Indoor Air Quality Assessment Report

Sky Valley Educational Center
351 Short Columbia Street
Monroe, Washington

Prepared for:

Monroe School District
200 East Fremont Street
Monroe, Washington 98272

PBS Project Number 41373.000
April 2016

INDOOR AIR QUALITY ASSESSMENT

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1.0 EXECUTIVE SUMMARY

Background

On January 14, 2016, PBS Engineering and Environmental, Inc. (PBS) initiated an indoor air quality investigation at the Sky Valley Education Center located at 351 Short Columbia Street, Monroe, Washington. This investigation was prompted by staff, parent, and student concerns with indoor air quality in the Library/Classroom Pod Building, Annex Building, Administration Building, Gym Building and the Technology Building.

PBS understands that indoor air quality concerns were initially reported in the fall of 2014 from classrooms 9, 10, and 11. The health symptoms reported at that time included acute headaches, sinus issues, burning eyes, "pressure" in the head, sneezing and neck pain. In the fall 2015 staff reported unusual odors in various areas. These included, but were not limited to musty odors, finger nail polish remover odors, burnt smells, car exhaust fumes, kiln exhaust fumes, moldy and stale odors and chemical odors. Other concerns noted from the forms included, but were not limited to, polychlorinated biphenyl's (PCB) containing ballasts and associated leaks, water coming into the building, moldy portables, asbestos contamination from construction projects, pesticides being tracked in the building, moldy wrestling mats, drinking water quality, attic odors, black residue around windows, lack of vacuuming, garbage cans near outside air intakes, and dust mites.

Conclusions and Recommendations

The following has the potential to impact indoor air quality or cause adverse health symptoms to sensitive individuals. Based upon PBS' observations in the field and review of laboratory data associated with this investigation, PBS concludes and recommends the following:

<u>HVAC</u>

A lack of ventilation air flow was observed in the Administration Building, Gathering Place Café Kitchen, Science Room B Prep Room, Science Room A, Science Room B, Annex Girls and Boys Restrooms, Room F – chemical fume hood, Room D, the Music Percussion Storage room. And all Custodial closets. The lack of fresh supply air and or exhaust ventilation allows contaminants to build up and impacts indoor air quality. Carbon dioxide was found to be elevated in the Gathering Place and Room F. Temperature ranges were outside of recommended criteria in Room 6 and 9. PBS recommends that thermostats, dampers, fan motors, etc. be evaluated by HVAC professionals and repaired/adjusted as appropriate.

A sheet laminator is used in the Administration Storage Room. This machine generates fumes that impact air quality and the health of sensitive individuals. This supply room is not adequately ventilated for laminator use. PBS recommends the laminator only be used in a well ventilated room.

PBS observed a "burnt" smell at unit ventilators in Rooms 4, 5 and 9. This may be a mechanical problem with the units. PBS recommends each unit be evaluated by HVAC professional.

Evidence of cooking and candle burning was observed in classrooms. These activities generate airborne particulate, chemicals and odors. Candle burning and cooking are not recommended in classrooms.

Kiln exhaust odors were reported throughout the Technology building. PBS observed that only a portion of the kiln exhaust was being vented outdoors. The remainder of the unvented kiln exhaust is being captured by the building HVAC return air system. PBS recommends the building return air system in this room be eliminated.

There were complaints of vehicle exhaust odors in the Annex Building and the South Pod classroom building. Cars park and idle in close proximity to the outside air intakes. PBS recommends installing signs and implementing administrative controls that restrict idling and operating vehicles near these outside air intakes.

PBS observed that the filter media in all unit ventilators throughout campus is inadequate for removing small respirable particulate. However, the manufacturer of the unit ventilator provides them with a filter media of this nature. Additionally, the existing filters are incorrectly sized which allows unfiltered air to enter the building. PBS recommends installing correctly sized higher performance filters throughout.

Our investigation revealed an excessive amount of accumulated dust and debris in the ventilation ducting in Room B and the East Pod exhaust ducting. Moderate to heavy dust and debris was observed in unit ventilator return openings, inside the control panels and on the exterior of the building in the outside air intake. PBS recommends trained personnel thoroughly clean all portions of these unit ventilators on a routine basis.

PBS observed damaged louvers, screens and grills in Rooms D (interior exhaust duct), 1, 3, 4, 6, 7, 9, 10, 12, 14, 16, 17, 18 and 19. This has the potential to impede air flow and allow pests to enter. PBS recommends these items be evaluated by trained personnel and repaired as appropriate.

There is no fresh air supply in the Wood Shop. The room has a sawdust removal/exhaust system and a ceiling mounted particulate filtration fan unit that are not being used. PBS recommends that the wood dust collection system and the ceiling mounted particulate filtration system be operating all times when wood abrasion of any kind is taking place. PBS recommends the table saw be connected to a sawdust collection system.

Dirt, debris, plants, books, boxes, sea shells and various other items were observed on top of the unit ventilators in various classroom areas throughout campus. Debris from these items will become airborne and impact air quality. Many of the supply and returns grills were blocked with stored items which impedes air flow. PBS recommends no items should be placed/stored in front of any unit ventilator or on top of any unit ventilator.

Chemicals

Unlabelled chemicals and containers were observed in several areas of the campus. PBS recommends the District Chemical Hygiene Officer review all chemical storage and use practices in science classrooms and prep rooms. It is our understanding that many chemicals located in science rooms, custodial storage areas, art rooms, wood shop, and other maintenance areas are no longer being used. PBS recommends that designated District staff review each area and dispose of all chemicals no longer being used.

A strong solvent-like odor was present in the Art Storage Room and Wood Shop flammable storage cabinet. There have been spills inside these cabinets. The spills in the cabinet should

be cleaned up by trained personnel. These cabinets are passively vented to the outdoors. Odors from these cabinets are being drawn into the building. PBS recommends the flammable storage cabinets in these areas be mechanically vented.

Paint thinners and house paints are being improperly used and stored in many areas throughout campus. Some of these containers were open and some damaged. A paint that was used on the wall of the Gathering Place contained PCBs. PBS recommends that policies and procedures be implemented to control the use of these chemicals in school buildings.

Three unprotected, liquid, mercury-containing electrical switch bulbs were observed in the Annex Paint Storage closet. If breakage occurs, the liquid mercury will vaporize at room temperature and cause significant contamination. PBS recommends trained personnel properly dispose of these as soon as feasible in accordance with WAC 173-303.

Fluorescent light tubes were observed to be improperly stored in numerous areas throughout campus. All fluorescent light tubes contain mercury and if broken, have the potential to contaminate surrounding areas. PBS recommends the tubes be placed in proper storage containers to prevent accidental breakage.

Suspect PCB residue was observed inside fluorescent light fixtures. PBS recommends all fluorescent light fixtures throughout campus be evaluated for suspect PCB-containing ballasts and suspect PCB residue. All work associated with PCB ballast residue cleaning and handling must be performed in accordance with WAC 173-303 and 40 CFR Part 761). It is our understanding that the Monroe School District has trained personnel currently going through each light fixture in each space throughout campus.

Due to concerns of PCB contamination, PBS collected air and surface dust samples. None of the air samples collected during this study exceeded recommended or regulatory exposure limits. Seven air sample locations were above the EPA Reference Dose (RfD) levels. No concentrations of PCB's were detected in the surface wipe samples. EPA recommends trained personnel thoroughly clean each area that has detectable concentrations of PCBs to help minimize exposures to the lowest achievable levels.

Peeling and damaged paint was observed on the Annex Building, in the Wrestling Room, Boy's Locker Room shower wall, and the Technology Building exterior. Some of these paints are lead-containing and some are PCB-containing. PBS recommends all damaged paint be repaired to prevent peeling and potential adverse health and environmental impacts. All untested paints and coatings should be presumed to contain PCB's and lead unless tested and proven otherwise.

Housekeeping

Housekeeping was observed to be poor in numerous areas. Significant dust, debris, clutter, and improperly stored items were observed throughout. These findings were supported by elevated levels of non-fungal airborne particulate. Elevated non-fungal airborne particulate is an indication of inadequate housekeeping, inadequate air filtration, or inadequate air circulation. All custodial and staff/teacher housekeeping practices should be evaluated. PBS recommends thoroughly cleaning all surfaces to remove accumulated dust and debris in each area.

Aerosols, powdered cleansers and other non-approved cleaners were observed in many areas throughout campus. PBS recommends only School District approved cleaning chemicals be

used. PBS recommends the District designate a trained employee to survey all rooms throughout the campus and remove/properly dispose of all unapproved chemicals.

Walk-off mats are intended to collect debris to prevent it from being distributed throughout the building. It is our understanding that walk-off mats do not get cleaned. PBS recommends all campus walk-off mats be routinely cleaned.

The carpet in the Annex corridor is visibly discolored from heavy foot traffic. Carpets accumulate heavy dust and debris and impact air quality when disturbed. Carpets are not recommended in corridors because of the heavy traffic they endure. PBS recommends removing carpets from all corridors and replacing with a smooth surface such as wood, terrazzo or vinyl. If the carpet is to remain, PBS recommends cleaning frequency be evaluated.

Live potted plants with visible fungal growth and or dead plant material were observed in several areas. PBS recommends frequently checking all plants for dead materials and fungal growth. PBS recommends that all improperly maintained plants be removed from the building.

Concerns from staff that black debris/residue on window frames throughout campus was fungal growth. It is PBS opinion the residue is dirt and debris that accumulates on moisture at the perimeter of the metal operable window sash. PBS recommends all operable window sashes be included in the periodic cleaning routine.

Upholstered furniture, cubical walls, area rugs and other items that rarely get cleaned were observed in many areas. These items tend to accumulate dust and debris. According to custodial staff these items do not get cleaned. It is recommended they be included in the typical cleaning routine or removed from the building.

A outdoor garden compost pile, moldy scrap wood, rotting pumpkins, a table and other gardening equipment are located in close proximity to the outside air intake of Rooms C and F. PBS recommends the compost piles, dead plant materials, moldy wood and all gardening equipment be removed from the vicinity of the outside air intake to help prevent odors and particulate associated with those items from entering the building.

Refrigerators in various areas were observed to contain fungal growth on food, door gasketing and or the interior of the units. PBS recommends all food in refrigerators be periodically evaluated and discarded as necessary. The doors, door gasketing and the interiors should be periodically checked for visible suspect fungal growth and food debris and cleaned as appropriate.

Significant moisture damage was observed on the interior floor of the sink cabinet in the Adolescent Montessori Prep Room. PBS recommends the floor of the sink cabinet be replaced by trained personnel.

Holes were observed in the gypsum wallboard in Room D and the 18-21 Transitions classroom. Holes in walls potentially allow dust and odors to enter impacting air quality. PBS recommends all holes be sealed to prevent impacts to indoor air quality.

Three garden type handheld sprayers are stored in a fenced area of the Small Gym East – Storage Room. It is our understanding the sprayers are used for disinfecting the wrestling mats. The sprayers appear to be leaking and the carpet is wet beneath. PBS recommends the sprayer/chemical storage be evaluated.

Heavy polishing dust and debris is present around the Kiln Room buffing machine. The buffing machine filter is not capturing the dust being generated by the wheel. PBS observed several polishing compound bars which are suspected to contain silica. The dust and debris around the wheel may be silica–containing. PBS recommends that housekeeping practices be evaluated. It is our opinion that the existing buffing wheel unit is not adequate for its current use. PBS recommends only using polishing compounds that do not contain silica.

It is our understanding that the Foundry/Metal Shop is not being used. PBS observed numerous hazards and potential impacts to indoor air quality in this room. PBS recommends this room remain locked at all times and access to this room be restricted to authorized personnel only.

The Library typically contains 70-90 people Tuesday through Friday. Many of those people are eating throughout the day. Food particulate was observed on the carpeted floors daily. Food debris attracts insects, small rodents, promotes biological growth and increase airborne particulate. PBS recommends housekeeping practices and eating activities be evaluated.

It is our understanding that older carpet was removed by the Monroe School District in 5 areas of the East Pod. We also understand that teachers/parents have removed older carpet in 4 additional areas. Activities included manual carpet demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine dust on surfaces, mastic debris in unit ventilator returns, and concrete/mastic debris around the perimeter of one classroom. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. PBS recommends that only trained personnel using appropriate engineering controls perform carpet removal and floor grinding work. Construction dust/contaminant controls and housekeeping practices should be evaluated. Teaching staff and parents should not make building modifications without Monroe District approval and strictly adhering to District procedures and policies.

Numerous bags of seashells are stored on bookshelves in Classroom 9. A teacher reported adverse health impacts after handling these shells. If the shells were not thoroughly cleaned they have the potential to harbor organisms and allergens that can cause adverse health effects to sensitive individuals. PBS recommends the shells be thoroughly cleaned, disinfected, dried and then stored in airtight containers or removed from the building.

Fungal

In-place carpets near exterior entryways in the Administration, Annex, and Library were observed to be damp and have musty odors. PBS recommends the carpet near these entryways be removed and replaced with a walk-off mat/pad and or smooth flooring.

Suspect fungal growth was observed in the following areas:

- Floor drain near the toilet in the CTE (Home Ec) Restroom and Sewing Storage
- Boy's Locker Room – shower drains, on floor near toilet
- Wrestling Storage – Wood cabinet, ice machine, wall
- Room B Prep Room ceiling
- Stored wrestling mats
- Gathering Place exterior soffit
- Girls Locker – archery storage ceiling and wall

- Sink cabinets in the Art Room, Digital Arts Room, Library, South Pod
- Gypsum wall in Street Art Room
- Library Custodial Closet

PBS recommends the cause of the excess moisture be determined and corrected. PBS recommends removing all suspect fungal growth observed indoors.

Efflorescence (crystalline mineral deposits) and water staining was observed on the masonry (brick) in numerous areas. This is indicative of moisture intrusion through the masonry. The cause of indoor mineral deposits on masonry should be investigated and corrected. All areas should be investigated for suspect fungal growth. PBS recommends the roof drain system throughout this building be evaluated and repaired as appropriate to prevent building water intrusion. Significant fungal growth is present on the backside of wall mounted athletic safety pads, the acoustic wall panels and base trim. Fungal air and surface testing was performed to help determine if the fungal growth behind the panels was impacting air quality. Based on review of laboratory data there was no significant difference in fungal composition when compared to outdoors.

The storm water roof gutter system throughout the South portion of the gym building and associate covered walkway is clogged, damaged and leaking against the building. The water is working its way through the building envelope causing efflorescence and fungal growth in the building. PBS recommends the roof stormwater drainage system be evaluated and repaired to prevent water from running down the side of the building and into the envelope.

Asbestos

Damaged and delaminating 9" asbestos-containing vinyl floor tile and associated mastic is located in several areas. PBS recommends that trained workers remove the damaged floor tile in accordance WAC 296-62-077. It is PBS' opinion that the floor tile is not a current exposure concern.

Two projects were performed that generated asbestos debris in occupied areas of the buildings; a hot water tank replacement project and a cabling upgrade project. Demolition of a gypsum wallboard system that contains less than 1% asbestos by composite is not considered an asbestos abatement project and as such certified asbestos workers are not required to perform this work. PBS performed asbestos air testing in each of these areas and found no asbestos structures. The asbestos abatement work has been completed in all areas except the East Pod Attic. It is PBS' opinion that the asbestos materials were not properly handled by contractors performing work in those areas. PBS recommends verifying the asbestos content of all building materials prior to any impacts by construction or maintenance activities.

Asbestos surface dust testing found nine locations to have concentrations of asbestos structures above background levels. The source was presumed to be from the damaged hard fittings and gypsum wallboard systems. PBS presumed all dust in each of the areas to be asbestos contaminated. Air testing in each area revealed no airborne asbestos structures. A professional asbestos abatement contractor cleaned each area. PBS conducted visual inspections and air clearance sampling during these cleaning activities. PBS recommends that all future impacts to the gypsum wallboard systems and pipe insulation be conducted by trained personnel in accordance with WAC 296-62 and 40 CFR Part 763 AHERA.

An older yellow colored carpet is located in many areas throughout campus. The carpet is damaged and contains significant accumulated dust and debris from many years of accumulation. The carpet appears to be beyond it useful life. The carpet can no longer be adequately cleaned to prevent indoor air quality impacts. PBS recommends the carpet in these rooms be removed.

The sheet flooring is delaminating throughout the Small Gym East. This may be due to water intrusion through the wall, excessive moisture under the sheet flooring and or failed adhesive. PBS recommends the flooring be evaluated for slab moisture intrusion.

An open bag of vermiculite, an open bag of flint abrasive, a large three bowl stainless steel sink with black undercoating, polishing compounds and clay debris was observed in the attic corridor of the Technology Building Mechanical Mezzanine. These materials/items are presumed to contain asbestos and silica. PBS recommends corridor be cleaned and these items be properly disposed.

Surface Dust Testing

PBS collected surface dust samples from 30 locations in the study area. Based on testing there was no significant indication of fungal amplification. High levels of certain non-fungal particulate were identified in some areas which is an indication of one or more of the following; high occupant density, inadequate housekeeping, and or poor air filtration and recirculation.

PCB-containing Materials

PBS inspected all buildings on campus for damage suspect PCB-containing paints, sealants and mastics. Analysis revealed that paint and caulking in various areas throughout campus are PCB-containing. PCB-containing caulking and sealants were found to be associated with windows, doors and structural columns. The caulking has been in place for a long period of time and significant off-gassing is not a concern. Proper handling is required for all PCB-containing materials regardless of concentration. It is not necessary to remove the caulking unless it begins to degrade and fall off. If the caulking will be impacted by renovations or demolition it is recommended that regulations, work practices, hygiene practices, record keeping and air monitoring performed.

Other

PBS performed testing throughout the study area for relative humidity, formaldehyde, TVOCs, silica in air, dust mite allergens, radon, carbon monoxide, PCBs on surfaces and airborne asbestos. Based on testing, it is PBS' opinion these parameters are not a concern. PBS tested site soils for heavy metals, petroleum hydrocarbons and pesticides and found no elevated levels. PBS was requested to test the Leahy air filter for fungal and non-fungal particulate, asbestos and dust mite allergens. No remarkable levels of these parameters were found in the filter.

2.0 INTRODUCTION

On January 14, 2016, PBS Engineering and Environmental, Inc. (PBS) initiated an indoor air quality investigation at the Sky Valley Education Center located at 351 Short Columbia Street, Monroe, Washington. This investigation was prompted by staff, parent, and student concerns with indoor air quality in the Library/Classroom Pod Building, Annex Building, Administration Building, Gym Building and the Technology Building.

PBS understands that indoor air quality concerns were initially reported in the fall of 2014 from classrooms 9, 10, and 11. Monroe Public Schools *Indoor Air Quality Report Forms* from the three teachers associated with Classrooms 9, 10 and 11 provided information regarding their concerns and adverse health symptoms. The health symptoms reported at that time included acute headaches, sinus issues, burning eyes, "pressure" in the head, sneezing and neck pain.

In the fall 2015 staff reported unusual odors in various areas. These included, but were not limited to musty odors, finger nail polish remover odors, burnt smells, car exhaust fumes, kiln exhaust fumes, moldy and stale odors and chemical odors. Staff, students and parents reported adverse health symptoms they believed to be associated with the reported unusual odors. The symptoms reported on Indoor Air Quality forms submitted in fall of 2015 included, but were not limited to, headaches, sinus pressure, dry itchy throat; burning in lungs, hard to breath, dry mouth, congestion, runny nose, throat irritation, nausea, fatigue, lightheaded feeling, "tummy aches", anxiety, dry and irritated eyes and nasal passages. Other concerns noted from the forms included, but were not limited to, polychlorinated biphenyl's (PCB) containing ballasts and associated leaks, water coming into the building, moldy portables, asbestos contamination from construction projects, pesticides being tracked in the building, moldy wrestling mats, drinking water quality, attic odors, black residue around windows, lack of vacuuming, garbage cans near outside air intakes, and dust mites. PBS' investigation was intended to help identify potential indoor air quality concerns and potential pathways at the subject site.

PBS' work scope included an indoor air quality investigation throughout the five campus buildings. Components of the investigation included: a visual assessment of the accessible occupied and unoccupied building spaces, a heating, ventilation, and air-conditioning review (HVAC), ventilation monitoring, and sampling for various suspect contaminants.

Testing activities were chosen based on a review of documentation provided by the Monroe School District, a facility walk-through and interviews with campus staff. A sampling plan was generated by PBS. That plan was revised and added to by the Monroe School District. The approved sampling plan included evaluating the following:

- Carbon dioxide
- Temperature
- Relative humidity
- Carbon monoxide
- Formaldehyde
- Total volatile organic compounds (TVOCs)
- Airborne silica
- Dust mite allergens in surface dust
- Radon
- PCB's on surfaces
- Airborne PCB's
- Fungal and non-fungal airborne particulate

- Fungal and non-fungal surface dust particulate
- Airborne asbestos
- Asbestos in surface dust
- Pesticides, metals and petroleum hydrocarbons in landscaping soils
- Pesticides and PCB's in carpet pieces provided by the Monroe School District
- Fungal and non-fungal particulate, asbestos, and dust mite allergen in the Leahy air filter provided by the School District
- Caulking and sealants for PCB's
- Damaged paint for lead and PCB's
- Drinking water

The majority of all testing activities were performed during occupied hours to best represent human influences on the testing data. A summary of our findings for Drinking Water Testing is included in this report. The drinking water testing activity details is being reported under separate cover.

While each individual aspect of this investigation provided a limited amount of information, when used together as a whole, they provide a more comprehensive assessment of indoor air quality within the buildings assessed.

Limitations

This study was limited to the tests and locations as indicated to determine the absence or presence of certain contaminants. The site as a whole may have other concerns that were not characterized by this study. Further study may be warranted. It is important to understand that statistically valid data comes only from the collection of numerous samples in the study areas. The findings and conclusions of this work are not scientific certainties but, rather, probabilities based on professional judgment concerning the significance of the data gathered during the course of this investigation. PBS is not able to represent conditions on the site beyond those conditions detected or observed at the time of the investigation.

The spectrum of potential sources affecting indoor air quality is very broad and the sensitivity of individuals to these sources can vary significantly. This investigation was limited in scope and was intended to be a screening of potential pollutants and/or sources that may degrade the quality of the indoor air.

Background

The Sky Valley Educational Center (SVEC) was formerly Monroe Middle School. The entire Monroe Middle School was initially constructed in approximately 1963. The five campus buildings included in this study cover approximately 85,000 square feet in floor plan area. The campus services approximately 750 students. See Tab 1 for a Master Campus Floor Plan which identifies locations described in the following report. The campus consists of five buildings which include:

<u>Building 1 – Administration</u>

This building is a single story slab on grade structure, with masonry exterior walls and a flat, built-up, wood framed roofing system. The interior walls are wood framed with gypsum wallboard finish. Ceilings are primarily suspended lay-in ceiling tile systems. Floor finishes are

primarily carpet and resilient floor coverings over concrete. The windows are operable single pane and aluminum framed.

The Administration Building has a staff break room, copy room, supply room, restrooms, reception area, a health room, a server room and five individual offices. The HVAC system includes two electric roof mounted fan units that provide a mixture of outside air and recirculated building air to each room through ceiling mounted supply and return grills/ducting. Over the last 5 years this building has undergone minor interior renovations including carpet replacements, painting, and office improvements.

Building 2 – Annex

This building is a single story slab on grade structure, with masonry exterior walls and flat, built-up wood framed roofing system. The interior walls are wood framed with gypsum wallboard and plaster finishes and the ceilings are primarily 12" glued-on ceiling tile. Floor finishing includes carpeted and resilient floor coverings over concrete. The windows are operable single pane and aluminum framed.

The Annex Building was originally constructed as a science building and has two restrooms, three science prep rooms, six classrooms, a custodial closet, a paint storage room and a main corridor through the center of the building. There are two types of HVAC systems in this building. Room B (Salmon Room) has subgrade air supply ducting with the fan unit located on the roof. Rooms A, C, D and F have perimeter wall unit ventilators. Over the last five years this building has undergone minor interior renovations including carpets replacements.

Building 3 – Gymnasium

This building is a single story slab on grade structure, with masonry exterior walls and flat built up wood framed roofing system. Some interior walls are wood framed with gypsum wallboard and some are concrete tilt–up and concrete masonry unit (CMU) block assemblies. Ceiling finishes throughout are mostly 12" glued-on ceiling tile. The floors consist of the following: Large Gym has wood; Small Gym has sheet flooring; Gathering Place has resilient floor tiles; CTE (Home Ec) and Music Room rooms have carpet; Boys/Girls Locker rooms, Storage rooms, Weight room and Snack Bar are bare concrete. The windows throughout the building are non-operable single pane and aluminum framed. There are several different roof mounted HVAC Units that provide conditioned fresh air to the building through metal ducting. This building has undergone minor renovations in the CTE (Home Ec) room.

Building 4 – Technology

This building is a single story slab on grade structure, with masonry exterior walls and flat built up wood framed roofing system. Some interior walls are wood framed with gypsum wallboard and some are concrete tilt–up and concrete masonry unit (CMU) block assemblies. Ceiling finishes throughout are suspended ceiling tile grid system. The floors consist of bare concrete, carpet over concrete and resilient flooring.

The Technology Building is currently being used as a wood shop, art classroom and a computer lab. The building also has two restrooms, a kiln room, a custodial closet, a painting room and a teacher's office in the Art Room. This building previously contained a photography lab and film developing rooms, a metal forge, a metal shop, a wood shop and classroom space. The existing windows throughout the building are non-operable single pane and aluminum framed.

There is a roof mounted HVAC Unit that provides conditioned fresh air to the Art Room, Kiln Room and the Computer Lab. The Wood Shop does not appear to have a system that supplies fresh air to the space. The Art Room appears to have undergone minor renovations that replaced flooring and casework.

Building 5 – Classroom Pod/Library

This building has three classroom pods (north, south and east pods) located around a central library. Each pod has 6-7 classrooms surrounding a core common area. This building is a single story slab on grade structure, with masonry exterior walls and a pitched, built-up wood framed roofing system. The interior walls are wood framed with gypsum wallboard finishes and some classrooms have moveable walls. The ceilings are vaulted with exposed wood roof decking. The floors in the North and South pods and the Library are mostly carpet on concrete with resilient floor coverings at some entryways. The windows in the classrooms are operable single pane and aluminum framed. An updated HVAC system was installed in approximately 2010 and consists of unit ventilators in each room located at perimeter walls. Additionally, there is a central exhaust system located in the mechanical mezzanine of each pod that pulls air from each classroom room, common areas and the library. This building has undergone minor renovations over the last 5 years including carpeting replacements in the South Pod and Library, carpet removal in the East Pod and a portion of the North Pod, closing off library walls from the Pod central common areas and adding walls to create a room in the North Pod common central area.

3.0 DISCUSSION OF FINDINGS

Between January 15, 2016 and April 1, 2016, PBS conducted indoor air quality investigations and testing at the Sky Valley Educational Center. During our multiple site visits, interior and exterior features and building conditions were assessed.

3.1 Visual Investigation

PBS staff conducted visual investigations of all accessible spaces in each of the five study buildings. Components assessed in the visual investigation included the floors, walls, ceilings, and roofs. During our onsite investigations interviews were conducted with staff and parents regarding their concerns. The following summary identifies items that have the potential to impact air quality. Representative photographs of select items are provided in Tab 2.

<u>Building 1 – Administration</u>

1. Reception

    - Evidence of water staining was apparent on ceiling tiles near South entry. It is our understanding the water leak originated from the HVAC unit on the roof. The leak has been repaired. No evidence of fungal growth was observed on or above the suspended ceiling.

    - The walk-off mats located at the entry were dirty and wet. It is our understanding that these mats get cleaned once a year.

    - No air movement was observed from any of the HVAC grills on the east portion side of the Administration building. We understand that one of the HVAC units on the roof has failed and requires repairs.

    - Moderate accumulated surface dust was observed on horizontal surfaces.

2. Colin Egger's Office

    - The HVAC supply air appears functional, however, no return air was observed.

3. Server Room

    - The HVAC supply air appears functional, however, no return air flow was observed.

    - Suspect PCB contamination was observed inside both fluorescent light fixtures in this room. Not all light fixtures have been evaluated. The existing ballast has been replaced with an electronic ballast.

4. Nurses Office

    - Aerosols and other cleaners were observed under the sink that has the potential to impact air quality. Aerosolized chemicals can easily migrate to other areas of the building and cause adverse health impacts to sensitive individuals.

5. Conference Room 1 (Supply Room behind Jeanette's desk)

- A strong odor was observed coming from the sheet laminator. Odors and fumes from the laminator may impact sensitive individuals.

- This room contains a significant amount of stored items which makes it difficult to properly clean. Inadequate housekeeping impacts air quality.

6. North Entryway Corridor

    - The carpet is damp near the door. A musty odor was observed near the floor at the damp carpet.

7. Copy Room

    - No active HVAC supply or return air movement was observed. This may be due to the failed rooftop HVAC unit.

    - Moderate accumulated surface dust was observed.

8. Men's Restroom

    - No active HVAC supply or return air flow was observed. This may be due to the failed rooftop HVAC unit.

9. Staff Break Room

    - No active HVAC supply or return air flow was observed. This may be due to the failed rooftop HVAC unit.

    - Upholstered furniture is present. Upholstered furniture tends to accumulate dust and debris and rarely gets cleaned.

10. Building Exterior

    - One of the two rooftop HVAC units is not operational.

    - Peeling paint is present on exterior soffits. PBS collected samples of suspect paints and had them analyzed for lead content. This paint contains low levels (0.1% lead) of lead. See Lead Bulk Sample Inventory, Tab 3, Table 1.

<u>Building 2 – Annex</u>

1. Room A (Adolescent Montessori)

    - Housekeeping in this area is inadequate and moderate dust accumulation is present. Dirt and debris was observed under a sink and in the recycle bin under the sharp-tail grouse display. This display has accumulated dust and will be difficult to clean.

    - Numerous art supplies (i.e. paints, brushes, etc) were stored in this room. The teacher in this room indicated that many of the paints are no longer used.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the return opening, inside both control panels and on the exterior of the building in the outside air intake.

- The ventilator filter media value for the filter presently in place is less than MERV 8 which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

2. Room B (Computer Lab and Robotics)

- Overall housekeeping was poor to fair. Significant dust and debris was observed on the robotics side of room.

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- All fluorescent light fixtures were checked in this room for suspect PCB concerns. All ballasts were found to be labeled “No PCBs” and no suspect PCB residue was observed.

- Paint thinner was stored in a cabinet near the interior entry door. The cabinet is not intended for the storage of flammable chemicals.

- Upholstered furniture is present. Upholstered furniture tends to accumulate dust and debris and rarely gets cleaned.

- The prep room ceiling tiles are water damaged with suspect fungal growth.

- Powdered cleanser was observed under the prep room sink. Powdered cleansers tend to become airborne and settle in the resident dust only to be re-suspended when disturbed.

- The heating element located in the prep room ceiling has been damaged from a previous roof leak.

- No active air movement was observed from the prep room exhaust grill during our assessment.

- Fresh filtered air is supplied to this classroom by in-floor grills and sub-slab air ducting. Several of the floor grills are blocked. The fan unit is located in the paint storage room to the West. The sub-slab ducting contains heavy dust and debris and the duct lining may be degrading.

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- Water staining was observed on the east brick wall. It is our understanding this occurred during a previous roof leak and the roof has since been repaired. The crystalline mineral deposits appear to have been cleaned from this location.

3. Room C (Adolescent Montessori)

- Housekeeping appeared poor and significant clutter was present throughout classroom.

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- Numerous unlabelled chemicals were observed. PBS did not perform a chemical inventory or visually inspect all storage cabinets. No significant chemicals odors were observed.

- A locked flammable storage cabinet is located in this room. The teacher indicated that there are chemicals in the cabinet that are no longer used. The cabinet is not vented to the outdoors. No fume hood was observed in this room.

- Four potted plants were observed. Three of these plants had visible fungal growth on the plant and the soil.

- A large unused aquarium is located near the perimeter wall which contains plant debris, dirt, bird droppings and dead insects. The top of the aquarium is open. Pieces of wood covered with dirt are located underneath the aquarium.

- An open bucket of sand was observed under a sink. The sand which likely contains silica has the potential to become airborne.

- The small greenhouse room has no supply or exhaust air other than operable windows that were not open at the time of the investigation. This room contains significant clutter, dirt, debris, plant debris, and some rotting vegetables. Debris from these items can become airborne and impact air quality in the classroom.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris was apparent in the return opening and on the exterior of the building at the outside air intake. Dirt, debris, plants, and sea shells are located on top of the unit ventilator near the supply air grill. Debris from these items can become airborne and impact air quality. No room exhaust was observed.

- The ventilator filter media value for the filter presently in place is less than MERV 8 which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- A garden compost pile, moldy scrap wood, a table and other gardening equipment are located in close proximity to the outside air intake of the unit ventilator.

4. Adolescent Montessori Prep Room

- Housekeeping was fair to good and moderate dust on surfaces throughout.

- All fluorescent light fixture ballasts (FLB's) in this room were checked and found to be magnetic and should be presumed to be PCB-containing. Evidence of ballast residue was observed in all four fixtures.

- Moldy potatoes were observed in the refrigerator.

- Exhaust grills are located in the ceiling of this room. However, no active air flow was observed during our assessment.

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- PBS observed chemical damage to the interior floor of the sink cabinet.

5. Room D (Environmental Science)

- Housekeeping was fair to good.

- Water staining was observed on the 12" glued-on ceiling tiles in various locations in the room. No fungal growth was observed. The teacher had indicated that water leaks throughout the campus had mostly stopped when the roof was replaced in approximately 1989.

- Cloth curtains and an area rug were observed. These items tend to accumulate particulate which has the potential to impact air quality. Curtains, area rugs and other upholstered items are not usually part of the typical cleaning routine.

- Water staining was observed on the West brick wall. It is our understanding this occurred during a previous roof leak and the roof has since been repaired. The mineral deposits have been cleaned from this location.

- All fluorescent light fixtures were checked in this room for suspect PCB concerns. All ballasts were found to be labeled "No PCBs". Suspect PCB residue was observed inside a ballast panel cover. PBS did not test this residue.

- A plastic film was taped to the floor. It is our understanding that it was covering suspect PCB contamination from a light fixture ballast leak. PBS conducted wipe testing of the vinyl floor tile underneath the plastic and found PCB contamination to be present. The Monroe School District requested PBS to use trained personnel to remove and replace this tile. The tile was removed and replaced on March 5, 2016. A separate closure report will be provided for this activity.

- A small conduit hole was observed in the gypsum wallboard along the upper West wall that leads through to the attic. This hole potentially allows dust and odors from the attic to enter the room and impact air quality.

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- Fresh air is supplied by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the return opening and the outside air intake.
- The return/exhaust grill in the entryway soffit is detached from the ceiling. PBS did not observe airflow at this grill.

- The ventilator filter media value for the filter presently in use is less than MERV 8 which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Cars park in close proximity to the outside air intake.

- A potted plant located in the sink was observed with dead plant debris and fungal growth in the soil and on the plant.

6. Room F (Environmental Science)

- Overall housekeeping was poor and moderate with heavy dust and debris observed in various areas throughout.

- An open bag of plaster of paris and a spilled bag of flour were present in a metal storage cabinet.

- Paints being stored in drawers on West side of room are generating an odor.

- Numerous unlabelled chemicals were observed in cabinets and drawers. PBS did not perform a chemical inventory or visually inspect all storage cabinets. No significant chemicals odors were observed.

- A laboratory fume hood was observed in this room. PBS performed smoke testing in this hood while the exhaust fan was operating and found that air flow and velocity were not adequate to remove contaminants away from the user.

- The 9" asbestos-containing vinyl floor tile in this room has minor damage and is delaminating in the prep room. 9" floor tiles and their associated mastic likely contain asbestos.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris was observed in the supply opening, return opening and on the exterior of the building at the outside air intake.

- The ventilator filter media value of the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Garden compost piles, moldy wood, plant debris and other gardening equipment are located in close proximity to the outside air intake of the unit ventilator.

7. Room F Prep Room

    - An empty aquarium containing gravel, dust and debris was observed.

    - Moderate clutter was observed throughout. Plant materials wrapped in a towel, moldy tree bark in discolored water, cattail plants in an open bin, garbage can full of muddy boots, dirty wood stakes in cabinet, dirty plywood pieces, dirty plastic containers, dirty green tarp, and various other items have the potential to impact air quality.

8. 18-21 Transitions Room

    - A hole was observed in the gypsum wallboard along the lower east wall that leads into the wall cavity. Significant debris was observed in the hole.

    - Fresh air is supplied to this classroom by a roof mounted HVAC unit and overhead ducting. PBS observed flow from the supply air ducts but no active return air flow to the return grill.

    - Water staining was noted under the kitchen sink. No active leaks were observed. No fungal growth or odors indicative of concealed fungal growth were observed.

- Moderate to heavy dust accumulation was observed in the laundry room. When disturbed the airborne dust will impact air quality.

- Motor oil, windshield cleaner, and Matchlight BBQ charcoal were observed in the kitchen. The open charcoal bag had an odor associated with lighter fluid. These items are not likely used for building cleaning or are not part of the educational curriculum.

- One 9" vinyl floor tile has minor damage in the Kitchen. This tile and its associated mastic are presumed to be asbestos-containing. The damage observed is not a significant current exposure concern.

- Fungal growth was observed on the refrigerator door frame and gasketing.

9. Annex - Paint Storage Closet

    - Housekeeping is poor with a significant amount of clutter. The room is difficult to navigate without moving numerous chemical containers.

    - Numerous paint, adhesive and solvent containers are stored on wood shelving and on the floor. Approximately 20 5-gallon paint, 70 1-gallon paint, 7 solvent containers, 30 aerosol containers, numerous adhesive containers, and various other chemical containers are present. Some containers are open and some have spilled. There is dried residue on the vinyl tile floor. The paint storage closet contains the HVAC supply ducting for Room B and as such, may not be appropriate for the storage of chemicals. This room does appear to have its own return or exhaust ducting.

    - Three liquid mercury-containing electrical switch bulbs were observed. If breakage occurs, the liquid mercury will vaporize at room temperature and cause significant contamination.

    - A box of new unused 9" vinyl floor tile manufactured by Armstrong is stored in this room.

10. Annex Custodial Closet

    - This room is used for custodial cleaning equipment and chemical storage. A significant chemical odor was observed in this room. This may be indicative of spilled chemicals. No operating exhaust ventilation was observed.

    - A variety of chemicals (i.e. powdered, aerosols, solvents, cleaners, etc.) were being stored in this room. Many of which can impact air quality significantly when used indoors.

    - The 9" asbestos-containing vinyl floor tile in this room is water damaged. All 9" floor tiles and their associated mastic are presumed to contain asbestos.

11. Annex Corridor

    - The wall mounted tack board at the east end of the corridor is damaged and there were concerns that the exposed mastic contained asbestos. PBS collected a sample

of the mastic and had it analyzed to determine asbestos content. No asbestos was detected in the exposed tack board mastic. The asbestos testing data is being reported under separate cover. See Tab 2 for Asbestos Bulk Sample Inventory.

- The vinyl covebase in the corridor is damaged and there were concerns that the exposed mastic contained asbestos. PBS collected a sample of the covebase mastic and had it analyzed to determine asbestos content. No asbestos was detected in the exposed cove base mastic. See Tab 2 for Asbestos Bulk Sample Inventory.

- Significant dust and debris was observed inside the two wall mounted heating units. If airborne, the dust and debris will impact air quality.

- Water staining was observed on the 12" glued-on ceiling tiles in the restroom corridor and at the West end of the main corridor. No fungal growth was observed on the surface.

- The carpet in the corridor is visibly discolored from heavy foot traffic. Carpets that accumulate dust and debris can impact air quality when disturbed.

- A significant amount of debris was observed at the east entry door threshold. There is a gap between the metal threshold and the carpet which allows debris and moisture to accumulate from heavy foot traffic. Wet debris inside the building creates an ideal environment for biological growth. The carpet under the walk-off mat at this entry is wet and a musty odor was observed.

12. Girls and Boys Restrooms

    - No exhaust ventilation was observed in either of these restrooms.

13. Building Exterior

    - Numerous containers, moldy wood, compost piles, rotting pumpkins and other garden equipment were observed near the outside air intakes of Rooms C and F. These items all have the potential to impact indoor air quality.

    - Peeling paint was present on the exterior North soffit. PBS collected samples of suspect damaged paints and had them analyzed for lead content. This paint contains low levels (0.1% lead) of lead. See Lead Bulk Sample Inventory, Tab 3, Table 1.

<u>Building 3 – Gymnasium</u>

1. Music Storage Room 1

    - Moderate to heavy dust and debris were observed.

    - Aerosol cleaners were noted in this room. Aerosolized chemicals can easily migrate to other areas of the building and cause adverse health impacts to sensitive individuals.

2. Music Room - Irish Dance Storage Room

- Efflorescence (crystalline mineral deposits) and water staining was observed on the brick wall. Crystalline mineral deposits can become airborne and irritate respiratory systems and eyes of sensitive individuals.

- Moderate dust and debris was observed.

3. Music Room - Spa Storage

   - Damaged 9” vinyl floor tile was observed in this room. This tile and its associated mastic are presumed asbestos-containing.

   - Efflorescence (crystalline mineral deposits) and water staining was observed on the brick wall. Crystalline mineral deposits can become airborne and irritate respiratory systems and eyes of sensitive individuals.

   - Suspect PCB-containing residue was observed inside the fluorescent light fixture lense. PBS did not perform a comprehensive investigation of potential PCB-containing fluorescent light fixtures or PCB residue in the light fixtures in this building.

4. Music Room - Practice Rooms (2)

   - Moderate dust and debris was observed.

   - 9” vinyl floor tile is damage in these practice rooms. This tile and its associated mastic are presumed asbestos-containing.

5. Music Room - North Entryway Corridor

   - Damaged 9” vinyl floor tile was observed in this corridor. This tile is presumed asbestos-containing unless sampled and proven otherwise.

6. Music Room – Teachers Office

   - Damaged 9” vinyl floor tile was observed and is delaminating in this room. This tile is presumed asbestos-containing.

   - Water staining was observed under the sink. No active leaks were observed. No fungal growth or odors indicative of concealed fungal growth were present.

7. Music Classroom

   - The carpet is damaged and contains significant dust and debris. The carpet was installed approximately 25 years ago and appears to be beyond its useful life. The carpet can longer be adequately cleaned.

   - Ceiling tiles and wall paint are water damaged in multiple locations. No evidence of fungal growth was observed.

8. Music - Instrument Storage

   - Housekeeping is fair and moderate dust, debris and clutter were present.

- Fluorescent light tubes appear to be improperly stored. All fluorescent light tubes contain mercury and if broken, have the potential to contaminate surrounding surfaces.

- Efflorescence (crystalline mineral deposits) and water staining was observed on the brick wall. Crystalline mineral deposits can become airborne and irritate respiratory systems and eyes of sensitive individuals.

9. Music - Percussion Storage

    - Paints and painting supplies are being stored in this room.

    - The exhaust grill is covered with dust and debris.

10. CTE (Home Ec) – Main

    - Housekeeping was fair. Debris on window sills, floors, shelves. This room is used for cooking and storing foods.

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    - Water staining was observed on window sill, under sink and under drinking fountain. The windows may be leaking and or condensation on the metal frames may be gathering on the sills. Excess moisture indoors has the potential to promote fungal growth and can attract insects.

    - Paint containers were observed on a shelf in the kitchen area.

    - Bleach, powdered cleansers and vinegar were observed on a shelf in kitchen area.

11. CTE (Home Ec) – Electrical Room

    - There are two open unlabelled jars of a yellow liquid on shelf.

12. CTE (Home Ec) – East Storage Room

    - Housekeeping was observed to be poor to fair. Several empty juice bottles and one with visible biological growth were noted in this room.

    - A fluorescent light tube was found in the shower and is improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

13. CTE (Home Ec) - South Storage Room (former custodial closet)

    - Housekeeping was observed to be poor to fair.

    - Efflorescence (crystalline mineral deposits) and water staining was observed on the brick wall in the southwest corner. Crystalline mineral deposits can become airborne and irritate respiratory systems and eyes of sensitive individuals.

- Fluorescent light tubes were found and are improperly stored. All fluorescent light tubes contain mercury and if broken, have the potential to contaminate surrounding surfaces.

- Numerous cleaners were stored in this room. Many of these cleaners were unlabeled.

- An old canvas stretcher used for carrying injured people appeared to have fungal growth on the surface.

14. CTE (Home Ec) - Restroom and Sewing Storage

- Housekeeping was observed to be fair.

- Discoloration (i.e. suspect fungal growth or dirt) was observed around the floor drain.

- Fluorescent light tubes were noted and are improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

- Water staining was observed on the ceiling. No evidence of fungal growth or active water leaks was observed.

- Paint containers were stored on a shelf. No paint container leakage or associated odors were noted.

15. Large Gym

- Water staining was observed on ceiling tiles. Numerous ceiling tiles are damaged and many have delaminated. No fungal growth was observed from the floor level. Damaged ceiling tiles that are degraded can increase the overall airborne particulate load which impacts air quality.

- Heavy dust and debris was observed under bleachers.

- The storm water gutter system throughout the South portion of the gym building and associated covered walkway is clogged, damaged and leaking against the building. The water is working its way into and through the building envelope and causing efflorescence and fungal growth and potentially impacting air quality. The water is also causing plant growth on the exterior surface of the building which tends to degrade the building materials.

- Water damage and fungal growth was observed at the east exterior wood soffit of the Gathering Place.

16. Drama Dance (Small Gym East)

- Standing water was observed on the vinyl floor near the east entry. PBS recommends a walk-off mat at this location to help prevent water and debris from entering the building.

- Substantial efflorescence (crystalline mineral deposits), water staining and flaking paint were observed on the east and south perimeter CMU walls. The water intrusion has caused the backside of wall mounted athletic safety pads, the acoustic wall panels and base trim to become covered with visible fungal growth along the entire length of each wall. Paint particulate, fungal particulate and crystalline mineral deposits can become airborne and cause adverse health impacts. The beige paint was tested and found to not contain lead. See Lead Bulk Sample Inventory, Tab 3, Table 1.

- The sheet flooring was observed to be delaminating throughout. This may be due to water intrusion through the wall or excessive moisture under the sheet flooring or failed adhesive.

- Moderate dust and debris was noted throughout.

17. Drama and Dance Storage

- Water staining was observed on suspended ceiling tile. No fungal growth was observed.

- Three garden type handheld sprayers are stored in a fenced area. It is our understanding the sprayers are used for disinfecting the wrestling mats. The sprayers appear to be leaking and the carpet is wet beneath. There is a strong odor of cleaning chemical in the room. No suspect fungal growth was observed.

18. Carpet/PE Storage (Small Gym East)

- Housekeeping was observed to be poor in this room. Heavy dust and debris mostly from mineralization of the masonry wall. Substantial efflorescence (crystalline mineral deposits) and water staining were observed on the North and South perimeter CMU walls of this two-story storage room. Crystalline mineral deposits can become airborne and cause adverse health impacts.

19. Wrestling Room (Small Gym West)

- Moderate to heavy dust and debris was observed on floors, under mats and along edges. The black paint on the North CMU wall is damaged and flaking.

- Suspect fungal growth was observed on the wrestling mats in the mat storage locker at the South end of this gym.

- The wrestling mats on the floor of the gym are significantly cracked and damaged making them difficult to properly clean and disinfect.

- The walk-off mats at the gym entrance were wet and a musty odor was observed.

- Substantial efflorescence (crystalline mineral deposits), water staining and flaking paint were observed on the North and South perimeter CMU walls. PBS could not access behind the acoustical sound panels on the North and South walls to determine if fungal growth was present. Flaking paint and crystalline mineral deposits can become airborne and cause adverse health impacts. The beige damaged paint

was tested to determine lead content. Lead was found to be less than the limit of detection by laboratory analysis. See Lead Bulk Sample Inventory, Tab 3, Table 1.

20. Boy's Locker Room

- Light to moderate dust and debris was observed throughout.
- Suspect PCB-containing residue was observed on the fluorescent light fixture in the southeast corner of the locker room.
- Paint was observed to be flaking on the shower wall, ductwork and locker room ceiling.
- Discoloration (i.e. suspect fungal growth) was observed around the shower drains.

21. Boy's Locker Room – Wrestling Storage (North of Coaches Office)

- Suspect fungal growth was observed in the wood storage cabinet and inside operating ice machine. It also appears the ice machine has been leaking which has caused suspect fungal growth on the concrete floor and mineralization of the masonry wall.

22. Boy's Locker Room – Coaches Office

- Light to moderate dust and debris were observed.
- Suspect fungal growth on painted concrete floor near toilet.

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23. Boy's Locker Room – South Storage Room

- Housekeeping was observed to be fair in this room with moderate dust and debris present. Moderate efflorescence and water staining was observed on the East brick wall. This is likely from a previous roof leak. Crystalline mineral deposits can become airborne and cause adverse health impacts.

24. Girl's Locker Room – Archery Storage

- A roof leak has caused visible fungal growth on gypsum ceiling, brick wall, concrete floor, and in adjacent metal locker along the north and east wall.
- This room is difficult to clean due to the significant amount of items stored.
- Exposed electrical wiring is hanging from a fluorescent light fixture.

25. Girl's Locker Room – North Entry Custodial Closet

- Fluorescent light tubes were noted and are improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

- A variety of chemicals (i.e. powdered, aerosols, solvents, cleaners, etc.) were being stored in this room. Many of which will impact air quality significantly when used indoors.

- A strong chemical odor is present. No operating exhaust ventilation was observed.

26. Gathering Place

- Water staining was observed on ceiling, window frames and the interior South brick wall. The exterior rain gutters (i.e. roof drains) are damaged, clogged and leaking against the building. The water is working its way through the masonry, metal window and door frames. The interior vinyl base trim is delaminating.

- Housekeeping was observed to be fair overall. Heavy dust and debris was observed on the top of and under soda machines and associated cabinets; inside kitchenette sink cabinet; and in and around microwave. Moderate dust and debris was observed under the daycare carpet.

- Food debris and suspect fungal growth was observed to be in the kitchenette refrigerators.

27. Gathering Place – West Office

- The 9” floor tile in this room is being damaged by the desk chair. The floor tile is presumed to be asbestos-containing.

28. Gathering Place – Café

- The exhaust fan does not appear to be drawing air.

- Moderate dust and debris was observed on the tops of refrigerators, under and behind café equipment and around stored items.

- The ceiling attic access hatch located inside the café was open during our initial investigation.

29. Gathering Place Mechanical Attic (Above Café)

- Heavy dust, construction debris and asbestos hard-fitting insulation debris were observed in various areas in this attic space. PBS performed asbestos air testing in the café and Gathering Place to determine if asbestos structures were present in the air. No asbestos structures found in the air. See Testing Section for asbestos air testing details. PBS informed the Monroe School District immediately of our findings. The Monroe School District quickly responded by hiring a professional abatement contractor to perform asbestos debris cleanup.

  PBS recommended to the Monroe School District the attic space be sealed off, all access restricted and the space be cleaned by trained and experience abatement professionals in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 (AHERA). A work plan was prepared and PBS was onsite during that work to help verify the cleaning process was in compliance with state and federal regulations.

This work has been completed and will be documented in a separate abatement closure report.

- There are gaps in the attic floor that allow air to freely pass to the café, restrooms and gym entries below. This work was completed during abatement activities in the attic.

30. Gathering Place – Boy's Restroom Custodial Closet

- A musty odor associated with wet mop heads was observed. The floor was wet.
- The exhaust fan in this room is functioning, however, with minimal flow.
- There are holes in the ceiling that lead to the attic. These holes were sealed during the asbestos abatement activity in the attic space.

31. Gathering Place Custodial Closet

- A significant chemical odor was present in this room. No operating exhaust ventilation was observed.
- Fluorescent light tubes were noted and are improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

<u>Building 4 – Technology</u>

1. Mechanical Mezzanine

- Moderate debris and clutter was observed.
- An open bag of vermiculite, an open bag of flint abrasive and a large three bowl stainless steel sink with black undercoating was observed in the attic corridor. These materials/items are presumed to contain asbestos.
- Polishing compound and clay debris were observed in the attic corridor. These items are presumed to contain silica.

2. Art Room (Room 22)

- Both sinks cabinets are significantly water damaged and suspect fungal growth was observed in each. Both sinks appear to leak.
- This art room is used for working with clay and creating pottery/artwork. Significant clay dust is generated from these activities. A light to moderate layer of dust was observed in various areas. Housekeeping was good for the current use of the room. The existing clays are non silica-containing. Rooms where clays are used required extra housekeeping to prevent airborne dust.

3. Kiln Room

- Kiln exhaust odors were reported throughout the building. Two kilns are located in this room. One of the kilns is not being used. There is an exhaust hood situated directly over the unused kiln. The kiln room also contains building HVAC supply and return air grills. PBS performed smoke testing near the in-use kiln to help determine air flow patterns while kiln exhaust was operating. Based on observed air flow patterns only a portion of the kiln exhaust was being vented outdoors. It is PBS' opinion that the remainder of the unvented kiln exhaust is being captured by the building HVAC return air system.

- The vinyl floor tile was observed to be damaged under the water cooler. The water cooler may leak and or spills may have caused the water damage.

- Unlabeled 5-gallon containers of liquid/solid material were noted. PBS did not open the containers.

- Lead-containing solder was observed on a North storage shelf.

- Moderate clutter and dust accumulation was observed.

- A buffing wheel is located on the bench in the kiln room. Dust and debris from heavy polishing is present on the bench and around the buffing machine. The buffing machine filter is not capturing the dust being generated by the wheel. This may be an indication that the air flow velocity and or the filter are inadequate for capturing dust and that housekeeping is also inadequate for this activity. PBS observed several polishing compound bars on the bench. Some polishing compounds contain silica and as such, the dust and debris around the wheel may be silica–containing. Silica is a known carcinogen and causes various other health impacts.

4. Art Storage Room

    - A solvent-like odor was present in the room. The flammable storage cabinet in this room has a distinct solvent-like odor. The cabinet is passively vented. There appears to be liquid residue on the shelving and cardboard boxes in the cabinet indicative of spills. According to the art teacher there are many items stored in the flammable cabinet and in the art storage room that are no longer being used.

    - Stained ceiling tile was observed in this space however no fungal growth was observed.

    - Moderate clutter was noted in this room. Clutter makes the room difficult to adequately clean. Clutter should be minimized.

5. Digital Arts

    - Housekeeping was observed to be good, clutter was minimal, and dust accumulation was light.

    - The base of the sink cabinet is water damaged; degraded and suspect fungal growth is present.

- Open bags of cereal were observed in the casework and on top of the counter. Food tends to attract insects and small rodents and generates airborne particulate.

6. Wood Shop (Room 21)

   - The flammable storage cabinet located in the Wood Shop paint storage room (Southeast) appeared to be passively vented to the outdoors. A strong odor was observed in this cabinet. Several cans of diesel fuel, paint, stains, solvents and various other chemicals were observed in this cabinet.

   - No fresh air supply was observed in the Wood Shop during the assessment. The room has a sawdust removal/exhaust system and a ceiling mounted particulate filtration fan unit each intended to remove airborne particulate generated from wood dust. Neither of these systems was being used, because the teacher said they were noisy. Significant sawdust was also being dispersed into the room from a table saw that had no sawdust collection system. Students are performing hand sanding, drilling and cutting of wood which also generate wood dust. Substantial wood dust was observed throughout the Wood Shop on all surfaces which significantly impacts air quality. Wood dust is a known carcinogen, causes dermatitis with prolonged exposure, and can cause respiratory sensitization.

   - Suspect fungal growth (approx. 1 square foot) was observed on the north gypsum wallboard wall in the street art room located in the northeast corner of the Wood Shop. It appears that water intrusion has caused the fungal growth.

7. Foundry/Metal Shop

   - It is our understanding that this room is not currently used. PBS observed sand on the floor throughout and stored polishing compound, both of which are presumed to contain silica. Lead-containing solder was stored in a box. Paints were stacked near the exterior entry. Lots of clutter and debris was observed throughout.

8. Small Pump Room Under Attic Stairwell

   - Substantial dirt and debris in this small mechanical space. The door to this space is located in the hallway near the boys restroom was found to be unlocked and open. Dust and debris from this mechanical space can impact air quality.

9. Custodial Closet

   - Custodial cleaning supplies are stored in this room. A moderate chemical odor was observed. Air was observed coming from the exhaust vent and not being drawn into or exhausting outdoors. The vent was partially blocked by a box.

   - Fluorescent light tubes were noted and are improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

   - Heavy debris was observed on the floor.

   - Powdered cleansers and unlabeled spray bottles was observed.

10. Former Photography Developing Room (currently being used for storage)

    - This room has a slight odor of photo developing chemicals. The odor may be indicative of spills. The room was substantially filled with stored items and could not be fully accessed.

11. Building Exterior

    - Flaking and peeling brown paint on wood trim and concrete sills was observed. The paint was analyzed and found to be lead-containing. See Lead Bulk Sample Inventory, Tab 3, Table 1.

Building 5 – Library/Classroom Pods

1. Library

    - The carpet was wet and a musty odor was observed near the floor at the West main entrance. It is PBS opinion that rain water is being tracked into the building and impacting the carpet.

    - The Library typically houses 70-90 people Tuesday through Friday. Many of those people are eating throughout the day. Food particulate was observed on the carpeted floors. Food debris attracts insects, small rodents and promotes biological growth. Many people are allergic to many different food allergens. Food particles build up in the carpet and become airborne impacting air quality and sensitive individuals.

    - PBS observed numerous upholstered chairs throughout the Library, an area rug, a small upholstered chair and couch, cloth tapestry hanging from the walls, intricate artwork sitting on the soda machine and a log house situated on the glass case near the front entrance. These items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

    - Stained ceiling tile was observed in the AV Room; however, no fungal growth was noted.

    - A sink cabinet is located in the middle of the Library. Industrial lubricant, powdered cleansers, solvent, and aerosols were observed on the sink counter. The library aide stated that parents likely brought these chemicals to campus. The library aide does not use them.

    - Soil and suspect fungal growth was observed on the floor of the sink cabinet.

    - A custodial storage closet is located in the center of the Library. The closet contains a mop sink, numerous cleaning chemicals and custodial supplies. The closet does not have any exhaust ventilation. A strong musty and cleaning chemical odor was observed in the closet. Fungal growth was observed at the base of the gypsum wallboard wall inside the closet. Further investigation revealed fungal growth in the wall cavities. The fungal growth is likely due to spills and overfills from the sink and mop buckets over many years.

- Fresh air is supplied to the library by two unit ventilators located at the West exterior wall near the main entry. Heavy dust and debris is located in the control boxes, return openings and in the outside air intakes. The South unit ventilator right of the main entry door has numerous boxes being stored on top and in front blocking return and supply air flows. The outside air intake screen is damaged on the South unit ventilator.

- The ventilator filter media value for the filters presently used is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for these two units, which allows unfiltered air to enter the room.

- Roof stormwater drains directly in front of the outside air intakes of each of the Library unit ventilators. Suspect biological growth was observed in close proximity to the intake grills.

2. Classroom 1

- Housekeeping was observed to be fair to good. Minimal clutter and dust accumulation was observed.

- The floor finish in this room is an older carpet. This carpet cannot be adequately cleaned to prevent impacts to air quality. The carpet appears to be beyond its useful life.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Items were observed to be stacked on top of this unit ventilator and in front of the return air grill.

- The outside air intake louvers were observed to be partially closed and damaged.

- All fluorescent light fixtures were checked in this room for suspect PCB concerns. All ballasts were found to be labeled “No PCBs” and no suspect PCB residue was observed.

3. Classroom 2

- The floor finish in this room is a newer carpet that is approximately five years old. Housekeeping is good. Minimal clutter and dust accumulation was observed. Plants observed in this room are in good condition with no visible fungal growth.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Items were stacked on top of this ventilator and in front of the return air grill.

4. Classroom 3

- The floor finish in this room is a newer carpet that is approximately five years old. Housekeeping is fair. Minimal clutter and dust accumulation were observed. Plants observed in this room are in good condition with no visible fungal growth.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers were observed to be partially closed.

- A cabinet was placed in front of the unit ventilator blocking the return air grill.

- An open bag of fertilizer was stored on a shelf in the classroom near the exterior door.

5. Classroom 4

- The floor finish in this room is a newer carpet that is approximately five years old. Housekeeping appeared adequate. Minimal clutter and dust accumulation. Plants observed in this room are in good condition with no visible fungal growth.

- Black residue was observed on the wood ceiling beam. It appears to be roofing tar residue.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Minor debris is located in the return opening. Moderate debris was observed in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers are damaged and also blocked with a bookshelf and a raised wooden box filled with sand.

- Items were stacked in front of this ventilator.

- PBS observed a significant “burnt” smell in this unit ventilator while it was running.

6. Classroom 5

   - The floor finish in this room is newer carpet approximately five years old. Housekeeping appeared adequate. Minimal clutter and dust accumulation. Plants observed in this room were in good condition.

   - PBS observed an upholstered chair and several area rugs. These items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

   - The carpet beneath the drinking water dispenser was wet. Building materials that remain wet for long period of time promote fungal growth.

   - Minor efflorescence (crystalline mineral deposits) was observed on the interior South brick wall. No evidence of fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.

   - Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Minor dust and debris were observed in the supply and return opening. Moderate dust and debris were observed in the control boxes and in the outside air intake on the exterior of the building.

   - The ventilator filter media value for the filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

   - PBS observed a slight “burnt” smell while this unit ventilator was operating.

7. Classroom 6

   - The floor finish in this room is a newer carpet approximately five years old. Housekeeping appeared adequate. Minimal clutter and dust accumulation. Plants observed in this room have dead plant material in the pots but no visible fungal growth was present. Dead plant materials degrade and become airborne impacting air quality.

   - PBS observed an electric cooking burner, pots, pans, measuring cups and dishes. Cooking generates odors and particulate and causes the release of chemicals impacting air quality.

   - Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Minor dust and debris is located in the return and supply opening. Moderate dust and debris was observed in the control boxes and in the outside air intake on the exterior of the building.

   - The ventilator filter media value for the filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers appear to be damaged.

8. Classroom 7

   - The floor finish in this room is a newer carpet approximately five years old. Housekeeping is fair. Minimal clutter and dust accumulation. Several plants were observed in this room. One plant has dead plant material and suspect fungal growth. Fungal growth and dead plant materials have the potential to impact air quality.

   - Minor efflorescence (crystalline mineral deposits) was observed on the interior of the brick exterior wall. No evidence of fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.

   - PBS observed evidence of cooking in the room. Cooking generates odors, particulate and causes the release of chemicals impacting air quality.

   - Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the control boxes and in the outside air intake on the exterior of the building.

   - The ventilator filter media value for the filter presently used is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

   - The outside air intake louvers appeared damaged and there are a lot of items stored near the intake.

9. South Pod – Montessori Central Common Area

   - Housekeeping was fair and clutter moderate. A light to moderate dust accumulation was observed on top of light fixtures and metal storage cabinets. The space is filled with storage cabinets, student projects, educational materials, paint equipment cleaning stations, a few plants, two vacuum cleaners, and numerous other items.

   - PBS observed a moldy plant sitting on a sink counter. Fungal growth and dead plant materials have the potential to impact air quality.

   - There are two sink cabinets located in the central common area. Water staining was observed inside each cabinet. Suspect fungal growth was observed on the back wall in the base of the West sink cabinet and water staining was present.

   - The floor finish in this room is a newer carpet. There is an HVAC exhaust grill but no supply grills.

10. South Pod Attic – Elementary Montessori

    - The attic is situated directly above the central common area. A mechanical stair in the central common area drops down from the ceiling to provide access to this circular space. The teachers in South Pod use this space to store educational

materials and a variety of other items. The space has no HVAC supply or exhaust ventilation system to treat the air in the space. The attic contains a water tank that provides hot water to the two sinks in the central common area. The classroom (Rooms 1-7) HVAC exhaust ventilation fan and metal ducting is located in the attic along the perimeter walls.

- Stored items occupy the majority of available space with walking paths between. Housekeeping was fair to poor with a moderate accumulation of dust, dirt and debris. Garden tools with significant dirt attached and dirt on the floor surrounding the tools; open bags of table salt, open bags of plaster of paris and sand; open buckets of sand and sawdust; and an open can of house paint was observed in the attic space. These items have the potential to impact air quality.

- Construction debris from a 2015 cabling upgrade project was observed throughout the perimeter of the attic. The debris mostly consisted of gypsum wallboard dust and debris. The AHERA Management Plan presumes the gypsum wallboard and associated joint compound to be asbestos-containing. PBS performed bulk testing to determine/verify the asbestos content of the material. Testing revealed the gypsum wallboard joint compound to be asbestos-containing. The gypsum wallboard debris was not properly cleaned by the contractor after construction activities were completed.

  Additionally, pipe insulation debris was observed on the floor around the hot water tank. It appears that when the hot water tank was replaced pipe insulation was removed to retrofit new piping from the tank to the building system. Pipe insulation debris from that project was not properly cleaned up. The AHERA Management Plan identifies the pipe hard fitting insulation as asbestos-containing. Additional testing from horizontal surfaces revealed accumulated surface dust to be contaminated with asbestos fibers. PBS informed the Monroe School District immediately of our findings. PBS recommended to the Monroe School District the attic space be sealed off and all access restricted. The Monroe School District quickly responded by hiring a professional abatement contractor to perform asbestos debris cleaning. PBS recommended the attic be cleaned by trained and experience abatement professionals in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 AHERA. A work plan was prepared and PBS was onsite during that work to help verify the cleaning process to be in compliance with state and federal regulations. This work will be documented in a separate report.

- Several gallon sized cans of paint were stored in the attic. The paints were presumably used in classrooms by teachers and parents. One of the cans was open and as such, improperly stored. Off-gassing/drying paint impacts air quality. Numerous improperly stored paints have been observed throughout campus in classrooms, common areas and storage areas.

11. Classroom 8

- Housekeeping appeared adequate and clutter was minimal. A light to moderate dust accumulation was observed.

- A toaster and microwave were observed in this room. Cooking generates odors and particulate and causes the release of chemicals impacting air quality.

- The floor finish in this room is concrete. It is our understanding that the carpet was removed over Christmas break in 2015. Carpet removal included manual demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room and carpet mastic debris in the unit ventilator return. It is PBS' understanding that engineering controls during carpet removal and floor grinding consisted of opening the exterior door, operating the building exhaust fan, removing furniture, and covering cabinets with plastic sheeting. Most all surfaces were vacuumed when floor grinding was completed. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. These demolition activities generate a significant quantity of small particulate that remains airborne for several days if not properly controlled.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

12. Classroom 9

- Housekeeping appeared adequate and clutter was minimal. A light to moderate dust accumulation was observed.

- The floor finish in this room is concrete. It is our understanding that the carpet was removed over Christmas break in 2015. Carpet removal included manual demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room and carpet mastic debris in the unit ventilator return. It is PBS' understanding that engineering controls during carpet removal and floor grinding consisted of opening the exterior door, operating the building exhaust fan, removing furniture, and covering cabinets with plastic sheeting. Most all surfaces were vacuumed when floor grinding was completed. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. These demolition activities generate a significant quantity of small particulate that remains airborne for several days if not properly controlled.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate to heavy dust and debris was observed in the return opening, supply opening (wood shavings), control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filters presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- PBS observed a slight “burnt” smell while this unit ventilator was running.
- The outside air intake louvers are damaged.
- There are several unlabeled four ounce plastic bottles with a brown and clear liquids located in a metal storage cabinet.
- Numerous bags of seashells are stored on bookshelves in this space. A teacher reported adverse health impacts after handling these shells. The origin of the shells is unknown to the investigator. If the shells were not thoroughly cleaned they have the potential to cause adverse health effects to sensitive individuals.

13. Classroom 10

- Housekeeping appeared adequate and clutter was minimal. A light to moderate dust accumulation was observed.
- Minor efflorescence (crystalline mineral deposits) was observed on the interior of the brick exterior wall. No evidence of fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.
- The floor finish in this room is concrete. It is our understanding that teachers/parents removed this carpet over a weekend. The removal date is unknown to PBS. Carpet removal included mechanical grinding to remove residual carpet mastic. PBS observed carpet mastic debris in the unit ventilator return. Engineering controls during carpet removal and floor grinding are not known to the investigator. It is PBS’ opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. Concrete/mastic grinding generates a significant quantity of dust and debris.
- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the return opening, the control boxes and in the outside air intake on the exterior of the building.
- The ventilator filter media value for the filters used presently is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.
- The outside air intake louvers appeared to be damaged.
- The light fixtures in this room were assessed for suspect PCB contamination from the ballasts. Evidence of ballast residue was observed in two fixtures.

14. Classroom 11

- Housekeeping appeared adequate. Minimal clutter and dust accumulation.
- Cleaners, paints and candles were noted in the storage cabinet.

- The floor finish in this room is concrete. It is our understanding that the carpet was removed over Christmas break in 2015. Carpet removal included manual demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room and carpet mastic debris in the unit ventilator return. It is PBS' understanding that engineering controls during carpet removal and floor grinding consisted of opening the exterior door, operating the building exhaust fan, removing furniture, and covering cabinets with plastic sheeting. Most all surfaces were vacuumed when floor grinding was completed. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. These demolition activities generate a significant quantity of small particulate that remains airborne for several days if not properly controlled.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Items were stacked in front of this ventilator.

15. Classroom 12

- Housekeeping appeared adequate. Minimal clutter and dust accumulation was observed. Several plants were observed in this room. Two plants have suspect fungal growth. Fungal growth and dead plant materials have the potential to impact air quality.

- PBS observed an upholstered chair. Upholstered items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

- The floor finish in this room is concrete. It is our understanding that the carpet was removed over Christmas break in 2015. Carpet removal included manual demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room and carpet mastic debris in the unit ventilator return. It is PBS' understanding that engineering controls during carpet removal and floor grinding consisted of opening the exterior door, operating the building exhaust fan, removing furniture, and covering cabinets with plastic sheeting. Most all surfaces were vacuumed when floor grinding was completed. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. These demolition activities generate a significant quantity of small particulate that remains airborne for several days if not properly controlled.

- Open bags of sand and gravel were noted inside a storage cabinet. Particulate from sand and gravel has the potential to impact air quality.

- A five-gallon bucket that contains dirt, debris and a funnel was noted inside the storage cabinet. Particulate from sand and gravel has the potential to impact air quality.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers appeared to be damaged.

- Plants are located on top of and around this unit ventilator. No fungal growth was observed. Additionally, a media air filter was taped to the supply grill.

16. Classroom 13

- Housekeeping appeared adequate. Minimal clutter and dust accumulation was observed.

- PBS observed two area rugs. According to the teacher these rugs are not part of the typical cleaning routine and have never been cleaned since they have been in the classroom. Area rugs tend to accumulate dust, debris and other potential allergens.

- PBS observed brooms that are used for dry sweeping. Dry sweeping and dusting creates significant airborne particulate that has the potential to impact sensitive individuals.

- Minor efflorescence (crystalline mineral deposits) was observed on the interior of the brick exterior wall. No evidence of fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.

- The teacher was concerned about fungal growth associated with the sink. The sink is located in the central common area and shares a common wall with the classroom. PBS performed a non-destructive investigation of the sink and surrounding finishes. PBS found no evidence of fungal growth or odors associated with fungal growth in the classroom or the sink cabinet. PBS evaluated this location with an infrared camera and found no anomalies (i.e. evidence of excessive moisture). There is water staining in the base of the sink cabinet, however, the cabinet is in relatively good condition. PBS did not open the wall cavity.

- The floor finish in this room is concrete. It is our understanding that teachers/parents removed this carpet over a weekend. Carpet removal included mechanical grinding to remove residual carpet mastic. PBS observed carpet mastic debris in the unit ventilator return. Engineering controls during carpet removal and floor grinding are not known to the investigator. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control

contaminants and that all surfaces impacted by the work were not properly cleaned. Concrete/mastic grinding generates a significant quantity of dust and debris.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the return, control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

17. East Pod Attic – Math and Science

- The attic is situated directly above the central common area. A mechanical stair in the central common area drops down from the ceiling to provide access to this circular space. The teachers in East Pod use this space to store educational materials, art projects and a variety of other items. The space has no HVAC supply or exhaust ventilation system to treat the air in the space. The attic contains a water tank that provides hot water to the two sinks in the central common area below. The classroom (Rooms 8-13) HVAC exhaust ventilation fan and metal ducting is located in the attic along the perimeter walls.

- Stored items fill approximately 50% of available space. Housekeeping was poor with a moderate to heavy accumulation of clutter, dust, dirt, and debris. Broken glass and fluorescent light tubes were observed. Additional intact fluorescent light tubes were observed to be improperly stored. All fluorescent light tubes contain mercury and if broken, has the potential to contaminate surrounding surfaces.

- Construction debris from a 2015 cabling upgrade project was noted throughout the perimeter of the attic. The debris mostly consisted of gypsum wallboard dust and debris. The AHERA Management Plan presumes the gypsum wallboard and associated joint compound to be asbestos-containing. PBS performed bulk testing to determine/verify the asbestos content of the material. Testing revealed the gypsum wallboard joint compound to be asbestos-containing. The gypsum wallboard debris was not properly cleaned by the contractor after construction activities were completed.

  Additionally, pipe insulation debris was observed on the floor around the hot water tank. It appears that when the hot water tank was replaced pipe insulation was removed to retrofit new piping from the tank to the building system. Pipe insulation debris from that project was not properly cleaned up. The AHERA Management Plan identifies the pipe hard fitting insulation as asbestos-containing. Additional testing from horizontal surfaces revealed accumulated surface dust to be contaminated with asbestos fibers. PBS informed the Monroe School District immediately of our findings. PBS recommended to the Monroe School District the attic space be sealed off and all access restricted. The Monroe School District quickly responded by hiring a professional abatement contractor to perform asbestos debris cleanup. PBS recommended the attic be cleaned by trained and experience abatement professionals in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 AHERA. A work plan was prepared and PBS was onsite during that

work to help verify the cleaning process to be in compliance with state and federal regulations. This work will be documented in a separate report.

- PBS was requested to evaluate the interior of the exhaust ducting in the Pod attic. Small holes were drilled to allow borascope access. The borascope revealed a significant amount of accumulated dust on the interior of the exhaust ducting. We understand that the exhaust ducting was used to remove airborne concrete dust during floor grinding activities.

18. East Pod – Math/Science Central Common Area

- Housekeeping appeared adequate and clutter was minimal. A moderate dust accumulation was observed on top of light fixtures and a heavy accumulation on top of metal storage cabinets.

- The metal storage cabinets located along the West wall contain numerous partially burned candles. Burning candles in school buildings generates airborne soot, odors, and potentially releases chemicals impacting air quality.

- The floor finish in this room is concrete. It is our understanding that the carpet was removed over Christmas break in 2015. Carpet removal included manual demolition and mechanical grinding to remove most, but not all, residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room. It is PBS' understanding that engineering controls consisted of closing classroom doors, removing furniture, and covering cabinets with plastic sheeting. Surfaces were vacuumed when floor grinding was completed. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned. These demolition activities generate a significant quantity of small particulate that remains airborne for several days if not properly controlled.

- There are two sink cabinets located in the central common area. Water staining was noted inside each cabinet, however, no evidence of fungal growth was observed.

- A damaged unlabeled can of paint (presumed) was noted under a sink.

19. Classroom 14

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers appeared to be damaged.

20. Classroom 15

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- During our investigation, PBS was requested to evaluate an odor in this room. The teacher had moved all her students out of the room. PBS found the odor was being generated by a Tempura Paint that had been applied to cloth as part of a project and was drying in the room. It is our understanding that when these paints become contaminated and "go bad", they generate foul odors. PBS recommended the art projects be moved to a well ventilated area.

21. Classroom 16

- Housekeeping was fair and clutter was moderate. A moderate dust accumulation was observed on surfaces throughout classroom.

- The floor finish in this room is an older carpet. This carpet cannot be adequately cleaned to prevent impacts to air quality. The carpet appears to beyond its useful life.

- PBS observed an area rug and an upholstered chair. These items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

- PBS observed two crock pots, food, dishes and eating utensils. Cooking generates odors and particulate and can cause the release of chemicals impacting air quality.

- Minor efflorescence (crystalline mineral deposits) was observed on the interior of the brick exterior wall. No evidence of fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris was observed in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers appeared to be damaged.

22. Room 16a (Staff Break/Storage Room)

- Housekeeping was fair and clutter was moderate. A light dust and food debris accumulation was observed.

- The floor finish in this room is an older carpet. This carpet cannot be adequately clean to prevent impacts to air quality. The carpet appears to be beyond its useful life.

- PBS observed powdered and aerosol cleaners under the sink in this space.

- An exhaust air grill was observed on the ceiling but no supply air was apparent.

23. Classroom 17

- Housekeeping was fair and clutter was moderate. A moderate dust accumulation was observed on top of light fixtures and casework.

- PBS observed two area rugs. Area rugs are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

- The floor finish in this room is an older carpet. This carpet cannot be adequately clean to prevent impacts to air quality. The carpet is beyond its useful life.

- PBS observed a Clorox aerosol spray inside the built-in cabinet.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Moderate dust and debris was observed in the return opening. Heavy dust and debris was observed in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- Items were stacked in front of and on top of this unit ventilator.

- The outside air intake louvers appear to be damaged.

24. Classroom 18

- Housekeeping appeared adequate and clutter was moderate. A moderate dust accumulation was observed on top of light fixtures and casework.

- The floor finish in this room is an older carpet. This carpet cannot be adequately cleaned to prevent impacts to air quality. The carpet is beyond its useful life.

- PBS observed a household multi-purpose cleaner and Clorox aerosol spray.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy to moderate dust and debris is located in the return opening, the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake louvers appear to be damaged.

25. Classroom 19

- Housekeeping appeared adequate and clutter was minimal. A moderate dust accumulation was observed on top of light fixtures and file cabinets. Heavy dust/debris accumulation was observed at the perimeter of the room and in the return air grill opening.

- The floor finish in this room is concrete. It appears that the carpet mastic removal process included floor grinding. PBS observed a significant quantity of residual concrete and carpet mastic debris throughout the perimeter of the room and inside the return air grill of the unit ventilator. It is our understanding that teachers/parents performed this work over a weekend. It is PBS' opinion that engineering controls during the floor grinding process were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned.

- PBS observed an upholstered chair, a large area rug, numerous small cloth floor mats, and cloth curtains on windows and bookshelves. Upholstered items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

- A black debris/residue was observed on the metal window frames. The teacher was concerned it was fungal growth. It is PBS opinion that the residue is predominately dirt and debris that accumulates on moisture at the perimeter of the operable window sash. Some minor fungal growth may be present. This was typical throughout all buildings.

- PBS observed lavender therapy oils, aerosol hair sprays, household multi-purpose cleaners, cedar wood oils, and spray starch.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris was observed in the return opening, the control boxes and in the outside air intake on the exterior of the building. The residual carpet mastic was removed from the concrete floor by grinding. Significant concrete (silica) and carpet mastic dust and debris was observed in the return and on the floor around the perimeter of the room.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- The outside air intake pest screens appear to be damaged.

26. Classroom 20

- The floor finish in this room is an older carpet. This carpet cannot be adequately cleaned to prevent impacts to air quality. The carpet is beyond its useful life.

- Significant efflorescence (crystalline mineral deposits) was observed on the interior of the brick exterior wall. Minor fungal growth was associated with this water intrusion. The roof drain on the exterior of the wall is damaged and leaking against the building.

- The teacher was concerned about potential fungal growth in the shared common area sink wall cavity. PBS investigated for evidence of fungal growth in the wall cavity and none was found.

- PBS observed two areas rugs and a pillow in the classroom. These items are not part of the typical cleaning routine and tend to accumulate dust, debris and other potential allergens.

- Numerous dry erase markers were observed in the classroom. These markers contain significant VOC's that impact air quality.

- Fresh air is supplied to this classroom by a unit ventilator located at the exterior wall. Heavy dust and debris is located in the control boxes and in the outside air intake on the exterior of the building.

- The ventilator filter media value for the filter presently in use is less than MERV 8, which is inadequate for removing small respirable particulate. Additionally, the filter is incorrectly sized for this unit which allows unfiltered air to enter the room.

- An air filter was observed to be taped to the supply grill.

27. North Pod – Humanities Central Common Area

    - Housekeeping appeared adequate and clutter was moderate. Numerous boxes were being stored in this room. A moderate dust accumulation was observed on top of light fixtures.

    - There is one sink cabinet located in the central common area. Water staining was noted inside this cabinet, however, no evidence of fungal growth was observed. A hole has been cut in the back of the sink cabinet to access the plumbing.

    - Cleaners (i.e. powdered Ajax Bleach and GumOff) and paints were being stored under the sink.

    - The floor finish in this room is an older carpet. This carpet cannot be adequately clean to prevent impacts to air quality. The carpet appears to be beyond its useful life.

    - No HVAC supply or exhaust was observed in this space.

28. North Pod Attic – Humanities

- The attic is situated directly above the central common area. A mechanical stair in the central common area drops down from the ceiling to provide access to this circular space. The teachers in North Pod use this space to store educational materials and a variety of other items. Additionally, numerous computer parts were stored in this attic. The space has no HVAC supply or exhaust ventilation system to treat the air in the space. The attic contains a water tank that provides hot water to the two sinks in the central common area. The classroom (Rooms 14-20) HVAC exhaust ventilation fan and metal ducting is located in the attic along the perimeter walls.

- Stored items occupy approximately 50% of available space. Housekeeping was fair with a moderate accumulation of dust, dirt and debris.

- PBS observed several of the exhaust damper levers were in the closed position. It is our understanding that some of the damper controls are mislabeled. Additionally, it is our understanding that teachers have adjusted the damper controls.

- Construction debris from a 2015 cabling upgrade project was noted throughout the perimeter of the attic. The debris mostly consisted of gypsum wallboard dust and debris. The AHERA Management Plan presumes the gypsum wallboard and associated joint compound to be asbestos-containing. PBS performed bulk testing to determine/verify the asbestos content of the material. Testing revealed the gypsum wallboard joint compound to be asbestos-containing. The gypsum wallboard debris was not properly cleaned by the contractor after construction activities were completed.

  Additionally, pipe insulation debris was observed on the floor around the hot water tank. It appears that when the hot water tank was replaced pipe insulation was removed to retrofit new piping from the tank to the building system. Pipe insulation debris from that project was not properly cleaned up. The AHERA Management Plan identifies the pipe hard fitting insulation as asbestos-containing. Additional testing from horizontal surfaces revealed accumulated surface dust to be contaminated with asbestos fibers. PBS informed the Monroe School District immediately of our findings. PBS recommended to the Monroe School District the attic space be sealed off and all access restricted. The Monroe School District quickly responded by hiring a professional abatement contractor to perform asbestos debris cleanup.

  PBS recommended the attic be cleaned by trained and experience abatement professionals in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 AHERA. A work plan was prepared and PBS was onsite during that work to help verify the cleaning process to be in compliance with state and federal regulations. This work will be documented in a separate report.

- Several gallon sized cans of paint were stored in the attic. The paints were presumably used in classrooms by teachers and parents. One of the cans was open and as such, improperly stored. Off-gassing/drying paint impacts air quality. Numerous improperly stored paints have been observed throughout campus in classrooms, common areas and storage areas.

29. Library/Classroom Pod Building Exterior

- Rain gutters were observed to be overflowing. Roof drain piping is damaged in many locations causing stormwater to flow against and intrude into the brick exterior wall. This causes efflorescence (crystalline mineral deposits) on the interior walls. The roof water is designed to flow into subgrade “French” drains located at the base of the exterior brick wall. Many of these subgrade drains appear to be clogged, as overflows were observed during rain events. The overflows are causing water intrusion and efflorescence inside the building.

- PBS recommends the roof drain system throughout this building be evaluated and repaired as appropriate to prevent building water intrusion.

General Observations (Non-site specific observations)

30. Construction Activities

- Minor gypsum wallboard construction dust and debris from a 2015 cabling upgrade project was noted in occupied spaces throughout campus. It is our understanding that the intent of the cabling upgrade project was to add wireless data connections throughout. The project included installing wireless routers and running cabling in every instructional and office space throughout campus.

- The dust and debris was observed on most all horizontal surfaces beneath penetrations that were cut through the gypsum wallboard for cable pathways. Gypsum debris was also observed in attic spaces where cable routing took place. This is an indication that housekeeping by the contractor was poor. The AHERA Management Plan presumes the gypsum wallboard and associated joint compound to be asbestos-containing. PBS performed bulk testing to determine/verify the asbestos content of the material. Testing revealed the gypsum wallboard joint compound to be asbestos-containing. The gypsum wallboard debris was not properly handled or cleaned up by the contractor after construction activities were completed. PBS informed the Monroe School District immediately of our findings. The Monroe School District quickly responded by hiring a professional abatement contractor to HEPA-vacuum and wet wipe gypsum debris from every location where cabling was installed throughout campus. PBS was onsite during that work to help verify the cleaning process to be adequate.

  PBS recommends verifying asbestos content of all building materials prior to any impacts. If asbestos-containing materials are identified all impacts must be performed in accordance with WAC 296-62-07 and 40 CFR Part 763 AHERA. PBS recommends that all construction and maintenance housekeeping practices be evaluated. A work plan should be prepared and verified to address any potential asbestos impacts. Anytime a construction project takes place construction dust and debris not only impacts air quality but also creates potential worker and occupational exposures to hazardous materials.

31. Pest/Rodents

- During our assessment of the campus PBS found no evidence of significant rodent or pest activity within the buildings. We understand that there have been minor concerns regarding insects and mice in a few locations over the years.

32. Housekeeping

- Based on discussions with custodial staff, it is our understanding that housekeeping practices in the summer months includes the following; cleaning touch points, wiping walls, waxing floors, extraction cleaning most carpets, and use of feather dusters and microfiber cloths to dust throughout. During the school year custodians vacuum visible debris from floors in Library, Gathering Place, Restrooms and Home Ec. All other locations are vacuumed every other day, if time permits. Custodians also empty garbage cans, clean up visible debris, clean dirty substrates and mop floors when needed. Walk-off mats are not part of the cleaning routine.

3.2 Heating Ventilation and Air Conditioning (HVAC) Review

Generally, between 80% and 95% of all indoor air quality concerns can be attributed to faulty HVAC systems. Generally, the HVAC system is the only means of introducing outside air or clean air into a work area. Occasionally, it has been demonstrated that the HVAC system was the source of the contaminant that has caused an indoor air quality concern. Conversely, it is often the HVAC system that is the primary means of remedying the indoor air quality concern. As part of these investigations, PBS typically reviews the HVAC history and assesses the condition of the pertinent components of the HVAC system. The following is a general summary of our findings and recommendations.

Ventilation is provided to the Administration Building, Gymnasium Building, Technology Building and a portion of the Annex Building by roof top air-handling units. These units have not been investigated by PBS. We understand the Monroe School District hired a professional HVAC firm (McKinstry) in January 2016 to evaluate these units. PBS has not reviewed the findings of that assessment.

Ventilation is provided to the Library/Classroom Pod Building and a portion of the Annex Building by wall mounted unit ventilators installed approximately 5 years ago. Exhaust ventilation is provided to the Library/Classroom Pod Building from an exhaust fan and ducting located in the mechanical mezzanine (central attic area) also installed approximately 5 years ago. PBS has evaluated the general condition of these systems. See Section 3.2 Visual Investigations for a description of our observations of these systems.

<u>HVAC Controls</u>

It has been reported that staff and parents have made adjustments to unit ventilator fan motor controls and attic damper levers in the Library/Classroom Pod Building and the Annex Building. It is our understanding that the unit ventilator fans make significant noise and the cold air coming from the unit ventilators is uncomfortable. In some cases the unit ventilators had been turned off. There is an exhaust fan motor located in each (i.e. North Pod, East Pod, South Pod) Classroom Pod Attics. PBS understands that each of these exhaust fan motors were turned off because it created cold air currents that were uncomfortable to some occupants. Turning fans off reduce the amount of fresh outside air and air that is exhausted. This tends to increase the concentration of carbon dioxide and other contaminants in these spaces. Improper adjustments greatly impact air quality and cause adverse health impacts to sensitive individuals. It is our

understanding that a professional HVAC firm (McKinstry) has checked all HVAC supply and exhaust systems throughout the campus to help ensure they are functioning properly and are correctly balanced. PBS recommends that only trained and authorized HVAC personnel familiar with the systems be allowed to make adjustments.

Outside Air Intakes

The outside air intakes for all unit ventilators, except Annex Room D, are located near the ground surface. As such, dust and debris from the ground tends to get drawn in and clog the pest screens. Additionally, PBS observed dead plant materials, compost piles, moldy wood, garden tools, garbage cans, shoe racks, and miscellaneous other items in front of the outside air intakes. These items tend to impede air flow. Any particulate or odor associated with these items can easily become airborne and enter the building impacting air quality. PBS recommends that no items be placed near the outside air intakes. The ground in front of the outside air intakes should be free of loose materials such as soil, dust, construction debris, etc. Custodial staff should be cautious about dry sweeping or leaf blowing in front of the outside air intakes. Maintenance staff should be cautious about storing construction related debris near any intake.

Unit Ventilator Filter Media

The unit ventilator in-place filter media is less than a MERV 8, which is inadequate for preventing small respirable particulate from entering the room. The manufacturer of these unit ventilators does not provide or recommend the use of anything other than simple filter media. The Monroe school District is currently piloting the use of MERV Rated filters in these systems.

Additionally, the filter itself is incorrectly sized for all units which also allow unfiltered air to enter the room.

HVAC Blockage

PBS observed plants, art work, chairs, tables, bookshelves, filters, papers, lab experiments, boxes and various other items stacked on top of supply grills and in front of the return grills inside the classrooms. PBS recommends administrative policies and procedures be implemented to prevent these activities.

Custodial Closet Ventilation

Most custodial closets throughout campus that contained cleaning chemicals had odors associated with those chemicals. Exhaust ventilation in those closets was minimal and or non-existent. PBS recommends that all custodial closets that contain chemicals, be well ventilated. PBS recommends that the exhaust ventilation systems in all custodial storage closets and rooms be evaluated and corrected to meet current standards for custodial closets.

3.3 Chemical Storage

PBS observed a variety of chemicals used and stored throughout campus. The following is a summary our findings and recommendations.

Labeling

Numerous unlabelled chemicals were observed in classrooms and custodial areas throughout campus. PBS understands that some of these chemicals have been donated. PBS did not perform a chemical inventory or look in all chemical storage cabinets.

Paints, Stains and Solvents

PBS observed paints, stains, and associated solvents are being stored in classrooms, common areas, custodial closet's, attic's, storage closets, under sinks and in various other areas. PBS understands that some of these chemicals are donated to the school and some are brought in by parents and staff. PBS reviewed some of the labels and noted that some of these chemicals contain metals and some contain high concentrations of volatile organic compounds. PBS observed significant odors associated with some containers. Many are stored in unventilated areas. PBS observed paint and solvent containers with no lids and or partially opened. PBS performed testing of interior and exterior damaged paints in various areas of the campus and found one of the paints to be PCB-containing (See Section 3.17 for paint testing activities). Paints that contained PCB's were typically intended for outdoor and industrial use only. It is PBS' opinion this is a result of using a donated and unauthorized paint inside the building. PBS recommends that only Monroe School District approved paints and solvents be used and or stored in these buildings. PBS recommends that well ventilated designated storage areas be established. All donated paints should be evaluated prior to use or storage. PBS recommends that administrative policies and procedures be implemented to prevent unauthorized paints, stains and solvents from being stored/used in schools buildings.

Cleaning Chemicals

Numerous cleaning chemicals were observed throughout the campus in the janitor's closets, classrooms, common areas, and storage areas. The cleaning chemicals varied throughout from window cleaners, disinfectants, powdered cleansers, solvents, etc. It appears that some are brought from home by staff and parents, some have been onsite for many years and some have been recently brought to the campus by the Monroe School District. Powdered cleansers and fine mist aerosols should not be used as they tend to become airborne, settle in the resident dust and then potentially impact sensitive individuals.

No cleaning chemicals should be brought onto campus unless they have been pre-approved by the Monroe School District. PBS recommends the Monroe School District Chemical Hygiene Officer, trained custodial staff, maintenance staff and or trained teachers evaluate all chemicals stored and used in every room. If stored chemicals are not being used they should be discarded in accordance with manufacturer's instructions. Unknown/unidentified chemicals should be discarded in accordance with WAC 246-366-140 and WAC 173-303. PBS recommends that only Monroe School District approved cleaners and disinfectants be used and or stored in these buildings. PBS recommends that administrative policies and procedures be implemented to prevent unauthorized cleaners from being stored/used in school buildings.

3.4 Ventilation Monitoring

The most common indoor air quality complaints are typically associated with the building ventilation system, which controls heating, cooling, contaminant removal, and the intake of fresh air. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has established standards and guidelines to assist the industry and the public by offering a

uniform method of testing, by suggesting safe practices in the design and installation of equipment, by providing uniform definitions of equipment and practices, and by providing additional information that may serve to guide the industry. These industry standards and guidelines are voluntary and are not mandatory. They do, however, present the current indoor air quality state-of-the-art practices and are used to help evaluate heating, ventilation and air-conditioning (HVAC) systems.

PBS performed general ventilation monitoring at thirty-three (33) locations inside and outside the study area. Monitoring was performed utilizing a Q-Trak™ Model 7565 Indoor Air Quality Monitor manufactured by TSI. The Q-Trak™ is a data-logging instrument that measures and records four separate ventilation parameters. These parameters include carbon dioxide (CO_2), temperature, relative humidity (RH), and carbon monoxide (CO). The Q-Trak™ was set to collect a data point every 5 minutes. Total collection periods varied from approximately 24-48 hours. Testing of these four parameters can reveal potential causes of indoor environmental quality concerns, which are often related to the building HVAC system. Tables of the collected data from our testing activities are provided in Tab 3. Graphical representations of that data are provided in Tab 5. The graphs show time periods that samples were collected in each area. A summary of our findings follows below.

3.4.1 Carbon Dioxide

Carbon dioxide (CO_2) is a colorless odorless gas that is one of the primary by-products of combustion and respiration. Although CO_2 is not considered toxic, elevated levels can cause drowsiness, headaches, irritability and a general feeling of stuffiness.

Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) for CO_2, based on a time-weighted-average (TWA), is 5,000 ppm (parts per million). This level is typically used in industrial and commercial settings for worker exposures.

The current version of the American Society of Heating, Refrigeration and Air Conditioning (ASHRAE) Standard 62.1-2013, *Ventilation for Acceptable Air Quality*, does not provide a recommended upper limit for carbon dioxide concentrations. However previous versions of the standard have recommended that carbon dioxide concentrations be maintained below the outdoor air concentration plus 700 ppm. The number of comfort related complaints tends to increase when carbon dioxide reaches this level. Elevated carbon dioxide can also be an indicator of other potential issues.

Often in diagnosing the ventilation effectiveness of an HVAC system, measured indoor carbon dioxide levels are compared to measured outdoor levels. If indoor levels of carbon dioxide are significantly higher than outdoor levels, it is likely that there is a deficiency in the HVAC system. PBS collected an outside sample and the peak CO_2 level was 472 ppm. Therefore the threshold is approximately 1,172 ppm CO_2. Tab 3, Table 3 provides a list of sample locations and the corresponding carbon dioxide testing data. Tab 4, Drawing 2 provides a campus plan showing the sampling locations.

Table 3 shows the peak concentration reached for each location over the testing period. The peak concentrations were above the recommended ASHRAE Threshold in each of the following five areas:

- Gathering Place

The peak concentration was 1,734 ppm CO_2 which occurred at approximately 12:07 pm. The average concentration during occupied hours (approximately 8 am to 4 pm) was 1,099 ppm CO_2. From approximately 11 am to 1:30 pm the CO_2 level was above the recommended threshold. This was the time range when the room was most occupied with people eating lunch.

It is PBS opinion that adequate fresh air is not being supplied to this room.

- Administration Staff Room

  The peak concentration was 1,230 ppm CO_2 which occurred at approximately 12:27 pm. The average concentration during occupied hours (approximately 8 am to 4 pm) was 729 ppm CO_2. From approximately 12:20 pm to 12:30 pm the CO_2 level was above the recommended threshold. This was the time range when the room was most occupied for people eating lunch.

  PBS does not consider CO_2 to be a significant concern in this area.

- East Pod Center

  The peak concentration was 1,215 ppm CO_2 which occurred at approximately 12:30 pm. The average concentration during occupied hours (approximately 8 am to 4 pm) was 880 ppm CO_2. The 12:30 pm data point was the only data point that exceeded the recommended threshold. The exceedance was likely due to a curious onlooker.

  PBS does not consider CO_2 to be a significant concern in this area.

- Music Room

  The peak concentration was 1,270 ppm CO_2 which occurred at approximately 9:07 pm. The average concentration during daytime occupied hours (approximately 8 am to 4 pm) was 768 ppm CO_2. From approximately 8:30 pm to 9:15 pm the CO_2 level was above the recommended threshold. This was the time range when the community orchestra was using the room with a large group of people playing instruments. HVAC systems are typically turned off after 5 pm. PBS recommends that the HVAC system remain on during these events.

  PBS does not consider CO_2 to be a significant concern in this area.

- Room F

  The peak concentration was 1,315 ppm CO_2 which occurred at approximately 11:50 am. From approximately 9 am to 12 pm the CO_2 levels steadily rose to above the recommended threshold. The room appears to empty out after lunch because levels decrease and continue to decrease throughout the remainder of the day.

  It is PBS opinion that adequate fresh air is not being supplied to this room.

3.4.2 Temperature

The most common indoor air quality complaints are associated with poor temperature control. Maintaining a comfortable temperature for a variety of building occupants engaged in a variety of activities is the most difficult task facing a HVAC design engineer. People engaged in stationary activities such as data processing consider 72°F comfortable. However, if that person were engaged in a more strenuous activity, 72°F would be uncomfortably warm. ASHRAE recommends that indoor temperatures be maintained between 68°F to 75°F for most people engaged in sedentary activities and 64°F to 70°F for people engaged in strenuous activities. Tab 3, Table 4 provides a list of sample locations and the corresponding temperature testing data. Tab 4, Drawing 2 provides a campus plan showing the sampling locations.

Table 4 shows the temperature ranges for each location over the testing period. Temperatures ranges were outside of the recommended ASHRAE Thresholds in each of the following ten areas:

- Room 2

  Temperature spiked to 77.1 °F at approximately 7 pm and 76.5 °F at approximately 7 am. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 71.5 °F. The evening spike may have been due to a curious onlooker. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature and then cycling off after the initial start up to equalize. This is a typical fluctuation of unit ventilator systems.

  PBS does not consider temperature to be a significant concern in this space.

- Room 4

  Temperature spiked to 75.7 °F at approximately 7 am. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 69 °F. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature and then cycling off after the initial start up to equalize. This is a typical fluctuation of unit ventilator systems.

  PBS does not consider temperature to be a significant concern in this space.

- Room 6

  Temperature spiked to 76.0 °F at approximately 7 am and also dropped to 65°F several times during occupied hours. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 69 °F. The lower temperature may have been due to the exterior door or window being open.

- Room 9

  Temperature spiked to 79.6 °F at approximately 7:00 am and dropped below 68°F for a significant portion of typical occupied hours. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 67 °F. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature. At approximately 8 am the unit ventilator appears to have stopped operating or was shut off.

- Room 18

  Temperature spiked to 75.9 °F at approximately 7:00 am. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was approximately 72 °F. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature and then cycling off after the initial start up to equalize. This is a typical fluctuation of unit ventilator systems.

  PBS does not consider temperature to be a significant concern in this space.

- Room 20

  Temperature spiked to high of 78°F at approximately 7 pm and then rose several times during the day above the ASHRAE upper threshold. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was approximately 73°F. It appears the set point on this unit may be higher than others. As such, each time the unit ventilator cycles to set point temperature a spike is observed that is above the threshold.

  PBS does not consider temperature to be a significant concern in this space.

- Room B

  Temperature spiked to 78.9 °F at approximately 7:00 am. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was approximately 71 °F. The morning upward spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature.

  PBS does not consider temperature to be a significant concern in this space.

- Room C

  Temperature spiked to approximately 77 °F at approximately 7:00 am, 2:30 pm and 7:00 pm. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 72.5 °F. The afternoon and evening spikes may have been due to curious onlookers. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature and then cycling off after the initial start up to equalize. During occupied hours the cycling seemed typical.

  PBS does not consider temperature to be a significant concern in this space.

- Room D

  Temperature spiked to 80.6 °F at approximately 8:40 am at start up then appeared to cycle normally throughout the remainder of the day. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was approximately 74.5 °F. The morning spike was likely due to the HVAC unit ventilator starting up to bring the room up to set point temperature.

  PBS does not consider temperature to be a significant concern in this space.

- Room E

Temperature spiked to 78.3 °F at approximately 8:40 am at start up then appeared to cycle normally throughout the remainder of the day. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was approximately 72 °F. The morning upward spike was likely due to the HVAC unit starting up to bring the room up to set point temperature. This room has a roof mounted HVAC unit that provides fresh air.

PBS does not consider temperature to be a significant concern in this space.

3.4.3 Relative Humidity

Relative humidity (RH) is another comfort parameter that will often correlate with incidents of poor indoor air quality. High RH can support the growth of pathogenic or allergenic microorganisms. Examples of these organisms include certain species of fungi and dust mites. RH is the concentration of water vapor in air at a specific temperature compared to the concentration of water vapor that would represent saturation. Occupants in an area where RH is high will feel mugginess whereas indoor air with very low RH will cause irritation and dryness to sinuses, nasal passages and eyes.

Relative humidity inside a building can be managed by controlling temperature, by introducing more outside air (if appropriate), and by the use of humidifiers or de-humidifiers. Cooling indoor air decreases its ability to contain water in a vapor state and increases the RH. Conversely, heating air increases the amount of water vapor the air can contain and decreases the RH. ASHRAE recommends that RH be maintained between 30% and 60% for occupant comfort. RH levels greater than 70% have the potential to promote fungal growth. Tab 3, Table 5 provides a list of sample locations and the corresponding RH testing data. Tab 4, Drawing 2 provides a campus plan showing the sampling locations.

Table 5 shows the RH ranges for each location over the testing period. In Western Washington typical RH ranges from 30% to 60%. Depending on the weather this can vary from the low teens to 100% RH. It is PBS' understanding that the RH in the building is not controlled by the HVAC system but is a reflection of outside weather conditions. The day the outdoor RH readings were collected it ranged from 23% to 61%. All locations tested were within acceptable ranges with one exception:

- Classroom 20

  RH dropped to approximately 16% at approximately 4:45 pm. The average RH during daytime occupied hours (approximately 8 am to 4 pm) was approximately 23%. This average daytime reading was similar to other data collected during the same timeframe at the school campus.

  PBS does not consider RH to be a significant concern in this space.

3.4.4 Carbon Monoxide

Carbon monoxide (CO) can be introduced into a building by means of improperly vented furnaces, boilers or gas heaters, automobile exhaust from attached garages, street level air intakes near parking lots and loading dock areas, and environmental tobacco smoke. At low

concentrations, CO can cause fatigue and, possibly, chest pains. In higher concentrations, CO can cause impaired vision, headaches, nausea, flu-like symptoms, and can be fatal.

TLV (Threshold Limit Value) refers to concentrations of airborne substances representing conditions under which it is believed that nearly all people can be repeatedly or constantly exposed without adverse health effects. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV for CO is 25 ppm. The OSHA permissible exposure limit (PEL) for CO is 50 ppm. The ASHRAE recommended threshold for CO in indoor environments is 9 ppm. Tab 3, Table 6 provides a list of sample locations and the corresponding carbon monoxide testing data. Tab 4, Drawing 2 provides a campus plan showing the sampling locations.

Table 6 shows the CO readings for each location. All locations were below the AHSRAE recommended threshold with one exception:

- Music Room

  The peak concentration was 13.6 ppm CO which included one data point that occurred at approximately 2 pm. The elevated reading may have been due to an idling vehicle nearby. Most all other readings in this space were 0.0 ppm with a few that ranged up to 1.2 ppm.

  PBS considers does not consider CO to be a significant concern in the test area during this monitoring event.

3.5 Formaldehyde

Formaldehyde (HCHO) is a volatile organic compound (VOC) that, due to its extensive use in a variety of manufacturing processes, is ubiquitous in the modern environment. Formaldehyde is used in bonding/laminating agents (e.g. furniture), adhesives, paper and textile production, dry cleaning, foam insulation, cosmetics, and toiletries as a preservative. Formaldehyde is a known skin and mucous membrane irritant, allergen, and a suspected carcinogen.

PBS used Drager direct read colorimetric indicator tubes with a detection limit of 0.2 ppm for evaluating formaldehyde concentrations in each area.

The OSHA PEL for formaldehyde is 0.75 ppm. The TLV set by the ACGIH for formaldehyde is 0.3 ppm. Tab 4, Drawing 3 provides a campus plan showing the sampling locations.

Formaldehyde samples were collected in the following locations:

- Room B
- Room C
- Room D
- Administration Reception
- Administration Staff
- Small Gym West
- Small Gym East
- Room 2
- Room 4
- Room 5
- Room 6

- Room 7
- South Pod Central Common Area
- Room 9
- Room 11
- Room 13
- East Pod Central Common Area
- Room 18
- Room 20
- North Pod Central Common Area
- Library

No detectable levels of formaldehyde were observed. The analysis results indicate the formaldehyde concentrations in each sampling location were below the OSHA PEL and the ACGIH recommended TLV. Based on our testing and observations, formaldehyde levels were not a concern in the test areas at the time of our investigation.

3.6 Total Volatile Organic Compounds (TVOCs)

There are hundreds of VOCs found in the indoor air, sometimes in concentrations suspected of being harmful. VOCs are released from many housekeeping and maintenance products, building materials, furnishings and equipment, and from human metabolism. Examples include: acetone and alcohols that are byproducts of human metabolism and can be released from cleaners and personal care products; ammonia from cleaners and diazo copiers; aromatic hydrocarbons from combustion processes, pesticides, paints, and solvents; benzene from combustion processes, gasoline, and solvents; chlorinated hydrocarbons, from wood preservatives and solvents; styrene from carpet systems; phenols from equipment and furnishings; toluene from adhesives, gasoline, paints, and solvents; and 4-phenyl cyclohexane (4-PC) released from carpet systems.

PBS sampled for TVOCs in thirty-six (36) locations within the study area. These included custodial closets, chemical storage areas and various other representative areas throughout campus. Sampling was performed using a Rae Systems MiniRae 2000 Portable VOC Monitor. The measurement accuracy range is 0 – 2000 ppm +/- 2 ppm. Tab 4, Drawing 4 provides a campus plan showing the sampling locations.

TVOCs were not detected in the study area during this monitoring event.

3.7 Silica

PBS observed a fine light-colored dust in several East Pod classrooms. The dust was observed on horizontal surfaces and in unit ventilator returns. Carpet mastic debris was also observed in the unit ventilator return grills. PBS understands that the Monroe School District removed older carpet in some of those classrooms during Christmas Break in 2015. The carpet replacement process included manual demolition of the carpet. After carpet removal was completed the concrete floors were prepared for the new carpet finish by removing the old carpet mastic and leveling compounds. Commercial floor grinders were used to grind the mastic from the concrete substrate. Engineering controls included removing furniture, covering the unit ventilators with plastic sheeting, closing interior doors and also using the building exhaust ventilation system to help remove dust created by the grinding process. Additionally, we understand that all exposed surfaces in each room were vacuumed and wet wiped after carpet removal and floor preparation

activities were completed. It is PBS' opinion that engineering controls were inadequate to control the construction related concrete dust which contains crystalline silica.

Crystalline silica in the form of quartz is the second most common material in the earth's crust, making up 12% of the earth's crust. Because silica is so common, it is found everywhere -- in dirt, sand, gravel and rocks. It is a common part of most building products. It is in the concrete, brick, mortar, ceramic tile, ceramic sanitary ware (toilets), shingles and other items that are used in the construction of all homes. It is in the asphalt or concrete used to pave roads, the concrete to make sidewalks, airport taxiways and runways, the crushed stone upon which railroad ties and track are placed, and the other stone, gravel, concrete, and asphalt components of our transportation infrastructure. It is the primary raw material for all glass. Crystalline silica is so common, it is in the air at low levels nearly everywhere. Health effects from high silica exposures over prolonged periods include silicosis, chronic bronchitis, lung cancer, and kidney disease.

PBS performed indoor ambient sampling for crystalline silica in thirteen (13) locations where known concrete floor grinding has taken place. Sampling was performed in general accordance with NIOSH Method 7500 which uses a PVC cassette, aluminum cyclone and vacuum pump sampling train assembly. NIOSH Method 7500 is typically used to determine occupational exposures, however, was used at this site to gain a general understanding of potential ambient airborne silica during typical classroom activities. The high volume air pump is calibrated before and after testing with a pre-calibrated rotameter and a calibration jar. The rotameter is calibrated annually with a primary standard. Crystalline silica is measured in three forms; crystobalite, tridymite, and quartz.

Tab 3, Table 7 provides a list of sample locations and the corresponding silica test data. Tab 4, Drawing 5 provides a campus plan showing the sampling locations.

The laboratory found no detectable crystobalite or tridymite. Detectable concentrations of quartz were found in 8 of the 13 locations sampled. The highest concentration reported by the laboratory was 0.015 mg/m^3 which is less than the ACGIH-TLV of 0.025 mg/m^3.

The laboratory also reported total respirable dust. The highest concentration reported by the laboratory for total respirable dust was 0.08 mg/m^3, which is less than the ACGIH-TLV of 3 mg/m^3.

PBS does not consider respirable dust or silica to be a concern in the areas tested at the time of the assessment.

3.8 Dust Mites

Concerns about dust mite allergens were reported by teachers in indoor air quality complaints questionnaires. The Monroe School District requested PBS to perform dust mite allergen testing in various areas throughout the campus.

Dust mites are tiny organisms that live in dust and leave droppings that are an allergen which can potentially trigger an asthma episode. Dust mites live anywhere there is dust. They thrive in high humidity and where dead skin flakes can be found. This includes dust on hard furniture surfaces and books, and in carpeting, upholstered furniture and even stuffed animals. Dust mites live in bedding such as mattresses, pillows and linens.

Sensitivity to indoor allergens, particularly dust mites, animal dander, cockroach and fungi, are among the most important risk factors for asthma. Exposures to these allergens in small quantities can cause sensitization, bronchial hyperactivity, and acute asthma.

PBS sampled for dust mite allergens in twenty-six (26) locations within the study area. These carpeted areas, areas with significant dust accumulations (e.g. attics), known health complaint areas, are various other representative areas throughout campus. Sampling was performed using the micro-vacuum method. This method uses a high volume vacuum pump and a 25 mm cassette with a pore size of 0.45 microns. The open ended cassette is used to vacuum dust from various locations within each sample area. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to EM/P&K Laboratories in Phoenix, Arizona. The samples were analyzed by EM/P&K Laboratories Method EM-BC-S-1049 (Allergen-ELISA).

The limit of detection for this analytical method is 0.39 micrograms (µg) per gram of material collected. This method analyzes for Dermatophagoides farinae (Der f1) and Der p1 allergen. The threshold guidelines are as follows:

- The threshold limit is considered low and not sufficient to cause allergic symptoms when a sample is less than 2 µg of Der f1 or Der p1.
- Greater than 2 µg is considered significant and potential health effects may be observed.

Tab 3, Table 8 provides a list of sample locations and the corresponding dust mites lab results. Tab 4, Drawing 6 provides a campus plan showing the sampling locations.

All samples were below the limit of analytical detection except for two locations. The Music Room sample indicated a concentration of 1.18 µg/gram and Room 11 sample indicated a concentration of 1.89 µg/gram. Based on our testing dust mite allergen levels were not a concern in the test areas at the time of our investigation.

3.9 Radon

Radon is a naturally occurring radioactive gas that is caused by the decay of uranium in rocks and soil. Radon is colorless and odorless. The gas may move from the ground to the air above and into homes and other buildings through cracks and openings in the foundation or holes in walls and floors. Prolonged exposure to high levels of radon may lead to lung cancer. The Environmental Protection Agency (EPA) recommends an action level for radon of 4 picocuries per liter (pCi/L) of air.

The Monroe School District requested PBS to perform radon gas testing due to concerns by staff and parents. PBS collected samples from approximately nineteen (19) locations throughout campus. The Air Chek short-term radon test kits were placed within various areas as requested by the Monroe School District. Generally, sample kits were hung in the breathing zone (3-6 feet elevation from floor surface), away from heat sources or humid areas (laundry or bathroom) and greater than three feet from doorways, hallways, windows, exterior walls and heating and air-conditioning vents. The buildings were mostly in closed conditions because these samples were collected in early February during inclement weather. The building HVAC was operating during normal day time hours (7 am to 5 pm). The detectors were left in place for approximately a 48 hour test period, then collected and shipped to Air Chek, Inc., Mills River, North Carolina, for radon analysis.

Tab 3, Table 9 provides a list of sample locations and the corresponding radon lab results. Tab 4, Drawing 7 provides a campus plan showing the sampling locations.

All samples were below the EPA Action level with the exception of the Music Room. Lab results for the radon test collected in the Music Room was 3.3 +/- 0.7 pCi/L. EPA recommends that any time the Action Level is reached a second sample should be collected and the results averaged. Since the accuracy of the test “could” bring the results up to the EPA Action Level the School District chose to run a second test. Results of the second radon test in the Music Room was 3.2 +/- 0.3 pCi/L. The average of the two tests is 3.75 pCi/L, factoring in the method accuracy.

Based on our testing radon is below the EPA Action Level of 4.0 pCi/L. The Music Room is the only room on campus that is below the exterior grade of the site and as such may be more likely to be impacted by radon. The HVAC supply air grills are located at the ceiling level and directed across the ceiling to the exhaust grills (also at ceiling level) on the opposite side of the room. The air mixing near the teaching floor is likely reduced. Radon may also increase due to weather conditions, building pressurization and various other factors potentially causing radon concentrations to exceed the EPA Action Level.

3.10 Polychlorinated Biphenyls (PCBS)

PCBs are contained within the fluorescent light fixture capacitors and interior potting material of old, magnetic T12 lighting fixtures. The capacitor regulates the amount of electricity flowing into the lighting fixture, and the potting material insulates the fluorescent light fixture ballast (FLB) and reduces the "humming" noise. Because all PCB-containing FLBs currently in use have exceeded their designated life span, they are susceptible to leaking or rupturing. This may lead to increased exposure to building occupants. Residues from these sources are difficult and costly to clean up. Additionally, intact PCB-containing FLBs may emit small amounts of PCBs into the air during normal use of the lighting fixtures. EPA recommends all PCB-containing FLBs be removed from lighting fixtures.

In 1976, Congress banned PCB manufacturing in the United States due to their toxic effects. In July 1979, EPA phased out the processing and use of PCBs, except in totally enclosed equipment. Some PCBs installed before the 1976 ban or after 1979 may contain PCBs, and may still be used in schools around the United States. There is no regulation that requires the removal of non-leaking PCB-containing light ballasts.

EPA authorized the use of small capacitors in FLBs in 1982. However, if the capacitors leak then the spill must be cleaned up within 24 hours and the leaking FLBs must be disposed of properly. This is in accordance with 40 Code of Federal Regulations (CFR), section 761.125 (c)(1) - Requirements for PCB Spill Cleanup and 40 CFR, section 761.62 - Disposal of PCB Bulk Product Waste. EPA regulations also require that all FLBs built between July 1, 1979 and July 1, 1998 that does not contain PCBs must be labeled "No PCBs."

According to discussions with teachers and staff there has been a history of FLBs that have failed in various areas throughout the site. There have been reports of ballasts that have leaked onto furniture, floors and light fixture lenses. The have been reports of ballasts that have failed and “smoked” in rooms. The Monroe School District requested PBS to perform surface and air testing where ballast failures have been reported and other representative areas throughout campus.

PCB Surface Testing

PBS collected surface samples for PCBs in seventy-six (76) locations within the study area. Sampling was performed using the wipe sampling method in accordance with 40 CFR Part 761. This method uses a gauze pad wetted with hexane. The gauze is wiped over a 100 cm^2 area using a disposable template and then placed in a glass jar. The samples were collected from various surfaces such as floors, walls, casework and light fixtures, all of which had the potential to be contaminated with PCBs from a ballast failure. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to ALS Laboratories in Salt Lake City, Utah. The samples were analyzed by EPA Method SW 8082.

The EPA regulatory threshold for PCB surface sampling is 10 micrograms per 100 cm^2. Tab 3, Table 10 provides a list of sample locations and the corresponding PCB test data. Tab 4, Drawing 8 provides a campus plan showing the wipe sampling locations.

Two of the seventy-six (76) samples had detectable concentrations of PCBs. One of those samples was collected from the wood bleacher in the large gym and had a PCB concentration of 3.4 micrograms per 100 cm^2. This level is below the EPA criteria. Additional testing in the gymnasium may be warranted to further assess this space.

A wipe sample collected from a vinyl floor tile located in Room D of the Annex Building exceeded the EPA threshold. This floor tile was known to have been contaminated from a light fixture ballast leak, cleaned by custodial staff and then covered with a plastic film. The District requested PBS to surface test this tile to help assess PCB presence. This tile had a concentration of 516 ppm PCBs.

The Monroe School District requested PBS to remove and replace this tile. The tile was removed and replaced on March 5, 2016. A separate closure report will be provided for this activity.

PCB Air Testing

PBS collected PCB air samples in sixty-eight (68) locations within the study area. Air sampling was performed using EPA Method TO-10a. This method uses a high volume vacuum pump with a glass tube and a polyurethane foam (PUF) plug. Each sample was collected near the center of each room during typical class activities. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to ALS Laboratories in Salt Lake City, Utah and Cincinnati, Ohio. The samples were analyzed by EPA Method T0-10a. The high volume air pump is calibrated before and after testing with a pre-calibrated rotameter. The rotameter is calibrated annually with a primary standard.

Tab 3, Table 11 provides a list of all sample locations and the corresponding PCB test data. Tab 4, Drawing 9 provides a campus plan showing all PCB air sampling locations.

Thirteen of the 68 samples collected had detectable concentrations of PCBs. The following table provides a listing of those locations.

Sample Number	Location	PCB Results (ng/m^3)	NIOSH REL (ng/m^3)
001	Room 11	88	1,000

005	Montessori Science Prep Room	190	1,000
041	Large Gym	53	1,000
045	Gathering Place – West Office	53	1,000
046	Room E (18-21 Transitions) – West	48	1,000
052	Room E (18-21 Transitions) – East	51	1,000
054	Room F	110	1,000
056	Annex Hall – West	270	1,000
059	Room D	210	1,000
060	Annex Girl's Restroom	150	1,000
062	Annex Hall – East	150	1,000
063	Room A	250	1,000
064	Room C	99	1,000

None of the samples collected during this study exceeded the NIOSH Recommended Exposure Limit (REL) of 1,000 ng/m^3 or the OSHA PEL of 500,000 ng/m^3.

The EPA has calculated Exposure Levels for Evaluation that are intended to maintain overall PCB exposures below the oral reference dose (RfD) of 20 ng PCB/kg body weight per day. An RfD is an estimate of a daily exposure to the human population, including sensitive subgroups, that is likely to be without an appreciable risk of harmful effects during a lifetime.

The EPA considered potential pathways of PCB exposure in school and non-school environments. Non-school pathways generally result in PCB exposures that are significantly below the RfD.

To calculate the Exposure Levels for Evaluation of PCBs in indoor school air, the EPA made the following assumptions:

- PCB concentrations in dusts and soils in and around schools are the same as in average homes or other buildings without elevated PCBs.

- Adults and children less than 3 years old are in school for 8 hours per day; all other children are in school for 6.5 hours per day

- Adults and children less than 3 years old are in school 185 days per year. All other children are in school for 180 days.

The EPA calculated the school indoor air PCB concentrations that would result in an estimated total exposure equal to the RfD, when all of the other school and non-school PCB exposure pathways were set to average background levels. These calculated indoor air concentrations are the Exposure Levels for Evaluation of PCBs in Indoor School Air and are provided in the table below. They were derived to serve as health protective values intended for evaluation purposes. The EPA recommends that the concentrations of PCBs in indoor air be kept as low as is reasonably achievable and that total PCB exposure be kept below the RfD level.

EPA Exposure Levels for Evaluation of PCBs in School Indoor Air (ng/m3)*

Assuming that PCB exposures through pathways other than school indoor air are equal to average background PCB exposures for those pathways, the following indoor school air

concentrations should keep total exposure below the oral RfD of 20 ng PCB/kg-day.

Age 1 - <2 yr	Age 2 - <3 yr	Age 3 - <6 yr	Age 6 - <12 yr Elementary School	Age 12 - <15 yr Middle School	Age 15 - <19 yr High School	Age 19+ yr Adult
100	100	200	300	500	600	500

The following locations had detectable concentrations of PCBs that were all below the EPA RfD levels:

- Room 11
- Gathering Place – West Office
- Large Gym
- Annex Room E – East
- Annex Room E - West
- Annex – Room C

PBS performed additional assessment of classroom 11 to help determine the source of airborne PCBs in that space. All fluorescent light fixtures were opened and no suspect PCB-containing ballasts or PCB residue was observed. The room appeared to be clean with minimal accumulated dust or debris. However, the unit ventilator control compartments were dusty and dirty. Oil was observed leaking from the electric motor. PBS collected qualitative wipe samples from materials in each compartment and of the oil. See Table 20 for analysis results. Low levels of PCB were found in each compartment and the return. The floor in the classroom is bare concrete. There is a residual piece of older carpet located underneath the unit ventilator in this room. It is PBS' opinion that the carpet is the potential source of airborne PCBs. The carpet was likely contaminated from historical ballast failures, prior to the unit ventilator being installed approximately 5 years ago.

The following locations were above the EPA RfD levels for children less than 3 years of age.

- Annex Mont. Sci. Prep
- Annex Room F
- Annex Girls Restroom
- Annex Hall – East

This means that children less than 3 years of age should not continuously occupy these spaces to help prevent potential exposures above the reference dose levels. PBS recommends trained personnel thoroughly clean each room to help minimize exposures in these areas.

The following locations were above the EPA RfD levels for children less than 6 years of age:

- Annex Hall – West
- Annex Room D
- Annex Room A

This means that children less than 6 years of age should not continuously occupy these spaces to help prevent potential exposures above the reference dose levels. PBS recommends trained personnel thoroughly clean each room to help minimize exposures in these areas.

3.11 Airborne Particulates

Staff and parents reported potential concerns about fungal and non-fungal fungal particulate. PBS was requested to collect and analyze airborne particulate samples from various areas inside and outside of each building. These air samples were analyzed for fungal and non-fungal particulate to characterize the composition of airborne particulates at the test sites.

Human health can be affected by exposure to both living (viable) and non-living (non-viable) biological contaminants in the air (bioaerosols) and biological contaminants on building materials. Microorganisms are among the most common organisms found on earth and have adapted to a wide variety of diverse environmental conditions. They can be found in environments in all parts of the world. Fortunately, most do not cause human sickness or other health complaints and some are even essential to human health. The risk of illness from microorganisms increases when they grow in overwhelming numbers or multiply indoors.

Airborne contaminants vary in size. Large particles settle quickly and can be trapped in the body's upper respiratory system. Small particles are more likely to remain airborne and are capable of passing through the body's respiratory tract and entering deeper areas of the lungs. Dust is generated from many sources such as epithelial cells from human skin, glass chips, soil, combustion products, corrosion products, insect parts, pollen, fungal spores, bacterial cells, cotton and wood fibers from clothing and paper products. Some dust may contain lead, pesticide residues, other toxic materials, allergens, and irritants from numerous sources. Air filters can capture most of these particles. Many bacteria (99% exceed 1 micrometer in size) are attached to larger particles such as human skin flakes (dander). Viruses generally occur in clusters or, in and on, other particles. Lung damaging particles that can be retained in the lungs range from 0.2 to 5 micrometers in size. To help keep dust and airborne particulate contaminants to a minimum, good housekeeping is necessary. Damp dusting, HEPA vacuum cleaners and high performance HVAC filters should be considered to help minimize airborne particulate contaminant levels.

PBS collected samples of airborne particulate using the spore trap method. This method uses a high volume vacuum pump fitted with an "Allergenco" ^{TM} cassette. The air pump draws a measured volume of air through the cassette, which impacts airborne particulates onto a specially treated slide mounted inside the cassette. Air samples follow preparation and analysis techniques outlined in Method 5 of the laboratory SOP; this method is based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Characteristic morphologies were observed by optical microscopy at a magnification of 600x. For each individual particle type observed, data was reported in particles (counts) per cubic meter of air (m^3). The high volume air pump is calibrated before and after testing with a pre-calibrated rotameter. The rotameter is calibrated annually with a primary standard.

PBS collected twenty-seven (27) indoor samples and eight (8) outdoor samples during this monitoring event, for a total of thirty-five (35) samples. Two outdoor samples were collected each calendar day indoor samples were collected. The outdoor samples were taken as controls in order to compare the composition of the indoor air particulates to that of outdoor air. Each sample was collected at a flow rate of 15 liters per minute for 10 minutes (150 liters total per sample) from approximately four feet above floor level near the center of each room. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Lab/Cor, Inc. of Seattle, Washington.

Tab 3, Table 12 provides a list of all sample locations and the corresponding summary test data. Tab 4, Drawing 10 provides a campus plan showing all particulate air sampling locations. Refer to the attached laboratory reports in Tab 6 for more detailed particulate composition information.

Fungal Particulate

Based upon the analytical results, airborne fungal particulate concentrations in all locations tested were lower in the indoor samples when compared to the outdoor control samples. Additionally, the predominant types of fungal particulate identified in the indoor samples were all identified in the outdoor samples. Based on this limited testing, PBS does not consider airborne fungal particulate to be a concern.

Non-Fungal Particulate

In general, when total non-fungal airborne particulate is 25,000 counts/m^3 or greater, it is an indication of one or more of the following; high occupant density, inadequate housekeeping, inadequate air filtration/circulation. When total non-fungal airborne particulate exceeds 50,000 counts/m^3 that is an indication of poor housekeeping and or inadequate air filtration/circulation based on the use of the space.

Laboratory analysis revealed levels greater than 50,000 counts/m^3 in each of the following areas:

Sample ID	Location Description	Non-fungal Total Count/m^3
001	Small Gym; South	62,098
005	Library	168,192
006	East Pod; Center	124,868
008	South Pod; Center	87,583
017	Admin; Staff	104,266
021	Art Room	157,034
022	Wood Shop	*Overloaded
023	Room 13	169,974
025	Gathering Place	175,800
026	Room 5	63,813
027	Room 6	96,036
029	Room 11	88,738
032	CTE (Home Ec)	99,874
033	Gathering Place	104,067

The Wood Shop sample was overloaded with amorphous, crystalline, wood fragments and paper particles and as such could not be analyzed. This was an expected finding due to our observations of significant airborne and accumulated surface dust and debris. Additionally, the air filtration system and the wood dust collection systems were not being used.

For all other areas in the above table the predominant particulate types included amorphous, cotton, dander and crystalline. These particulate are typical in densely occupied buildings.

Air filtration media efficiency should be evaluated. A minimum MERV 8 air filter or greater should be used depending on the design of the HVAC unit.

3.12 Accumulated Surface Dust

PBS collected surface dust samples from 30 locations in the study area. These samples were analyzed for fungal and non-fungal particulate to characterize the composition of accumulated surface dust (particulates) at the test sites. While air sampling characterizes airborne particulate from a snapshot in time, surface dust tends to provide a historical view of settled particulate.

PBS collected samples of surface dust in the building using the tape lift method. This method uses a pre-manufactured plastic microscope slide that contains a sticky substance on the surface to adhere particulates to the slide. The slide is manufactured by Zefon. The slide is gently pressed against a surface and accumulated particulates adhere to the slide. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Lab/Cor, Inc. of Seattle, Washington.

Surface samples follow preparation and analysis techniques outlined in Method 7 and Method 9 of the laboratory standard operating procedure. These methods are based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. The particles on the slide are then stained with lactocotton blue and characteristic morphologies were observed using optical microscopy at a magnification of 600x. Fungal and particulate counts are reported in Relative Abundance (High, Moderate, Low, and Trace).

Tab 3, Table 13 provides a list of all sample locations. Tab 4, Drawing 11 provides a campus plan showing all surface particulate sampling locations. Refer to the attached laboratory reports in Tab 6 for more detailed particulate composition information.

<u>Fungal Surface Particulate</u>

Based upon the analytical results, accumulated fungal particulate in surface dust was found to be at trace and low levels in many areas. The composition of fungal particulate did not reveal any fungal indicator species. Fungal indicator species are those indicative of long term water intrusion. Additionally, the predominant types of fungal particulate identified in the surface dust samples were all identified in the outdoor air samples. The composition of fungal particulate was considered typical of “clean” buildings with the exception of the following:

- The following areas contained moderate levels of Basidiospores: Rooms 2, 4, 6, 11, 14, 18, 20, 23, South Pod Center, B, D, C, Administration Reception, Music Main, CTE (Home Ec). Basidiospores are the most common outdoor airborne fungal spore. This was not an unexpected finding. Basidiospores were found in high levels in all outdoor air

samples collected. The "moderate range" means that approximately 30%-70% of the portion of the sample examined was covered with that particulate.

- The following areas contained moderate levels of Aspergillus/Penicillium-like spores: Rooms 2, 5, 23, and South Pod Center. Aspergillus/Penicillium-like spores are also a very common outdoor airborne fungal spore. This spore type was found in outdoor air samples collected during this study. It is PBS' opinion that these levels are not indicative of significant fungal contamination at these sites. Minor fungal growth was observed in the South Pod and Room 23 sink cabinets.

- Room 2 had moderate levels of four types of fungal particulate in surface dust including: Aspergillus/Penicillium-like, Basidiospores, Ganoderma, and fungal fragments. This room does not contain plumbing, or evidence of fungal growth, or evidence of water intrusion and the carpet is newer. It is PBS' opinion that this finding is not due to significant fungal contamination. These fungi can be related to wood rot. Additional investigation of the source of these fungi may be beneficial.

Non-Fungal Surface Particulate

Based upon the analytical results, moderate levels of non-fungal particulate commonly found in schools were identified at most sampling sites. This included one or more of the following: paper, dander, crystalline, cotton, soot, starch and amorphous particulate. The predominant types of all non-fungal particulate identified in the surface dust samples were also reflected in the indoor air samples. This is an expected finding.

The following less common particulate were identified in moderate levels:

- Toner – Admin. Reception, Wood Shop
  This is likely from a printer/copier leak or toner spill may have occurred in the past. The presence of this toner should be further investigated.

- Glass fibers – Admin. Staff Room, South Pod Attic
  This mostly related to fiberglass fibers. Typically caused by renovations or handling something that contains fiberglass such as ceiling tiles or batt insulation.

- Paint spheres – Admin. Staff Room, Room C
  Paint spheres are typically generated from projects that involve painting or degrading and peeling paint. Painting was occurring in Room C during our investigation.

- Wood fragments - Room 11, North Pod Attic
  Wood fragments in classrooms can be from pencil shavings, animal cages, wood shavings from packaging, art project, sanding sawing drilling wood products. PBS observed wood shavings in on top of several unit ventilators. Room 11 was not one of those rooms.

The following non-fungal particulate was identified in high levels:

- Soot – South Pod Center
- Wood fragments – Wood Shop and Room 7
- Manufactured fibers and tire fragments – Room 14

- Manufactured fibers – Library, Room B, Room D, CTE (Home Ec), Room 4 , Room 11, Room 18 and South Pod Attic
- Glass fibers – Admin Reception, Room 11, North Pod Attic
- Starch – CTE (Home Ec), Art Room
- Dander – Rooms 2, 5, 6, 7, Rooms B and C, Library, CTE (Home Ec)
- Amorphous, crystalline and dander – Rooms 4, 11, 14, 20 and Room D
- Crystalline and dander – Small Gym and South Pod Center
- Dander and amorphous – Room 18
- Amorphous and crystalline – Art Room, North Pod Attic, East Pod Attic and South Pod Attic.

Moderate levels of non-fungal particulate are not uncommon in buildings and are typically due to high occupant density, inadequate housekeeping, and or poor air filtration and recirculation. High levels of non-fungal particulate are not common in buildings, however, are due to one or more of the following; high occupant density, inadequate housekeeping, and or poor air filtration and recirculation. Our visual investigation revealed that air filtration and housekeeping was inadequate in many spaces. Additionally, our investigation revealed that vacuums being used were not HEPA-filtered and feather dusters were being used to remove accumulated dust. Both of activities tend to re-entrain particulate into the air.

3.13 Asbestos

Due to concerns of potential asbestos contamination PBS was requested to perform air testing, surface testing and limited bulk materials testing in various areas throughout the study area.

The Asbestos Hazard Emergency Response Act (AHERA) and its regulations require public school districts and non-profit schools including charter schools and schools affiliated with religious institutions to inspect their schools for asbestos-containing building material, prepare management plans and to take action to prevent or reduce asbestos hazards. These legal requirements are founded on the principle of "in-place" management of asbestos-containing material. Removal of these materials is not usually necessary unless the material is damaged or will be disturbed by a building demolition or renovation project. Personnel working on asbestos activities in schools must be trained and accredited in accordance with The Asbestos Model Accreditation Plan.

PBS has reviewed the AHERA Triennial Reinspection and Management Plan Update, prepared by EHS – International, May 29, 2015. This report is available for review in the Directors Office. The intent of our review was to gain an understanding of known asbestos-containing materials at the school. Based on our review of the AHERA Reinspection Report and staff concerns, a surface and air sampling strategy was developed by PBS and the Monroe School District.

<u>Asbestos Air Testing</u>

PBS collected thirty-three (33) asbestos air samples throughout the school. The air samples are taken to determine representative fiber levels in the air, as an index to the potential asbestos content of the air. The sampler is a pump and filter cassette arrangement through which the air is drawn. The fibers in the air are then deposited on the filter where they can be subsequently analyzed under a microscope. The samples were collected in the breathing zone at approximately the center of each area during daytime occupied hours. The EPA recommended clearance level is 0.01 fibers per cubic centimeter (f/cc) of air for sample cassettes analyzed using Phase Contrast Microscopy (PCM) and 0.01 structures per cubic centimeter (s/cc) for

Transmission Electron Microscopy (TEM) analysis. PCM analysis does not allow for the distinction of asbestos fibers from non-asbestos fibers. TEM analysis only measures asbestos structures.

Air sampling pumps are calibrated before and after use to determine accurate flow rates. All samples were collected at a maximum volume of 10 liters per minute for a total volume of not less than 1,200 liters of air. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Lab/Cor, Inc. of Seattle, Washington. All samples were analyzed EPA Modified Level II, TEM Methodology. Tab 3, Table 14 provides a list of all sample locations and the corresponding summary test data. Tab 4, Drawing 12 provides a campus plan showing all particulate air sampling locations.

Laboratory analysis revealed that no asbestos structures were found in any of the samples collected at this site. It is PBS opinion that airborne asbestos is not a concern in the areas tested.

Asbestos Surface Testing

While air testing provides a snapshot in time, settled dust can provide information about past asbestos releases and the presence of those fibers that may not be currently airborne. Finding of an elevated asbestos concentration in settled dust indicates the presence of asbestos fibers which have been released and may be available for re-suspension. There is limited understanding of the relationship between surface load and the potential for re-suspension, exposure, and health risk.

PBS collected sixty-nine (69) asbestos dust samples during this monitoring event. PBS used the American Society for Testing and Materials (ASTM) D5755-95 Standard Method, “Microvacuum Sampling and Indirect Analysis of Dust of Transmission Electron Microscopy for Asbestos Number Concentrations. The sampler is a pump and filter cassette arrangement through which the air is drawn. A 100 cm^2 disposable template is placed on the surface and the sampler is used like a vacuum cleaner to vacuum up available dust with in the template area. This is called the “microvacuum method”. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Lab/Cor, Inc. of Seattle, Washington. All samples were analyzed by ASTM Method D5755-95.

Tab 3, Table 15 provides a list of all sample locations and the corresponding summary test data. Tab 4, Drawing 13 provides a campus plan showing all dust sampling locations.

There are no regulatory thresholds for the amount of asbestos in settled dust. However, researchers believe (EPA World Trade Center Expert Technical Review on The Issue of Microvac Sampling, May 3, 2004.) asbestos structure concentrations above 10,000 s/cm^2 are generally above background levels. Levels above 100,000 s/cm^2 are considered high and may indicate a significant accidental release from an abatement site or material damage.

In the dust samples collected the following locations were found to have concentrations of asbestos structures above background levels:

- North Pod Attic – 11,947 s/cm^2
- South Pod Attic - 32,166 s/cm^2
- Room D (vinyl floor) – 11,947 s/cm^2

- Room 1 (carpet) – 47,790 s/cm^2
- Room 11 (top of built in shelf) – 12,062 s/cm^2
- Room 12 (top of built in shelf) – 31,548 s/cm^2
- Room 14 (top of North bookshelf) – 238,952 s/cm^2
- Room 15 (carpet under recent construction location) – 524,917 s/cm^2
- Room 18 (carpet under recent construction location) – 16,701 s/cm^2

The samples from the North and South Pod attics were collected on top of stored items. During our visual assessment damaged asbestos-containing pipe hard fittings and gypsum wallboard was observed. No other sources of asbestos materials were observed in those attic spaces. PBS presumes all dust in these attics is asbestos contaminated. Non-aggressive testing revealed no airborne asbestos in these areas.

The samples from Room 14, Room D, and Room 15 were each collected from areas where significant visible gypsum wallboard dust was observed. The wallboard was impacted by a wireless cabling upgrade that occurred during the summer of 2015. The contractor performing that work did not take into account that the gypsum wallboard joint compound contained asbestos. Additionally, post construction housekeeping by the contractor was poor and dust and debris was left throughout the construction areas. It is PBS' opinion that the gypsum wallboard joint compound and poor and improper housekeeping during the cabling project is likely the source of asbestos fibers found.

The samples collected from Room 11, Room 12 and Room 1 were not collected close to areas where recent construction activities have occurred. The only known asbestos-containing material that currently exists in these rooms is the joint compound associated with the gypsum wallboard system. It is PBS opinion that past impacts to the gypsum wallboard systems are the source of the asbestos fibers found. Testing revealed no airborne asbestos in these areas.

PBS notified the Monroe School District of our findings of asbestos structures in the accumulated surface dust. The Monroe School District hired a professional asbestos abatement contractor to perform proper cleaning of each area. PBS conducted visual inspections and clearance sampling during these cleaning activities. The cleaning activities will be documented in a separate asbestos cleaning closure report.

PBS recommends that all future impacts to the gypsum wallboard system be conducted by trained personnel in accordance with WRD 23.10, WAC 296-62 and 40 CFR Part 763 AHERA.

3.14 Soils

Teachers expressed concerns about potential contaminated soils in the landscaping area near classrooms 4, 5, and 6. They indicated that their kids play in this area and that soils could potentially be tracked into the building. The teachers were specifically concerned about pesticide and petroleum contaminants. The Monroe School District requested PBS perform soil sampling in the following three locations:

- Landscape area south of classrooms 4, 5, and 6 (Southeast landscape area)
- Garden area just north of Annex - Room F
- Large playfield east of the Technology and Classroom Pod Buildings

PBS Environmental collected one composite soil sample from each of the above areas for a total of three samples. Three discrete soil samples were collected from within each sample area and composited into one sample. Sample collection started just below any shallow cover layer (approximately two inches of grass, if present). A hand shovel was used to complete six inch deep test holes. A soil sample was collected from the ground surface below the cover layer down to six inches below ground surface. Soil was composited in stainless steel bowl then packed into laboratory-provided 4-ounce jars with zero headspace, sealed, labeled and delivered to an accredited laboratory under appropriate chain of custody.

PBS personnel wore disposable nitrile gloves to protect against cross-contamination between samples. All sampling equipment was decontaminated with a detergent and a distilled water rinse between each sample location.

The soil samples were delivered to Fremont Analytical in Seattle, Washington. Each of the three samples was analyzed for total mercury, arsenic, cadmium, chromium, and lead by EPA Method 6020. The samples were also analyzed for organochlorine pesticides by EPA Method 8081 and for petroleum hydrocarbons by Washington State Method NWTPH-HCID.

Tab 3, Table 16 provides a list of soil sample locations and the corresponding summary test data. Tab 4, Drawing 14 provides a campus plan showing all soil sampling locations. Copies of laboratory reports and sample chain-of-custody forms are presented in Tab 6. Results of soil analyses performed are summarized below.

The results of soil sampling revealed that each of the three samples were below the Washington Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Use for metals including arsenic, cadmium, chromium, and lead. All metals were found at normal background concentrations with the exception of lead. The average background concentration for lead in soils in Western Washington is 24 ppm. Lead was found at 18 ppm (South East landscape area), 37 ppm (Large Playfield) and 52 ppm (Room F garden). These are low levels and as such no mitigation actions are required.

The results of three soil samples revealed no detectable concentrations of organochlorine pesticides, petroleum hydrocarbons or mercury.

Based on soil sampling and analysis activities it is PBS' opinion that the soils sampled do not present a concern.

3.15 Analysis of Carpet Pieces

The Monroe School District removed carpet in several classrooms over Christmas break in 2015. Due to reported health complaints teachers expressed concerns about potential contaminants in the carpets. The teachers were concerned about PCB and pesticides contaminants. Five small pieces of that carpeting was placed in individual Ziploc style bags and provided to PBS. PBS was requested to select three of those samples for representative analysis. Carpet from the following three locations was selected for analysis:

- Classroom 8
- Classroom 12
- East Pod Center

PBS labeled each of those samples with unique identification numbers and along with chain of

custody documentation they were delivered to Fremont Analytical in Seattle, Washington. Each of the three carpet samples were analyzed for organochlorine pesticides by EPA Method 8081 and polychlorinated biphenyls (PCBs) by EPA Method 8082.

Tab 3, Table 17 provides a list of carpet sample locations and the corresponding summary test data. Copies of laboratory reports and sample chain-of-custody forms are presented in Tab 6.

Two of the carpet samples revealed no detectable concentrations of PCBs. Laboratory analysis of the sample from classroom 8 revealed 6.51 mg/kg PCBs. No airborne PCBs were found in this room. PBS understands that the carpets are extraction cleaned every summer. It is PBS' opinion that direct skin contact with the PCBs found in this carpet was unlikely.

Laboratory results of carpet analysis revealed no detectable concentrations of organochlorine pesticides.

3.16 Leahy Air Filter Analysis

A portable air purifier was used by Ms. Leahy in classroom 11. It is our understanding that the portable air filtration unit was used in the classroom during normal school hours from October 12 – December 15, 2015. The HEPA-filter from this unit was removed and placed in a sealed clear plastic bag and provided to PBS for analysis. PBS was requested to have this filter analyzed for asbestos, dust mites, mold, and other non-fungal particulate.

PBS cut a cross-section from the full length of the filter and packaged it for analysis. The filter contained two layers; black pre-filter media and a white paper media (i.e. HEPA filter media). The sample was labeled with a unique identification number and along with chain of custody documentation delivered to EM Lab P&K, Phoenix, Arizona.

The sample was analyzed for fungal particulate by direct microscopic examination using laboratory method EM-MY-S-1039, for non-fungal particulate by dust characterization method EM-MY-S-1044, and for asbestos fibers by EPA Methods 600/R-93/116 & 600/M4-82-020. The laboratory was not able to analyze for dust mite allergens due to the lack of available dust on the filter. Copies of laboratory reports and sample chain-of-custody forms are presented in Tab 6.

Fungal Particulate

Direct microscopic examination for fungal particulate revealed the following in the sample:

Particulate	White HEPA Filter Media	Black Pre-Filter Media
Miscellaneous Spores Present	Very Few	Very Few
Mold Growth	None	None
Other Comments	None	None
General Impression	Normal Trapping	Normal Trapping

The above finding is indicative of normal conditions, (i.e. seen on surfaces everywhere). Normal conditions includes finding a mix of basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen is reflective of what is usually observed outdoors.

Non-Fungal Particulate

Direct microscopic examination for non-fungal particulate (dust characterization) revealed the following particulates in the sample:

Particulate	White HEPA Filter Media (%)	Black Pre-Filter Media (%)
Amorphous debris	10	10
Animal hair	0	2
Cellulose fibers	5	14
Epithelial cells	84	70
Feather barbules	0	2
Fungal spores	1	1
Pollen	0	1

This was a qualitative analysis which provides a relative percentage of particulate on the filter. This composition of particulate is not atypical of what is normally found in school buildings. Review of the particulate air samples collected from this room by PBS, February 2016, revealed the predominant types of non-fungal particulate to be amorphous, crystalline, dander (epithelial cells) and soot. The particulate found in the air sample is reflective of what was found outdoors. Less predominant particulate found in the indoor air sample included cotton fibers, manufactured fibers, pollen, starch and printer toner.

Asbestos Fiber Analysis

The two filter layers (i.e. black pre-filter and white HEPA media) were analyzed for the presence of asbestos fibers. No detectable asbestos fibers were found by laboratory analysis.

Based on review of the laboratory reports for the HEPA-filter, it is our opinion that no unusual or excessive particulate was present.

3.17 Bulk Sample Surveys

PBS was requested to survey and sample all damaged suspect PCB-containing building materials and all damaged suspect lead-containing paints. The following is a summary of our survey related activities and findings.

Polychlorinated Biphenyl's (PCBs) – Paints, Sealants and Mastics

PCBs may have been intentionally added to some specialty paints and coatings to improve their performance for use primarily in industrial and/or military applications (e.g., paints manufactured to endure thermal stress, vibration or corrosivity) but such specialty paints or coatings could have been used in some schools and other buildings built or renovated between about 1950 and 1979. PCBs intentionally added to specialty paints and coatings may occur in high concentrations. Although specialty paints or coatings were not typically used for interior or exterior decorative architectural uses, PCBs have been found in paint on walls in some schools and other buildings, so all interior and exterior decorative uses of PCB-containing paint cannot always be ruled out. PCBs in manufactured materials such as specialty paint may move directly into adjoining materials, particularly porous materials such as wood, concrete, and other types of masonry. PCBs, if present in exterior paints, may also leach into surrounding building materials and soil from precipitation and deterioration of the paint, and from disturbances during renovations or construction.

PBS inspected all buildings on campus and sampled damaged suspect PCB-containing paints, sealants and mastics. PBS collected twenty-seven (27) PCB bulk material samples within the study area. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Fremont Analytical, Seattle, Washington. The samples were analyzed by EPA Method SW 8082.

Tab 3, Tables 18, 19 and 20 provides a list of sample locations and the corresponding PCB analysis data for paint, caulk, and carpet mastics, respectively. Tab 4, Drawing 15 shows sampling locations for each material sampled.

The following materials were found to contain PCBs:

Location	PCB Content (mg/kg)
Damaged white painted wood located on the exterior covered walkway at the South side of the Administration Building	1.8
Damaged light blue painted concrete wall located on the wall above the kitchenette in the Gathering Place	0.196
Gray caulking on interior and exterior metal window and door frames on all buildings throughout campus	1.03-5,730
Light gray caulking on exterior metal columns throughout campus	5,530

Yellow carpet mastic located in the North Pod Central Common Area	1.42

It is our opinion that the PCBs found in the North Pod Common Areas carpet mastic are likely a result of ballast failure contamination because the other mastic samples were found to be non-detect for PCBs

PCB-containing caulking and sealants were found to be associated with windows, doors and structural columns. PCBs are known to leach into the substrates that come into contact with sealants.

Removal of the caulking/sealants and impacts to the substrates that contain PCBs has the potential to create human exposures and environmental contamination.

Proper handling is required for all PCB-containing materials regardless of concentration. It is not necessary to remove the caulking unless it begins to degrade and fall off. If the caulking will be impacted by renovations or demolition it is recommended that regulations, work practices, hygiene practices, record keeping and air monitoring performed. Workers potentially impacting regulated metals are advised to confirm training requirements of WISHA, and to ensure that proper worker protection and work practices are implemented.

Waste handling should follow WAC 173-303 Dangerous Waste and the EPA Toxic Substance Control Act (TSCA) 40 CFR Part 761. Waste characterization should be performed prior to any disposal of lead-containing materials. Materials that contain PCBs in concentrations greater than 50 ppm are considered a TSCA Bulk Product Waste. Materials that contain PCBs in concentrations ranging from 100 ppm – 10,000 ppm are considered a Special Waste; no manifest is needed but must go to a permitted municipal solid waste landfill in the State of Washington. Special Wastes are regulated under 173-303-073. Materials that contain PCBs in concentrations greater than 10,000 ppm are considered a hazardous waste in the State of Washington and must be manifested for transport.

Lead-Containing Paints

PBS inspected and sampled damaged suspect lead-containing paints. PBS collected sixteen (16) suspect paint samples within the study area. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Fremont Analytical and NVL Labs, Seattle, Washington. The samples were analyzed by EPA Methods SW 6020 and 3051 to determine lead content.

Tab 3, Table 1 provides a list of sample locations and the corresponding Lead Paint analysis data. Tab 4, Drawing 16 shows sampling locations for each material sampled.

Fourteen (14) of the paint samples collected yielded laboratory results with detectable concentrations of lead. The results ranged from 0.00011% – 4.2%.

In the state of Washington regulations, lead-containing paint (LCP) is defined as a painted coating that contains any detectable concentrations of lead. The presence of LCP requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-62-155). PBS recommends that all untested painted coatings be considered LCP. Workers impacting LCP should be provided the proper

personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted. Waste handling should follow WAC 173-303 Dangerous Waste.

Lead-based paint (LBP) is defined by EPA as containing 0.5 % or greater lead content. The presence of LBP in schools or child occupied facilities requires all activities to be performed according to 40 CFR Part 745. Federal law requires that individuals receive certain information before renovating six square feet or more of painted surfaces in a room for interior projects or more than twenty square feet of painted surfaces for exterior projects in housing, child care facilities and schools built before 1978. Federal law requires contractors that disturb lead-based paint in homes, child care facilities and schools, built before 1978 to be certified and follow specific work practices to prevent lead contamination.

Three of the damaged paints sampled contained greater than 0.5% lead content. These include the following:

Location	Lead Content (%)
Brown Metal Exterior Fascia Covered Walkway South Gymnasium	0.59
White Wood Framing and Decking Covered Walkway South Administration	0.77
Brown Concrete Exterior Wood Shop South Wall Technology Building	4.2

3.18 Drinking Water

PBS performed drinking water sampling for the Monroe School District at the Sky Valley Educational Center in 2016. Drinking water in Washington State is regulated by both the Environmental Protection Agency (EPA) and the Washington State Department of Health (DOH). The testing process followed the protocols described in the Environmental Protection Agency (EPA) document, *"Lead in Drinking Water in Schools and Non-Residential Buildings"*, EPA 812-8-94-002, 1994. All sampling and analyses procedures are conducted in accordance with EPA's publication 812-94-002*, Lead in Drinking Water in Schools and Non-Residential Buildings.* Washington Administrative Code (WAC 246-366A-130 Lead and WAC 246-366A-135 Copper) has recently published drinking water testing procedures and criteria for copper and lead in schools. These codes do not become effective until July 2017. The Monroe School District program for Sky Valley Educational Center meets the requirements of the WAC.

The following is a summary of our findings and conclusions. See report dated April 2016, Report of Drinking Water Testing for Lead and Copper Content – Sky Valley Educational Center, prepared by PBS Engineering and Environmental.

PBS collected a total of 70 drinking water samples at 69 sampling sites. Of the 69 sampling locations, a total of 2 or <3% of the sampling sites contained elevated levels of lead in the drinking water. The fixtures that exceeded the EPA drinking water criteria were limited to the following:

- Wood Shop sink faucet – 22 ppb lead
- Room D sink faucet – 78 ppb lead

The Wood Shop sink was taken out of service and will no longer be used. The sink faucet in Room D was replaced and confirmation sampling was performed. Confirmation sampling revealed that the level of lead in the drinking water to be below the EPA criteria.

The sampled facility was not found to have systemic or facility-wide lead or copper contamination in the drinking water. Two individual fixtures at the facilities were found to exceed the EPA and DOH criteria of >20 ppb lead, indicating localized contamination. The cause of lead contamination at the Sky Valley facility appeared to be lead-containing fixtures.

The Lead Contamination Control Act of 1988 has mandatory public notice requirements for reporting lead test results. There are two separate public availability notifications the schools must perform: making a copy of the sampling results available in the school administrative offices; and providing notification to relevant parent, teacher, and employee organizations that the sampling program results are available.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon PBS' review of data, field observations, discussions with staff, students, and parents, and review of laboratory data associated with this investigation, PBS concludes and recommends the following:

4.1 Field Observations

The field observations conclusions and recommendations are divided into the following groups; HVAC, Chemical, Housekeeping, Fungal, Asbestos, and Construction. They are not numbered in order of priority.

HVAC Concerns

1. Several of the HVAC grills in the Administration Building appeared to have no air flow. PBS understands that one of the roof mounted HVAC units is broken. This may or may not be the cause of no observed flow.

   PBS recommends all supply, return air, dampers, and controls throughout the building be checked for proper operation once the unit is repaired.

2. PBS observed a "burnt" smell in the following unit ventilators while they were operational:

   - Room 4
   - Room 5
   - Room 9

   PBS recommends each unit be evaluated and repaired as appropriate.

3. It was reported that the building exhaust ducting in the East Pod Mechanical Mezzanine (attic) was used to help remove airborne concrete dust during floor grinding activities, which occurred over Christmas break in 2015. PBS was requested to evaluate the interior of the exhaust ducting located in the attic. Our investigation revealed a significant amount of accumulated fine dust. When the exhaust fan is not operating, contaminants in the ducting can potentially migrate back into the building.

   PBS recommends all exhaust ducting and the fan unit be cleaned by NADCA Certified personnel, using appropriate contaminant control measures to prevent contaminant migration back into the building. PBS recommends the exhaust fan remain running until the ducting can be cleaned.

4. Gathering Place Café Kitchen – No air movement was observed at the exhaust grill in the Café kitchen.

   PBS recommends the HVAC exhaust in the café be evaluated for proper operation and repaired as appropriate.

5. PBS observed used candles stored in the following areas:

   - South Pod Central Common Area

- East Pod Central Common Area
- Room 11

Burning candles in school buildings generates airborne soot, odors, and potentially releases chemicals impacting air quality. PBS does not recommend burning candles in classrooms without local exhaust ventilation.

6. Kiln Room - Kiln exhaust odors were reported throughout the building during initial firing. Based on observed air flow patterns only a portion of the kiln exhaust was being vented outdoors.

   It is PBS' opinion that the remainder of the unvented kiln exhaust is being captured by the building HVAC return air system. PBS recommends the working kiln be placed directly beneath the hood to better capture kiln exhaust. Additionally, the return air system in this room should be eliminated to prevent kiln exhaust from entering and being distributed throughout the building. An alternative would be to only use the kiln when there are no other occupants in the building.

7. Wood Shop (Room 21) - There is no fresh air supply in the Wood Shop. The room has a sawdust removal/exhaust system and a ceiling mounted particulate filtration fan unit that are not being used. Significant sawdust is being dispersed into the room from a table saw, hand sanding, drilling and cutting of wood. Substantial wood dust was observed throughout the wood shop on all surfaces. Wood dust is a known carcinogen, causes dermatitis with prolonged exposure and can cause respiratory sensitization and can present a significant fire and explosion hazard.

   PBS recommends that the wood dust exhaust system and the ceiling mounted particulate filtration system be operating all times when wood cutting, sanding, sawing, drilling or abrasion of any kind is taking place. The filter in the ceiling mounted filtration system should be checked and changed frequently. PBS recommends the table saw be connected to a sawdust collection system that filters and collects all fine particulate or the table saw should not be used indoors. The room should be cleaned to remove existing dust and debris throughout. Wood Shops require frequent housekeeping activities. PBS recommends housekeeping practices be carefully evaluated and administrative policies and procedures be implemented.

8. Filter media in each unit ventilator throughout campus is less than MERV 8, which is inadequate for removing small respirable particulate. However, the manufacturer of the unit ventilator provides them with a filter media of this nature. Additionally, the existing filters are incorrectly sized which allows unfiltered air to enter the building.

   PBS recommends installing correctly sized filters that are MERV 8 or better in all unit ventilators.

9. No exhaust air flow was observed in Room B Prep Room during our assessment.

   PBS recommends the need for exhaust air in the Prep Room be evaluated and repaired as appropriate. Since this room is no longer used as a science prep room there may be no need for exhaust.

10. Fresh filtered air is supplied to Room B by in-floor grills and sub-slab air ducting. Several of the floor grills are blocked. Placing items over the floor grills impedes air flow. No items should be placed in front of or over these grills that impedes air flow. Redirecting the air flow is acceptable. The sub-grade ducting contains heavy dust and debris and the duct lining may be degrading.

    PBS recommends HVAC professionals evaluate the ducting to determine the appropriateness of cleaning. PBS recommends cleaning the air supply ducting, if feasible. Cleaning should be performed by NADCA certified and trained personnel. If cleaning these ducts is not feasible they should be taken out of service.

11. No room exhaust ventilation was observed in Science Rooms A and C. However, a large exhaust grill was observed in the ceiling of the Prep Room. The Prep Room is situated between these two rooms. PBS did not observe any air flow into the exhaust grill during the assessment.

    PBS recommends exhaust ventilation for the Prep Room and the adjacent science rooms be evaluated by an HVAC professional and corrected if appropriate. Testing by PBS did not revealed elevated concentrations of carbon dioxide.

12. The return/exhaust grill in the entryway soffit of Room D is detached from the ceiling. PBS did not observe airflow at this grill during our assessment.

    PBS recommends this exhaust ducting be checked for proper operation and repaired as appropriate.

13. There were complaints of vehicle exhaust odors in the Annex Building and the South Pod classroom building. Cars park and idle in close proximity to the outside air intakes.

    PBS recommends installing signs and implementing administrative controls that restrict idling and operating vehicles near these outside air intakes. PBS recommends that cars not be allowed to idle near the building. Exhaust fumes from operating vehicles will likely enter the building through the outside air intakes.

14. Room F has a chemical fume hood that is ducted to the outdoors. PBS performed smoke testing in and around this hood and found air flow and velocity was not adequate to remove contaminants away from the user.

    PBS recommends this cabinet be repaired for compliance with state code or not be used for contaminant control.

15. No exhaust ventilation was observed in the Annex Girl's and Boy's Restrooms.

    PBS recommends exhaust ventilation requirements for these restrooms are evaluated by HVAC professionals.

16. PBS observed evidence (i.e. hot plates, electric burners, microwaves, electric griddles) of cooking in the following Classrooms:

    - Room 6
    - Room 7

- Room 8
- Room 16

Most classrooms are not designed for cooking. Cooking generates odors and particulate and causes the release of chemicals impacting air quality. PBS does not recommend cooking in classrooms.

17. The exhaust grill in the Music Percussion Storage Room has significant caked on dust and debris which is likely impeding air flow.

    PBS recommends all visible dust and debris be removed by trained personnel using wet wiping and HEPA-vacuuming methods.

18. Unit ventilator outside air intake louvers and pest screens located on the Library/Classroom Pod Building are partially obstructed and/or damaged in the following locations:

    - Room 1
    - Room 3
    - Room 4
    - Room 6
    - Room 7
    - Room 9
    - Room 10
    - Room 12
    - Room 14
    - Room 16
    - Room 17
    - Room 18
    - Room 19

    PBS recommends the louvers and screens are evaluated by trained personnel and repaired as appropriate.

19. Significant chemical odors were observed in the following custodial storage areas:

    - Annex
    - Library
    - Girl's Locker Room
    - Gathering Place - Boy's Restroom
    - Gathering Place
    - Technology
    - Library

    This may be indicative of spilled chemicals, open containers, or lack of proper exhaust ventilation. Exhaust ventilation was observed to be either non-existent or flow was minimal during our assessment.

    PBS recommends appropriate ventilation systems be installed or the existing systems be evaluated. All custodial storage areas should have adequate exhaust ventilation. PBS

recommends that trained personnel evaluate all chemicals in these areas for improper storage or damaged containers.

PBS recommends these rooms be thoroughly cleaned. PBS recommends reviewing and complying with WAC 296-901 Hazard Communications, for all chemical usage in custodial closets and non-laboratory storage areas.

20. Dirt, debris, plants, books, boxes, sea shells and various other items were observed on top of the unit ventilators in various classroom areas throughout campus. Debris from these items will become airborne and impact air quality. Many of the supply and returns grills were blocked with stored items which impedes air flow.

    PBS recommends no items should be placed/stored in front of any unit ventilator or on top of any unit ventilator.

21. A sheet laminator is used in the Administration Storage Room. A strong odor was observed coming from the sheet laminator during use. Odors and fumes from the laminator impacts air quality and may impact sensitive individuals.

    PBS recommends the laminator only be used in a well ventilated room. This supply room is not adequately ventilated for laminator use.

Chemical Concerns

1. Unlabelled chemicals and containers were observed in several areas of the campus:

    - Room C
    - Room F
    - CTE (Home Ec) – Electrical Room – two open jars of yellow liquid
    - CTE - South Storage Room (former custodial closet)
    - Kiln Room - Unlabeled 5-gallon containers
    - Technology Custodial Closet
    - Room 9 - several unlabeled 4 ounce plastic bottles with a brown and clear liquids
    - East Pod – Central Common Area - A damaged unlabeled can of paint (presumed)

    PBS recommends that all chemical or other containers be labeled. PBS did not perform a chemical inventory at this site or investigate all storage cabinets. PBS recommends the District Chemical Hygiene Officer review all chemical storage practices in science classrooms and prep rooms and ensures compliance with WAC 296-828 Hazardous Chemicals in Laboratories. PBS recommends chemical storage, use and educational utility be evaluated.

    PBS recommends that art teachers and designated trained District staff review all containers in their spaces to ensure they are labeled. If chemicals are no longer being used they should be properly discarded. PBS recommends reviewing and complying with WAC 296-901 Hazard Communications, for all chemical usage outside of the Laboratory classrooms and lab storage areas.

2. A locked flammable storage cabinet is located in Room C. The teacher indicated that there are chemicals in that cabinet that are no longer used. Additionally, the cabinet is not vented to the outdoors.

PBS recommends the District Chemical Hygiene Officer evaluate this cabinet, properly discard all unused chemicals, evaluate the need for an exhaust hood and install proper venting and cabinetry for flammables.

3. A strong solvent-like odor was present in the Art Storage Room. The flammable storage cabinet in this room has a distinct solvent-like odor. There have been spills inside this cabinet that have not been cleaned up.

   The spills in the cabinet should be cleaned up by trained personnel. The cabinet is passively vented to the outdoors and odors from the cabinet can potentially be drawn into the building HVAC system. According to the art teacher there are chemicals stored in the flammable cabinet and in the art storage room that are no longer being used. PBS recommends that trained District personnel assist the art teachers with disposing of unused chemicals. PBS recommends the flammable storage cabinet be mechanically vented to help remove VOC's.

4. Wood Shop – The flammable storage cabinet located in the Wood Shop paint storage room (southeast) had a strong solvent and diesel odor. The cabinet was passively vented to the outdoors. According to the shop teacher there are chemicals stored in the flammable cabinet that are no longer being used.

   PBS recommends the flammable storage cabinet be mechanically vented outdoors. PBS recommends that trained District personnel assist the shop teacher with disposing of unused chemicals. The paint storage room does contain an exhaust fan. PBS recommends the exhaust fan be operating at all times.

5. Dry erase markers were observed throughout campus. Some of these markers contain significant VOC's that impact air quality.

   PBS recommends that only low-VOC dry erase markers be used. All others should be disposed.

6. Paint thinners and or house paints are being used and stored in the following areas:

   - Room B Robotics/Computer Lab
   - Music - Percussion Storage
   - CTE (Home Ec)
   - CTE (Home Ec) - Restroom and Sewing Storage
   - Library Sink
   - South Pod Attic
   - East Pod Attic
   - North Pod Attic
   - South Pod - Central Common Area
   - North Pod - Central common Area
   - Room 11

   Products that contain volatile organic compounds should only be used outdoors or in a fume hood. They present a flammability hazard, cause adverse health effects and impact air quality if used indoors. PBS recommends the type, use and storage of these chemicals in school classrooms be evaluated. Household paints were presumably

donated or bought and used in the classrooms by teachers and parents. Some of these containers were open and some damaged. A donated paint used on the wall of the Gathering Place contained PCBs. These types of paints were used as outdoor paints. Numerous improperly stored paints have been observed throughout campus in classrooms, common areas and storage areas. Only District approved chemicals/paints should be stored/used at this site. PBS recommends that policies and procedures be implemented to control the use of these chemicals in school buildings to help prevent adverse impacts to air quality and sensitive individuals. All donated paints and painting projects should be reviewed by trained District staff.

7. PBS observed numerous paint, adhesive and solvent containers stored on wood shelving and on the floor in the Annex Paint Storage Closet. Some containers are open and some have spilled. There is some dried spilled residue on the vinyl tile floor. This storage room contains the HVAC supply ducting for Room B and as such, may not be appropriate for the storage of chemicals. This room does not contain its own return or exhaust ducting.

   PBS recommends all residue/spilled materials be properly cleaned by trained personnel. PBS recommends evaluating all paints, adhesives, solvents and various other stored chemicals. Only District approved chemicals should be stored/used. All other chemicals should be properly disposed. All open and damaged chemicals containers should be disposed. PBS does not recommend this room be used as a chemical storage area because the HVAC supply ducting for Room B is located in this room.

8. Three unprotected, liquid, mercury-containing electrical switch bulbs were observed in the Annex Paint Storage closet. If breakage occurs, the liquid mercury will vaporize at room temperature and cause significant contamination.

   PBS recommends trained personnel properly dispose of these as soon as feasible in accordance with WAC 173-303.

9. Motor oil, windshield cleaner, and Matchlight BBQ charcoal were observed in the kitchen of the 18-21 Transitions Room. The open charcoal bag had an odor associated with lighter fluid.

   PBS recommends these chemicals be removed from the building.

10. Fluorescent light tubes were observed to be improperly stored in the following areas:

    - Music - Instrument Storage
    - CTE (Home Ec) – East Storage Room
    - CTE (Home Ec) - South Storage Room
    - CTE (Home Ec) - Restroom and Sewing Storage
    - Girl’s Locker Room – North Entry Custodial Closet
    - Gathering Place Custodial Closet
    - Technology Custodial Closet
    - East Pod Attic

    All fluorescent light tubes contain mercury and if broken, have the potential to contaminate surrounding areas. PBS recommends the intact tubes be placed in proper storage containers to prevent accidental breakage and properly disposed.

11. Suspect PCB residue was observed inside fluorescent light fixtures in the following areas:

    - Administration Building Server Room
    - Adolescent Montessori Prep Room
    - Room D
    - Music Room - Spa Storage
    - Large Gym – Boy's Locker Room
    - Room 10

    Not all rooms have been evaluated for suspect PCB-containing residues.

    PBS recommends all fluorescent light fixtures throughout campus be evaluated for suspect PCB-containing ballasts and suspect PCB residue (contamination). If suspect residue is observed it should be cleaned or removed by trained personnel. If contaminated fixtures cannot be cleaned they should be removed and discarded as PCB contaminated in accordance with Washington Administrative Code (WAC 173-303) and the Code of Federal regulations (40 CFR Part 761). Magnetic ballasts are suspect PCB-containing and should be replaced with electronic ballasts. Electronic light fixture ballasts do not contain PCBs and are more energy efficient.

12. Art supplies (i.e. paints, brushes, etc) are stored in the following areas:

    - Room A
    - Art Room (Room 22)
    - Room F – The paints are stored in a drawer and are generating an odor.
    - Various other locations throughout campus.

    The teacher in Room A and Room 22 (Art Room) indicated that many of the stored paints, paint thinners, etc are no longer used.

    PBS recommends trained staff/teachers evaluate all art supplies in their respective areas. Those paints and chemicals that are not being used or are outdated should be properly discarded. Storage location and chemical type should be evaluated. No paints that contain heavy metals or high VOC content should be used. Odors from these chemicals impact air quality. PBS recommends the paints in Room F be stored in airtight containers, moved to a well ventilated area or discarded.

13. Lead-containing solder was observed in the Kiln Room on a North storage shelf.

    PBS recommends the lead-containing solder not be used in schools. PBS recommends the solder be properly discarded and replaced with a non-lead containing solder.

14. An open bag of fertilizer was stored on a shelf in classroom 3.

    Hazardous chemicals should not be stored in classrooms. This open bag of fertilizer has the potential to easily become airborne and impact air quality. PBS recommends that the fertilizer be removed from the classroom and placed in a secure, well ventilated location that is intended for garden chemical storage.

15. Aerosols, powdered cleansers and other non-approved cleaners were observed in many areas throughout campus. These were observed in the following areas:

    - Nurses Office
    - Room B – Prep Room
    - Annex Custodial Closet
    - Music Storage Room
    - CTE (Home Ec) Room
    - CTE (Home Ec) - South Storage Room (former custodial closet)
    - Girl's Locker Room – North Entry Custodial Closet
    - Technology Custodial Closet
    - Library Sink
    - Room 11
    - Room 16a
    - Room 17
    - Room 18
    - Room 19
    - North Pod – Humanities Central Common Area
    - East Pod – Central Common Area

    PBS recommends only District approved non-aerosol cleaning and disinfecting chemicals be used inside District buildings. All non-approved chemicals should be removed and properly disposed. PBS recommends the District designate a trained employee to survey all rooms throughout the campus and remove/properly dispose of all unapproved chemicals. Aerosolized chemicals and fragrance generators (e.g. scented candles, scented oils) can easily migrate to other areas of the building and cause adverse health impacts to sensitive individuals. They also tend to settle in resident dust and have the potential to become re-entrained in the air.

16. Peeling/damaged paint was observed in the following locations:

    - Annex Building - North Exterior Soffit. The paint is lead-containing.
    - Wrestling Room (Small Gym West) – North Interior Black Wall. The black paint does not contain lead.
    - Large gym – Boy's Locker Room Shower Wall. The paint is lead-containing.
    - Technology Building Exterior - Brown paint on wood trim and concrete sills. The paint is lead-containing.

    PBS recommends all damaged paint be repaired to prevent peeling and potential adverse health and environmental impacts. All untested paints and coatings should be presumed to contain lead unless tested and proven otherwise. Lead-containing paints and materials should only be disturbed by trained personnel in accordance with WAC 296-155 Lead and 40 CFR Part 745 Lead in Target Housing and Child Occupied Facilities.

Housekeeping Concerns

1. Housekeeping was poor and significant clutter was observed in the following areas:

    - Room B – Robotics

- Room C
- Room Annex Paint storage Closet
- Nurses Office
- Administration Storage
- CTE (Home Ec) – East Storage
- CTE (Home Ec) - South Storage Room
- Carpet/PE Storage (Small Gym East)
- Technology Building - Mechanical Mezzanine
- Art Storage Room
- Wood Shop - Foundry/Forge Room
- Technology Custodial Closet
- South Pod – Montessori Central Common Area
- North , East and South Pod Attics
- Room 16
- Room 16a
- Room 17
- Room 18
- Room 19

Significant debris, clutter, and improperly stored items were observed in these areas. PBS observed brooms that are used for dry sweeping and feather dusters. Dry sweeping and feather dusting creates significant airborne particulate that is redistributed in the room.

PBS recommends all custodial housekeeping practices be evaluated. PBS does not recommend using feather dusters or performing dry dusting of any kind. PBS recommends using HEPA-vacuums and wet wiping/microfiber cloths for all dusting activities. It appears that not all areas are vacuumed every day. PBS observed debris on the floors in almost every occupied space during our investigation. Debris is being generated by eating/cooking, typical classroom activities, construction and maintenance, and being tracked in from outdoors. PBS recommends that all activities that generate debris be evaluated and measures be taken to minimize debris. These measures may include more frequent vacuuming, installing walk-off mats, minimizing cooking and eating where feasible, immediate cleanup after classroom projects, detailed cleaning after all construction and maintenance activities. Walk-off mats are intended to collect debris to prevent it from being distributed throughout the building. It is our understanding that walk-off mats do not get cleaned. PBS recommends all campus walk-off mats be routinely cleaned.

PBS recommends evaluating the clutter in these spaces. Remove all items not being used frequently. When numerous stored items (i.e. clutter) are present, it is difficult for custodial staff or anyone, to clean the space adequately. All small items and “hard to clean” items should be placed in airtight containers to help keep them clean and free of dust accumulation.

2. Moderate to heavy accumulated surface dust was observed in various areas throughout campus:

    - Administration - Copy Room, Storage Room, Server Room, Nurses Office, Top of shelving in Reception area.

- Annex – Room A
- Adolescent Montessori Prep Room
- 18-21 Transitions Laundry Room
- Music Storage Room – Throughout
- Music Room - Irish Dance Storage Room
- Music Room - Practice Rooms (2)
- Music Instrument Storage Room
- Large Gym – under bleachers
- Small Gym East - Throughout
- Small Gym West - Wrestling Room
- Boy's Locker Room – South Storage Room
- CTE (Home Ec) Room
- Gathering Place - top of and under soda machines and associated cabinets, inside kitchenette sink cabinet, and in and around microwave, and under daycare carpet.
- Gathering Place Café
- Kiln Room - throughout
- Technology Building - Small Pump Room Under Attic Stairwell
- North, East and South Pod Attics – throughout
- East Pod Central Common Area – top of storage cabinets
- Room 16
- Room 19

Accumulated dust has the potential for re-suspension impacting air quality. PBS recommends housekeeping practices be evaluated. Moderate to heavy dust should be cleaned, when observed, to prevent air quality impacts. Cleaning should include HEPA-vacuuming or wet dusting. More frequent housekeeping may be necessary in some areas. Dry dusting (i.e. feather dusters, dry cloths, etc.) should never be used as it re-entrains dust into the air. Discussions with the Maintenance Director revealed that existing vacuum cleaners were not HEPA-filtered. Non-HEPA-filtered vacuums tend to re-entrain respirable particulate into the air. PBS recommends replacing all vacuums and only using HEPA-filtered vacuums.

3. Gathering Place Café - The ceiling access hatch to the above mechanical space was open during our initial investigation.

   PBS recommends the attic access hatch in the Café be closed at all times. Debris from the attic has the potential to migrate into the Café.

4. Gathering Place - Boy's Restroom Custodial Closet - A musty odor associated with wet mop heads was observed.

   PBS recommends housekeeping practices be evaluated and musty odors always be investigated. If a musty odor is present, fungal growth may also be present. All fungal contaminated materials should be cleaned or discarded. Fungal contaminated mop heads are not cleanable.

5. North Pod – Humanities Central Common Area - There is one sink cabinet located in the central common area. Water staining was noted inside this cabinet, however, no evidence of fungal growth was observed. A hole has been previously cut in the back of the sink cabinet to access the plumbing.

PBS recommends HEPA-vacuuming the accessible cavity behind the sink.

6. Live potted plants with visible fungal growth and or dead plant material were observed in the following areas:

   - Room C
   - Room D
   - Room 6
   - Room 7
   - South Pod – Montessori Central Common Area
   - Room 12

   Proper plant maintenance is important in preventing potential impacts to air quality and sensitive individuals. PBS recommends frequently checking all plants for dead materials and fungal growth. Overwatering and plant disease causes fungal growth. PBS recommends that all improperly maintained plants be removed from the building.

7. Large unused aquariums containing significant dust and debris are located in the following classrooms:

   - Room C - contains plant debris, dirt, bird droppings, dead insects, pieces of dirt covered wood
   - Room F - contains gravel and dust and debris

   PBS recommends these aquariums, stands and all associated items are thoroughly cleaned or removed from the building.

8. An open bucket of sand was observed under a sink in Room C and in the South Pod Attic. The sand particulate has the potential to become airborne when disturbed.

   PBS recommends the sand be stored in sealed containers or disposed.

9. The small greenhouse room located between Rooms A and C contains significant clutter, dirt, debris, plant debris and some rotting vegetables. Debris and fungal growth from these items will become airborne and has the potential to impact air quality in the classrooms. The greenhouse has no supply or exhaust air other than operable windows that were not open at the time of the investigation.

   PBS recommends all dirt, debris, rotting vegetables and clutter be removed and the room be HEPA-vacuum and wet wiped.

10. Concerns that the black debris/residue on the metal window frames was fungal growth. It is PBS opinion that the residue is dirt and debris that accumulates on moisture at the perimeter of the metal operable window sash. This was typical throughout all buildings.

    PBS recommends all operable window sashes be included in the periodic cleaning routine. Cleaning should consist of wet wiping.

11. Walk off mats were observed in various areas throughout campus. Many of the mats were dirty, wet, and some had musty odors. Walk-off mats are intended to capture water

and debris tracked in from outdoors. However, it is our understanding that these mats get cleaned once a year, if time permits.

PBS recommends all walk-off mats be vacuumed daily and extraction cleaned quarterly. Cleaning more often may be necessary if debris builds up in the fibers or musty odors are observed. If musty odors are observed the mat should be extraction cleaned with hot water or discarded.

There are some areas on campus that have smooth vinyl flooring that do not have walk-off mats, such as gymnasium entrances. PBS recommends walk-off mats are placed at all exterior building entrances to help prevent dirt, debris and excess moisture from being tracked in.

12. Significant dust and debris was observed inside the two wall mounted heating units in the Annex corridor.

    PBS recommends removing the covers and thoroughly cleaning the interior of each heating unit in the corridor.

13. Upholstered furniture, cubical walls, area rugs and other items that rarely get cleaned were observed in many areas:

    - Administration - chairs
    - Library - chairs
    - Room B – chairs and cubical walls
    - Room D – curtains and area rugs
    - Library – chairs, area rug, a small upholstered couch, cloth tapestry hanging from the walls, intricate artwork sitting on the soda machine and a log house
    - Room 5 – chair and several area rugs
    - Room 12 – chair
    - Room 13 – area rugs
    - Room 16 – area rug, chair
    - Room 17 – area rugs
    - Room 19 – area rugs, chairs, floor mats and cloth curtains
    - Room 20 – area rugs and pillow

    Upholstered furniture, cubical walls and other cloth items tend to accumulate dust and debris. According to custodial staff these items do not get cleaned.

    PBS recommends evaluating cleaning practices for these items. It is recommended they be included in the typical cleaning routine. HEPA-vacuuming and extraction cleaning is recommended. If they are not part of the cleaning routine these should be removed. An alternative to an upholstered chair would be one with a smooth vinyl or leather cover that does not accumulate dust and debris.

14. The stuffed sharp-tail grouse display and other “mounted” animals in Room A will tend to shed animal dander, feather barbules and accumulate dust that is difficult to clean.

    PBS recommends that housekeeping practices be evaluated for this room. Consider placing these displays in an enclosed case and or removing them from the classroom.

15. Digital Arts (room 23) - Open bags of cereal were observed in the casework and on top of the counter. Food tends to attract insects and small rodents and generates airborne particulate.

    PBS recommends the bags be stored in airtight containers.

16. Classroom 12 - Open bags of sand, gravel, a 5-gallon bucket that contains dirt, debris and a funnel were noted inside a storage cabinet of this classroom. Particulate from these items has the potential to become airborne and impact air quality.

    PBS recommends the bucket be cleaned and the open bags are stored in airtight containers or removed from the building.

17. The carpet in the Annex corridor is visibly discolored from heavy foot traffic. Carpets accumulate heavy dust and debris and impact air quality when disturbed. Carpets are not recommended in corridors because of the heavy traffic they endure.

    PBS recommends removing carpets from all corridors and replacing with a smooth surface such as wood, terrazzo or vinyl. If the carpet is to remain, PBS recommends cleaning frequency be evaluated.

18. A garden compost pile, moldy scrap wood, rotting pumpkins, a table and other gardening equipment are located in close proximity to the outside air intake of Rooms C and F.

    PBS recommends the compost piles, dead plant materials, moldy wood and all gardening equipment be removed from the vicinity of the outside air intake to help prevent odors and particulate associated with those items from entering the building.

19. Refrigerators in the following areas were observed to contain fungal growth on food, door gasketing and or the interior of the unit:

    - Adolescent Montessori Prep Room - Food
    - Gathering Room – Small and Large Refrigerator – Doors and Interiors
    - 18-21 Transitions – Doors
    - Boy's Locker Room Storage – Interior of Ice Machine

    PBS recommends all food in refrigerators be periodically evaluated and discarded as necessary. The doors, door gasketing and the interior should be periodically checked for visible suspect fungal growth and food debris and cleaned as appropriate.

20. Chemical damage was observed on the interior floor of the sink cabinet in the Adolescent Montessori Prep Room.

    PBS recommends the floor of the sink cabinet be replaced by trained personnel.

21. A hole was observed in the gypsum wallboard along the upper West wall that leads through to the attic. This hole potentially allows dust from the attic to enter the room and impact air quality.

    PBS recommends the hole be sealed to prevent air transfer from the attic.

22. A hole was observed in the gypsum wallboard along the lower east wall in the 18-21 Transitions Room. Significant debris was observed in the hole.

    PBS recommends the debris be cleaned/removed and the hole be sealed. Cleaning should include HEPA-vacuuming all debris.

23. Drama and Dance Storage (Small Gym East) - Three garden type handheld sprayers are stored in a fenced area. It is our understanding the sprayers are used for disinfecting the wrestling mats. The sprayers appear to be leaking and the carpet is wet beneath. There is a strong odor of cleaning chemicals in the room. No suspect fungal growth was observed.

    PBS recommends the sprayer/chemical storage be evaluated. The wet carpet should be dried and evaluated for damage.

24. Unit ventilators are located in four classrooms in the Annex Building (i.e. A, C, D, and F), all 21 classrooms in the classroom Pods and the Library. Fresh air is supplied to these rooms by the unit ventilator located at the exterior wall. Moderate to heavy dust and debris was in the return openings, inside the control panels and on the exterior of the building in the outside air intake.

    PBS recommends trained personnel thoroughly cleaning the return opening, the interior of both control panel boxes and the outside air intake. To clean the outside air intake the exterior pest screens should be removed to access the interior of the unit vent. Cleaning should include HEPA-vacuuming and wet wiping all visible dust and debris. PBS recommends all compartments on all unit ventilators be cleaned.

25. Kiln Room - A buffing wheel is located on the bench in the Kiln Room. Heavy polishing dust and debris is present on the bench and around the buffing machine. The buffing machine filter is not capturing the dust being generated by the wheel. PBS observed several polishing compound bars on the bench. Some polishing compounds contain silica and as such, the dust and debris around the wheel may be silica–containing. Silica is a known carcinogen and causes various other health impacts.

    PBS recommends that housekeeping practices be evaluated. Every time the buffing wheel is used all visible dust and debris should be HEPA-vacuumed. It is our opinion that the existing buffing wheel unit is not adequate for its current use in its current location. PBS recommends this buffing wheel not be used. OSHA recommends all buffing wheels should have a minimum air flow velocity of 300 cubic feet per minute (cfm) per wheel with local exhaust ventilation. PBS recommends only using polishing compounds that do not contain silica. If existing polishing compounds are being used/stored that potentially contain silica they should be discarded.

26. Art Room (Room 22) - Significant clay dust is generated in this room. Housekeeping was good for the current use of the room. Rooms where clays are used required extra housekeeping to prevent excessive airborne dust.

    PBS recommends frequent and thorough wet dusting and HEPA-vacuuming. HVAC filters and ducting in these areas should be frequently checked for clay dust build up and cleaned as necessary.

27. Foundry/Metal Shop - It is our understanding that this room is not being currently used. PBS observed significant sand on the floor throughout and stored polishing compounds, lead-containing solder, house paints and lots of clutter and debris throughout.

    PBS recommends this room remain locked at all times and access to this room be restricted to authorized personnel only. Prior to occupancy, trained personnel should discard all unused items, evaluate and properly dispose of all chemicals, remove all sand, thoroughly HEPA-vacuum all surfaces and ventilation systems, clean all surfaces to remove hazardous residues that potentially exist and ensure that ventilation systems are operating properly.

28. Former Photography Developing Room (currently being used for storage) - This room has a slight odor of photo developing chemicals. The odor may be indicative of spills or photographic developing chemicals that have absorbed into the building materials. The room was substantially filled with stored items and could not be fully accessed.

    PBS recommends this room be emptied to investigate for chemical damage to finishes or evidence of spills.

29. The Library typically contains 70-90 people Tuesday through Friday. Many of those people are eating throughout the day. Food particulate was observed on the carpeted floors daily. Food debris attracts insects, small rodents and promotes biological growth. Many people are allergic to many different food allergens. Food particles build up in the carpet and become airborne impacting air quality and sensitive individuals.

    PBS recommends the carpet be extraction cleaned every 2-3 months or replaced with smooth flooring such as sheet vinyl, ceramic/vinyl tile, wood or concrete. Another alternative would be to restrict eating in the Library.

30. It is our understanding that old carpet was removed in the following classrooms over Christmas break of 2015 by a District hired contractor:

    - Room 8
    - Room 9
    - Room 11
    - Room 12
    - East Pod – Central Common Area

    Carpet removal included manual demolition and mechanical grinding to remove residual carpet mastic. PBS observed a fine light colored dust (i.e. concrete dust) on various surfaces throughout the room and carpet mastic debris in the unit ventilator return. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned.

    PBS recommends that only trained personnel using appropriate engineering controls perform carpet removal and floor grinding work. Construction dust/contaminant controls and housekeeping practices should be evaluated. All concrete floor grinding activities should be performed in accordance with WAC 296-155-693 Concrete Finishing.

Carpet removal should consist of the following at a minimum: wet the carpet to minimize airborne particulate, isolate and seal off the HVAC systems as they should not be used for demolition dust control, isolate the work area from adjacent non-work areas to prevent contaminant migration, cut the carpet into small manageable strips and remove to a refuse dumpster outside the building. Personnel should be wearing respiratory protection. All unprotected surfaces throughout the room should be HEPA-vacuumed initially and then again the next day if settled is observed.

Concrete grinding should consist of the following at a minimum: wet grinding methods are preferred to minimize airborne silica dust, isolate and seal off HVAC systems as they should not be used for demolition dust control, isolate the work area from adjacent non-work areas to prevent contaminant migration, and install a HEPA-filtered pressure differential fan to create negative air and exhaust contaminants to the outdoors. Personnel should be wearing HEPA-filtered respiratory protection appropriate for potential exposure to silica dust. All unprotected surfaces throughout the room should be HEPA-vacuumed at completion and then again the next day if settled dust is observed. The HEPA-filter negative pressure fan should remain operating until visible dust no longer settles on surfaces.

31. It is our understanding that teachers/parents removed carpets in the following rooms:

    - Room 10
    - Room 13
    - Room 19 – Significant concrete and mastic debris throughout perimeter of room and in HVAC return.

    Carpet removal included mechanical grinding to remove residual carpet mastic. PBS observed carpet mastic debris in the unit ventilator return. Engineering controls during carpet removal and floor grinding are not known to the investigator. It is PBS' opinion that engineering controls during carpet removal and floor grinding processes were inadequate to control contaminants and that all surfaces impacted by the work were not properly cleaned.

    PBS recommends that only trained personnel using appropriate engineering controls perform carpet removal and floor grinding work. Construction dust/contaminant controls and housekeeping practices should be evaluated. Teaching staff and parents should not make building modifications without District approval and strictly adhering to District procedures and policies.

32. Classroom 9 - Numerous bags of seashells are stored on bookshelves in this space. A teacher reported adverse health impacts after handling these shells. The origin of the shells is unknown to the investigator. If the shells were not thoroughly cleaned they have the potential to harbor organisms and allergens that can cause adverse health effects to sensitive individuals.

    PBS recommends the shells be thoroughly cleaned, disinfected, dried and then stored in airtight containers or removed from the building.

Fungal Concerns

1. In-place carpets near exterior entryways were observed to be damp and have musty odors.

    - Administration Building - North Entrance
    - Annex Building - East Entrance
    - Library – West Main Entrance

    PBS recommends the carpet near these entryways be removed and replaced with a walk-off mat/pad and or smooth flooring. All fungal remediation work should be performed in accordance with EPAs Guidelines, “Mold Remediation in Schools and Commercial Buildings”.

    Discoloration (i.e. suspect fungal growth or dirt build up) was observed around the floor drain near the toilet in the CTE (Home Ec) Restroom and Sewing Storage. PBS recommends trained personnel thoroughly clean and disinfect the discolored floor areas. All fungal remediation work should be performed in accordance with EPAs Guidelines, “Mold Remediation in Schools and Commercial Buildings”.

2. Boy’s Locker Room - Discoloration (i.e. suspect fungal growth) was observed around the shower drains.

    PBS recommends that trained personnel clean the suspect fungal growth.

3. Room B Prep Room ceiling is water damaged and discoloration (i.e. suspect fungal growth) is present. The ceiling mounted heating element located in the prep room is water damaged.

    PBS recommends the impacted ceiling tile and all suspect fungal contamination is removed by trained personnel. PBS recommends the heating element be removed.

4. Water damage and fungal growth was noted at the east exterior wood soffit of the Gathering Place.

    PBS recommends the source of the water damage be determined and all building damage repaired. The fungal growth should be removed by trained and experience workers.

5. Suspect fungal growth was noted on the wrestling mats in the mat storage locker at the South end of the Wrestling Room (Small Gym West).

    PBS recommends the mats be removed, unrolled and condition evaluated by trained personnel. If they are determined to be re-useable and cleanable, the mats should be thoroughly cleaned and disinfected by trained personnel. If they are not usable they should be discarded and no longer stored.

6. The wrestling mats currently laid out on the floor of the Wrestling Room are significantly cracked and damaged making them difficult to properly clean and disinfect.

    PBS recommends properly repairing these mats. If the mats are not repairable they should be discarded.

7. Suspect fungal growth in wood storage cabinet and on the floor in the Boy's Locker Room – Wrestling Storage. It also appears the ice machine has been leaking which has caused the suspect fungal growth and mineralization of the masonry wall.

   PBS recommends repairing the ice machine. All fungal growth on the floor and in the cabinet should be removed by trained and experience workers.

8. Suspect fungal growth on painted concrete floor near toilet in the Boy's Locker Room – Coaches Office.

   PBS recommends the source of the fungal growth in the cabinet be determined and corrected. The fungal growth should be removed by trained and experience workers.

9. Girl's Locker Room (Archery Storage) - A roof leak has caused fungal growth on gypsum ceiling, brick wall, concrete floor, and in adjacent metal locker along the north and east wall.

   PBS recommends the source of the water intrusion be determined and corrected, as appropriate. This work was performed in February by a professional abatement firm. PBS was onsite during this work which included cleaning the contents of the rooms, cleaning the impacted walls and removing the fungal impacted ceiling materials. This work will be documented in a separate closure report.

10. Gathering Place Daycare Toys – It is our understanding frequency of toy cleaning is unknown to the custodial staff.

    PBS recommends daycare toy cleaning type and frequency cleaning be evaluated. These toys are handled by many children on a daily basis which creates a significant potential for disease causing organisms to be transferred.

11. Art Room (Room 22) - Both sinks cabinets are significantly water damaged and suspect fungal growth was observed in each.

    PBS recommends both sinks cabinets be replaced by trained personnel.

12. Digital Arts (Room 23) - Base of the sink cabinet is water damaged, degraded and suspect fungal growth is present.

    PBS recommends the sink cabinet be removed by trained personnel.

13. Wood Shop Street Art Room - Suspect fungal growth was observed on the North gypsum wallboard wall in the street art room. It appears that water intrusion has caused the fungal growth. The source of the water intrusion should be determined and corrected/repaired.

    PBS recommends that trained personnel remove the impacted gypsum and inspect the wall cavity for further impacts.

14. Library Sink - Soil and minor suspect fungal growth was observed on the floor of the sink cabinet.

PBS recommended the soil and fungal growth is cleaned by trained personnel. This work was performed in February by a professional abatement firm hired by the Monroe School District. Cleaning included HEPA-vacuuming and wet wiping. PBS was onsite during this work. This work will be documented in a separate closure report.

15. Library Custodial Closet - Fungal growth was observed at the base of the gypsum wallboard wall and in the wall cavities. PBS recommended that all fungal impacted gypsum wallboard within 2 feet of the floor, associated base trim, and wall cavity insulation be removed on all four closet walls. This work was performed in April by a professional abatement firm hired by the Monroe School District. PBS performed a visual inspection when this work was completed. The work included demolishing the majority of this cleaning closet leaving the plumbing wall in place. This work will be documented in a separate closure report.

16. South Pod – Montessori Central Common Area - Suspect fungal growth was observed on the back wall in the base of the West sink cabinet.

    PBS recommends the sink cabinet be removed and replaced by trained workers using engineering controls.

17. Efflorescence (crystalline mineral deposits) and water staining was observed on the masonry (brick) in the following areas:

    - Room B - East Brick Wall (previous roof leak)
    - Room D - West Brick Wall (previous roof leak)
    - Music Room - Irish Dance Storage Room
    - Music Room - Spa Storage
    - Music Room – Percussion Storage
    - CTE (Home Ec) - South Storage Room
    - Carpet/PE Storage (Small Gym East)
    - Boy's Locker Room – South Storage Room
    - Gathering Place – South Wall
    - Room 5
    - Room 7
    - Room 10
    - Room 13
    - Room 16
    - Room 20 – This was cleaned during our field assessment and no further action is required in this space.

    This is indicative of moisture intrusion through the brick masonry. Crystalline mineral deposits can become airborne and irritate respiratory systems and eyes of sensitive individuals. All mineral deposits should be removed with a scrub brush and HEPA-vacuuming. For each location the cause of indoor mineral deposits on masonry should be investigated and corrected.

    The cause of the efflorescence in the Library/Classroom Pod Building is due to damaged and clogged stormwater piping systems causing water to leak onto the exterior wall of the building. The roof rain water "drain" is designed to flow into subgrade "French" drains located at the base of the exterior brick wall. Many of these subgrade drains

appear to be clogged, as overflows were observed during rain events. The overflows are also causing water intrusion and efflorescence inside the building.

PBS recommends the roof drain system throughout this building be evaluated and repaired as appropriate to prevent building water intrusion.

18. Substantial efflorescence (crystalline mineral deposits), water staining and flaking paint were observed on the east and south perimeter CMU walls of the (Small Gym - East). The water intrusion has caused the backside of wall mounted athletic safety pads, the acoustic wall panels and base trim to become moldy along the entire length of each wall. Paint particulate, fungal particulate and crystalline mineral deposits can become airborne and cause adverse health impacts. Fungal air and surface testing was performed in this room to help determine if the fungal growth behind the panels was impacting air quality. Based on review of laboratory data there was no significant difference in fungal composition when compared to outdoors. The fungal growth is enclosed behind the panels.

    PBS recommends the cause of the water intrusion be determined and corrected throughout the Small Gym East. PBS recommends trained personnel remove the fungal contaminated pads, wall panels, and base trim in the Small Gym East. All fungal remediation work should be performed in accordance with EPAs Guidelines, “Mold Remediation in Schools and Commercial Buildings”. All flaking paint and mineral deposits should be removed from the CMU walls throughout the Small Gym. Removal and cleaning should include, at a minimum, using a scrub brush, mild detergent solution and HEPA-vacuuming. The flaking beige wall paint was tested and found not to contain lead.

    All untested paints and coatings should be presumed to contain lead unless tested and proven otherwise. Lead-containing paints and materials should only be disturbed by trained personnel in accordance with WAC 296-155 Lead and 40 CFR Part 745 Lead in Target Housing and Child Occupied Facilities.

19. Substantial efflorescence (crystalline mineral deposits), water staining and flaking paint were also observed on the North and South perimeter CMU walls of the Wrestling Room (Small Gym West). PBS could not access behind the acoustical sound panels on the North and South walls to determine if fungal growth was present.

    PBS recommends the cause of the water intrusion be determined and corrected throughout the Wrestling Room. PBS recommends investigating behind the wall panels in the Wrestling Room to determine if fungal growth is present.

    PBS recommends trained personnel remove the fungal growth, if found. All fungal remediation work should be performed in accordance with EPAs Guidelines, “Mold Remediation in Schools and Commercial Buildings”. All flaking paint and mineral deposits should be removed from the CMU walls throughout the Wrestling Room. Removal and cleaning should include, at a minimum, using a scrub brush, mild detergent solution and HEPA-vacuuming. The flaking beige wall paint was tested and found not to contain lead.

    All untested paints and coatings should be presumed to contain lead unless tested and proven otherwise. Lead-containing paints and materials should only be disturbed by

trained personnel in accordance with WAC 296-155 Lead and 40 CFR Part 745 Lead in Target Housing and Child Occupied Facilities.

20. Water staining was observed on the 12" glued-on ceiling tiles in various areas throughout campus. No fungal growth was observed on visible surfaces. Locations that had long term leaks or more likely to have fungal growth. Small short term leaks will typically dry and no fungal amplification will occur.

    PBS recommends checking the top side of representative stained ceiling tile for fungal growth. If suspect fungal growth is observed, the impacted materials should be removed by trained personnel in accordance with EPA guidelines, Mold Remediation in Schools and Commercial Buildings.

21. The storm water gutter system throughout the South portion of the gym building and associate covered walkway is clogged, damaged and leaking against the building. The water is working its way into and through the envelope (i.e. brick, window and door frames) causing efflorescence and fungal growth and potentially impacting air quality in the building. The water is also causing plant growth on the exterior surface of the building which tends to degrade the building materials.

    PBS recommends the roof stormwater drainage system be evaluated and repaired to prevent water from running down the side of the building and into the envelope.

22. Library/Classroom Pod Building - Roof stormwater drains directly in front of the outside air intakes of each of the Library unit ventilators. Suspect algal growth and fungal growth was observed in close proximity to the intake grills.

    PBS recommends the stormwater drain leaders be rerouted to a location at least 6' away from the building. Stormwater should not be allowed to accumulate against the building. The concrete walk and exterior brick wall should be cleaned.

23. Classroom 5 - The carpet beneath the drinking water dispenser was wet. Building materials that remain wet for long period of time promote fungal growth. No evidence of fungal growth was observed.

    PBS recommends the carpet be dried and a drip pan be placed under the dispenser.

Observed Asbestos Concerns

1. Damaged 9" asbestos-containing vinyl floor tile is located in the following areas:

    - Room F and the associated Prep Room - minor damage, delaminating
    - Annex Custodial Closet – moderate damage, delaminating
    - Music Room - Spa Storage – minor damage, delaminating
    - Music Room - Practice Rooms (2) – minor damage
    - Music Room – North Corridor – minor damage
    - Music Room – Teachers Office – minor damage, delaminating
    - Gathering Place – West Office – minor damaged caused by the desk chair.

    PBS recommends that trained workers using personal protective equipment (PPE) and engineering controls remove the damaged floor tile in accordance WAC 296-62-077.

The associated flooring mastic has not been tested. PBS presumes the floor tile mastic is asbestos-containing unless it is tested and proven otherwise. It is PBS' opinion that the floor tile is not a current exposure concern. The damaged tile in the gathering Place Office can be waxed and then a chair mat be placed under the chair to prevent future damage.

2. Gathering Place Mechanical Attic

   Heavy dust, construction debris and asbestos hard-fitting insulation debris were observed in various areas in this attic space. PBS performed asbestos air testing in the café and Gathering Place to determine if asbestos structures were present in the air. No asbestos structures found in the air. PBS recommended to the Monroe School District the attic space be sealed off, all access restricted and the space be cleaned by trained and experience abatement professionals in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 (AHERA). This work has been completed and will be documented in a separate abatement closure report.

3. A box of unused 9" vinyl floor tile manufactured by Armstrong is stored in this room. PBS recommends all 9" vinyl floor tile be presumed to be asbestos-containing unless tested.

   The floor tile and its associated mastic should be handled by trained workers and properly disposed in accordance with WAC 296-62-077.

4. Technology Building - Mechanical Mezzanine: An open bag of vermiculite, an open bag of flint abrasive, a large three bowl stainless steel sink with black undercoating, polishing compounds and clay debris was observed in the attic corridor. These materials/items are presumed to contain asbestos and silica.

   PBS recommends corridor be cleaned and these items be properly disposed by trained and experience abatement professionals. This work should be performed in accordance with WAC 296-62-077 (Asbestos) and 40 CFR Part 763 AHERA.

5. North and South Pod Attics (Mechanical Mezzanines) - The teachers use these spaces to store educational materials and a variety of other items. The attics contain HVAC equipment and a hot water tank. Stored items use the majority of available space. Teachers were making adjustments to the HVAC equipment in the attics. A cabling upgrade project left asbestos-containing gypsum wallboard debris throughout the perimeter. A hot water tank replacement project left asbestos containing pipe insulation debris near each water tank.

   Testing revealed asbestos fibers in the settled dust, however, no airborne asbestos fibers were revealed. PBS presumes the source of the asbestos fibers in the dust is from the pipe insulation and gypsum wallboard joint compound damage.

   A professional abatement firm was hired to remove and decontaminate all cleanable items and the building structure in the North and South Pod Attics. The attic spaces will no longer be used for teacher storage. PBS Industrial Hygienists were onsite during abatement to verify regulatory compliance and perform clearance testing. Abatement activities in these attics will be documented in a separate closure report. PBS recommends these mechanical mezzanines not be used for public storage and only accessed by maintenance staff.

The AHERA Management Plan includes asbestos-containing gypsum wallboard systems and pipe insulation. It is our understanding that contractors were provided the asbestos survey for each activity. However, the gypsum wallboard and pipe insulation debris was not properly handled or cleaned up by the contractors involved.

PBS recommends verifying the asbestos content of all building materials prior to any impacts. If asbestos-containing materials are identified all impacts to those materials must be performed in accordance with WAC 296-62-07 and 40 CFR Part 763 AHERA. PBS recommends that all construction and maintenance housekeeping practices be evaluated for asbestos related impacts and compliance enforced. Construction dust and debris not only impacts air quality but also creates potential worker and occupant exposures to hazardous materials.

6. East Pod Attic (Mechanical Mezzanine) - The teachers in the East Pod used this space to store educational materials, art projects and a variety of other items. The attic contains a hot water tank and the HVAC exhaust ventilation system for Rooms 8-13. Housekeeping was poor with a moderate to heavy accumulation of clutter, dust, dirt, and debris including broken glass door. Teachers were making adjustments to the HVAC equipment in the attics. A cabling upgrade project left asbestos-containing gypsum wallboard debris throughout the perimeter. A hot water tank replacement project left asbestos containing pipe insulation debris near the hot water tank. Testing revealed no asbestos fibers in the settled dust on items stored in the attic or the attic air. PBS presumes the source of the asbestos fibers in the dust is from the pipe insulation and gypsum wallboard joint compound damage.

   The AHERA Management Plan includes gypsum wallboard systems and pipe insulation to be asbestos-containing. It is our understanding that contractors were provided the asbestos survey for each activity. However, the gypsum wallboard and pipe insulation debris was not properly handled or cleaned up by the contractors involved.

   PBS recommends access to this attic space is restricted to asbestos trained personnel only. All visible pipe insulation debris around the water heater and all gypsum wallboard debris throughout the perimeter of the space should be cleaned in accordance with WAC 296-62-07 and 40 CFR Part 763 AHERA.

   PBS recommends housekeeping practices and the use of this space be critically evaluated. All broken glass, construction debris, etc should be removed. PBS recommends these mechanical mezzanines not be used for public storage and only accessed by trained maintenance staff.

Construction Concerns

1. Minor gypsum wallboard construction dust and debris from a 2015 wireless cabling upgrade project was noted in occupied spaces throughout campus. The project included installing wireless routers and running cabling in every instructional and office space throughout campus. Gypsum wallboard dust and debris was observed on most all horizontal surfaces beneath penetrations that were cut through the gypsum wallboard for cable pathways. The cabling project included demolition of a non-regulated asbestos-containing gypsum wallboard system.

2. The AHERA Management Plan presumes the gypsum wallboard and associated joint compound to be asbestos-containing. Testing revealed the gypsum wallboard joint compound to be asbestos-containing. However, demolition of a gypsum wallboard system that contains less than 1% asbestos by composite is not considered an asbestos abatement project and as such certified asbestos workers are not required to perform this work.

   The gypsum wallboard debris was not properly handled or cleaned up by the contractor after construction activities were completed. PBS informed the District of our findings. The District responded by hiring a professional abatement contractor to HEPA-vacuum and wet wipe gypsum debris from every location where cabling was installed throughout campus. PBS was onsite during that work to help verify the cleaning process to be adequate.

   PBS recommends verifying asbestos content of all building materials prior to any impacts. If asbestos-containing materials are identified all impacts must be performed in accordance with WAC 296-62-07 and 40 CFR Part 763 AHERA. PBS recommends that all construction and maintenance housekeeping practices be evaluated. A work plan should be prepared and verified to address any potential asbestos impacts. Whenever a construction project takes place construction dust and debris not only impacts air quality but also creates potential worker and occupational exposures to hazardous materials.

3. An older yellow colored carpet is located in the following rooms:

   - Music Room
   - Classrooms 1, 14, 15, 16, 16a, 17, 18 and 20.
   - North Pod - Central common Area

   The carpet is damaged and contains significant accumulated dust and debris from many years of accumulation. The carpet was installed approximately 25+ years ago and is beyond it useful life. The carpet can longer be adequately cleaned to prevent indoor air quality impacts.

   PBS recommends the carpet in these rooms be removed by trained workers using appropriate PPE and engineering controls to contain dust and debris generated by removal of the carpet. The presence of asbestos-containing floor tile and mastic underneath the carpet in the Music Room should be investigated prior to carpet removal.

4. The sheet flooring is delaminating throughout the Small Gym East. This may be due to water intrusion through the wall or excessive moisture under the sheet flooring or failed adhesive.

   PBS recommends the flooring be evaluated for slab moisture intrusion.

5. Kiln Room - the vinyl floor tile is damaged under the water cooler. The water cooler may leak and or spills may have caused the water damage.

   PBS recommends the source of the damage be determined and corrected.

6. Girl's Locker Room (Archery Storage) - Exposed electrical wiring is hanging from a fluorescent light fixture.

PBS recommends the wiring be evaluated and corrected as appropriate.

4.2 Testing

Carbon Dioxide Concerns

PBS performed carbon dioxide testing in 32 locations. Two of those locations revealed concentrations of carbon dioxide that were above the recommended ASHRAE Threshold for an extended period during normal occupancy:

1. Gathering Place

   The peak concentration was 1,734 ppm CO_2. The average concentration during occupied hours (approximately 8 am to 4 pm) was 1,099 ppm CO_2. From approximately 11 am to 1:30 pm the CO_2 level was above the recommended threshold. This was the time range when the room was most occupied with people eating lunch.

   It is PBS' opinion that this system is not providing an adequate supply of fresh air. PBS recommends that the HVAC system be evaluated and adjusted during that time range to accommodate the higher occupancy load.

2. Room F

   The peak concentration was 1,315 ppm CO_2. From approximately 9 am to 12 pm the CO_2 levels steadily rise to above the recommended threshold. The room appears to empty out after lunch because levels decrease and continue to decrease throughout the remainder of the day.

   It is PBS' opinion that adequate fresh air is not being supplied to this room. PBS recommends that the HVAC system be assessed for proper operation and corrected to supply adequate fresh air based on the use of the space.

Temperature Concerns

PBS performed temperature testing in 32 locations. Two of those locations require further assessment:

1. Room 6

   Temperatures spiked to 76.0 °F at approximately 7 am and also dropped to 65°F several times during occupied hours. The average temperature during daytime occupied hours (approximately 8 am to 4 pm) was 69 °F. The lower temperature may have been due to an exterior door or window being open.

   PBS recommends the unit ventilator thermostat be checked for proper operation.

2. Room 9

   Temperatures spiked to 79.6 °F at approximately 7:00 am and dropped below 68°F for a significant portion of typical occupied hours. The average temperature during daytime

occupied hours (approximately 8 am to 4 pm) was 67 °F. The morning spike was likely due to the HVAC Unit Ventilator starting up to bring the room up to set point temperature. Then at approximately 8 am the unit ventilator may have stopped operating or was shut off.

PBS recommends the unit ventilator thermostat be checked for proper operation.

PCB Air Testing

PBS collected PCB air samples in sixty-eight (68) locations within the study area.

Thirteen of the 68 samples collected had detectable concentrations of PCBs. The following table provides a listing of those locations.

Sample Number	Sample Locations	PCB Results ng/m^3
001	Room 11	88
005	Montessori Science Prep Room	190
041	Large Gym	53
045	Gathering Place – West Office	53
046	Room E (18-21 Transitions) – West	48
052	Room E (18-21 Transitions) – East	51
054	Room F	110
056	Annex Hall – West	270
059	Room D	210
060	Annex Girl's Restroom	150
062	Annex Hall – East	150
063	Room A	250
064	Room C	99

None of the samples collected during this study exceeded the NIOSH Recommended Exposure Limit of 1,000 ng/m^3 or the OSHA PEL of 500,000 ng/m^3.

The EPA has calculated Exposure Levels for Evaluation that are intended to maintain overall PCB exposures below the oral reference dose (RfD) of 20 ng PCB/kg body weight per day. The EPA recommends that the concentrations of PCBs in indoor air be kept as low as is reasonably achievable and that total PCB exposure be kept below the RfD level.

The following locations had detectable concentrations of PCBs were all below the EPA RfD levels:

- Room 11
- Gathering Place – West Office
- Large Gym
- Annex Room E – East
- Annex Room E - West
- Annex – Room C

While these levels don't exceed the EPA RfD, EPA recommends cleaning all areas where PCB's are present to help minimize exposures to the lowest achievable levels.

The following locations were above the EPA RfD levels for children less than 3 years of age.

- Annex Mont. Sci. Prep
- Annex Room F
- Annex Girls Restroom
- Annex Hall – East

This means that children less than 3 years of age should not continuously occupy these spaces to help prevent potential exposures above the reference dose levels. PBS recommends trained personnel thoroughly clean each room to help minimize exposures in these areas.

The following locations were above the EPA RfD levels for children less than 6 years of age:

- Annex Hall – West
- Annex Room D
- Annex Room A

This means that children less than 6 years of age should not continuously occupy these spaces to help prevent potential exposures above the reference dose levels. PBS recommends trained personnel thoroughly clean each room to help minimize exposures in these areas.

PBS performed additional assessment of classroom 11 to help determine the source of airborne PCBs in that space. All fluorescent light fixtures were opened and no suspect ballasts or residue was observed. The room was clean with minimal accumulated dust or debris. However, the unit ventilator control compartments were dusty and dirty. Oil was observed leaking from the electric motor. PBS collected qualitative wipe samples from materials in each compartment and the oil. Low levels of PCB were found in each compartment and the return. There is an old carpet located underneath the unit ventilator in this room. It is PBS opinion that the carpet is the potential source of airborne PCBs. The carpet was likely contaminated from historical ballast failures, prior to the unit ventilator being installed approximately five years ago. PBS recommends the unit ventilator be removed and the interior and exterior be thoroughly cleaned. Additionally, the old carpet and associated mastic should be removed from underneath and the concrete floor thoroughly cleaned. This work should only be performed by trained personnel using appropriate PPE and the waste materials be discarded in accordance with WAC 173-303.

Airborne Particulate Testing

PBS collected twenty-seven (27) indoor samples and eight (8) outdoor samples for airborne fungal and non-fungal particulate during this monitoring event, for a total of thirty-five (35) samples.

Based upon the analysis results, airborne fungal particulate concentrations in all locations tested were lower in the indoor samples when compared to the outdoor control samples. Additionally, the predominant types of fungal particulate identified in the indoor samples were all identified in the outdoor samples. Based on this testing activity, PBS does not consider airborne fungal particulate to be a concern.

Laboratory analysis revealed elevated levels of non-fungal particulate in each of the following areas:

Sample ID	Location Description	Non-fungal Total Count/m^3
001	Small Gym; South	62,098
005	Library	168,192
006	East Pod; Center	124,868
008	South Pod; Center	87,583
017	Admin; Staff	104,266
021	Art Room	157,034
022	Wood Shop	*Overloaded
023	Room 13	169,974
025	Gathering Place	175,800
026	Room 5	63,813
027	Room 6	96,036
029	Room 11	88,738
032	CTE (Home Ec)	99,874
033	Gathering Place	104,067

Elevated levels of non-fungal airborne particulate will irritate eyes and respiratory systems of sensitive individuals. Elevated non-fungal airborne particulate is an indication of inadequate housekeeping, inadequate air filtration, or inadequate air circulation.

The Wood Shop sample was overloaded with amorphous, crystalline, wood fragments and paper particles and as such could not be analyzed. This was an expected finding due to our observations of significant airborne and accumulated surface dust and debris. Additionally, the air filtration system and the wood dust collection systems were not being used.

PBS recommends thoroughly cleaning all surfaces to remove accumulated dust and debris. PBS also recommends exhaust ventilation and air filtration in this space be used during all occupied hours and wood is being abraded. All housekeeping and ventilation practices and processes for the Wood Shop should be evaluated.

For all other areas in the above table the predominant particulate types included amorphous, cotton, dander and crystalline. These particulate are typical in densely occupied buildings. PBS recommends that the type and frequency of housekeeping be evaluated. Housekeeping should include thoroughly HEPA-vacuuming and wet wiping all surfaces initially (i.e. “deep cleaning”). Frequency of subsequent housekeeping activities will be determined as accumulations of dust and debris are observed.

Air filtration media efficiency should be evaluated in each area. A minimum MERV 8 air filter or better should be used depending on the design of the HVAC unit. PBS recommends consulting with an HVAC professional or the manufacturer to determine appropriate air filter media. Air

circulation should be evaluated to determine if air flow volumes are adequate, air flow pathways are being blocked or renovations have redirected air flows.

Surface Dust Testing

PBS collected surface dust samples from 30 locations in the study area. These samples were analyzed for fungal and non-fungal particulate to characterize the composition of accumulated surface dust (particulates) at the test sites. While air sampling characterizes airborne particulate from a snapshot in time, surface dust tends to provide a historical view of settled particulate.

Based upon the analysis results, accumulated fungal particulate in surface dust was found to be at trace and low levels in many areas. The composition of fungal particulate did not reveal any common fungal indicator species. Fungal indicator species are those indicative of long term water intrusion. Additionally, the predominant types of fungal particulate identified in the surface dust samples were all identified in the outdoor air samples. The composition of fungal particulate was considered typical of "clean" buildings with the exception of the following:

1. Rooms 2, 4, 6, 11, 14, 18, 20, 23, South Pod Center, B, D, C, Administration Reception, Music Main, and CTE (Home Ec) contained moderate levels of Basidiospores. Basidiospores are the most common outdoor airborne fungal spore. This was not an unexpected finding. Basidiospores were found in high levels in all outdoor samples collected. This is not an indication of fungal amplification or long term water intrusion. Rather, it is an indication of one or a combination of the following: inadequate housekeeping, inadequate fresh air supply, inadequate air filtration and or high occupant density.

   PBS recommends thoroughly cleaning all surfaces in these rooms.

2. Room 2, 5, 23, and South Pod Central Common Area contained moderate levels of Aspergillus/Penicillium-like spores: Aspergillus/Penicillium-like spores are also a very common outdoor airborne fungal spore. This spore type was found in outdoor air samples collected during this study. It is PBS' opinion that these levels are not indicative of significant fungal contamination at these sites. This is not an indication of fungal amplification or long term water intrusion. Rather this is an indication of one or a combination of the following: inadequate housekeeping, inadequate fresh air supply, inadequate air filtration and or high occupant density.

   PBS recommends thoroughly cleaning all surfaces in these rooms.

- Room 2 had moderate levels of four types of fungal particulate in surface dust including: Aspergillus/Penicillium-like, Basidiospores, Ganoderma, and fungal fragments. These fungi are commonly found outdoors in Western Washington. Aspergillus/Penicillium-like, Basidiospores and Ganoderma were each found in the outdoor air samples collected from this site. This room does not contain plumbing, evidence of fungal growth, or evidence of water intrusion. The carpet was installed in the last five years. It is PBS' opinion that this finding is not due to significant fungal contamination. These fungi can be related to wood rot. Additional investigation of the source of these fungi may be beneficial.

  The finding of these fungi is an indication of one or a combination of the following: inadequate housekeeping, inadequate fresh air supply, inadequate air filtration (the unit

ventilator was partially blocked impeding air flow and filtration), and or high occupant density. PBS recommends thoroughly cleaning all surfaces in this room including the HVAC outside air intake and return.

Based upon the analysis results, moderate levels of non-fungal particulate commonly found in schools was identified at most sampling sites. This includes one or more of the following: paper, dander, crystalline, cotton, soot, starch and amorphous particulate. The predominant types of all non-fungal particulate identified in the surface dust samples were also reflected in the indoor air samples. This is an expected finding.

The following less common particulate were identified in moderate levels:

- Toner – Admin. Reception, Wood Shop

  This is likely from a printer/copier leak or toner spill that may have occurred in the past. The presence of this toner should be further investigated.

- Glass fibers – Admin. Staff Room, South pod attic

  This mostly related to fiberglass fibers. Typically caused by renovations or handling something that contains fiberglass such as ceiling tiles or batt insulation.

- Paint spheres – Admin. Staff Room, Room C

  Paint spheres are typically generated from projects that involve painting or degrading and peeling paint. Painting was occurring in Room C during our investigation.

- Wood fragments - Room 11, North Pod Attic

  Wood fragments in classrooms can be from pencil shavings, animal cages, packaging, art projects, sanding, sawing, and drilling wood products. PBS observed wood shavings on top of several unit ventilators in other rooms.

The following non-fungal particulate was identified in high levels in these areas:

- Soot – South Pod Center
- Wood fragments – Wood Shop and Room 7
- Manufactured fibers and tire fragments – Room 14
- Manufactured fibers – Library, Room B, Room D, CTE (Home Ec), Room 4 , Room 11, Room 18 and South Pod Attic
- Glass fibers – Admin Reception, Room 11, North Pod Attic
- Starch – CTE (Home Ec), Art Room
- Dander – Rooms 2, 5, 6, 7, Rooms B and C, Library, CTE (Home Ec)
- Amorphous, crystalline and dander – Rooms 4, 11, 14, 20 and Room D
- Crystalline and dander – Small Gym and South Pod Center
- Dander and amorphous – Room 18
- Amorphous and crystalline – Art, North Pod Attic, East Pod Attic and South Pod Attic.

Moderate levels of non-fungal particulate are not uncommon in buildings and are typically due to high occupant density, inadequate housekeeping, and or poor air filtration and recirculation.

High levels of non-fungal particulate are not common in buildings and are typically due to one or more of the following; high occupant density, inadequate housekeeping, and or poor air filtration and recirculation. Our visual investigation revealed that air filtration and housekeeping was inadequate in many spaces. Additionally, our investigation revealed that vacuums being used were not HEPA-filtered and feather dusters were being used to remove accumulated dust. Both of these cleaning activities tend to re-entrain particulate into the air. PBS recommends that trained personnel thoroughly clean all areas with moderate to high levels of accumulated particulate. Cleaning should include HEPA-vacuuming and wet wiping all surfaces throughout each area initially (i.e. “deep cleaning”) and then again as accumulated particulate becomes apparent.

Additional investigation may be warranted to determine the source of the “high” levels of these particulate.

Asbestos Surface Testing

While air testing provides a snapshot in time, settled dust can provide information about past asbestos releases and the presence of those fibers that may not be currently airborne. Finding of an elevated asbestos concentration in settled dust indicates the presence of asbestos fibers which have been released and may be available for re-suspension. There is limited understanding of the relationship between surface load and the potential for re-suspension, exposure, and health risk.

PBS collected sixty-nine (69) asbestos dust samples during this monitoring event. There are no regulatory thresholds for the amount of asbestos in settled dust. However, researchers believe asbestos structure concentrations above 10,000 s/cm^2 are generally above background levels. Levels above 100,000 s/cm^2 are considered high and may indicate a significant accidental release from an abatement site or material damage.

The following locations were found to have concentrations of asbestos structures above background levels:

- North Pod Attic – 11,947 s/cm^2
- South Pod Attic - 32,166 s/cm^2
- Room D (vinyl floor) – 11,947 s/cm^2
- Room 1 (carpet) – 47,790 s/cm^2
- Room 11 (top of built in shelf) – 12,062 s/cm^2
- Room 12 (top of built in shelf) – 31,548 s/cm^2
- Room 14 (top of North bookshelf) – 238,952 s/cm^2
- Room 15 (carpet under recent construction location) – 524,917 s/cm^2
- Room 18 (carpet under recent construction location) – 16,701 s/cm^2

During our visual assessment damaged asbestos-containing pipe hard fittings and gypsum wallboard was observed. No other sources of asbestos materials were observed in those attic spaces. PBS presumes all dust in these attics is asbestos contaminated. Non-aggressive testing revealed no airborne asbestos in these areas.

The samples from Room 14, Room D, and Room 15 were each collected from areas where significant visible gypsum wallboard dust was observed. The wallboard was impacted by a wireless cabling upgrade that occurred during the summer of 2015. The contractor performing that work did not take into account that the gypsum wallboard joint compound contained asbestos as identified in the AHERA Management Plan. Additionally, post construction housekeeping by the contractor was poor and dust and debris was left throughout the construction areas. It is PBS' opinion that the gypsum wallboard joint compound and poor housekeeping is the source of asbestos fibers found. Demolition of a gypsum wallboard system that contains less than 1% asbestos by composite is not considered an asbestos abatement project and as such certified asbestos workers are not required by regulation to perform this work.

The samples collected from Room 11, Room 12 and Room 1 were not collected close to areas where recent construction activities have occurred. The only known asbestos-containing material that currently exists in these rooms is the joint compound associated with the gypsum wallboard system. As such, it is PBS' opinion that past impacts to the gypsum wallboard systems are the likely source of the asbestos fibers found. Testing revealed no airborne asbestos in these areas.

PBS notified the Monroe School District of our findings of asbestos structures in the accumulated surface dust. The District hired a professional asbestos abatement contractor to perform proper cleaning of each area. PBS conducted visual inspections and clearance sampling during these cleaning activities. The cleaning activities will be documented in a separate asbestos cleaning closure report.

PBS recommends that all future impacts to the gypsum wallboard system be conducted by trained personnel in accordance with WAC 296-62 and 40 CFR Part 763 AHERA.

Soils Testing

Teachers expressed concerns about contaminated soils in the landscaping area near classrooms 4, 5, and 6. PBS Environmental collected one composite soil sample from each of the following locations:

- Landscape area south of classrooms 4, 5, and 6 (southeast landscape area)
- Garden area just north of Annex - Room F
- Large playfield east of the Technology and Library/Classroom Pod Buildings

The laboratory results of soil sampling revealed that each of the three samples were below the Washington Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Use for arsenic, cadmium, chromium, and lead.

The laboratory results also revealed no detectable concentrations of organochlorine pesticides, petroleum hydrocarbons or mercury in each of the three samples.

Based on soil sampling and analysis activities, it is PBS' opinion that the soils are not a concern.

Analysis of Carpet Pieces

The District removed carpet in several classrooms over Christmas Break of 2015. Due to reported health complaints teachers expressed concerns about potential contaminants in the

carpets. PBS was requested to select three of those samples for representative analysis. Carpet from the following three locations was selected for analysis:

- Classroom 8
- Classroom 12
- East Pod Center

Two of the carpet samples revealed no detectable concentrations of PCBs. Laboratory analysis of the sample from classroom 8 revealed 6.51 mg/kg PCBs. No airborne PCBs were found in this room. PBS understands that the carpets are extraction cleaned every summer. It is PBS' opinion that direct skin contact with the PCBs found in this carpet was unlikely.

Laboratory results of carpet analysis revealed no detectable concentrations of organochlorine pesticides.

Polychlorinated phenyls (PCBs)

PBS inspected all buildings on campus and sampled suspect damaged suspect PCB-containing paints, sealants and mastics. PBS collected twenty-seven (27) PCB bulk material samples within the study area.

The following materials were found to contain PCBs:

Location	PCB Content (mg/kg)
Damaged white painted wood located on the exterior covered walkway at the South side of the Administration Building	1.8
Damaged light blue painted concrete wall located on the above the kitchenette in the Gathering Place	0.196
Gray caulking on interior and exterior metal window and door frames on all buildings	1.03 - 5,730
Light gray caulking on exterior metal columns on all buildings	5,530
Yellow carpet mastic located in the North Pod Central Common Area	1.42

It is our opinion that the PCBs found in the North Pod Common Areas carpet mastic are likely a result of ballast failure contamination because the other mastic samples were found to be non-detect for PCBs

PCB-containing caulking and sealants were found to be associated with windows, doors and structural columns. PCBs are known to leach into the substrates that come into contact with the sealants. Removal of the caulking/sealants and impacts to the substrates that contain PCBs has the potential to create human exposures and environmental contamination.

Proper handling is required for all PCB-containing materials regardless of concentration. It is not necessary to remove the caulking unless it begins to degrade and fall off. If the caulking will be impacted by renovations or demolition it is recommended that regulations, work practices, hygiene practices, record keeping and air monitoring performed. Workers potentially impacting regulated metals are advised to confirm training requirements of WISHA, and to ensure that proper worker protection and work practices are implemented.

Waste handling should follow WAC 173-303 Dangerous Waste and the EPA Toxic Substance Control Act (TSCA) 40 CFR Part 761. Waste characterization should be performed prior to any disposal of lead-containing materials. Materials that contain PCBs in concentrations greater than 50 ppm are considered a TSCA Bulk Product Waste. Materials that contain PCBs in concentrations ranging from 100 ppm – 10,000 ppm are considered a Special Waste; no manifest is needed but must go to a permitted municipal solid waste landfill in the State of Washington. Special Wastes are regulated under 173-303-073. Materials that contain PCBs in concentrations greater than 10,000 ppm are considered a hazardous waste in the State of Washington and must be manifested for transport.

Lead-Containing Paints

PBS inspected and sampled damaged suspect lead-containing paints. PBS collected sixteen (16) suspect paint samples within the study area. Fourteen (14) of the paint samples collected yielded laboratory results with detectable concentrations of lead. The results ranged from 0.00011% – 4.2%.

Lead-containing paint (LCP) is defined as a painted coating that contains detectable concentrations of lead. The presence of LCP requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-62-155). PBS recommends that all untested painted coatings be considered LCP. Workers impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted. Waste handling should follow WAC 173-303 Dangerous Waste.

Lead-based paint (LBP) is defined by EPA as containing 0.5 % or greater lead content. The presence of LBP in schools or child occupied facilities requires all activities to be performed according to 40 CFR Part 745. Federal law requires that individuals receive certain information before renovating six square feet or more of painted surfaces in a room for interior projects or more than twenty square feet of painted surfaces for exterior projects in housing, child care facilities and schools built before 1978. Federal law requires contractors that disturb lead-based paint in homes, child care facilities and schools, built before 1978 to be certified and follow specific work practices to prevent lead contamination.

Three of the damaged paints sampled contained greater than 0.5% lead content. These include the following:

Sample Locations	Lead Content (%)
Brown Metal Exterior Fascia Covered Walkway South Gymnasium	0.59
White Wood Framing and Decking Covered Walkway South Administration	0.77
Brown Concrete Exterior Wood Shop South Wall Technology Building	4.2

PBS recommends that trained workers repair those damaged paints in accordance with WAC 296-62-155 and 40 CFR Part 745.

Relative Humidity

PBS performed relative humidity testing in 32 locations. Based on our testing PBS does not consider relative humidity to be a concern during this study.

Formaldehyde Testing

PBS performed formaldehyde testing in 22 locations. No detectable levels of formaldehyde were revealed during testing. The analysis results indicate the formaldehyde concentrations in each sampling location were below the ACGIH recommended TLV. Based on our testing formaldehyde levels were not a concern in the test areas at the time of our investigation.

Total Volatile Organic Compounds (TVOCs) Testing

PBS sampled for TVOCs in thirty-six (36) locations within the study area. TVOCs were not detected in the study area during this monitoring event. PBS does not consider TVOC's to be a significant concern at this site during our study.

Silica Air Testing

PBS observed a fine light-colored dust in several East Pod classrooms. The dust was observed on horizontal surfaces and in unit ventilator returns. PBS understands that the District replaced older carpet in some of those classrooms during Christmas Break 2015. The carpet replacement process included grinding the concrete floors. PBS performed indoor ambient sampling for crystalline silica in thirteen (13) locations where known concrete floor grinding has taken place. Detectable concentrations of silica quartz were found in 8 of the 13 locations sampled. The highest laboratory concentration of silica reported by the laboratory was 0.015 mg/m^3 which is less than the ACGIH-TLV of 0.025 mg/m^3.

The laboratory also reported total respirable dust as part of the analysis. The highest concentration reported by the laboratory of total respirable dust found was 0.08 mg/m^3, which is less than the ACGIH-TLV of 3 mg/m^3.

PBS does not consider respirable dust or silica to be a concern in the areas tested at the time of the assessment.

Dust Mite Testing

PBS sampled for dust mites in twenty-six (26) locations within the study area. All samples were below the limit of analytical detection except for two locations. The Music Room was 1.18 µg/gram and Room 11 was 1.89 µg/gram. Based on our testing dust mite allergen levels were not a concern in the test areas at the time of our investigation.

Radon Testing

PBS collected radon samples from approximately nineteen (19) locations throughout campus. All samples were below the EPA Action level with the exception of the Music Room. Lab results for the radon test collected in the Music Room was 3.3 +/- 0.7 pCi/L. EPA recommends that any time the Action Level is reached a second sample should be collected and the results averaged. Since the accuracy of the test results "could" bring the firs results up to the EPA Action Level the School district chose to run a second test. The result of the second radon test in the Music Room was 3.2 +/- 0.3 pCi/L. The average of the two tests is 3.75 pCi/L.

Based on our testing Radon is below the EPA Action Level of 4.0 pCi/L. The Music Room is the only room on campus that is below the exterior grade of the site and as such may be more likely to be impacted by Radon. The HVAC supply air grills are located at the ceiling level and directed across the ceiling to the exhaust grills (also at ceiling level) on the opposite side of the room. The air mixing near the teaching floor is likely reduced. Radon may also increase due to weather conditions, building pressurization and various other factors potentially causing Radon concentrations to exceed the EPA Action Level.

PBS recommends HVAC adjustments to increase fresh air and redirect supply air flows towards the floor to create better air mixing.

PCB Surface Testing

PBS collected PCB surface samples in seventy-six (76) locations within the study area. None of the locations tested were above the EPA criteria of 10 micrograms/cm^2. Based on this testing activity it is PBS opinion that PCB contamination on accessible building surfaces is likely not a concern.

There is known surface contamination inside of fluorescent light fixtures. PBS understands that's the Monroe School District is methodically going through the campus and inspecting for suspect light fixture contamination and cleaning or replacing those fixtures.

Carbon Monoxide Monitoring

PBS performed carbon monoxide testing in 32 locations. The peak concentrations of carbon monoxide were above the recommended ASHRAE Threshold in the following location.

Music Room - The peak concentration was 13.6 ppm CO which included one data point that occurred at approximately 2 pm. The elevated reading may have been due to a passing vehicle. Most all other readings in this space were 0.0 ppm with a few that ranged up to 1.2 ppm carbon

monoxide. PBS considers this an anomaly and does not consider CO to be a significant concern in the test area during this monitoring event. However, it may be prudent to conduct additional testing.

Asbestos Air Testing

Due to concerns of asbestos contamination, PBS was requested to perform air testing, surface testing and limited bulk materials testing in various areas throughout the study area.

PBS collected thirty-three (33) asbestos air samples during this monitoring event. The EPA clearance level is 0.01 structures per cubic centimeter (s/cc) for Transmission Electron Microscopy (TEM) analysis.

Laboratory analysis revealed that all air samples collected throughout campus were well below the EPA Clearance Criteria. It is PBS opinion that airborne asbestos is not a concern in the study area.

Classroom 11 – (Leahy) Air Filter Analysis

A portable air purifier was used by Ms. Leahy in classroom 11. The HEPA-filter from this unit was removed and placed in a sealed clear plastic bag and handled to PBS for analysis. PBS was requested to have this filter analyzed for asbestos, dust mites, mold, and other non-fungal particulate.

Based on review of the laboratory reports for the HEPA-filter, it is our opinion that no unusual or excessive particulate was present.

5.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

PBS has performed this investigation in conformance with current standard industry practices.

PBS Engineering and Environmental, Inc.



Gregg Middaugh
Senior Project Manager – Industrial Hygiene



Reviewed By:
Doug Hancock
Certified Industrial Hygienist

TABS

Master Floor 1 – Tab 1
Photo Documentation – Tab 2
Laboratory Data Tables – Tab 3
Sample Location Field Sketches – Tab 4
Ventilation Monitoring Graphs – Tab 5
Laboratory Reports – Tab 6

TAB 1

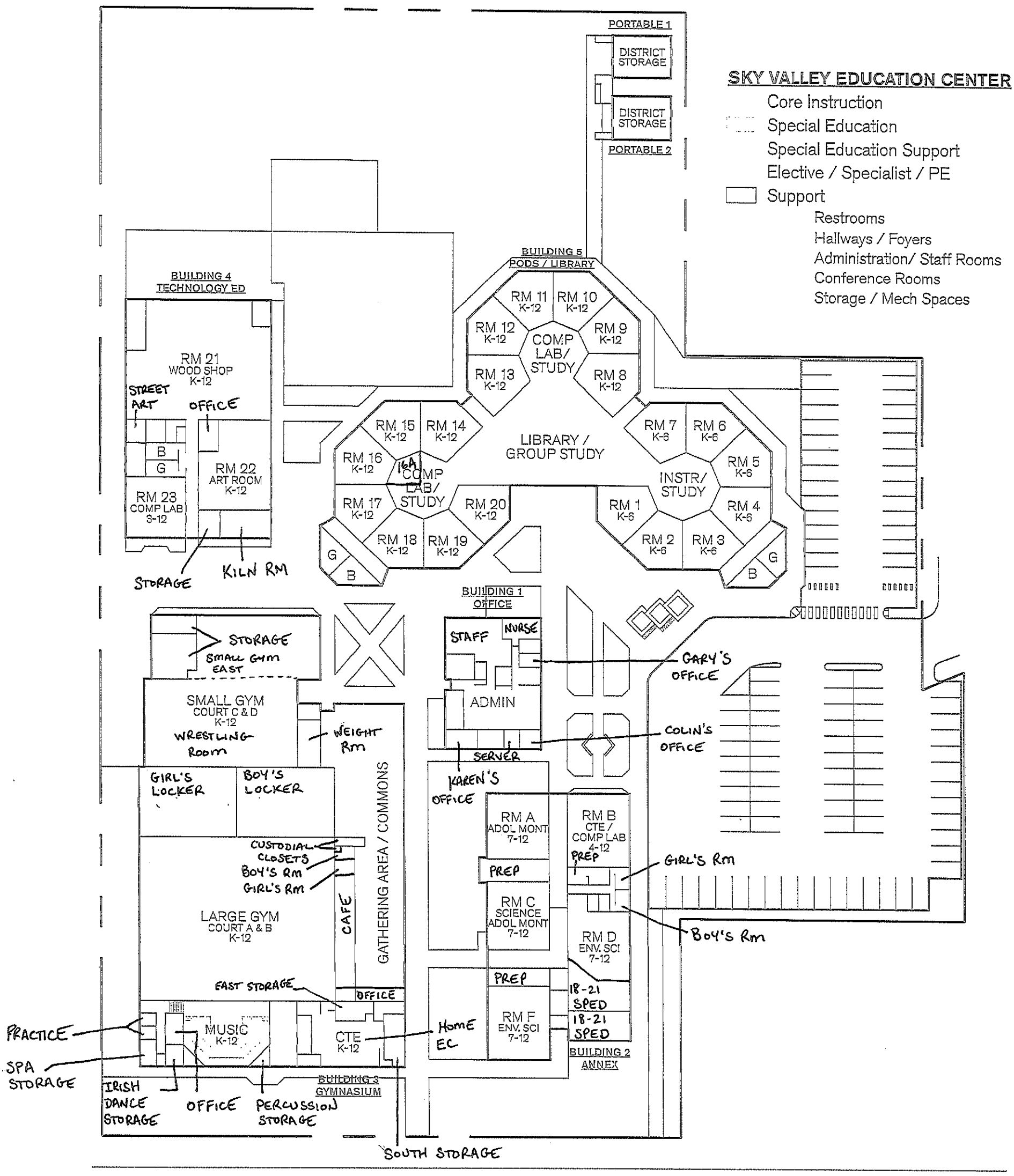
MASTER FLOOR PLAN

Drawing 1 - Master Campus Plan

Monroe School District - Sky Valley Education Center

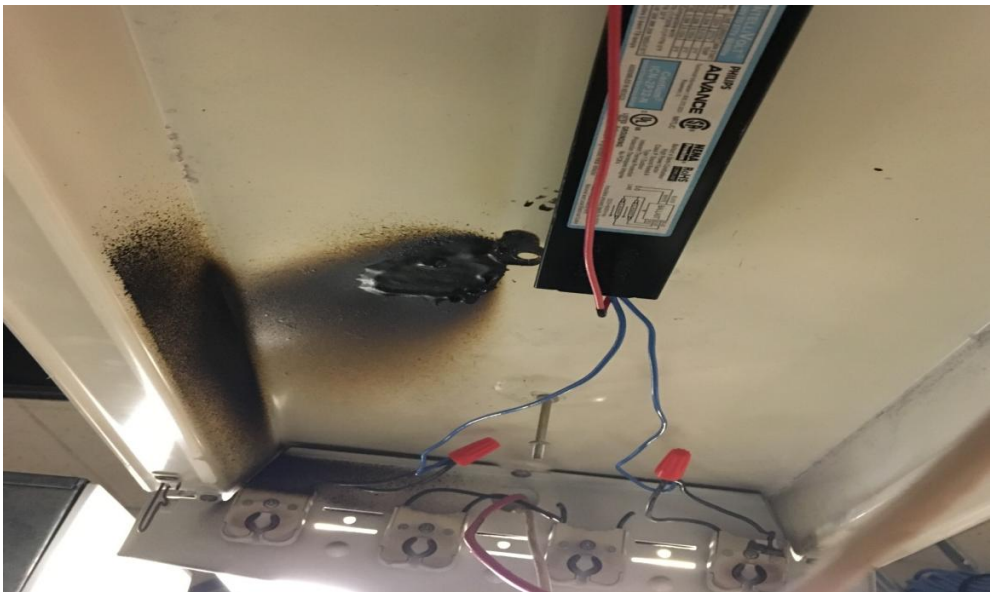
PBS Engineering + Environmental

April 2016



TAB 2

PHOTO DOCUMENTATION



1. Administration Server Room - Suspect PCB residue in fluorescent light fixture.



2. Administration Exterior – Peeling lead-containing paint on soffit.



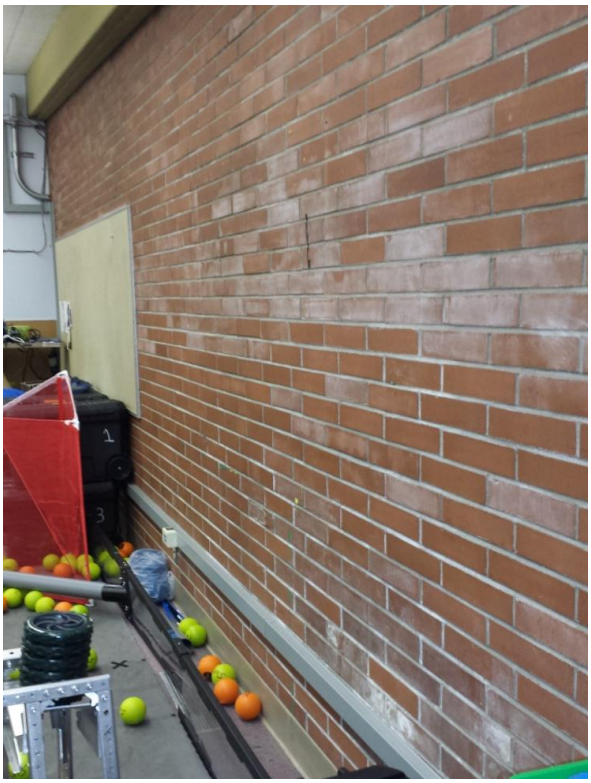
3. Annex Room A – Dusty grouse display difficult to clean.



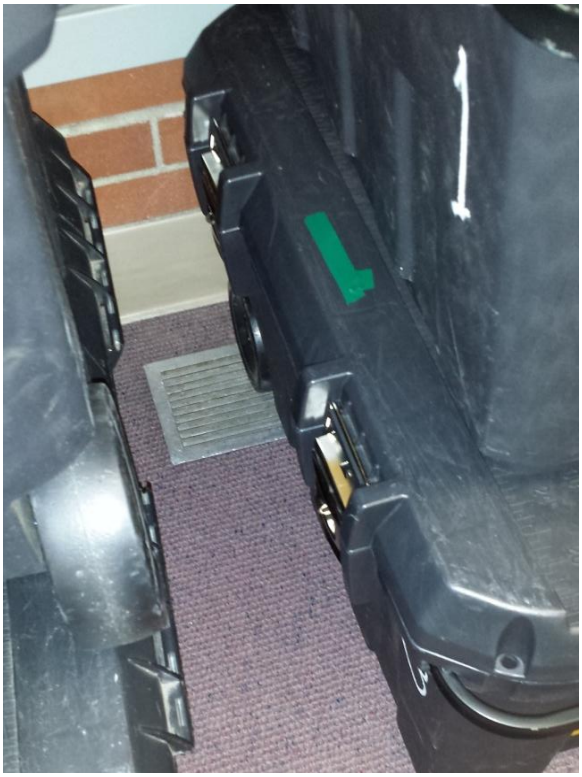
4. Annex Room A – Unused art supplies.



5. Annex Room A - Debris in unit ventilator return.



6. Annex Room B – Water intrusion east perimeter wall



7. Annex Room B – Blocked in-floor air supply grill.



8. Annex Room B – Significant debris in the in-floor air supply duct.



9. Annex Room B Prep – Water damaged ceiling and heating element. Suspect fungal growth present.



10. Annex Room C – Moldy potted plant.



11. Annex Room C – Unused aquarium with debris plant debris, dirt, bird droppings, dead insects, pieces of dirt covered wood underneath.



12. Annex Room C – Significant dirt, debris, clutter and rotting vegetables in the greenhouse room.



13. Annex Room C – Labeled and unlabeled chemicals, broken glass in beaker, experiments on countertops.



14. Annex Room C – Damaged asbestos-containing floor tile.



15. Annex Adolescent Montessori Prep Room – Damaged sink cabinet.



16. Annex Room D – Stored paints, stains, sealers.



17. Annex Room D – Detached HVAC exhaust grill in entryway.



18. Annex Room F – White powder and other debris in unit ventilator supply.



19. Annex Room F – Unlabeled liquids and powders cabinet



20. Annex Room F – Spilled powder in cabinet.



21. Annex Room F – Paints in drawer generating odor.



22. Annex Room F – Moldy tree bark in discolored water.



23. Annex Room F – Moldy plant grasses/leaves on shelf.



24. Annex 18-21 Transitions – Hole in east wall.



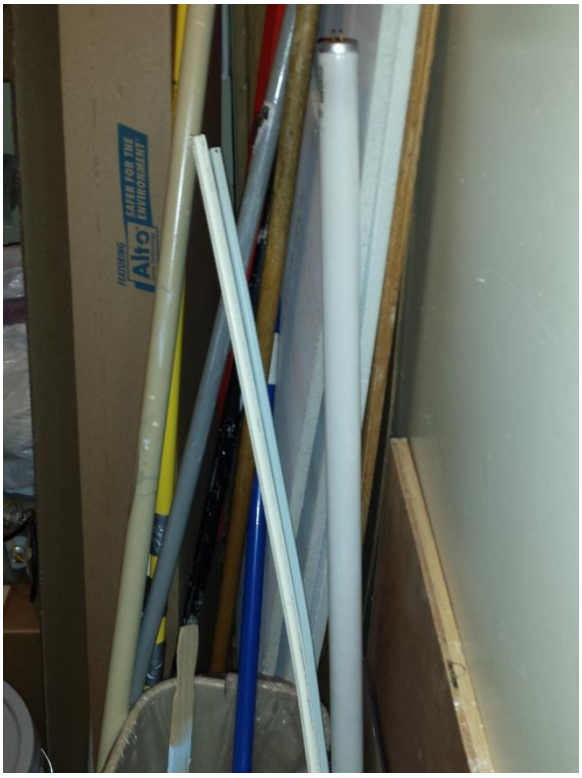
25. Annex 18-21 Transitions Kitchen – Moldy refrigerator door frame.



26. Annex Paint Storage Room



27. Annex Paint Storage Room – Residue from unknown spill.



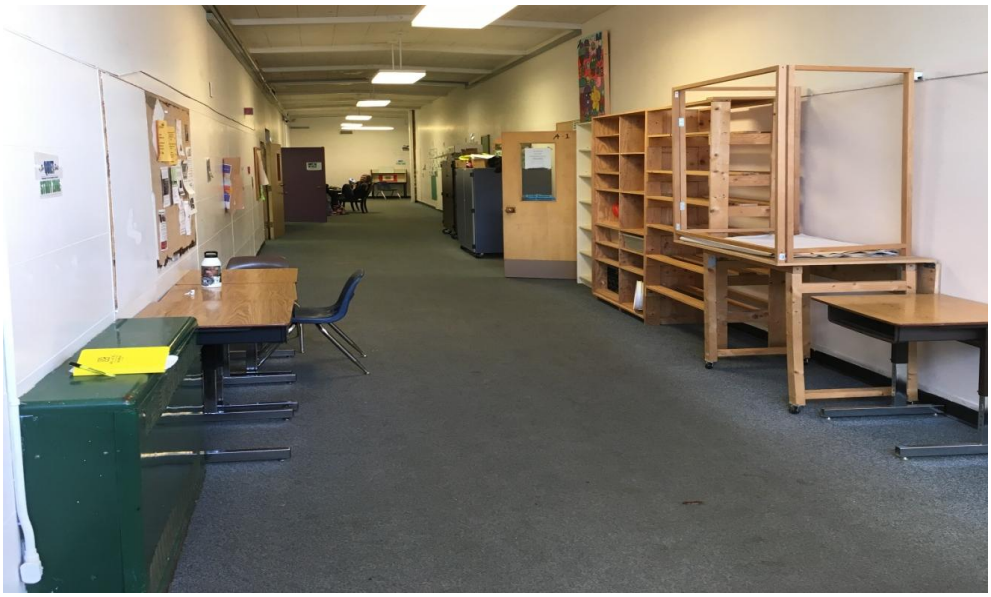
28. Annex Paint Storage Room – Improperly stored fluorescent light tube.



29. Annex Paint Storage Room – Liquid mercury electrical switch.



30. Annex Custodial Closet – Damaged delaminating asbestos-containing floor tile.



31. Annex Main Corridor – Discolored carpet.



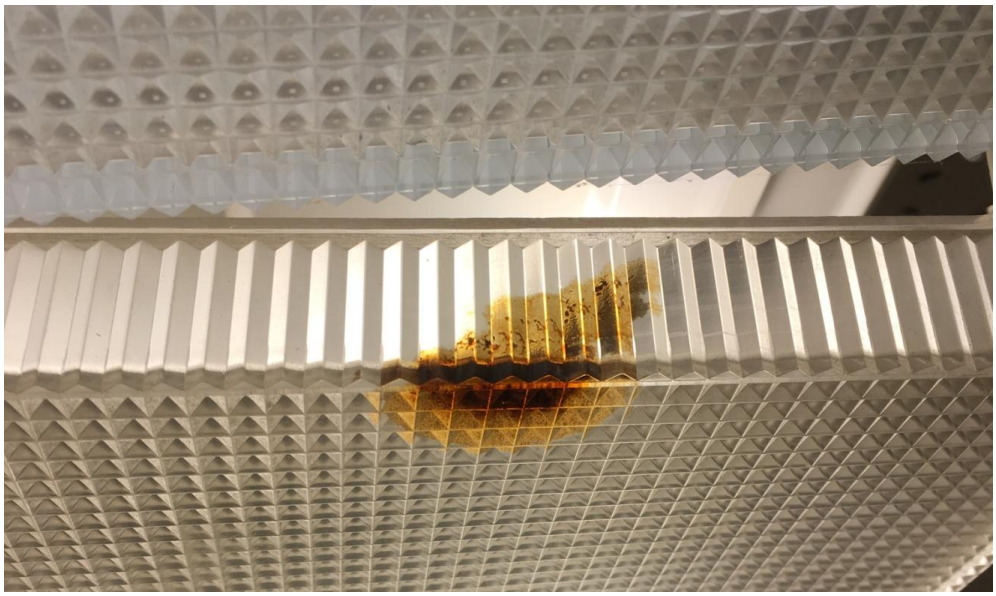
32. Annex Exterior – Garden equipment, compost pile, dirt/debris, and garbage cans placed in front of and surrounding the outside air intake of Room C.



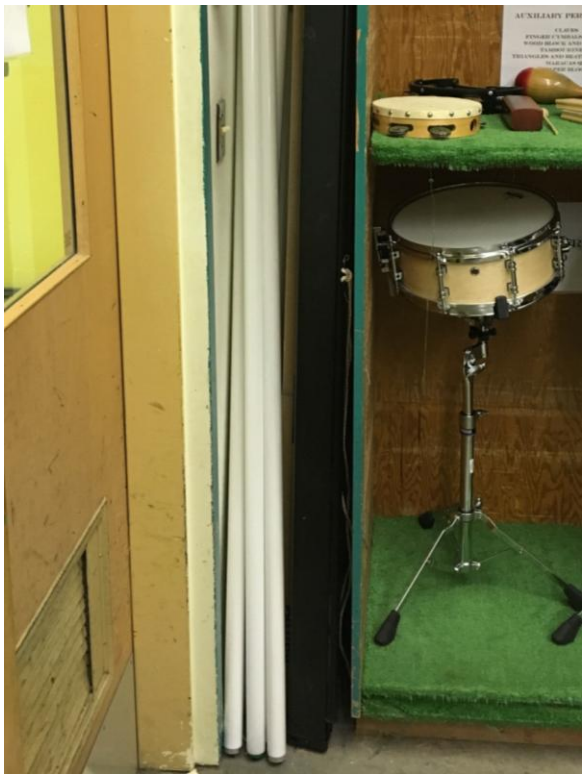
33. Annex Exterior – Peeling lead-containing paint on soffit.



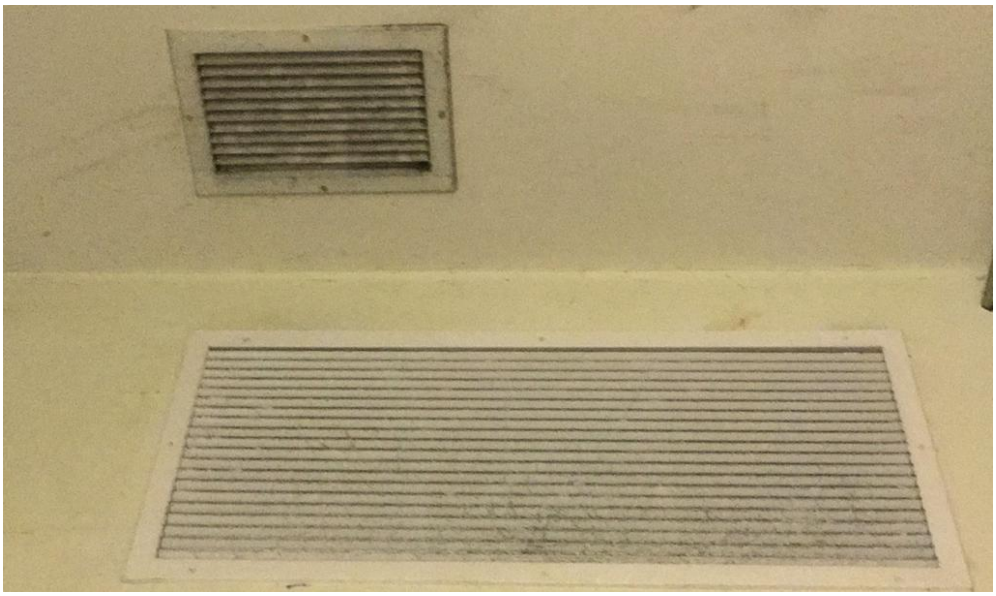
34. Music Room SPA Storage – Damaged asbestos-containing floor tile.



35. Music Room SPA Storage – Suspect PCB residue in light fixture lense.



36. Music Instrument Storage – Improperly stored fluorescent light tubes.



37. Music Percussion Storage – Dust/debris impeding air flow through exhaust grill.



38. CTE (Home Ec) Electrical Room – Two jars of unknown liquid.



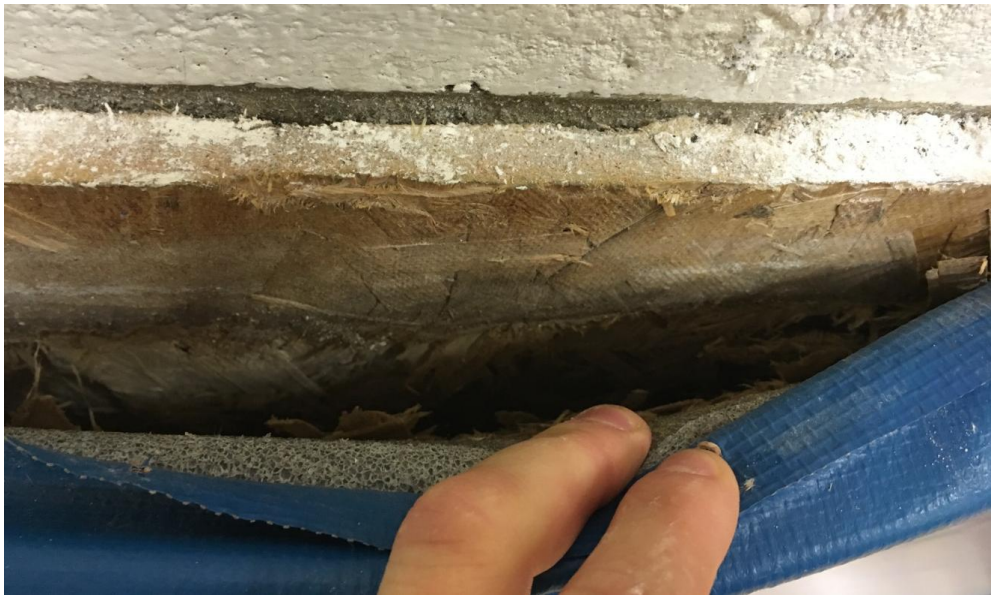
39. CTE (Home Ec) Sewing and Storage Room – Suspect fungal growth around floor drain near toilet.



40. Gym Building South Exterior Wall – Damage roof water drainage system causing water to flow down the outside of the building and intrude into the building.



41. Small Gym East Perimeter Wall –
Water intrusion through the exterior masonry wall has damaged the paint, caused mineralization. The water intrusion has caused fungal growth behind the sound insulation panels on the upper wall and behind the athletic safety pads on the lower wall.



42. Small Gym East Perimeter Wall –
Fungal growth on the OSB behind the athletic safety pads on the lower wall.



43. Small Gym Drama/Dance Storage – Leaking garden sprayers impacting carpet.



44. Small Gym Wrestling Mat Storage Locker – Fungal growth on stored wrestling mats.



45. Boys Locker Room Wrestling Storage – Fungal growth in wood cabinet.



46. Boys Locker Room Wrestling Storage – Fungal growth in ice machine.



47. Boys Locker Room Wrestling Storage –
Fungal growth and water damage on floor from leaking ice machine.



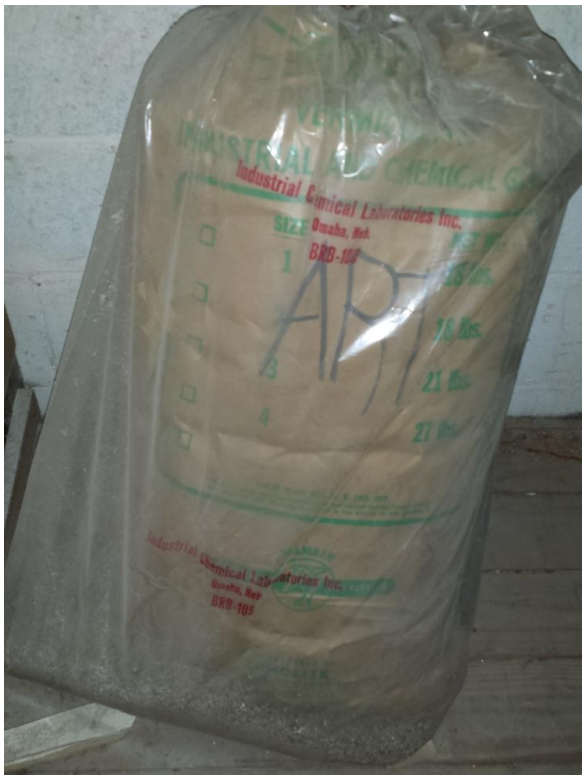
48. Girls Locker Room Archery Storage –
Fungal growth and water damage on ceiling and wall.



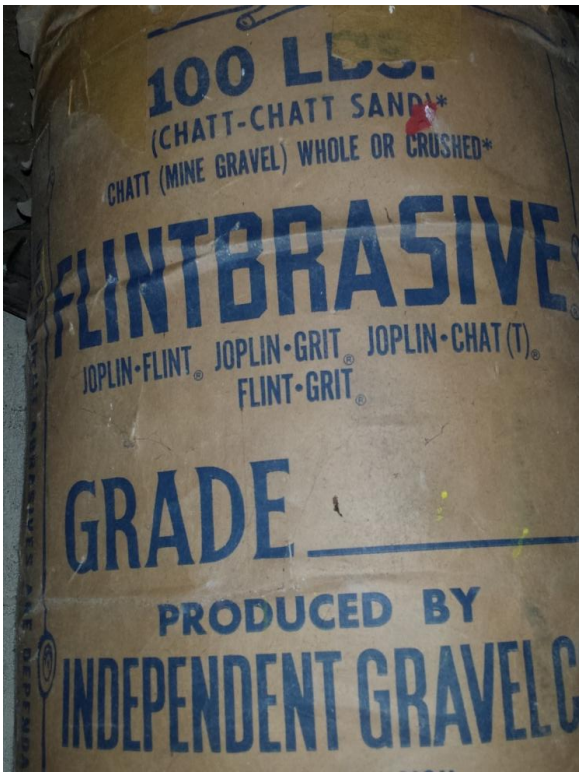
49. Exterior of Girls Locker Room (Archery Storage) –
Long term rain water running down side of building causing algal and moss growth, efflorescence and water intrusion into the archery storage room.



50. Gym Gathering Place West Office – Abrasion of asbestos floor tile from chair rollers.



51. Technology Building – Bag of asbestos-containing vermiculite in mechanical attic.



52. Technology Building – Bag of asbestos-containing abrasive in mechanical attic.



53. Technology Building – Sinks with asbestos-containing coating in mechanical attic.



54. Technology Building Art Room – Two water damaged sink cabinets with fungal growth.



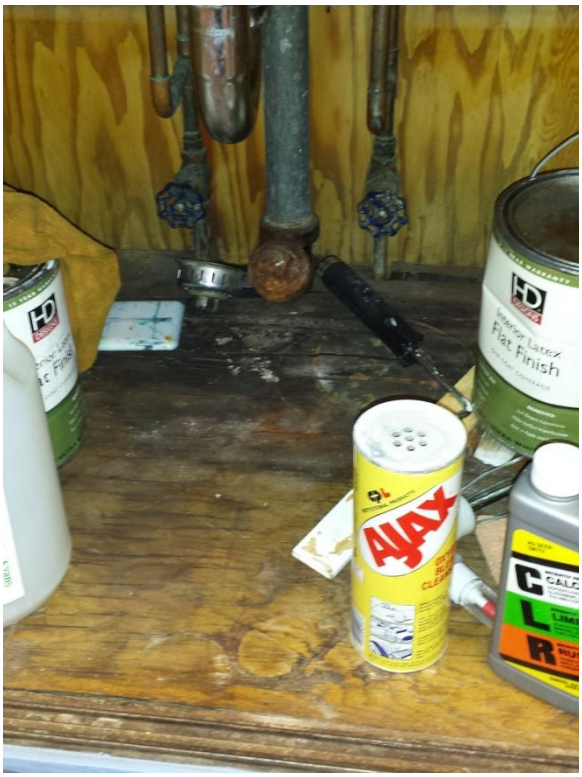
55. Technology Building Kiln Room – Buffing wheel creating dust and debris in room.



56. Technology Building Art Room –
According to the teacher there are many unused old chemicals in this room.



57. Technology Building Woodshop – No sawdust collection system on table saw.



58. Technology Building Room 23 – Water damaged sink cabinet with fungal growth.



59. Technology Building West Exterior – Peeling lead-containing paint.



60. Library – Upholstered chairs and other items rarely get cleaned.



61. Library – Custodial closet with water damage and fungal growth around base of wall.



62. Library –
Unit ventilator air filter does not fit properly leaving gap for air/particulate bypass.



63. Library – The roof stormwater drain leaders direct the flow of water directly in front of the unit ventilator outside air intakes. Biological growth surrounding the intake grill.



64. Classroom 1 – Items placed in front of and on top of the unit ventilator impeding air flow.



65. Classroom 4 – Outside air intake of unit ventilator blocked impeding air flow. Note the sandbox on the left.



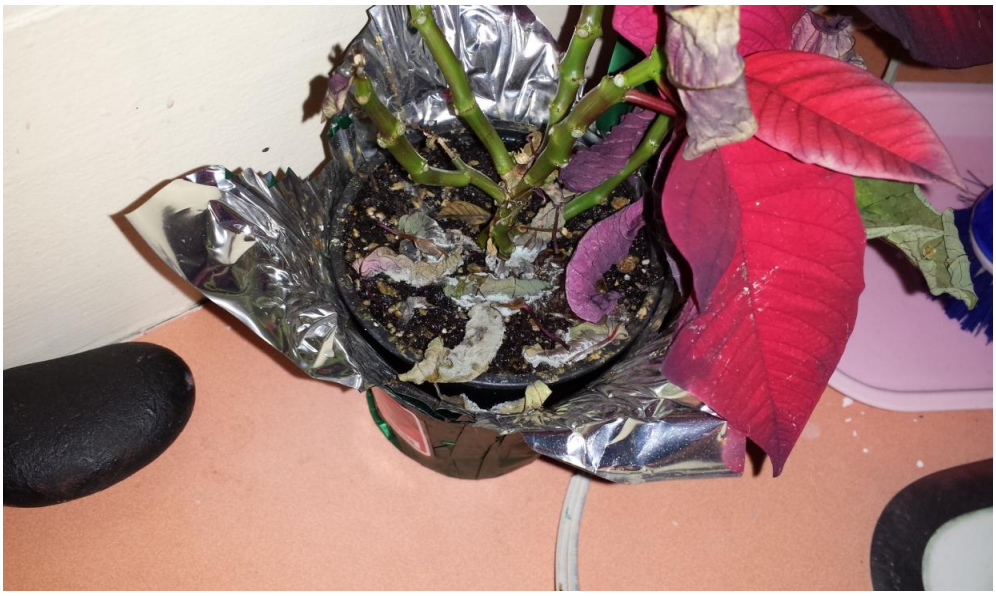
66. Classroom 5 – Water dispenser leaking on carpet.



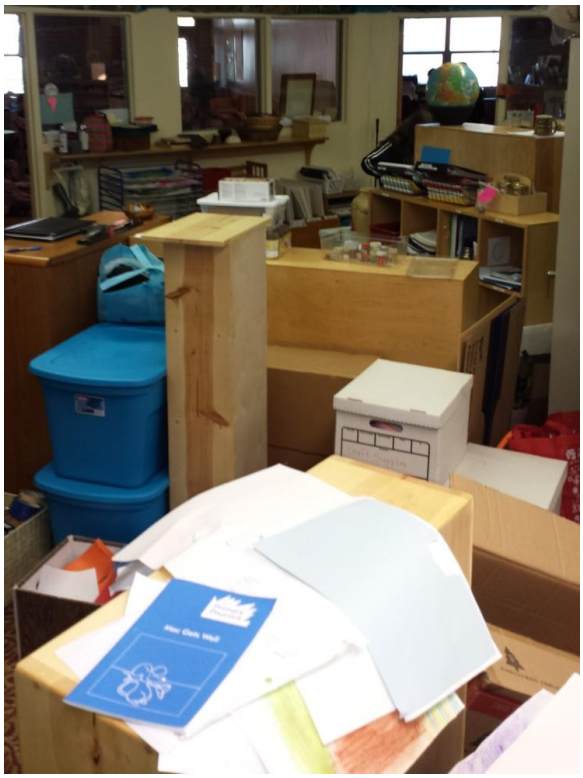
67. Classroom 6 – Cooking in classrooms.



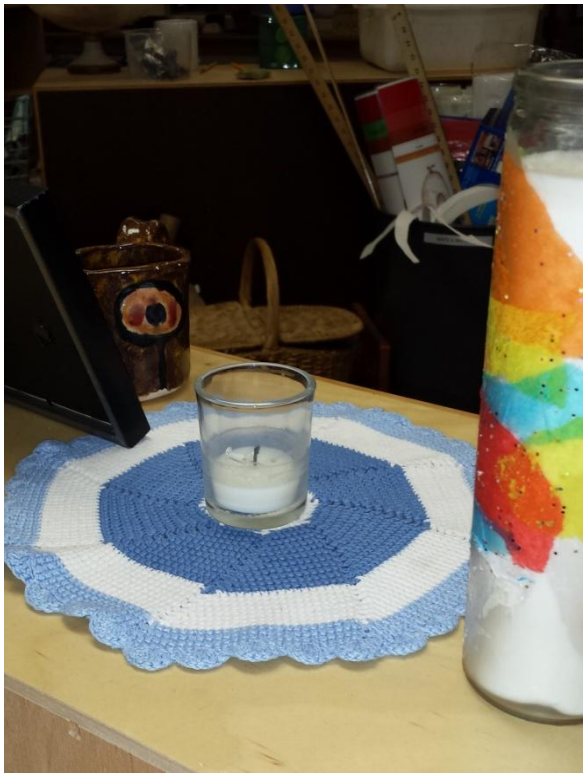
68. South Pod Central Common Area – Suspect fungal growth in sink cabinet.



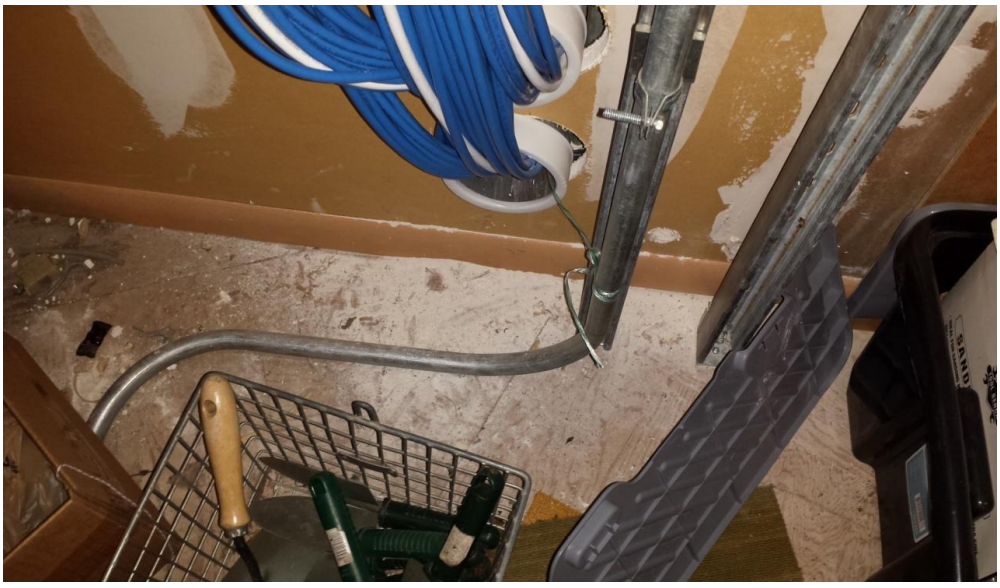
69. South Pod Central Common Area – Moldy plant on countertop.



70. South Pod Central Common Area –
Difficult area to adequately clean due to the amount of stored items.



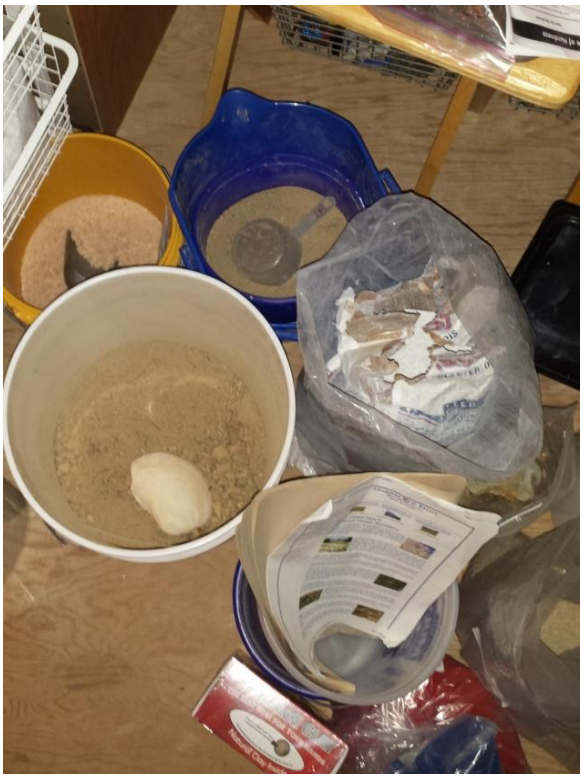
71. South Pod Central Common Area – Candle burning creates airborne particulate.



72. South Pod Attic – Gypsum wallboard debris from cabling upgrade project.



73. South Pod Attic – Garden tools and associated dirt.



74. South Pod Attic – Buckets of dirt and sand.



75. South Pod Attic – Open can of paint.



76. Classroom 8 – Concrete and carpet mastic debris in unit ventilator return from floor grinding activities.



77. Classroom 9 – Motor oil and several unlabeled plastic bottles with unknown liquids.



78. Classroom 13 – Area rugs that rarely get cleaned.



79. East Pod Central Common Area – Damaged can of paint under sink. Water staining on sink cabinet but no suspect fungal growth observed.



80. Classroom Pod Exterior – Roof rain leaders leak and ground drains are clogged causing water intrusion.

TAB 3

LABORATORY DATA TABLES

Table 1 – Lead Paint Sample Inventory

Sample ID	Material	Location Description	Result (mg/kg)
001	White/wood	Exterior covered walkway West Annex	1,170
002	Brown/metal	Exterior Fascia covered walkway South Gymnasium	5,980
003	Tan/metal	Exterior down spout West Gymnasium Bldg	104
004	White/metal	Exterior covered walkway West Gymnasium Bldg	136
005	White/wood	Exterior Soffit Annex	1,160
006	White/metal	Exterior trim Administration	11.2
007	White/wood	Exterior covered walkway South Administration	7,740
008	Light gray/metal	Exterior metal sawdust hopper Technology	241
009	Brown/concrete	Exterior Wood Shop South wall Technology	42,900
010	White/wood	Exterior Soffit Annex	1,480
011	Brown/wood	Exterior Fascia Annex	2,650
012	Brown/wood	Exterior Fascia Technology	20.3
013	Light blue/concrete	Interior Commons Northeast wall Gathering Place	397
014	White/gypsum wallboard	Interior Electrical Room Annex	359
100	Black/blue paint/concrete block	North Wall Small Gym	<140.0
101	Beige paint/concrete block	East Wall Small Gym	<53.0

Table 2 - ASBESTOS SAMPLE INVENTORY

PBS Sample #		Material Type	Sample Location	Lab Description	Lab Result	Lab
41373.000	-001	Gypsum wallboard/ Joint compound	East Pod Attic	Layer 1: Off-white powder w/ paper	2%	SAT
				Layer 2: White Chaulky w/ paper	NAD	SAT
41373.000	-002	Gypsum wallboard/ Joint compound	South Pod Attic	Layer 1: Off-white powder	2%	SAT
				Layer 2: White Chaulky w/ paper	NAD	SAT
41373.000	-006	Cove base mastic	Annex hall	Layer 1: Brown mastic	NAD	A/N
41373.000	-007	12" Ceiling tile - Medium fissured; small pinhole	Annex prep - Room B	Layer 1: Brown fibrous material w/paint	NAD	A/N
41373.000	-008	Cove base mastic	Annex - Special Ed Laundry, Northwest corner	Layer 1: Brown mastic	NAD	A/N
41373.000	-009	12" Ceiling tile - Medium fissured; small pinhole	Annex - Room C	Layer 1: Brown fibrous material w/paint	NAD	A/N
41373.000	-010	14"x30 Ceiling tile/Tan mastic	Gathering Place - Boy's Restroom	Layer 1: Brown fibrous material w/paint	NAD	A/N
41373.000	-011	12" Glued-on ceiling tile - Medium fissured; small pinhole	Main gym - Southwest entry	Layer 1: Brown fibrous material w/paint	NAD	A/N
		Brown mastic		Layer 2: Dark brown mastic	NAD	
41373.000	-012	12" Glued-on ceiling tile - Large/small pinholes	Main gym - Southwest entry	Layer 1: Brown fibrous material w/paint	NAD	A/N
		Brown mastic		Layer 2: Dark brown mastic	NAD	
41373.000	-013	12" Glued-on ceiling tile - Medium fissured; small pinhole	Gym - Boy's Locker Room; Coach's office	Layer 1: Brown fibrous material w/paint	NAD	A/N
		Brown mastic		Layer 2: Dark brown mastic	NAD	
41373.000	-014	12" Glued-on ceiling tile - Large/small pinholes	Main gym - Southwest entry vestibule	Layer 1: Brown fibrous material w/paint		
		Brown mastic		Layer 2: Dark brown mastic	NAD	A/N
41373.000	-015	2x4 Lay-in ceiling tile - Medium fissured; small pinholes	Tech building - Art Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-016	2x4 Lay-in ceiling tile - Medium fissured; small pinholes	Tech building - Woodshop	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-017	12" Glued-on ceiling tile - Medium fissured; small pinhole	Montessori - Center pod	Layer 1: Brown fibrous material w/paint	NAD	A/N
		Brown mastic		Layer 2: Dark brown mastic	NAD	
41373.000	-018	12" Glued-on ceiling tile - Medium fissured; small pinhole	Library - East entry vetible	Layer 1: Brown fibrous material w/paint	NAD	A/N
		Brown mastic		Layer 2: Dark brown mastic	NAD	
41373.000	-019	2x4 Lay-in ceiling tile - Medium fissured; small pinholes	Admin Staff Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-020	2x4 Lay-in ceiling tile - Medium fissured; small pinholes	Admin Staff Room	Layer 1: Gray fibrous material w/paint	NAD	A/N

Table 2 - ASBESTOS SAMPLE INVENTORY

PBS Sample #		Material Type	Sample Location	Lab Description	Lab Result	Lab
41373.000	-021	12" Ceiling tile - Heavy fissured; small pinholes	Admin Staff Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
				Layer 2: White chalky material w/paper	NAD	
41373.000	-022	12" Ceiling tile - Heavy fissured; small pinholes	Admin Staff Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-023	12" Ceiling tile - Medium fissured; small pinholes	Admin building - Boy's Restroom	Layer 1: Brown fibrous material w/paint	NAD	A/N
41373.000	-024	12" Ceiling tile - Medium fissured; small pinholes	Admin building - Boy's Restroom	Layer 1: Brown fibrous material w/paint	NAD	A/N
41373.000	-025	12" Ceiling tile - Medium fissured; medium pinholes	Faculty Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-026	12" Glued-in ceiling tile - Medium fissured; medium pinholes	Faculty Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
		Light brown mastic		Layer 2: Yellow mastic	NAD	
41373.000	-027	12" Glued-in ceiling tile - Medium fissured; medium pinholes	Faculty Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
		Light brown mastic		Layer 2: White paper w/paint	NAD	
41373.000	-028	12" Glued-on ceiling tile - Small fissured; medium pinholes	Faculty Room	Layer 1: Gray fibrous material w/paint	NAD	A/N
		Light brown mastic		Layer 2: White paper w/paint	NAD	
41373.000	-029	2'x4' Lay-in ceiling tile; bright white	Gather area - East	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-030	2'x4' Lay-in ceiling tile; bright white	Gather area - East	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-031	2'x4' Lay-in ceiling tile; Off-white	Gather area - East	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-032	2'x4' Lay-in ceiling tile; Off-white	Gather area - East	Layer 1: Gray fibrous material w/paint	NAD	A/N
41373.000	-033	Brown tackboard mastic	Annex hall	Layer 1: Brown mastic w/paint	NAD	A/N
41373.000	-034	Red concrete floor	Room 23 - Tech building	Layer 1: Red sandy cementitious material w/paint	NAD	A/N
41373.000	-035	Chemistry counter	Room F	Layer 1: Black hard brittle material	NAD	SAT
41373.000	-200	Sound insulation board	Small Gym	Layer 1: Light gray fibrous material w/ paint and thin white soft mastic	NAD	NVL
41373.000	-201	Sound insulation board	Small Gym	Layer 1: Light gray fibrous material w/ paint and thin white soft mastic	NAD	NVL

Table 2 - ASBESTOS SAMPLE INVENTORY

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	Lab
-003	GWB construction debris	Room 4	TEM	NAD	L/Cor
-004	GWB construction debris	Library, North wall	TEM	Present	L/Cor
-005	GWB construction debris	Admin Building, Server room	TEM	NAD	L/Cor
-006	GWB construction debris	Room 20	TEM	NAD	L/Cor
-007	GWB construction debris	Library, East wall	TEM	Present	L/Cor

Table 3 – Results for Carbon Dioxide Monitoring

Sample ID	Locations	Start Date	Peak Monitoring Results (ppm)
001	Admin Reception	2/16/2016	663
002	Admin Staff	2/16/2016	1,230
003	Art Room	2/21/2016	850
004	Admin Collin Office	2/24/2016	895
005	CTE (Home EC)	2/17/2016	852
006	East Pod	2/22/2016	1,215
007	Gathering Place	2/18/2016	1,734
008	Admin Karen Office	2/24/2016	639
009	Library	2/16/2016	1,159
010	Music Room	2/18/2016	1,270
011	North Pod	2/18/2016	1,043
012	Outside	2/26/2016	472
013	Room 2	2/16/2016	837
014	Room 4	2/18/2016	1,080
015	Room 5	2/22/2016	1,133
016	Room 6	2/22/2016	849
017	Room 9	2/16/2016	1,169
018	Room 13	----------*	----------
019	Room 20	2/22/2016	1,005
020	Room 23	2/24/2016	869
021	Room B	2/15/2016	1,163
022	Room C	2/16/2016	804
023	Room D	2/18/2016	891
024	Room E	2/24/2016	862
025	Room 7	2/24/2016	642
026	Room 11	2/25/2016	928
027	Room 14	2/16/2016	759
028	Room 18	2/18/2016	681

ASHRAE Recommended Threshold – 1,172 ppm (700 + outdoors)
*sensor malfunction

Table 3 – Results for Carbon Dioxide Monitoring

Sample ID	Locations	Start Date	Peak Monitoring Results (ppm)
029	Small Gym	2/18/2016	895
030	South Pod	2/18/2016	908
031	Wood Shop	2/24/2016	849
032	Room F	2/24/2016	1,315

ASHRAE Recommended Threshold – 1,172 ppm (700 + outdoors)

Table 4 – Results for Temperature Monitoring

Sample ID	Locations	Start Date	Monitoring Range (F°)
001	Admin Reception	2/16/2016	67.3 - 75.3
002	Admin Staff	2/16/2016	66.1 - 73.2
003	Art Room	2/21/2016	66.4 – 72.1
004	Admin Collin Office	2/24/2016	63.5 – 73.4
005	CTE (Home EC)	2/17/2016	60.6 – 72.6
006	East Pod	2/22/2016	62.8 – 73.0
007	Gathering Place	2/18/2016	62.5 – 70.3
008	Admin Karen Office	2/24/2016	61.2 – 74.8
009	Library	2/16/2016	64.9 – 71.6
010	Music Room	2/18/2016	64.1 – 72.3
011	North Pod	2/18/2016	59.4 – 73.8
012	Outside	2/26/2016	50.2 – 70.5
013	Room 2	2/16/2016	64.5 – 77.1
014	Room 4	2/18/2016	66.0 – 75.7
015	Room 5	2/22/2016	57.1 – 75.0
016	Room 6	2/22/2016	51.0 – 76.0
017	Room 9	2/16/2016	63.2 – 79.6
018	Room 13	----------*	----------
019	Room 20	2/22/2016	57.7 – 78.0
020	Room 23	2/24/2016	67.4 – 72.3
021	Room B	2/15/2016	65.4 – 78.9
022	Room C	2/16/2016	66.0 – 77.0
023	Room D	2/18/2016	66.6 – 80.6
024	Room E	2/24/2016	64.1 – 78.3
025	Room 7	2/24/2016	60.6 – 75.0
026	Room 11	2/25/2016	59.4 – 71.2
027	Room 14	2/16/2016	63.0 – 75.0
028	Room 18	2/18/2016	62.4 – 75.9
029	Small Gym	2/18/2016	60.9 – 74.0

ASHRAE Recommended Threshold 68.0 – 75.0 Deg. F
*sensor malfunction

Table 4 – Results for Temperature Monitoring

Sample ID	Locations	Start Date	Monitoring Range (Deg F)
030	South Pod	2/18/2016	63.7 – 69.6
031	Wood Shop	2/24/2016	66.5 – 72.5
032	Room F	2/24/2016	62.3 – 69.2

ASHRAE Recommended Threshold 68.0 – 75.0 Deg. F

Table 5 – Results for Relative Humidity Monitoring

Sample ID	Locations	Start Date	Monitoring Range (%rH)
001	Admin Reception	2/16/2016	39.0 - 49.7
002	Admin Staff	2/16/2016	38.8 - 48.5
003	Art Room	2/21/2016	26.2 - 38.3
004	Admin Collin Office	2/24/2016	28.6 – 42.8
005	CTE (Home Ec)	2/17/2016	37.0 – 46.2
006	East Pod	2/22/2016	27.2 – 40.1
007	Gathering Place	2/18/2016	37.1 – 51.2
008	Admin Karen Office	2/24/2016	25.0 – 40.0
009	Library	2/16/2016	39.6 – 53.8
010	Music Room	2/18/2016	38.5 – 46.4
011	North Pod	2/18/2016	21.0 – 46.2
012	Outside	2/26/2016	23.8 – 61.5
013	Room 2	2/16/2016	34.3 – 50.4
014	Room 4	2/18/2016	32.0 – 44.4
015	Room 5	2/22/2016	23.9 – 45.5
016	Room 6	2/22/2016	20.4 – 51.6
017	Room 9	2/16/2016	32.8 – 51.8
018	Room 13	----------*	----------
019	Room 20	2/22/2016	16.6 – 36.0
020	Room 23	2/24/2016	22.2 – 38.8
021	Room B	2/15/2016	35.8 – 49.8
022	Room C	2/16/2016	37.3 – 50.9
023	Room D	2/18/2016	35.1 – 43.7
024	Room E	2/24/2016	26.5 – 37.5
025	Room 7	2/24/2016	26.4 – 46.1
026	Room 11	2/25/2016	30.7 – 43.2
027	Room 14	2/16/2016	39.8 – 55.2
028	Room 18	2/18/2016	34.2 – 49.8
029	Small Gym	2/18/2016	39.2 – 54.9

ASHRAE Recommended Threshold – 30.0 – 60.0 %
*sensor malfunction

Table 5 – Results for Relative Humidity Monitoring

Sample ID	Locations	Start Date	Monitoring Range (%Rh)
030	South Pod	2/18/2016	35.7 – 43.1
031	Wood Shop	2/24/2016	31.0 – 40.3
032	Room F	2/24/2016	40.5 – 50.2

ASHRAE Recommended Threshold – 30.0 – 60.0 %

Table 6 – Results for Carbon Monoxide Monitoring

Sample ID	Locations	Start Date	Peak Monitoring Results (ppm)
001	Admin Reception	2/16/2016	0.0
002	Admin Staff	2/16/2016	0.0
003	Art Room	2/21/2016	0.3
004	Admin - Collin Office	2/24/2016	0.1
005	CTE (Home EC)	2/17/2016	0.4
006	East Pod Center	2/22/2016	0.0
007	Gathering Place	2/18/2016	0.6
008	Admin Karen Office	2/24/2016	0.0
009	Library	2/16/2016	0.9
010	Music Room	2/16/2016	13.6
011	North Pod Center	2/16/2016	0.0
012	Outside	2/26/2016	0.0
013	Room 2	2/16/2016	0.4
014	Room 4	2/18/2016	0.1
015	Room 5	2/22/2016	0.0
016	Room 6	2/22/2016	0.0
017	Room 9	2/16/2016	0.2
018	Room 13	---------- *	----------
019	Room 20	2/22/2016	0.4
020	Room 23	2/24/2016	0.4
021	Room B	2/15/2016	0.7
022	Room C	2/16/2016	0.3
023	Room D	2/18/2016	0.1
024	Room E	2/24/2016	1.2
025	Room 7	2/24/2016	0.8
026	Room 11	2/25/2016	0.0
027	Room 14	2/16/2016	0.6
028	Room 18	2/18/2016	0.0
029	Small Gym	2/18/2016	0.0

ASHRAE Recommended Threshold – 9.0 ppm
WAC PEL – 35 ppm
*sensor malfunction

Table 6 – Results for Carbon Monoxide Monitoring

Sample ID	Locations	Start Date	Peak Monitoring Results (ppm)
030	South Pod Center	2/18/2016	0.1
031	Wood Shop	2/24/2016	0.0
032	Room F	2/24/2016	0.0

ASHRAE Recommended Threshold – 9.0 ppm

Table 7 –Results for Silica Air Sampling

Sample ID	Location	Quartz Lab Results (mg/m^3)	Cristobalite Lab Results (mg/m^3)	Tridymite Lab Results (mg/m^3)
001	Room 9	<0.012	<0.024	<0.024
002	Room 13	0.012	<0.024	<0.024
003	East Pod	<0.012	<0.024	<0.024
004	North Pod	0.013	<0.024	<0.024
005	Room 19	0.013	<0.024	<0.024
006	Room 14	0.015	<0.025	<0.025
007	Room 4	0.012	<0.023	<0.023
008	Room 2	0.012	<0.021	<0.021
009	Room 5	0.014	<0.025	<0.025
010	Room 6	0.0095	<0.018	<0.018
011	Art Room	0.011	<0.020	<0.020
012	Kiln Room	0.010	<0.020	<0.020
013	Room 7	<0.011	<0.022	<0.022

ACGIH Threshold Limit Values - Quartz 0.025 (mg/m^3), Cristobalite 0.025 (mg/m^3), Tridymite 0.05 (mg/m^3)

Table 8 – Results for Dust Mite Allergen Sampling

Sample ID	Location Description	Sample Result *(Mcg/G)
001	Annex; Room B	<0.39
002	Annex; Room D	<0.39
003	Annex; Room C	<0.39
004	South Pod; Room 2	<0.39
005	South Pod Center	<0.39
006	South Pod; Room 6	<0.39
007	South Pod; Room 7	<0.39
008	Admin/Reception	<0.39
009	Admin/Staff	<0.39
010	South Pod; Room 4	<0.39
011	South Pod; Room 5	<0.39
012	North Pod Center	<0.39
013	North Pod; Room 14	<0.39
014	Library	<0.39
015	Gathering Place	<0.39
016	CTE (Home EC)	<0.39
017	Music Room	1.18
018	East Pod; Room 13	<0.39
019	East Pod	<0.01
020	East Pod; Room 9	<0.39
021	North Pod; Room 18	<0.39
022	East Pod; Room 11	<0.39
023	North Pod; Room 20	<0.39
024	North Pod; Attic	<0.39
025	East Pod; Attic	<0.39
026	South Pod; Attic	<0.39

***Mcg/G – micrograms/gram**

Table 9 – Radon Sample Inventory

Sample ID	Location Description	Sample Result (pCi/L)
7103063	South Pod Center	<0.3
7103066	East Pod Center	<0.3
7103067	Room 13	<0.3
7103068	Music (Sample #1)	3.3 ± 0.7
7103069	Wood Shop	0.6 ± 0.5
7103070	North Pod	0.8 ± 0.5
7103071	Room E (18-21 Transitions)	0.8 ± 0.6
7103072	Room 5	<0.3
7103073	Admin/Reception	<0.3
7103074	Gathering Place	<0.3
7103076	Room B	<0.3
7103077	Room A	<0.3
7103078	Small Gym Wrestling	<0.3
7103079	Art Room	<0.3
7103081	Admin/Staff	<0.3
7103082	Music Room (Sample #2)	3.2 ± 0.3
7103084	Room 14	<0.3
7103085	Room 20	<0.3
7103086	Library	1.0 ± 0.2

EPA Threshold – 4.0 (pCi/L)

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-001 PCB-W	Room 11 Top of wood shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-002 PCB-W	Room 5 Top of light fixture	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-003 PCB-W	South Pod Top of file cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-004 PCB-W	Admin Top of wood shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-005 PCB-W	Annex Mont. Sci. Prep Top of refrigerator	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-006 PCB-W	Music Table leg	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-007 PCB-W	Room 1 Top of wood cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-008 PCB-W	Room 2 Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-009 PCB-W	Room 3 Window sill	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-010 PCB-W	Room 4 Top of light fixture	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-011 PCB-W	Room 7 GWB wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-012 PCB-W	Room 6 Top of wood cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-013 PCB-W	Room 13 Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-014 PCB-W	Room 12 Top of light fixture	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-015 PCB-W	Room 10 Top of wood cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-016 PCB-W	Room 9 Top of light fixture	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-017 PCB-W	Room 8 GWB wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-018 PCB-W	East Pod Window sill	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-019 PCB-W	Art Wood shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-020 PCB-W	Room 23 Brick wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-021 PCB-W	Woodshop Countertop	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-022 PCB-W	Art Room Kiln Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-023 PCB-W	Room 22 Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-024-PCB-W	Small Gym East Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-025-PCB-W	Small Gym West Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-026-PCB-W	Boy's Locker Wood bench	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-027-PCB-W	Girl's Locker Wood bench	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-028-PCB-W	Large Gym Top of wood bleacher	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND 3.40 ND **3.40**
-029-PCB-W	Weight Room Concrete wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-030-PCB-W	Gathering Place Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-031-PCB-W	CTE (Home EC) Top of counter	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-032-PCB-W	FACS/CTE East Office GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-033-PCB-W	Music Concrete wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-034-PCB-W	Music Office Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-035-PCB-W	Music Practice GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-036-PCB-W	Music Practice GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-037-PCB-W	Music Spa Storage GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-038-PCB-W	Annex Room F Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-039-PCB-W	Annex - 18-21 Transitions Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-040-PCB-W	Annex - 18-21 Transitions East Top of desk	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-041-PCB-W	Room F Prep Chem counter	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-042-PCB-W	Annex Hall West GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-043-PCB-W	Annex Hall East Top of metal storage cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-044-PCB-W	Annex Room C Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-045-PCB-W	Annex Room A Top of wood bookshelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-046-PCB-W	Annex Room B Top of metal storage cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-047-PCB-W	Annex Room D Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-048-PCB-W	Annex Girl's Restroom Ceramic floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-049-PCB-W	Room 14 Top of wood cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-050-PCB-W	Room 15 Top of wood cabinet	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-051-PCB-W	Room 20 Top of light fixture	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-052-PCB-W	Room 16A Counter	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-053-PCB-W	Room 17 Top of light	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-054-PCB-W	North Pod Girl's Restroom Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-055-PCB-W	North Pod GWB Wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-056-PCB-W	Room 19 Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-057-PCB-W	Room 18 Top of wood shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-058-PCB-W	North Pod Boy's' Restroom Concrete wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-059-PCB-W	South Pod Restroom Hall Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-060-PCB-W	South Pod Girl's Restroom Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-061-PCB-W	South Pod Boy's Restroom Concrete wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-062-PCB-W	Admin Supply Top of counter	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-063-PCB-W	Admin Gary's Office Top of book shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-064-PCB-W	Admin Server Top of laminated counter	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-065-PCB-W	Admin Staff Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-066-PCB-W	Karen's Office Window sill	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-067-PCB-W	CTE (Home EC) Restroom Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-068-PCB-W	Music Storage Wood shelf	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-069-PCB-W	Gathering Place Office Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-070-PCB-W	Café Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-071-PCB-W	Gathering Place East Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-072-PCB-W	Tech Building Girl's Restroom Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-073-PCB-W	Tech Hallway Vinyl floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-074-PCB-W	Small Gym Storage Concrete wall	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**
-075-PCB-W	Tech Building Boy's Restroom Concrete floor	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND ND ND **ND**

Table 10 – Results for PCB Wipe Sampling

Sample ID	Location	Analyte	Result (ug/100 cm2)
-100-PCB-W	Room D Contaminated vinyl floor tile	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	516.00 ND ND ND ND ND ND **516.00**
-1001	Room 11 Leaking Motor Oil Unit Ventilator	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND 0.68 ND **0.68**
-1002	Room 11 Debris in Return Unit Ventilator	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND 1.74 ND **1.74**
-1003	Room 11 Dust from Left Control Panel Unit Ventilator	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 **Total PCB's**	ND ND ND ND ND 6.48 ND **6.48**

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-001 PCB-A	Room 11	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	0.17	0.000088
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**0.17**	**0.000088**
-002 PCB-A	Room 5	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**ND**	
-003 PCB-A	South Pod	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**ND**	
-004 PCB-A	Admin	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-005 PCB-A	Annex Mont. Sci. Prep	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	0.36	0.000190
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**0.36**	**0.000190**
-006 PCB-A	Music	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**ND**	
-007 PCB-A	Room 1	Aroclor 1016	ND	<0.000042
		Aroclor 1221	ND	<0.000042
		Aroclor 1232	ND	<0.000042
		Aroclor 1242	ND	<0.000042
		Aroclor 1248	ND	<0.000042
		Aroclor 1254	ND	<0.000042
		Aroclor 1260	ND	<0.000042
		Aroclor 1262	ND	<0.000042
		Aroclor 1268	ND	<0.000042
		Total PCB's	**ND**	
-008 PCB-A	Room 2	Aroclor 1016	ND	<0.000043
		Aroclor 1221	ND	<0.000043
		Aroclor 1232	ND	<0.000043
		Aroclor 1242	ND	<0.000043
		Aroclor 1248	ND	<0.000043
		Aroclor 1254	ND	<0.000043
		Aroclor 1260	ND	<0.000043
		Aroclor 1262	ND	<0.000043
		Aroclor 1268	ND	<0.000043
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-009 PCB-A	Room 3	Aroclor 1016	ND	<0.000043
		Aroclor 1221	ND	<0.000043
		Aroclor 1232	ND	<0.000043
		Aroclor 1242	ND	<0.000043
		Aroclor 1248	ND	<0.000043
		Aroclor 1254	ND	<0.000043
		Aroclor 1260	ND	<0.000043
		Aroclor 1262	ND	<0.000043
		Aroclor 1268	ND	<0.000043
		Total PCB's	**ND**	
-010 PCB-A	Room 4	Aroclor 1016	ND	<0.000044
		Aroclor 1221	ND	<0.000044
		Aroclor 1232	ND	<0.000044
		Aroclor 1242	ND	<0.000044
		Aroclor 1248	ND	<0.000044
		Aroclor 1254	ND	<0.000044
		Aroclor 1260	ND	<0.000044
		Aroclor 1262	ND	<0.000044
		Aroclor 1268	ND	<0.000044
		Total PCB's	**ND**	
-011 PCB-A	Room 6	Aroclor 1016	ND	<0.000045
		Aroclor 1221	ND	<0.000045
		Aroclor 1232	ND	<0.000045
		Aroclor 1242	ND	<0.000045
		Aroclor 1248	ND	<0.000045
		Aroclor 1254	ND	<0.000045
		Aroclor 1260	ND	<0.000045
		Aroclor 1262	ND	<0.000045
		Aroclor 1268	ND	<0.000045
		Total PCB's	**ND**	
-012 PCB-A	Room 7	Aroclor 1016	ND	<0.000045
		Aroclor 1221	ND	<0.000045
		Aroclor 1232	ND	<0.000045
		Aroclor 1242	ND	<0.000045
		Aroclor 1248	ND	<0.000045
		Aroclor 1254	ND	<0.000045
		Aroclor 1260	ND	<0.000045
		Aroclor 1262	ND	<0.000045
		Aroclor 1268	ND	<0.000045
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-013 PCB-A	Library	Aroclor 1016	ND	<0.000047
		Aroclor 1221	ND	<0.000047
		Aroclor 1232	ND	<0.000047
		Aroclor 1242	ND	<0.000047
		Aroclor 1248	ND	<0.000047
		Aroclor 1254	ND	<0.000047
		Aroclor 1260	ND	<0.000047
		Aroclor 1262	ND	<0.000047
		Aroclor 1268	ND	<0.000047
		Total PCB's	**ND**	
-014 PCB-A	Computer Lab	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-015 PCB-A	Room 8	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	ND	<0.000046
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**ND**	
-016 PCB-A	Room 9	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	ND	<0.000046
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-017 PCB-A	Room 10	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	ND	<0.000046
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**ND**	
-018 PCB-A	Room 12	Aroclor 1016	ND	<0.000047
		Aroclor 1221	ND	<0.000047
		Aroclor 1232	ND	<0.000047
		Aroclor 1242	ND	<0.000047
		Aroclor 1248	ND	<0.000047
		Aroclor 1254	ND	<0.000047
		Aroclor 1260	ND	<0.000047
		Aroclor 1262	ND	<0.000047
		Aroclor 1268	ND	<0.000047
		Total PCB's	**ND**	
-019 PCB-A	Room 13	Aroclor 1016	ND	<0.000048
		Aroclor 1221	ND	<0.000048
		Aroclor 1232	ND	<0.000048
		Aroclor 1242	ND	<0.000048
		Aroclor 1248	ND	<0.000048
		Aroclor 1254	ND	<0.000048
		Aroclor 1260	ND	<0.000048
		Aroclor 1262	ND	<0.000048
		Aroclor 1268	ND	<0.000048
		Total PCB's	**ND**	
-020 PCB-A	Room 14	Aroclor 1016	**Sample damaged at lab**	
		Aroclor 1221		
		Aroclor 1232		
		Aroclor 1242		
		Aroclor 1248		
		Aroclor 1254		
		Aroclor 1260		
		Aroclor 1262		
		Aroclor 1268		
		Total PCB's		

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-021 PCB-A	Room 15	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	<0.000049
-022 PCB-A	Room 16	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-023 PCB-A	Room 17	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-024-PCB-A	Room 18	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-025-PCB-A	Room 19	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-026-PCB-A	Room 20	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-027-PCB-A	Computer Lab	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	<0.000051
-028-PCB-A	Room 22, Art Room	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-029-PCB-A	Room 21, Woodshop	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-030-PCB-A	Room 23, Computer Lab	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-031-PCB-A	Technology Building Hall	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	<0.000051
-032-PCB-A	Girl's Restroom	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	<0.000049

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-033-PCB-A	Art Kiln Room	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-034-PCB-A	South Pod Bathoom Hall	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-035-PCB-A	Boy's Restroom	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-036-PCB-A	North Pod Bathoom Hall	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-037-PCB-A	Small Gym	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-038-PCB-A	Small Gym North Storag	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-039-PCB-A	Weight Room	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-040-PCB-A	Small Gym	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-041-PCB-A	Large Gym	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	0.10	0.000053
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**0.10**	**0.000053**
-042-PCB-A	Gathering Place Café	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-043-PCB-A	Gathering Place East	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-044-PCB-A	Gathering Place West	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-045-PCB-A	Gathering West Office	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	0.11	0.000053
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**0.11**	**0.000053**
-046-PCB-A	Annex Room E (18-21 Transitions)	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	0.10	0.000048
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**0.10**	**0.000048**
-047-PCB-A	CTE East Office	Aroclor 1016	ND	<0.000048
		Aroclor 1221	ND	<0.000048
		Aroclor 1232	ND	<0.000048
		Aroclor 1242	ND	<0.000048
		Aroclor 1248	ND	<0.000048
		Aroclor 1254	ND	<0.000048
		Aroclor 1260	ND	<0.000048
		Aroclor 1262	ND	<0.000048
		Aroclor 1268	ND	<0.000048
		Total PCB's	**ND**	
-048-PCB-A	CTE	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-049-PCB-A	Music /Drama Storage	Aroclor 1016	ND	<0.000048
		Aroclor 1221	ND	<0.000048
		Aroclor 1232	ND	<0.000048
		Aroclor 1242	ND	<0.000048
		Aroclor 1248	ND	<0.000048
		Aroclor 1254	ND	<0.000048
		Aroclor 1260	ND	<0.000048
		Aroclor 1262	ND	<0.000048
		Aroclor 1268	ND	<0.000048
		Total PCB's	**ND**	
-050-PCB-A	Music Office	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-051-PCB-A	Annex Room D	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-052-PCB-A	Annex Room E (18-21 Transitions)	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	0.11	0.000051
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**0.11**	**0.000051**

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-053-PCB-A	Music Spa Storage	Aroclor 1016	ND	<0.000048
		Aroclor 1221	ND	<0.000048
		Aroclor 1232	ND	<0.000048
		Aroclor 1242	ND	<0.000048
		Aroclor 1248	ND	<0.000048
		Aroclor 1254	ND	<0.000048
		Aroclor 1260	ND	<0.000048
		Aroclor 1262	ND	<0.000048
		Aroclor 1268	ND	<0.000048
		Total PCB's	**ND**	
-054-PCB-A	Annex Room F	Aroclor 1016	ND	<0.000046
		Aroclor 1221	ND	<0.000046
		Aroclor 1232	ND	<0.000046
		Aroclor 1242	0.23	0.000110
		Aroclor 1248	ND	<0.000046
		Aroclor 1254	ND	<0.000046
		Aroclor 1260	ND	<0.000046
		Aroclor 1262	ND	<0.000046
		Aroclor 1268	ND	<0.000046
		Total PCB's	**0.23**	**0.000110**
-055-PCB-A	Annex Room F Prep	Aroclor 1016	ND	<0.000035
		Aroclor 1221	ND	<0.000035
		Aroclor 1232	ND	<0.000035
		Aroclor 1242	ND	<0.000035
		Aroclor 1248	ND	<0.000035
		Aroclor 1254	ND	<0.000035
		Aroclor 1260	ND	<0.000035
		Aroclor 1262	ND	<0.000035
		Aroclor 1268	ND	<0.000035
		Total PCB's	**ND**	
-056-PCB-A	Annex Hall West	Aroclor 1016	ND	<0.000047
		Aroclor 1221	ND	<0.000047
		Aroclor 1232	ND	<0.000047
		Aroclor 1242	0.57	0.000270
		Aroclor 1248	ND	<0.000047
		Aroclor 1254	ND	<0.000047
		Aroclor 1260	ND	<0.000047
		Aroclor 1262	ND	<0.000047
		Aroclor 1268	ND	<0.000047
		Total PCB's	**0.57**	**0.000270**

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-057-PCB-A	Girl's Locker Room	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-058-PCB-A	Boy's Locker Room	Aroclor 1016	ND	<0.000051
		Aroclor 1221	ND	<0.000051
		Aroclor 1232	ND	<0.000051
		Aroclor 1242	ND	<0.000051
		Aroclor 1248	ND	<0.000051
		Aroclor 1254	ND	<0.000051
		Aroclor 1260	ND	<0.000051
		Aroclor 1262	ND	<0.000051
		Aroclor 1268	ND	<0.000051
		Total PCB's	**ND**	
-059-PCB-A	Annex Room D	Aroclor 1016	ND	<0.000053
		Aroclor 1221	ND	<0.000053
		Aroclor 1232	ND	<0.000053
		Aroclor 1242	0.39	0.000210
		Aroclor 1248	ND	<0.000053
		Aroclor 1254	ND	<0.000053
		Aroclor 1260	ND	<0.000053
		Aroclor 1262	ND	<0.000053
		Aroclor 1268	ND	<0.000053
		Total PCB's	**0.39**	**0.000210**
-060-PCB-A	Annex Girl's Restroom	Aroclor 1016	ND	<0.000053
		Aroclor 1221	ND	<0.000053
		Aroclor 1232	ND	<0.000053
		Aroclor 1242	0.29	0.000150
		Aroclor 1248	ND	<0.000053
		Aroclor 1254	ND	<0.000053
		Aroclor 1260	ND	<0.000053
		Aroclor 1262	ND	<0.000053
		Aroclor 1268	ND	<0.000053
		Total PCB's	**0.29**	**0.000150**

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-061-PCB-A	Annex Room B	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	
-062-PCB-A	Annex Hall East	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	0.31	0.000150
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**0.31**	**0.000150**
-063-PCB-A	Annex Room A	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	0.51	0.000250
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**0.51**	**0.000250**
-064-PCB-A	Annex Room C	Aroclor 1016	ND	<0.000053
		Aroclor 1221	ND	<0.000053
		Aroclor 1232	ND	<0.000053
		Aroclor 1242	0.19	0.000099
		Aroclor 1248	ND	<0.000053
		Aroclor 1254	ND	<0.000053
		Aroclor 1260	ND	<0.000053
		Aroclor 1262	ND	<0.000053
		Aroclor 1268	ND	<0.000053
		Total PCB's	**0.19**	**0.000099**

Table 11 - PCB Air Sampling Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)	Result (mg/m^3)
-065-PCB-A	Admin Karen's Office	Aroclor 1016	ND	<0.000049
		Aroclor 1221	ND	<0.000049
		Aroclor 1232	ND	<0.000049
		Aroclor 1242	ND	<0.000049
		Aroclor 1248	ND	<0.000049
		Aroclor 1254	ND	<0.000049
		Aroclor 1260	ND	<0.000049
		Aroclor 1262	ND	<0.000049
		Aroclor 1268	ND	<0.000049
		Total PCB's	**ND**	
-066-PCB-A	Admin Server Room	Aroclor 1016	ND	<0.000047
		Aroclor 1221	ND	<0.000047
		Aroclor 1232	ND	<0.000047
		Aroclor 1242	ND	<0.000047
		Aroclor 1248	ND	<0.000047
		Aroclor 1254	ND	<0.000047
		Aroclor 1260	ND	<0.000047
		Aroclor 1262	ND	<0.000047
		Aroclor 1268	ND	<0.000047
		Total PCB's	**ND**	
-067-PCB-A	Admin Gary's Office	Aroclor 1016	ND	<0.000052
		Aroclor 1221	ND	<0.000052
		Aroclor 1232	ND	<0.000052
		Aroclor 1242	ND	<0.000052
		Aroclor 1248	ND	<0.000052
		Aroclor 1254	ND	<0.000052
		Aroclor 1260	ND	<0.000052
		Aroclor 1262	ND	<0.000052
		Aroclor 1268	ND	<0.000052
		Total PCB's	**ND**	
-068-PCB-A	Admin Staff Room	Aroclor 1016	ND	<0.000050
		Aroclor 1221	ND	<0.000050
		Aroclor 1232	ND	<0.000050
		Aroclor 1242	ND	<0.000050
		Aroclor 1248	ND	<0.000050
		Aroclor 1254	ND	<0.000050
		Aroclor 1260	ND	<0.000050
		Aroclor 1262	ND	<0.000050
		Aroclor 1268	ND	<0.000050
		Total PCB's	**ND**	

Table 12 - Results for Particulate Air Sampling

Sample ID	Location Description	Fungal Total Count/m^3	Non-fungal Total Count/m^3
001	Small Gym; South	6,500	62,098
002	Small Gym; North	6,765	44,466
003	Outdoor	28,534	22,866
004	Outdoor	177,799	42,733
005	Library	977	168,192
006	East Pod; Center	689	124,868
007	Room 2	462	15,949
008	South Pod; Center	699	87,583
009	Room 4	434	32,056
010	Room 19	533	8,199
011	Room 14	632	7,401
012	Room 20	499	5,034
013	North Pod; Center	566	5,499
014	Outdoors	1,510	13,265
015	Outdoors	2,249	9,320
016	Room 9	970	12,002
017	Admin; Staff	1,266	104,266
018	Room D	1,876	3,647
019	Room 20	2,233	8,600
020	Room B	933	6,432
021	Art Room	834	157,034
022	Wood Shop	Overloaded	Overloaded
023	Room 13	1,206	169,974
024	Admin; Reception	362	44,222
025	Gathering Place	1,434	175,800
025A	Outdoor	7,092	30,327
025B	Outdoor	9,346	35,228
026	Room 5	1,353	63,813

Table 12 - Results for Particulate Air Sampling

Sample ID	Location Description	Fungal Total Count/m^3	Non-fungal Total Count/m^3
027	Room 6	1,667	96,036
028	Room 7	1,469	20,156
029	Room 11	2,334	88,738
030	Girl's Locker Room	1,286	14,429
031	Music Room	488	15,513
032	CTE (Home Ec)	762	99,874
033	Gathering Place	688	104,067
034	Outdoor	2,569	44,488
035	Outdoor	2,120	38,833

Table 13 – Particulate Surface Sampling Locations

Sample ID	Location Description
MTS-1	Music; West
MTS-2	Gathering; North Center
MTS-3	Small Gym; Wrestling
MTS-4	Woodshop; West
MTS-5	Room 23; Southwest
MTS-6	South Pod
MTS-7	Room 2; West
MTS-8	Room 7; East
MTS-9	East Pod
MTS-10	Room 13; North
MTS-11	Room 9; Southeast
MTS-12	Room 14; West
MTS-13	Room 20; Southwest
MTS-14	North Pod
MTS-15	Library; Northeast
MTS-16	Room B; North Center
MTS-17	Room D; South Center
MTS-18	Admin/Reception; North
MTS-19	Staff Room; Northwest
MTS-20	Room C; Northeast
MTS-21	Home Ec; Northwest
MTS-22	Room 6; East
MTS-23	Room 5; South
MTS-24	Room 4; West
MTS-25	Room 11; Northeast
MTS-26	Room 18; West
MTS-27	Art Room; East
MTS-28	North Pod Attic; South
MTS-29	East Pod Attic; West
MTS-30	South Pod Attic; North

Table 14 – Results for Asbestos Air Monitoring

Sample ID	Location Description	Concentration (structures/cc)
001	Gathering Place East	<0.005
002	Gathering Place West	<0.004
003	Café	<0.004
004	Lab Blank	N/A
005	Lab Blank	N/A
006	South Pod Attic Space	<0.004
007	East Pod Attic Space	<0.004
008	North Pod Attic Space	<0.005
009a	Blank	N/A
010a	Blank	N/A
009	Room 2	<0.004
010	Room 4	<0.004
011	Room 5	<0.005
012	Room 6	<0.005
013	Room 7	<0.005
014	South Pod Center	<0.004
015	Library	<0.004
016	East Pod Center	<0.005
017	Room 9	0.003
018	Room 13	<0.004
019	Room 14	<0.002
020	North Pod Center	<0.005
021	Room 20	<0.005
022	Admin – Staff Room	<0.004
023	Admin - Reception	<0.004
024	Room C	<0.004
025	Room D	<0.004
026	Room B	<0.004

EPA Threshold – 0.01 structures/cm3

Table 14 – Results for Asbestos Air Monitoring

Sample ID	Location Description	Concentration (structures/cm^3)
027	Art Room	<0.003
028	Woodshop	<0.003
029	Gathering – Girl's Restroom	<0.005
030	Outdoor (1)	<0.004
031	Outdoor (2)	<0.004
032	Lab blank	N/A
033	Lab blank	N/A
030	Room 1	<0.004
033	Room 11	<0.005
034	Room 12	<0.005
035	Room 15	<0.004
037	Room 18	<0.005

EPA Threshold – 0.01 structures/cm3

Table 15 – Results for Asbestos Surface Sampling

Sample ID	Location Description	Total Structures
001	Montessori Pod Attic – South	32,166
002	Humanities Pod Attic – North	111,947
003	Math & Science Pod Attic – East	<367
004	South Pod Center	<367
005	Room 7	<919
006	Library	6,433
007	East Pod Center	<1,470
008	Room 9	<1,470
009	Room 13	<7,352
010	Room 14	238,952
011	Room 20	<7,352
012	North Pod Center	<919
013	Room 2	7,352
014	Room 22 – Art	<14,704
015	Room 21 – Woodshop	<36,761
016	Small Gym	<1,470
017	Girl's Locker	<1,470
018	Gathering Place	<3,676
019	Music	2,527
020	CTE	3,676
021	Staff – Admin	<3,676
022	Reception – Admin	735
023	Room B	735
024	Room D	<1470
025	Room C	<1,470
500	Room 1 – Carpet, North	47,790
501	Room 3 – Top of Shelf	<927
502	Room 4 – Lower Shelf	<927
503	Room 5 – Lower Shelf	<927
504	Room 6 – Top of Shelf	<927
505	Room 8 – Desk Shelf	1,855
506	Room 10 – Top of Shelf	3,711

Table 15 – Results for Asbestos Surface Sampling

Sample ID	Location Description	Total Structures
507	Room 11 – Top of Shelf	12,062
508	Room 12 – Top of Shelf	31,548
509	Room 15 – Carpet, West	524,917
510	Room 16 – Top of File Cabinet	1,855
511	Room 17 – Top of Shelf	7,423
512	Room 18 – Top of Shelf	16,701
513	Room 19 – Top of Shelf	1,855
514	Room A – Lower Shelf, West	618
515	Room F – Counter Top, East	927
516	Annex Hall – Top of Wood Cabinet	<618
517	Music – Piano	919
518	Music – East Carpet	<919
519	Music – West Carpet	919
520	Room D – Teacher's Desk	919
521	Room D – Southeast Vinyl Floor Tile by Window	11,947
522	Room D – Entry Top of Cabinet	919
523	Room D – Top of Green Cabinet, West	1,838
524	Room D – Vinyl Floor Tile, Northwest Corner	1,838
525	Room 14 – Carpet, North Bookshelf	1,838
526	Room 14 – Entry Carpet, West	1,838
527	Room 14 – Top North Bookshelf	151,642
528	Room 14 – Top of Built-in Bookshelf	<919
529	Room 14 – Small Bookshelf, West Entry	5,514
530	Library – East Wall Carpet	<919
531	Library – East Bookshelf, Fiction	5,514
532	Library – Southwest Wall Carpet	<919
533	Library – Southwest Wall, Top of Bookshelf	<919
534	Library – Northeast Wall, Carpet	919
535	Library – Northeast Wall, Top of Bookshelf	1,838

Table 16 - Soil Sampling Results

Sample ID	Location	Analyte	Result (mg/kg-dry)	MTCA Method A Clean-up Criteria	Lab Method
-001	Southeast Garden	Mercury	ND	2	EPA 7471
		Arsenic	5.45	20	EPA 6020
		Cadmium	ND	2	EPA 6020
		Chromium	26.0	2000	EPA 6020
		Lead	17.8	250	EPA 6020
		Organochlorine Pesticides	ND		EPA 8081
		Hydrocarbon Identification	ND		NWTPH-HCID
-002	Northwest Garden	Mercury	ND	2	EPA 7471
		Arsenic	13.5	20	EPA 6020
		Cadmium	0.460	2	EPA 6020
		Chromium	57.4	2000	EPA 6020
		Lead	52.9	250	EPA 6020
		Organochlorine Pesticides	ND		EPA 8081
		Hydrocarbon Identification	ND		NWTPH-HCID
-003	North Playground	Mercury	ND	2	EPA 7471
		Arsenic	13.1	20	EPA 6020
		Cadmium	0.298	2	EPA 6020
		Chromium	47.8	2000	EPA 6020
		Lead	36.7	250	EPA 6020
		Organochlorine Pesticides	ND		EPA 8081
		Hydrocarbon Identification	ND		NWTPH-HCID

Table 17 - Carpet Pieces Analysis Results

Sample ID	Location	Analyte	Total Per Sample (mg/kg)
-1100	Room 8 Carpet	Aroclor 1016	ND
		Aroclor 1221	ND
		Aroclor 1232	ND
		Aroclor 1242	ND
		Aroclor 1248	ND
		Aroclor 1254	6.51
		Aroclor 1260	ND
		Aroclor 1262	ND
		Aroclor 1268	ND
		Total PCB's	**6.51**
		Organochlorine Pesticides	**ND**
-1101	Room 12 Carpet	Aroclor 1016	ND
		Aroclor 1221	ND
		Aroclor 1232	ND
		Aroclor 1242	ND
		Aroclor 1248	ND
		Aroclor 1254	ND
		Aroclor 1260	ND
		Aroclor 1262	ND
		Aroclor 1268	ND
		Total PCB's	**ND**
		Organochlorine Pesticides	**ND**
-1102	East Pod, Center	Aroclor 1016	ND
		Aroclor 1221	ND
		Aroclor 1232	ND
		Aroclor 1242	ND
		Aroclor 1248	ND
		Aroclor 1254	ND
		Aroclor 1260	ND
		Aroclor 1262	ND
		Aroclor 1268	ND
		Total PCB's	**ND**
		Organochlorine Pesticides	**ND**

Table 18 - Results for PCB Paint Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-001 PCB-P	White/wood	Exterior covered walkway West Annex	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**
-002 PCB-P	Brown/metal	Exterior facia covered walkway Northwest Annex	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**
-003 PCB-P	Tan/metal	Exterior down spout West Gym	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**
-004 PCB-P	White/metal	Exterior covered walkway West Gym	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**

Table 18 - Results for PCB Paint Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-005 PCB-P	White/wood	Exterior covered walkway, Annex Classroom 4	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-006 PCB-P	White/metal	Exterior white trim, Office West Admin.	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-007 PCB-P	White/wood	Exterior covered walkway, Office South Admin	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	1.80
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**1.80**
-008 PCB-P	Light gray/metal	Exterior hopper, Building 4 Technology	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-009 PCB-P	Brown/concrete	Exterior wood shop, South wall Technology	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**

Table 18 - Results for PCB Paint Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-010 PCB-P	White/wood	Exterior Annex soffit	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-011 PCB-P	Brown/wood	Exterior facia, Annex	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-012 PCB-P	Brown/wood	Exterior facia, building 4 Technology	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**
-013 PCB-P	Light blue/concrete	Interior Commons, Northeast wall Gathering Place near kichenette	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	0.196
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**0.196**
-014 PCB-P	White/gypsum wallboard	Interior Electrical Room, Annex	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**

Table 19 – Results for PCB Caulk Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-001 PCB-C	Gray caulk - metal frame	Building 3 - West window	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	1130.00
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**1130.00**
-002 PCB-C	Light gray caulk - metal column	Building 3 - West exterior column	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	5530.00
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**5530.00**
-003 PCB-C	Gray caulk - metal window frame	Main office - West exterior	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	4420.00
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**4420.00**
-004 PCB-C	Gray caulk- metal door frame	North Pod, Room 14 - exterior door	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	1.04
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**1.04**

Table 19 – Results for PCB Caulk Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-005 PCB-C	Tan caulk - metal window frame	South Pod, Room 4 - exterior window	Aroclor 1016	2.28
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	15.40
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**17.70**
-006 PCB-C	Brown caulk - metal door frame	Room 7 - exterior door, interior frame	Aroclor 1016	3.92
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	4.91
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**8.83**
-007 PCB-C	Brown caulk - metal door frame	Room 20 - exterior door, interior frame	Aroclor 1016	1.25
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	2.01
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**3.26**
-008 PCB-C	Gray caulk - metal window frame	Room 7 - interior window frame	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	3660.00
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**3660.00**

Table 19 – Results for PCB Caulk Sampling

Sample ID	Material next to location	Location	Analyte	Lab Result (mg/kg)
-009 PCB-C	Gray caulk - metal window frame	Room 20 - interior window frame	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	5730.00
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**5730.00**
-010 PCB-C	Dark brown caulk - metal window frame	Room 23 - interior window frame	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	ND
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**ND**

Table 20 - Results for PCB Carpet Mastic Sampling

Sample ID	Material	Location	Analyte	Lab Result (mg/kg)
-1001 *Dust - Room 11*	Oil from motor	Room 11	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND 0.684 ND ND ND **0.684**
-1002	Carpet mastic	Room 11	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND 1.74 ND ND ND **1.74**
-1003	Dust in U.V.	Room 11	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND 6.48 ND ND ND **6.48**
-1004	Carpet Mastic	Room 1	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**
-1005	Carpet Mastic	Room 13	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 **Total PCB's**	ND ND ND ND ND ND ND ND ND **ND**

Table 20 - Results for PCB Carpet Mastic Sampling

Sample ID	Material	Location	Analyte	Lab Result (mg/kg)
-1006	Carpet Mastic	North Pod - Center	Aroclor 1016	ND
			Aroclor 1221	ND
			Aroclor 1232	ND
			Aroclor 1242	ND
			Aroclor 1248	ND
			Aroclor 1254	1.42
			Aroclor 1260	ND
			Aroclor 1262	ND
			Aroclor 1268	ND
			Total PCB's	**1.42**

TAB 4

SAMPLE LOCATION FIELD SKETCHES

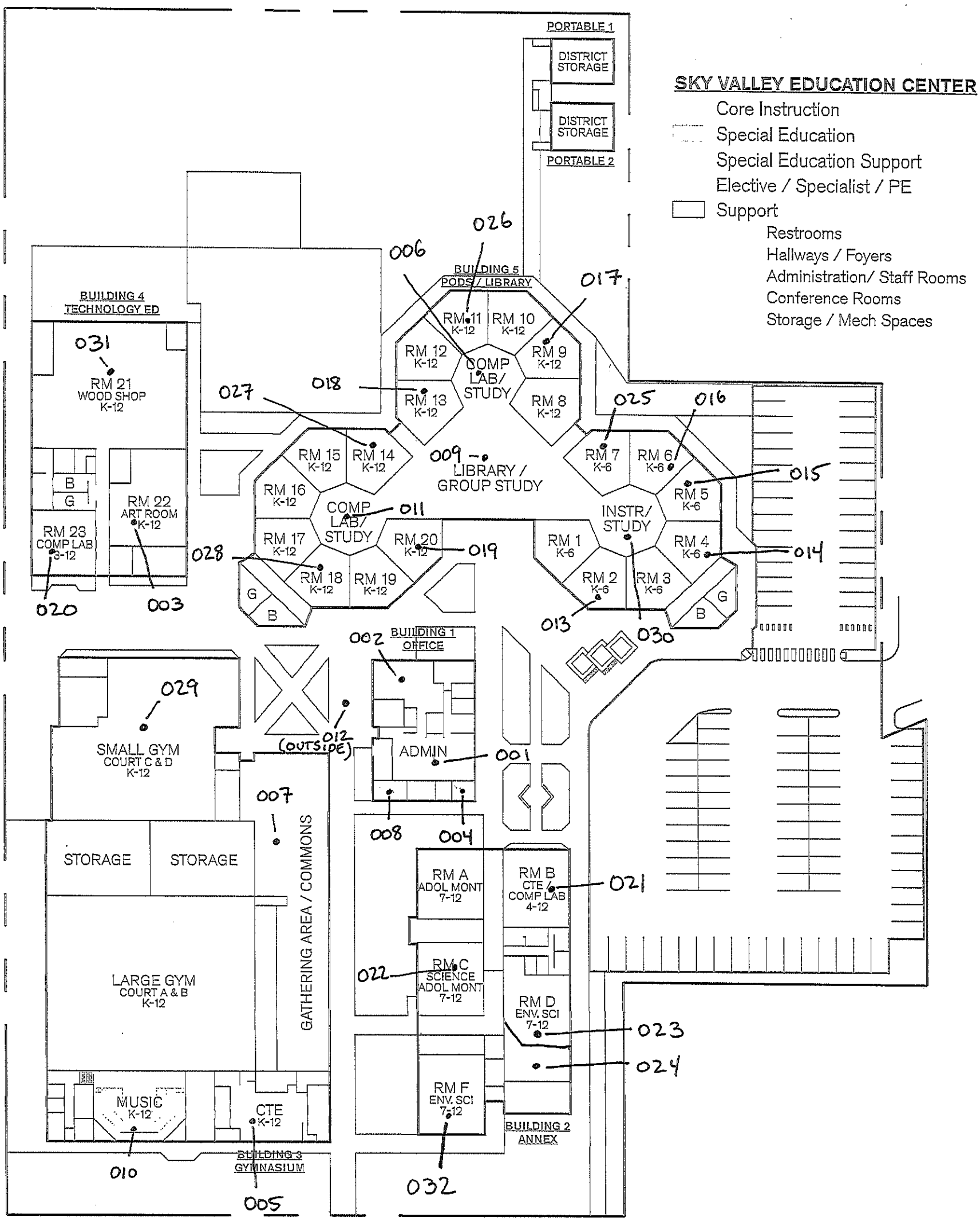
Drawing 2 - CO2, Temperature, CO and Relative Humidity

Air Sample Locations

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April 2016

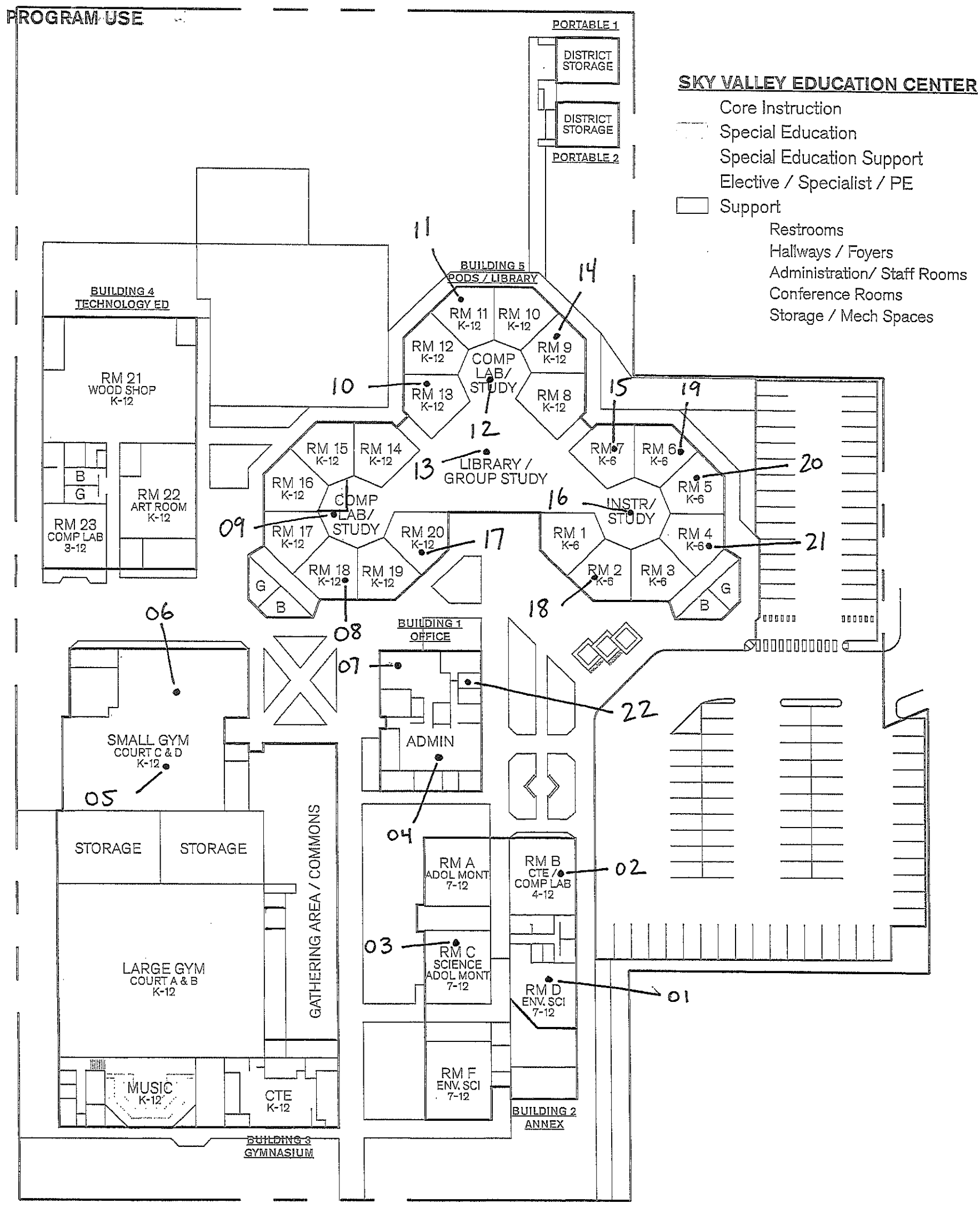


Drawing 3 - Formaldehyde Sample Locations

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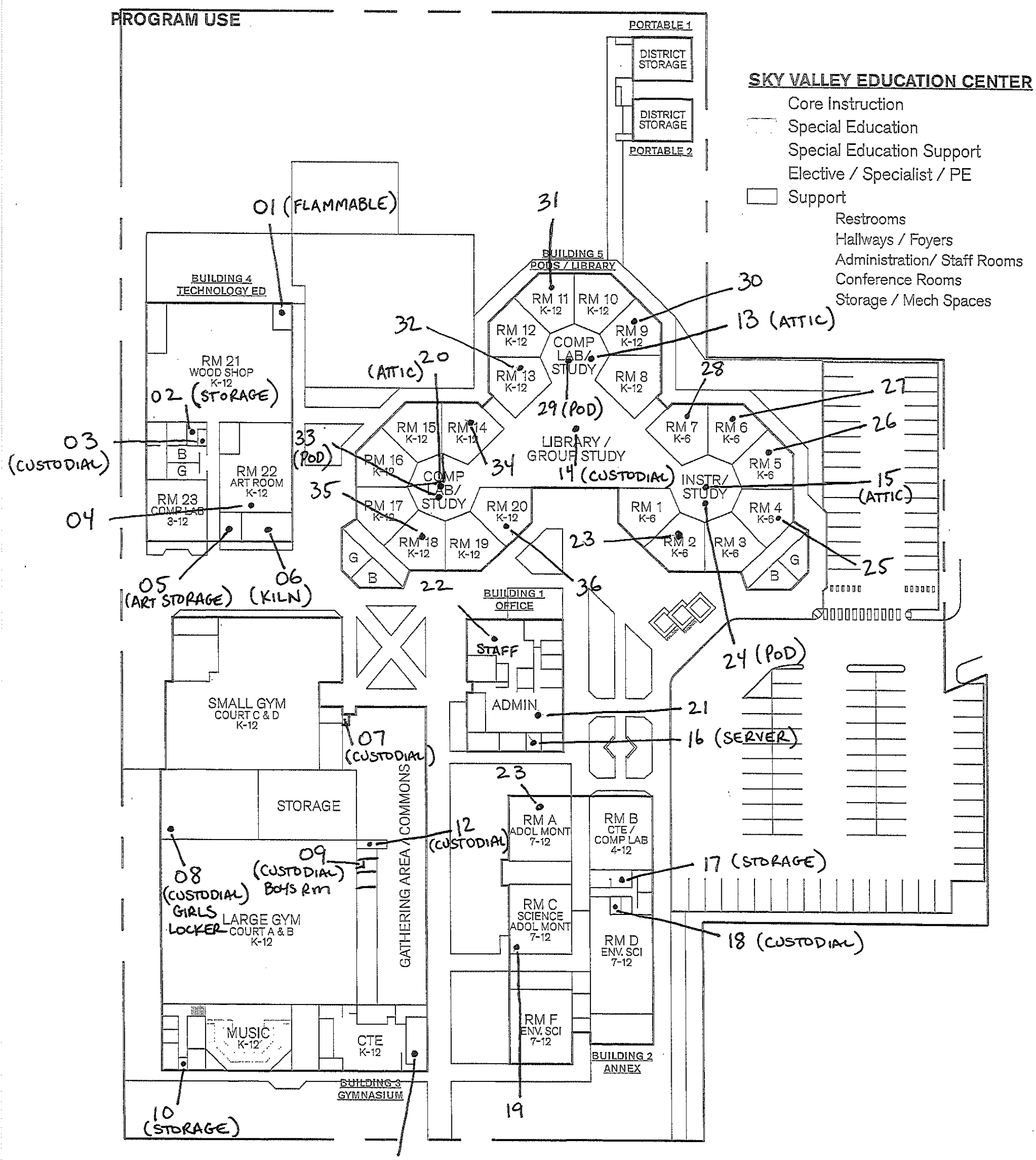


Drawing 4 - Total VOC Sample Locations

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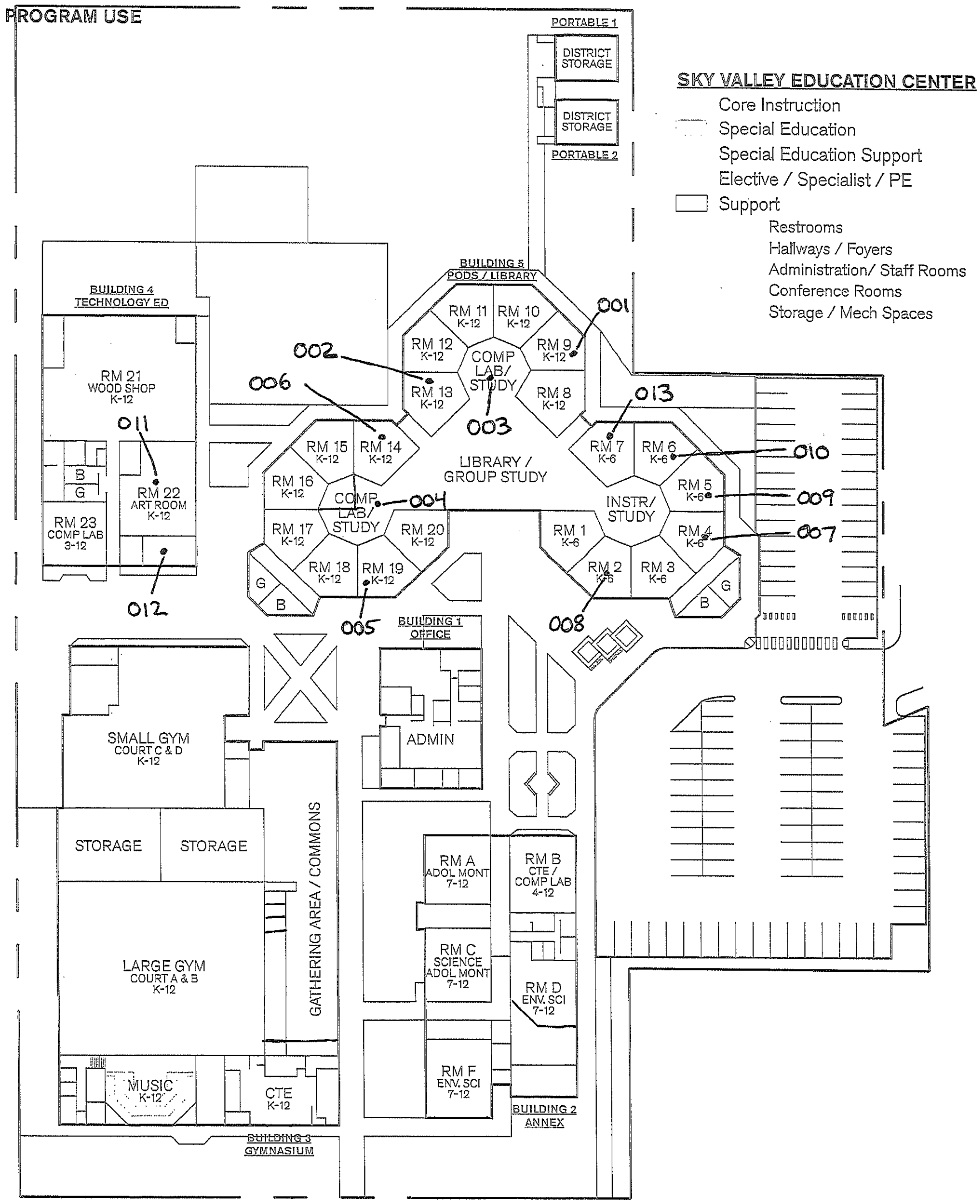


Drawing 5 - Silica Sample Locations

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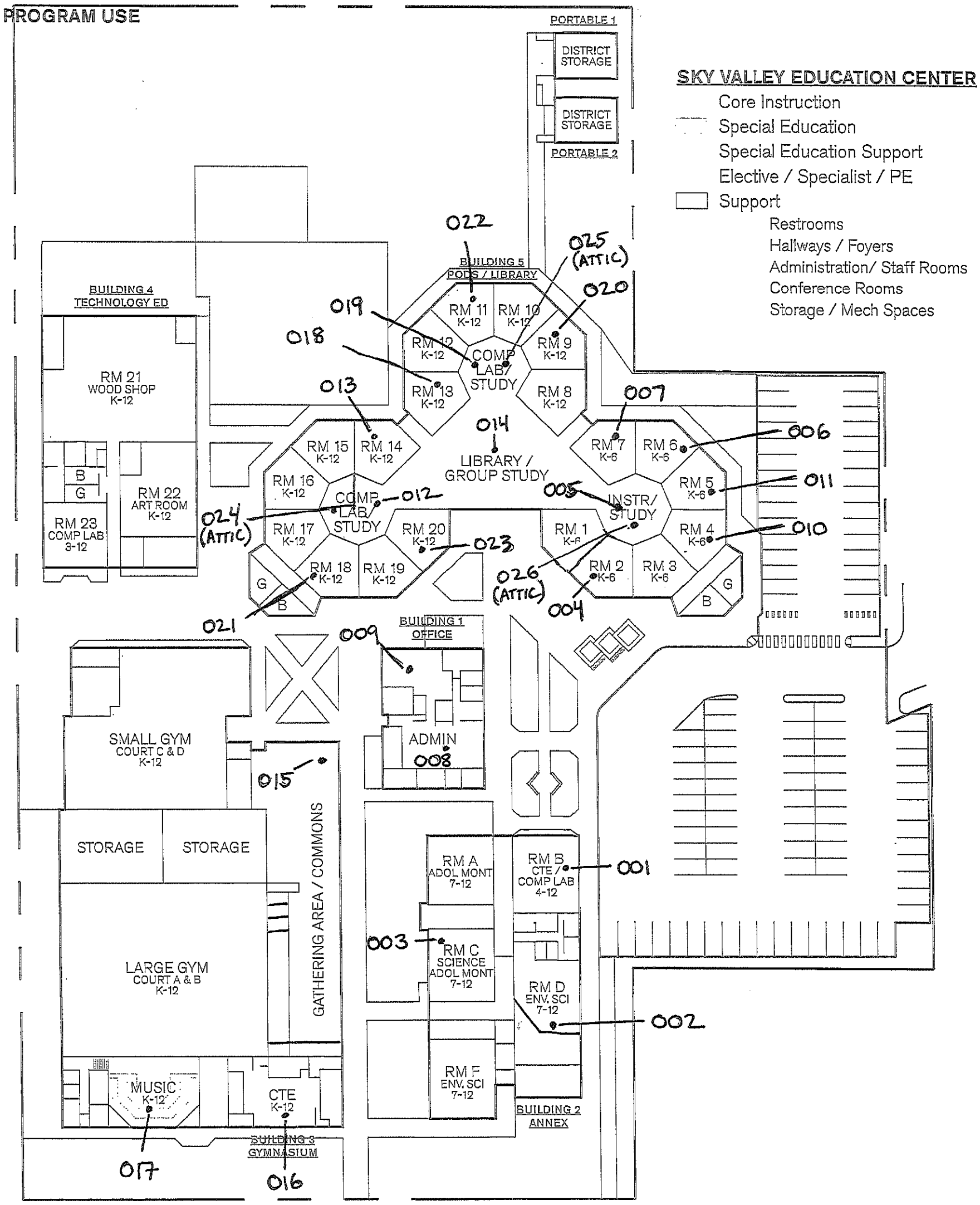


Drawing 6 - Dust Mite Sample Locations

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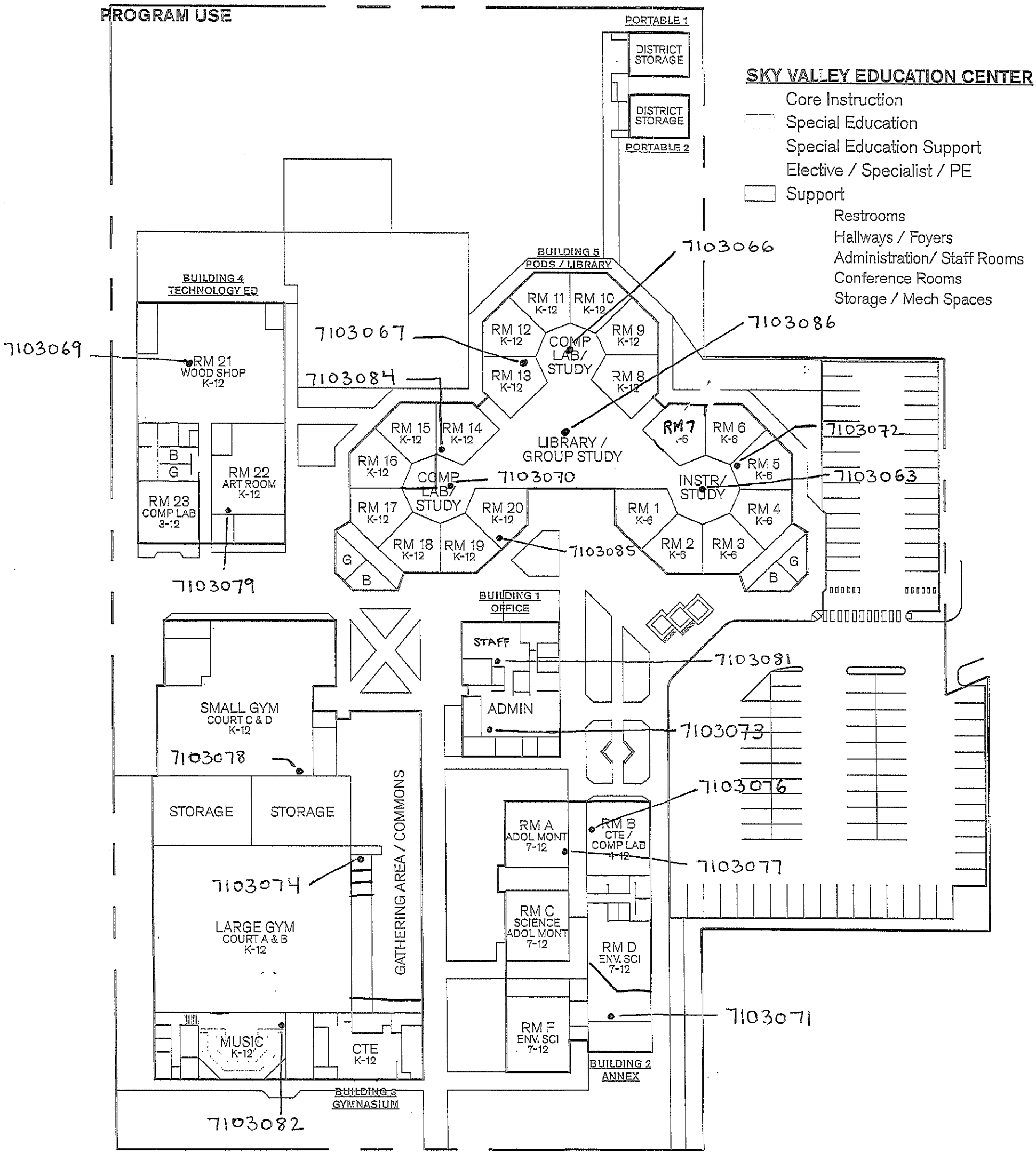


Drawing 7 - Radon Sample Locations

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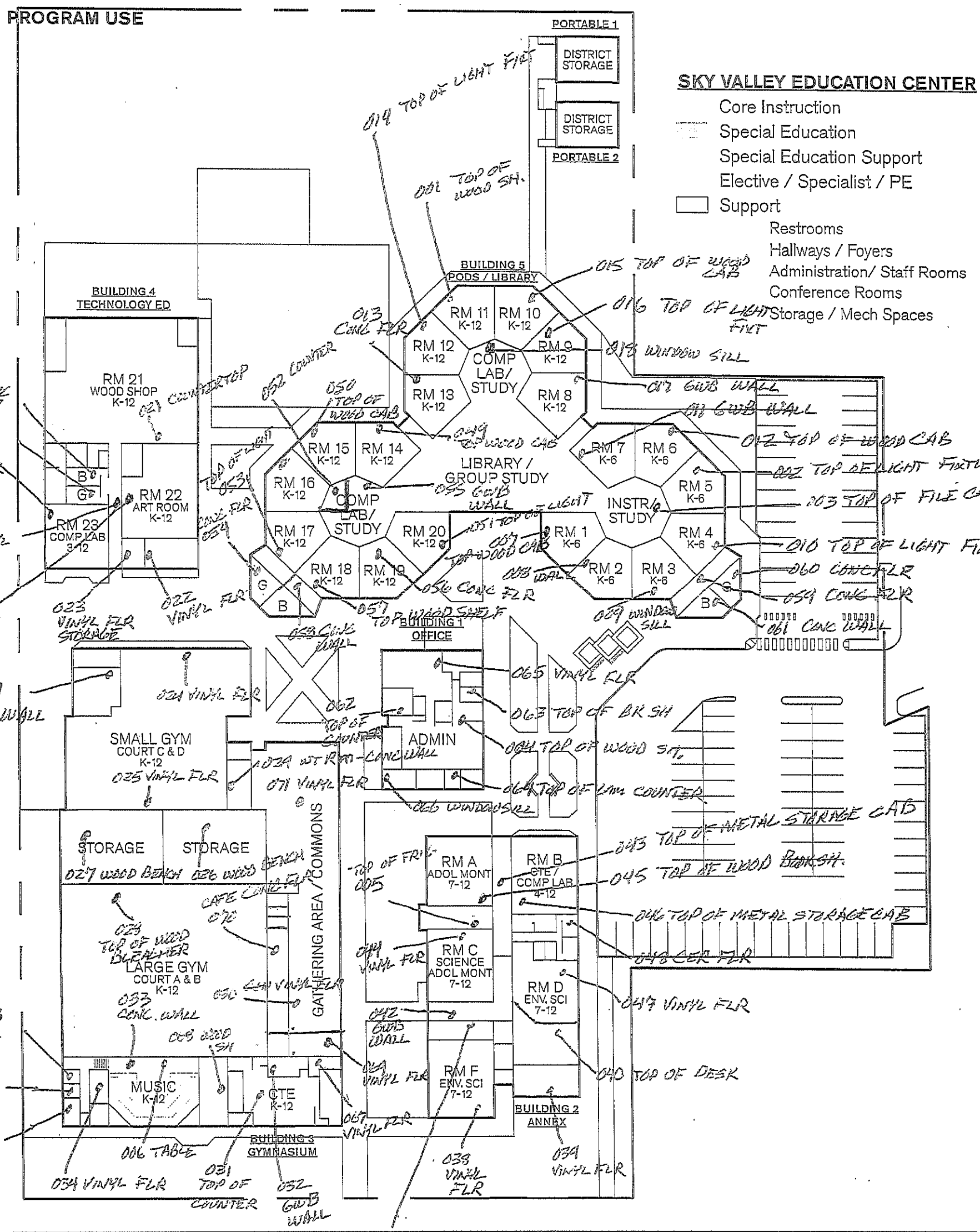


Drawing 8 - PCB Wipe Sample Locations

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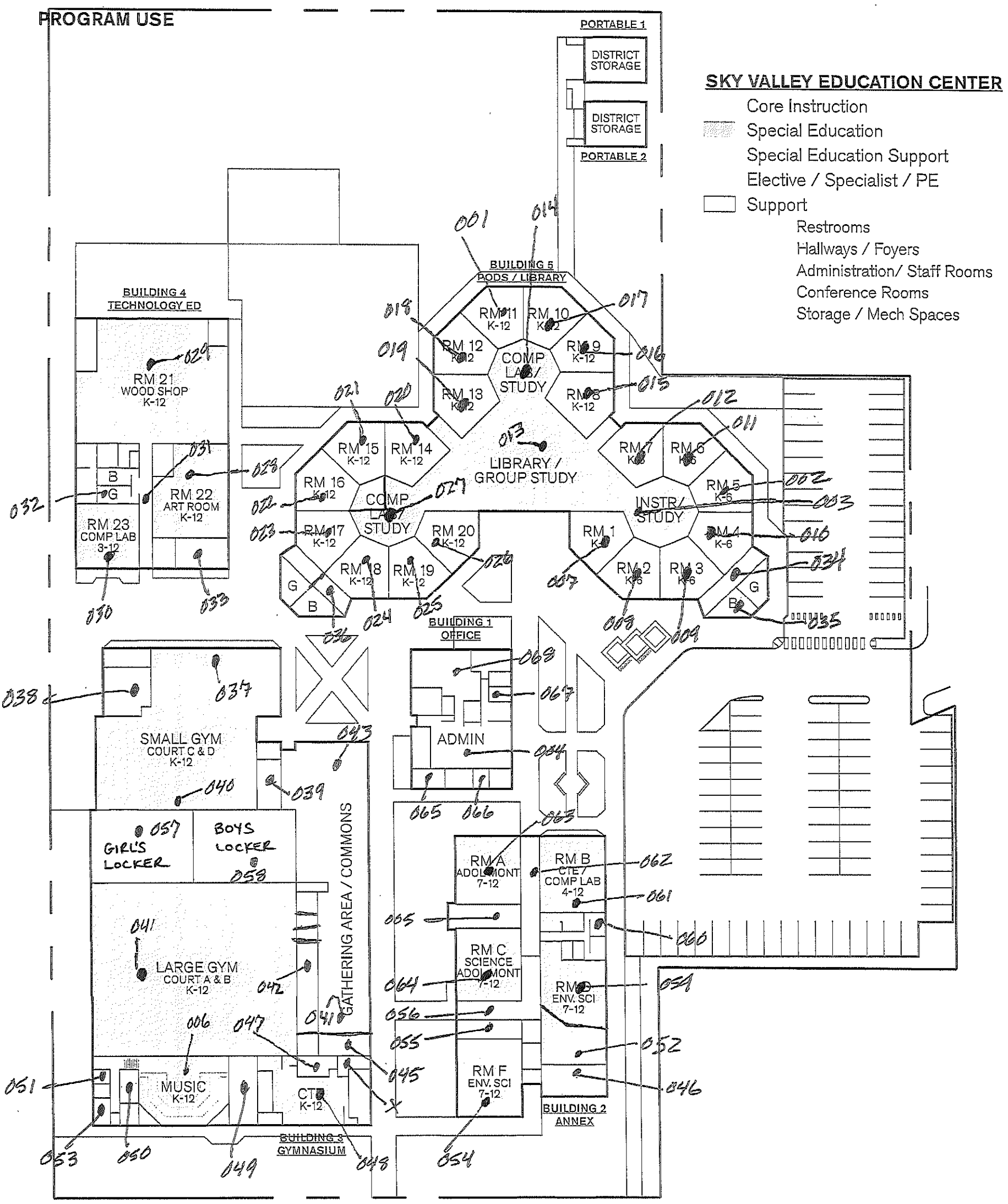


Drawing 9 - PCB Air Sample Locations

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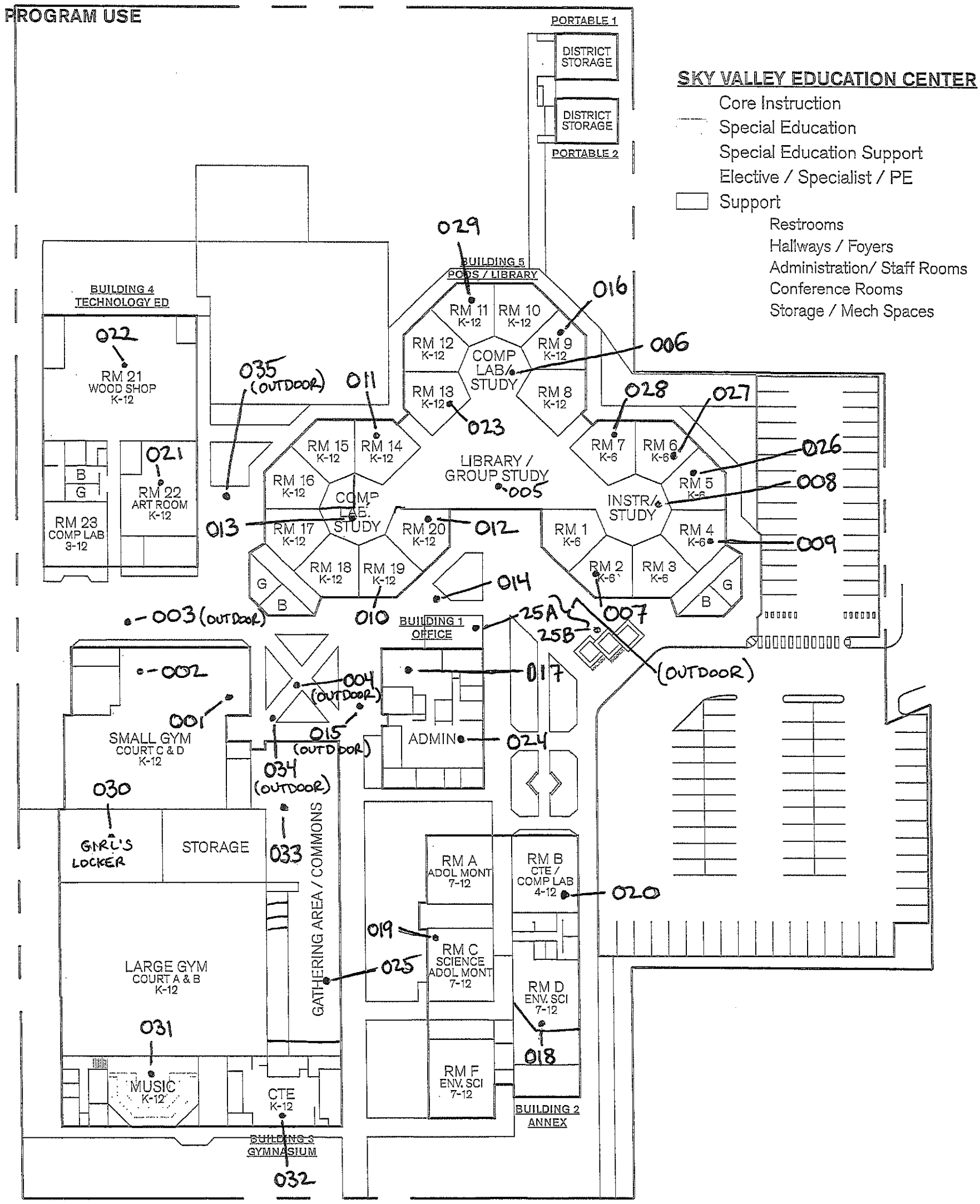


Drawing 10 - Particulate Air Sample Locations

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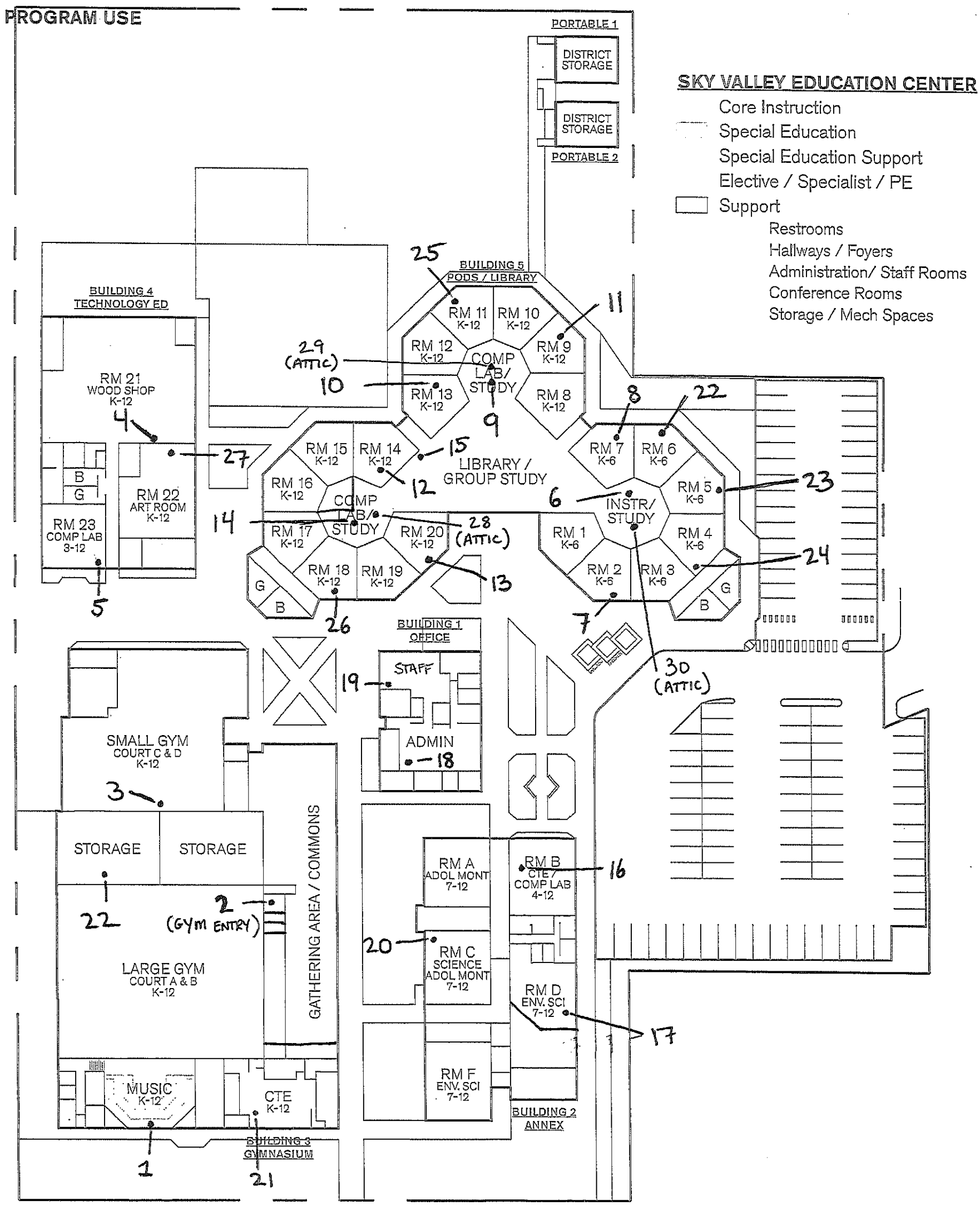


Drawing 11 - Particulate Surface Sample Locations

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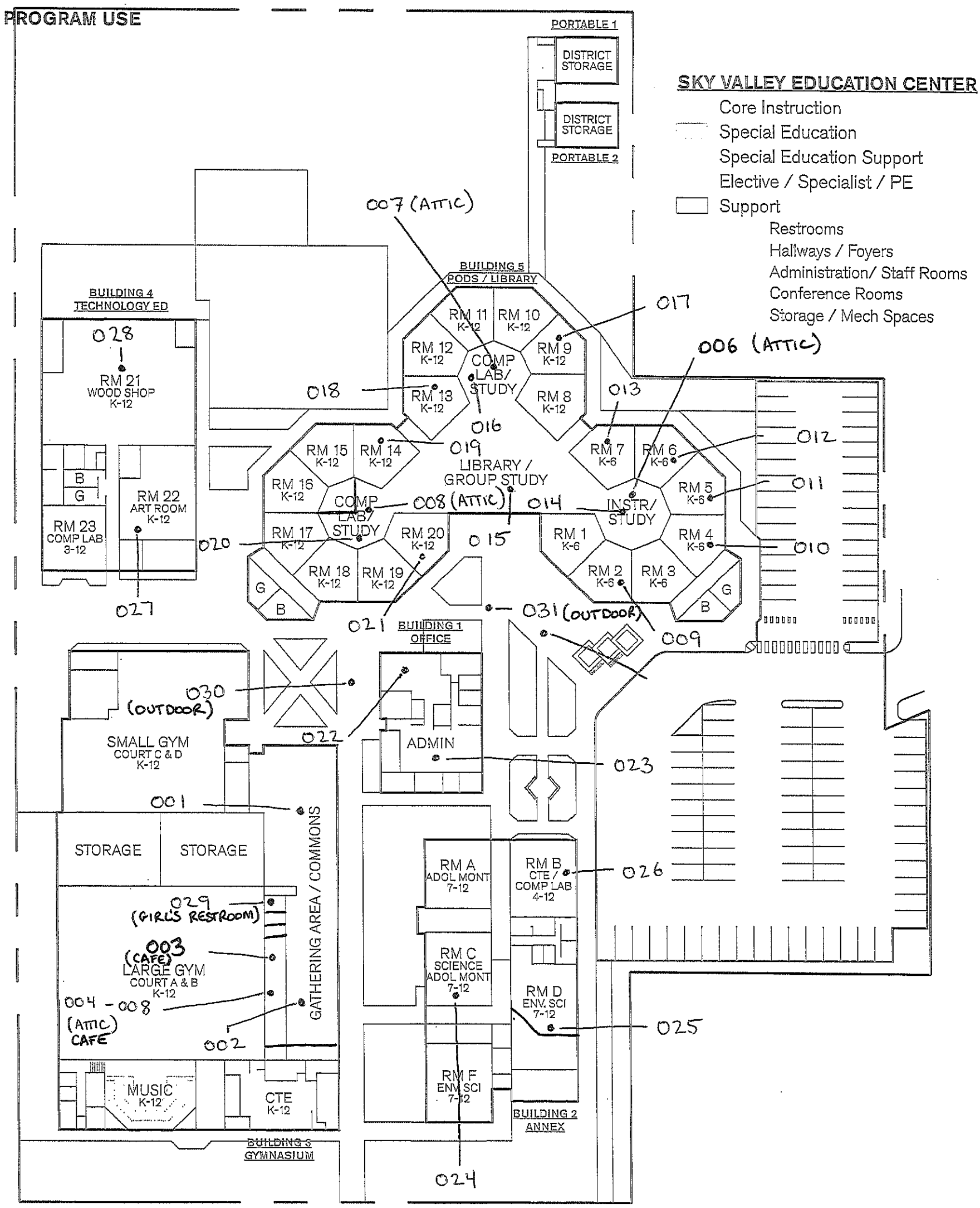


Drawing 12 - Asbestos Air Sample Locations

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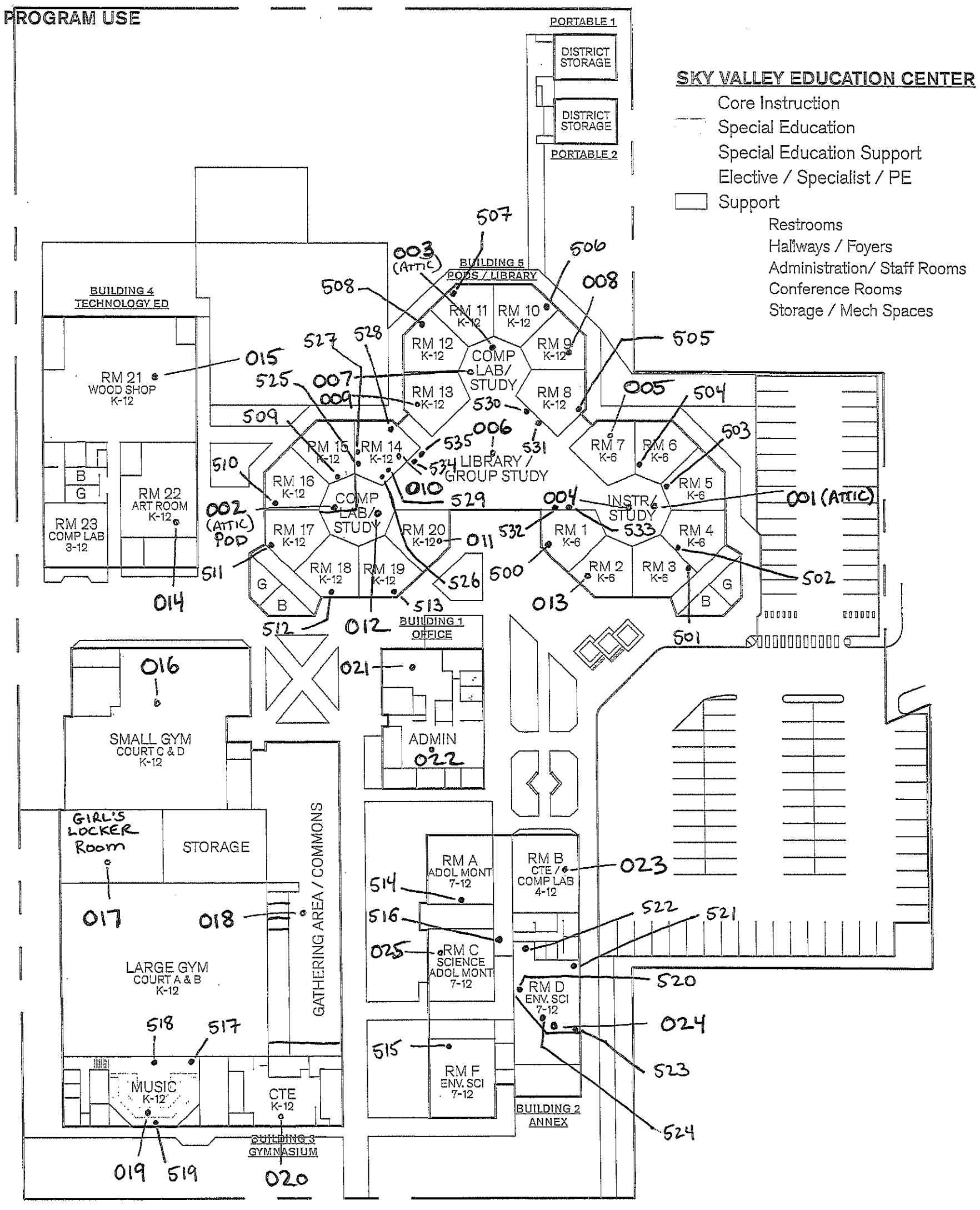


Drawing 13 - Asbestos Surface Sample Locations

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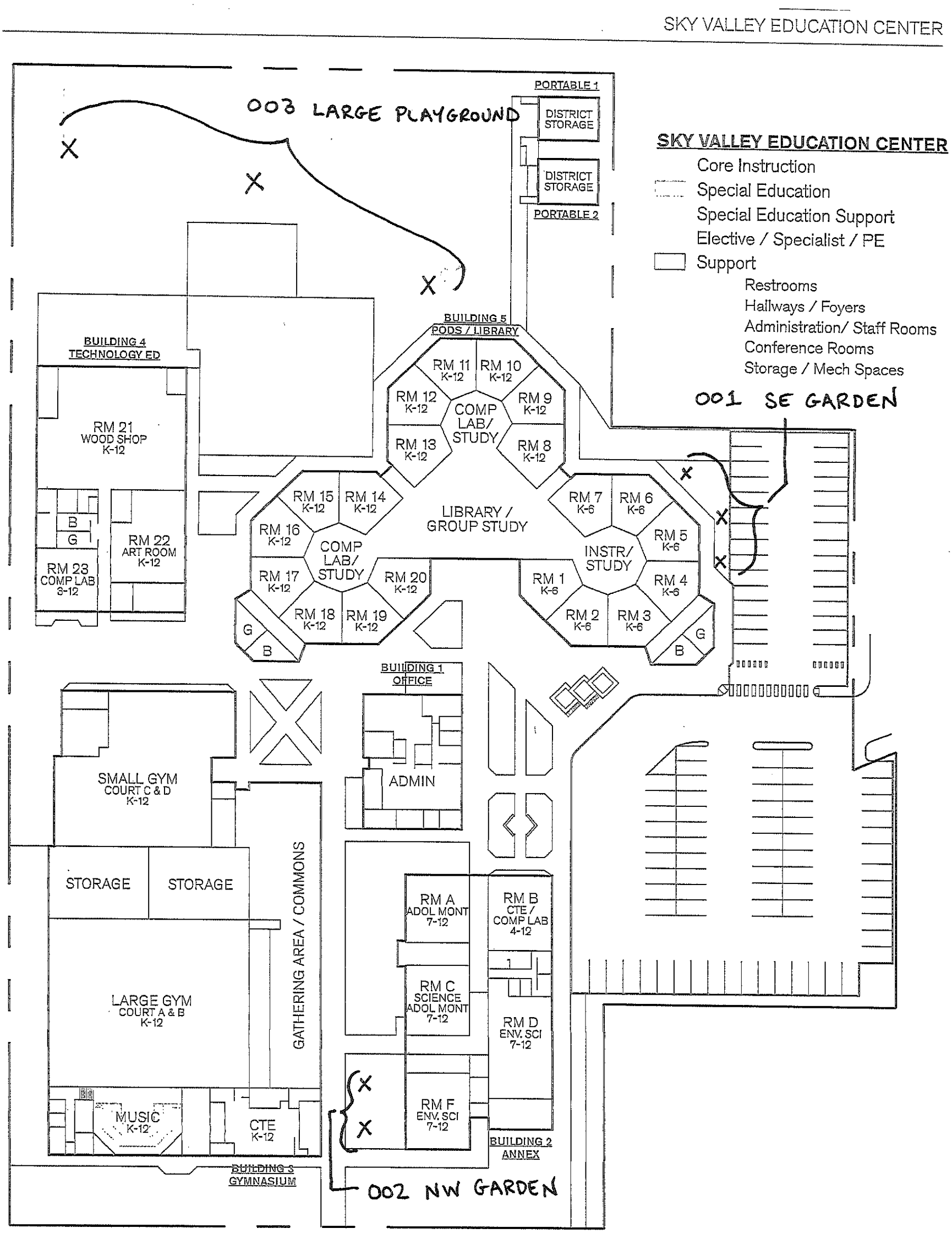


Drawing 14 - Soil Sample Locations

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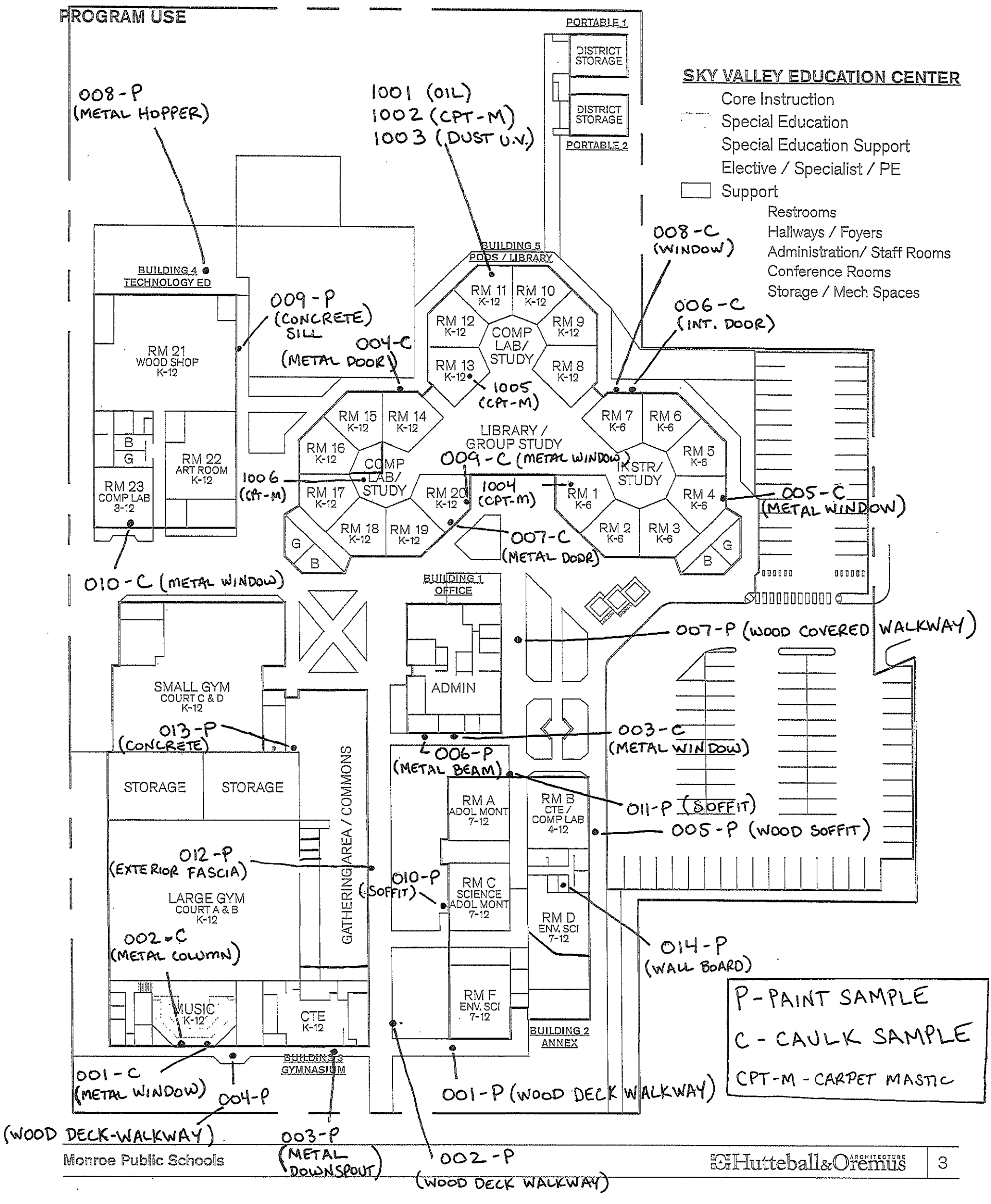


Drawing 15 - PCB Paint, PCB Caulk, PCB Carpet Mastic Sample Locations

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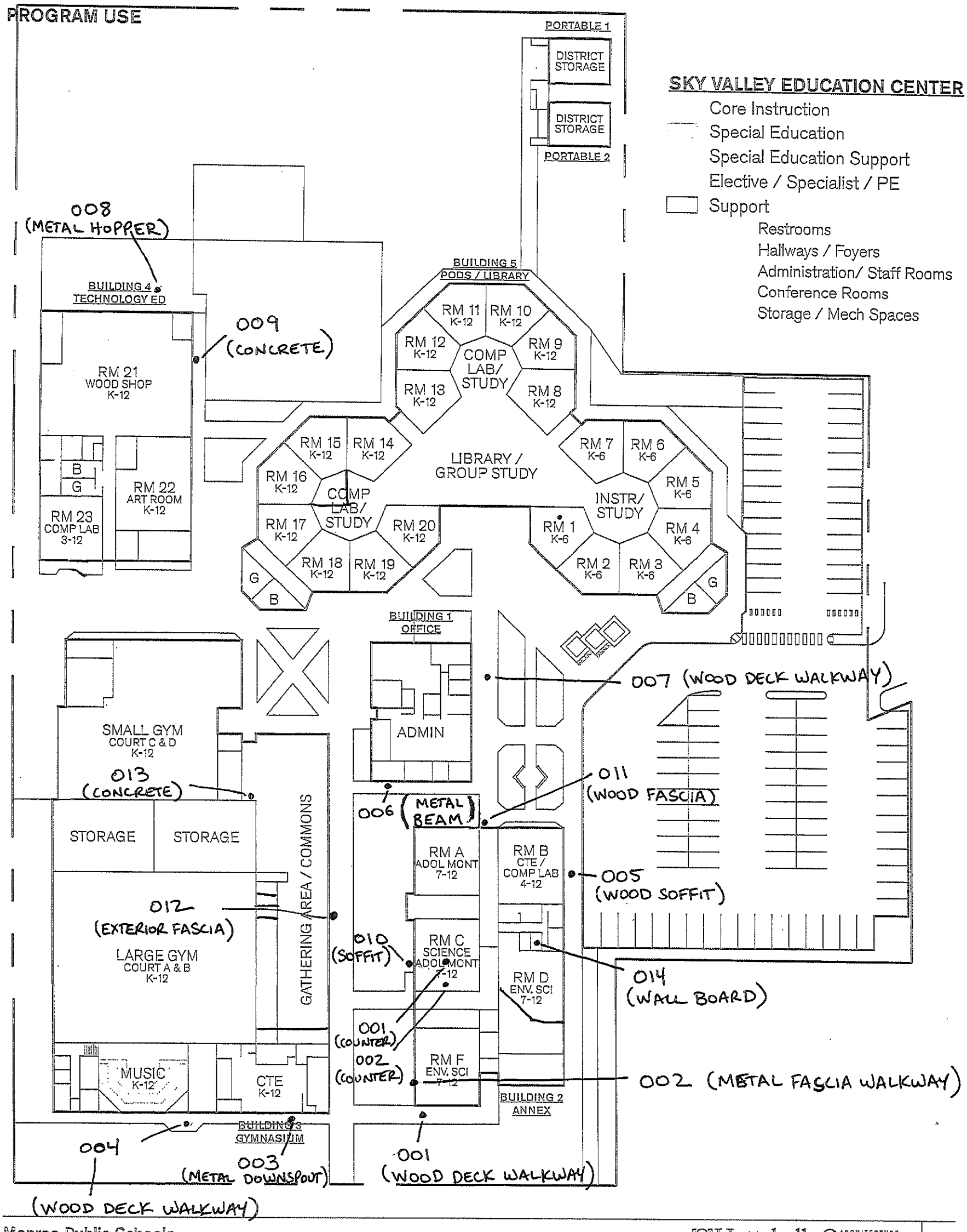


Drawing 16 - Lead Paint Sample Locations

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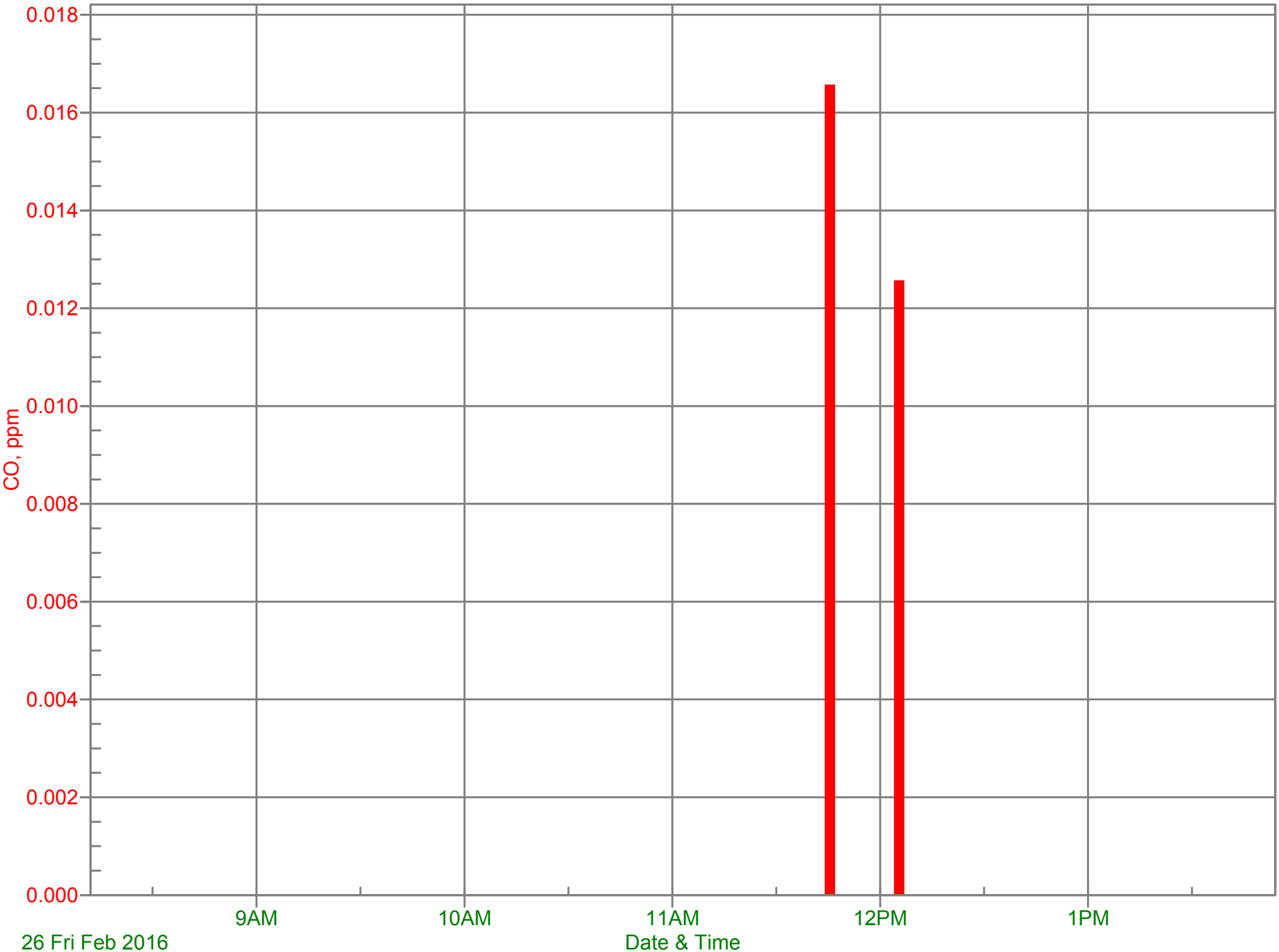


TAB 5

VENTILATION MONITORING GRAPHS

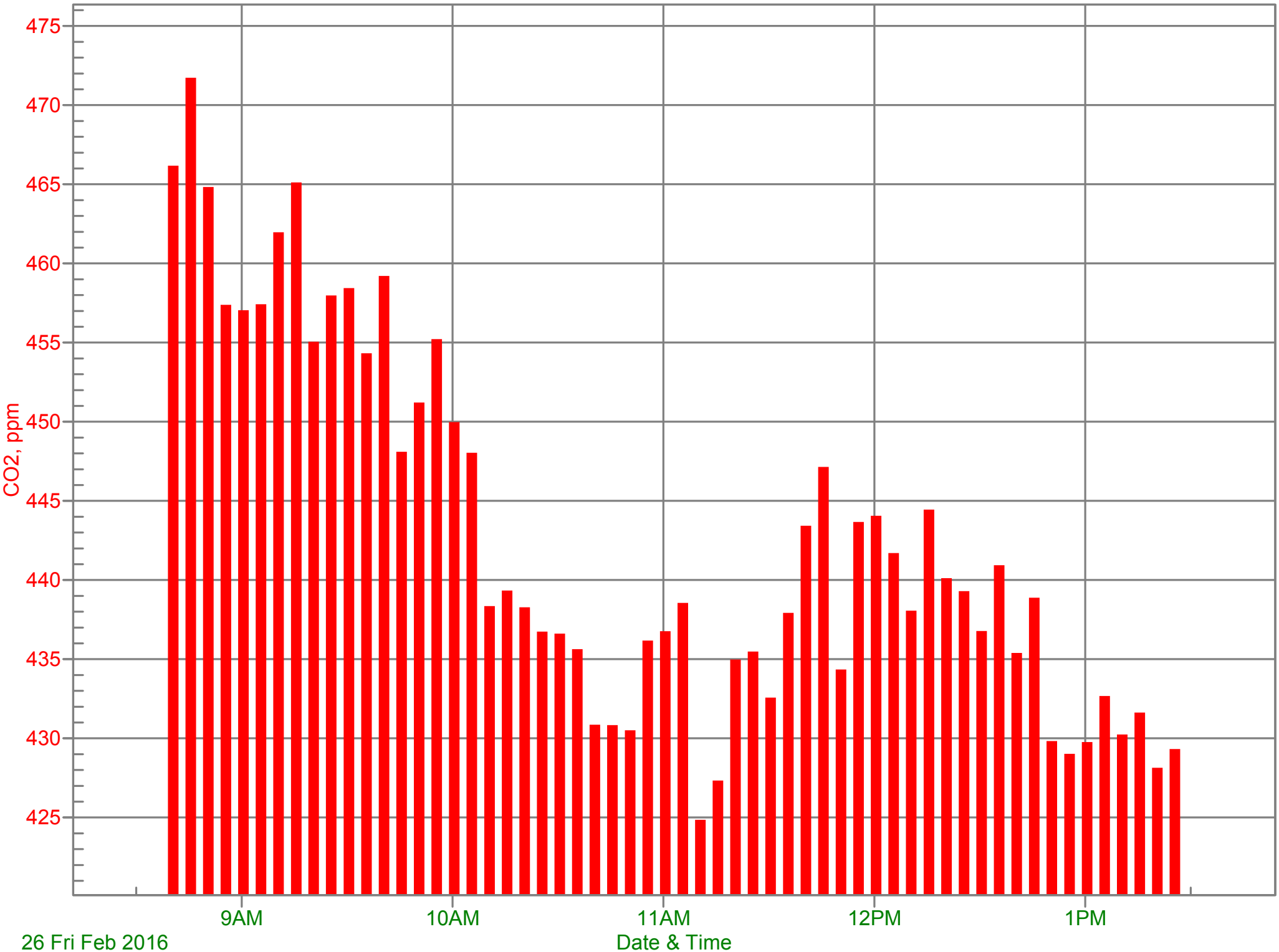
Results of Air Quality Testing

Outside



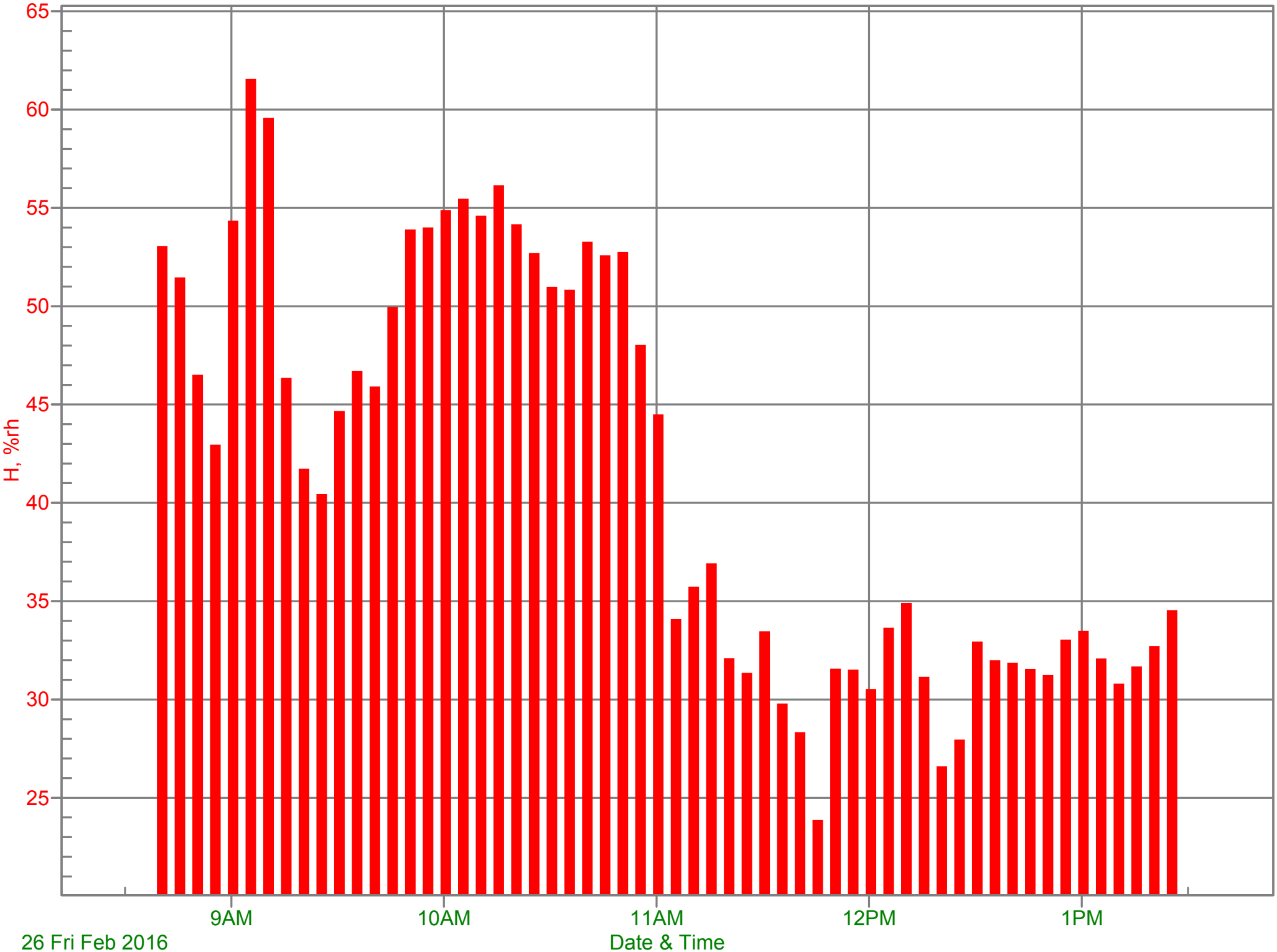
Results of Air Quality Testing

Outside



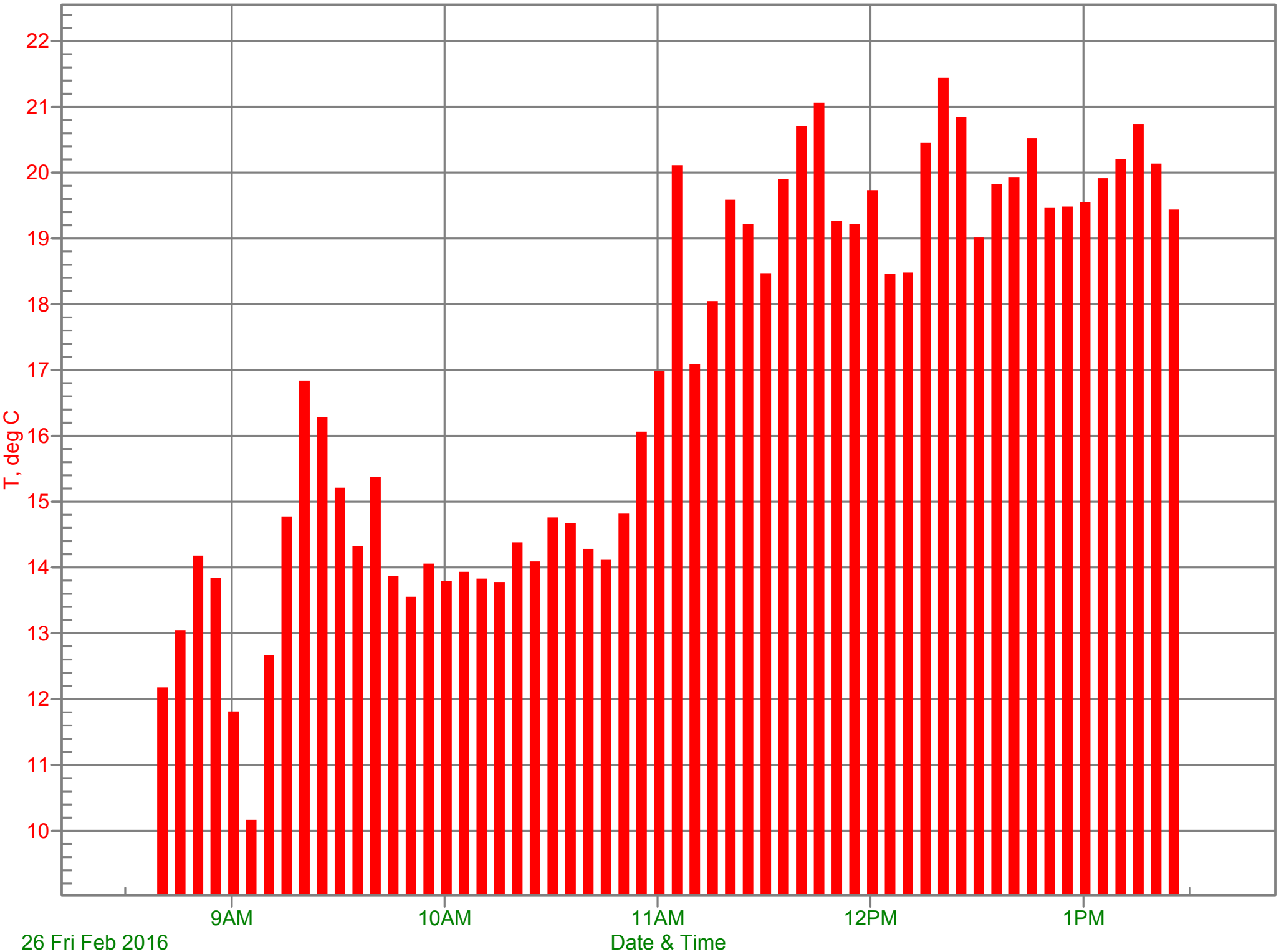
Results of Air Quality Testing

Outside



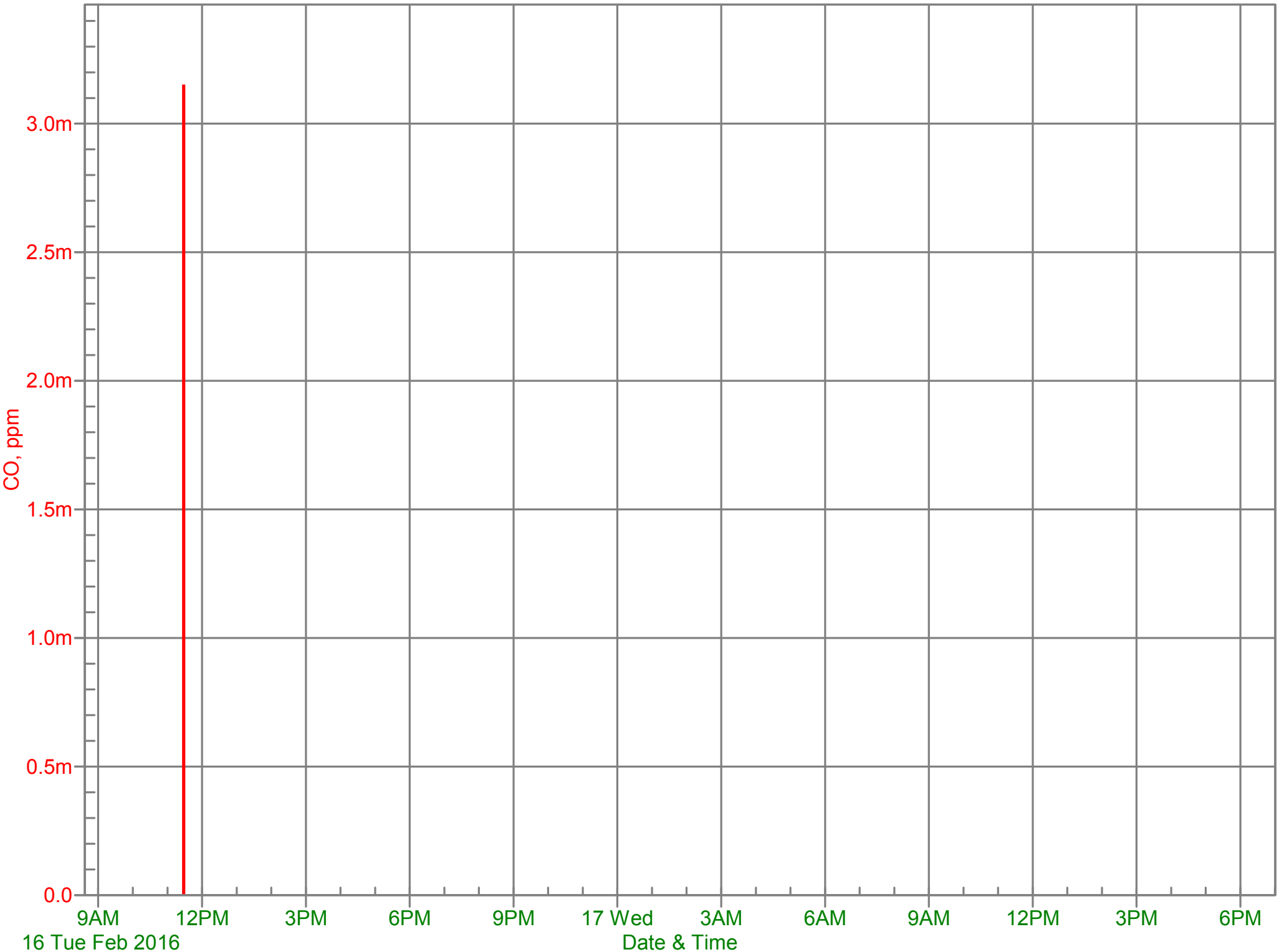
Results of Air Quality Testing

Outside



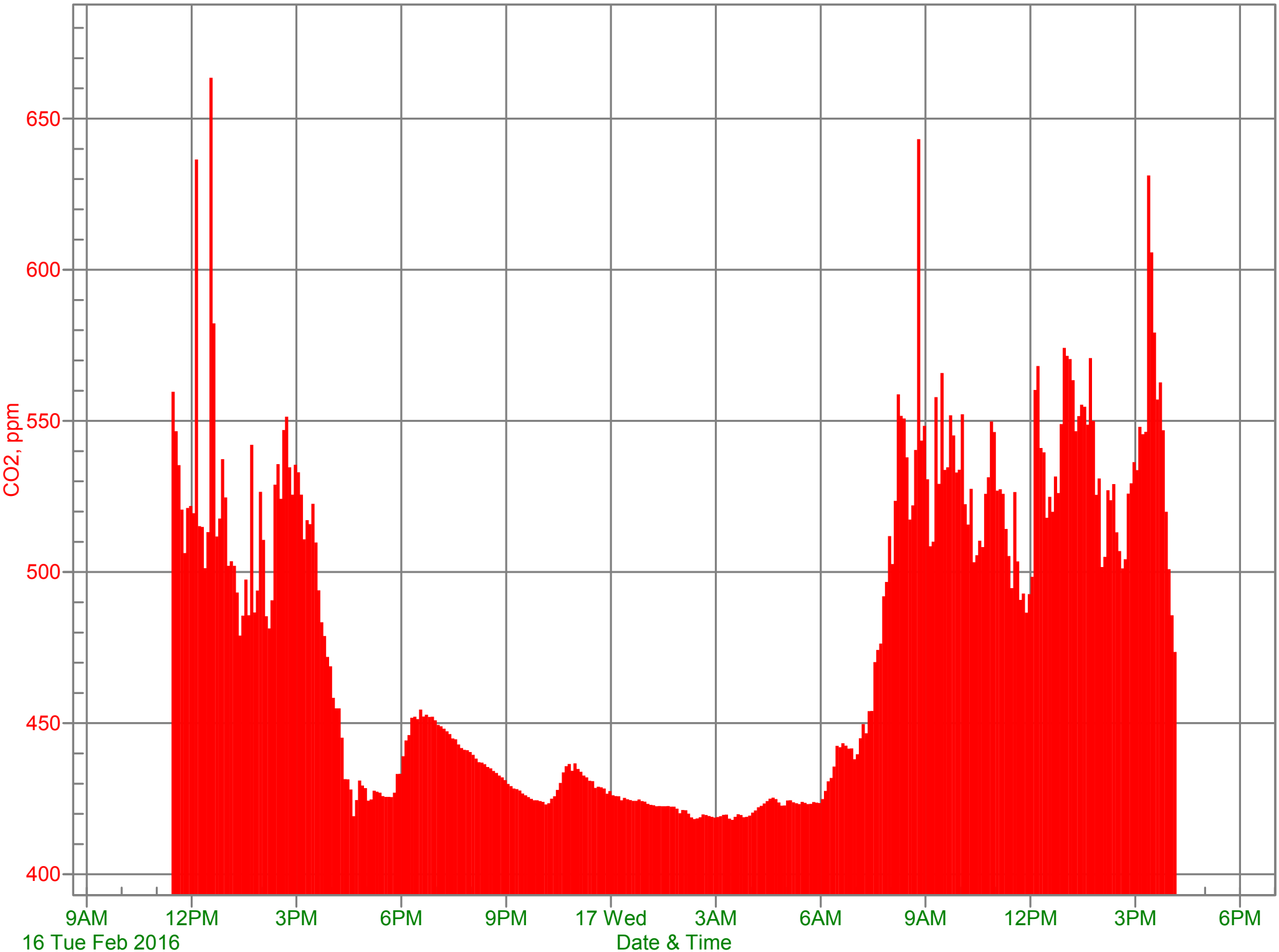
Results of Air Quality Testing

Admin. Reception



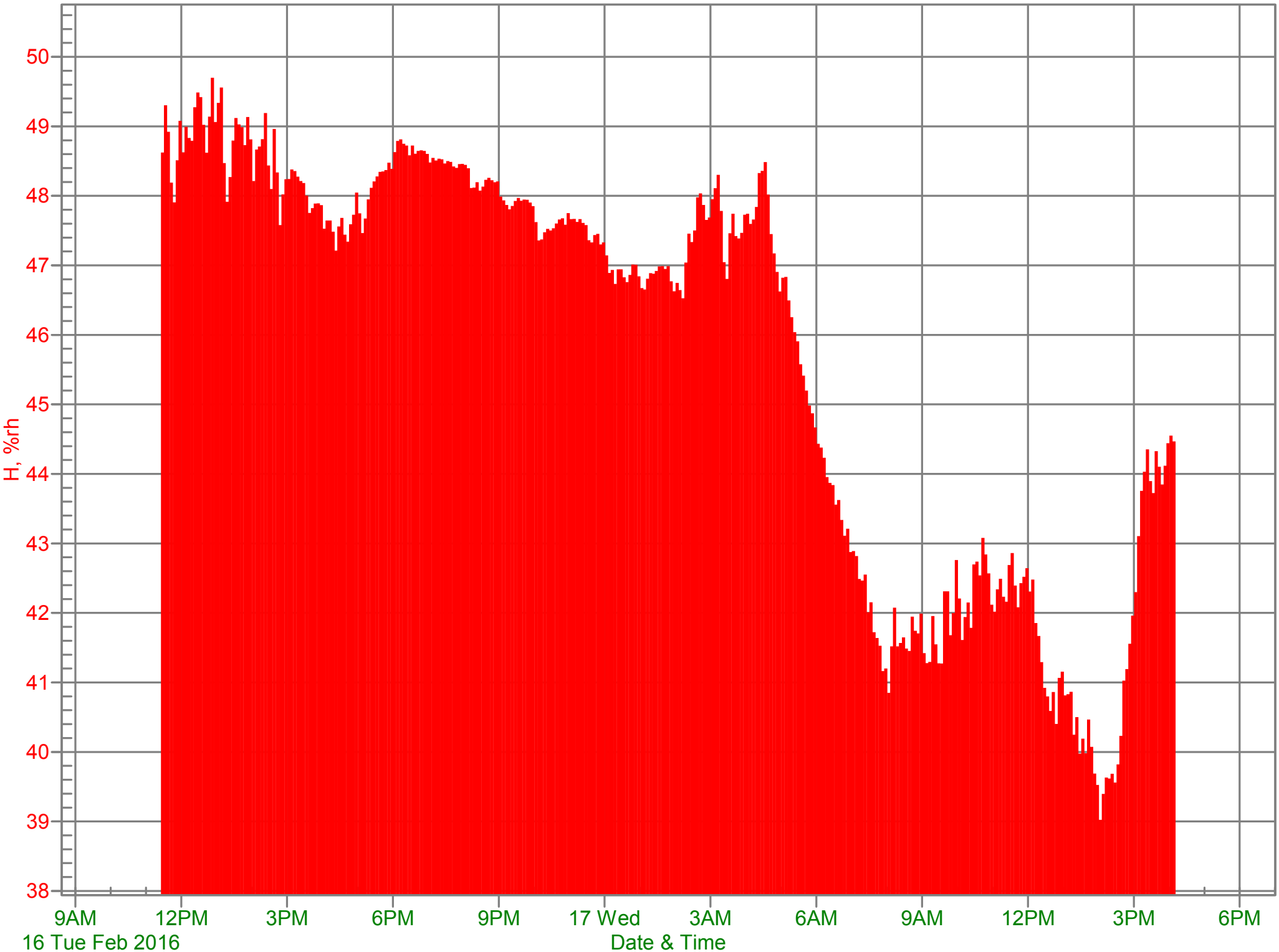
Results of Air Quality Testing

Admin. Reception



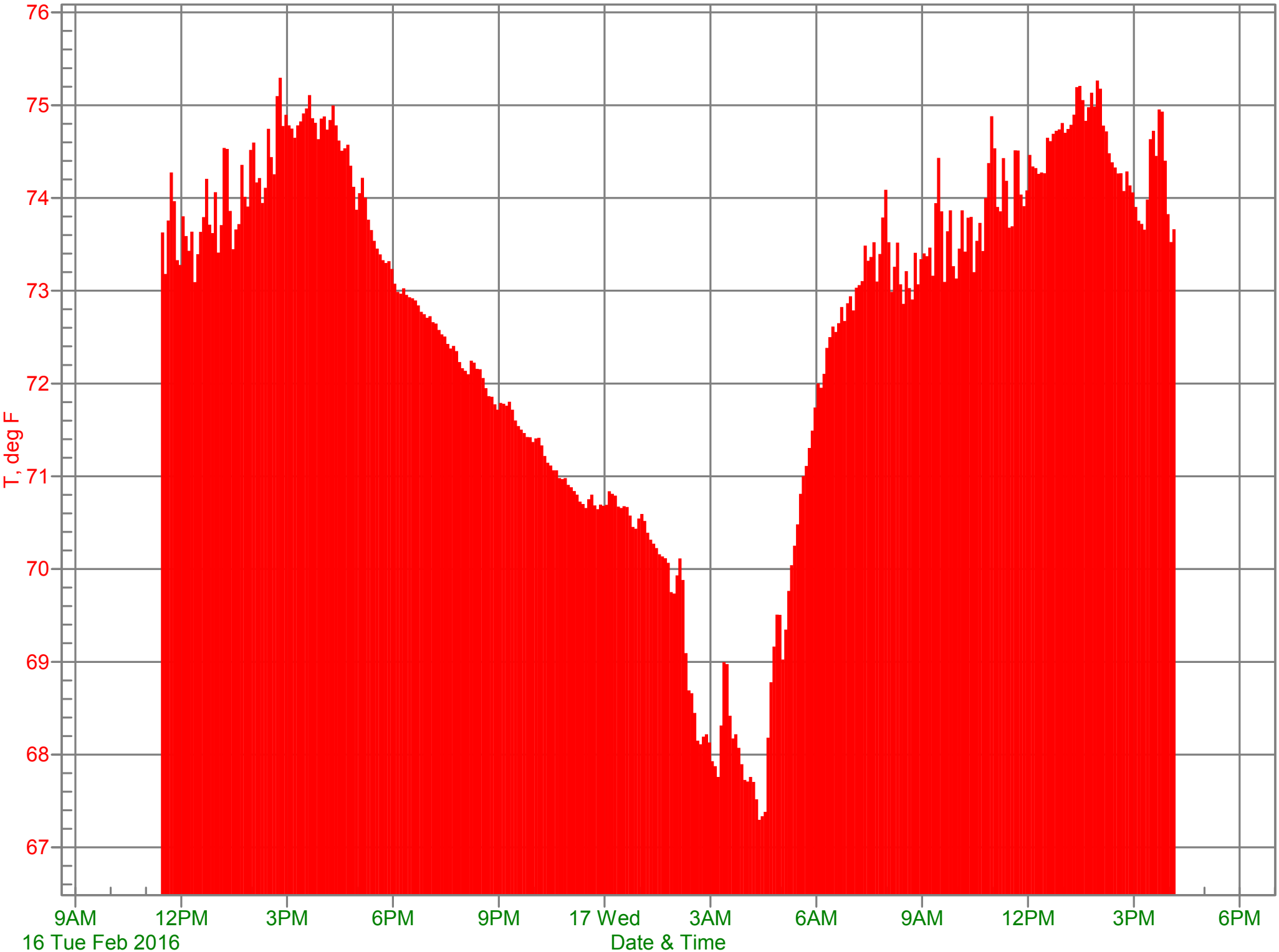
Results of Air Quality Testing

Admin. Reception



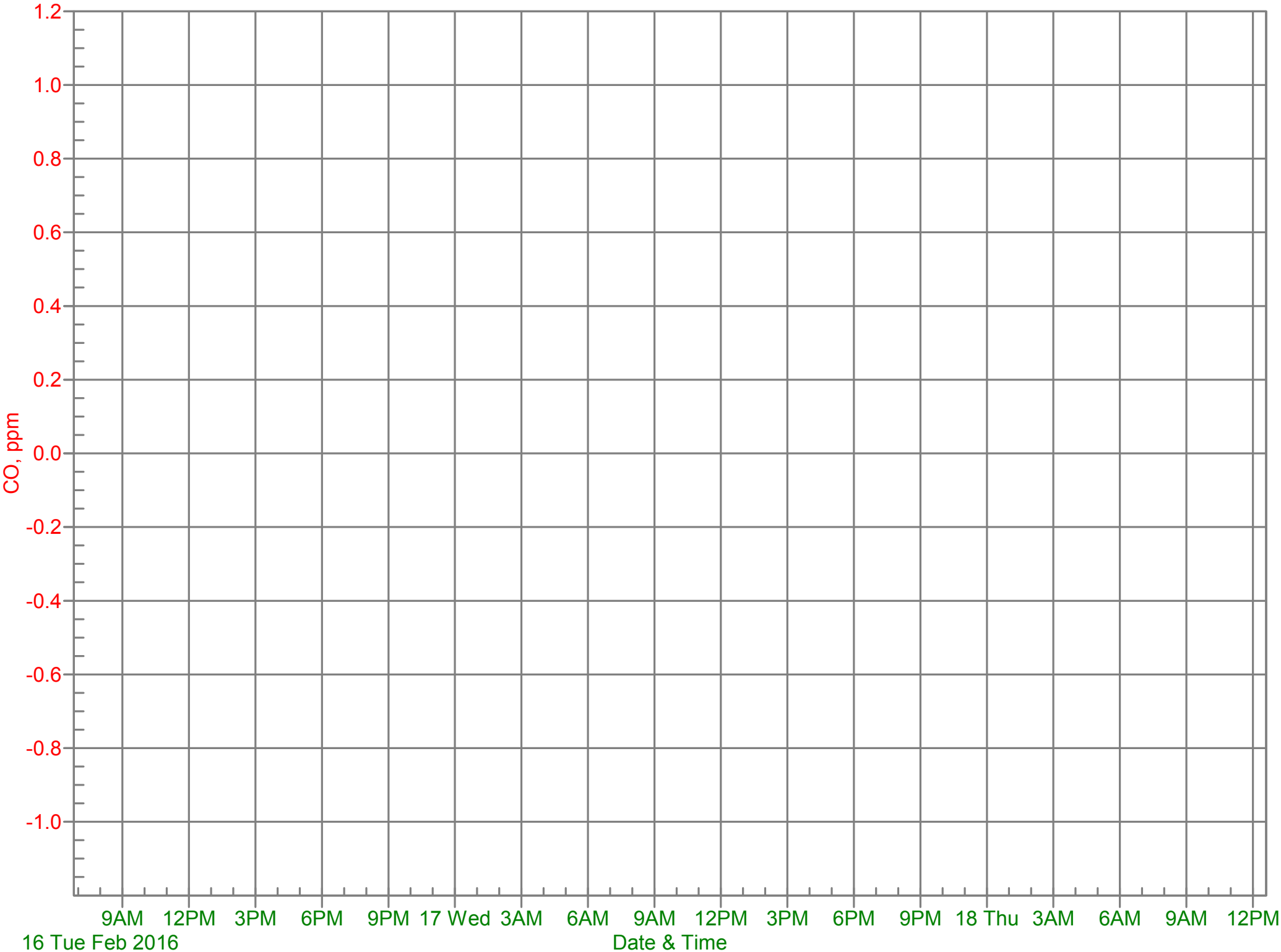
Results of Air Quality Testing

Admin. Reception



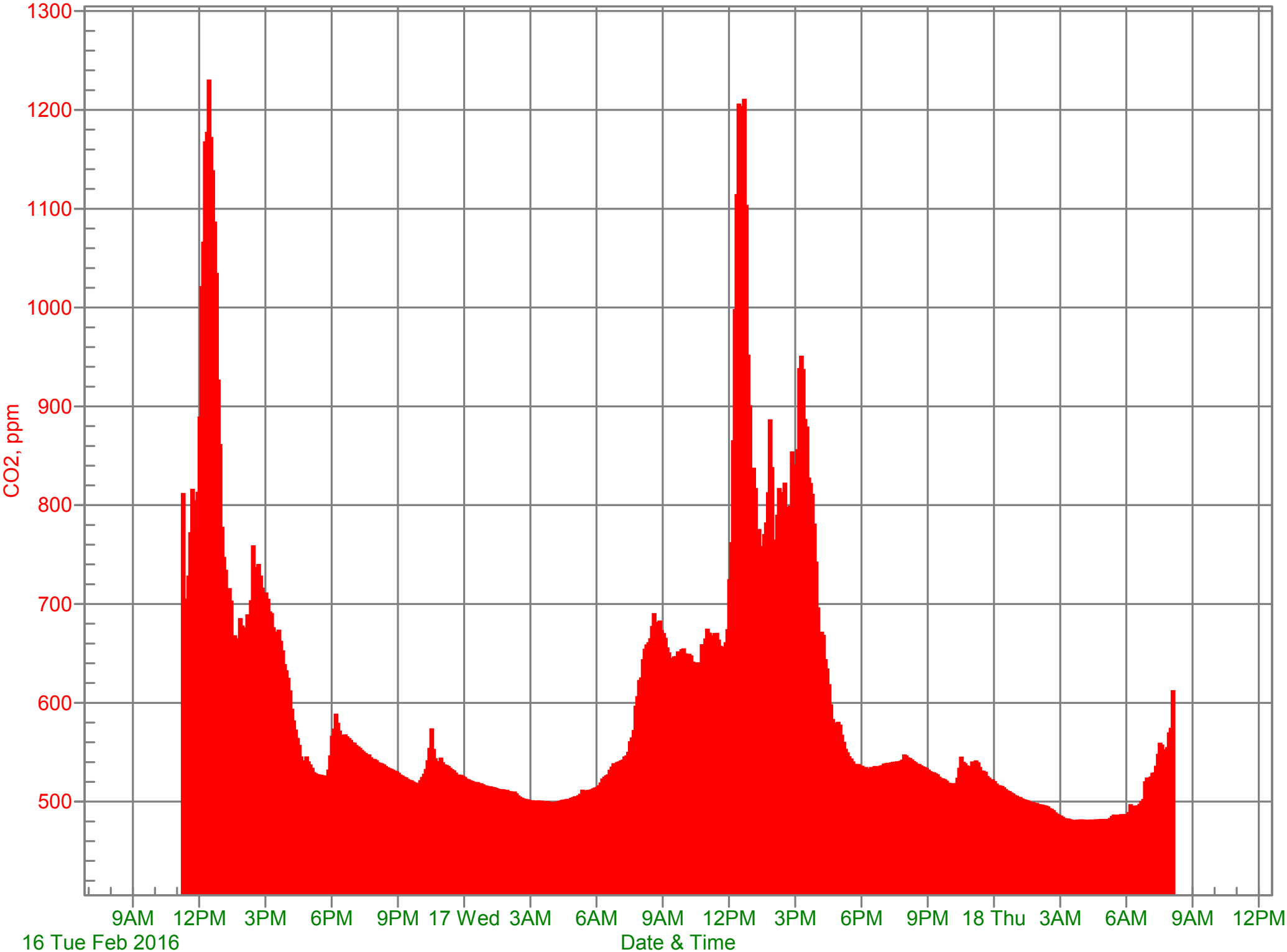
Results of Air Quality Testing

Admin. Staff Room



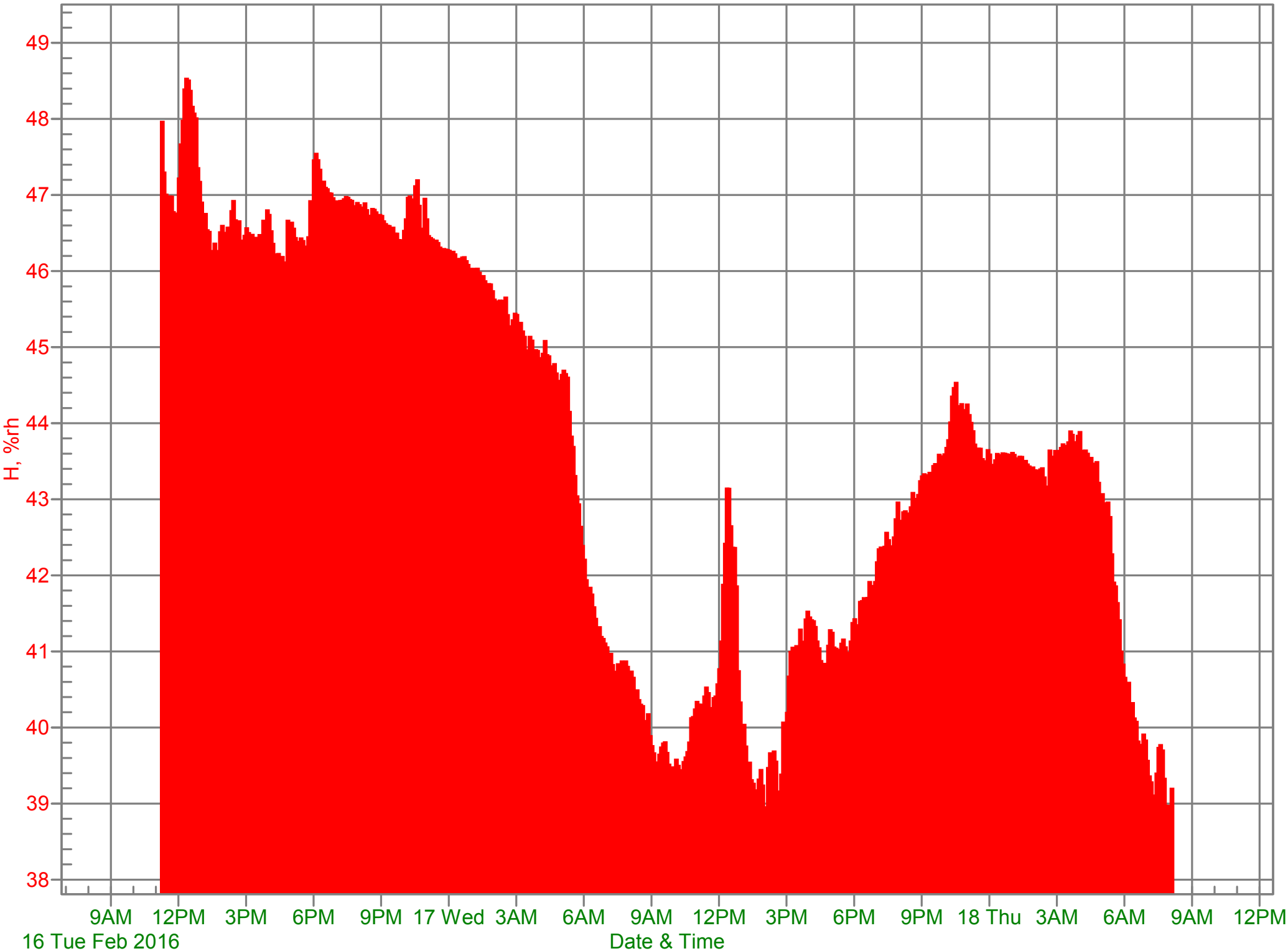
Results of Air Quality Testing

Admin. Staff Room



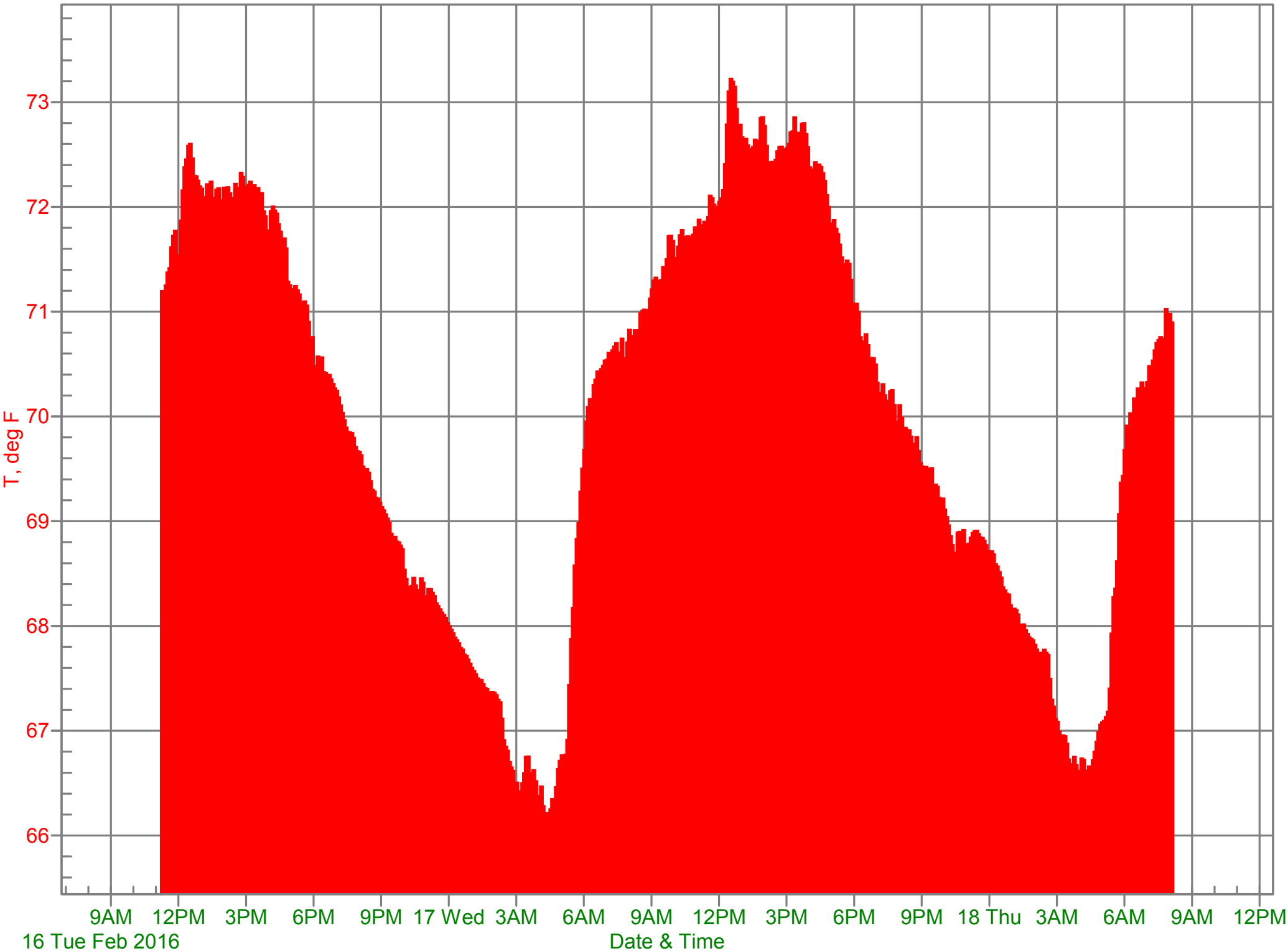
Results of Air Quality Testing

Admin. Staff Room



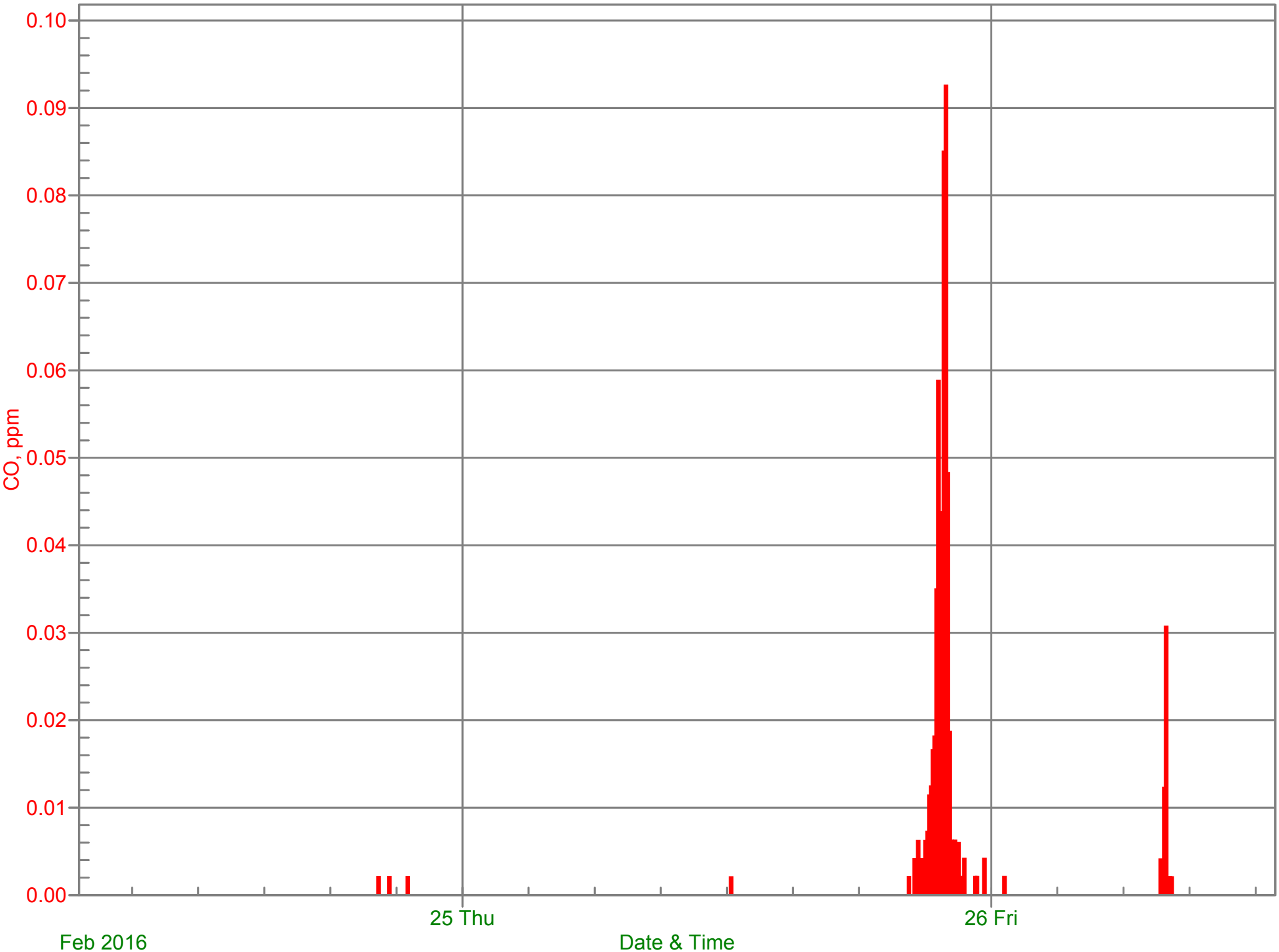
Results of Air Quality Testing

Admin Staff Room



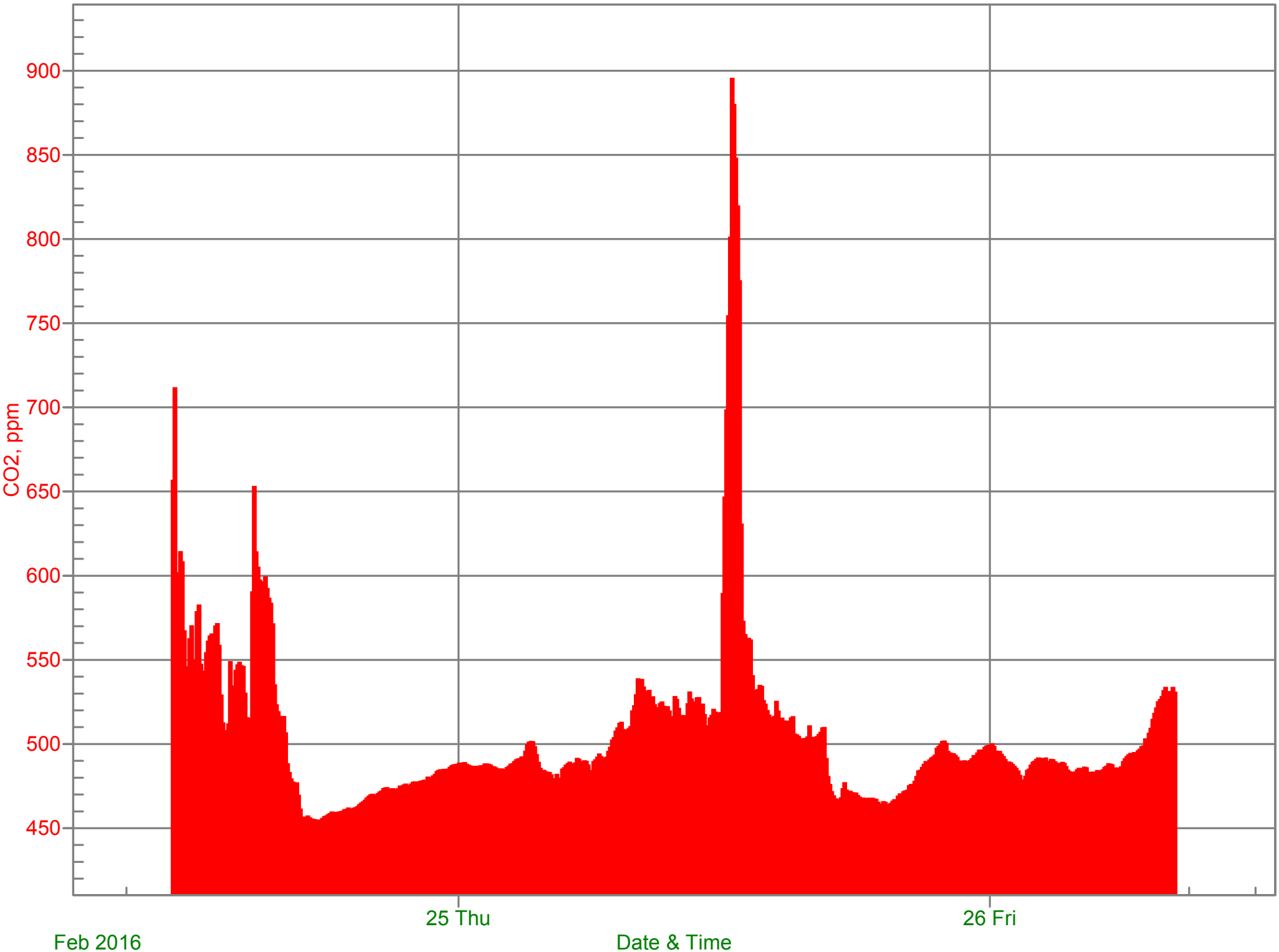
Results of Air Quality Testing

Collin's Office



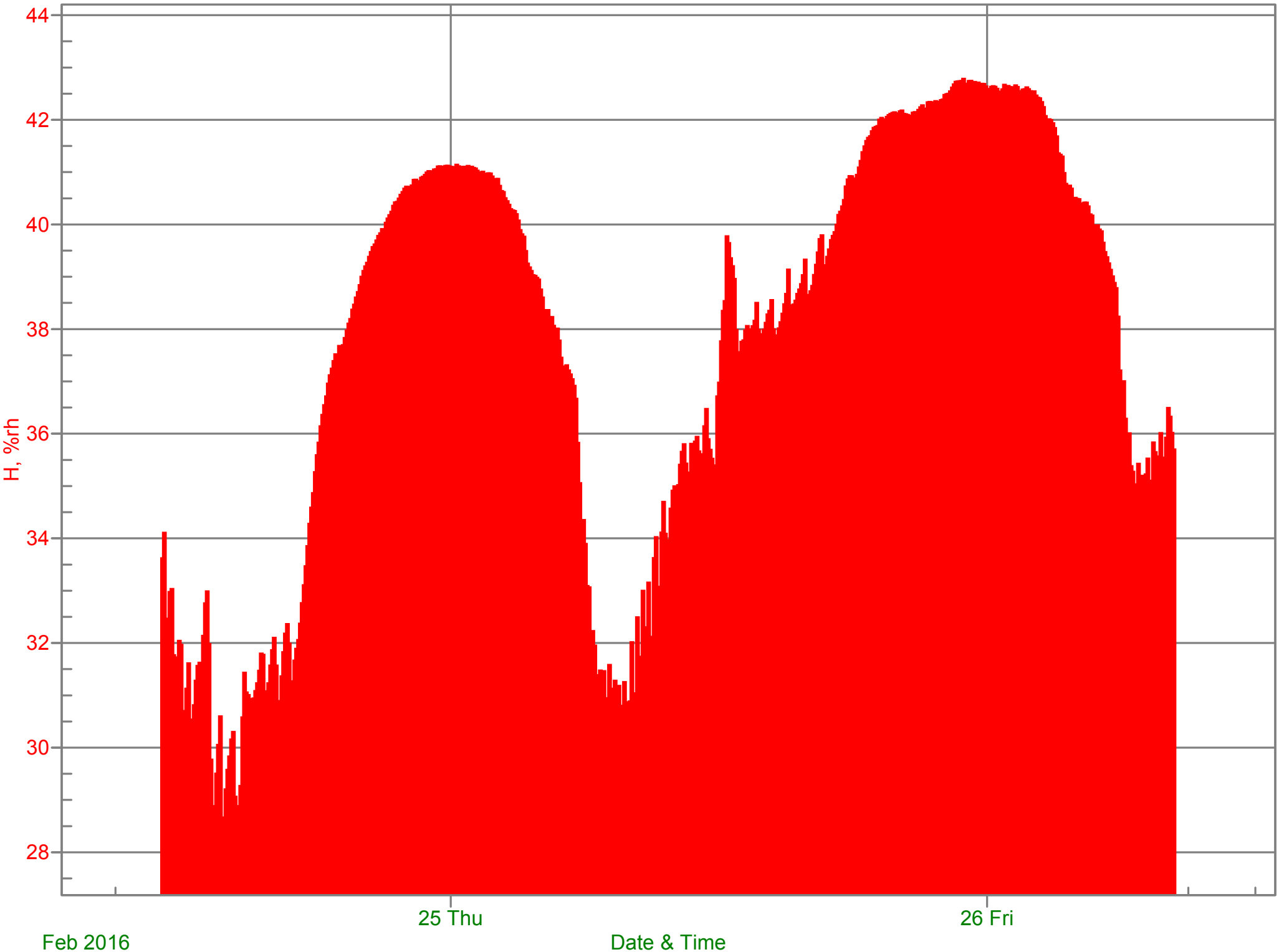
Results of Air Quality Testing

Collin's Office



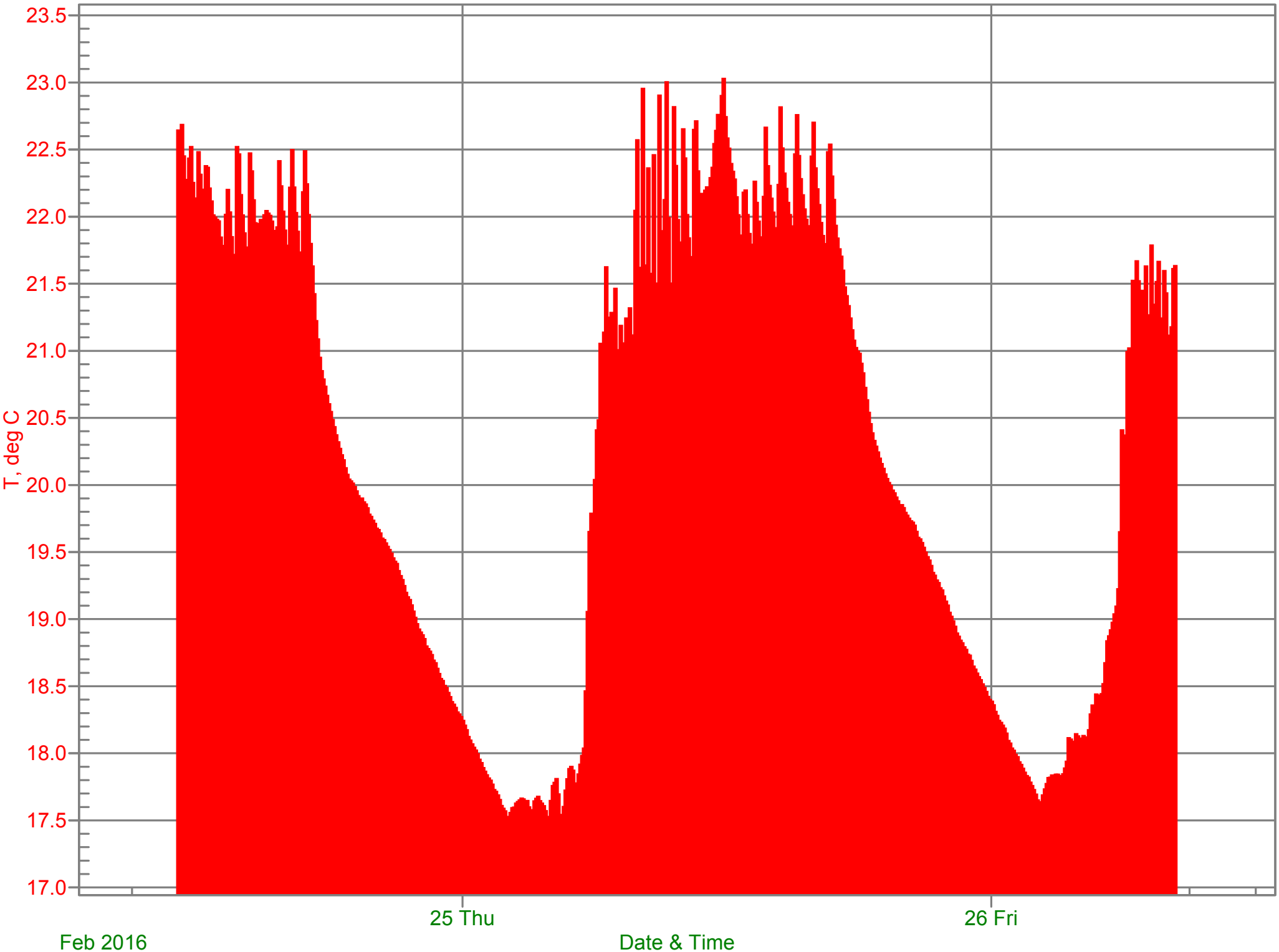
Results of Air Quality Testing

Collin's Office



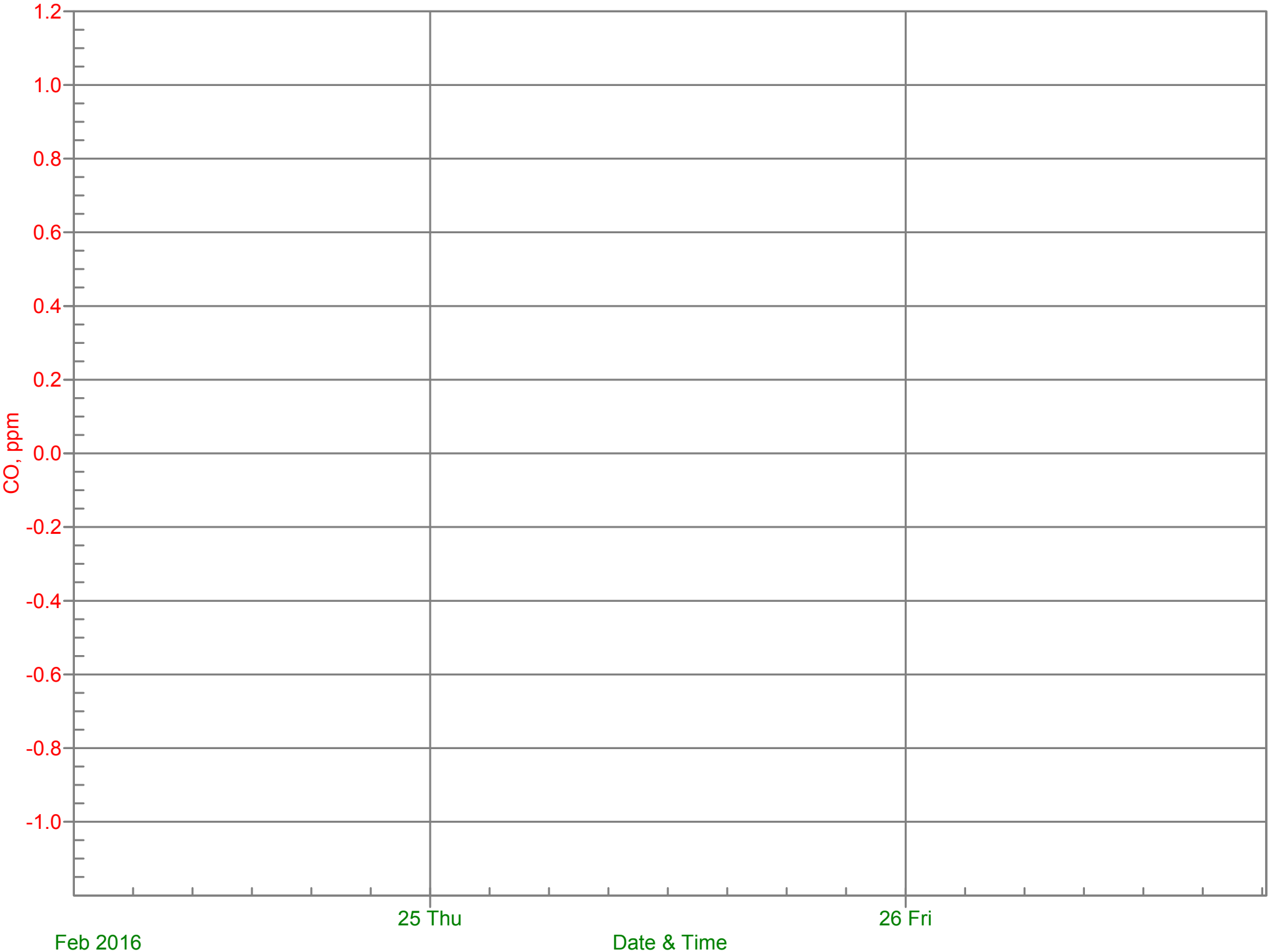
Results of Air Quality Testing

Collin's Office



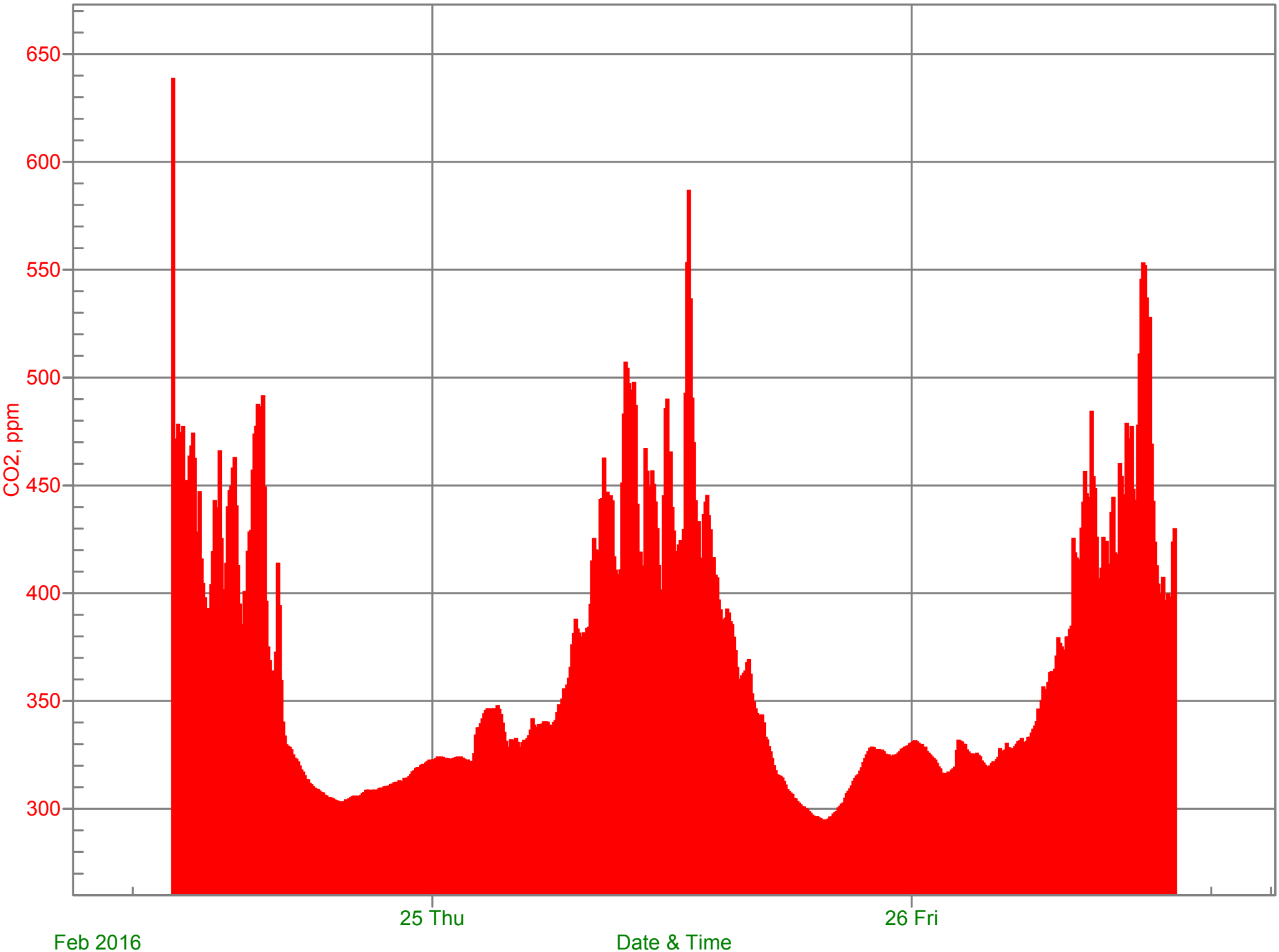
Results of Air Quality Testing

Karen's Office



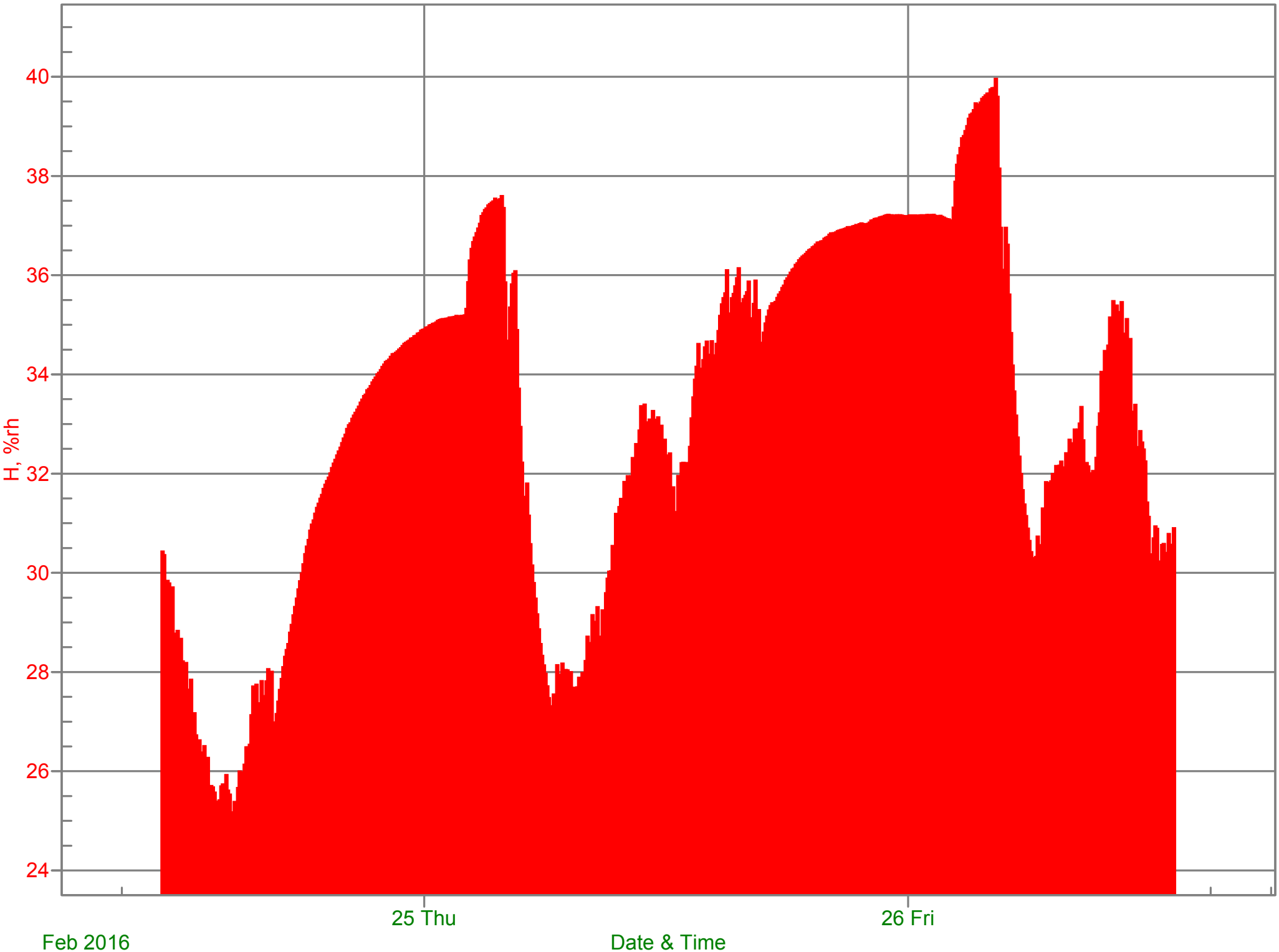
Results of Air Quality Testing

Karen's Office



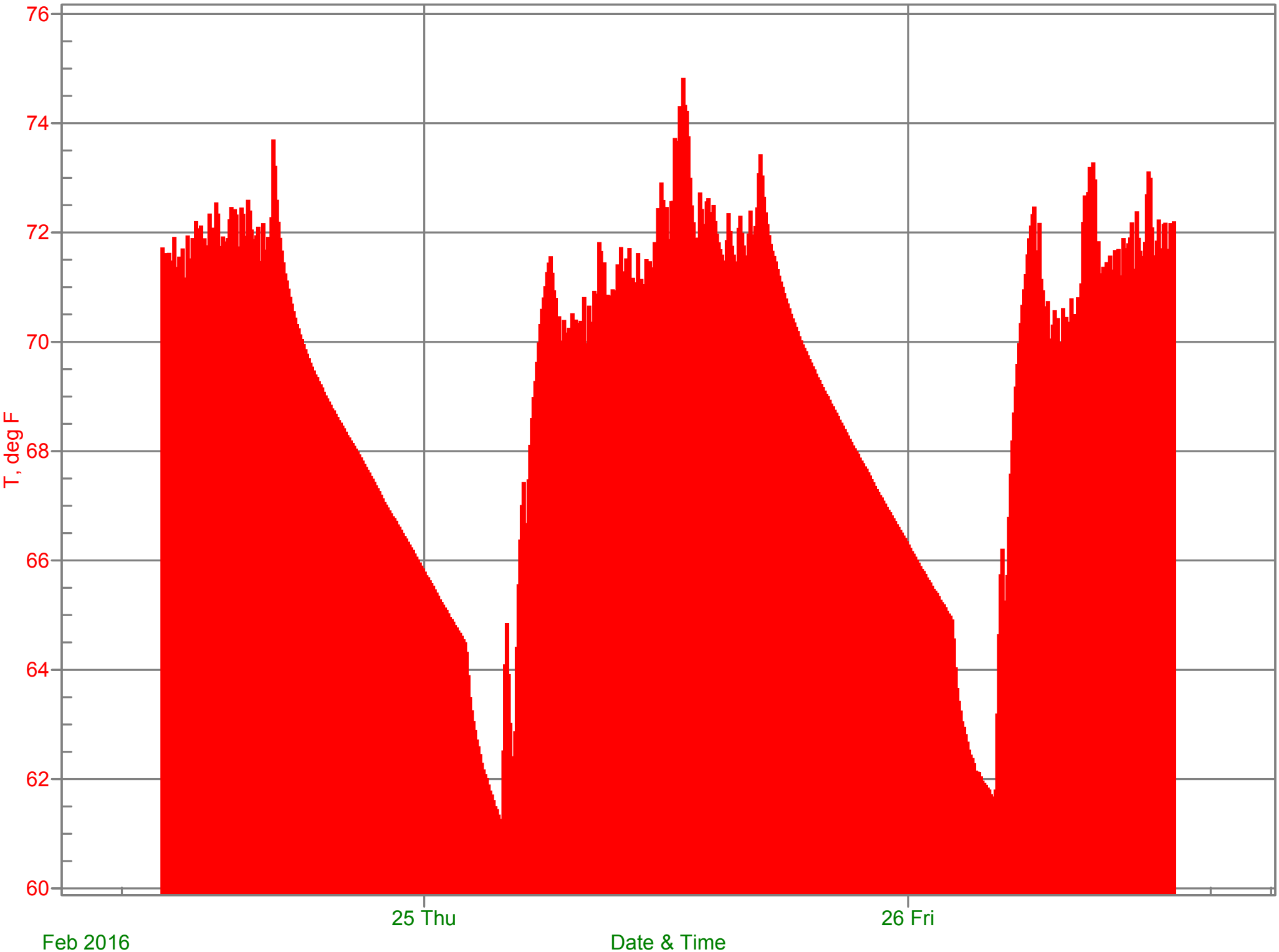
Results of Air Quality Testing

Karen's Office



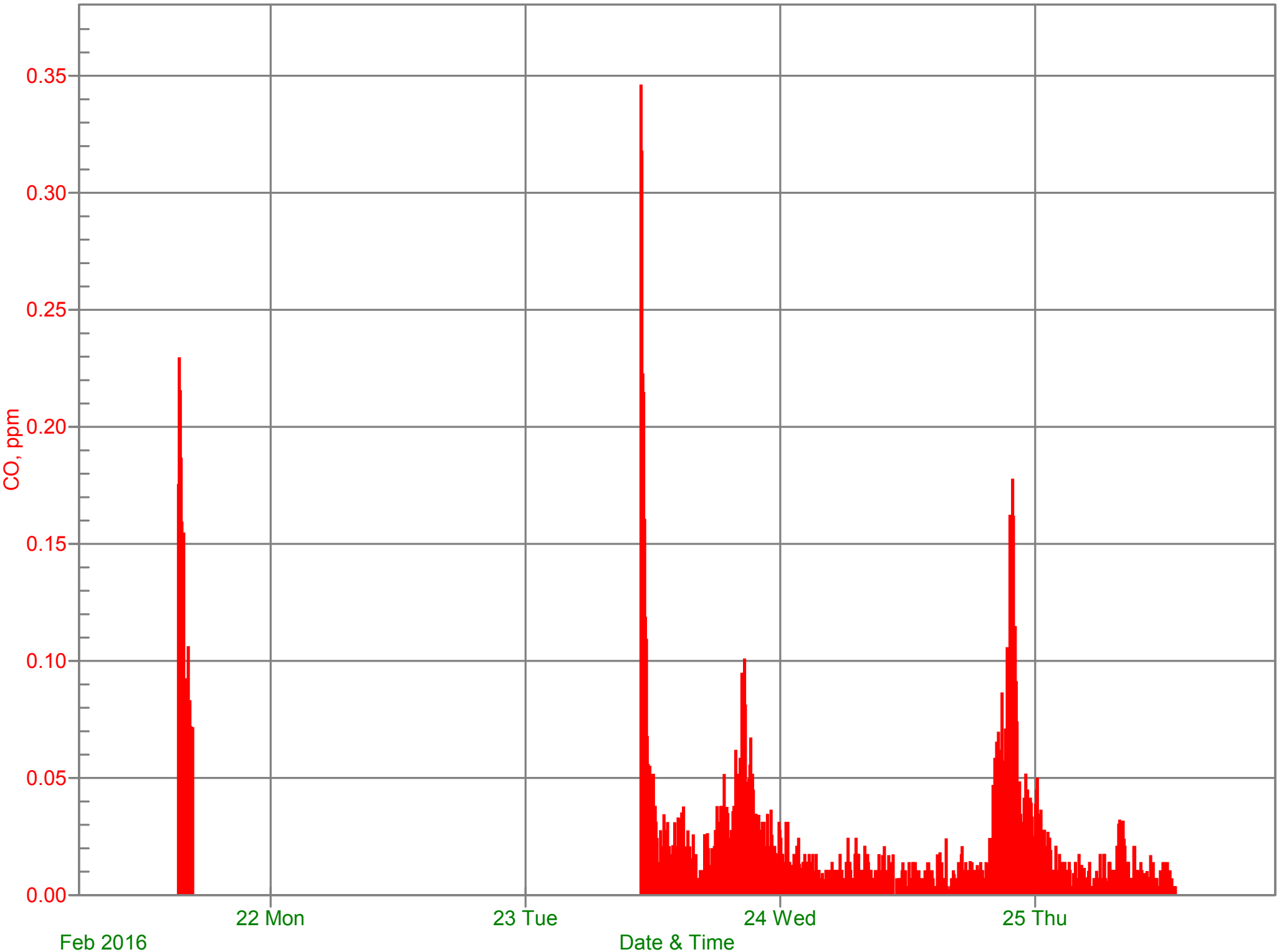
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Karen's Office



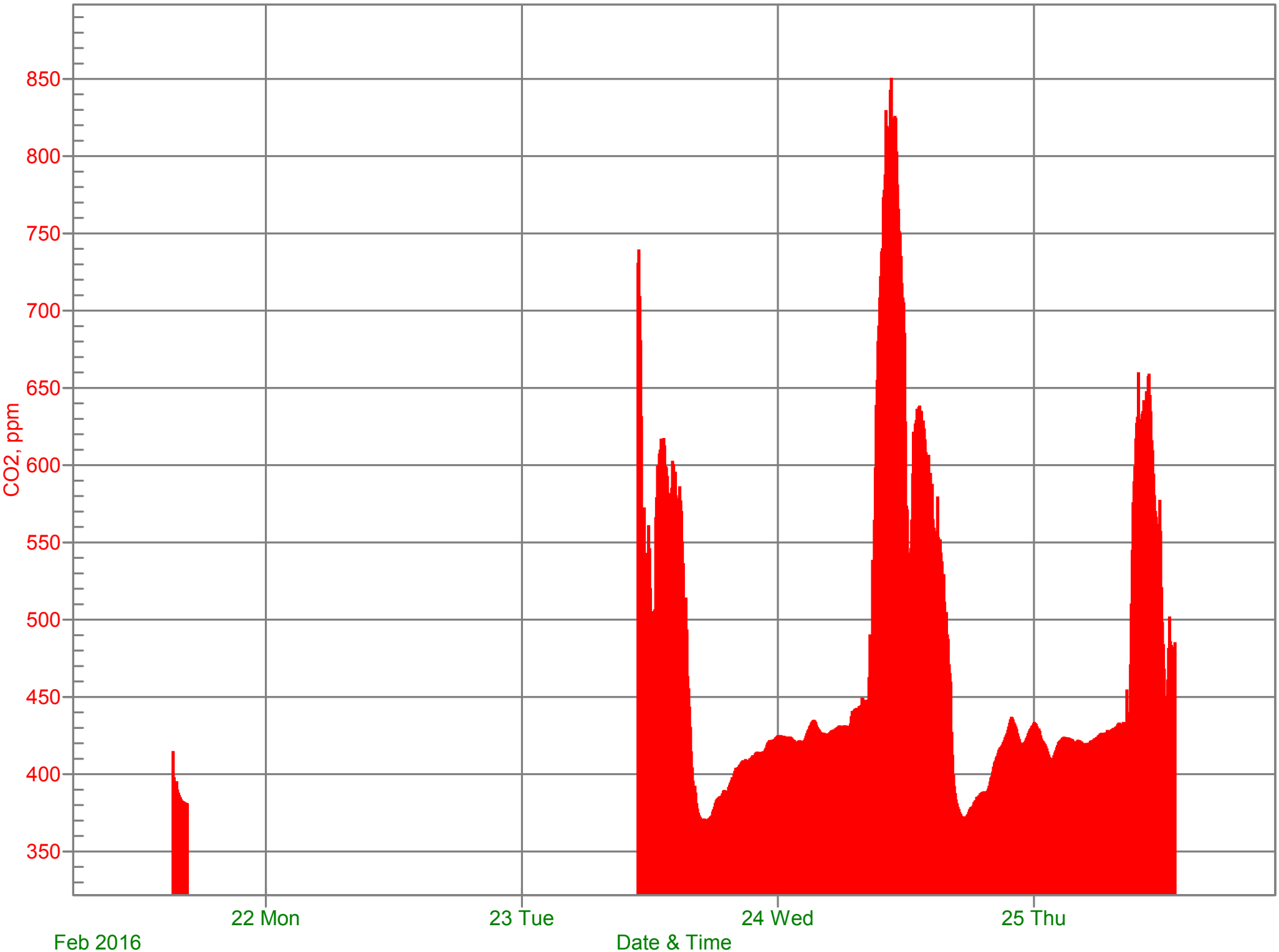
Results of Air Quality Testing

Art Room



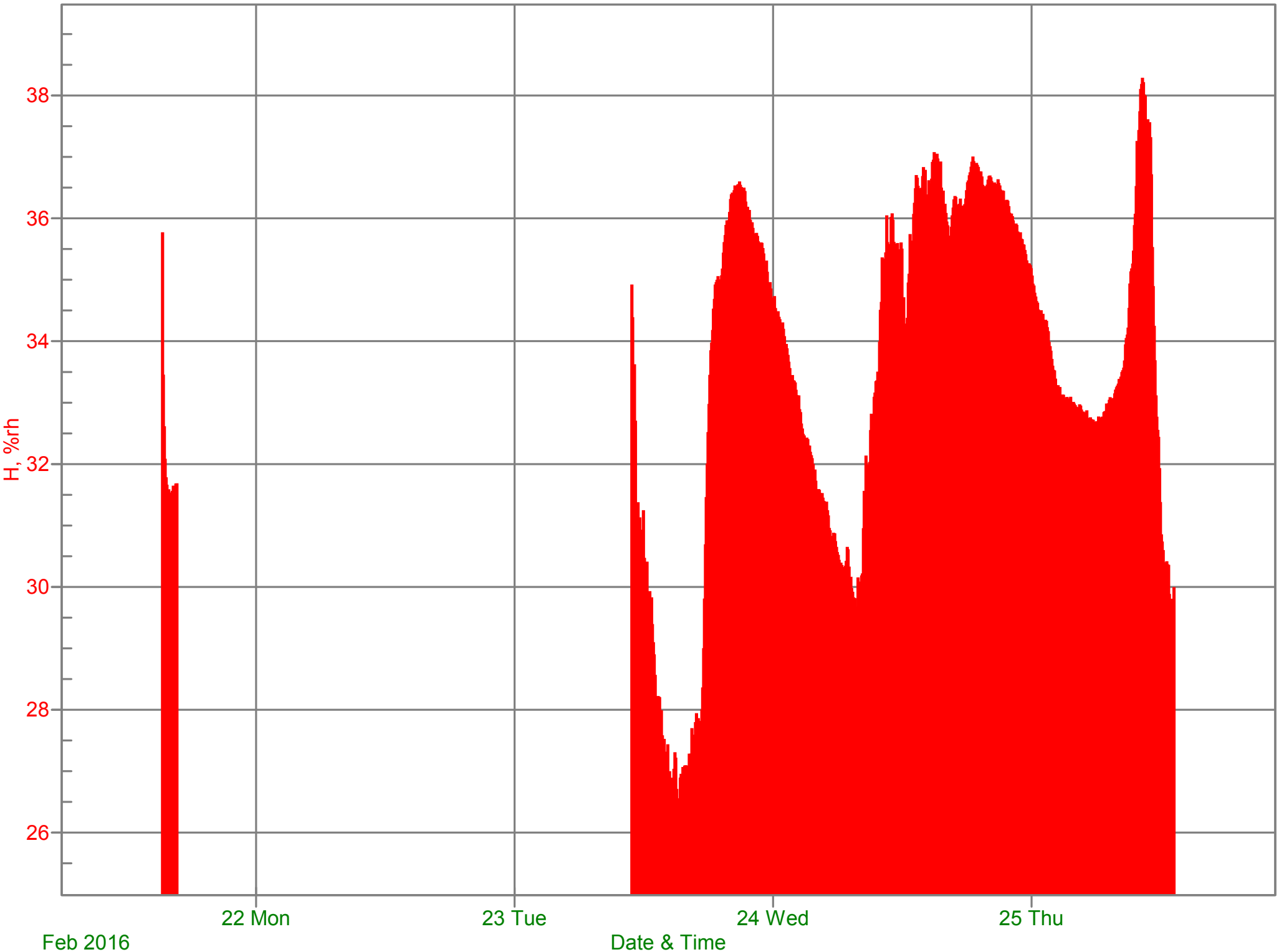
Results of Air Quality Testing

Art Room



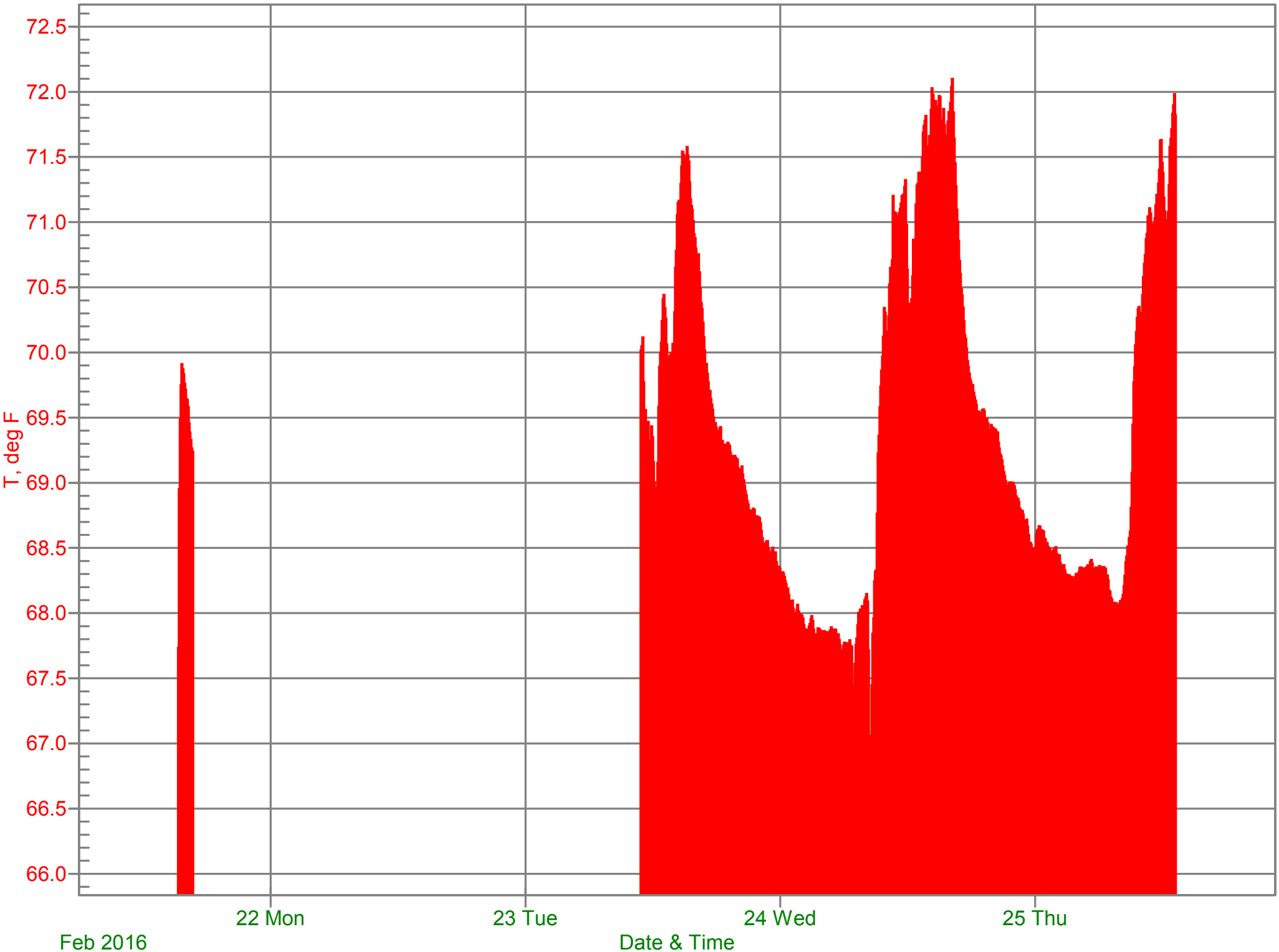
Results of Air Quality Testing

Art Room



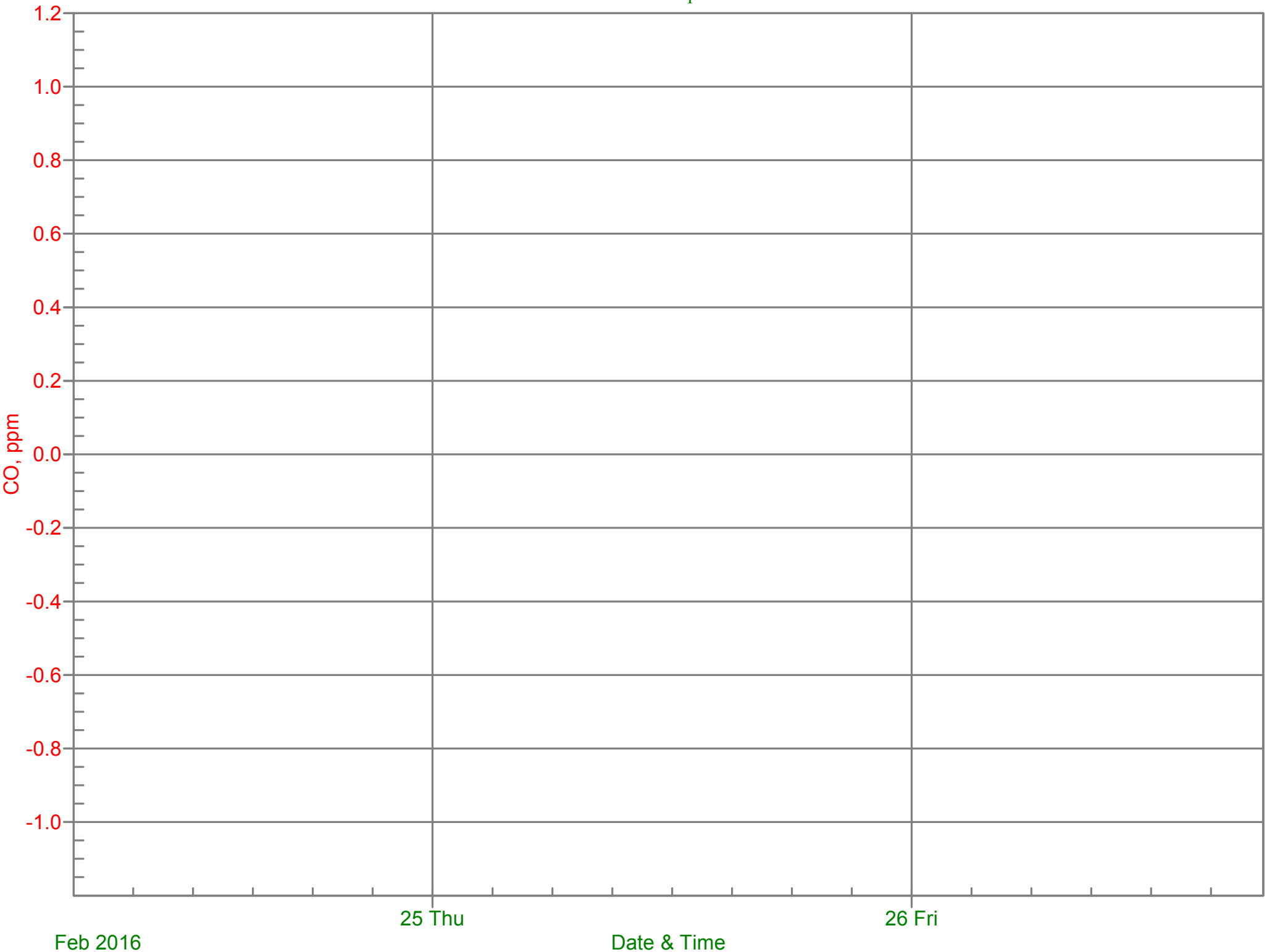
Results of Air Quality Testing

Art Room



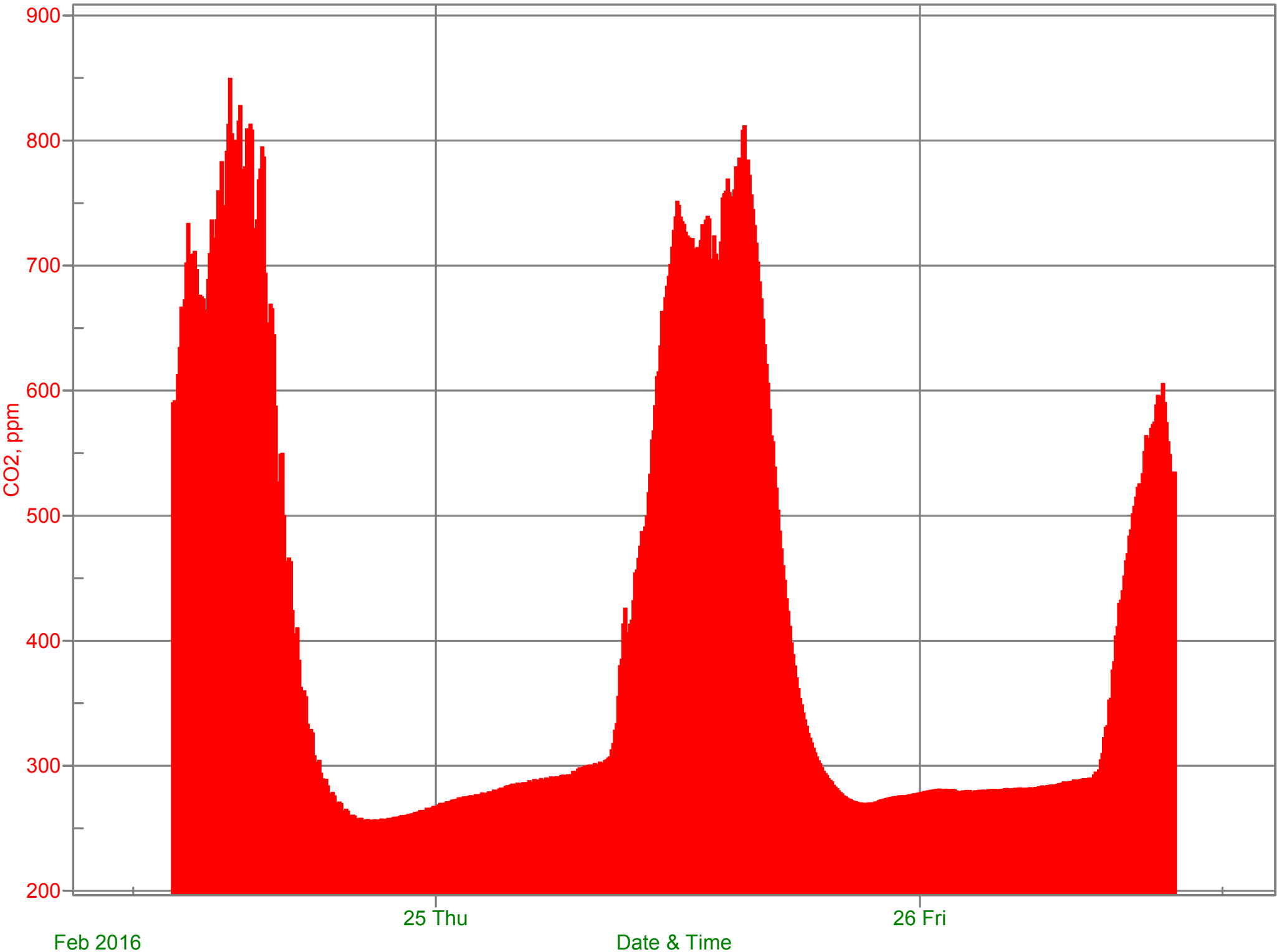
Results of Air Quality Testing

Woodshop



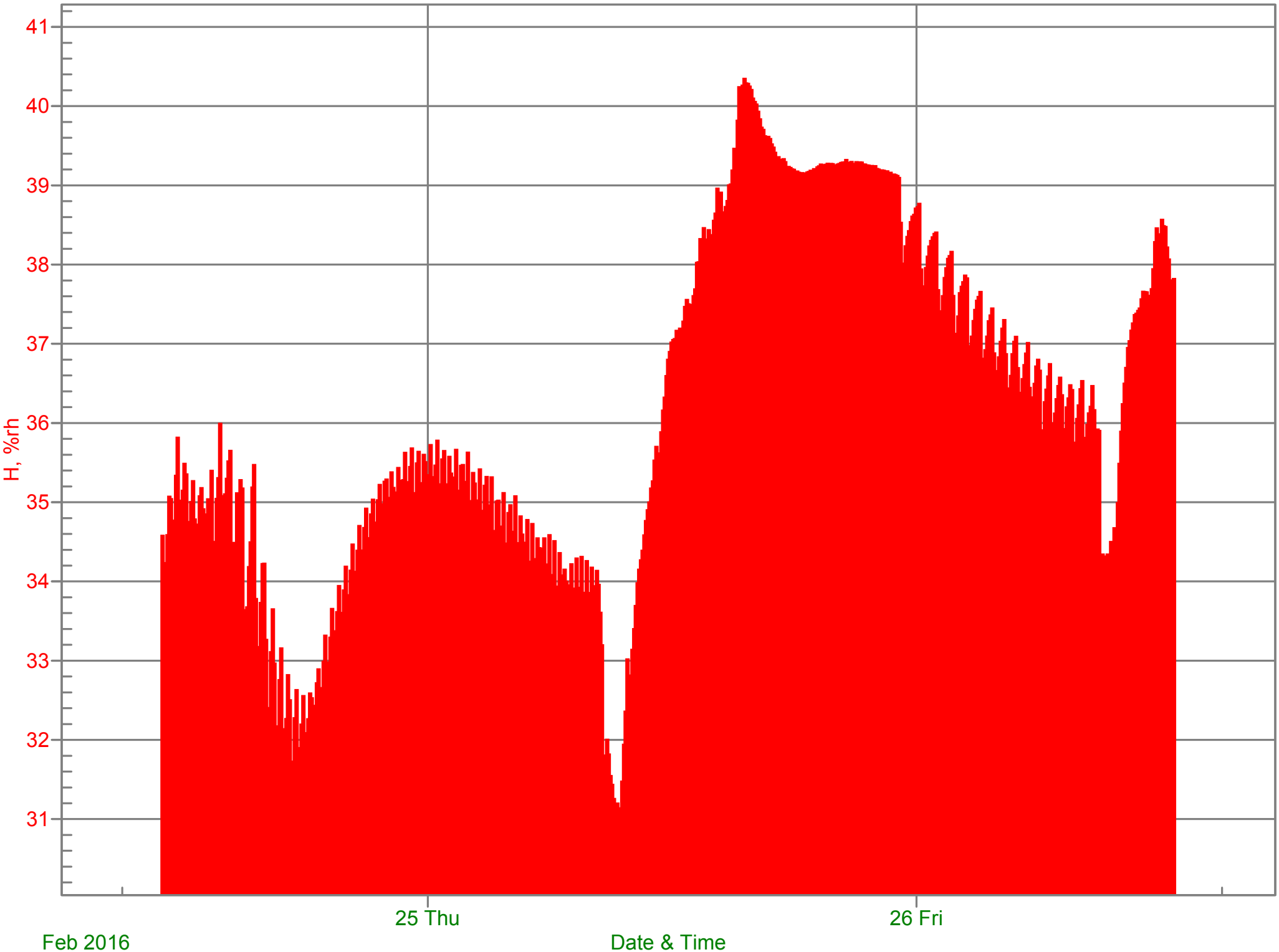
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Woodshop



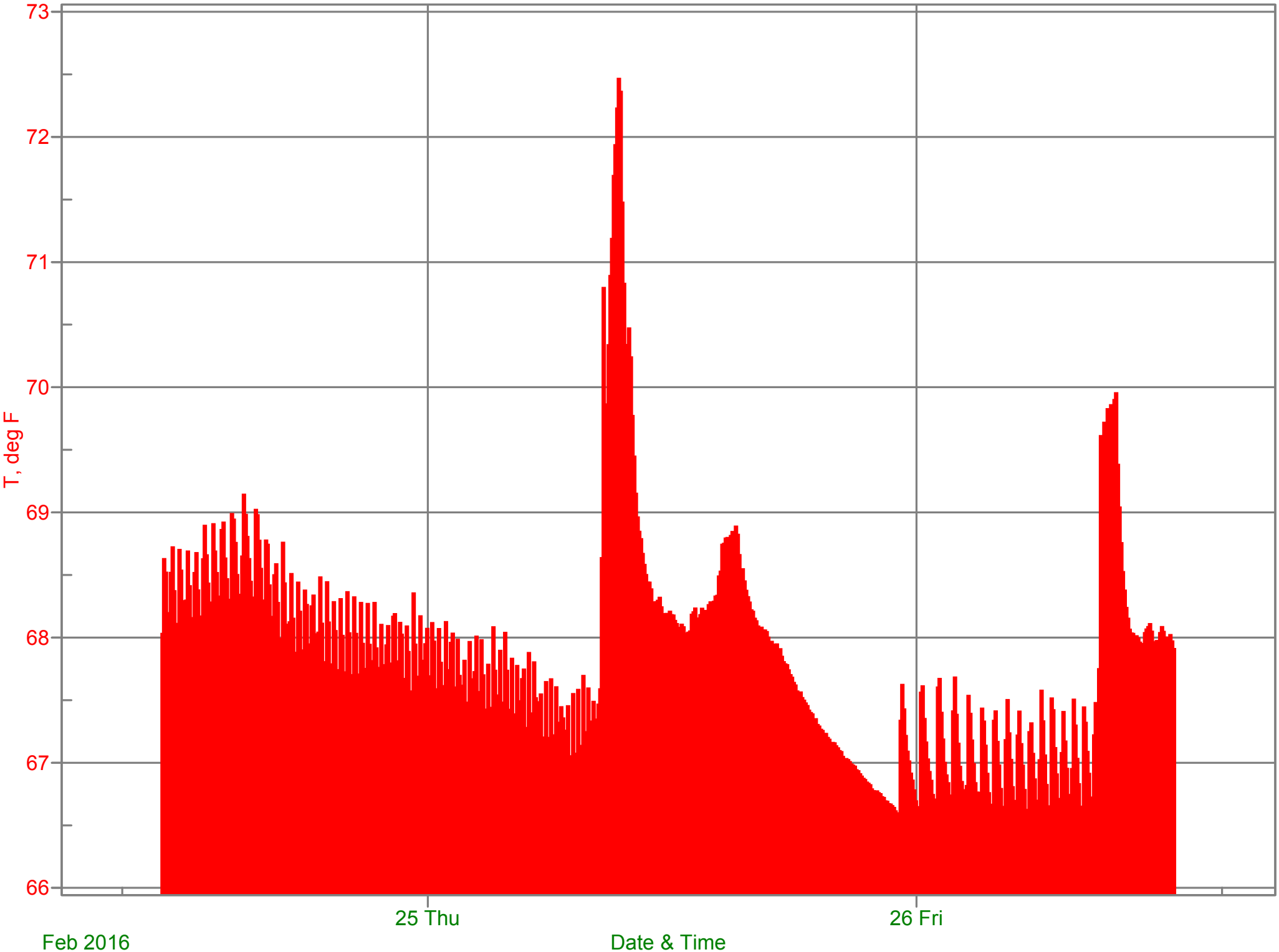
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Woodshop



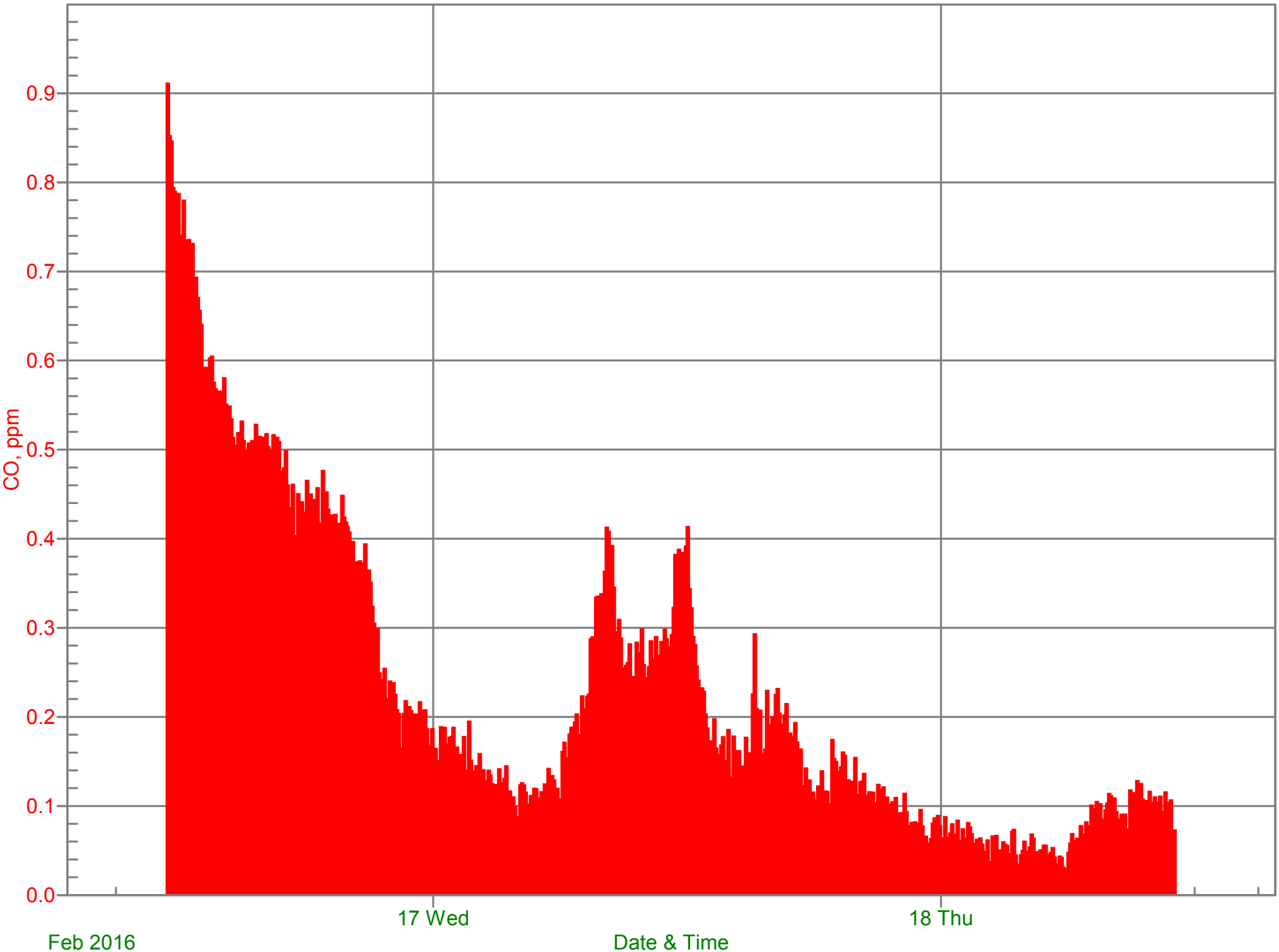
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Woodshop



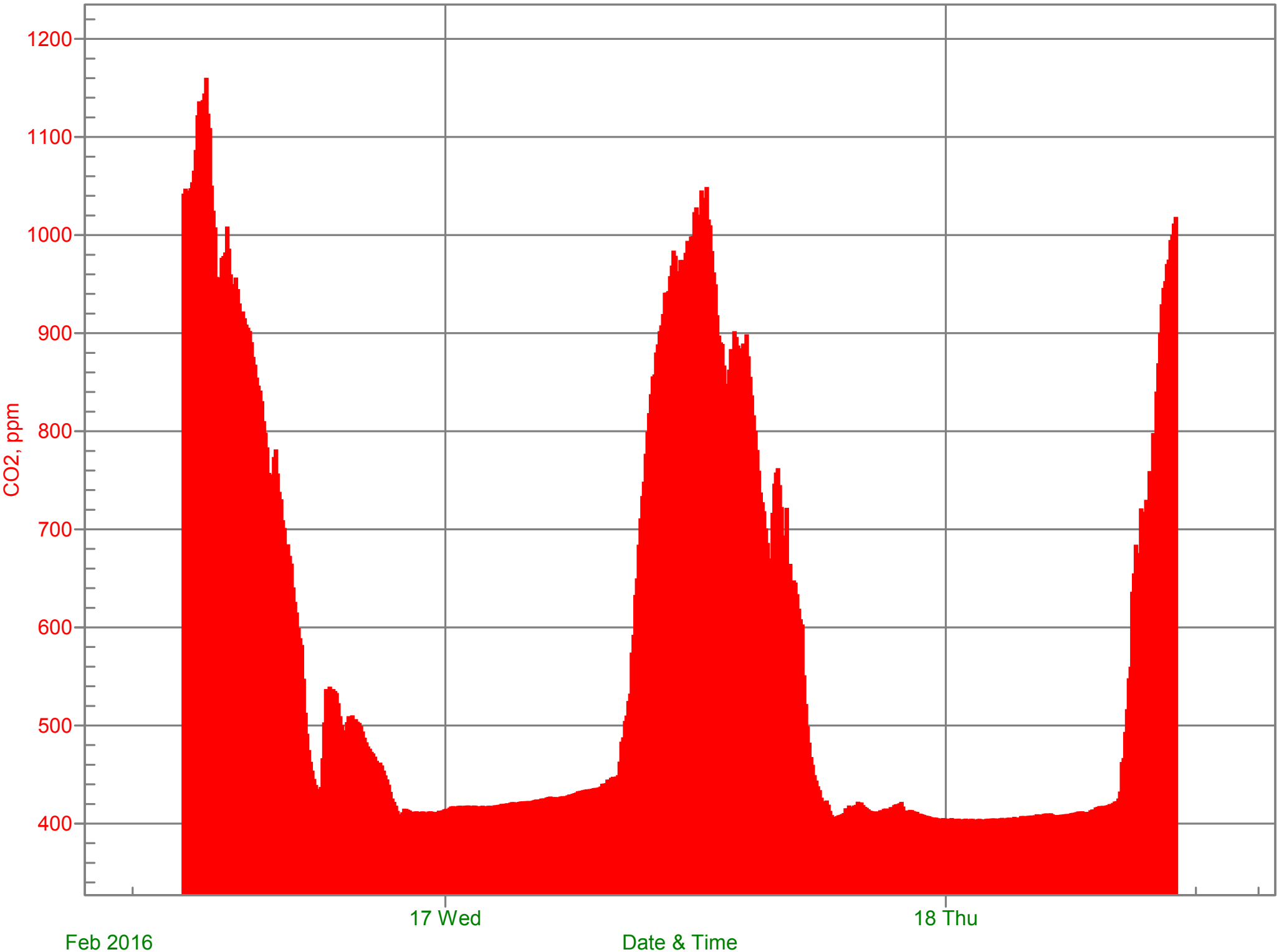
Results of Air Quality testing

Library



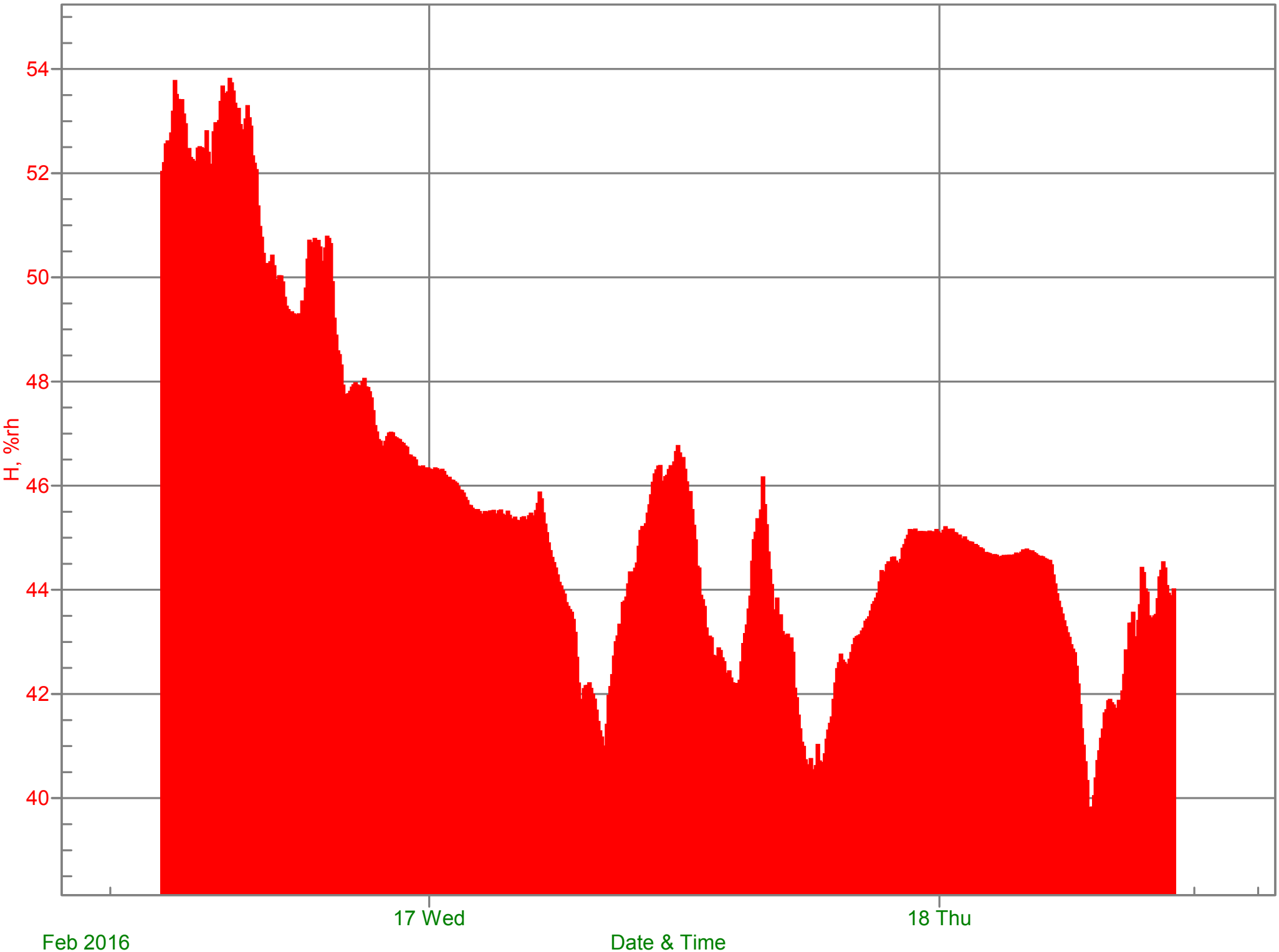
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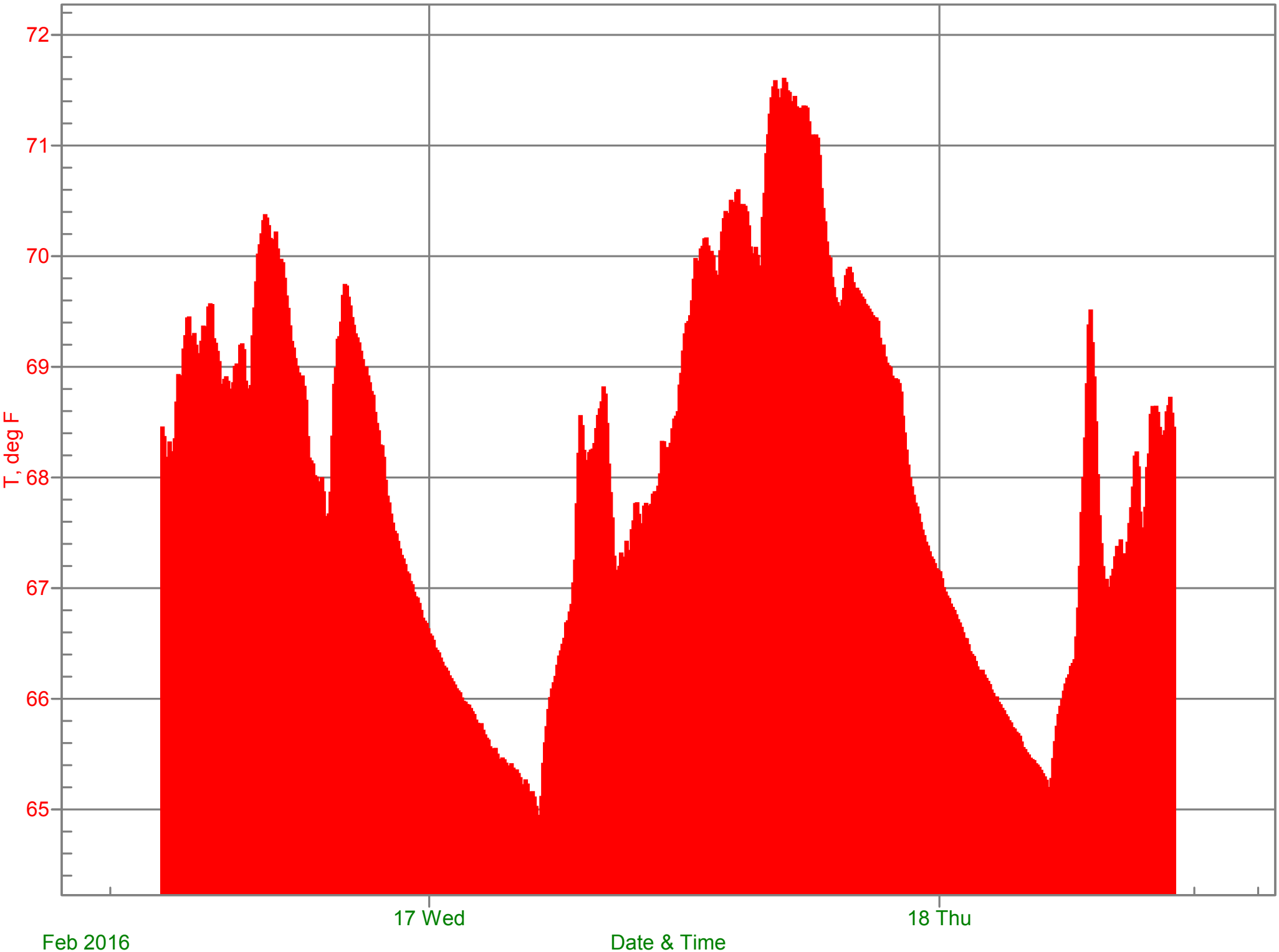
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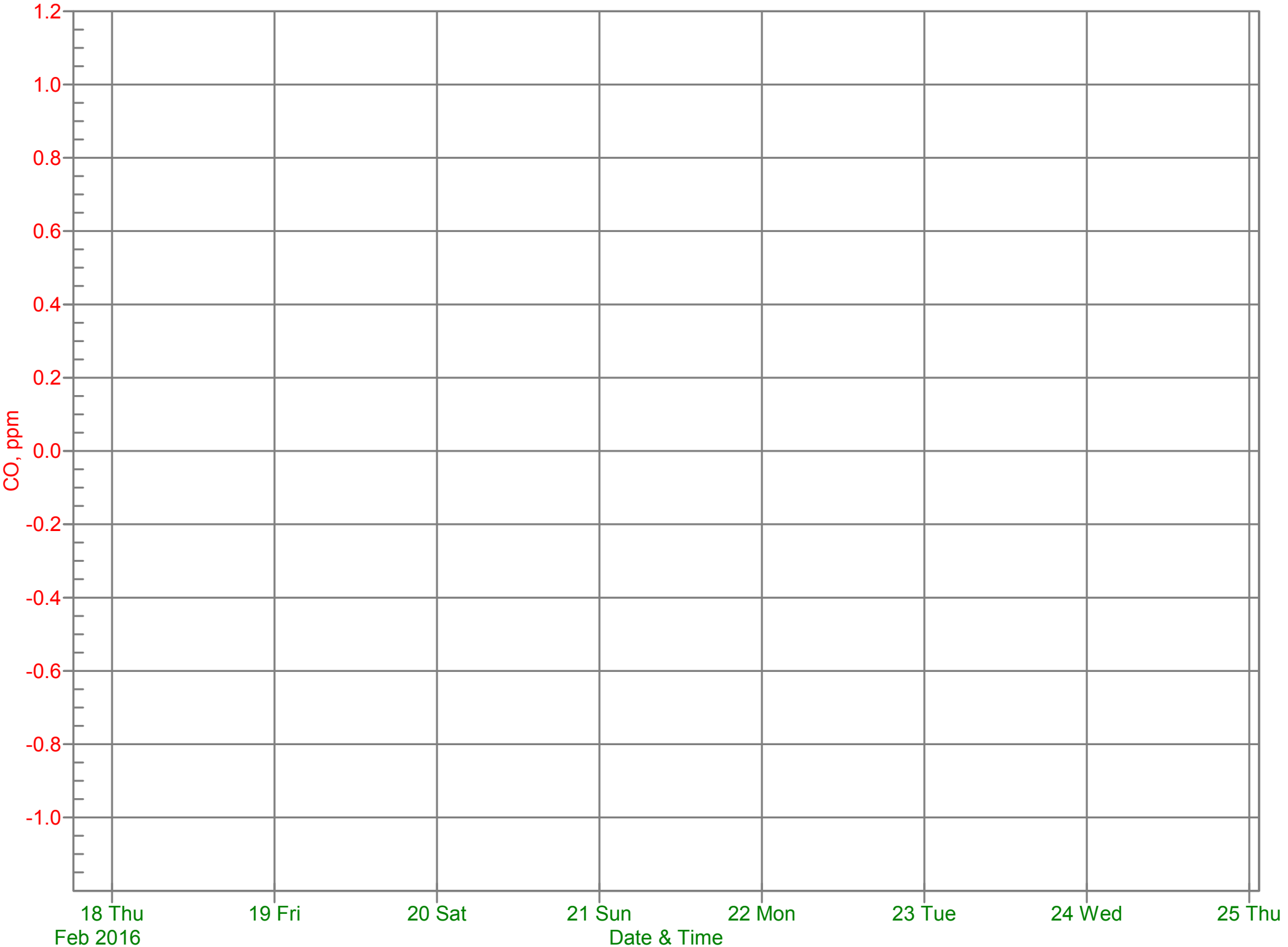
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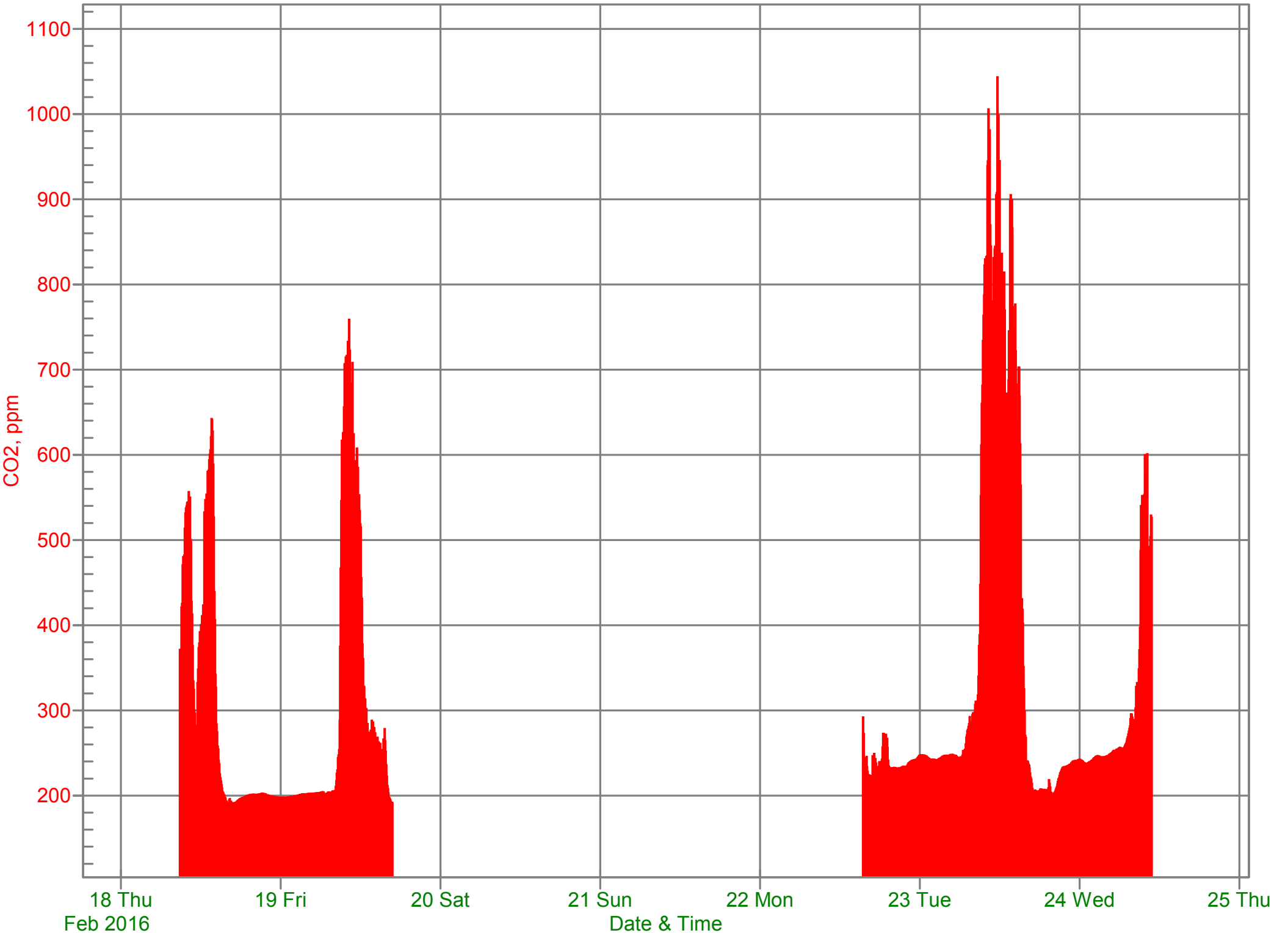
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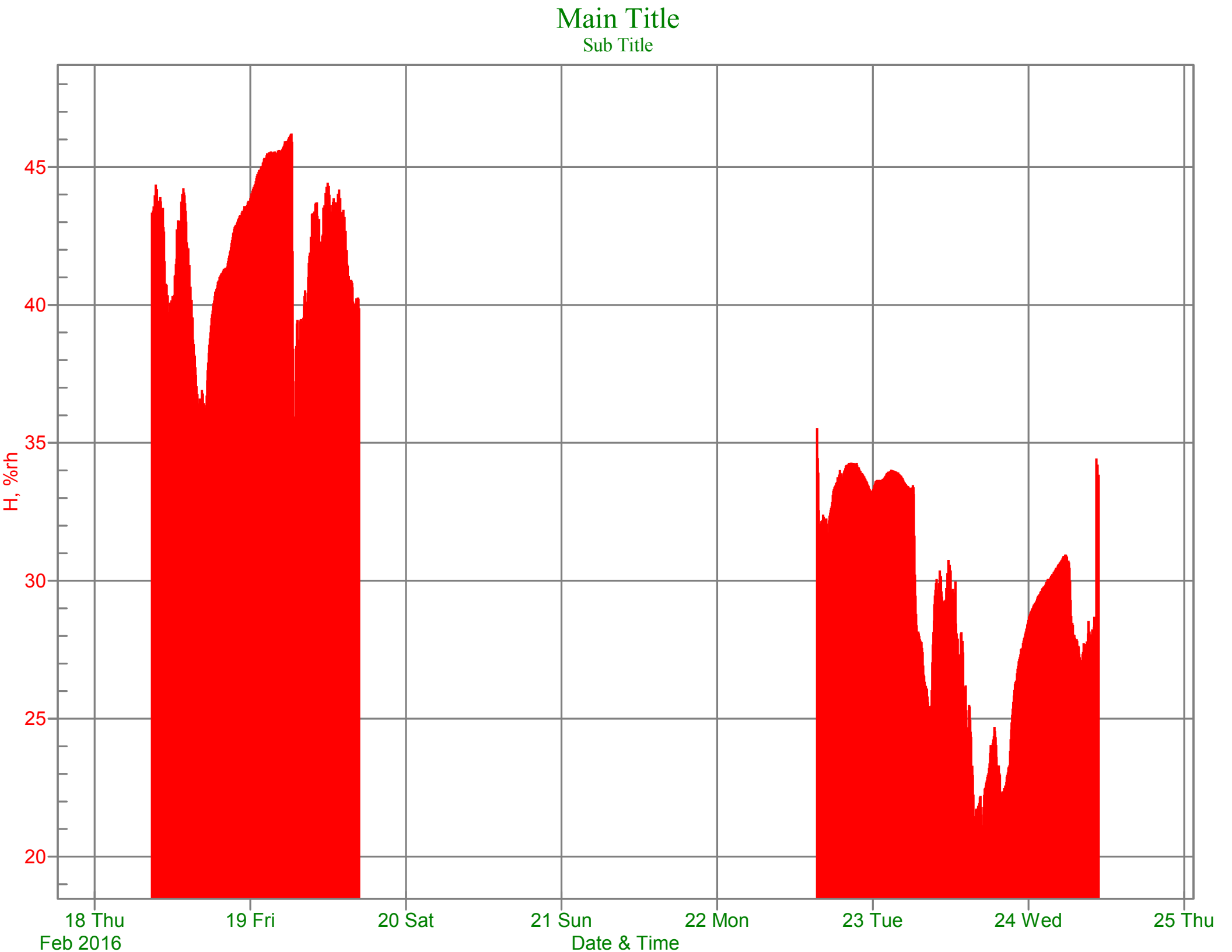
North Pod



Results of Air Quality Testing

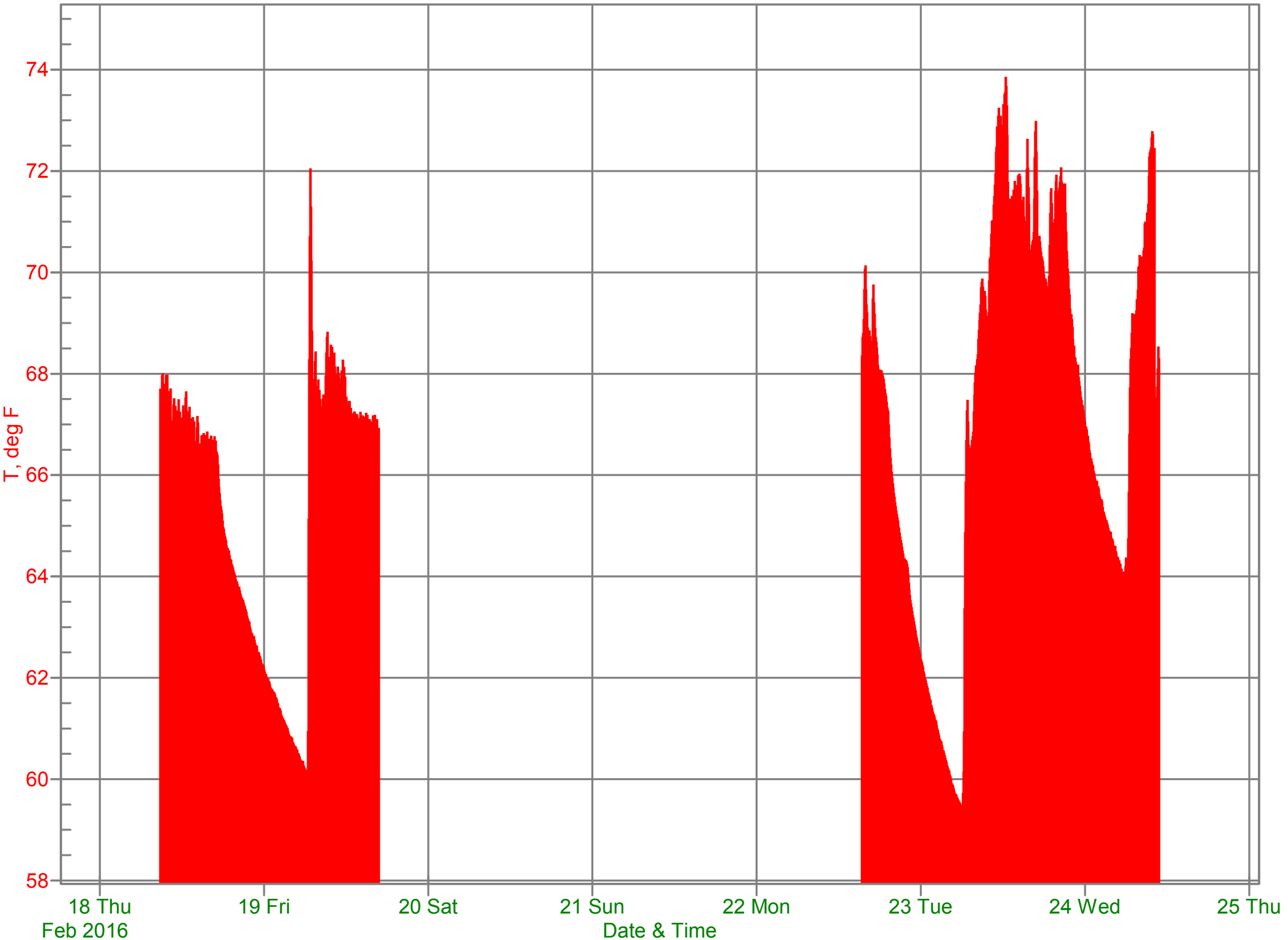
North Pod




Main Title
Sub Title
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Date & Time

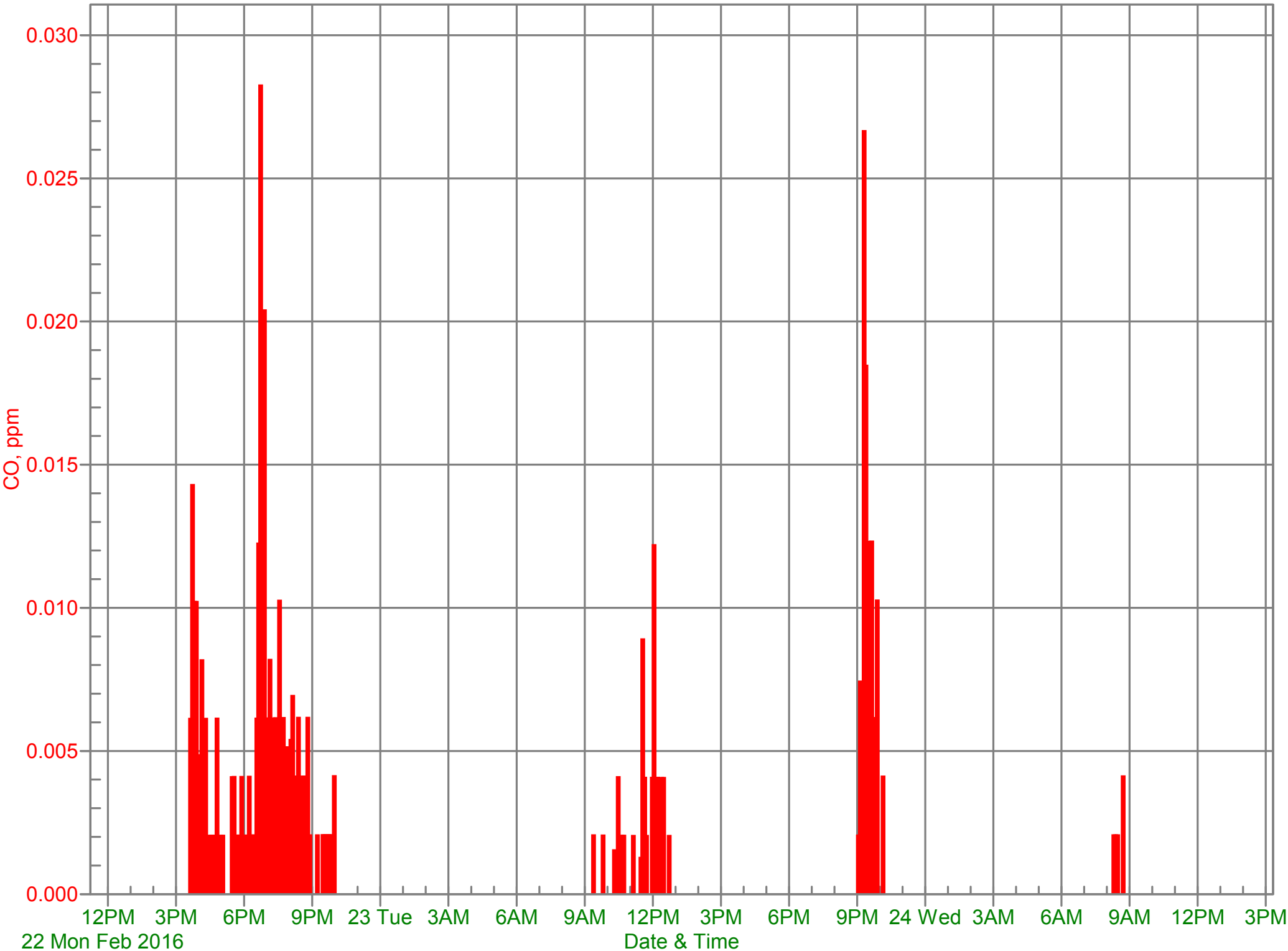
Results of Air Quality Testing

North Pod



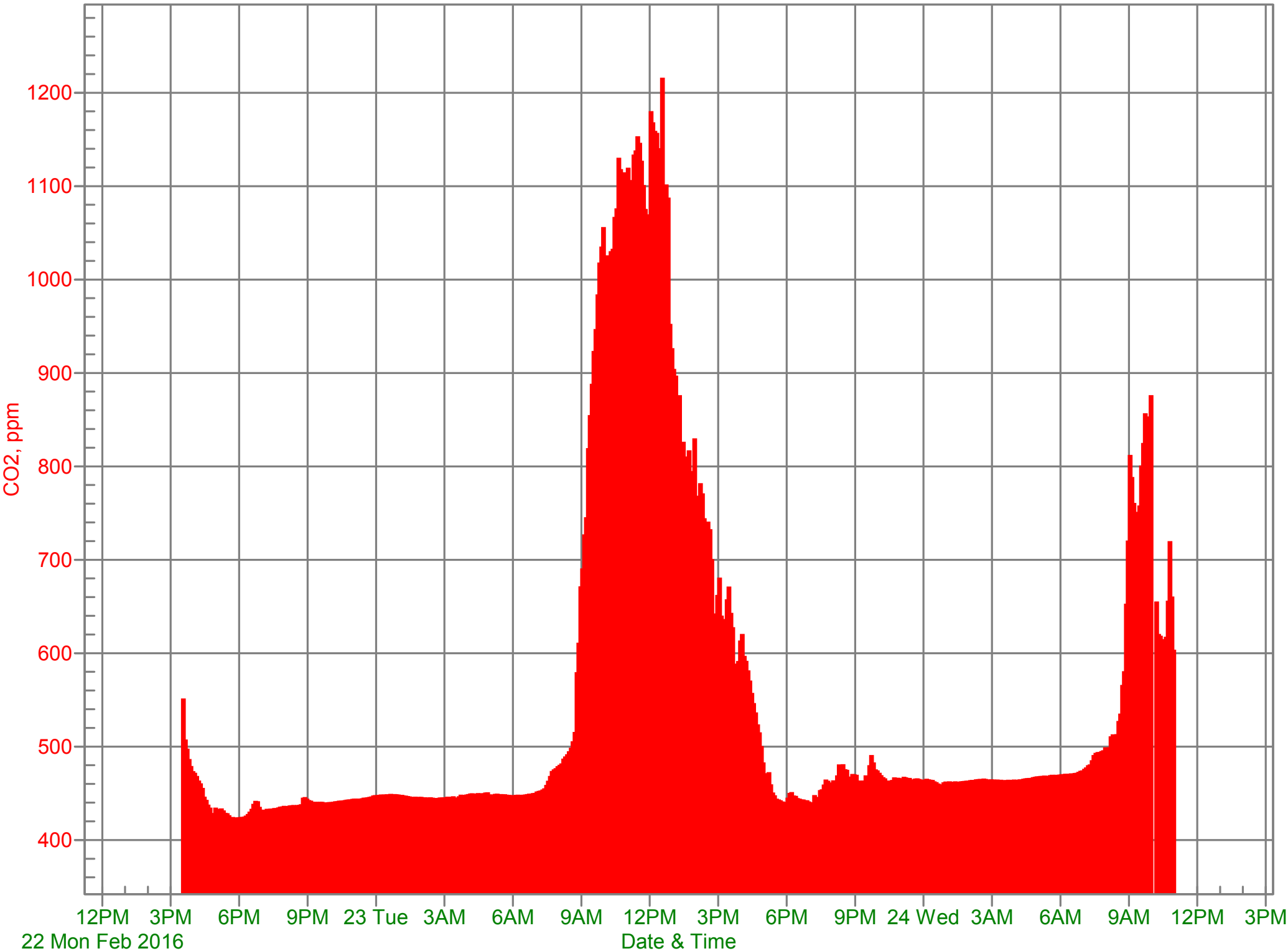
Results of Air Quality Testing

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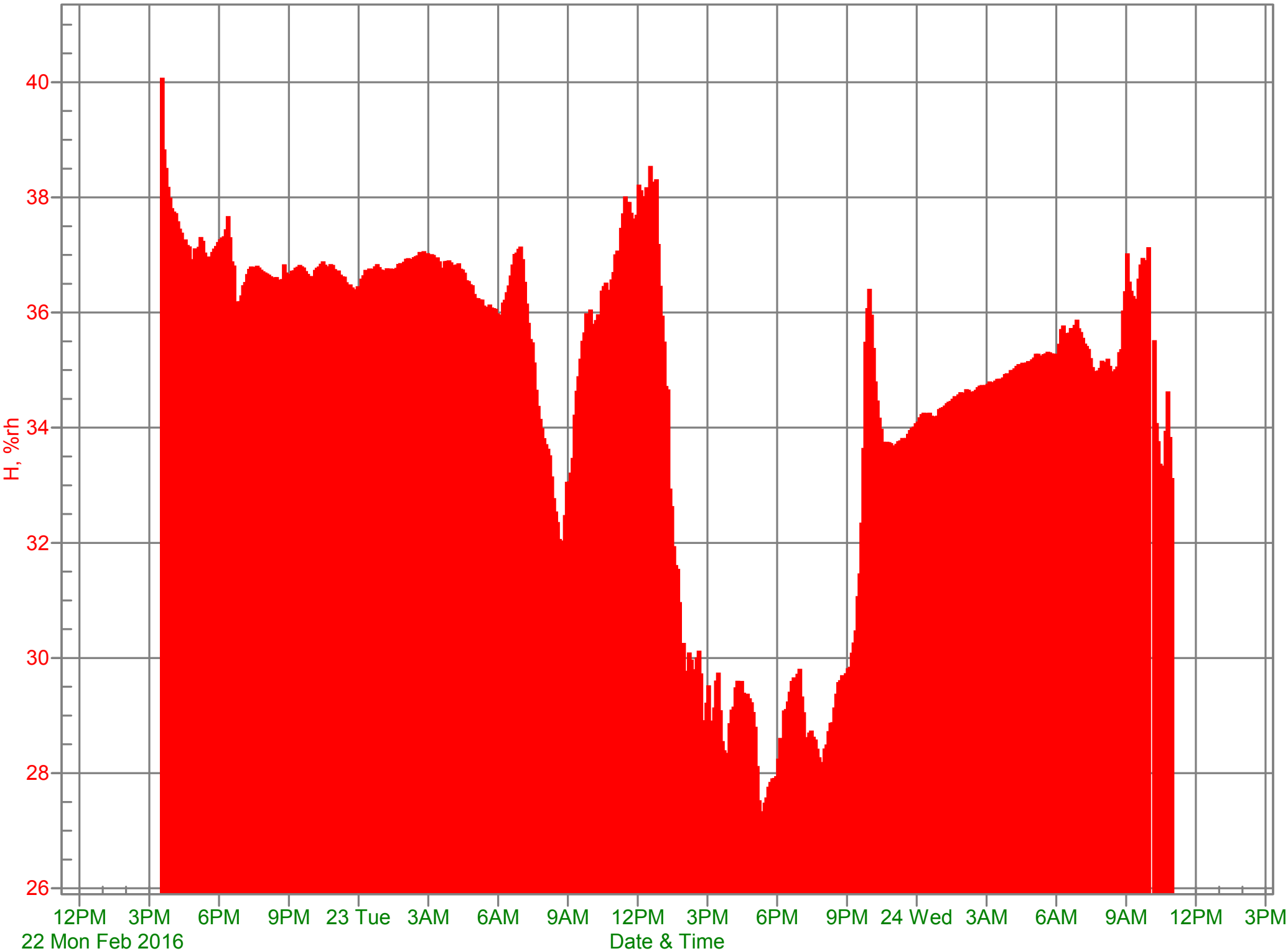
Results of Air Quality Testing

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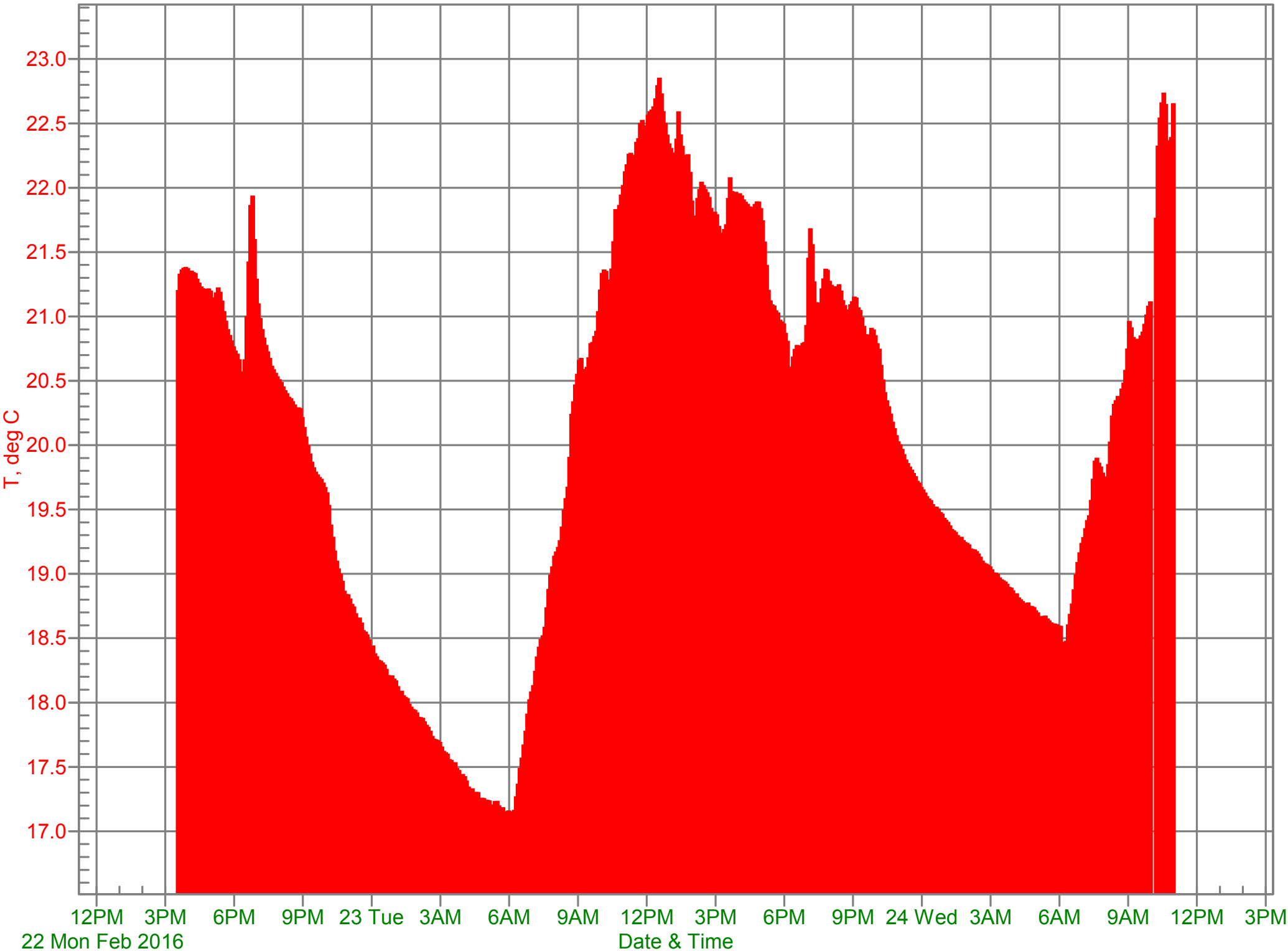
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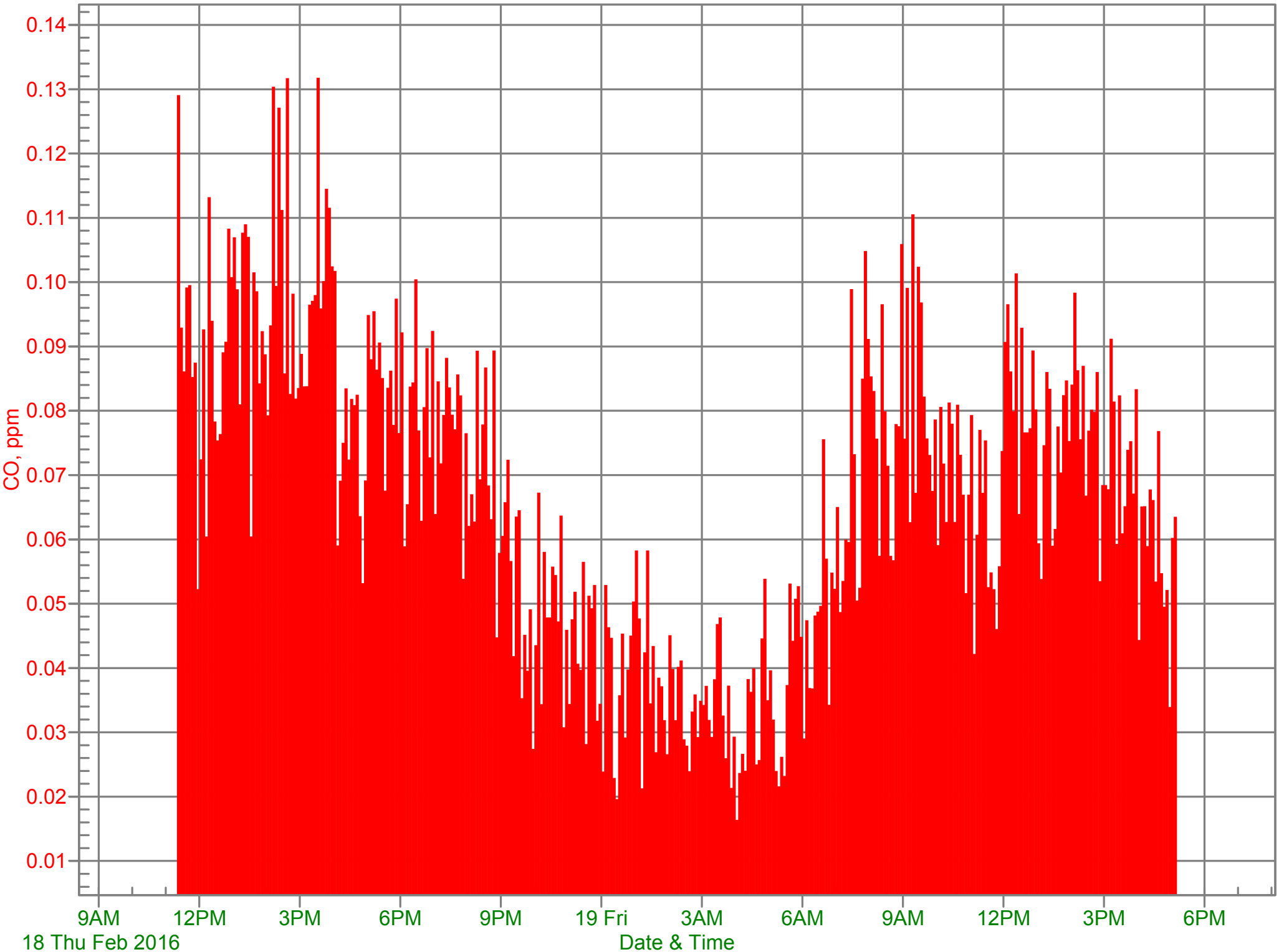
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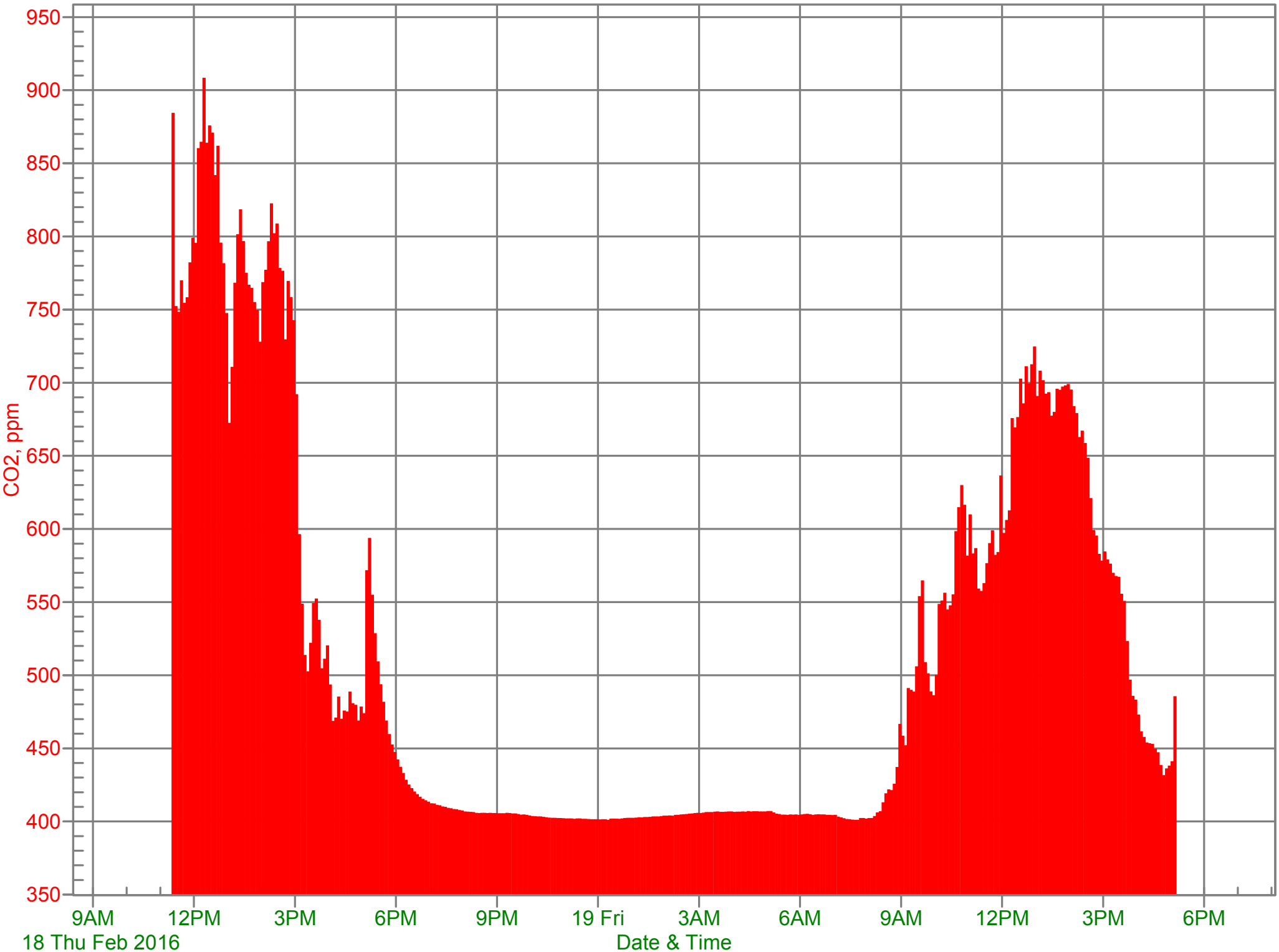
Results of Air Quality Testing

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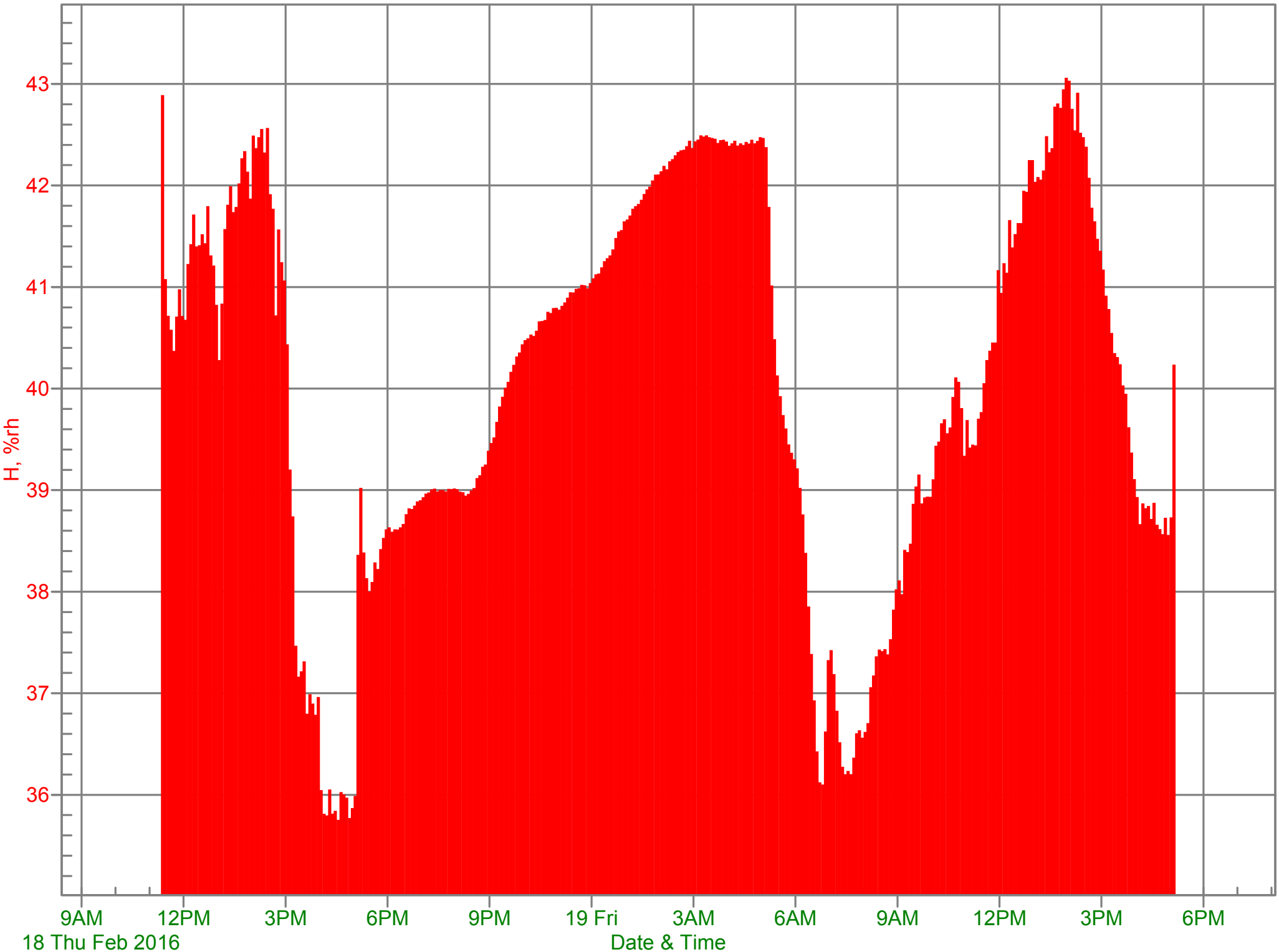
Results of Air Quality Testing

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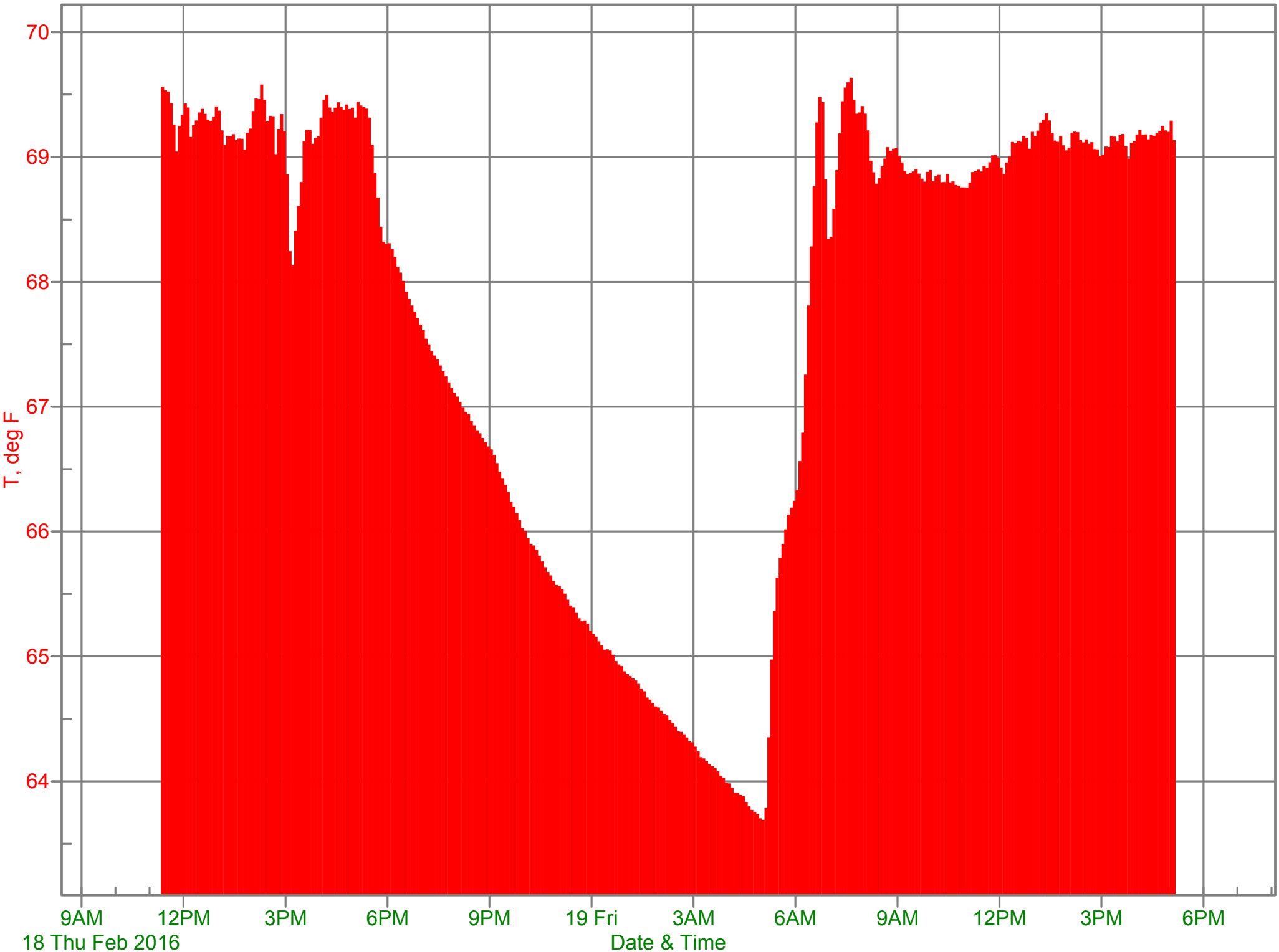
Results of Air Quality Testing

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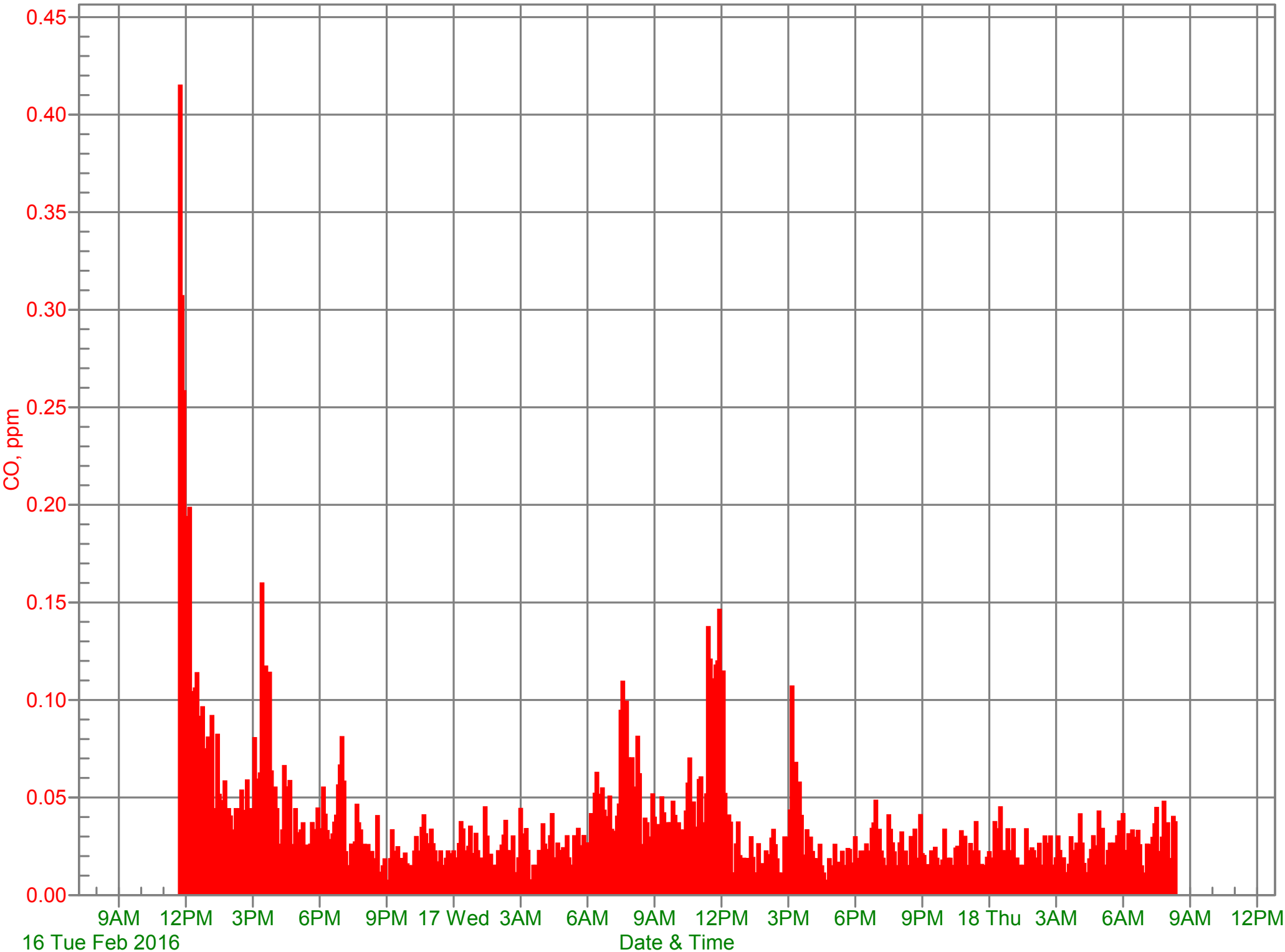
Results of Air Quality Testing

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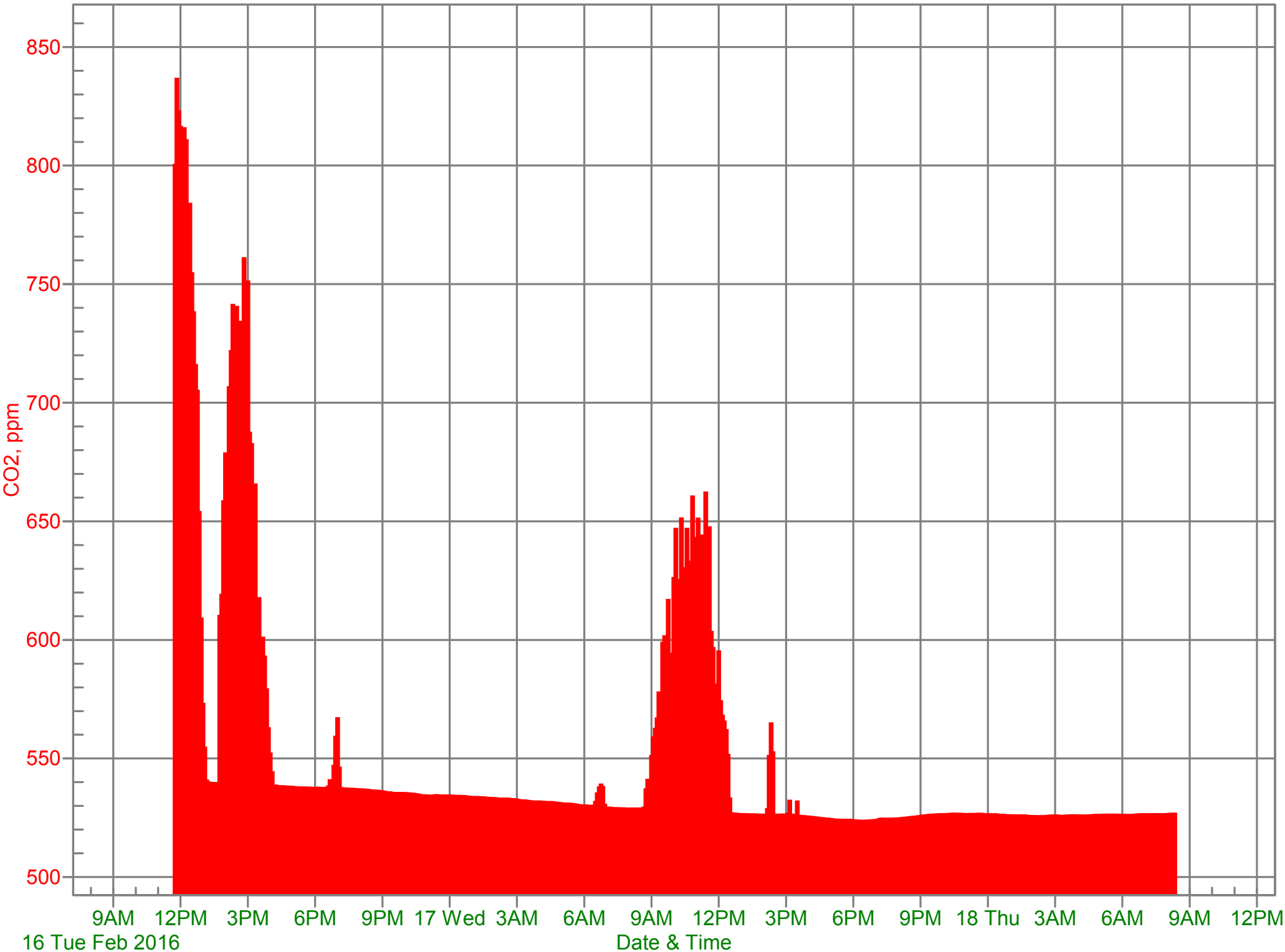
Results of Air Quality Testing

Room 2



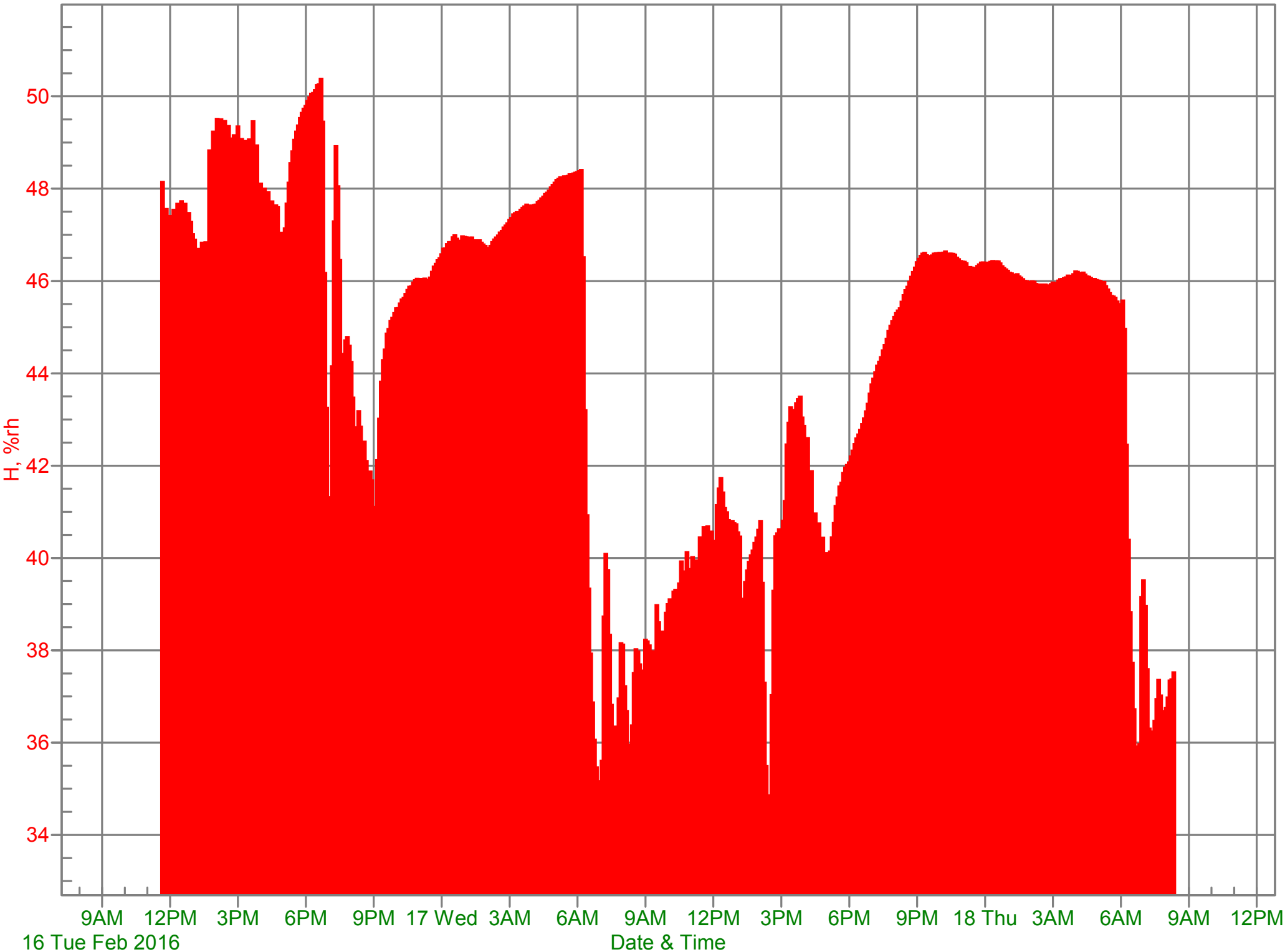
Results of Air Quality Testing

Room 2



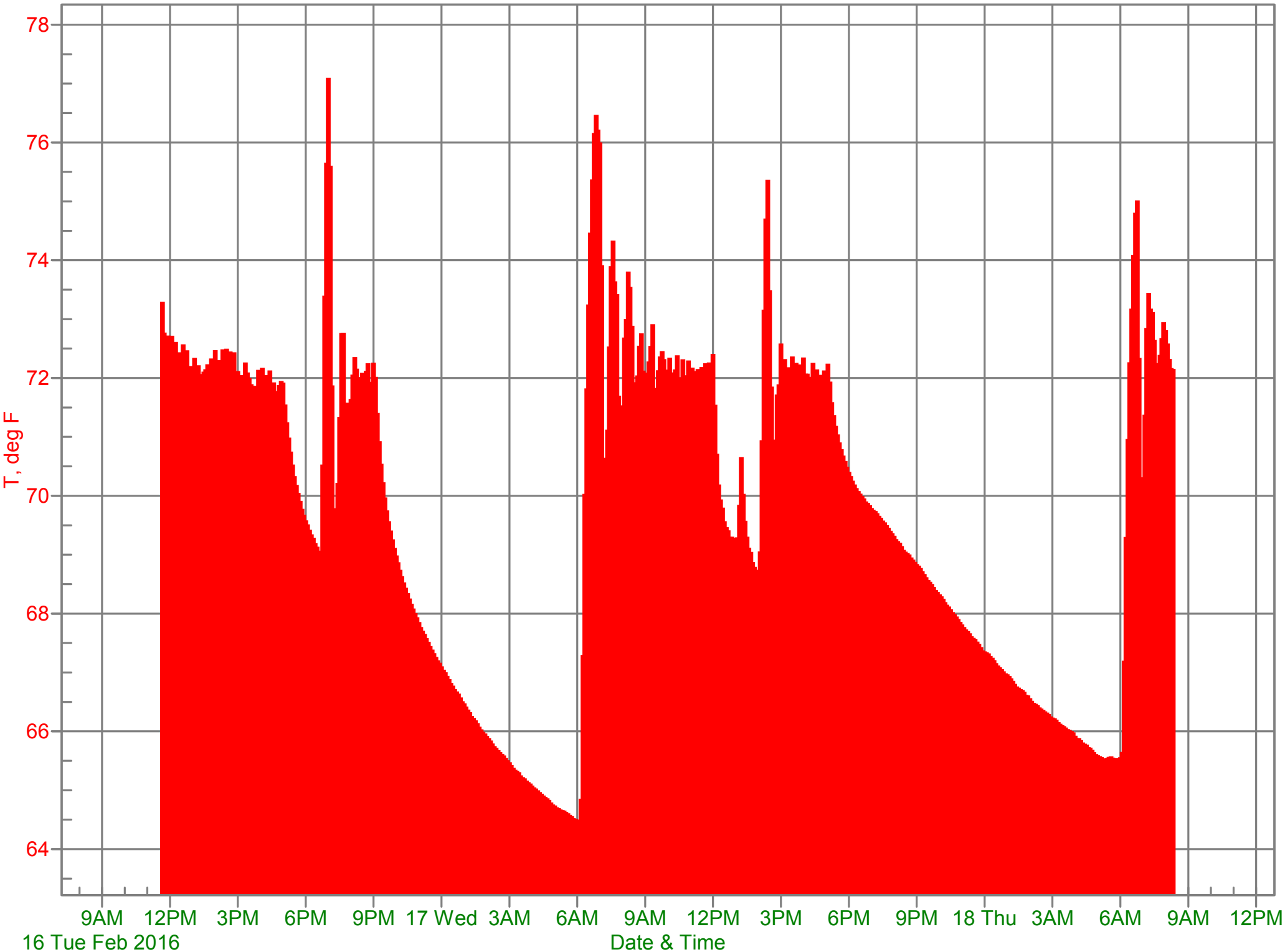
Results of Air Quality Testing

Room 2



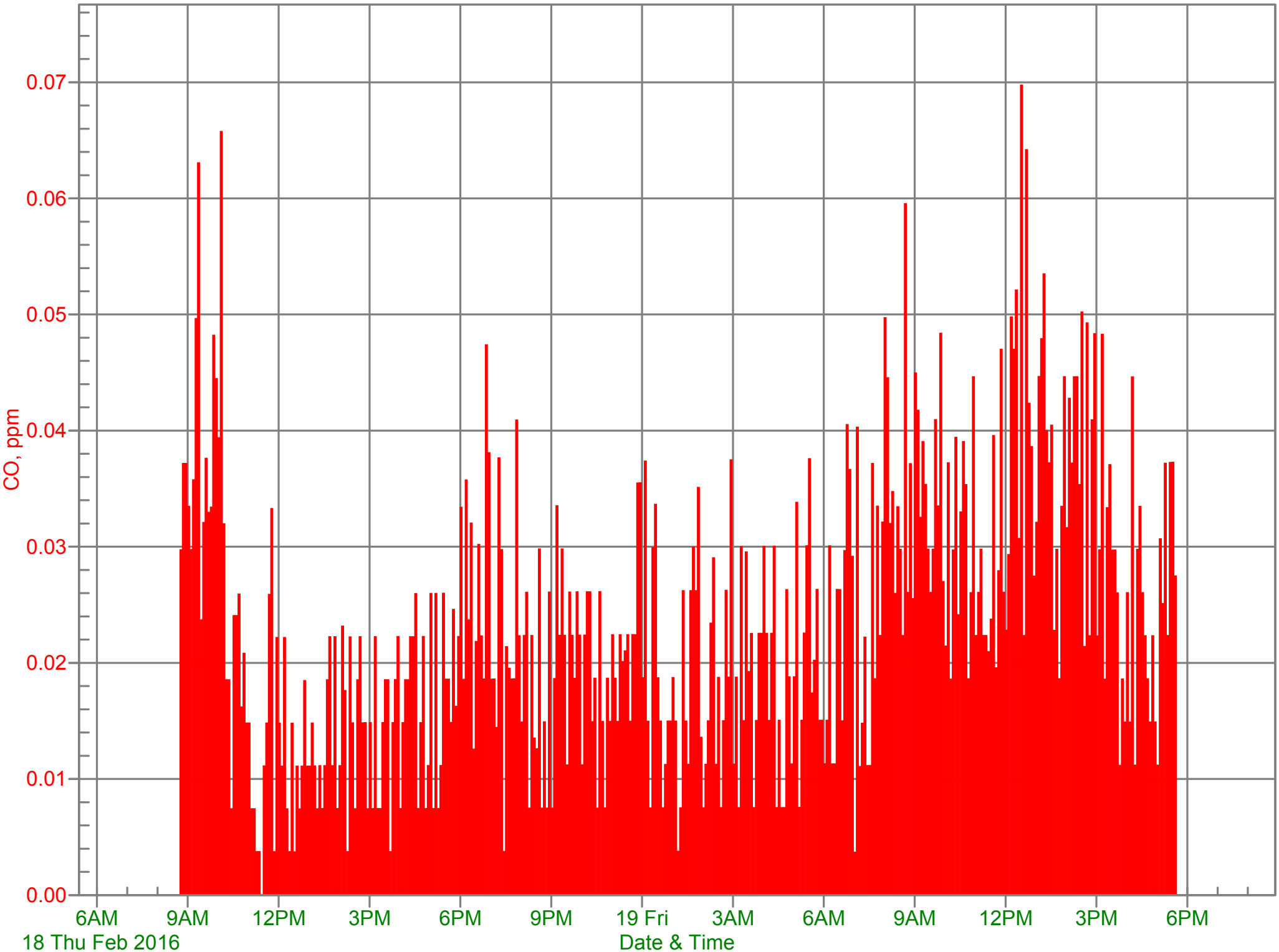
Results of Air Quality Testing

Room 2



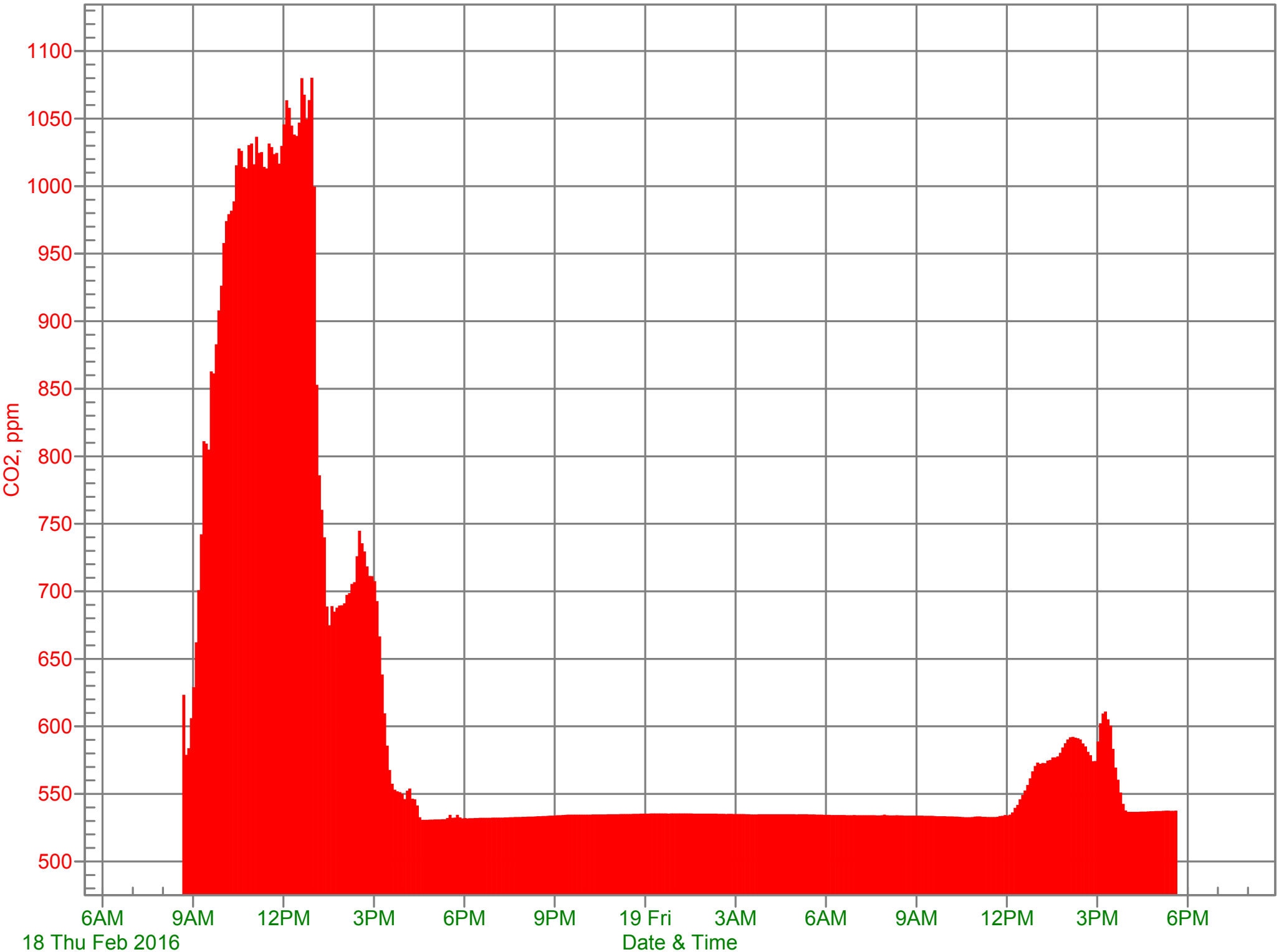
Results of Air Quality Testing

Room 4



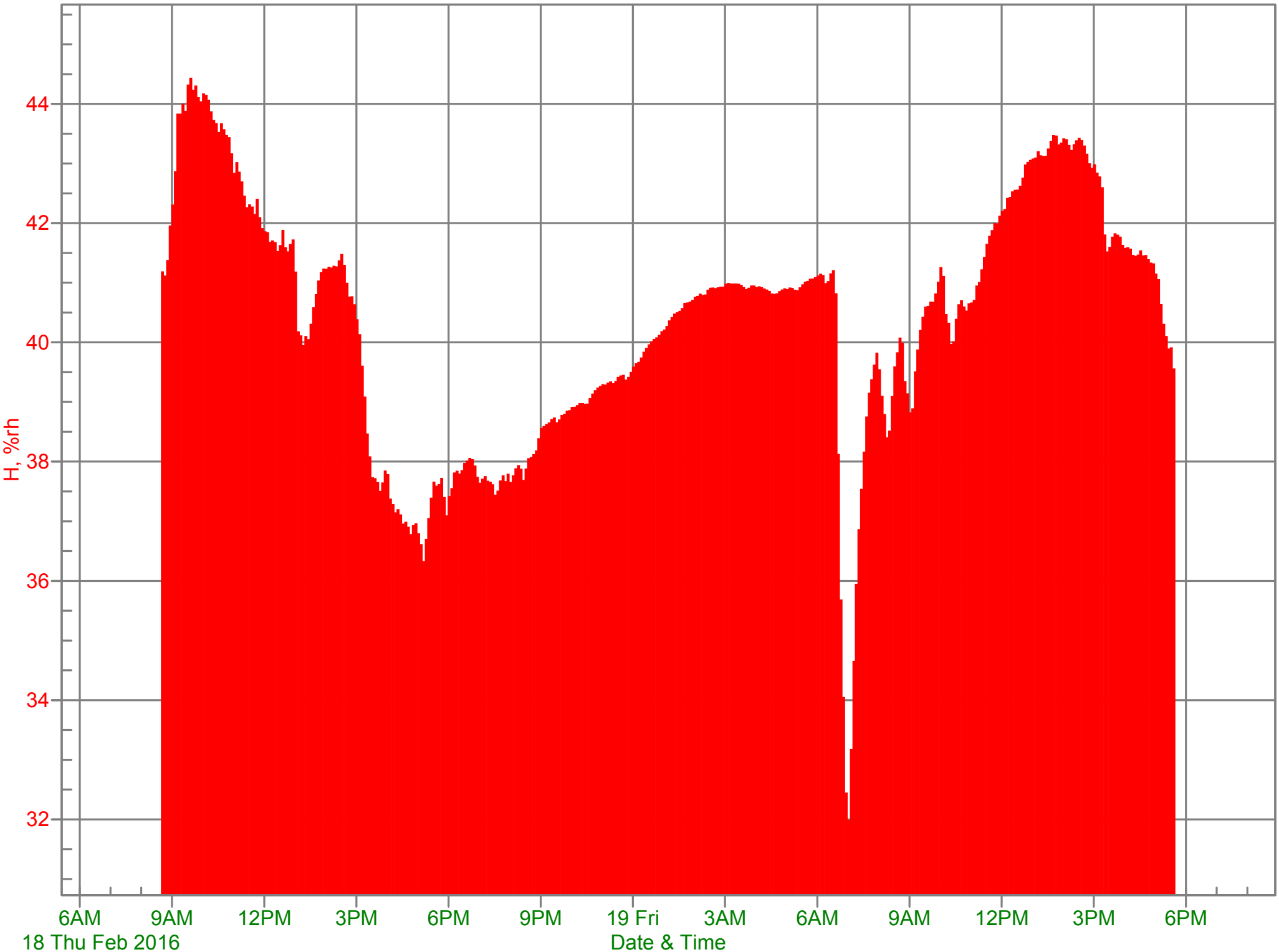
Results of Air Quality Testing

Room 4



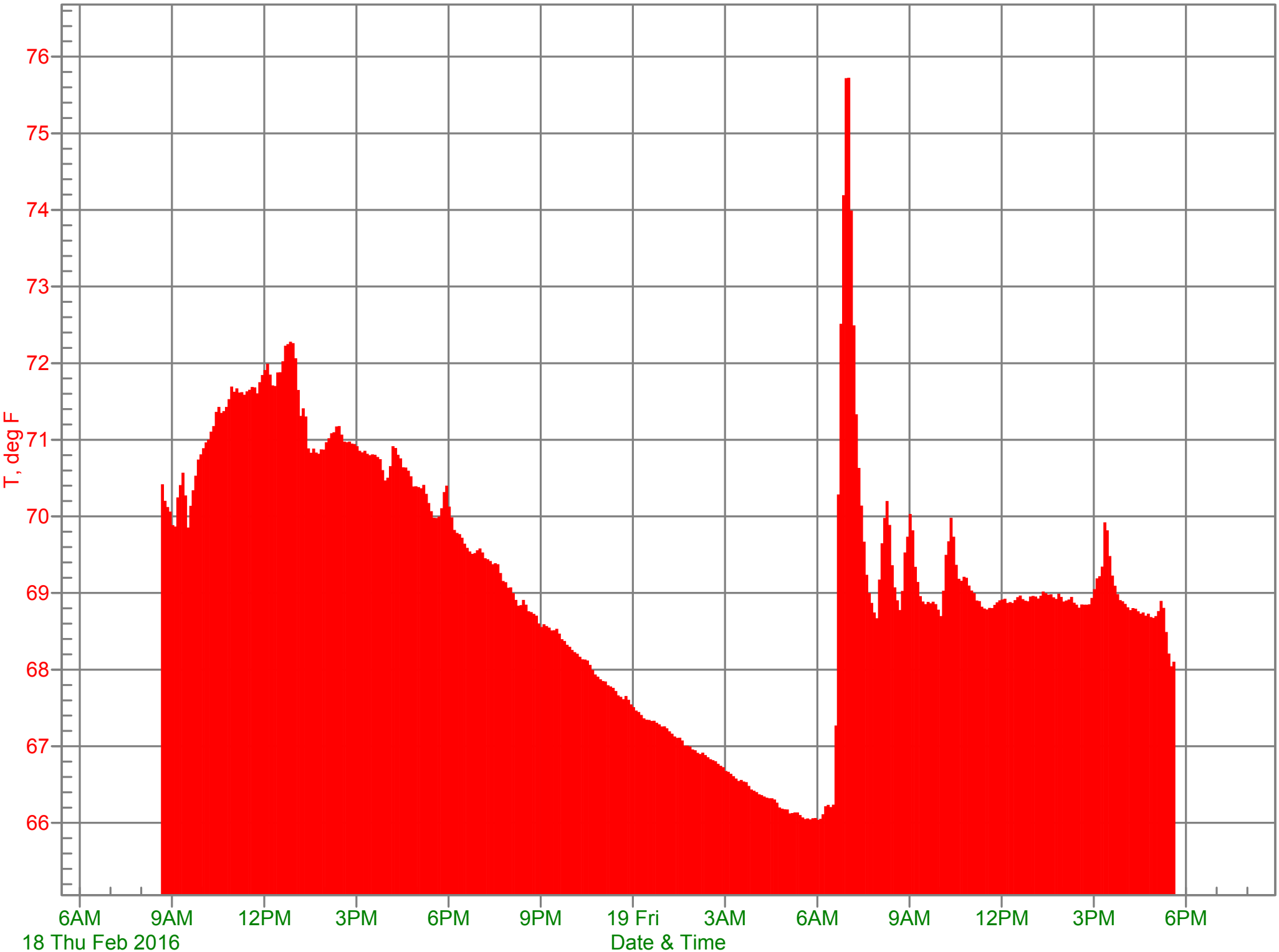
Results of Air Quality Testing

Room 4



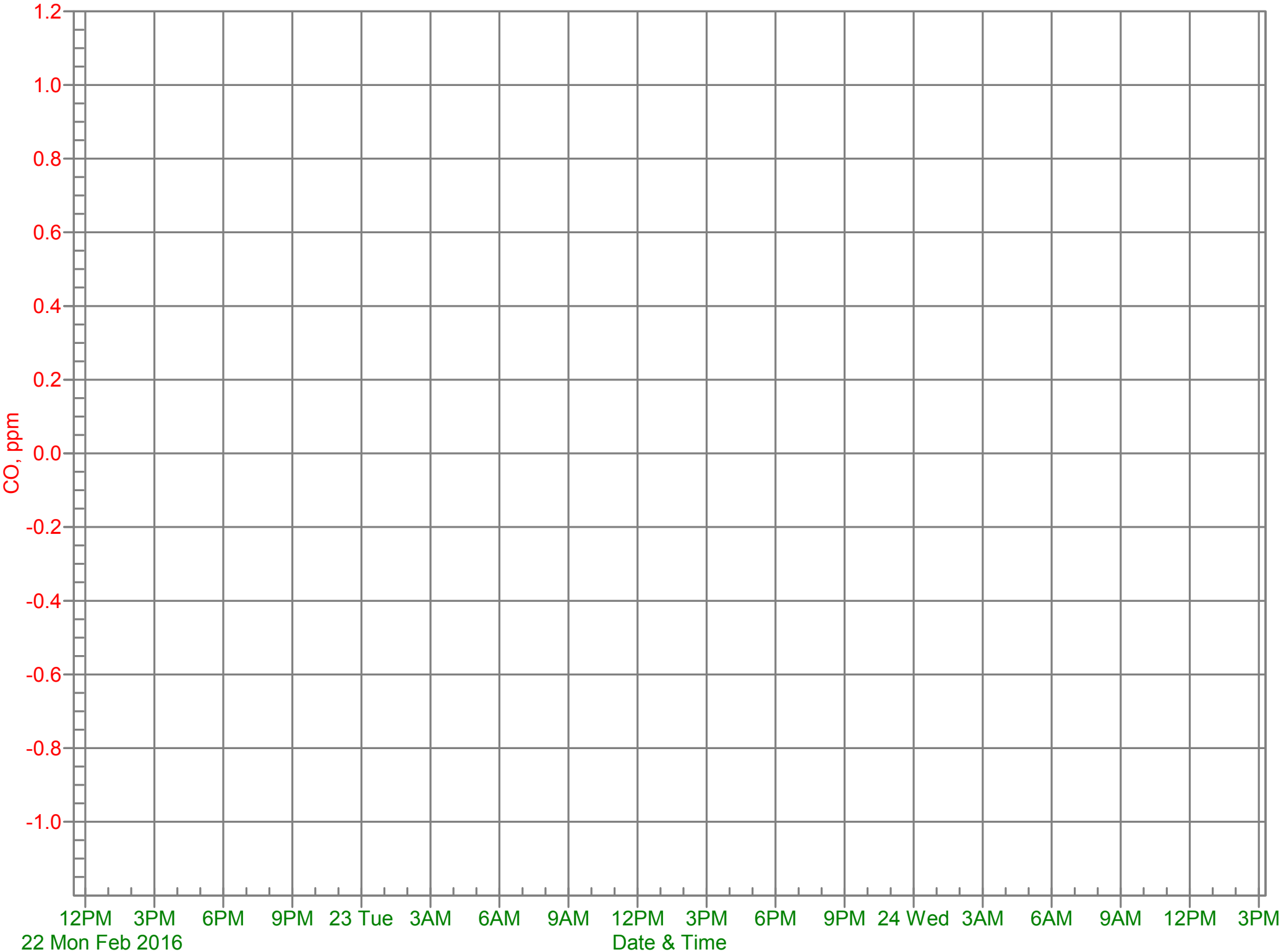
Results of Air Quality Testing

Room 4



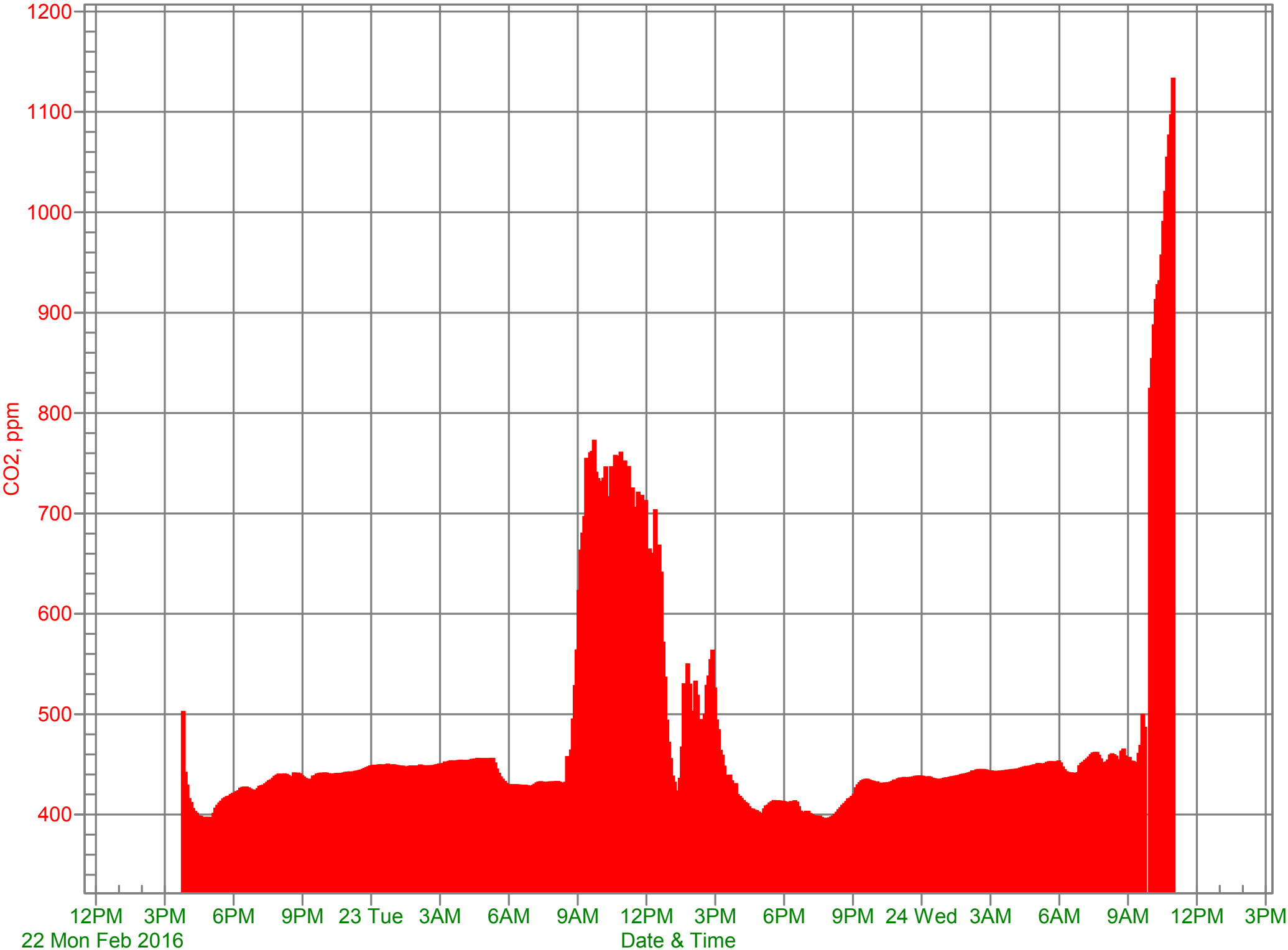
Results of Air Quality Testing

Room 5



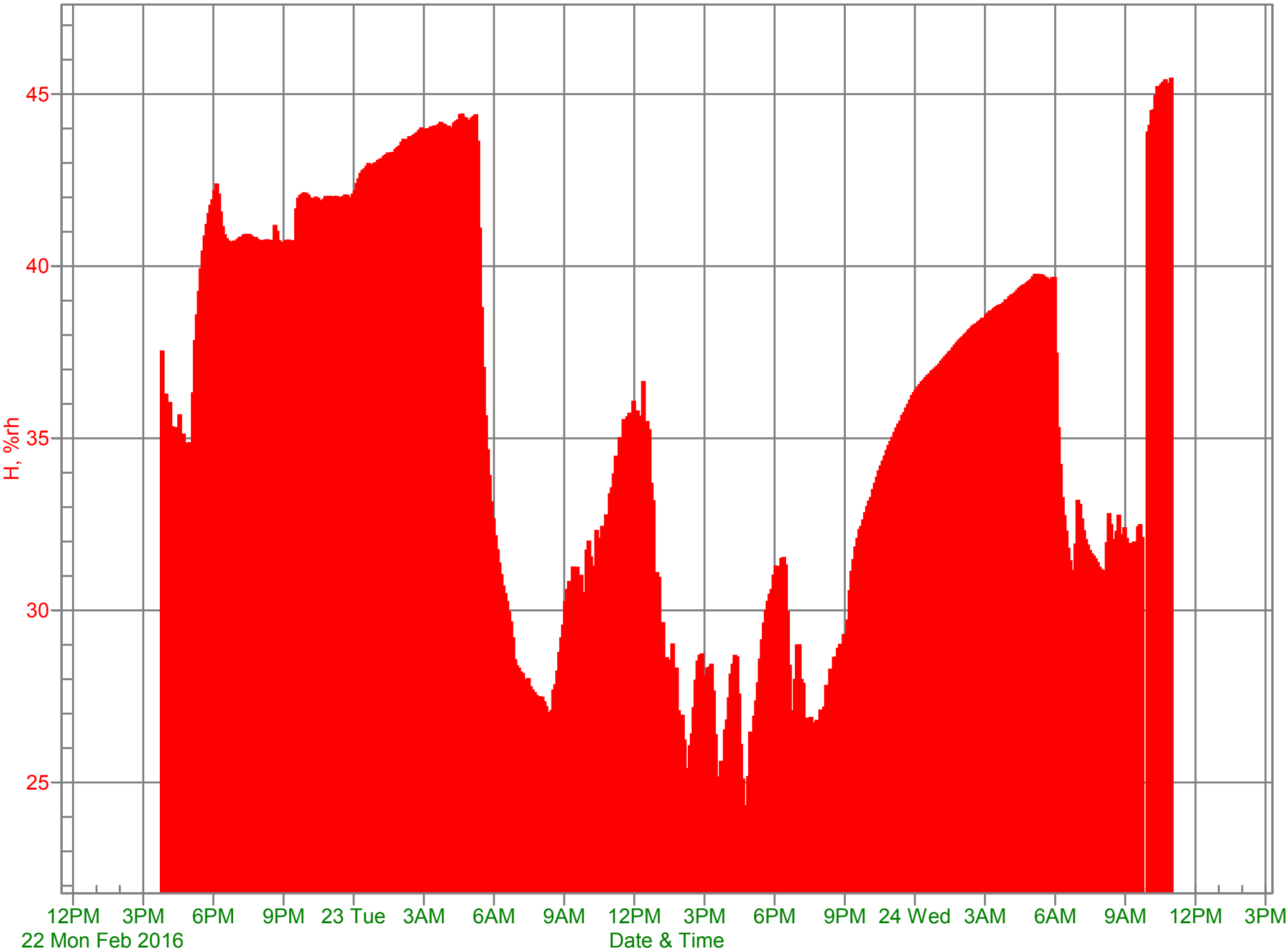
Results of Air Quality Testing

Room 5



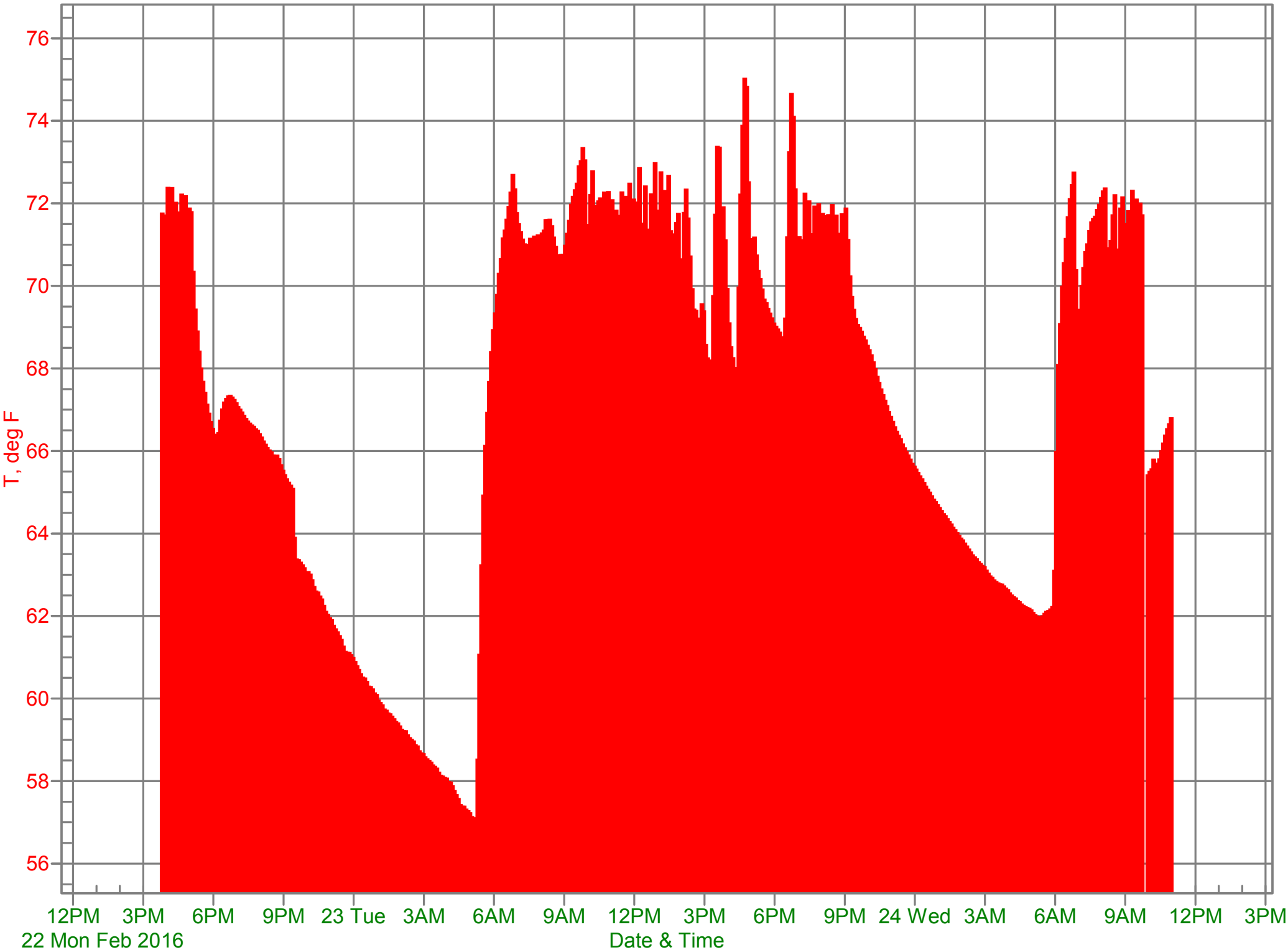
Results of Air Quality Testing

Room 5



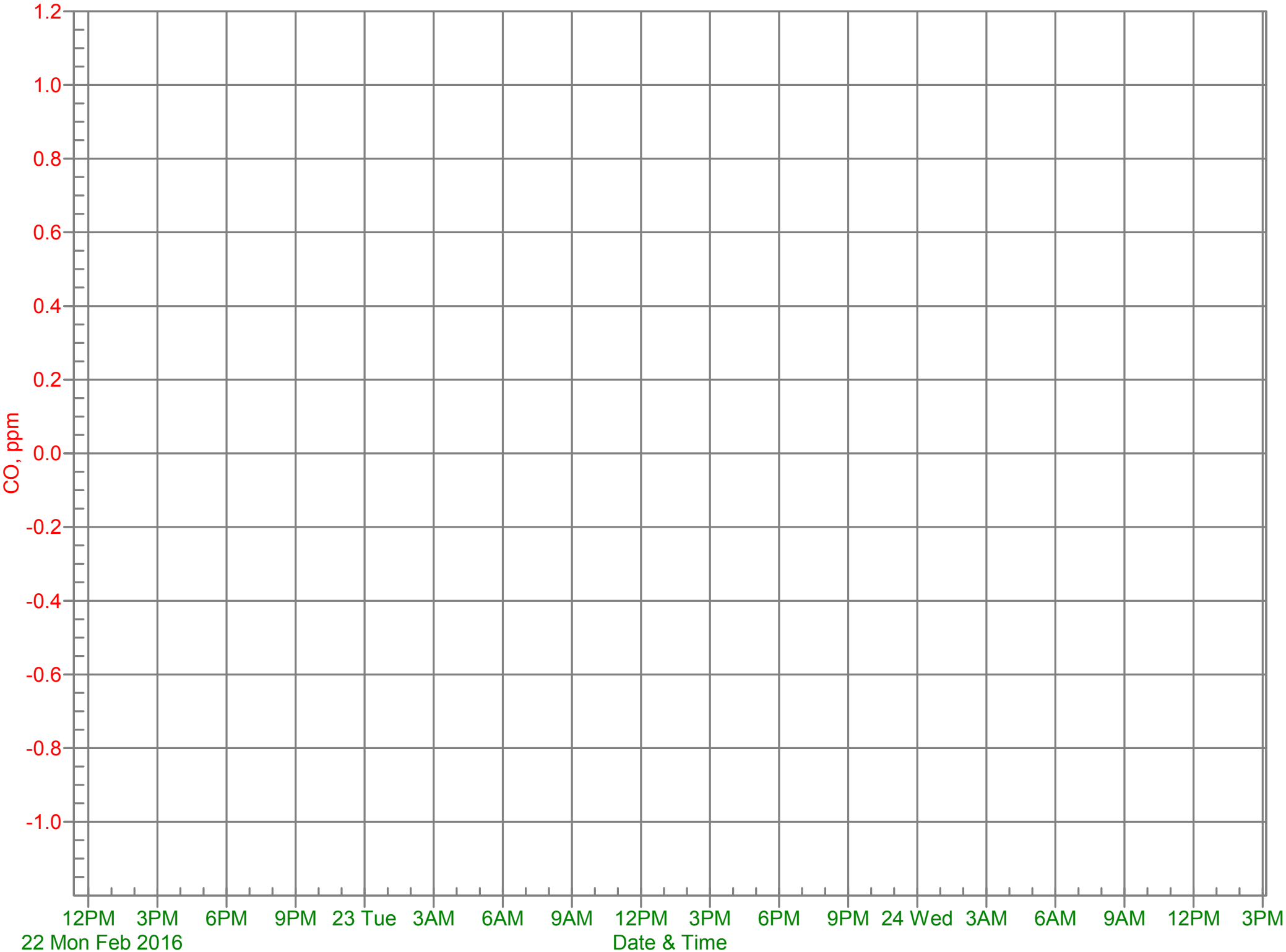
Results of Air Quality Testing

Room 5



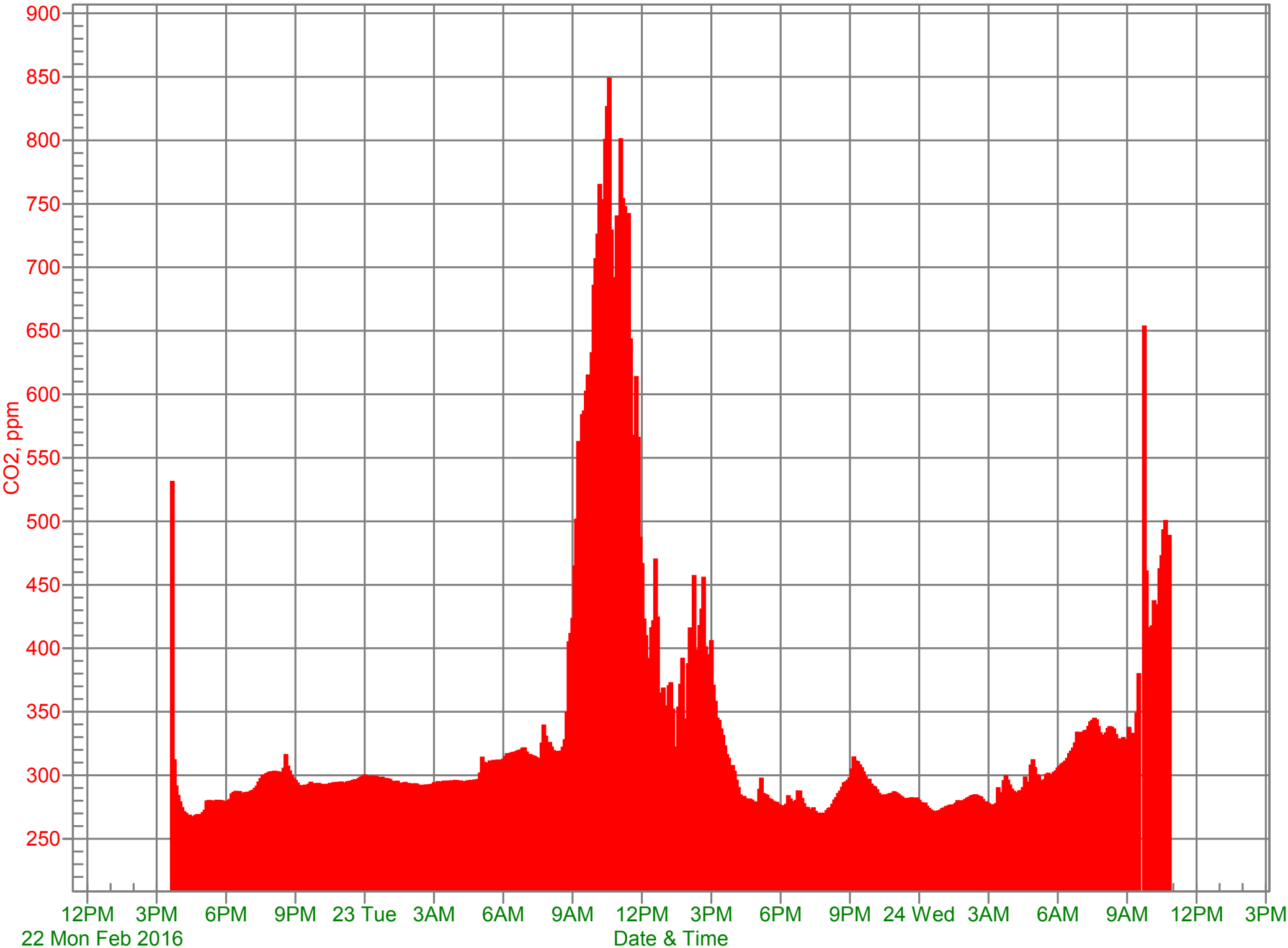
Results of Air Quality Testing

Room 6



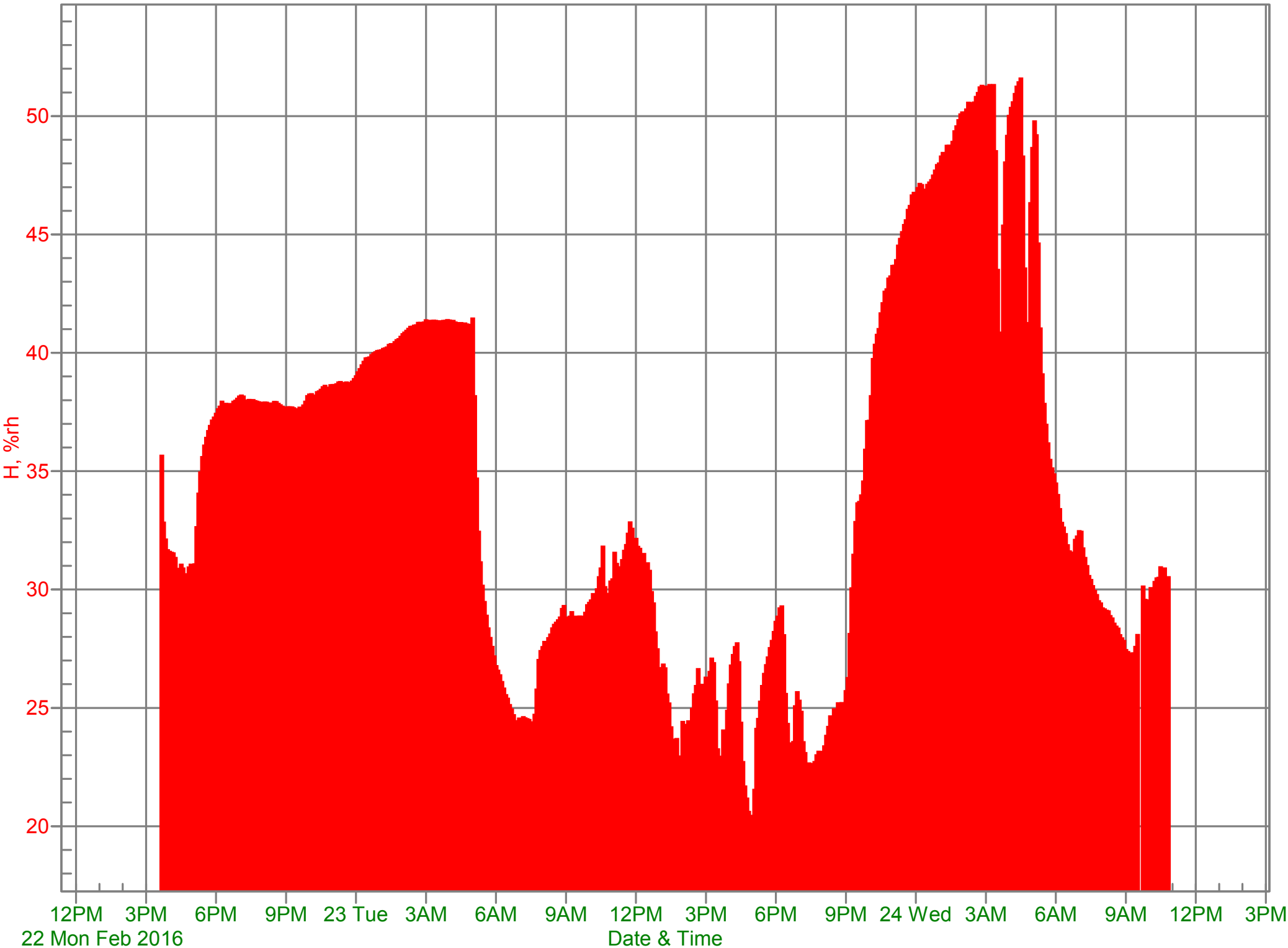
Results of Air Quality Testing

Room 6



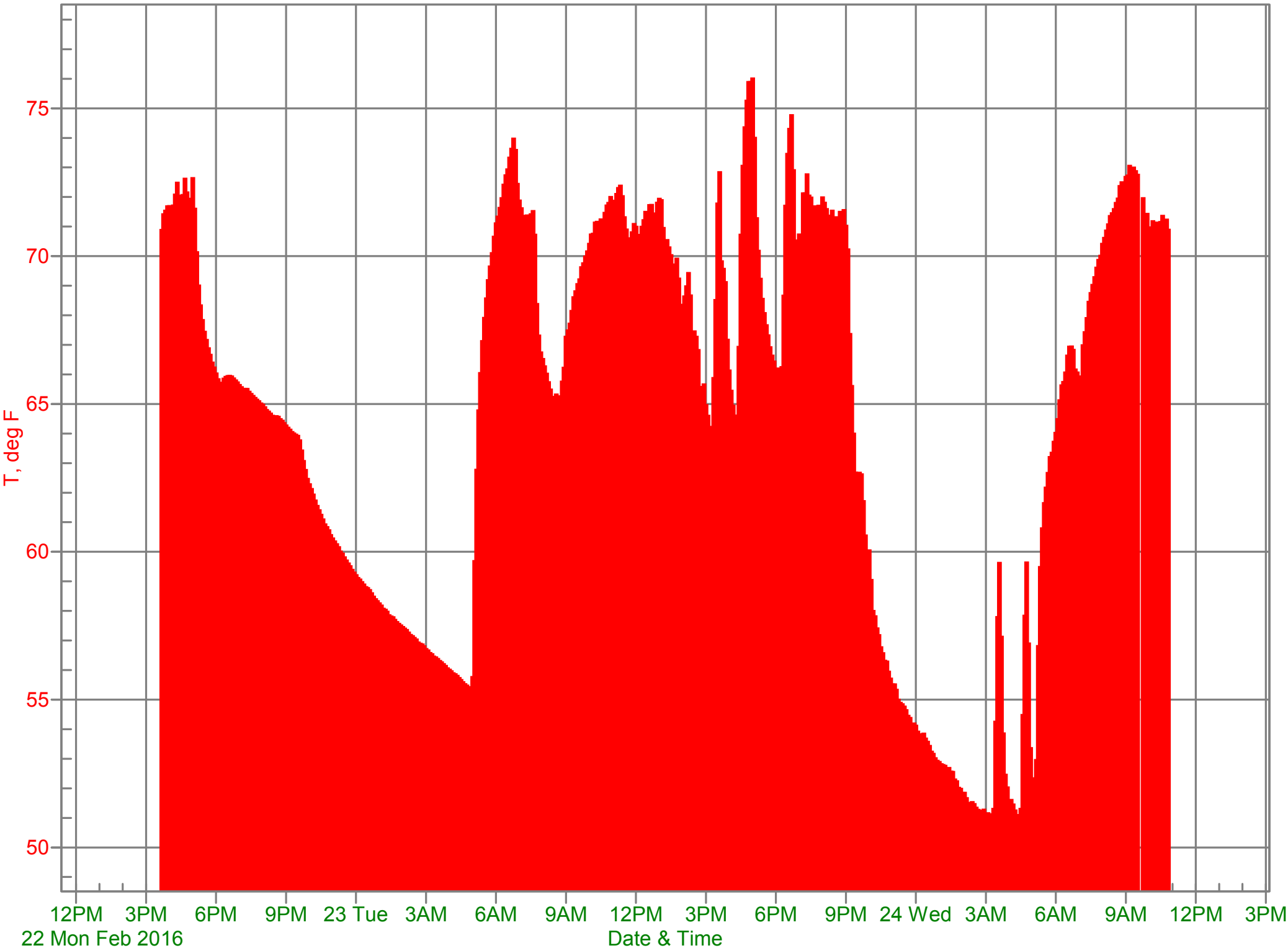
Results of Air Quality Testing

Room 6



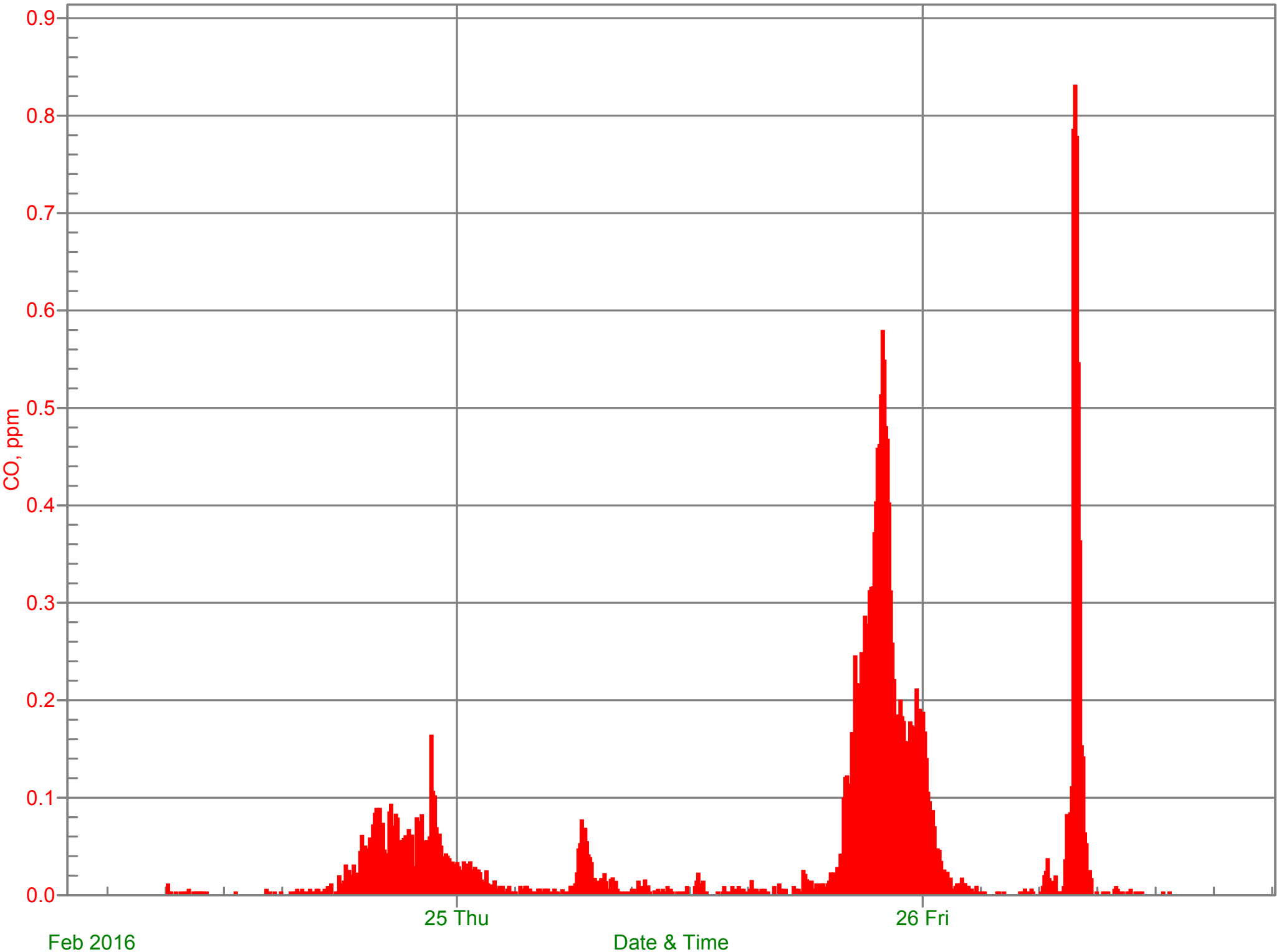
Results of Air Quality Testing

Room 6



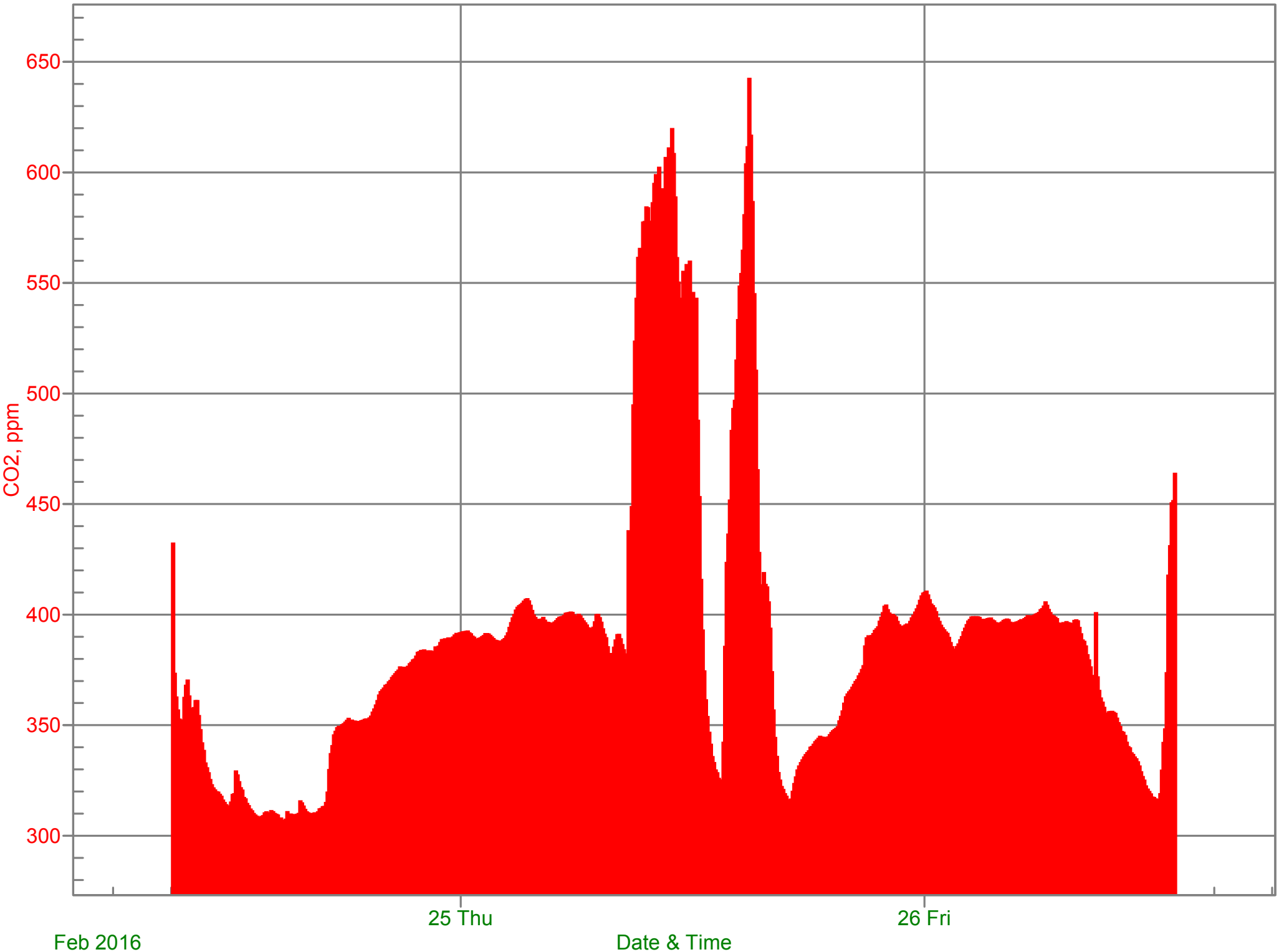
Results of Air Quality Testing

Room 7



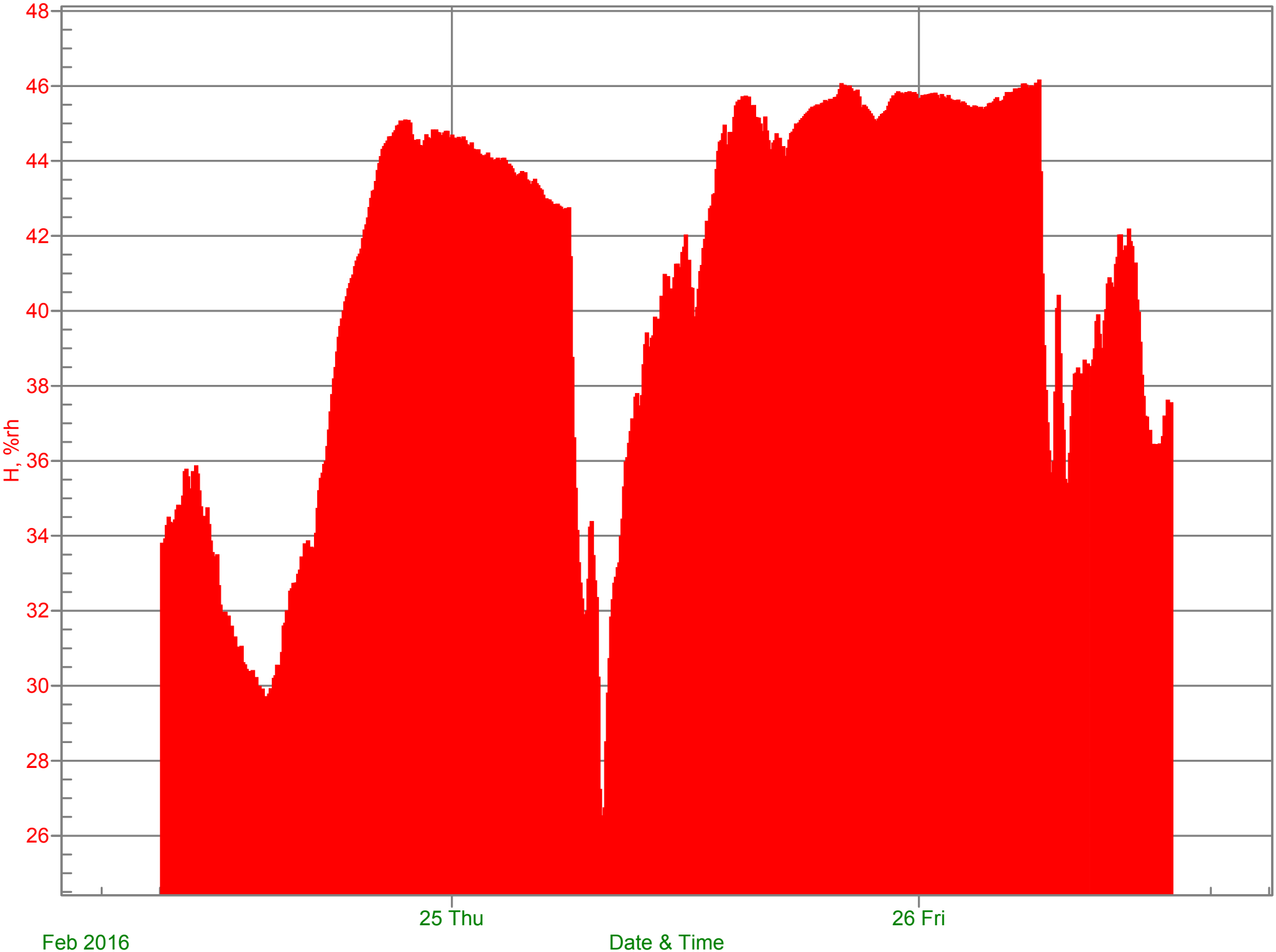
Results of Air Quality Testing

Room 7



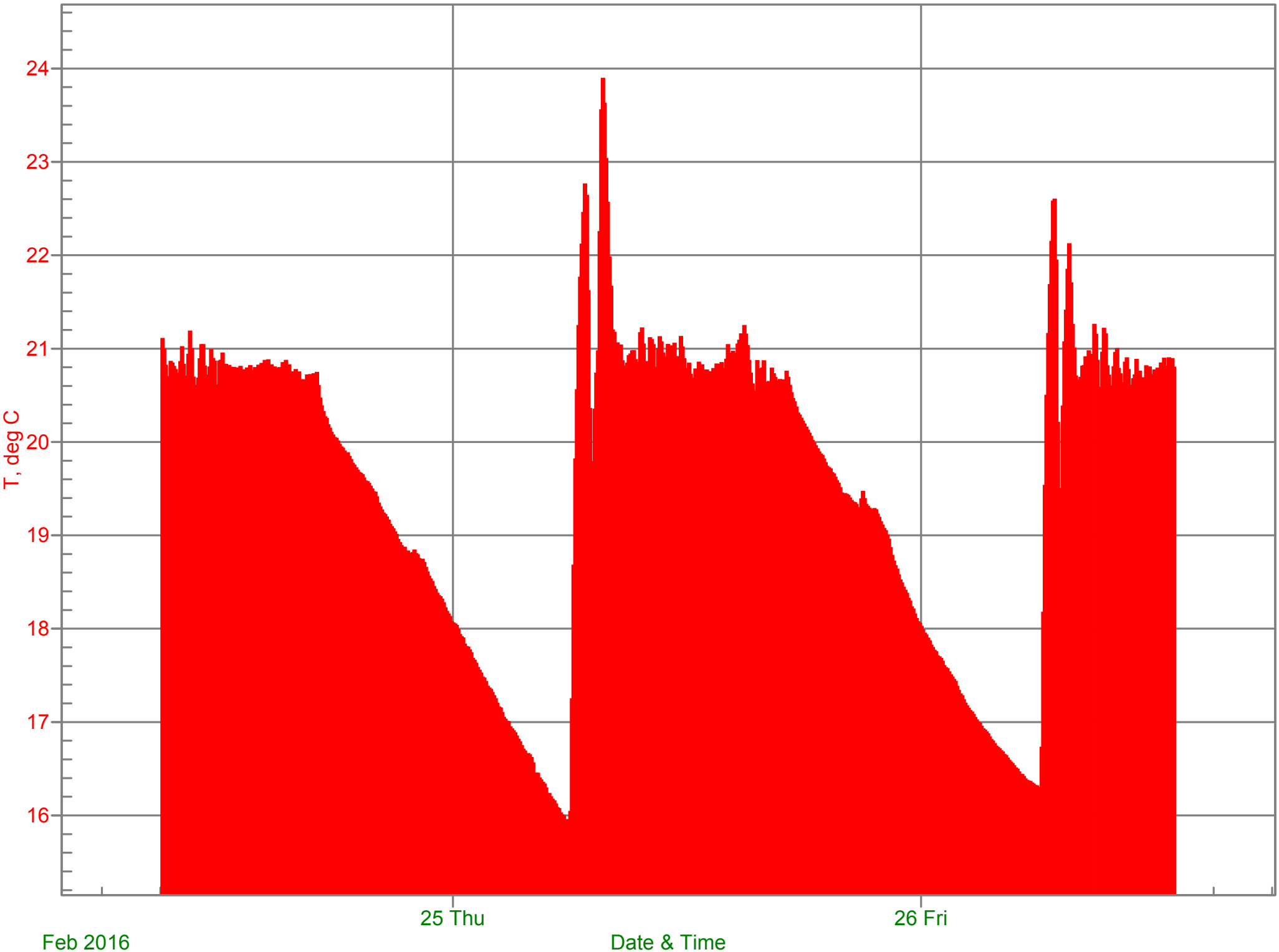
Results of Air Quality Testing

Room 7



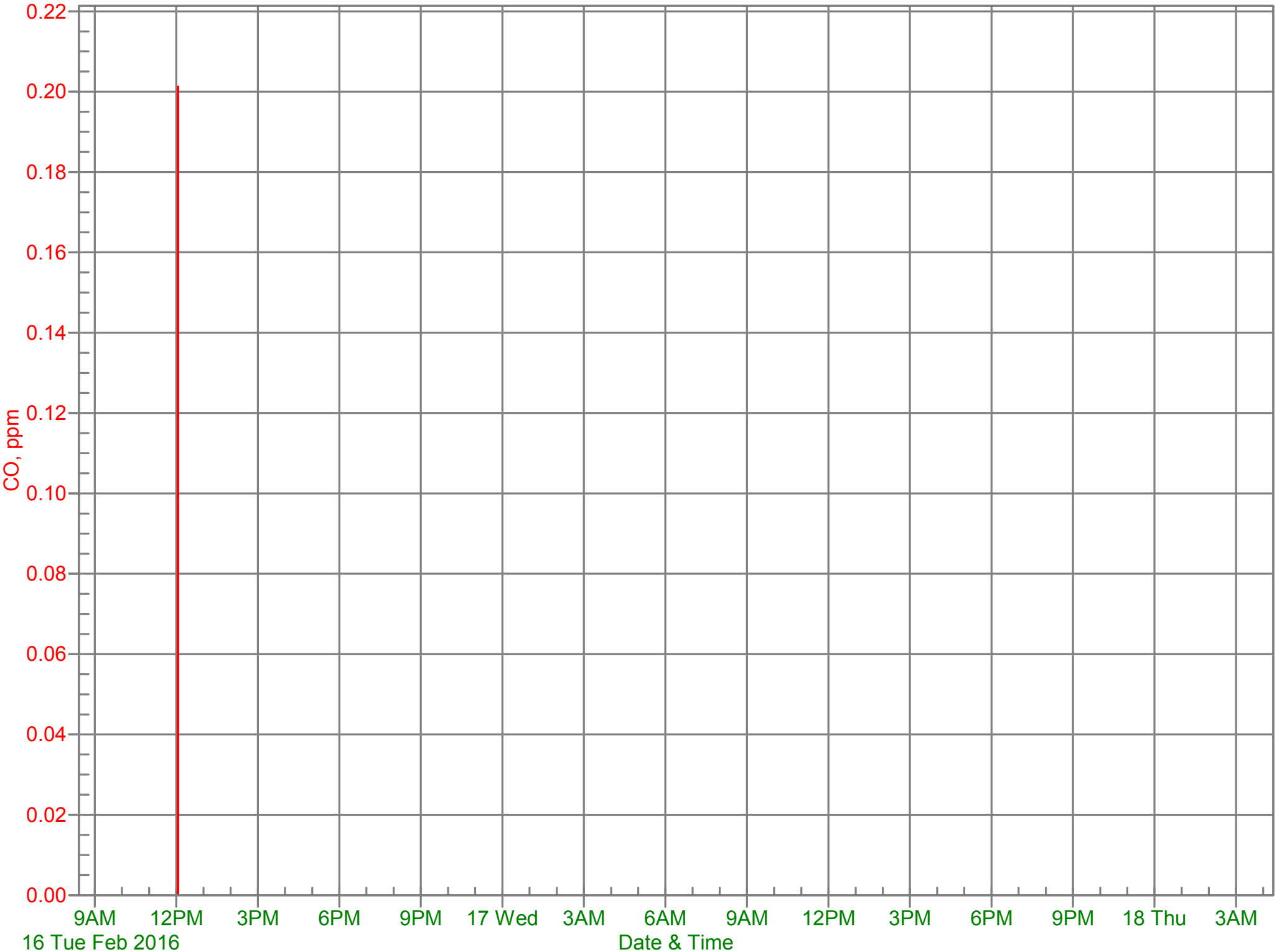
Results of Air Quality Testing

Room 7



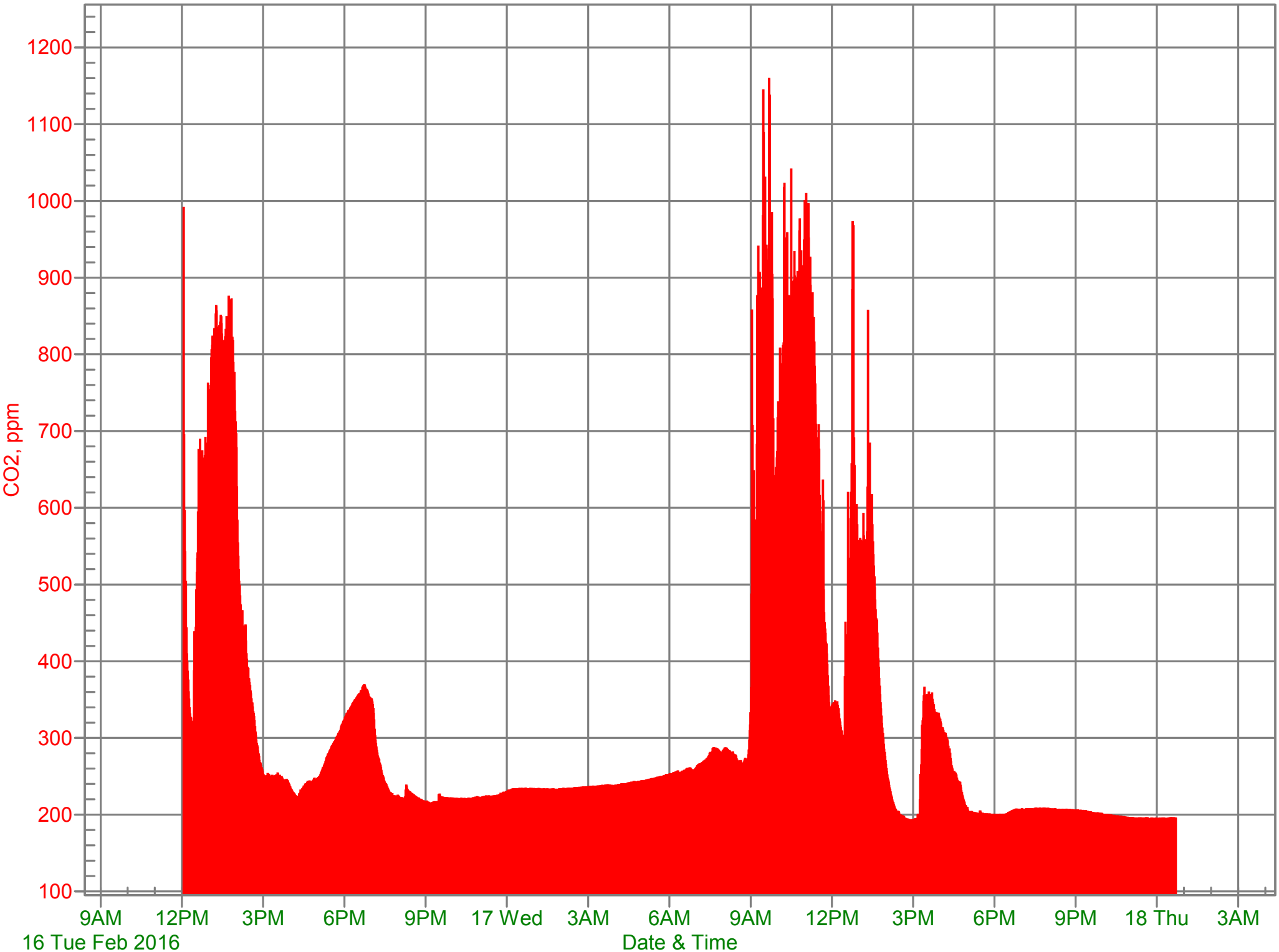
Results of Air Quality Testing

Room 9



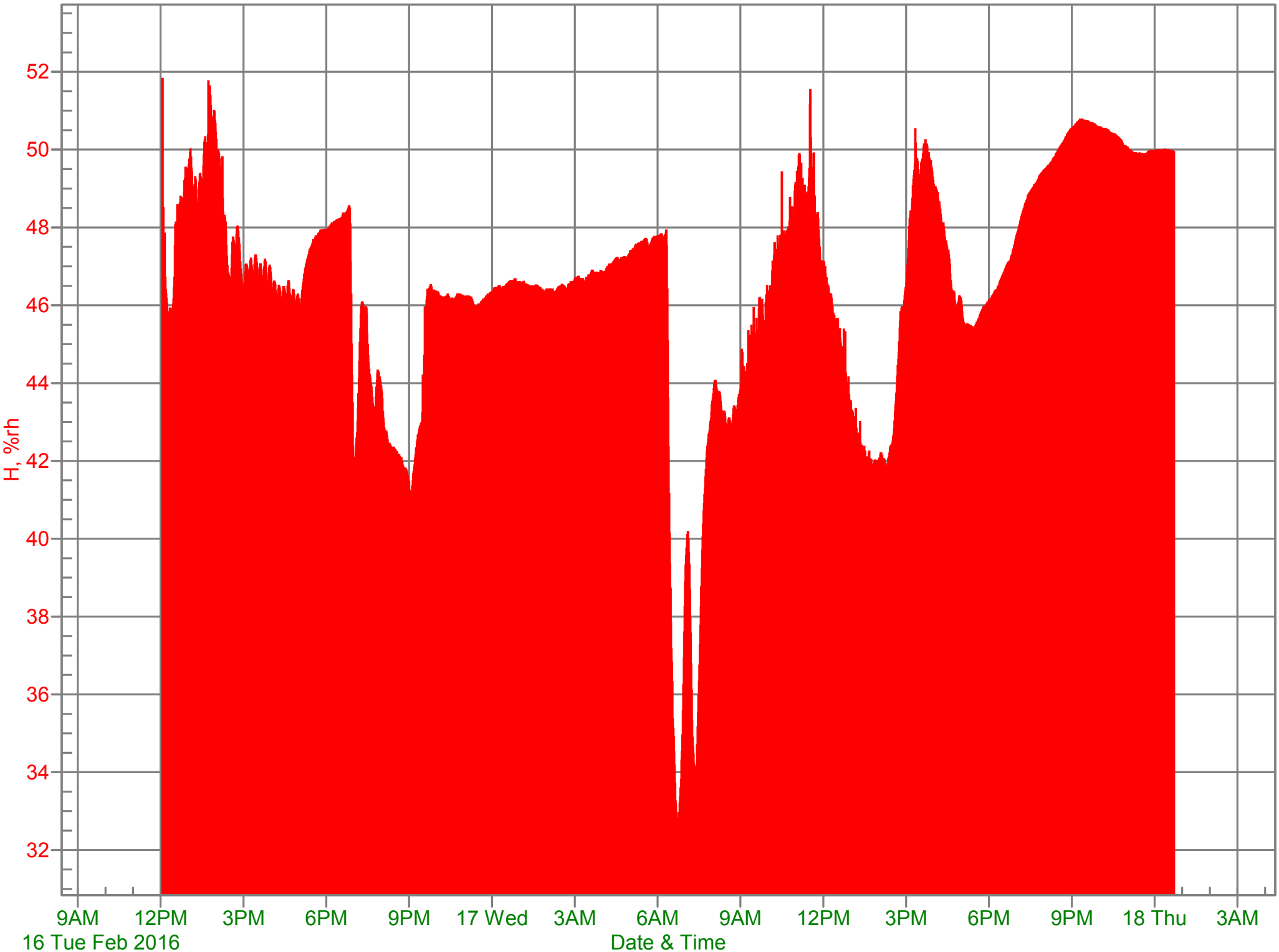
Results of Air Quality Testing

Room 9



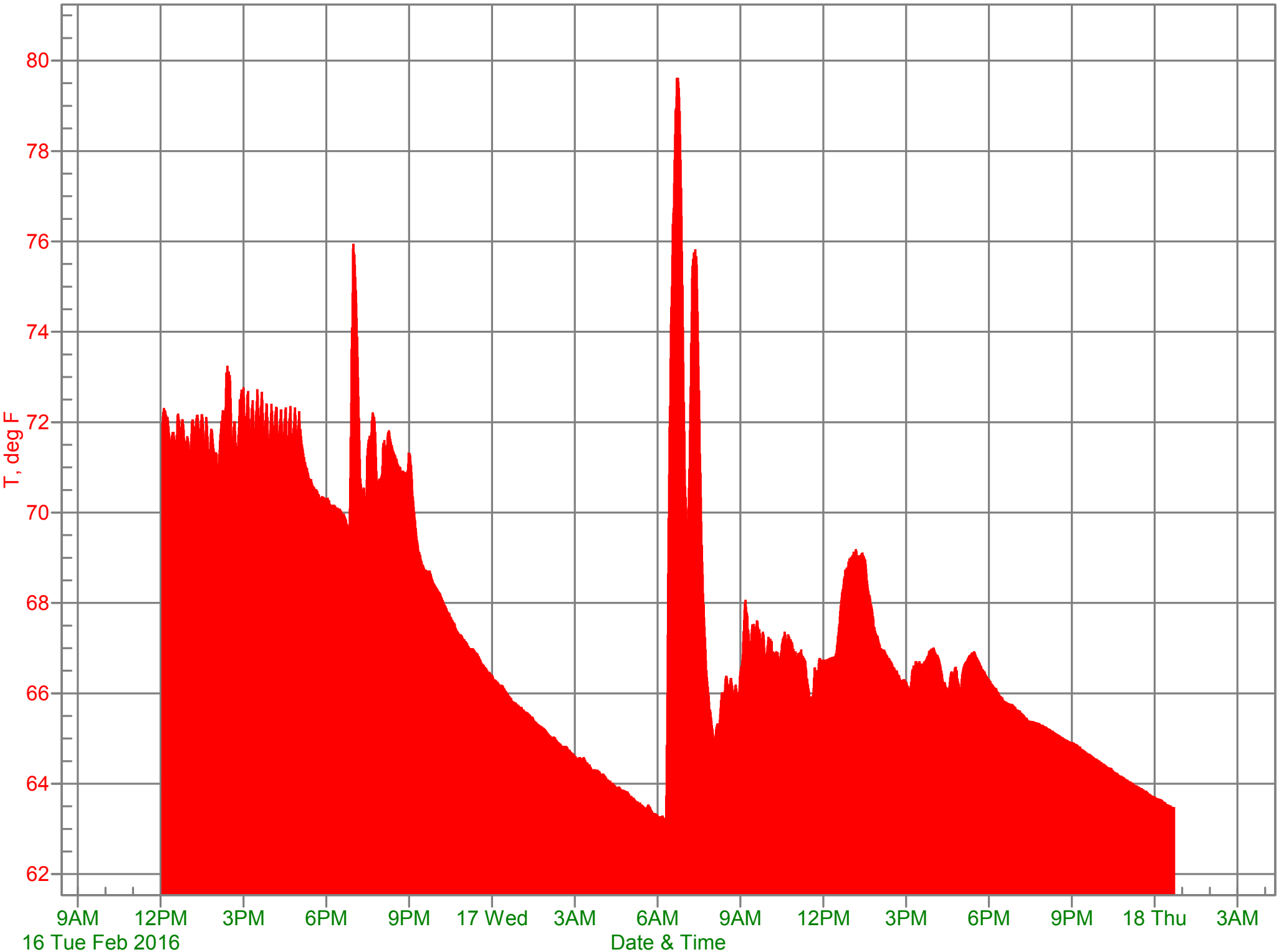
Results of Air Quality Testing

Room 9



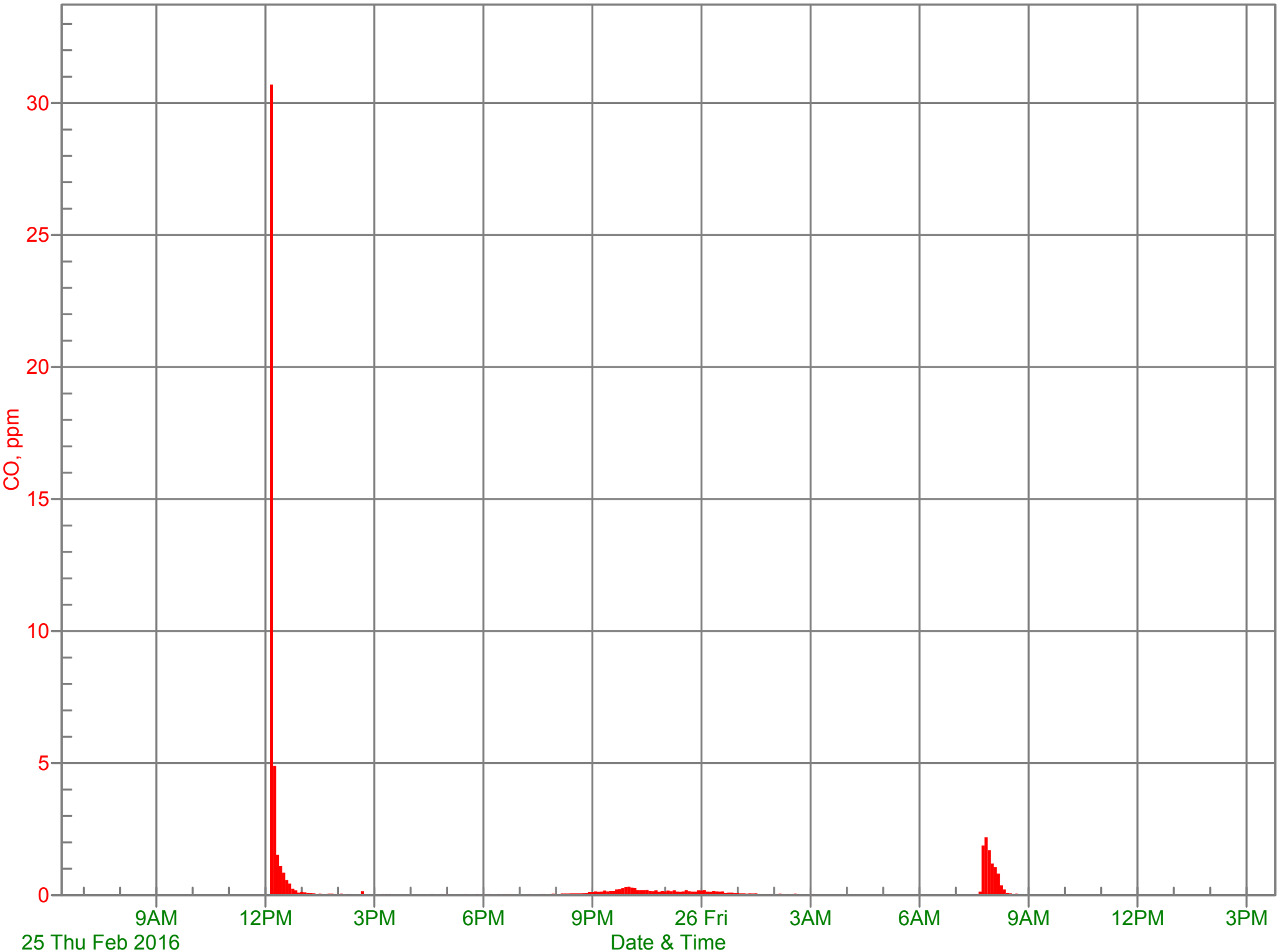
Results of Air Quality Testing

Room 9



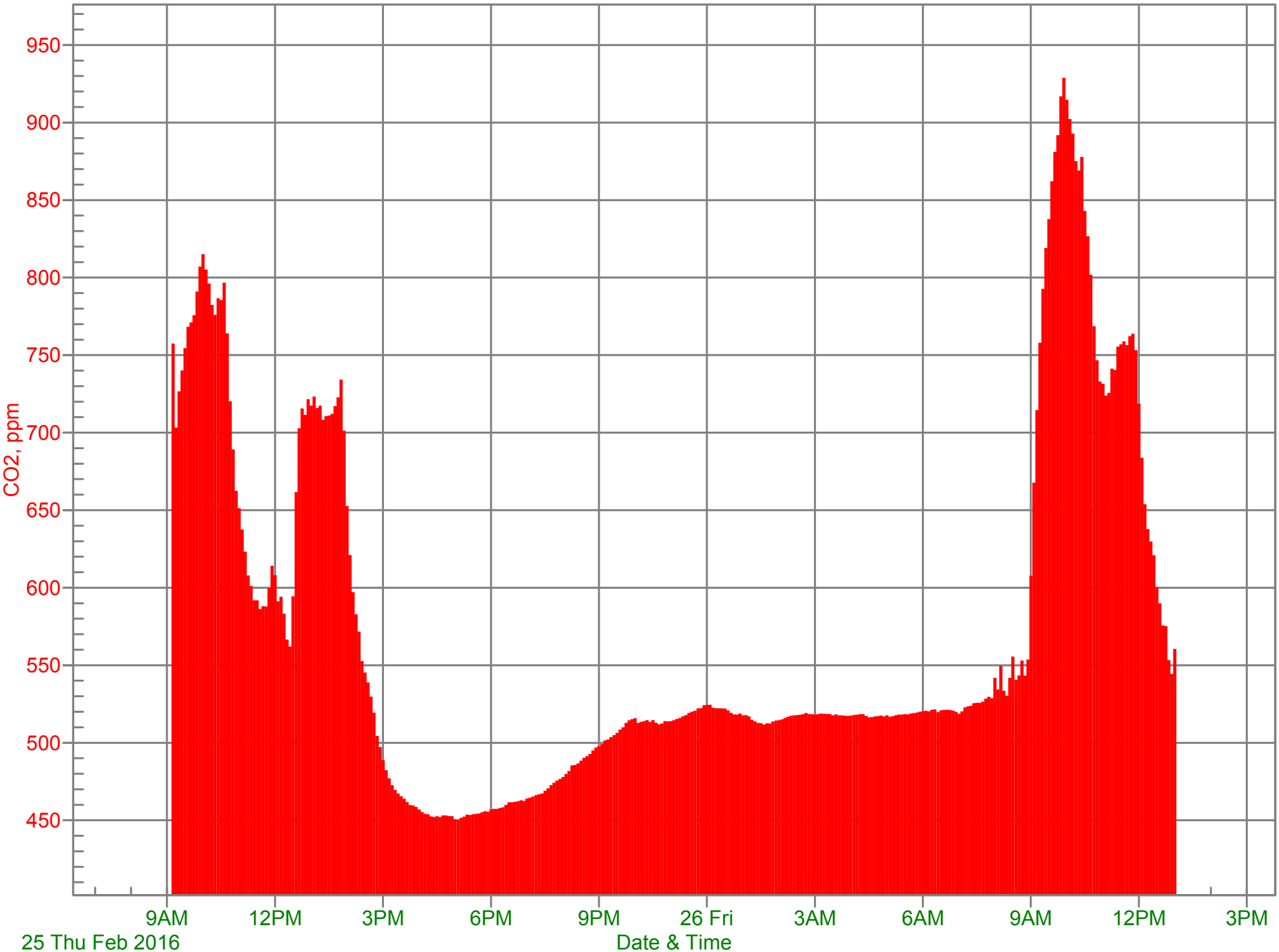
Results of Air Quality Testing

Room 11



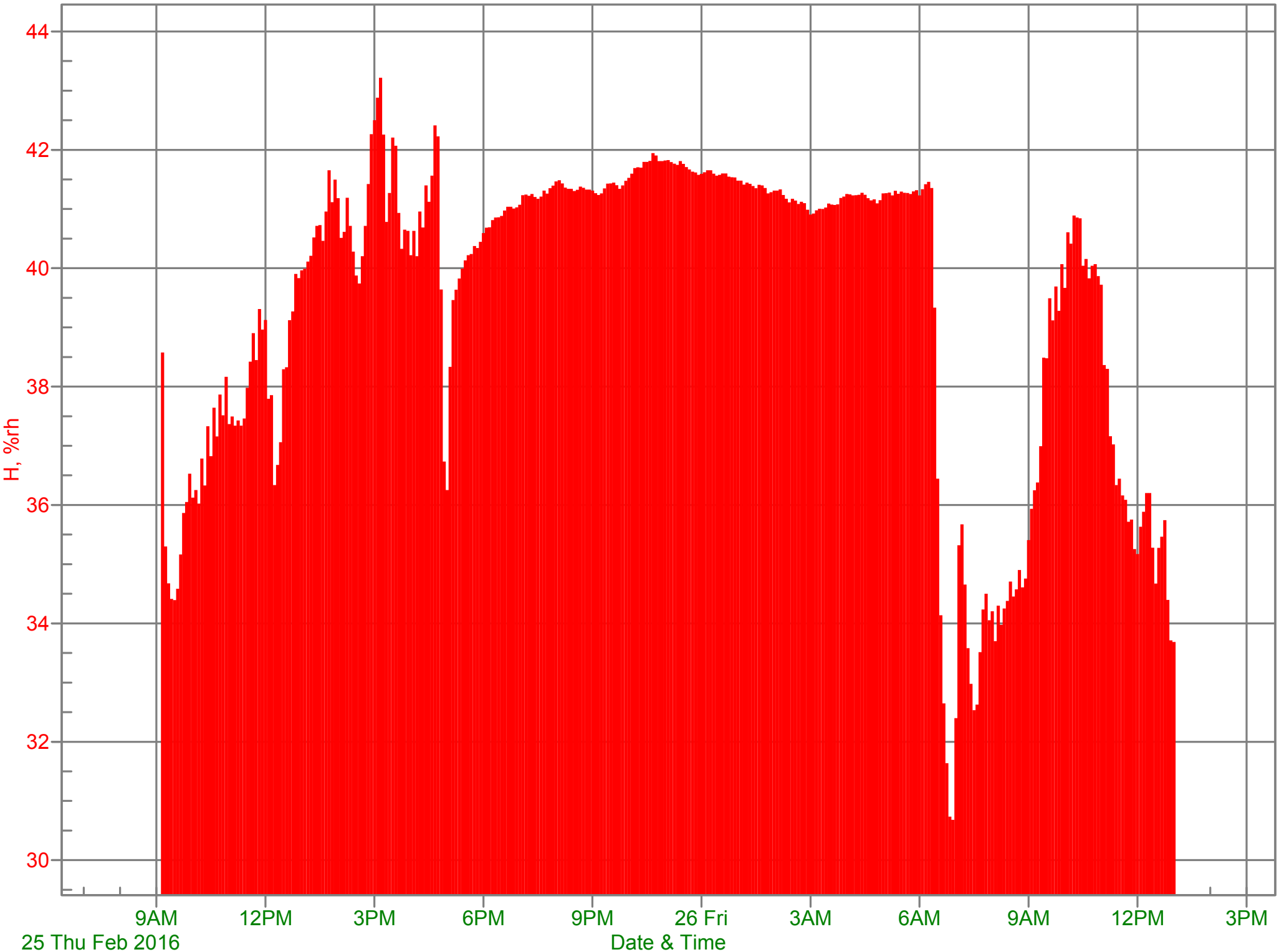
Results of Air Quality Testing

Room 11



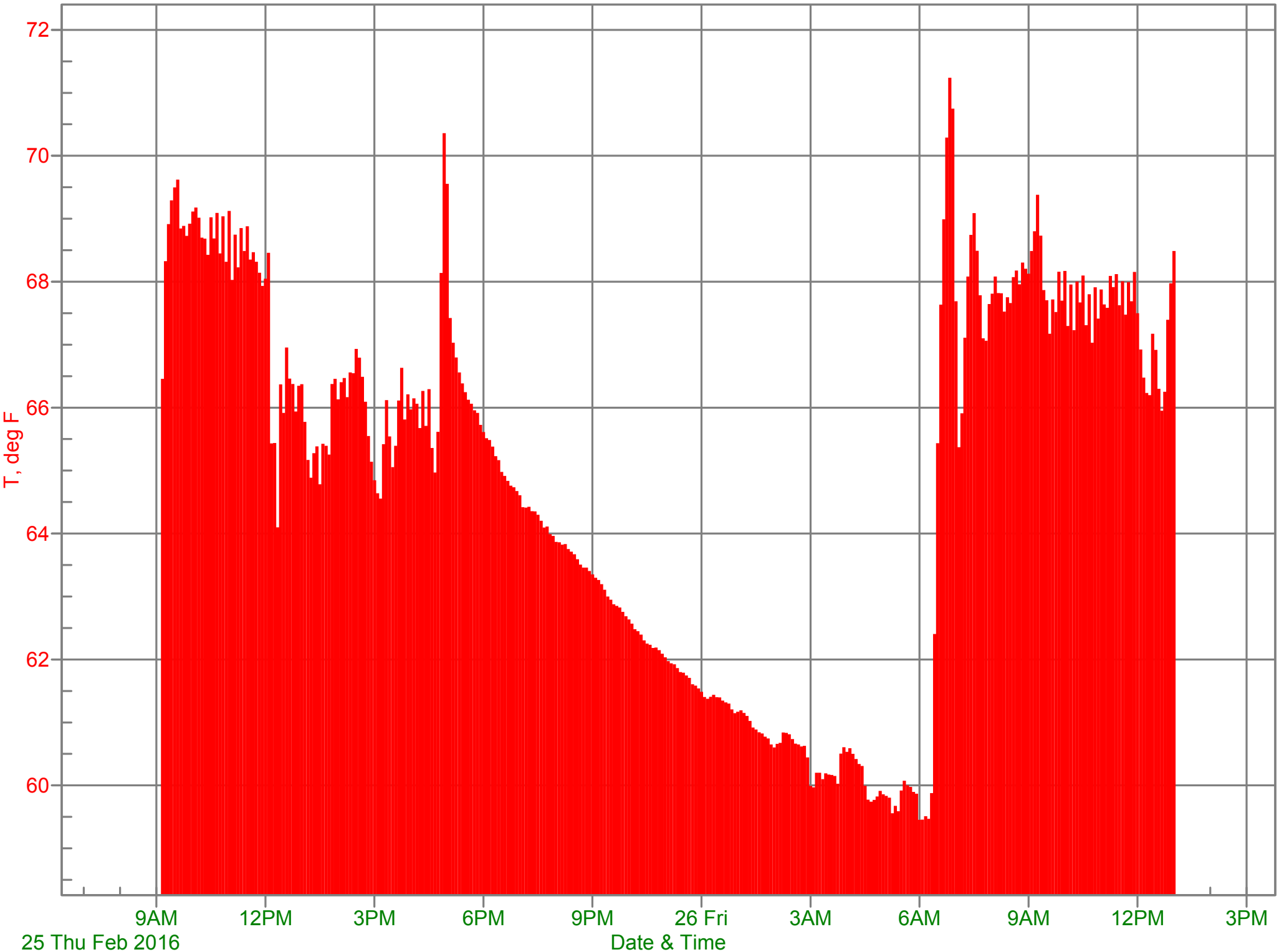
Results of Air Quality Testing

Room 11



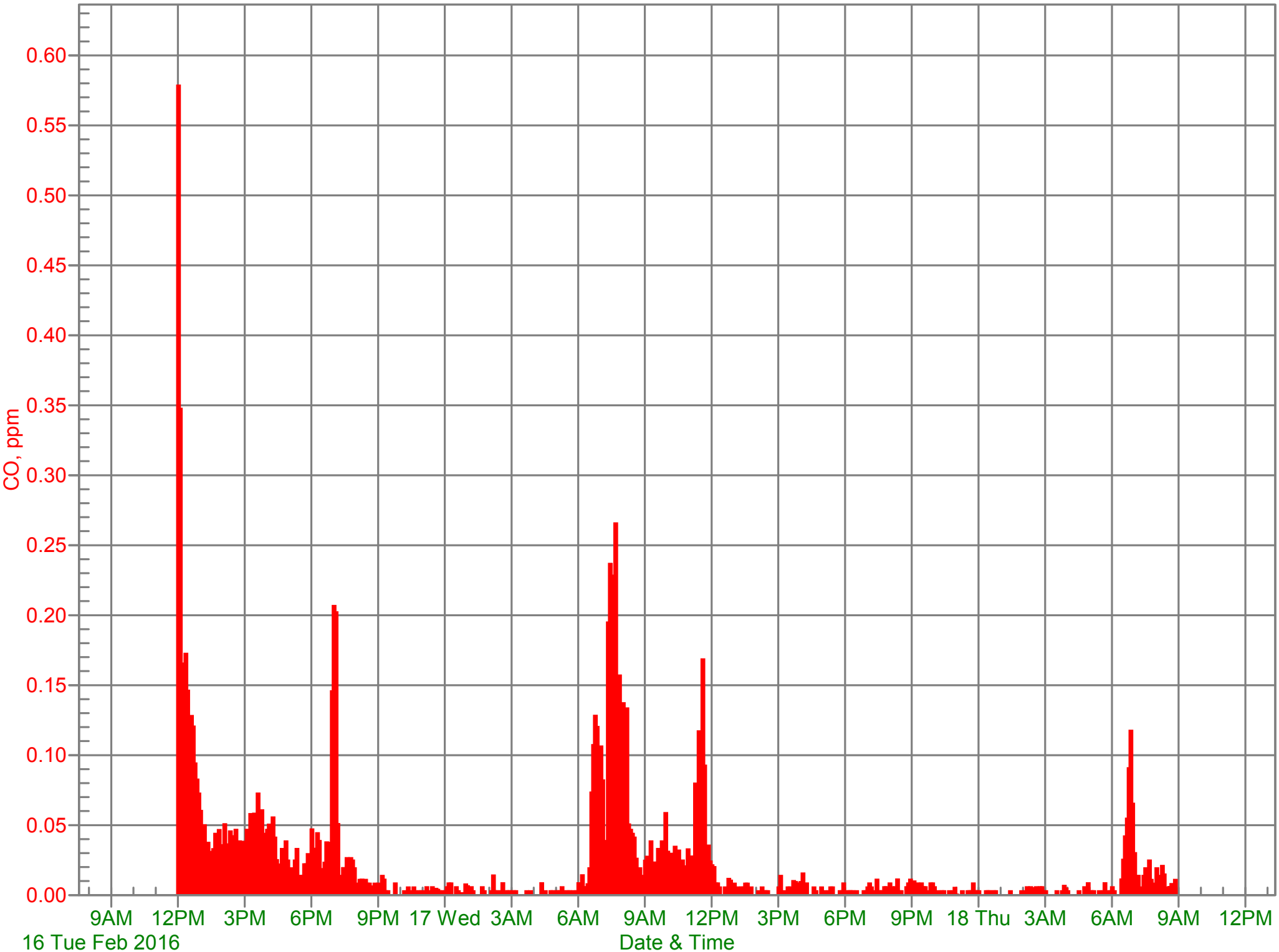
Results of Air Quality Testing

Room 11



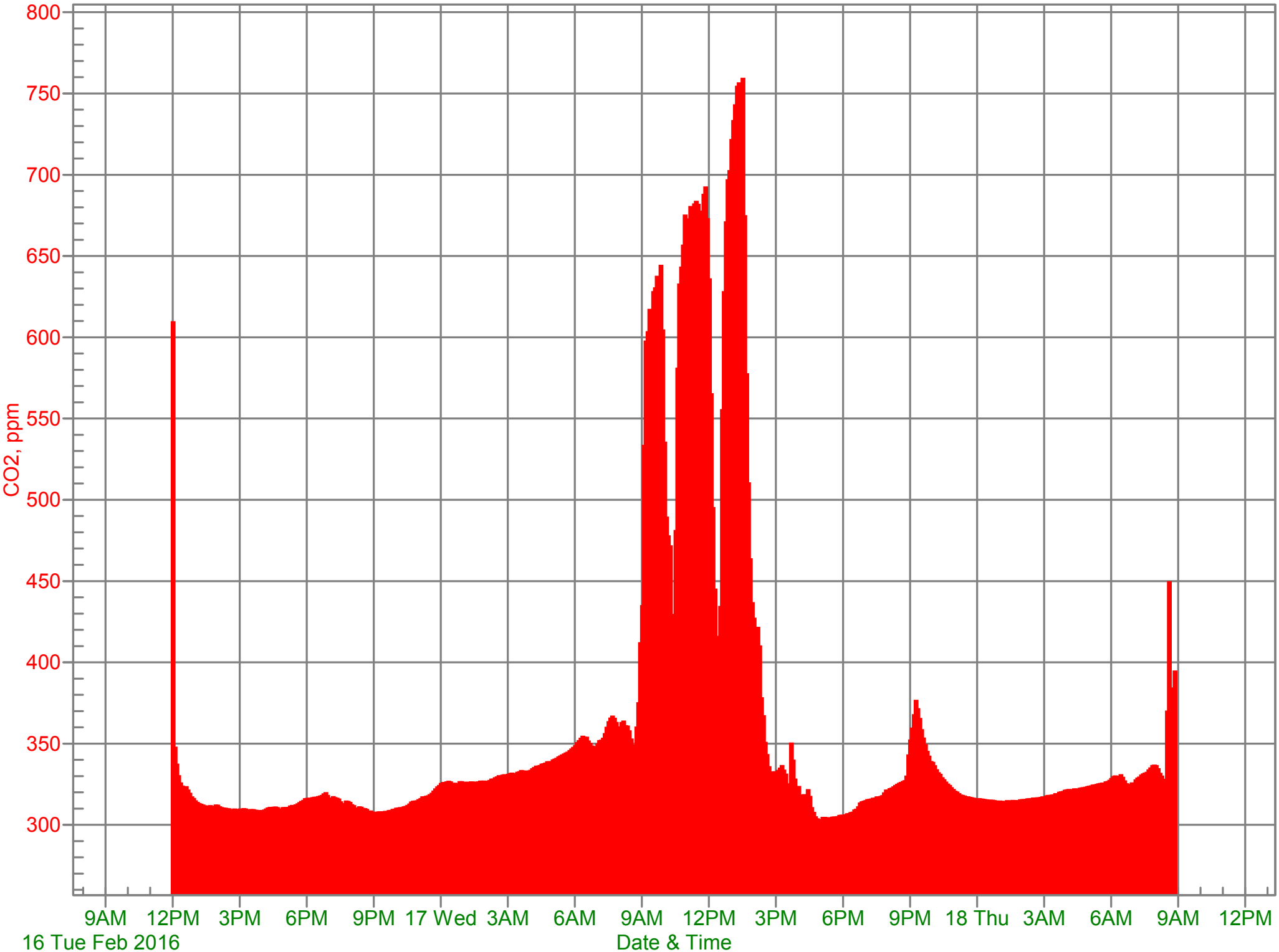
Results of Air Quality Testing

Room 14



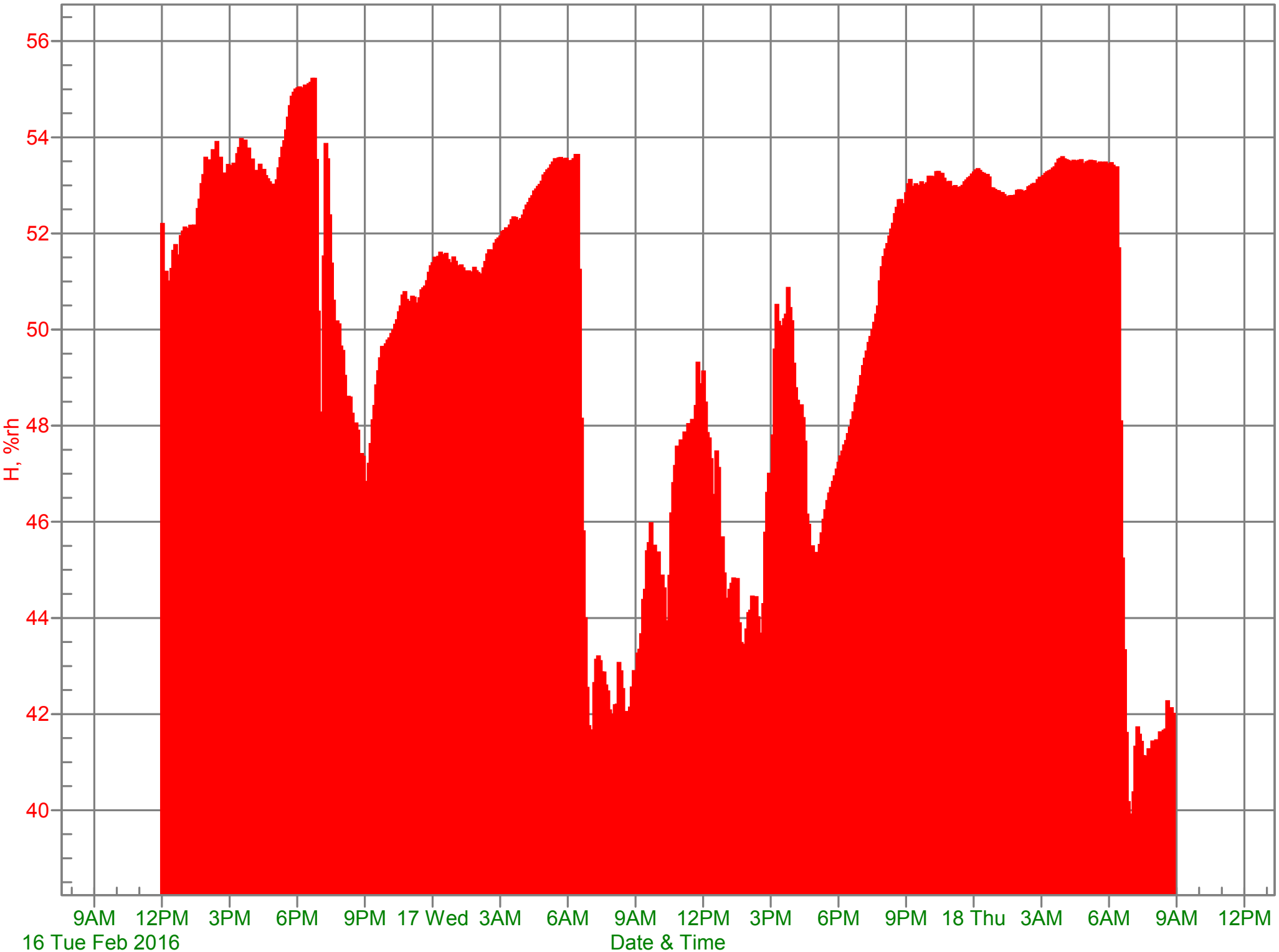
Results of Air Quality Testing

Room 14



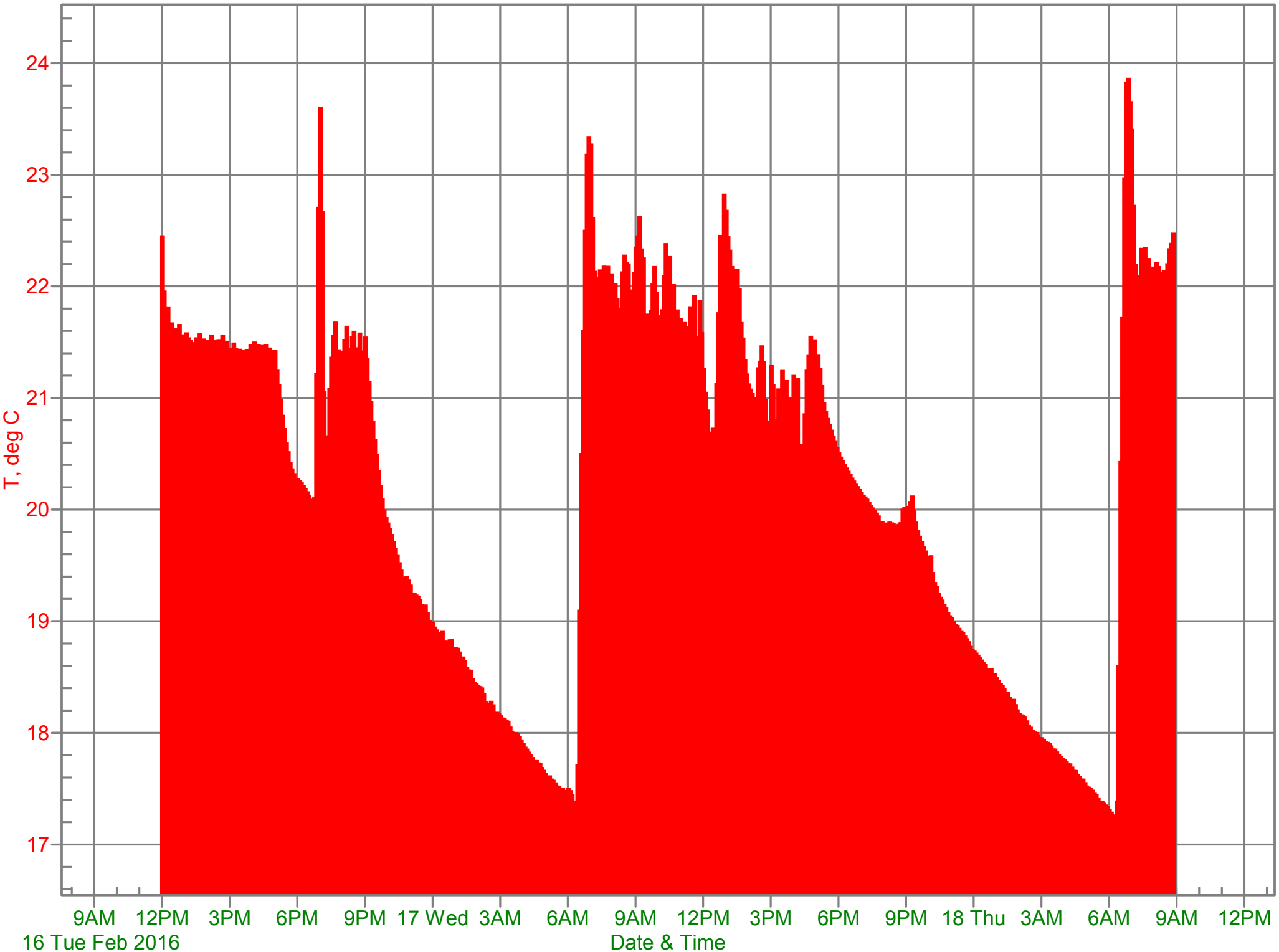
Results of Air Quality Testing

Room 14



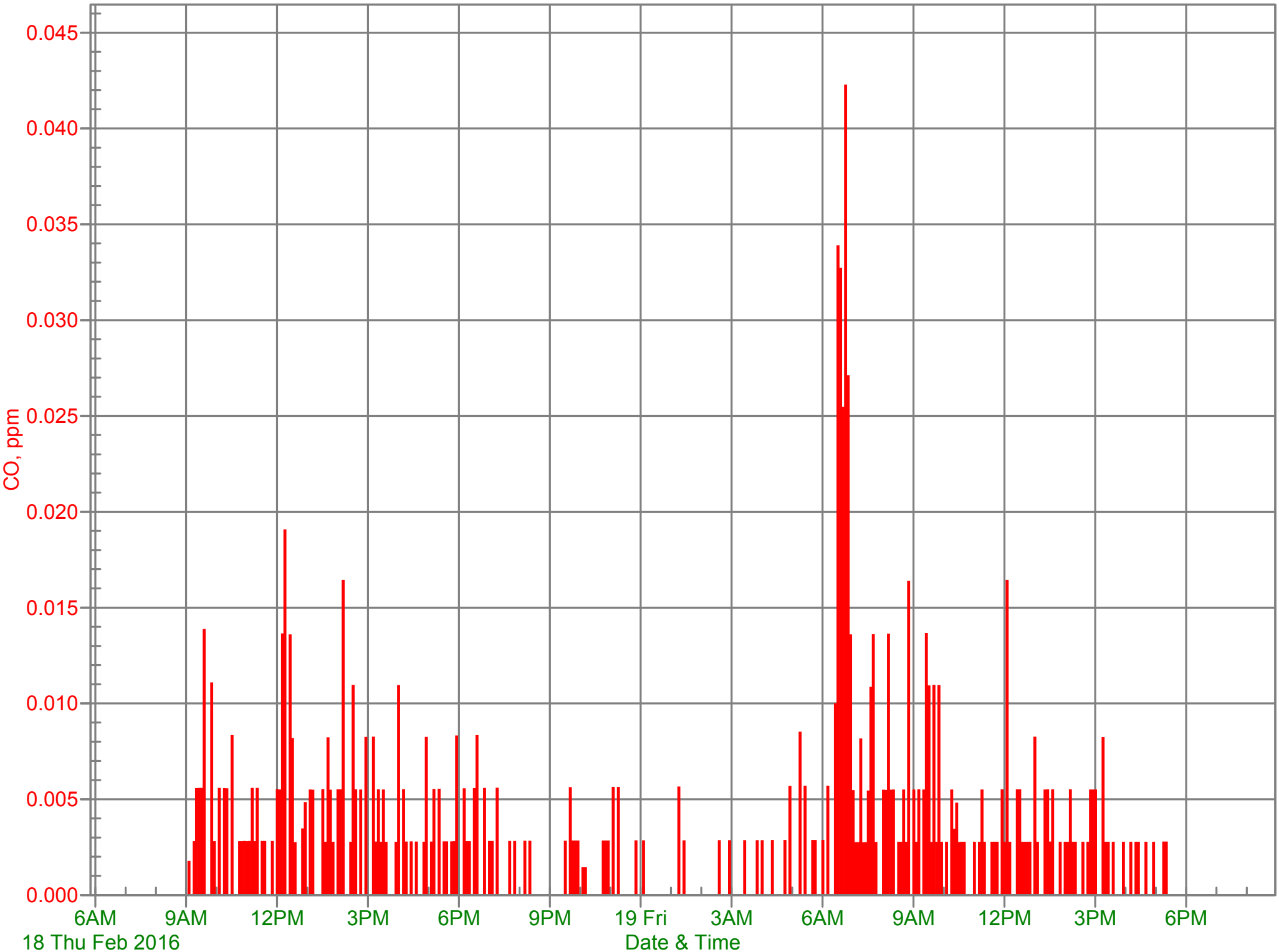
Results of Air Quality Testing

Room 14



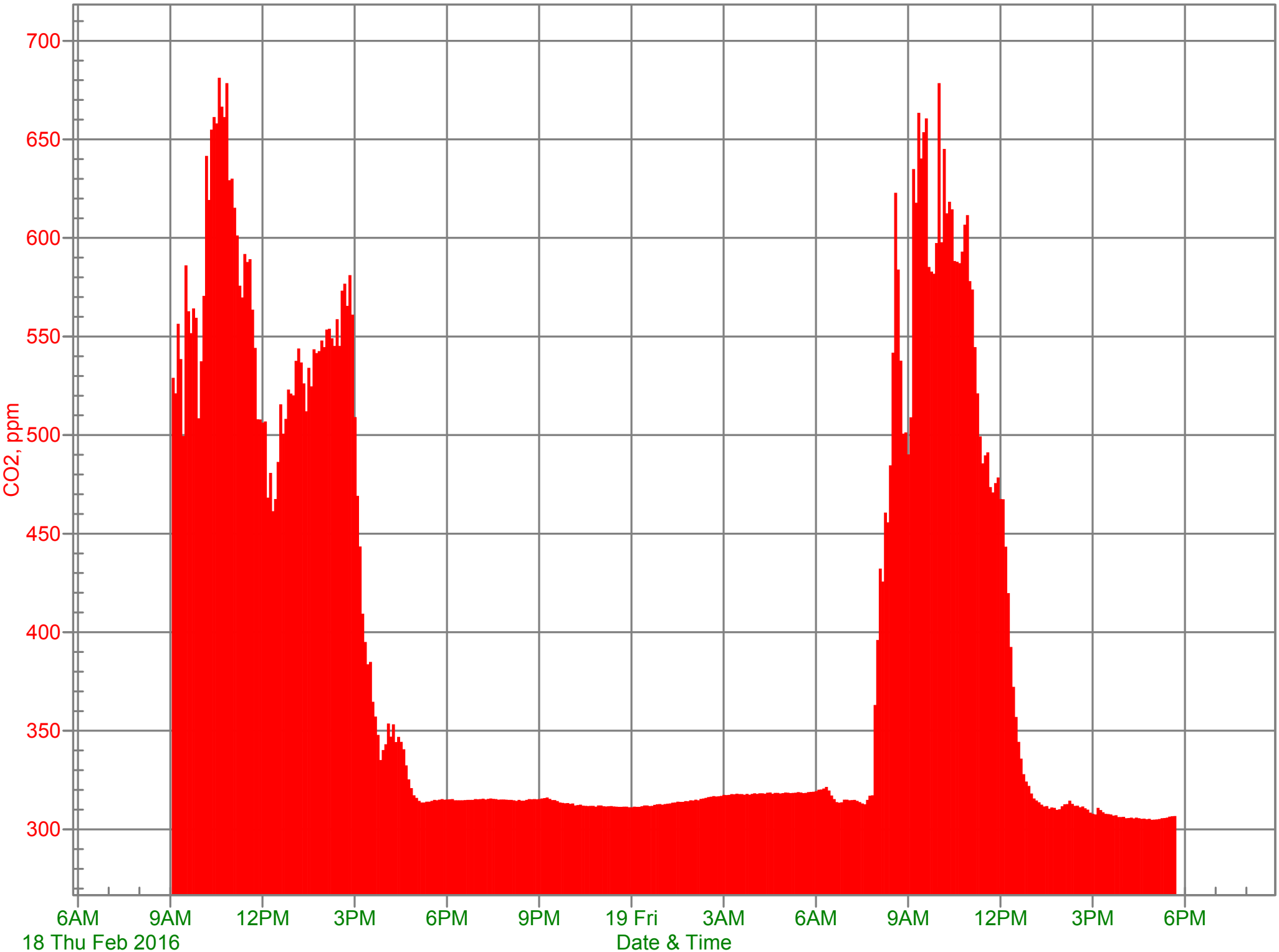
Results of Air Quality Testing

Room 18



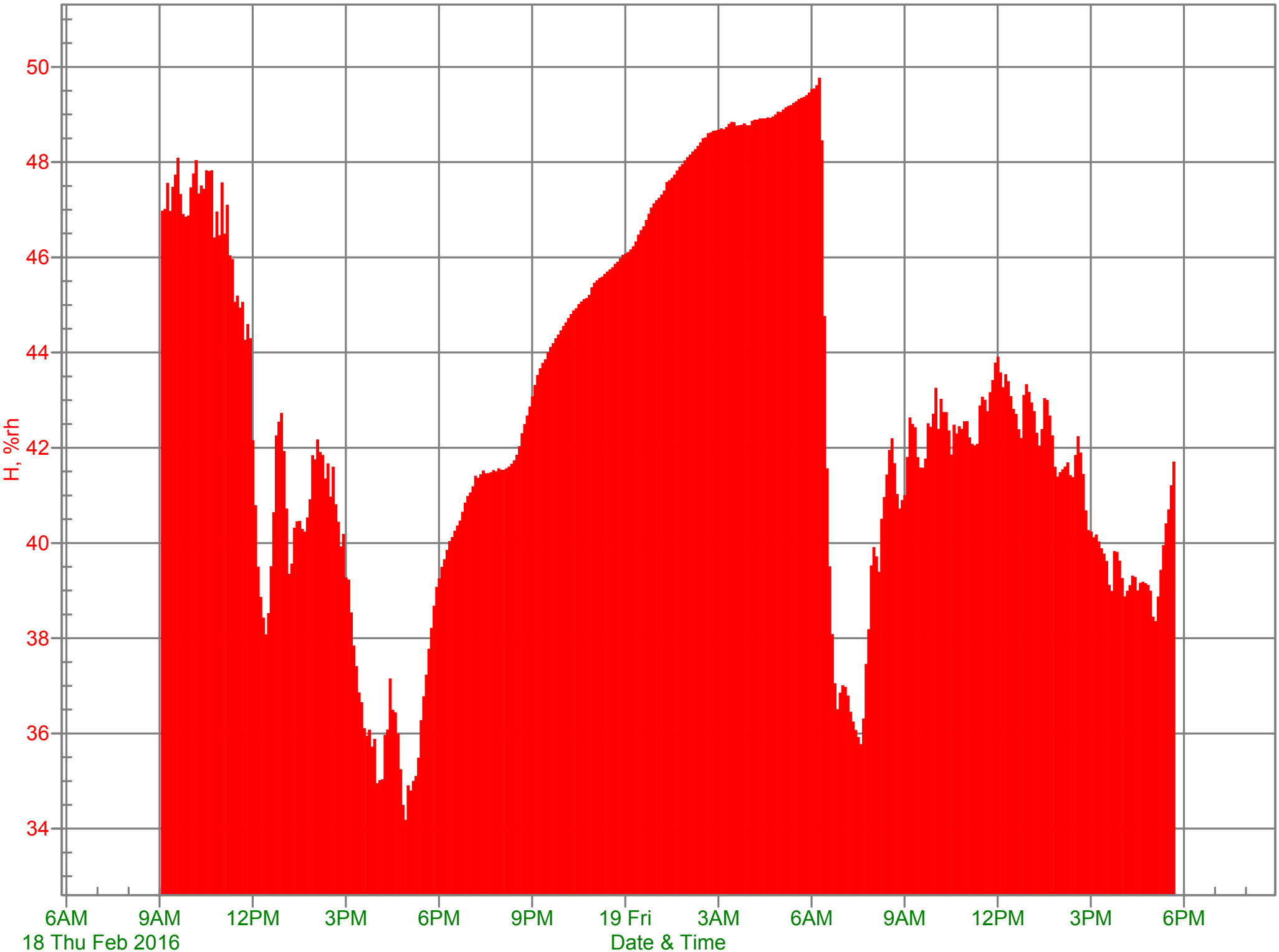
Results of Air Quality Testing

Room 18



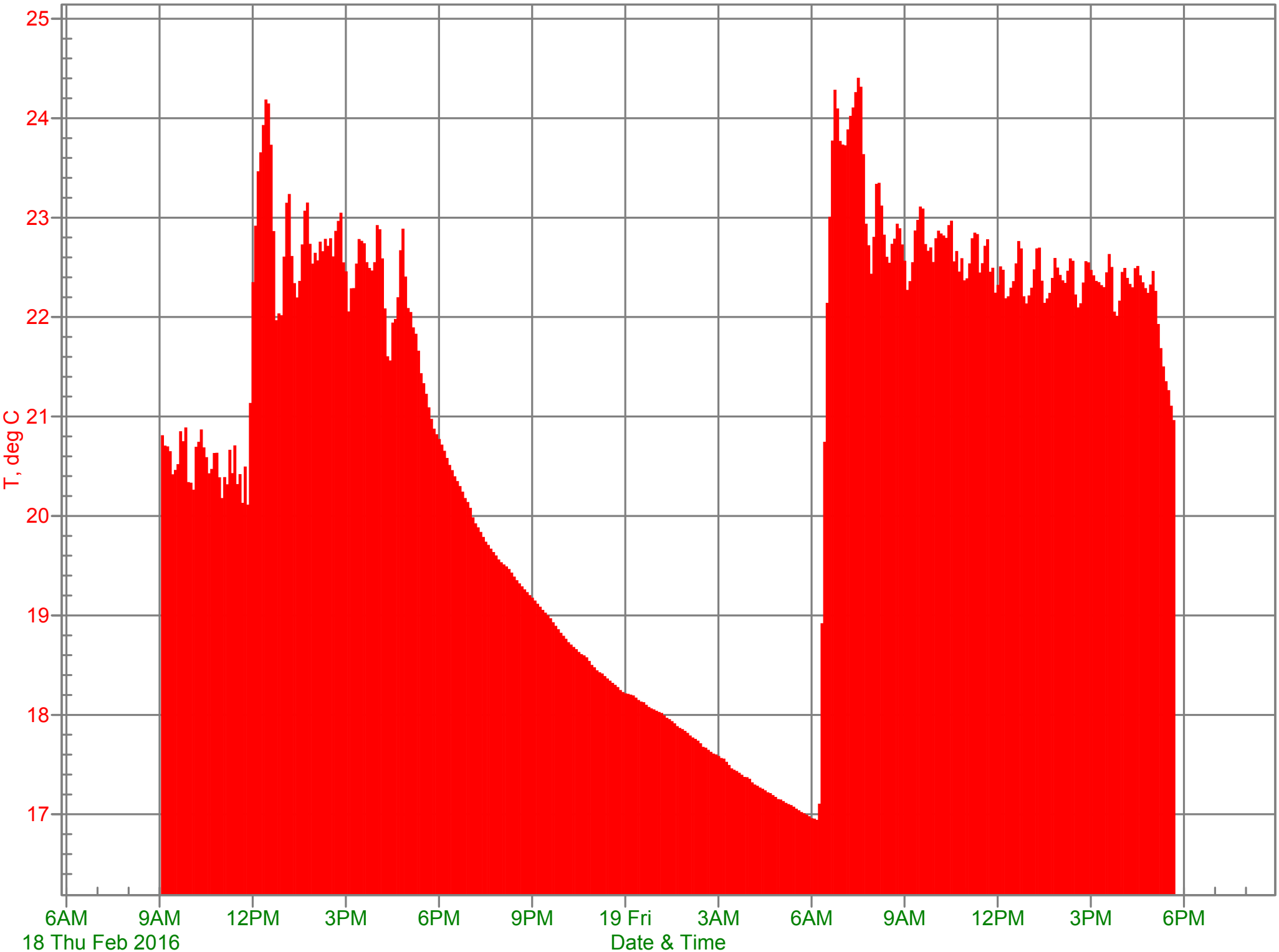
Results of Air Quality Testing

Room 18



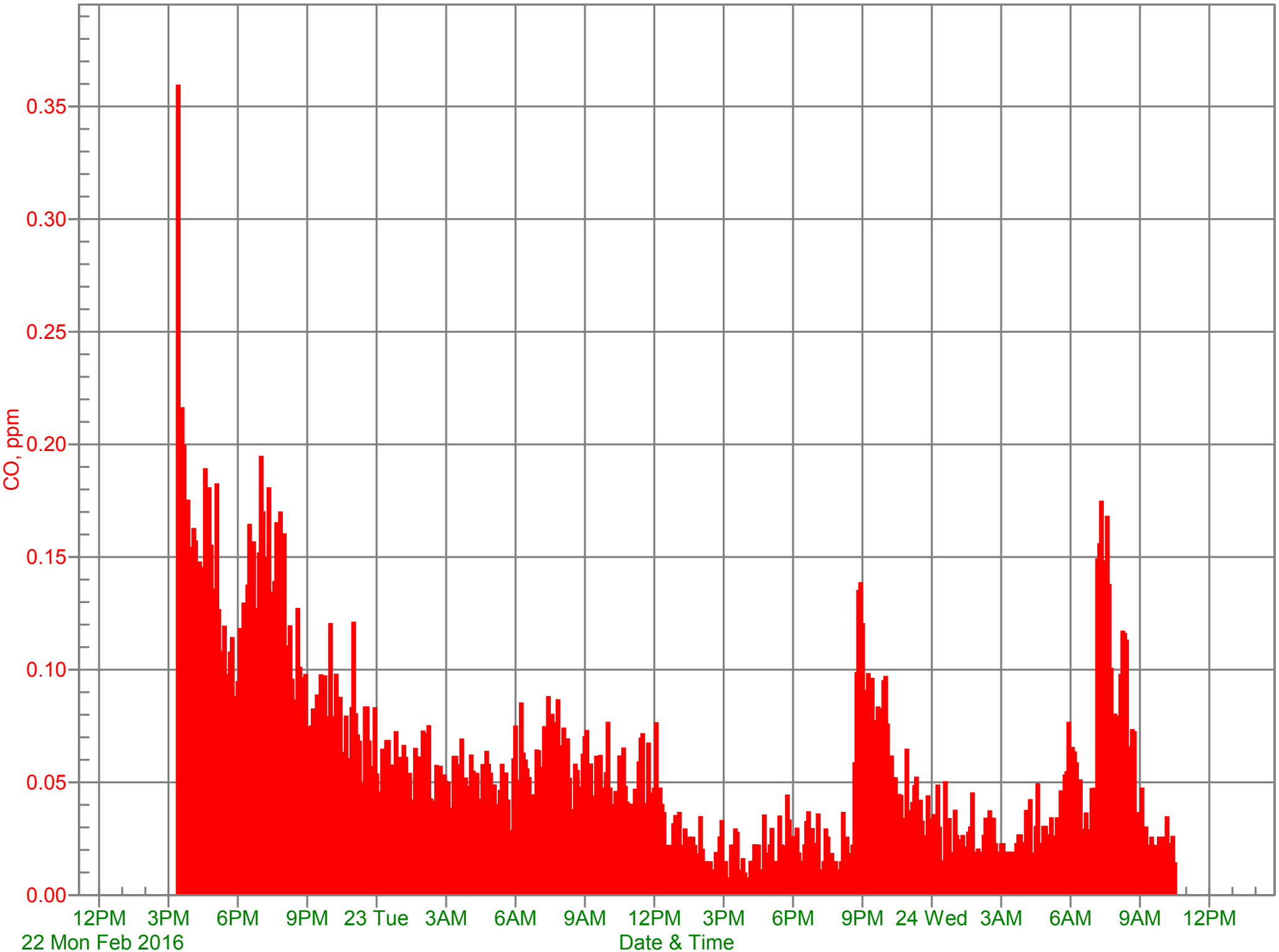
Results of Air Quality Testing

Room 18



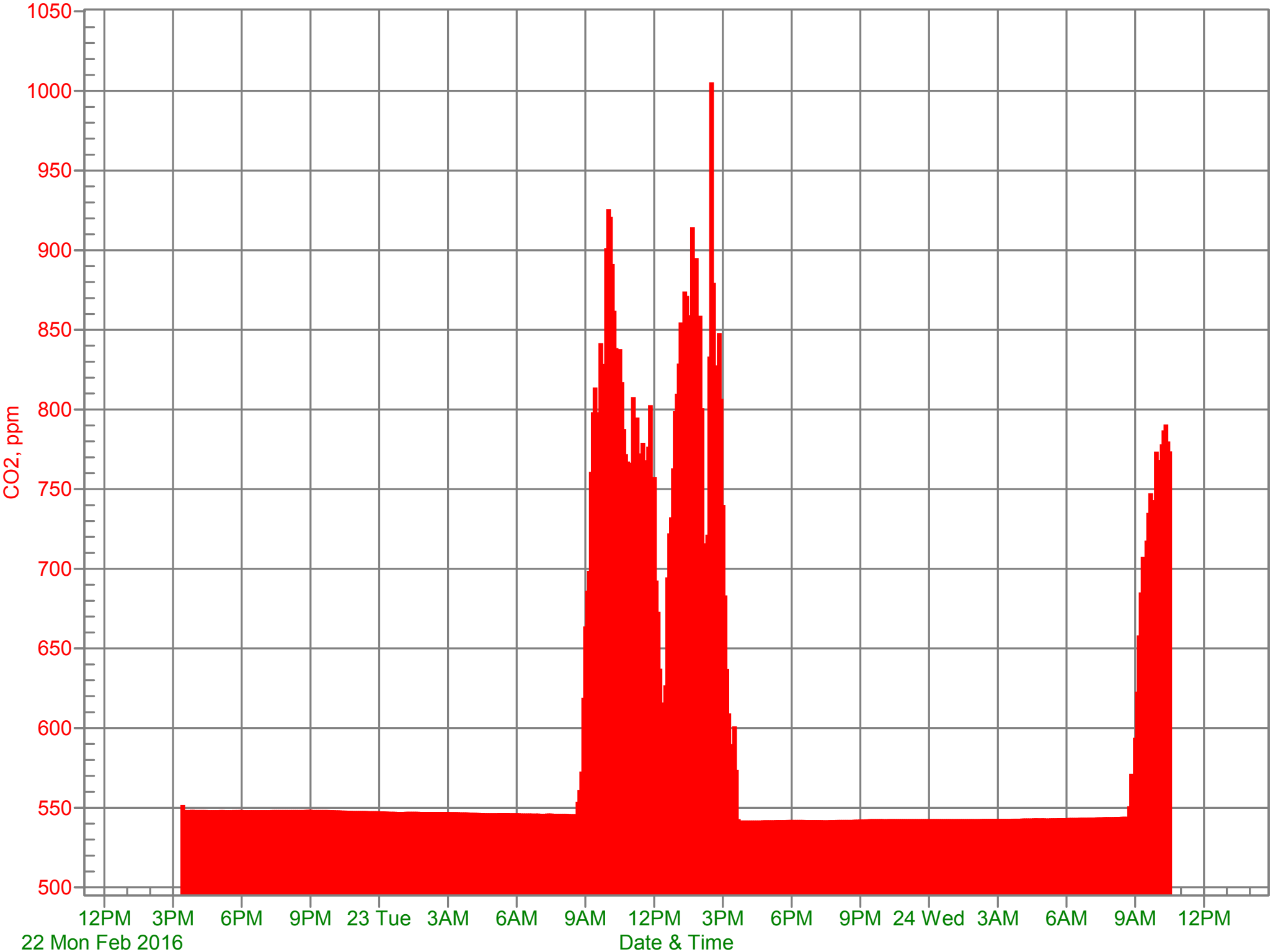
Results of Air Quality Testing

Room 20



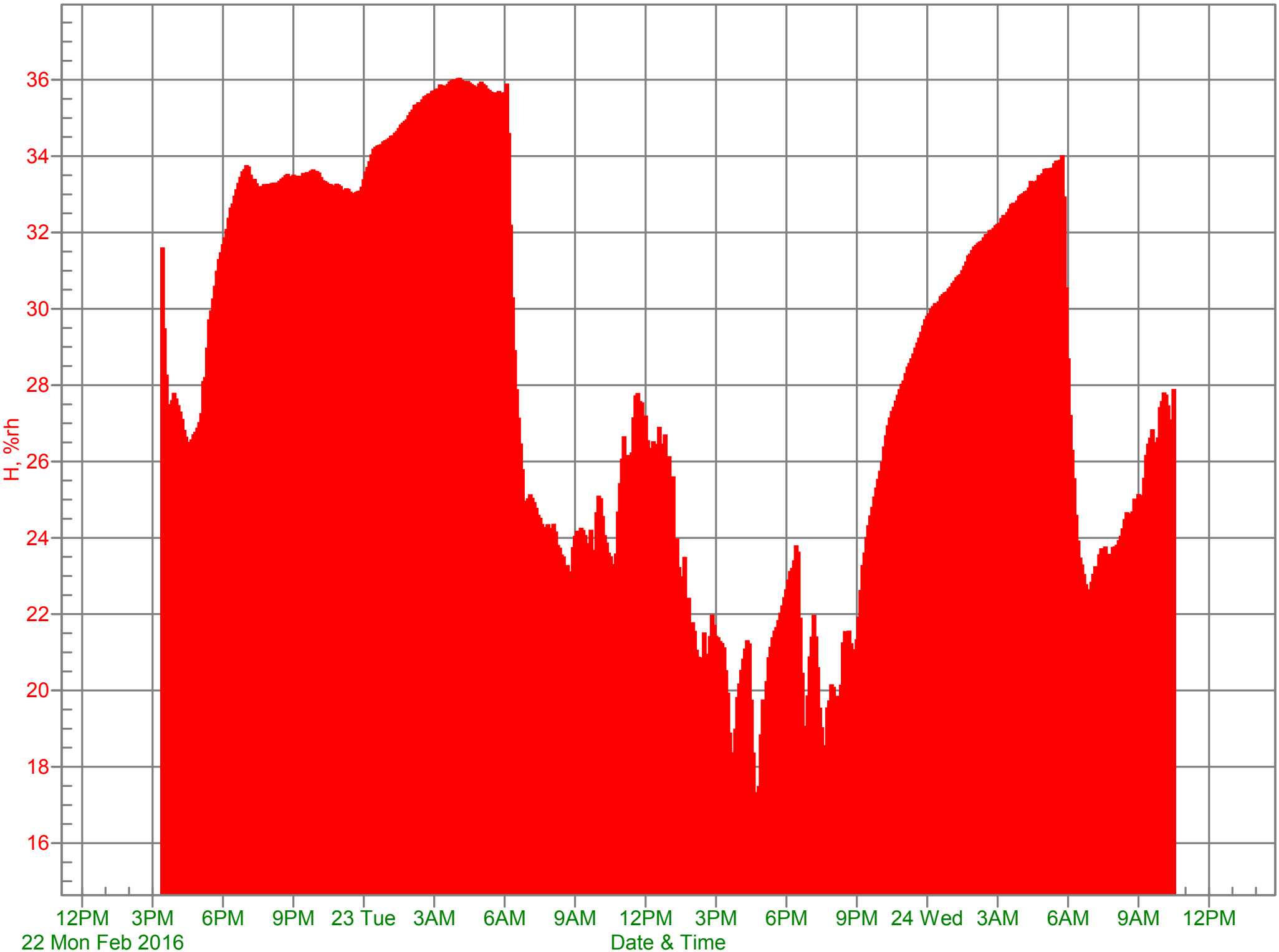
Results of Air Quality Testing

Room 20



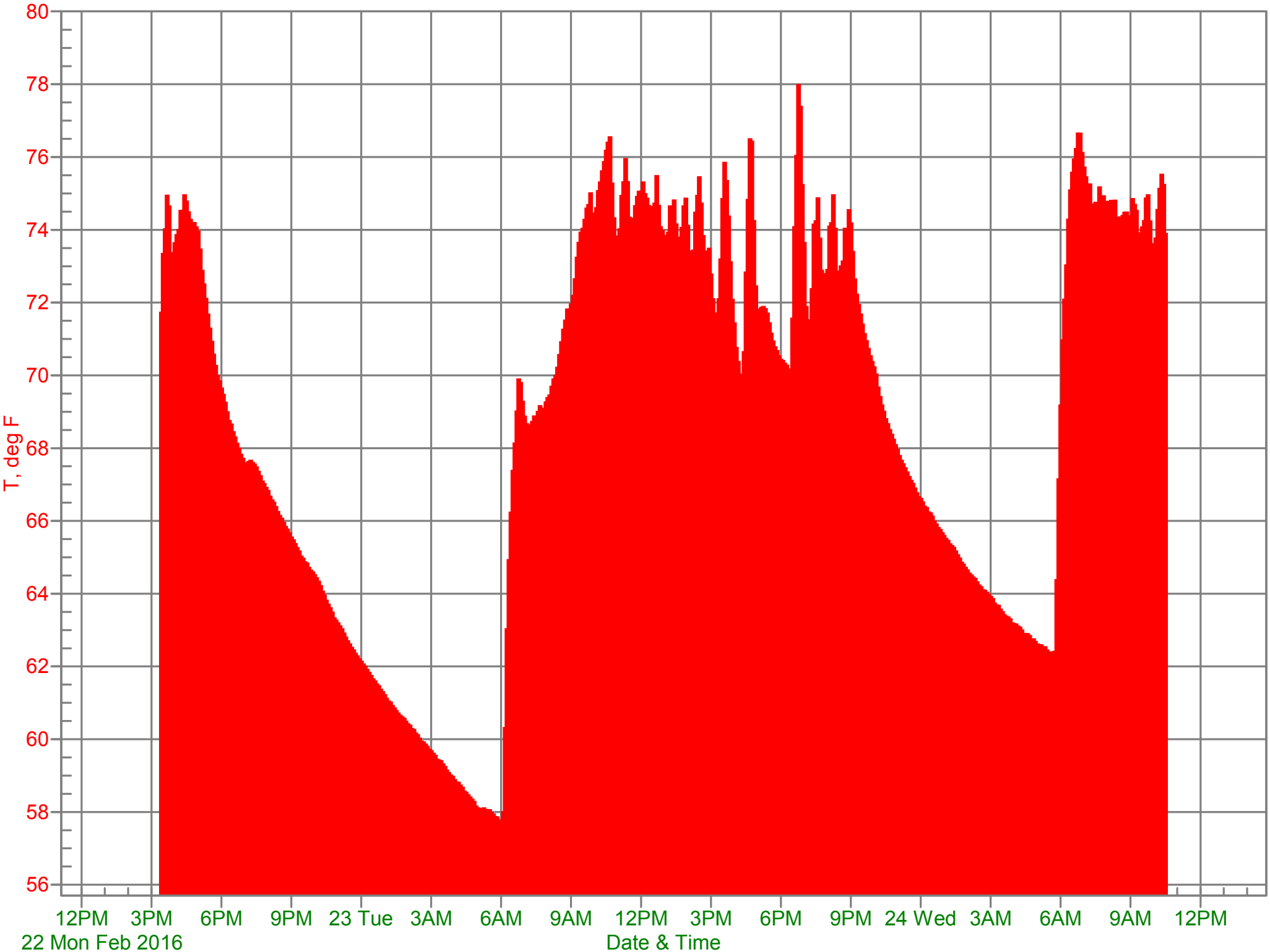
Results of Air Quality Testing

Room 20



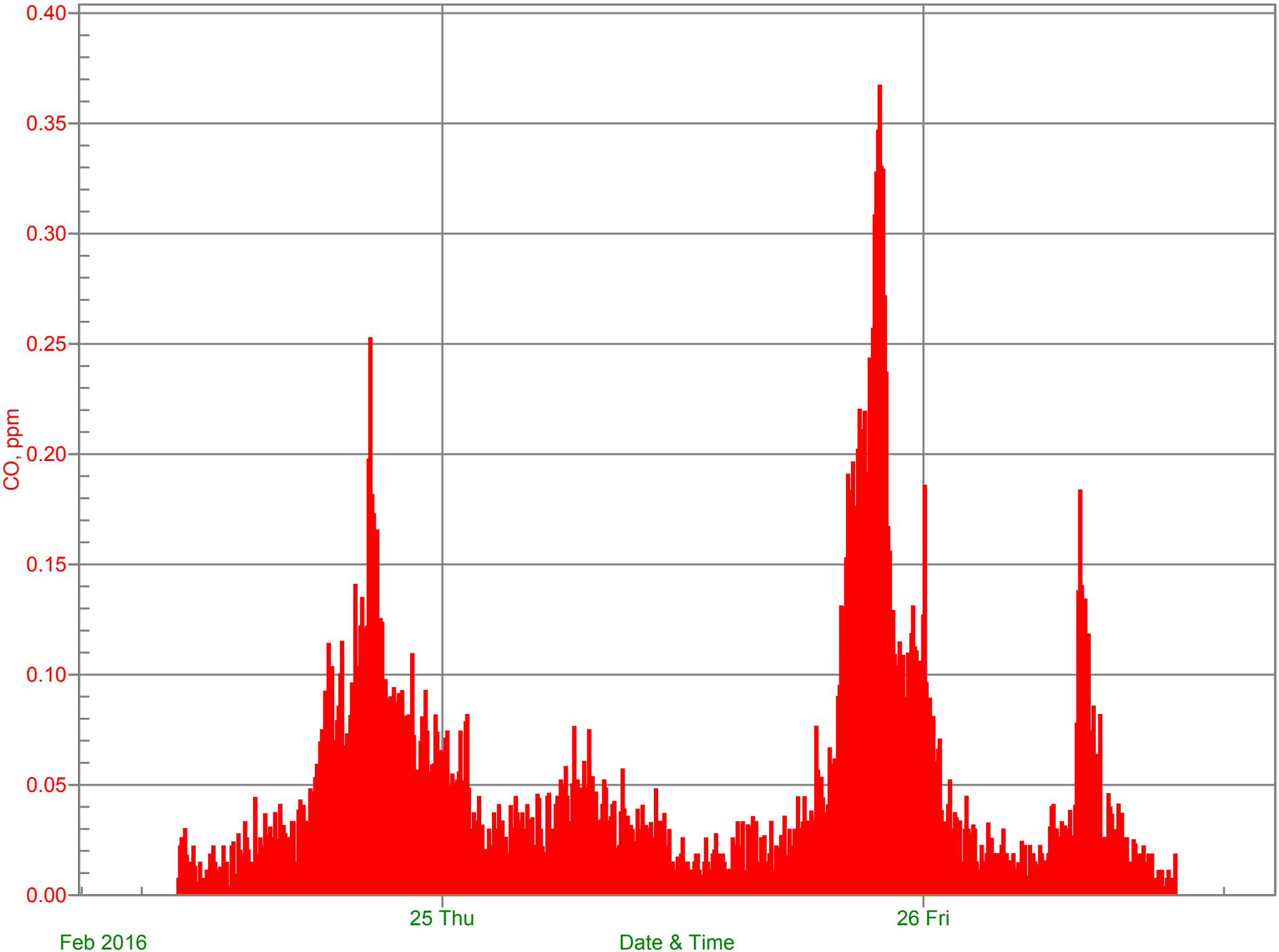
Results of Air Quality Testing

Romm 20



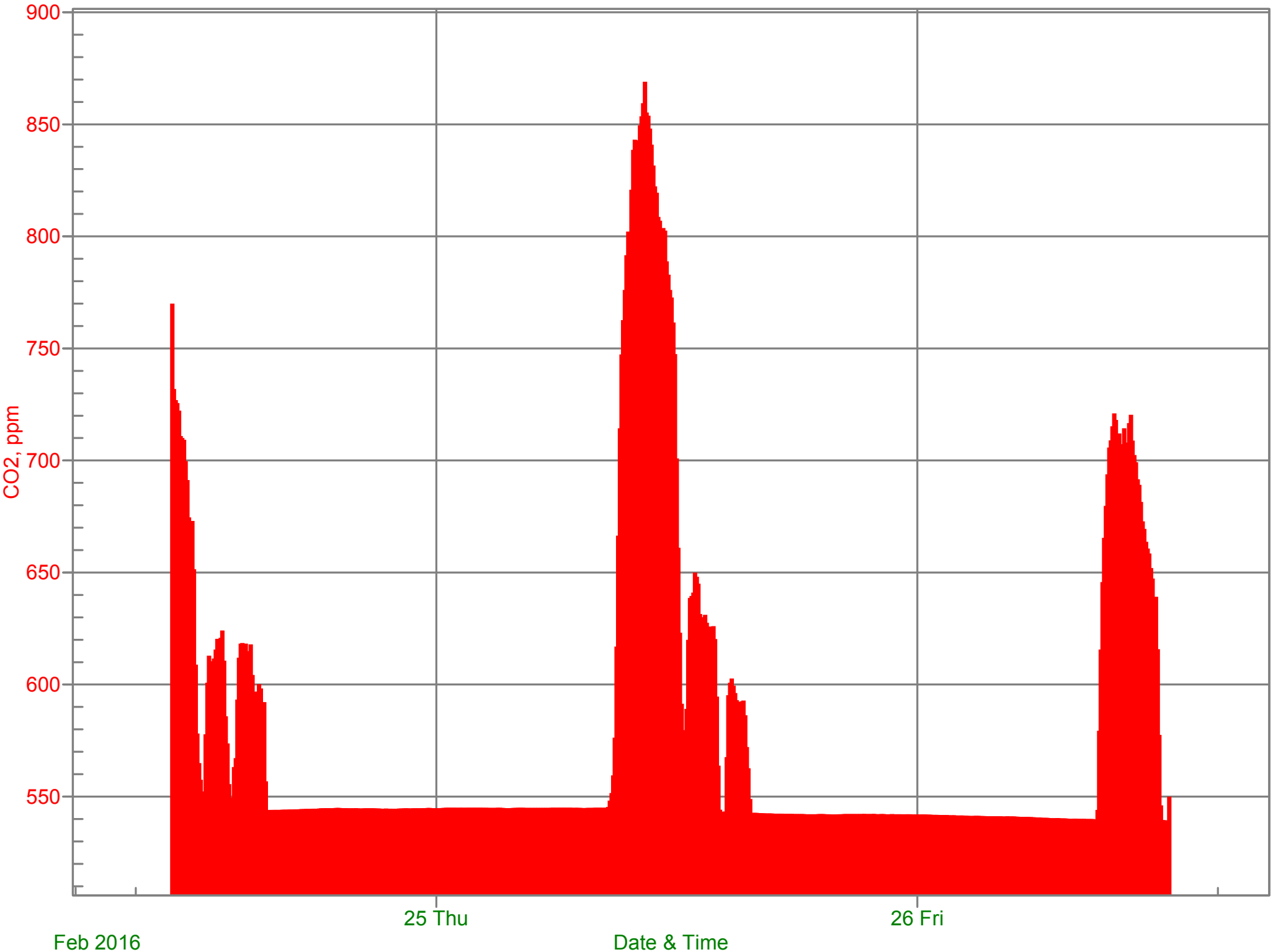
Results of Air Quality Testing

Room 23



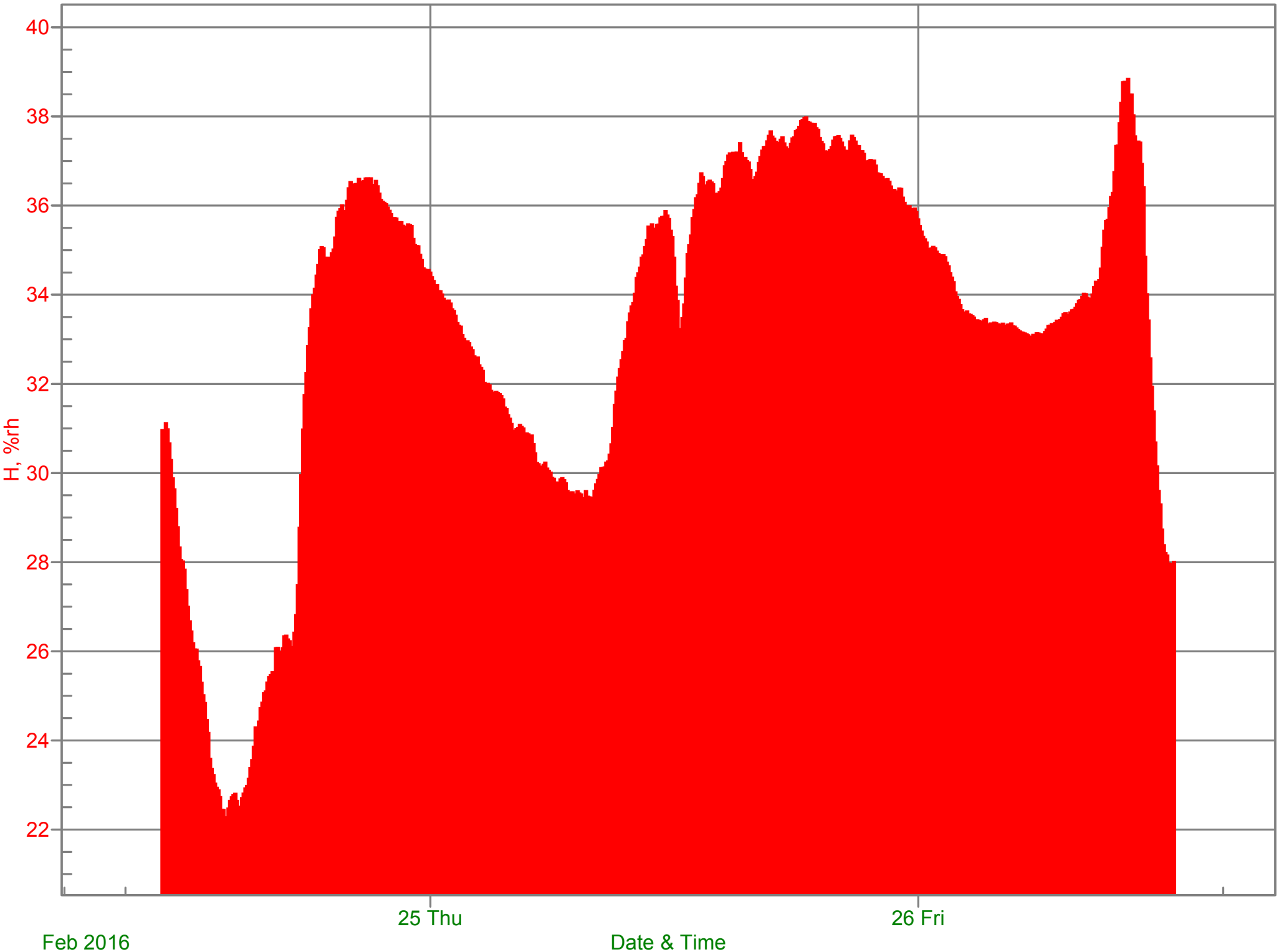
Results of Air Quality Testing

Room 23



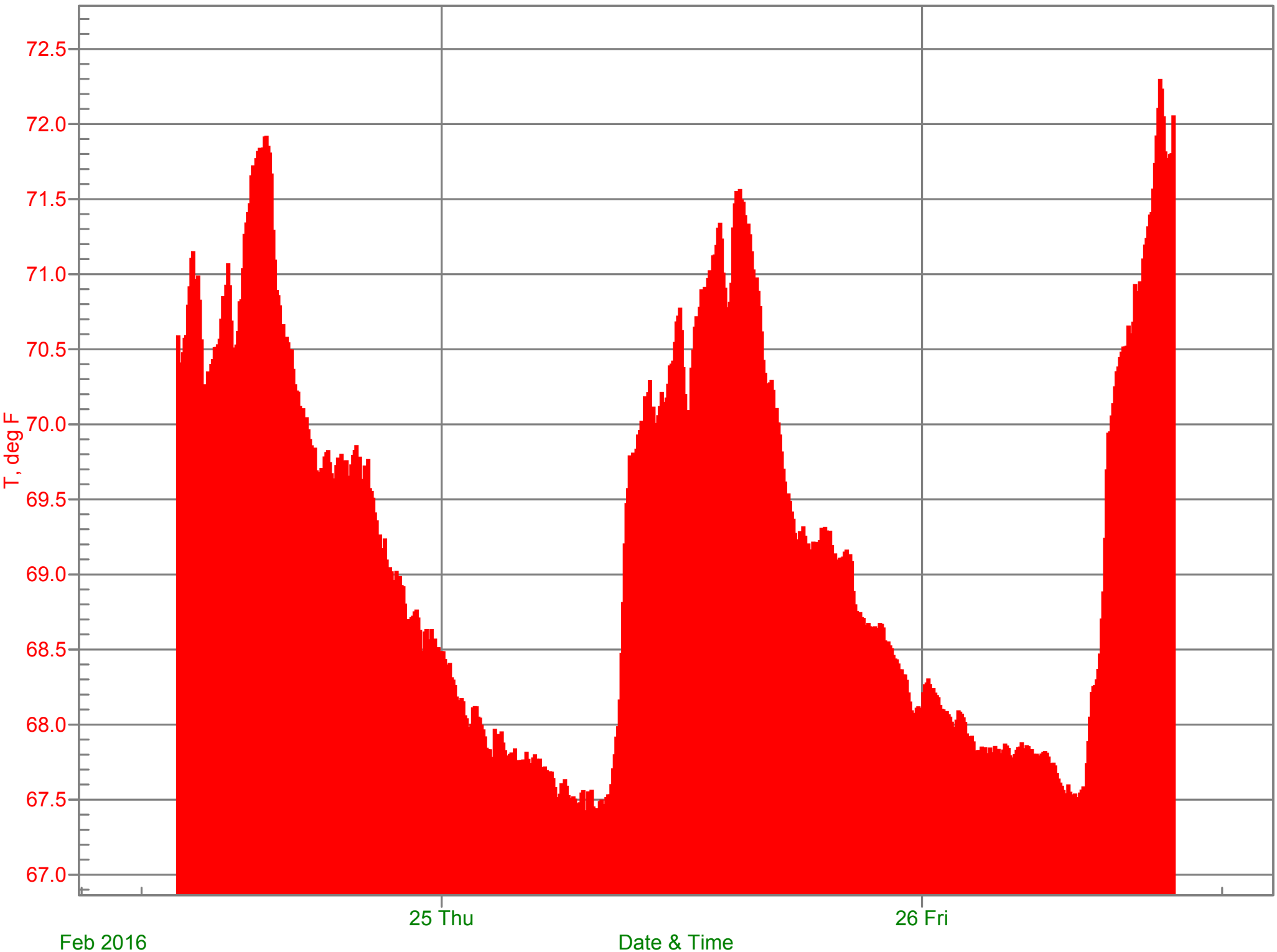
Results of Air Quality Testing

Room 23



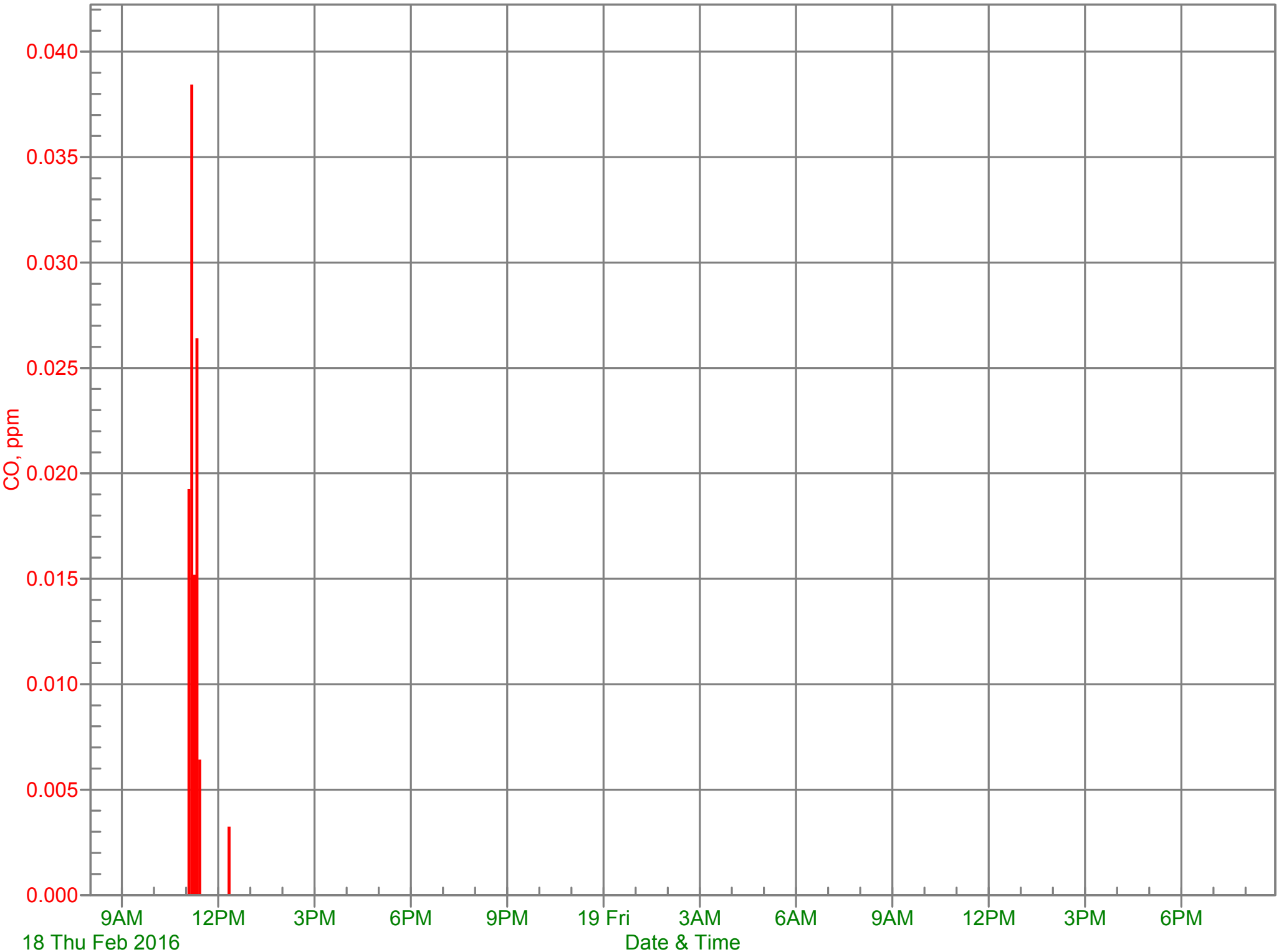
Results of Air Quality Testing

Room 23



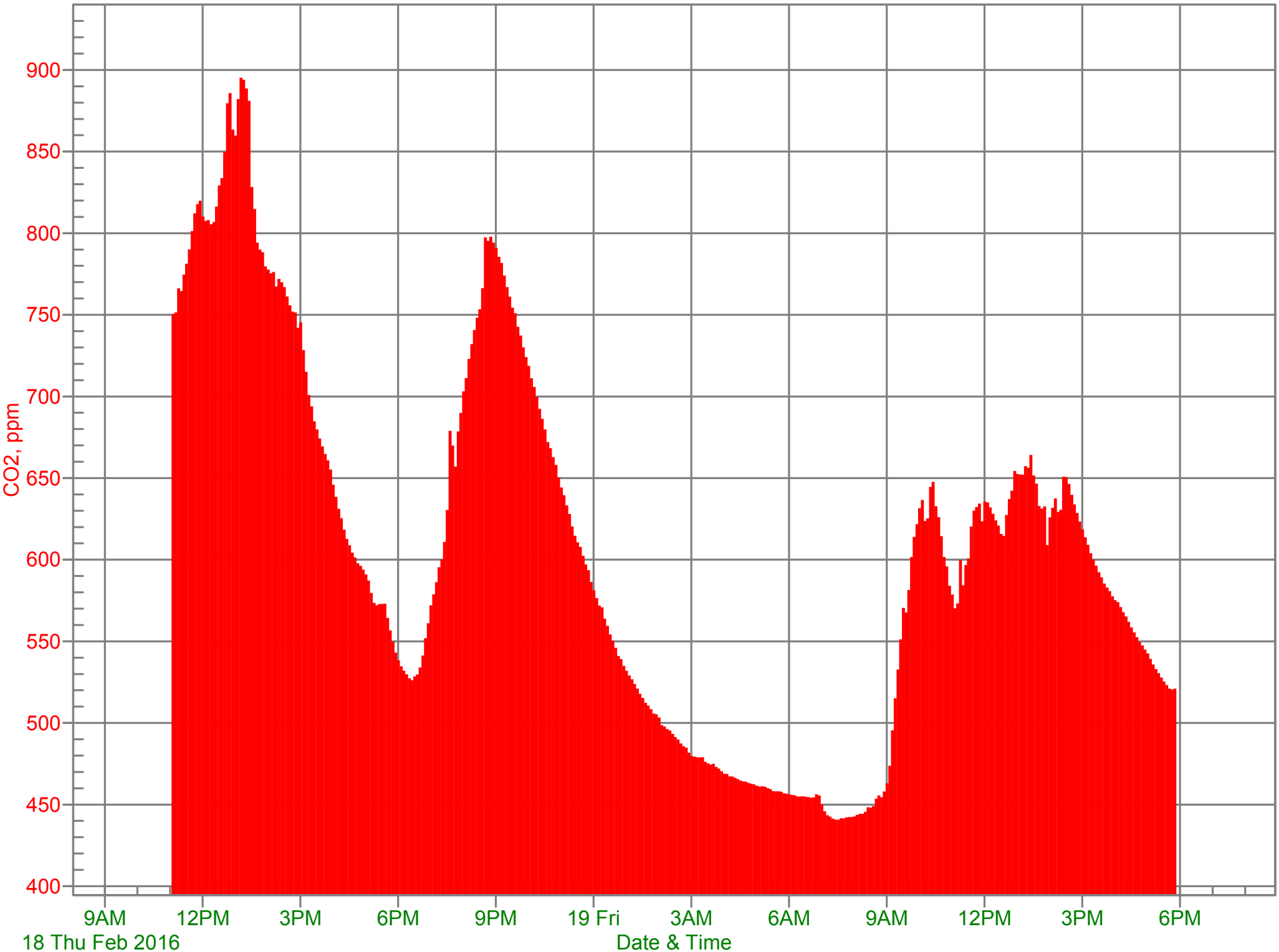
Results of Air Quality Testing

Small Gym



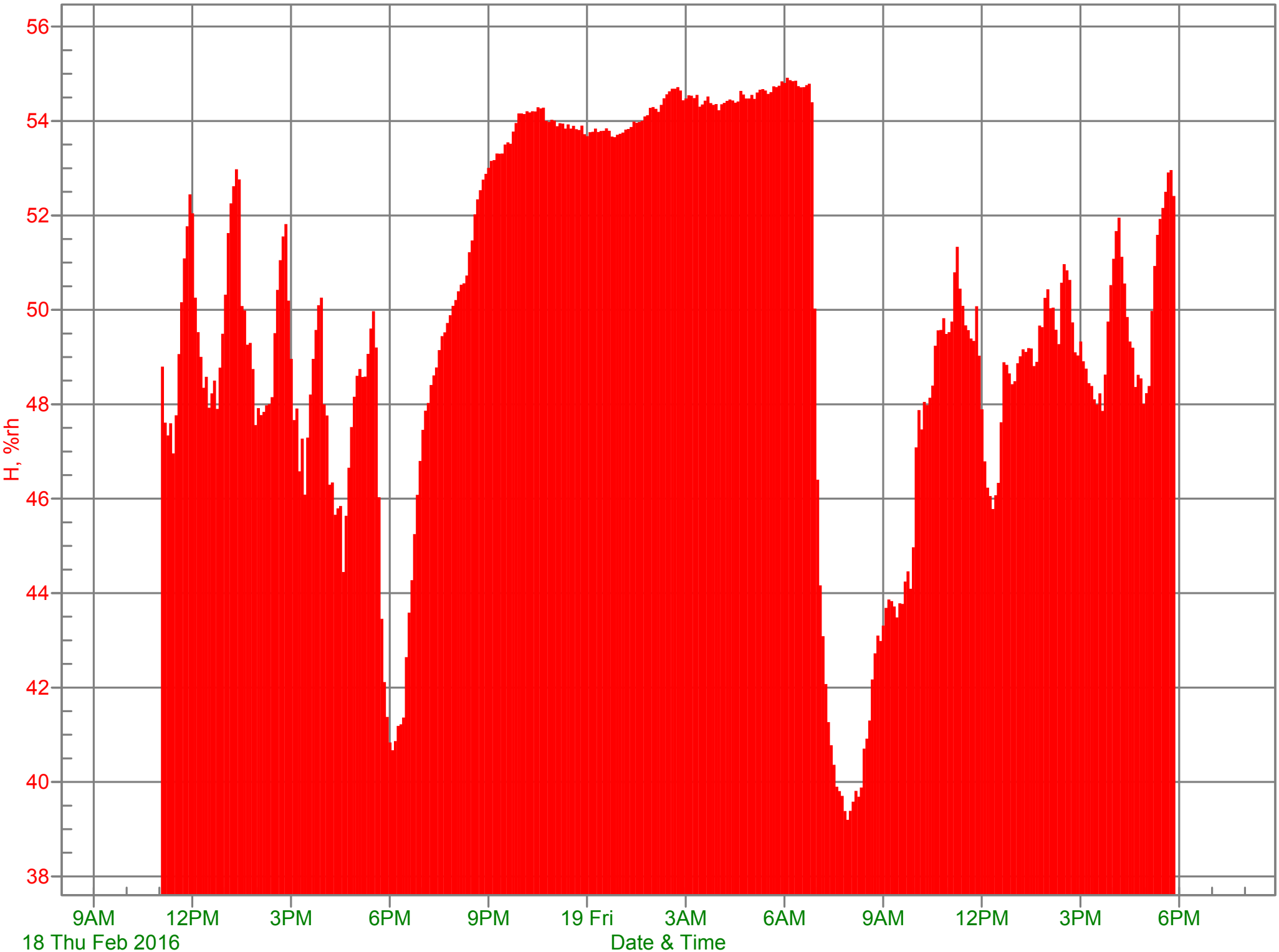
Results of Air Quality Testing

Small Gym



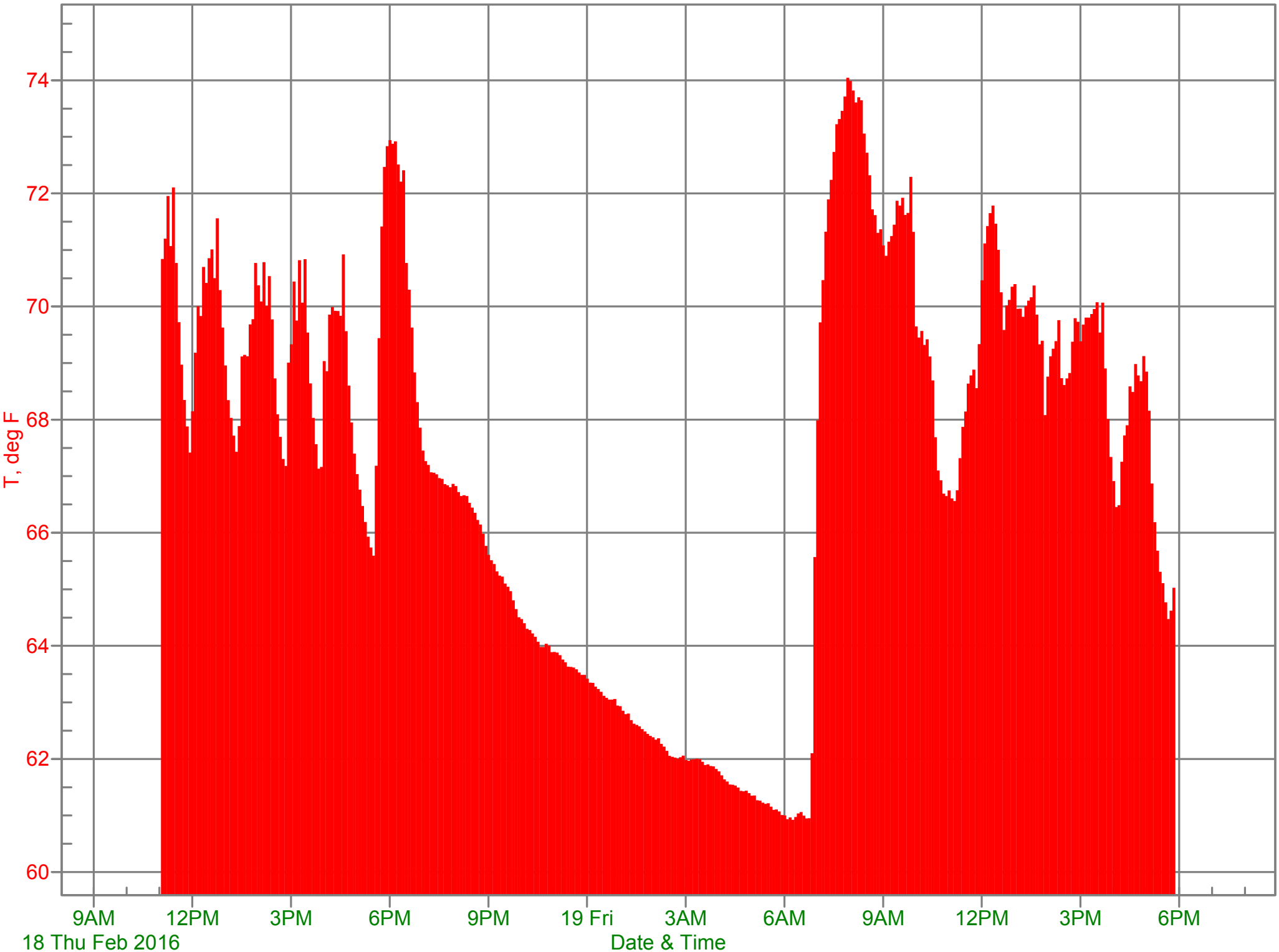
Results of Air Quality Testing

Small Gym



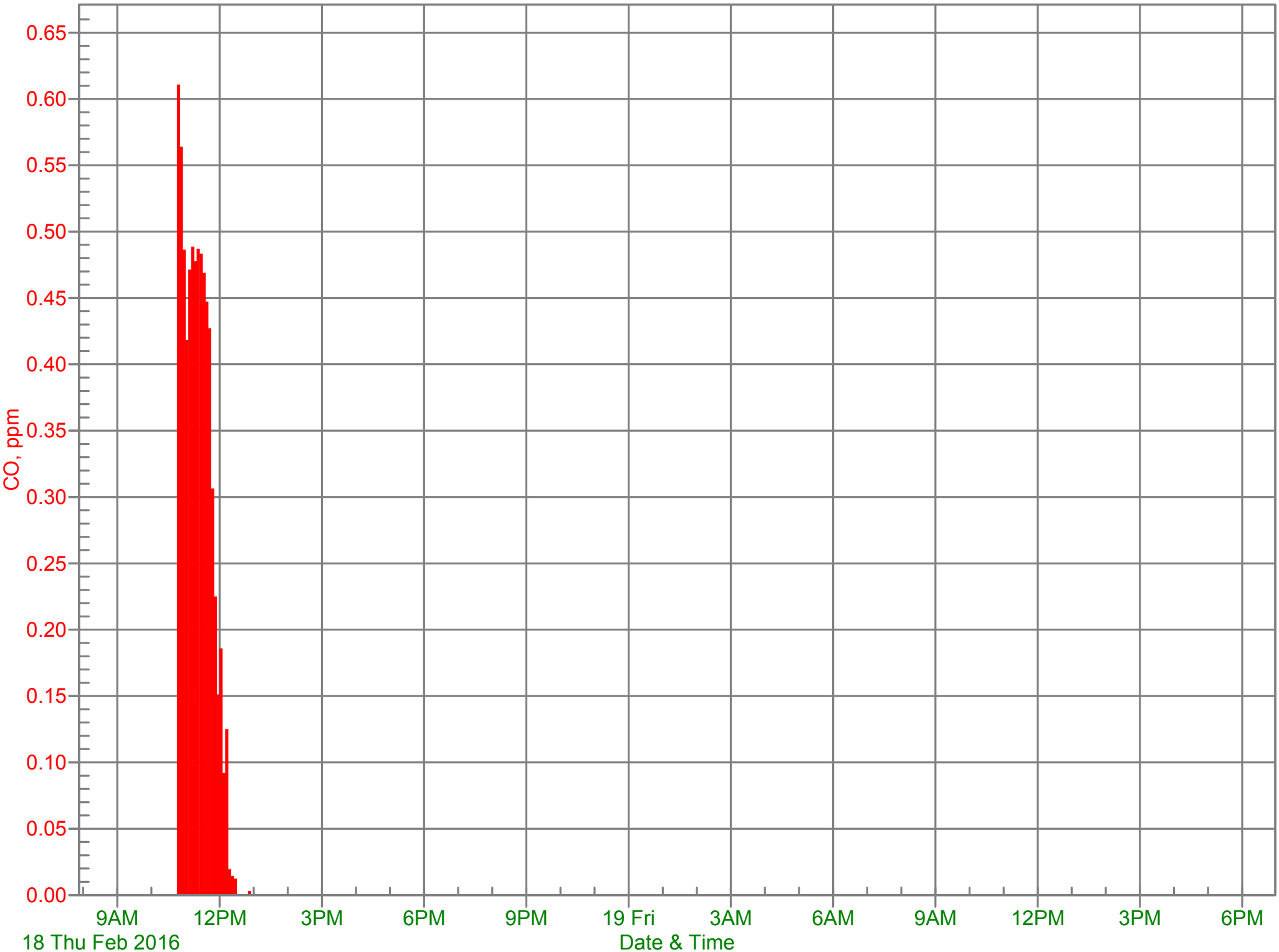
Results of Air Quality Testing

Small Gym



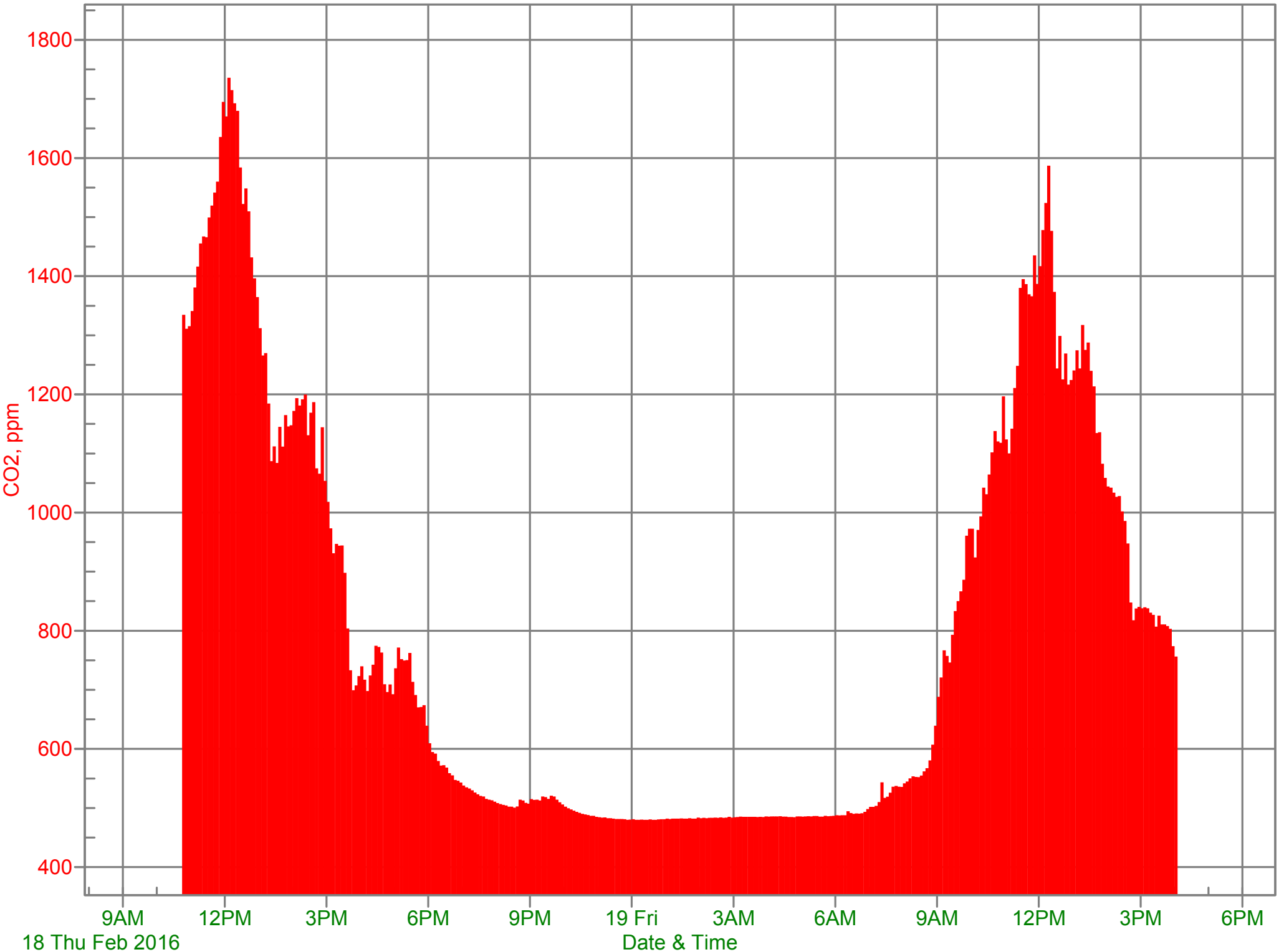
Results of Air Quality Testing

Gathering Area



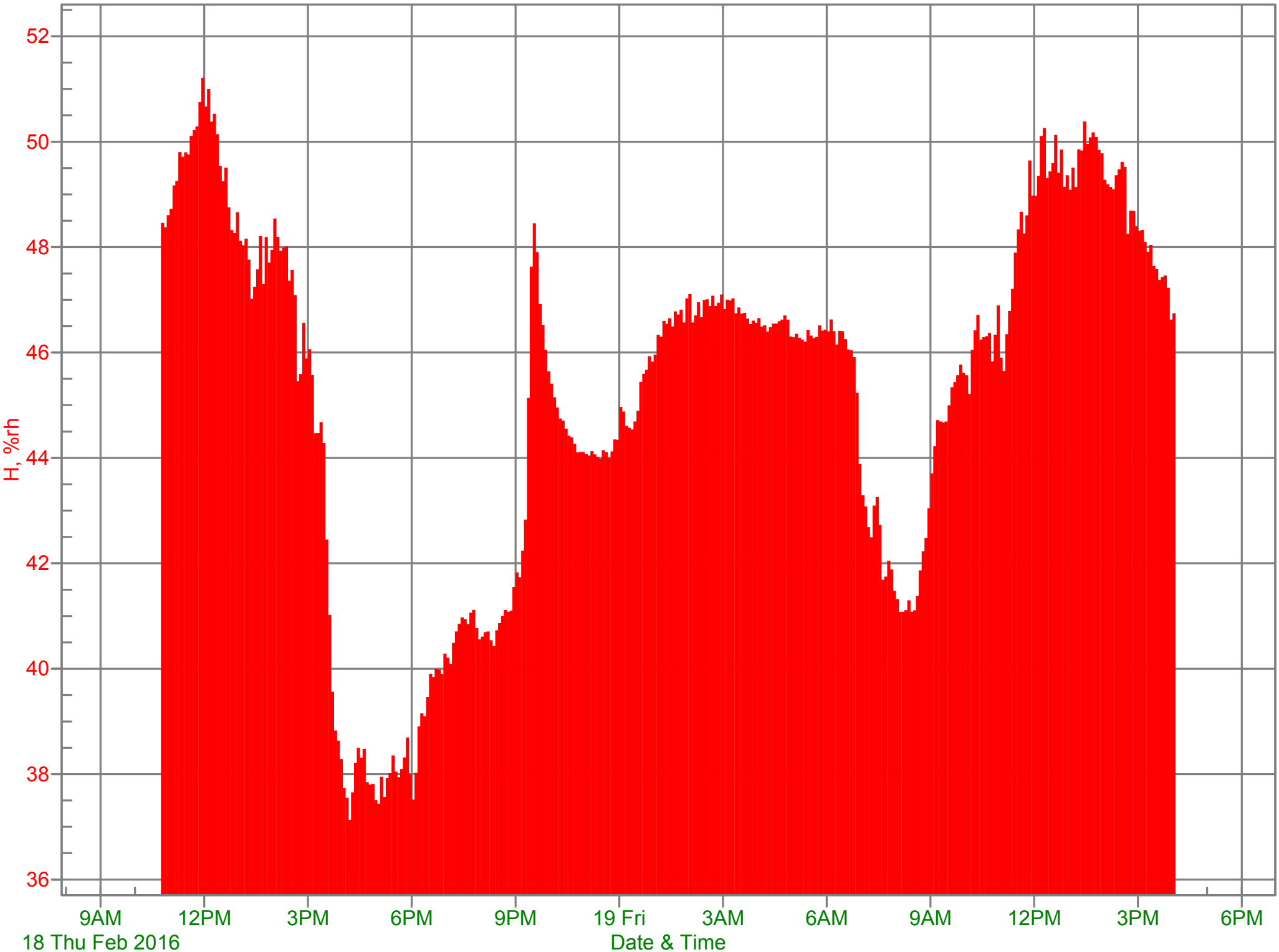
Results of Air Quality Testing

Gathering Area



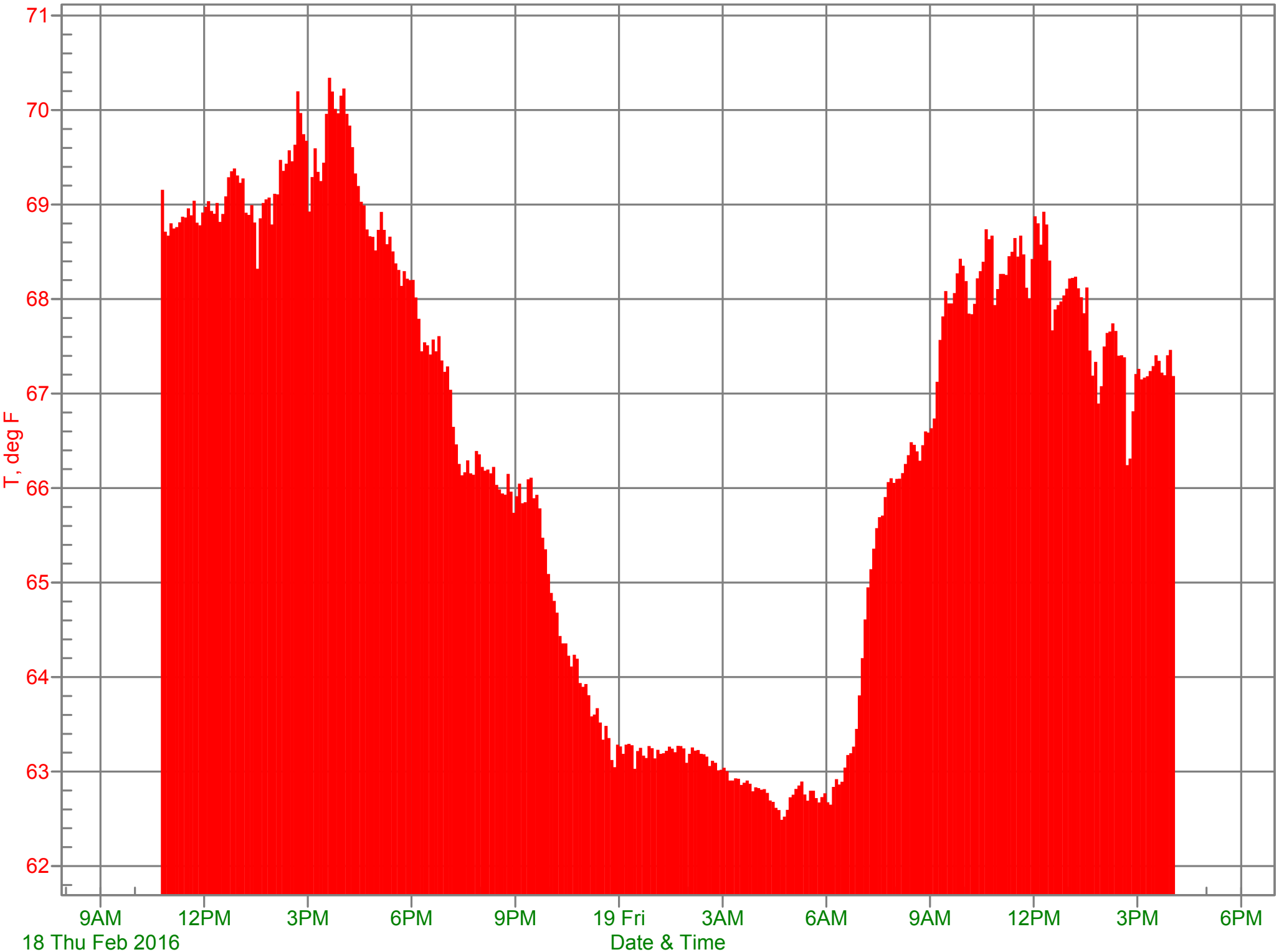
Results of Air Quality Testing

Gathering Area



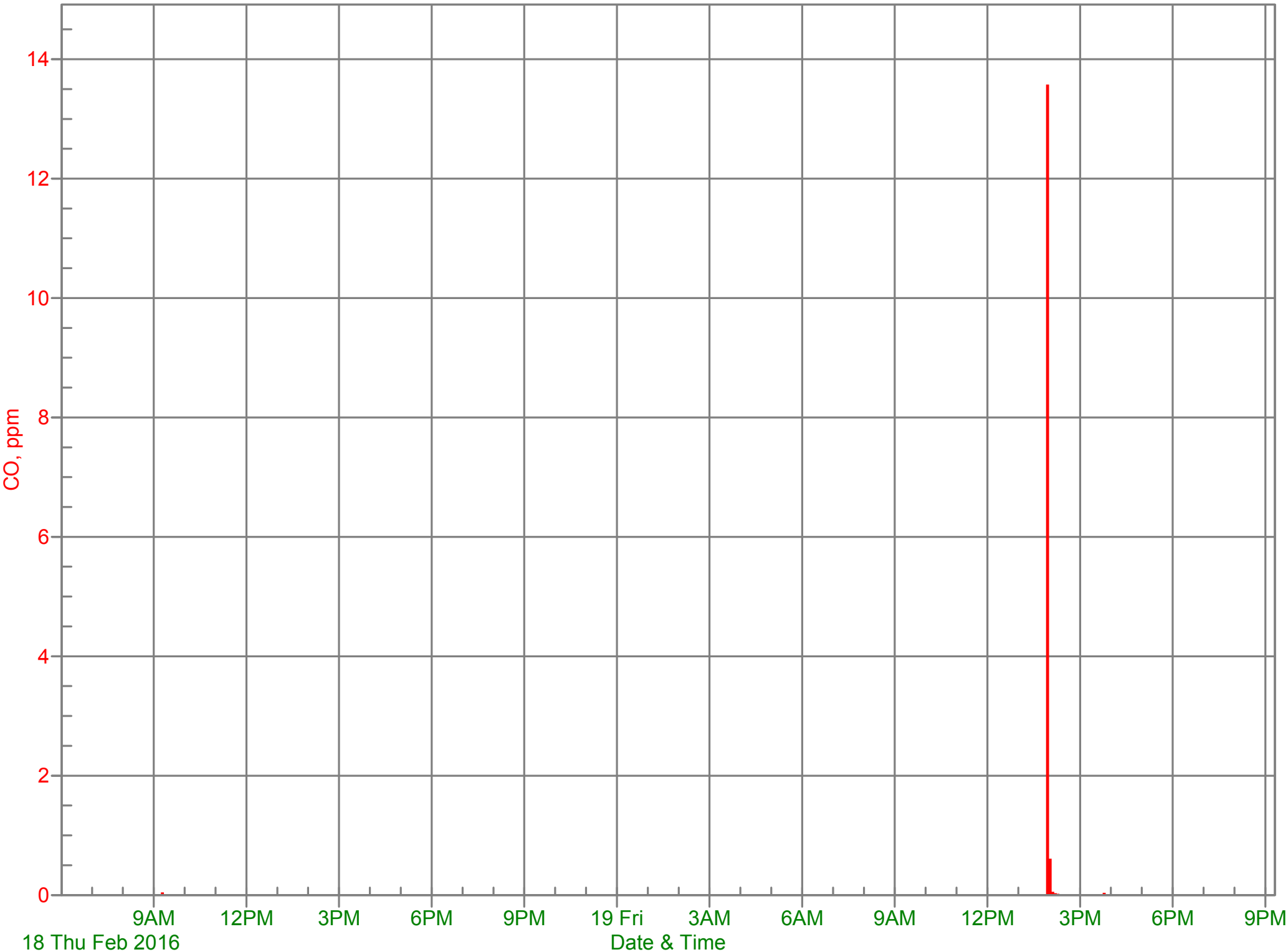
Results of Air Quality Testing

Gathering Area



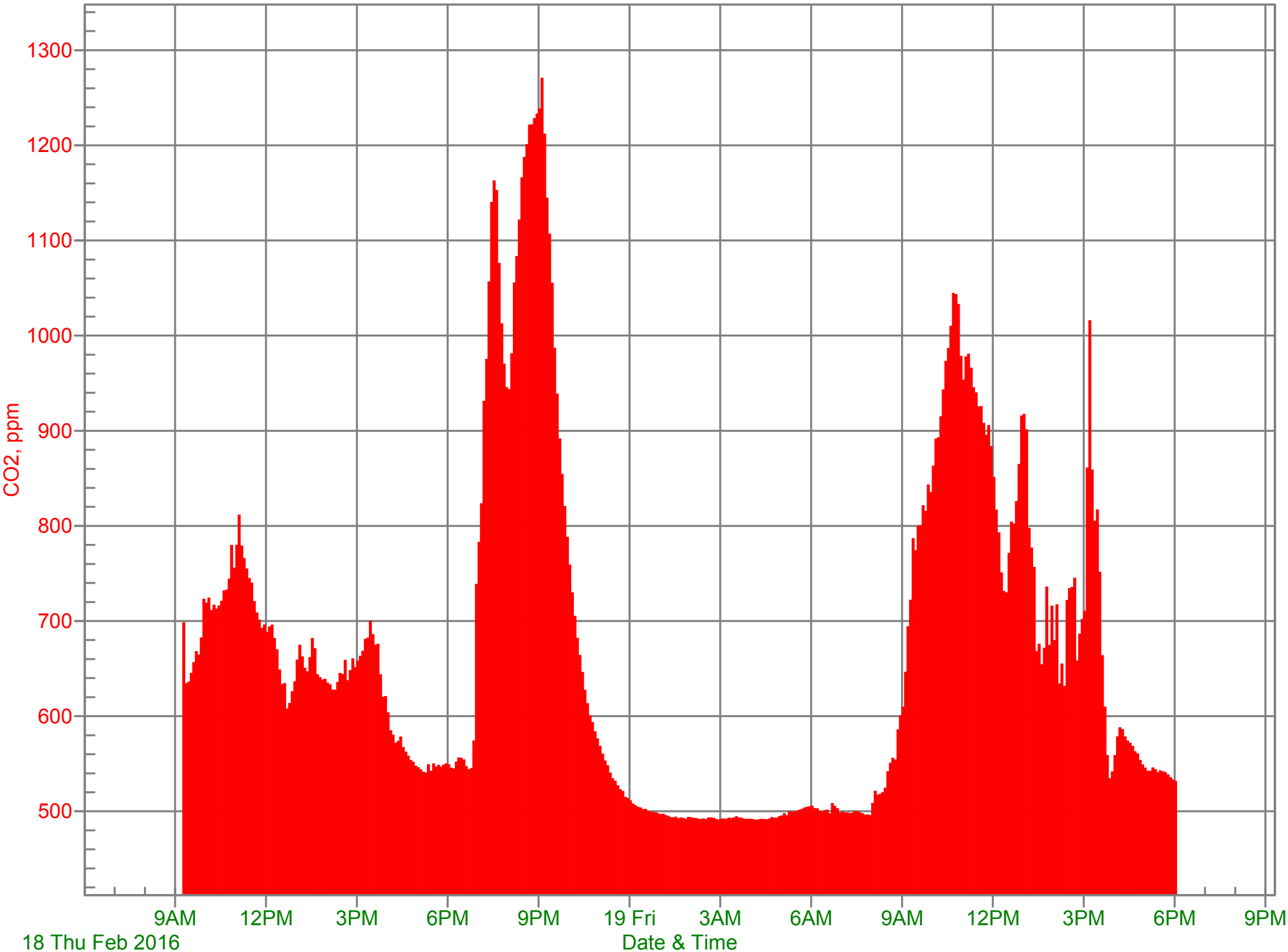
Results of Air Quality Testing

Music Room



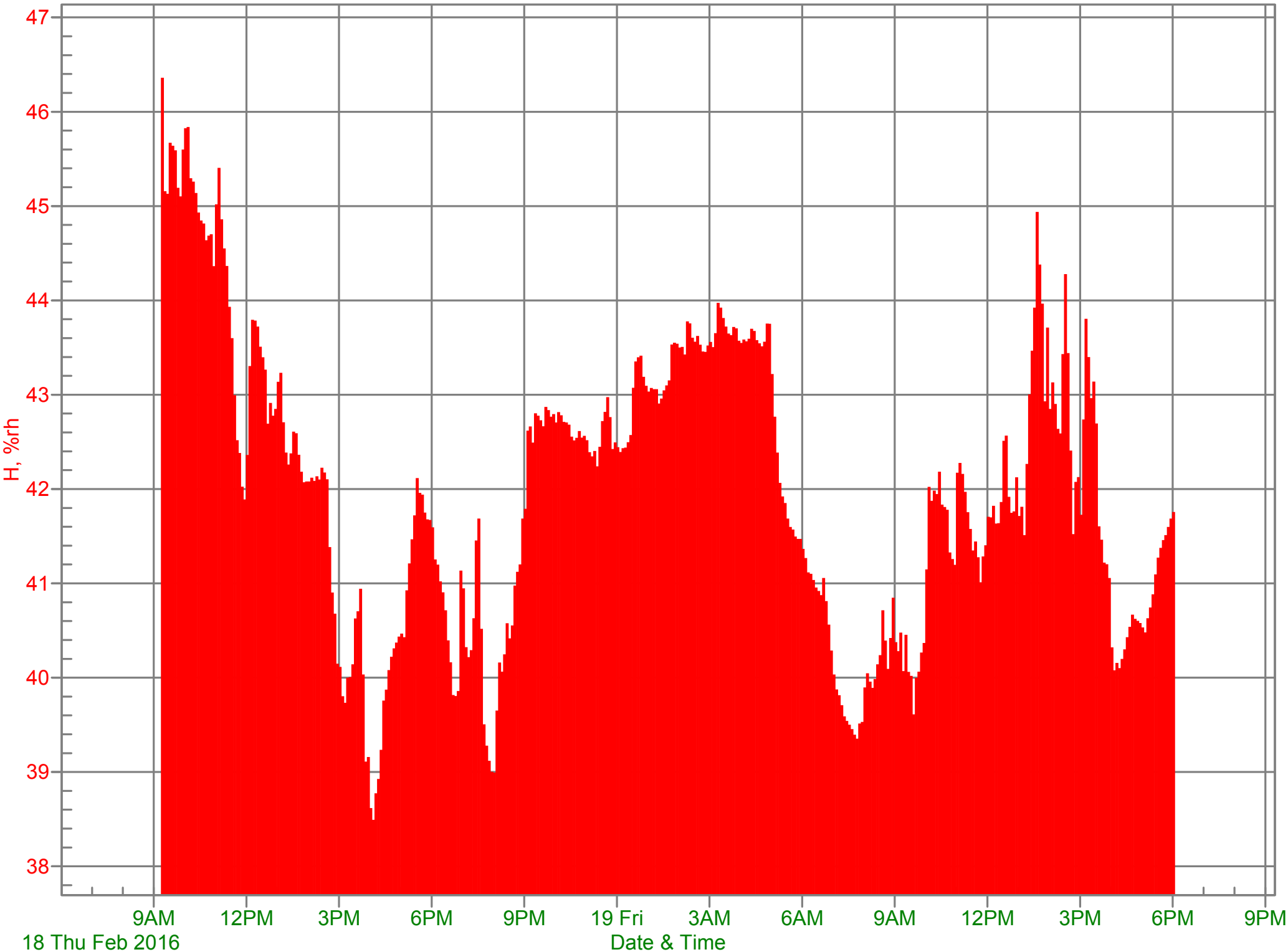
Results of Air Quality Testing

Music Room



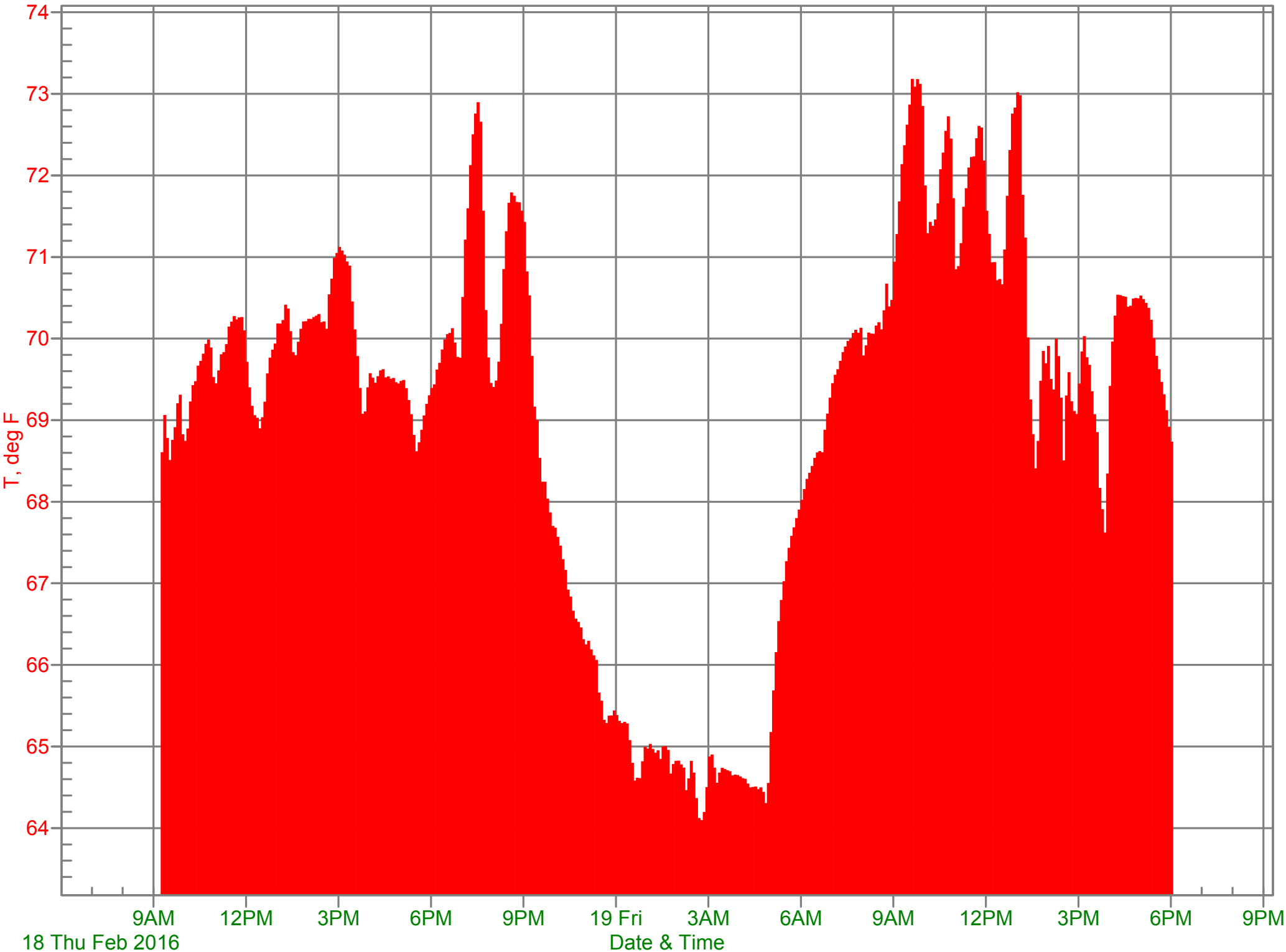
Results of Air Quality Testing

Music Room



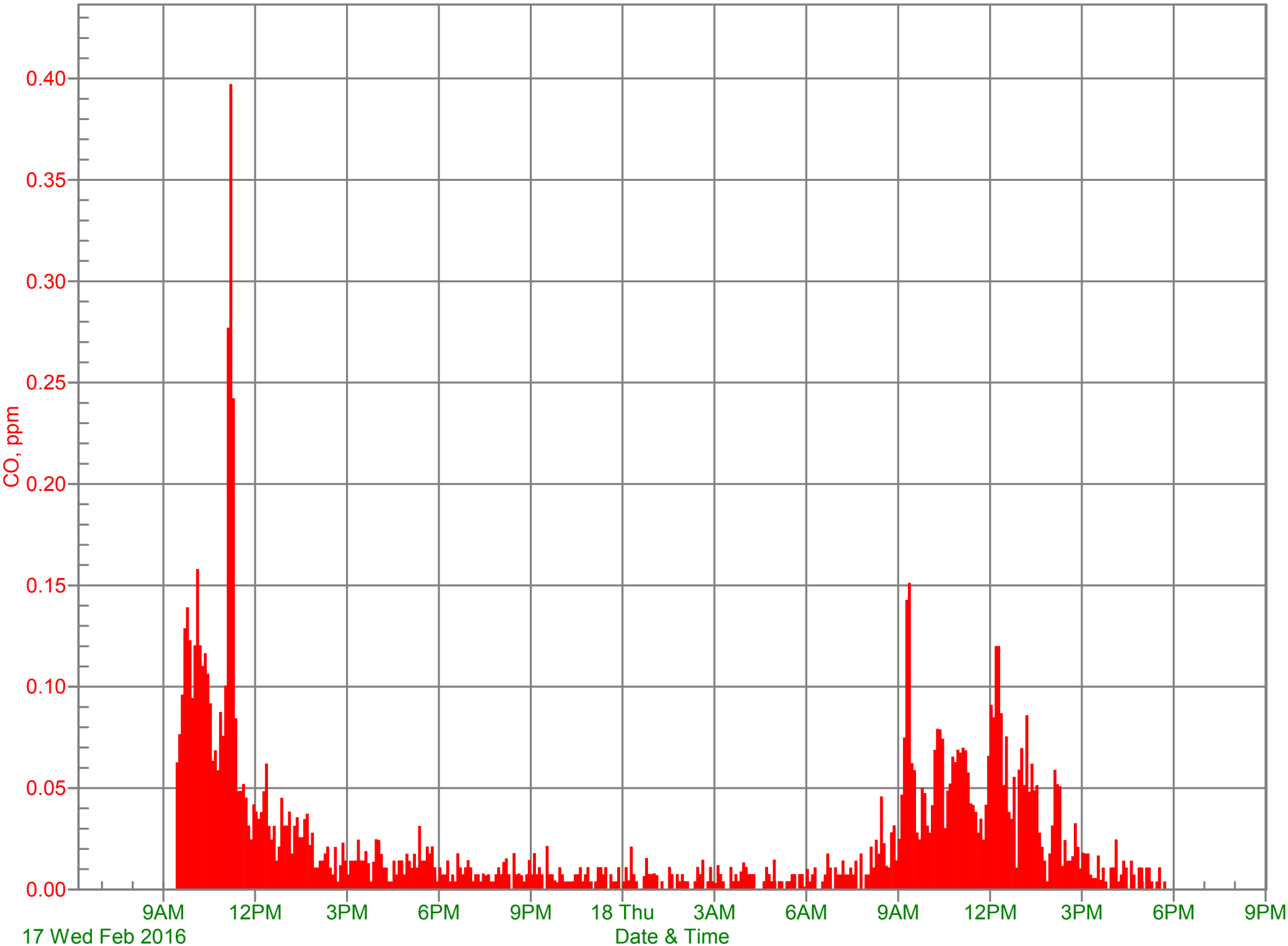
Results of Air Quality Testing

Music Room



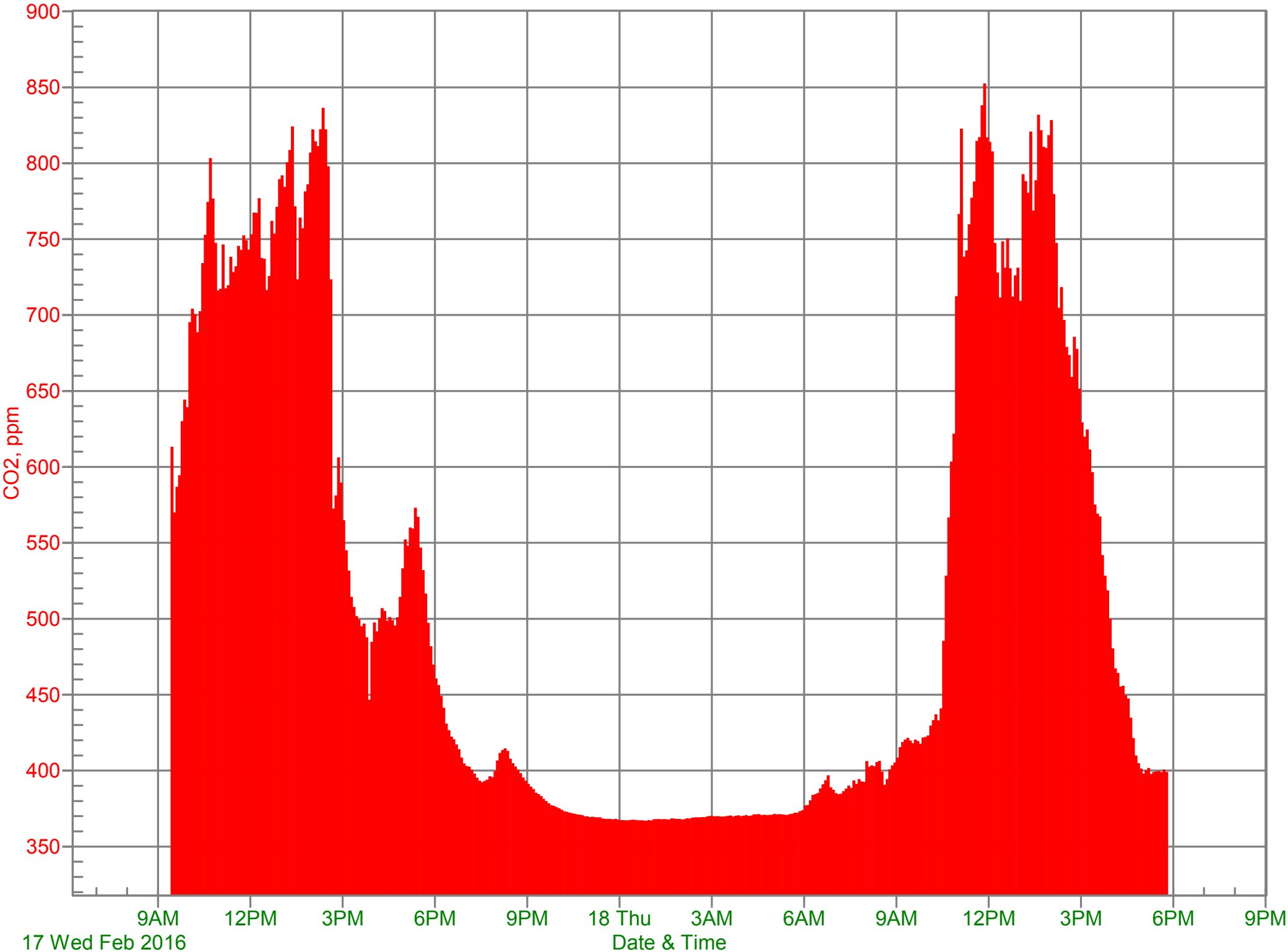
Results of Air Quality Testing

CTE



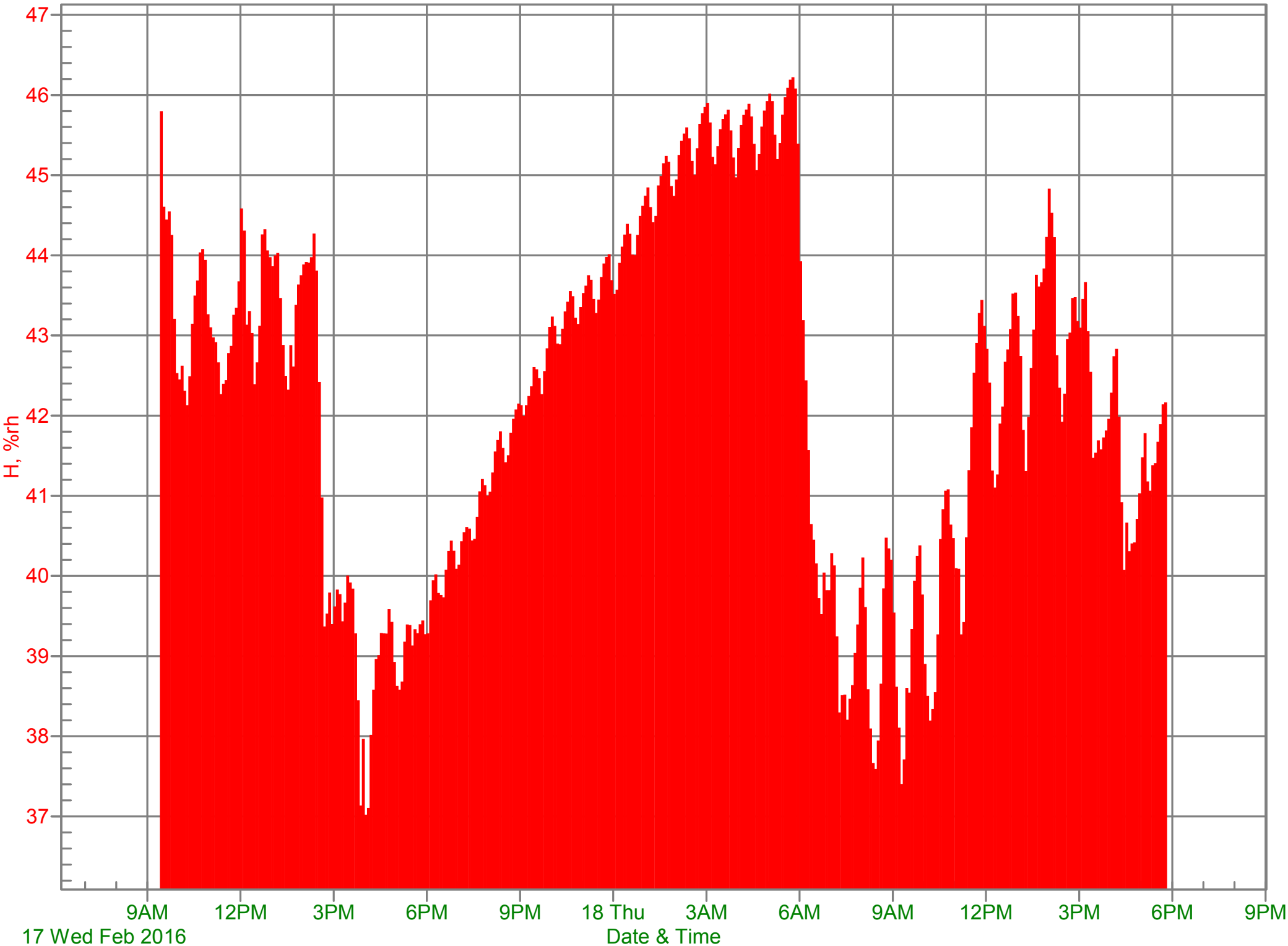
Results of Air Quality Testing

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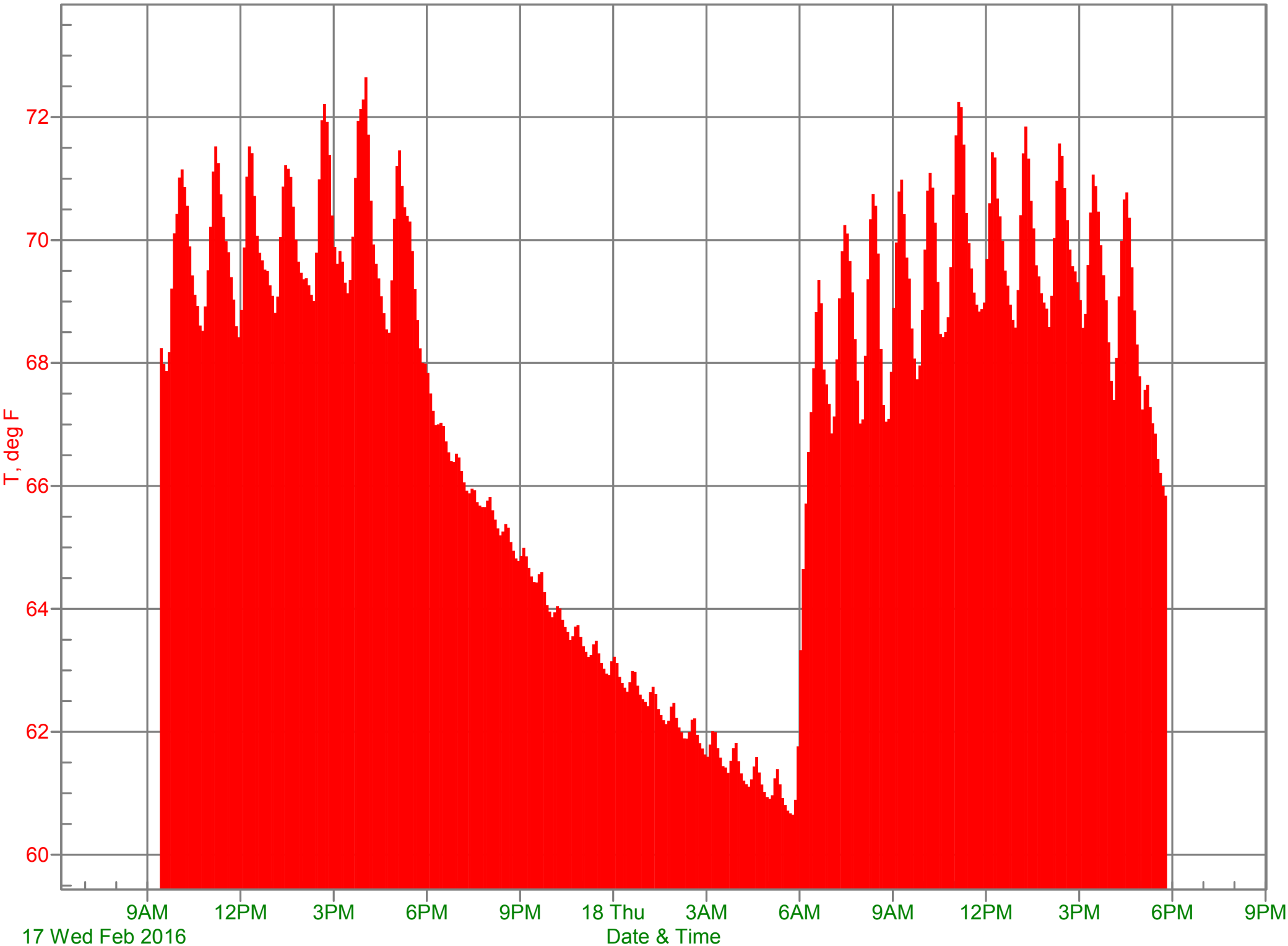
Results of Air Quality Testing

CTE



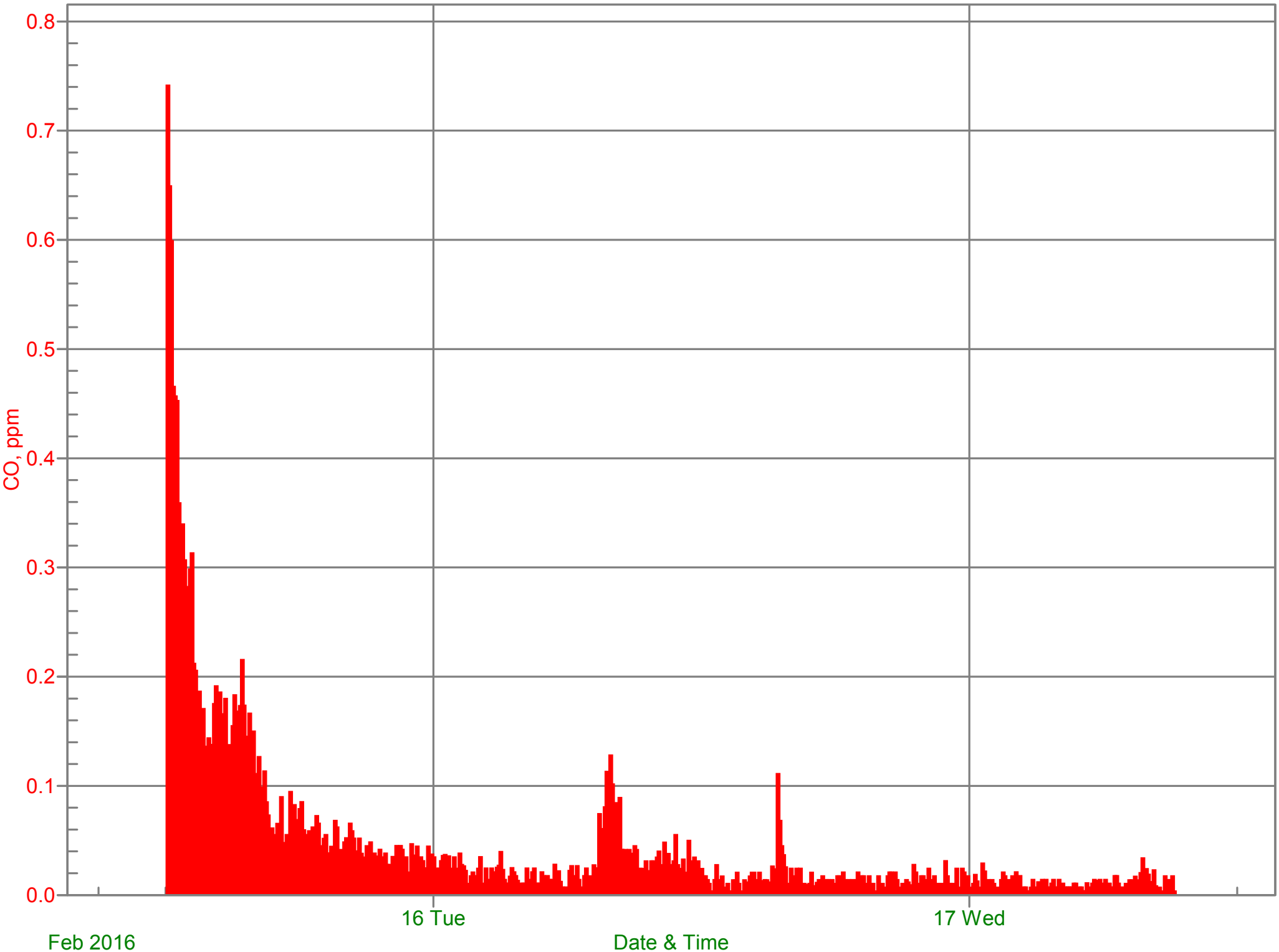
Results of Air Quality Testing

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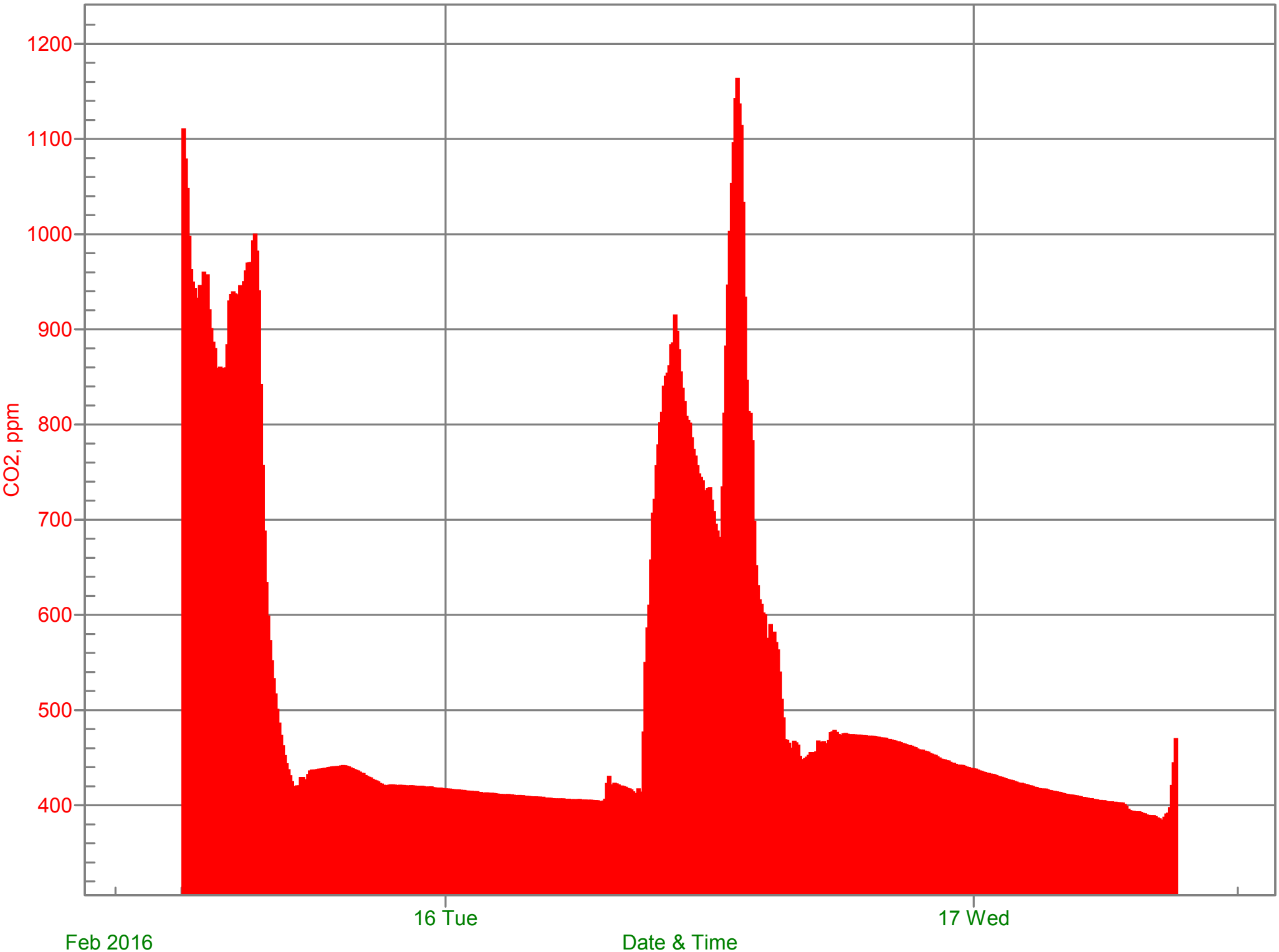
Results of Air Quality Testing

Room B



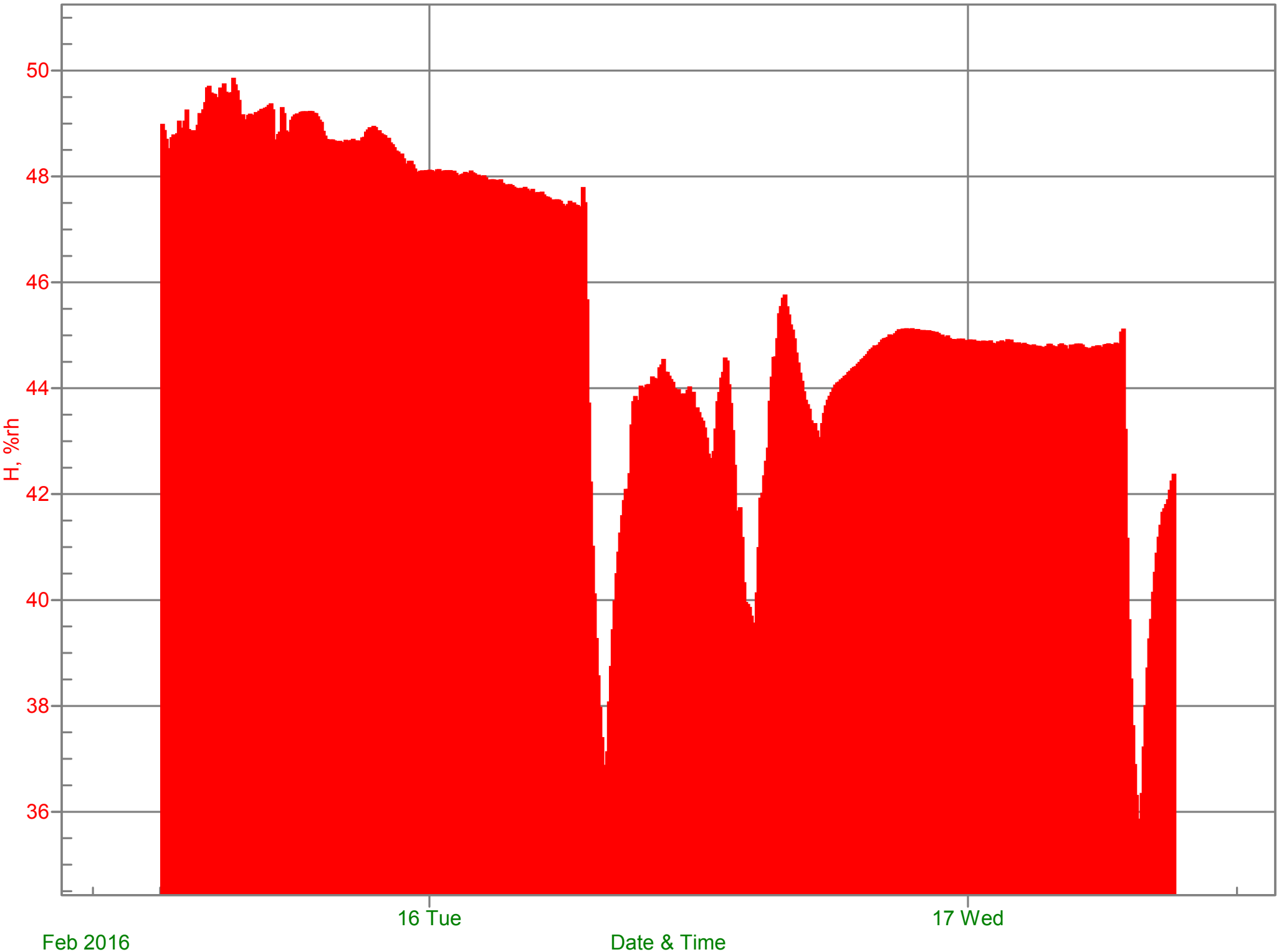
Results of Air Quality Testing

Room B



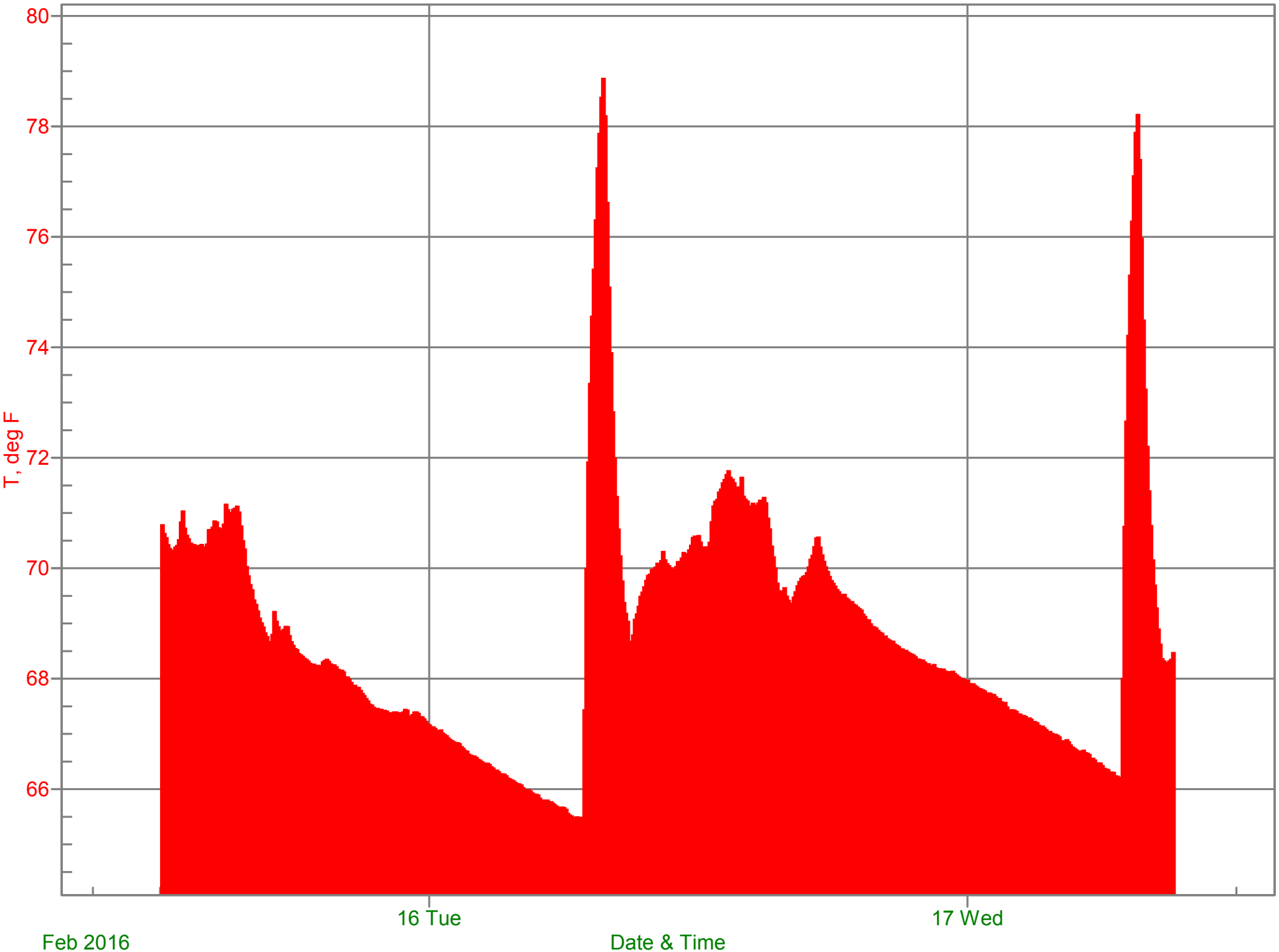
Results of Air Quality Testing

Room B



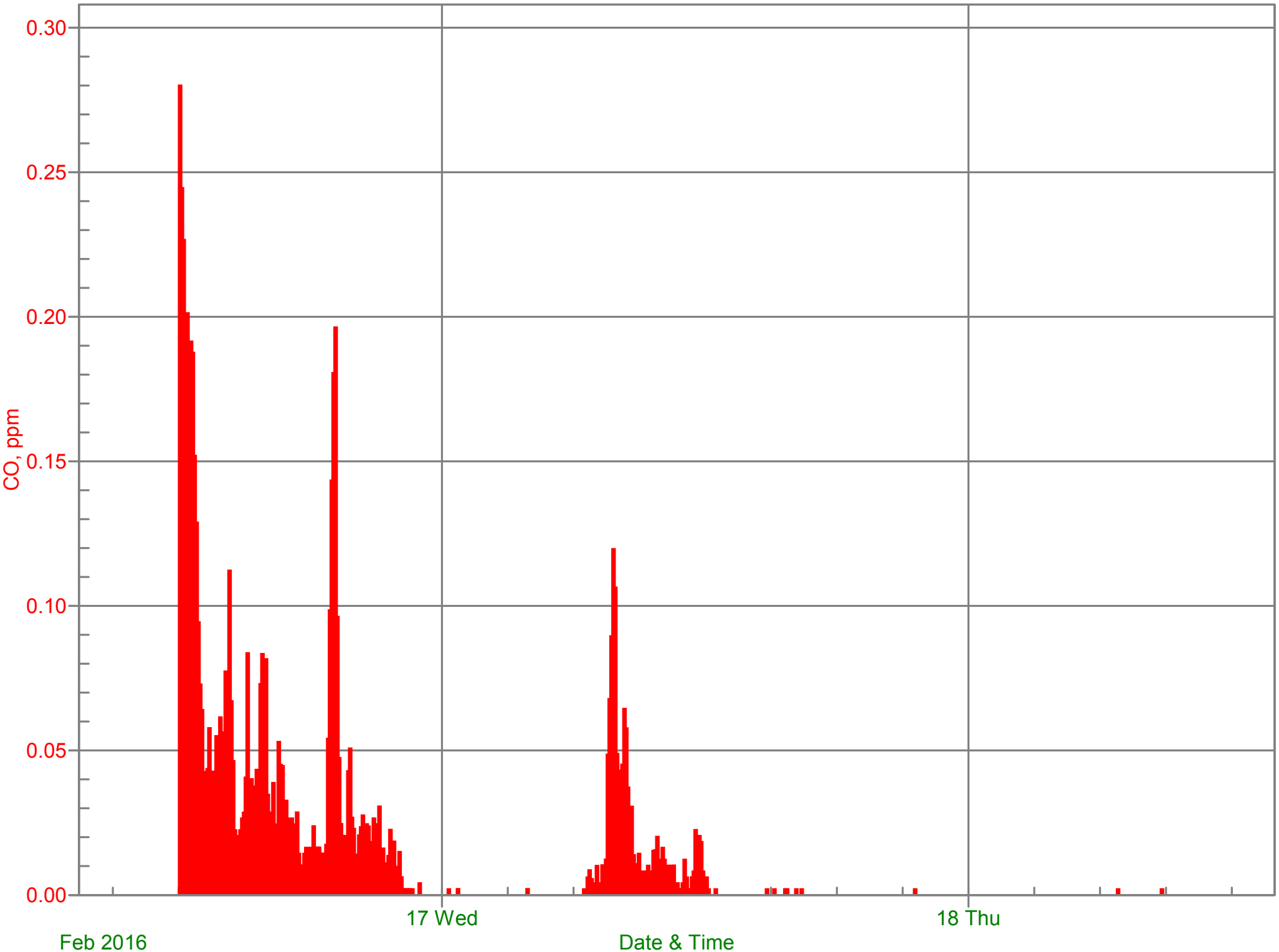
Results of Air Quality Testing

Room B



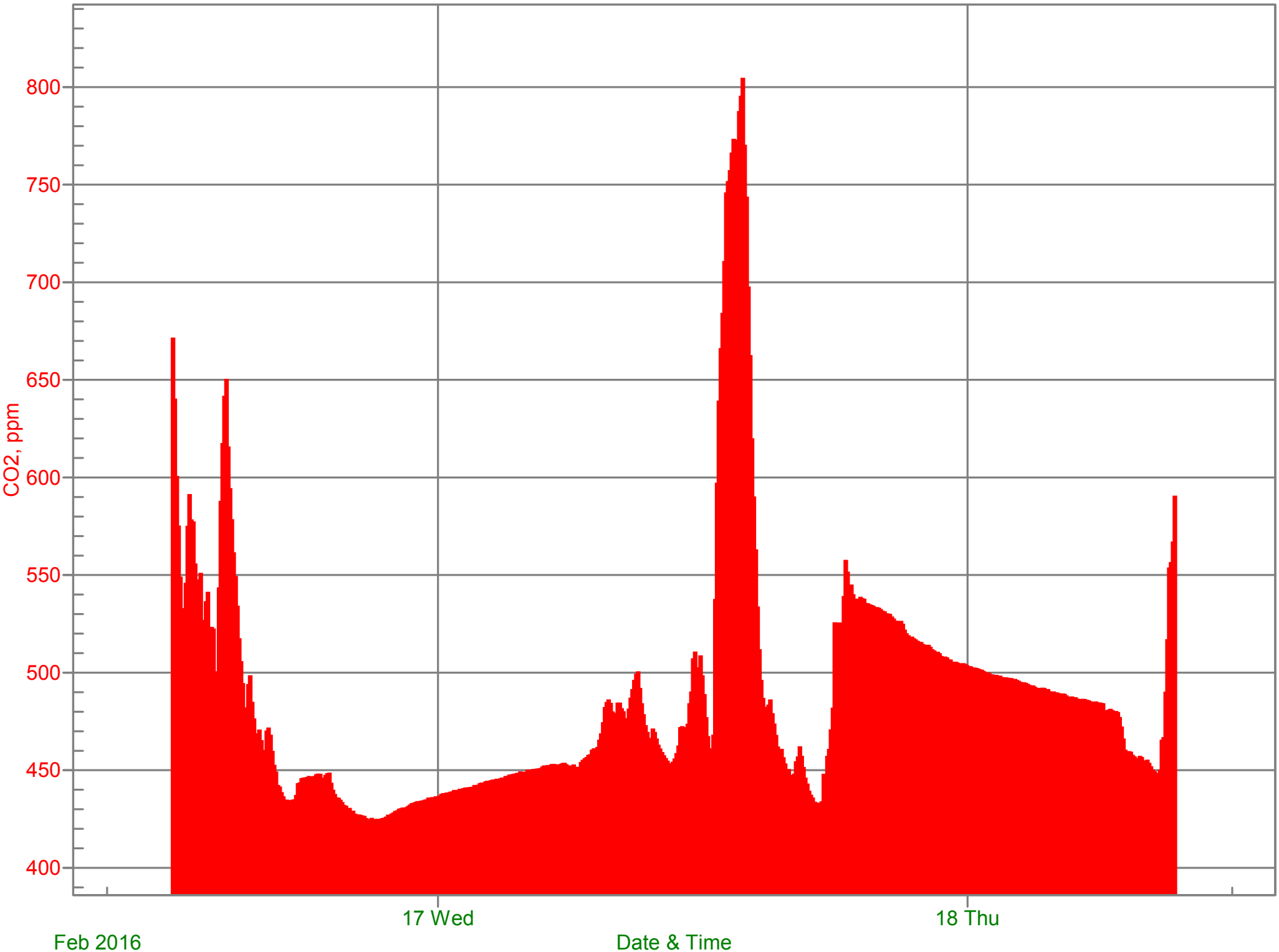
Results of Air Quality Testing

Room C



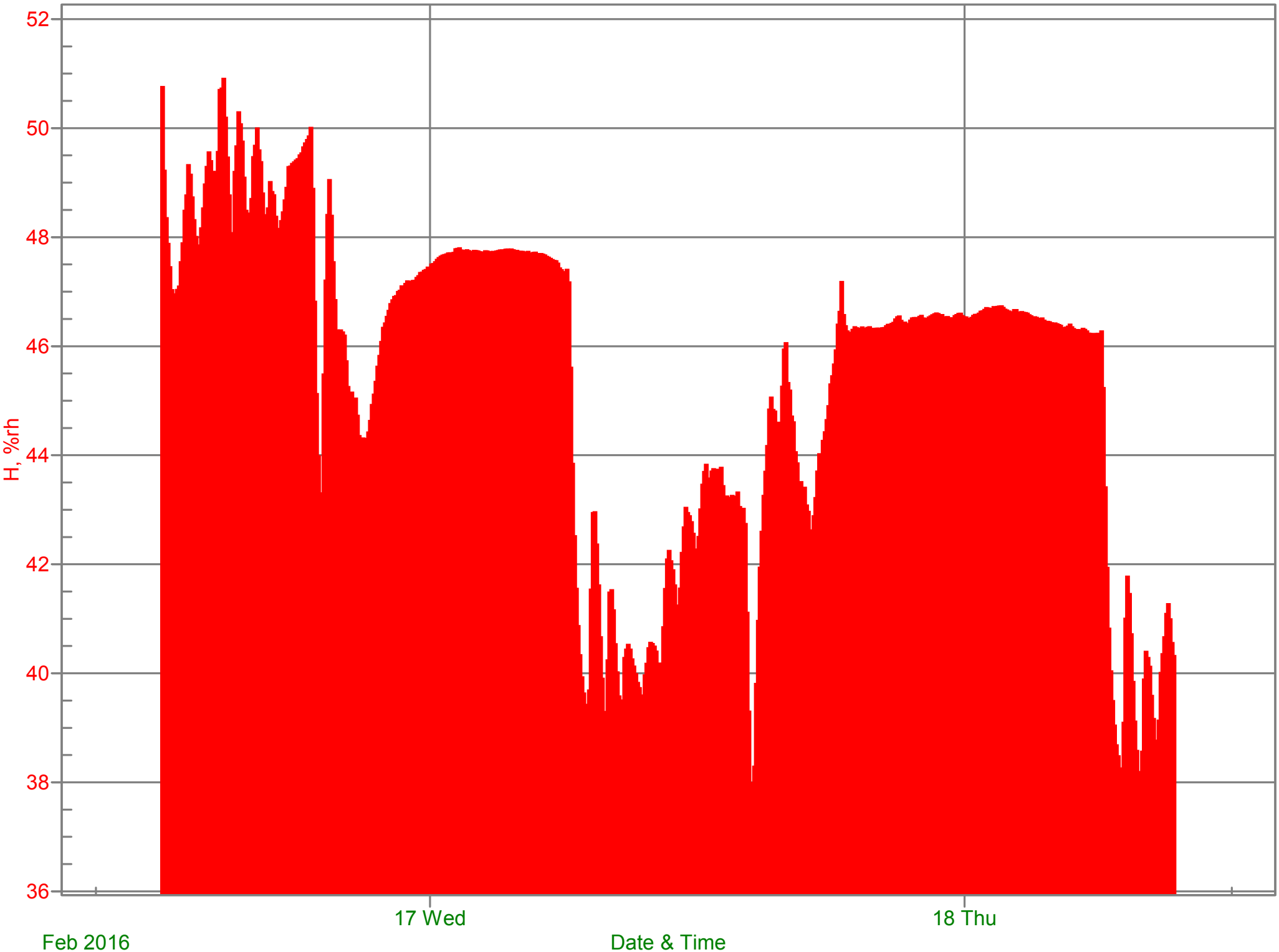
Results of Air Quality Testing

Room C



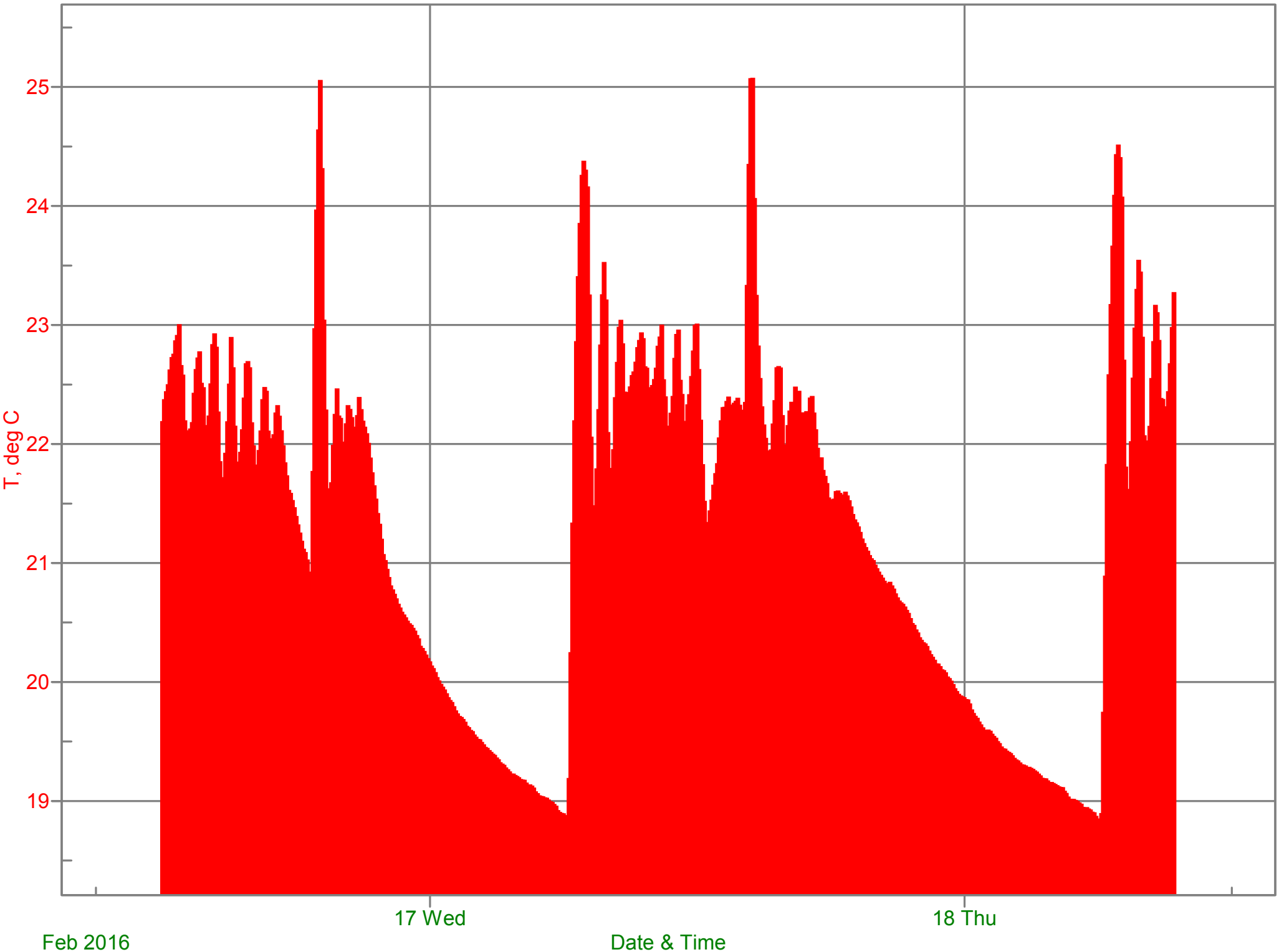
Results of Air Quality Testing

Room C



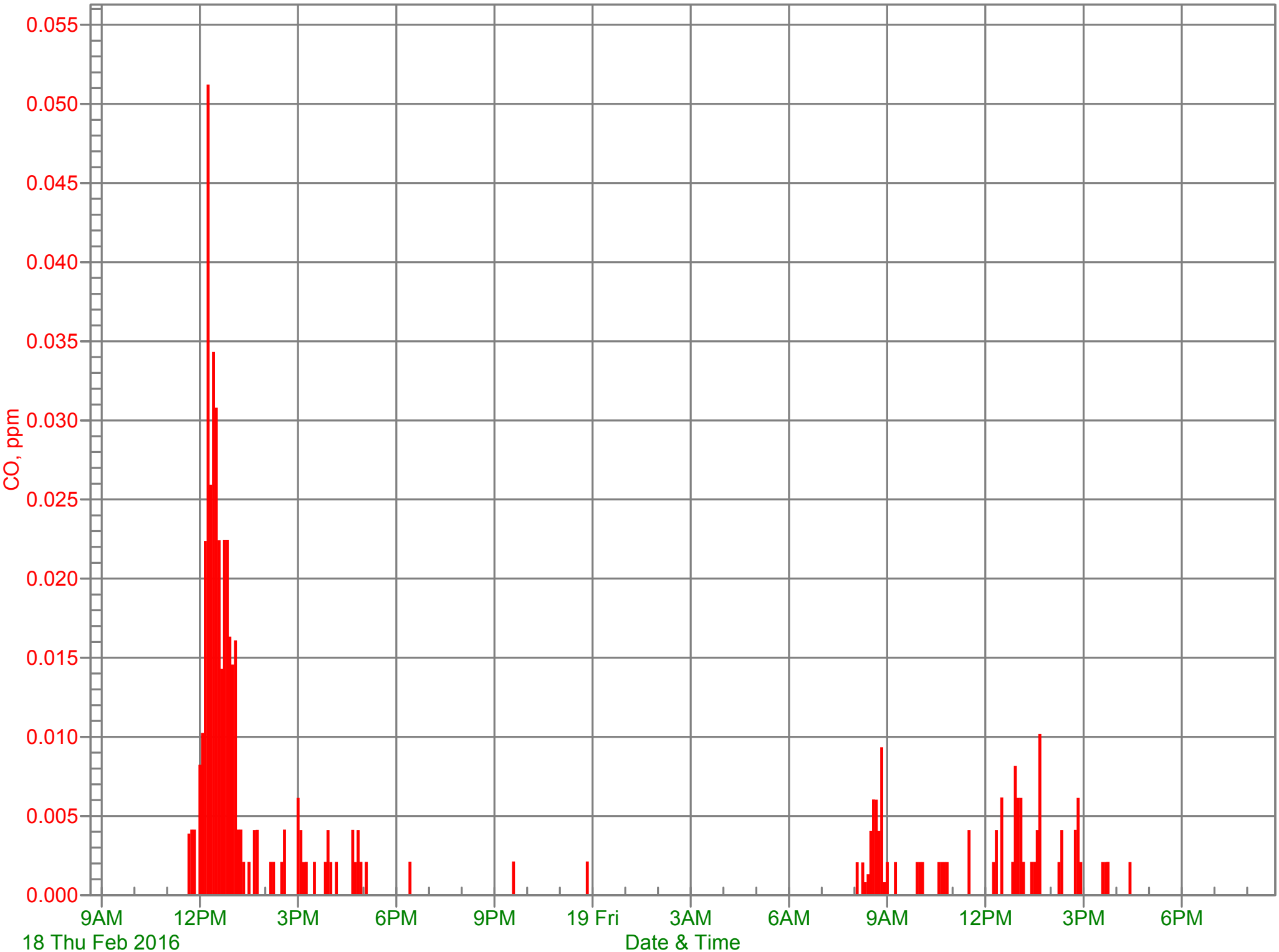
Results of Air Quality Testing

Room C



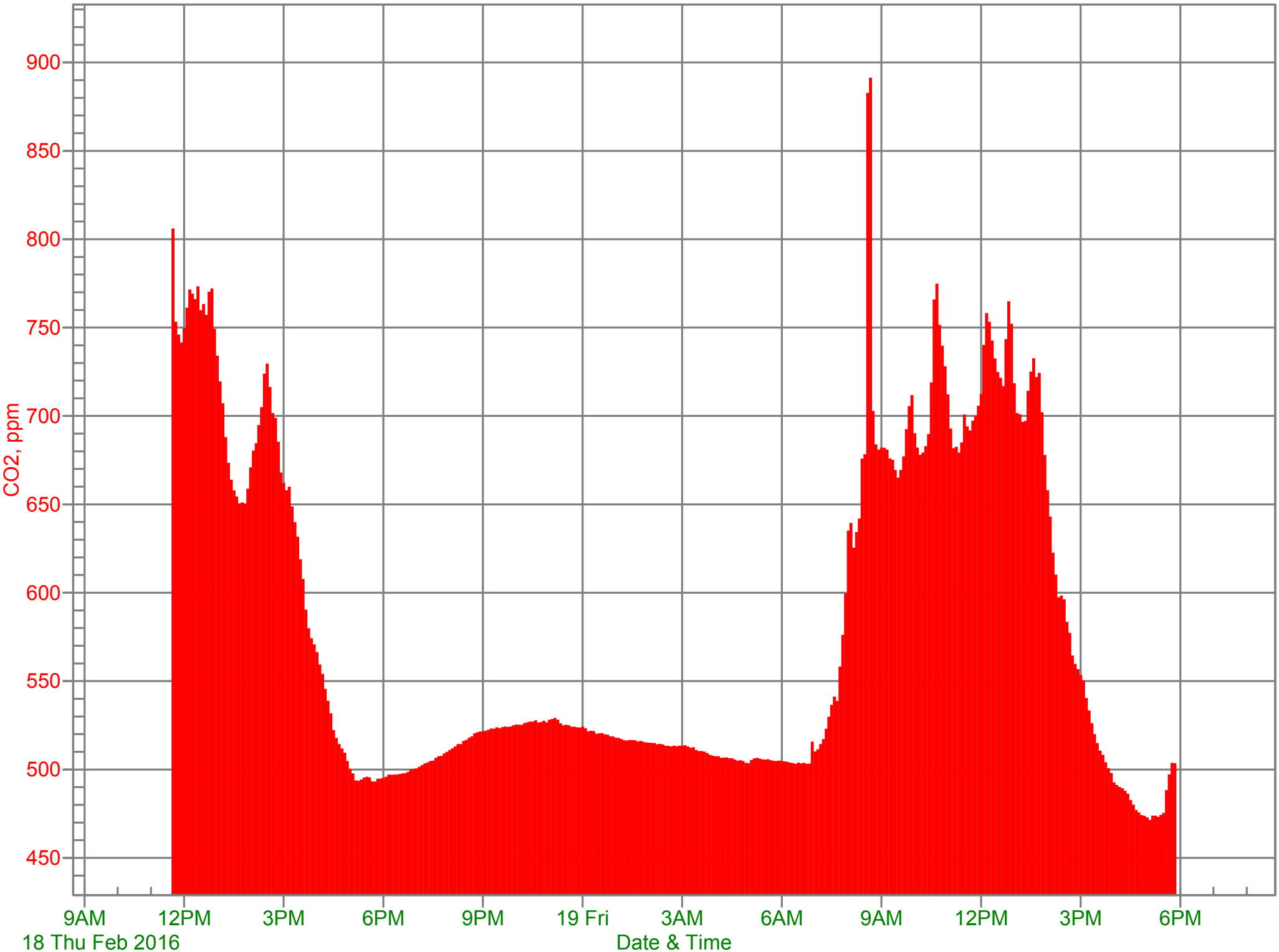
Results of Air Quality Testing

Room D



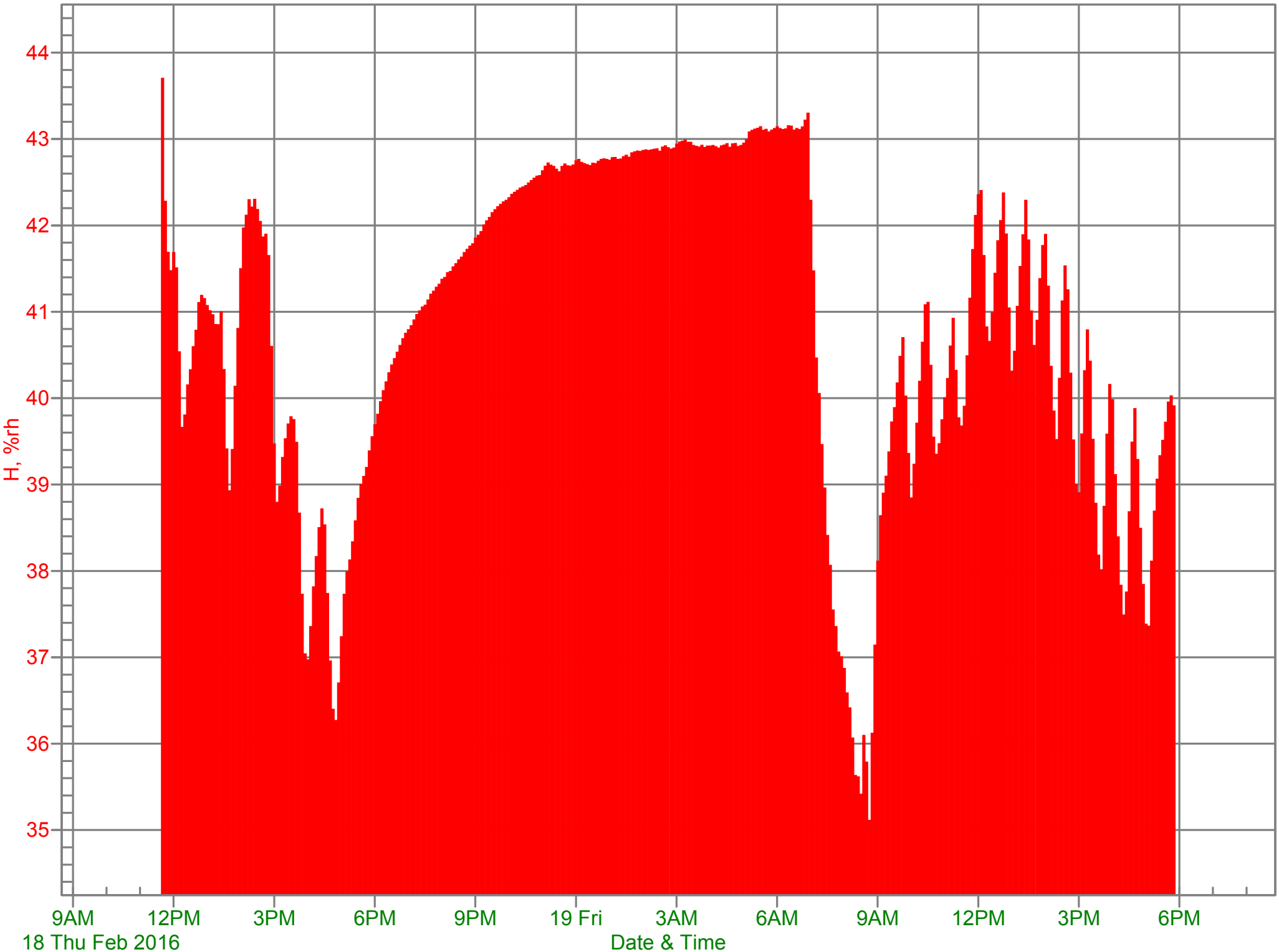
Results of Air Quality Testing

Room D



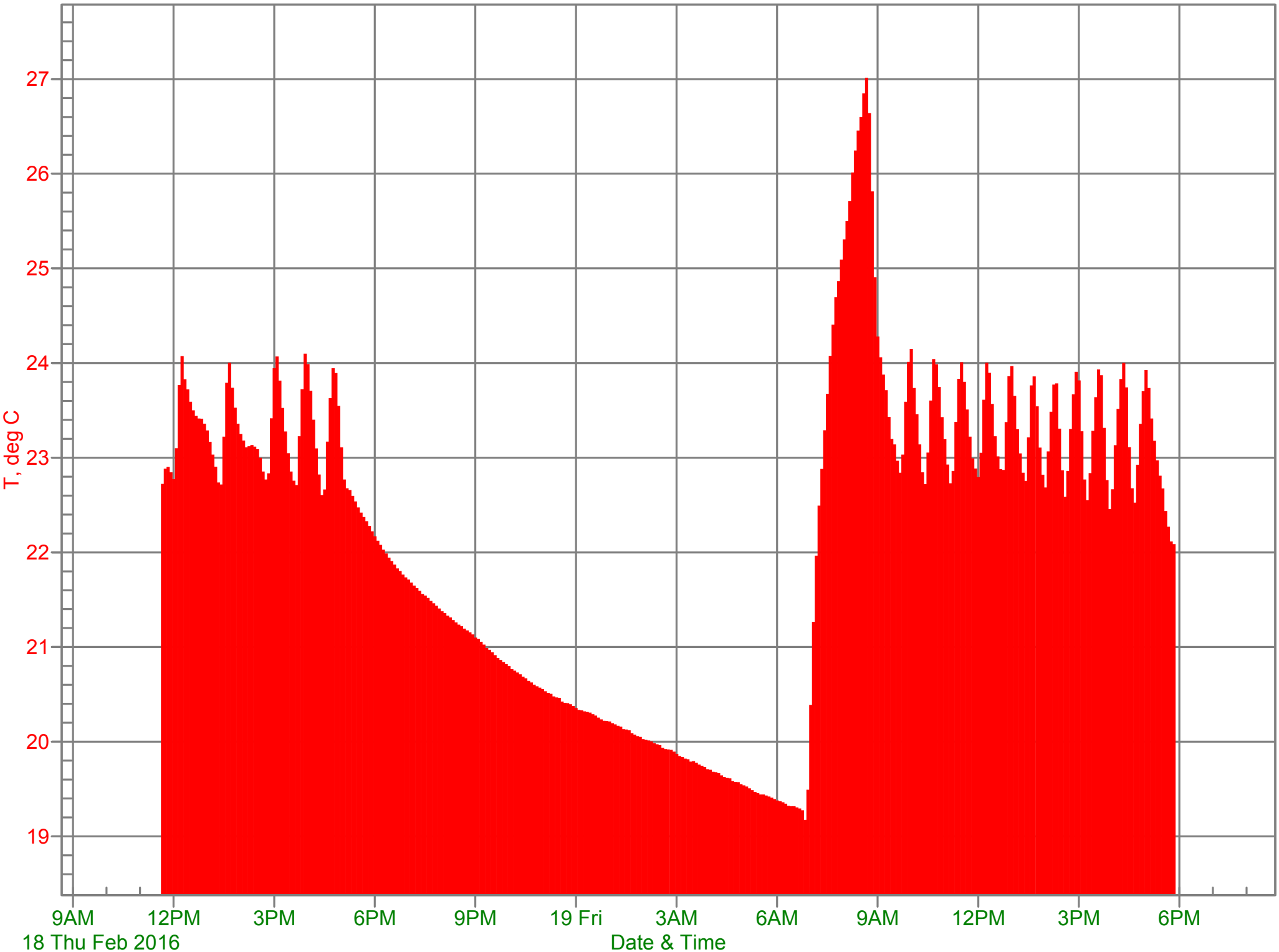
Results of Air Quality Testing

Room D



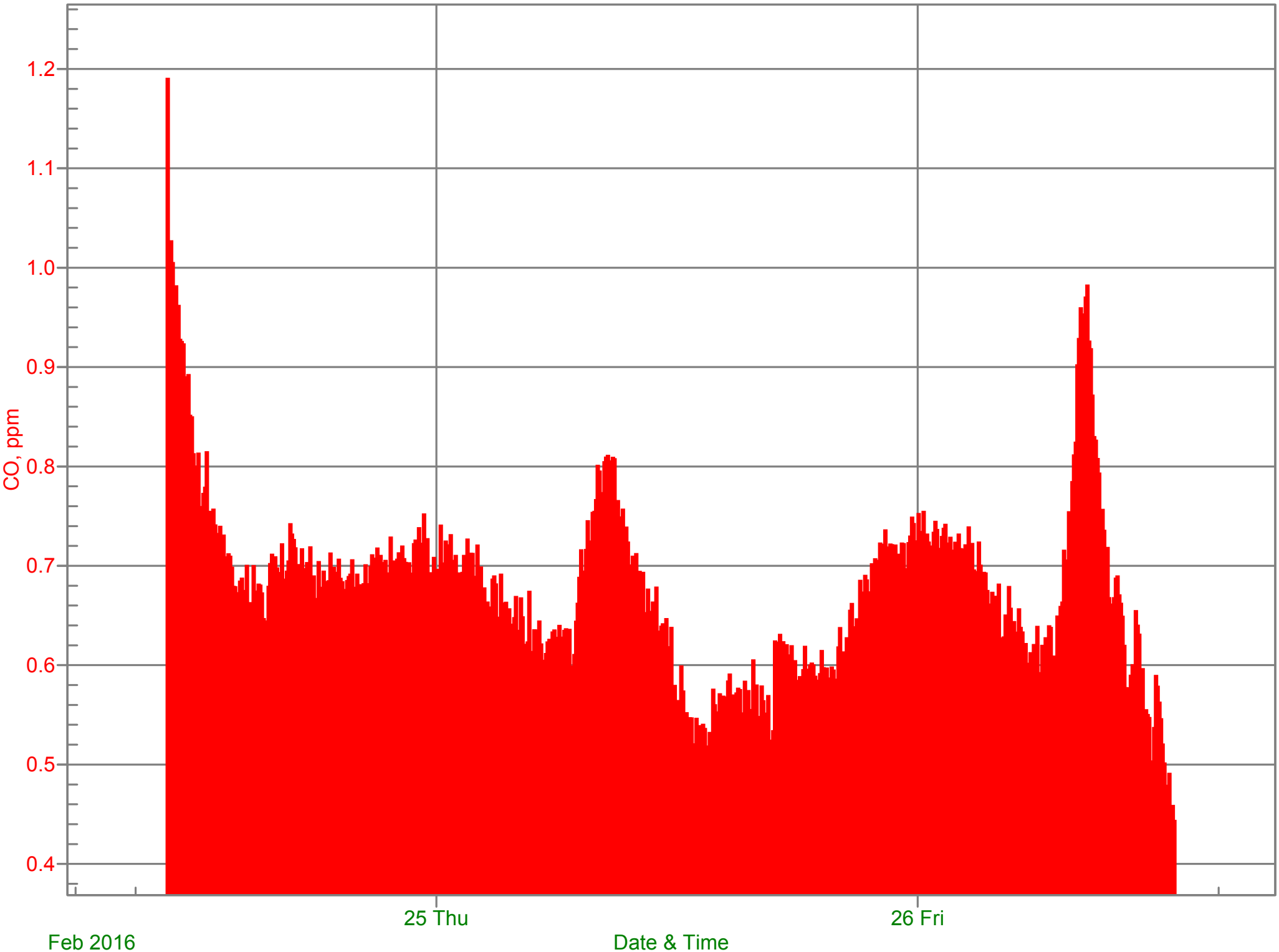
Results of Air Quality Testing

Room D



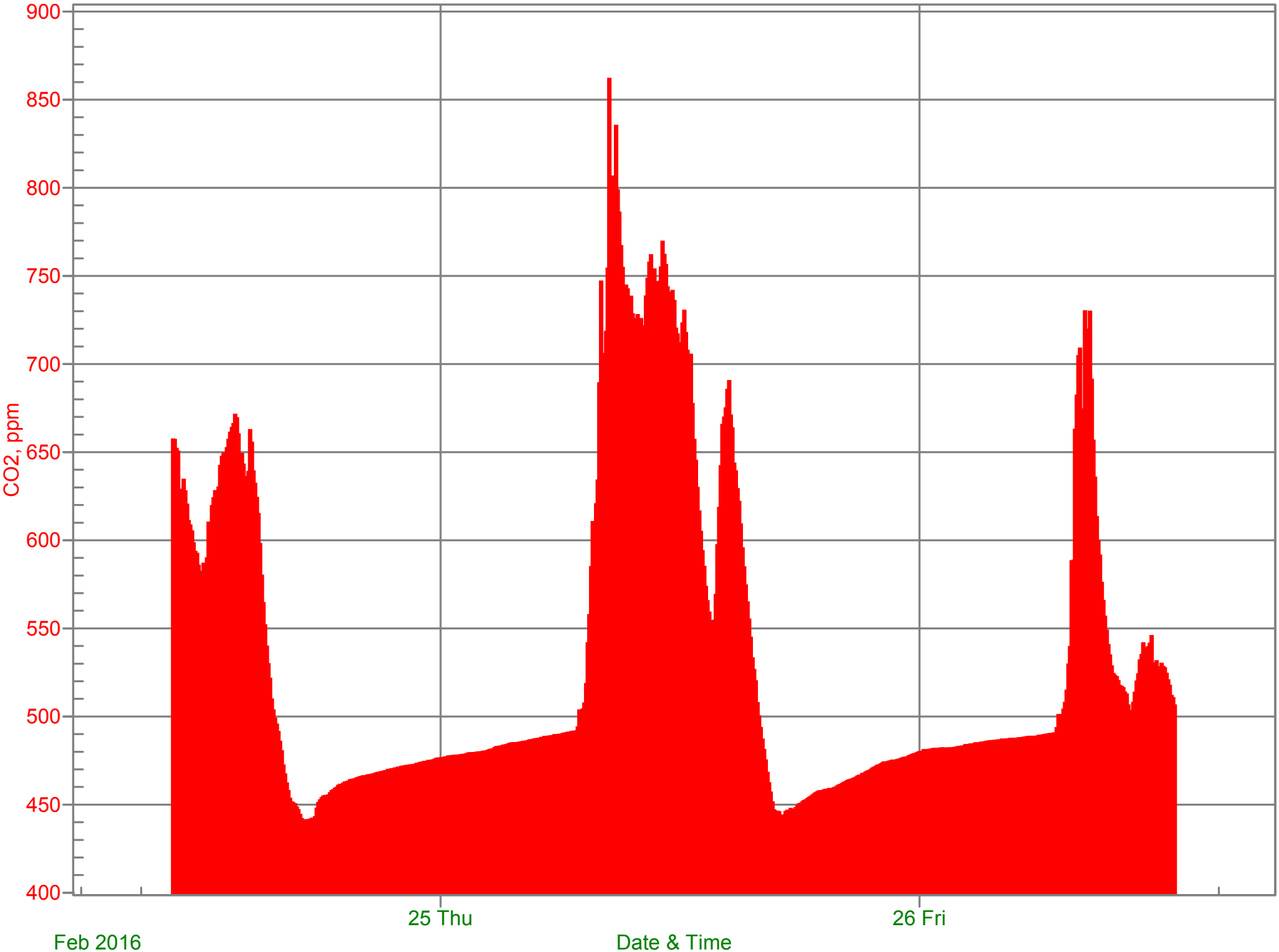
Results of Air Quality Testing

Room E



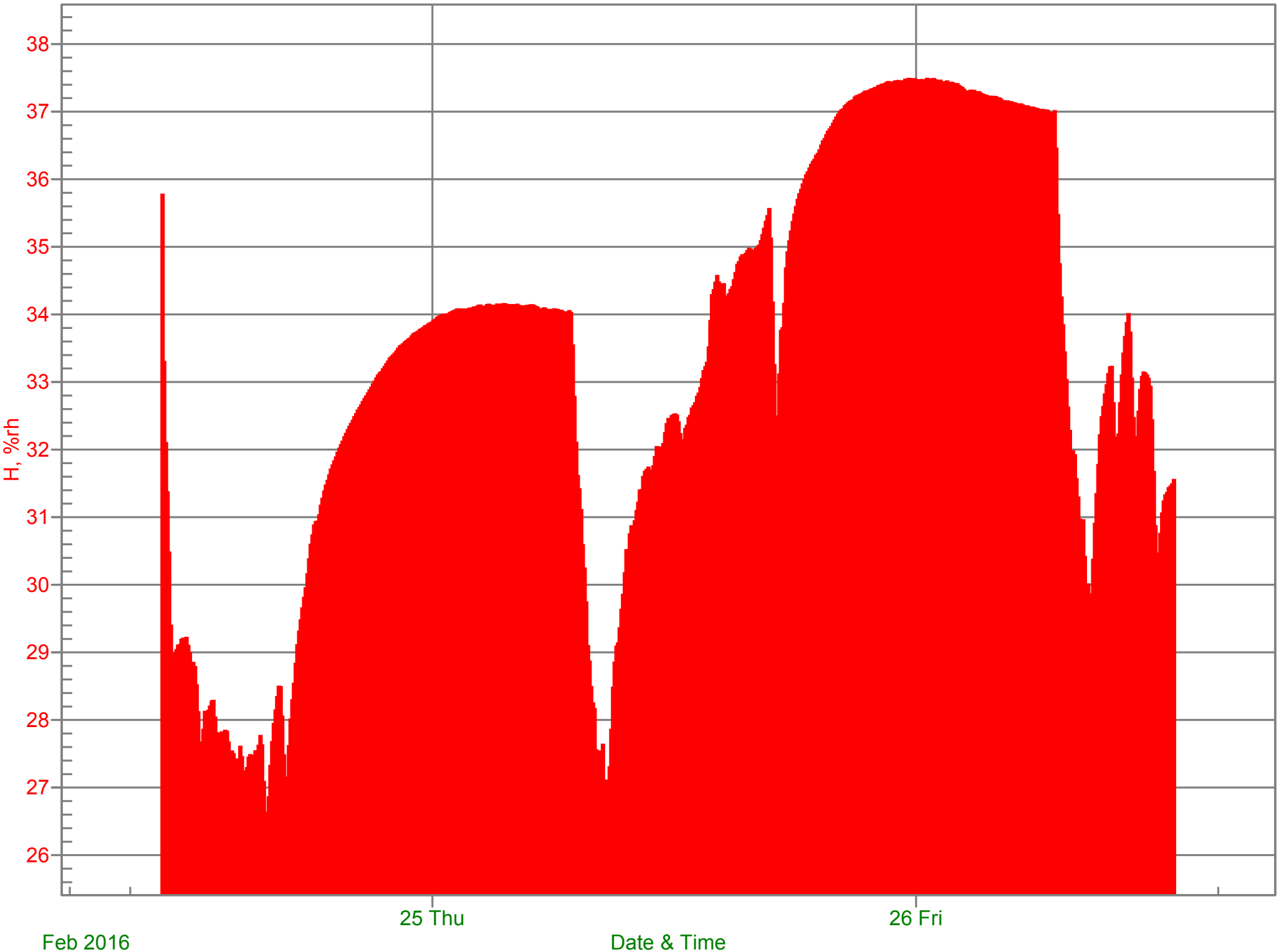
Results of Air Quality Testing

Room E



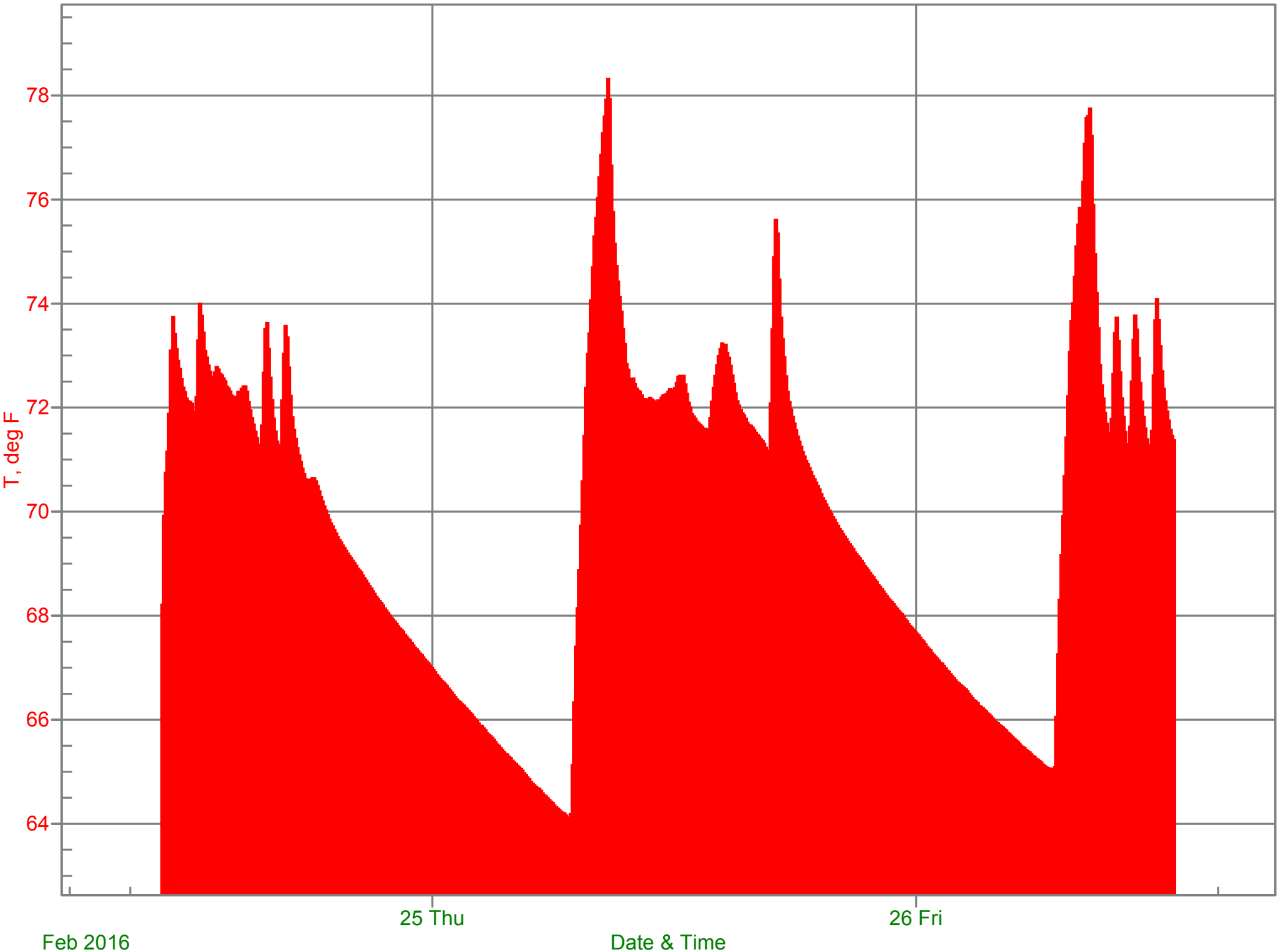
Results of Air Quality Testing

Room E



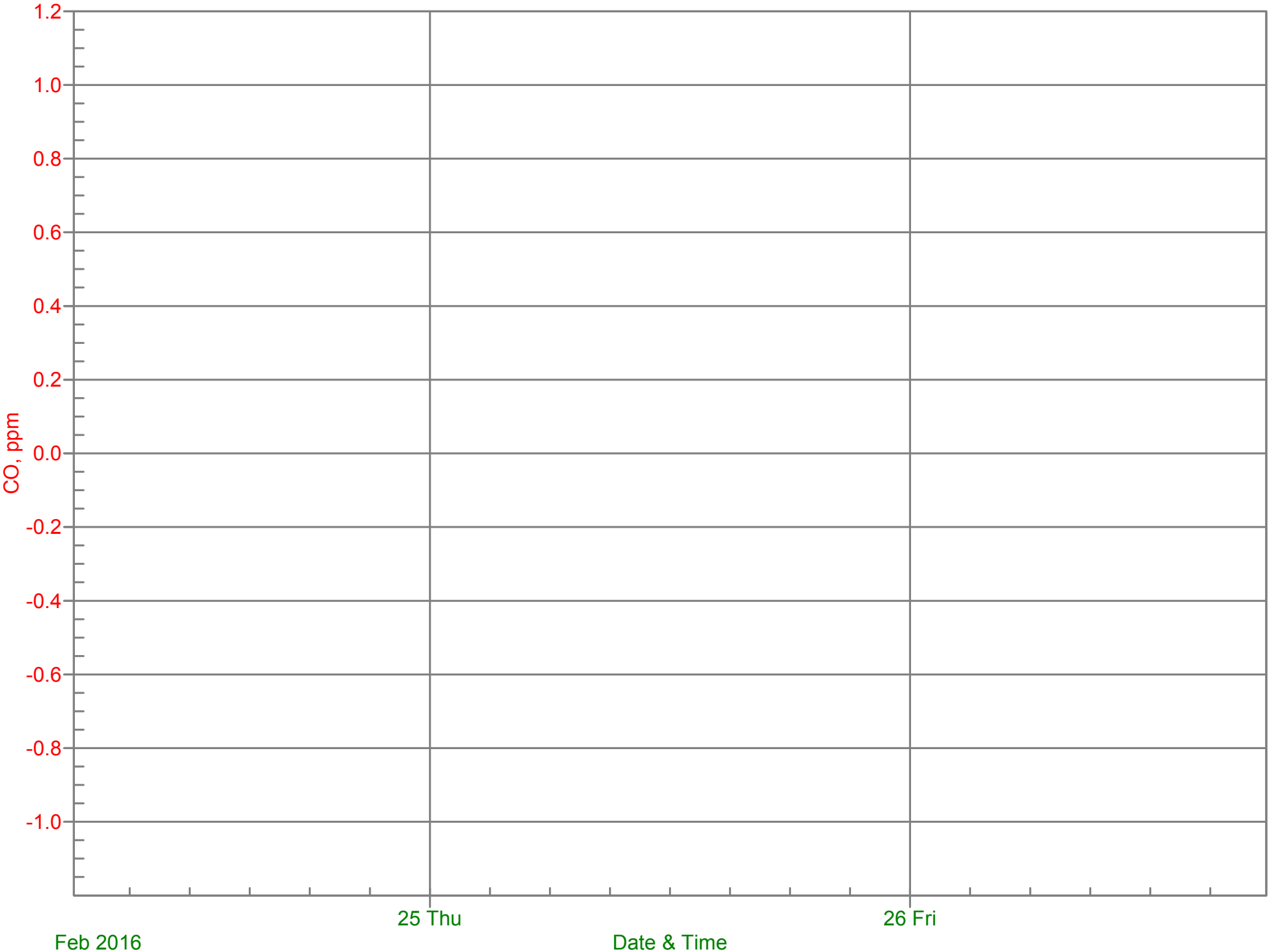
Results of Air Quality Testing

Room E



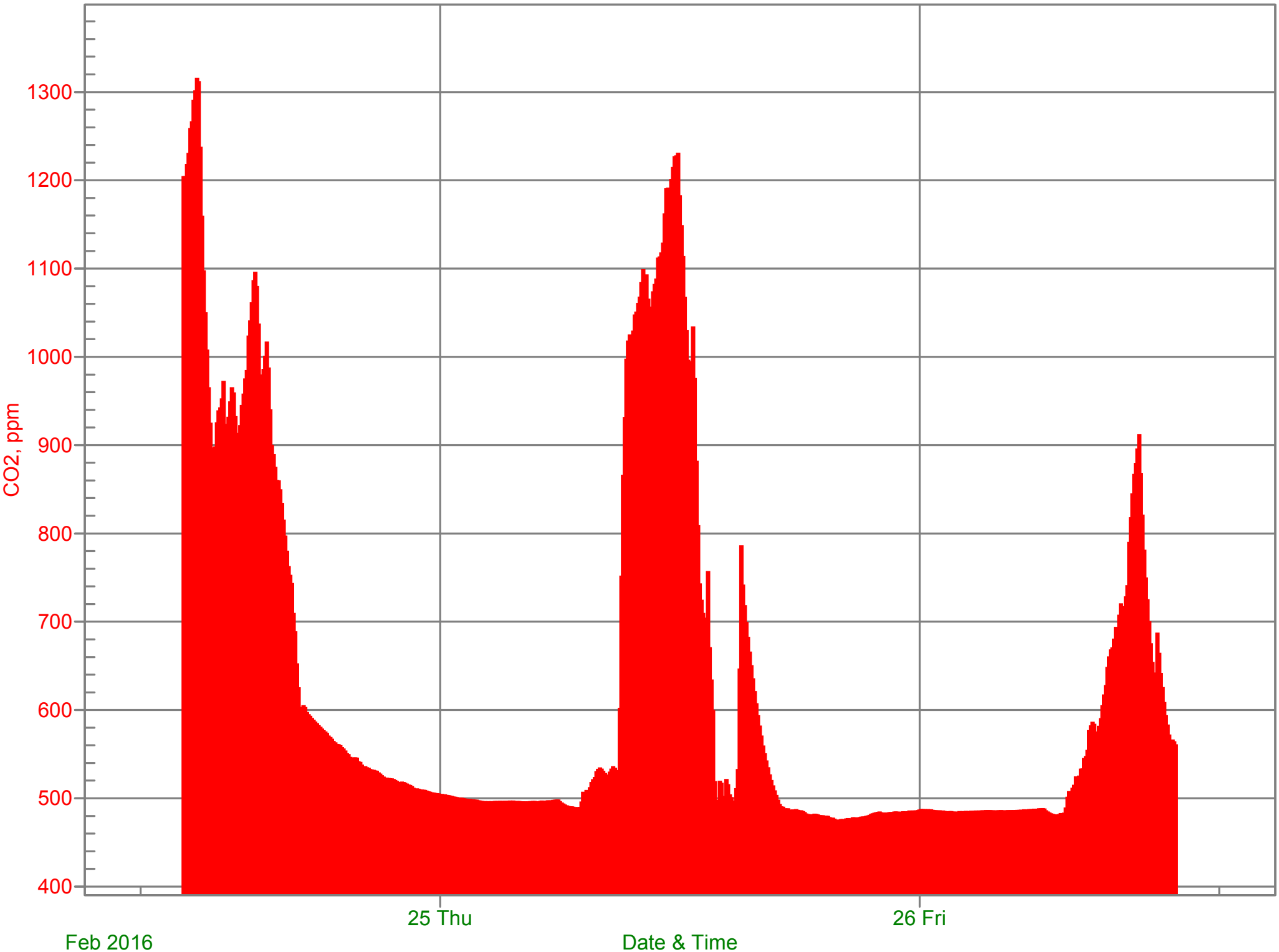
Results of Air Quality Testing

Room F



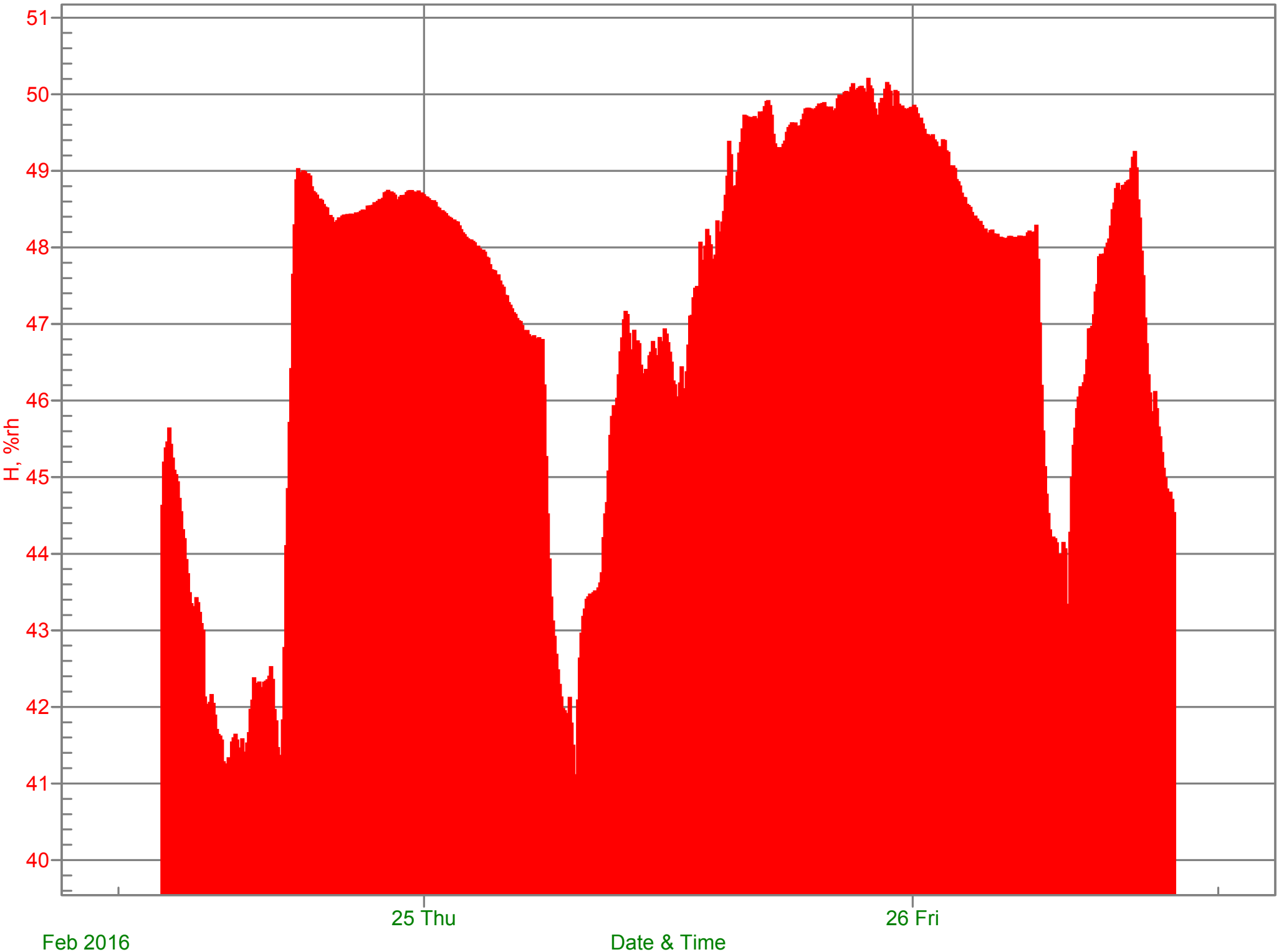
Results of Air Quality Testing

Room F



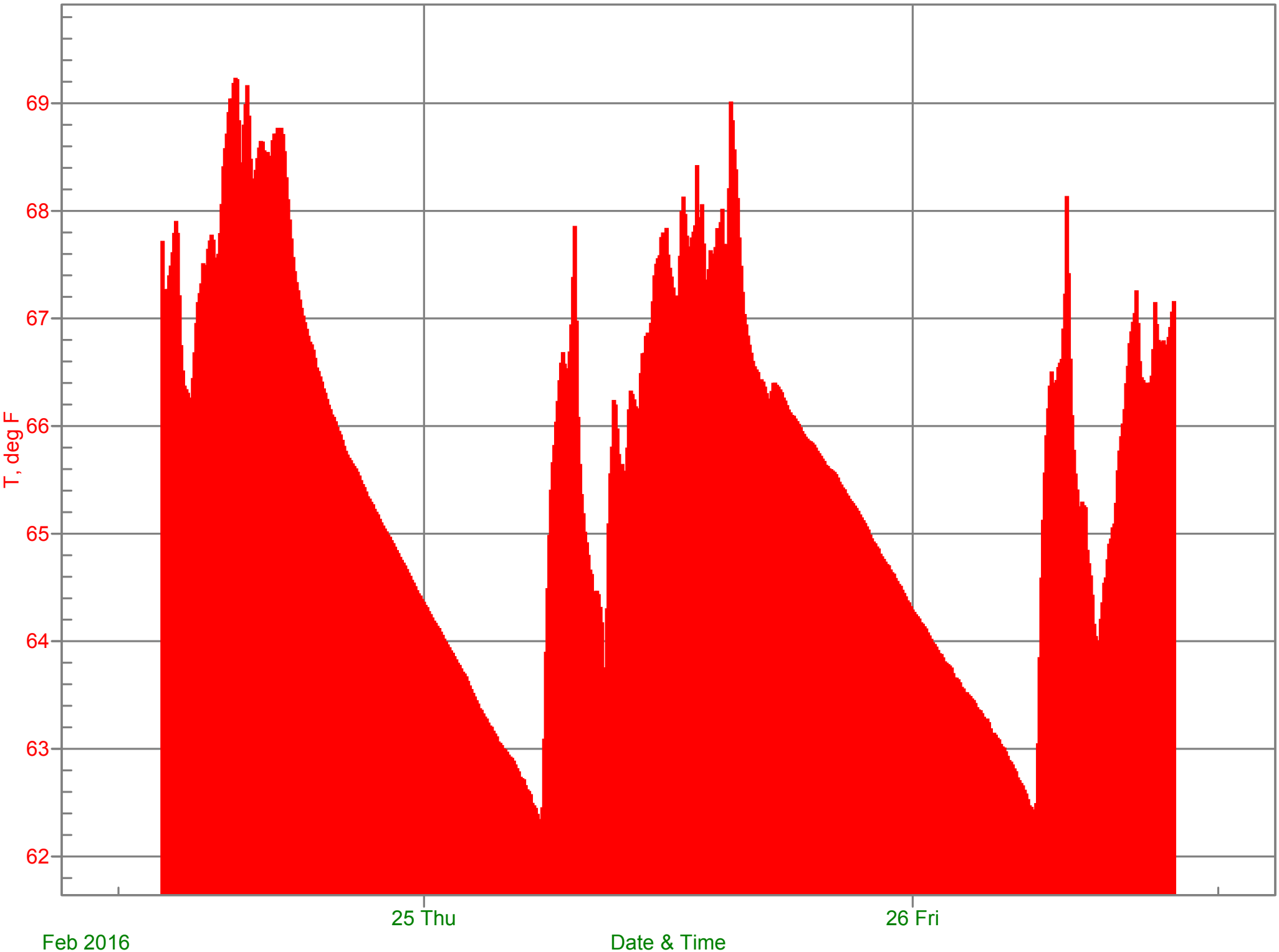
Results of Air Quality Testing

Room F



Results of Air Quality Testing

Room F



TAB 6

LABORATORY REPORTS

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 12, 2016

Gregg Middaugh
PBS Engineering & Environmental
2517 Eastlake Avenue E., Suite 100
Seattle, WA 98102

Re: Analytical Data for Project 41373.000
Laboratory Reference No. 1602-068

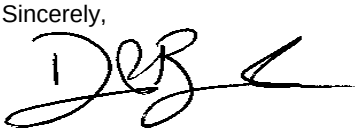
Dear Gregg:

Enclosed are the analytical results and associated quality control data for samples submitted on February 11, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 12, 2016
Samples Submitted: February 11, 2016
Laboratory Reference: 1602-068
Project: 41373.000

Case Narrative

Samples were received by the laboratory on February 11, 2016. They were maintained at the laboratory at a temperature of $2^{o}C$ to $6^{o}C$.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 12, 2016
Samples Submitted: February 11, 2016
Laboratory Reference: 1602-068
Project: 41373.000

TOTAL LEAD
EPA 6010C

Matrix: Wipe
Units: ug/Wipe

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-068-01					
Client ID:	**001 LW**					
Lead	**ND**	10	6010C	2-11-16	2-11-16	
Lab ID:	02-068-02					
Client ID:	**002 LW**					
Lead	**ND**	10	6010C	2-11-16	2-11-16	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 12, 2016
Samples Submitted: February 11, 2016
Laboratory Reference: 1602-068
Project: 41373.000

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-11-16
Date Analyzed:	2-11-16
Matrix:	Wipe
Units:	ug/Wipe
Lab ID:	MB0211WP1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 12, 2016
Samples Submitted: February 11, 2016
Laboratory Reference: 1602-068
Project: 41373.000

TOTAL LEAD
EPA 6010C
SB/SBD QUALITY CONTROL

Date Extracted: 2-11-16
Date Analyzed: 2-11-16

Matrix: Wipe
Units: ug/Wipe

Lab ID: SB0211WP1

Analyte	Spike Level	SB	Percent Recovery	SBD	Percent Recovery	RPD	Flags
Lead	500	**524**	105	**522**	104	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Laboratory Chain of Custody Form

ONSITE

PBS

Project: SVEC Bldg Name: ANNEX Project #: 41373.000

Analysis Requested: LEAD WIPE LAB: 02-068

Relinq'd by/Signature: GREGG MIDDAUGH Date/Time: 2/11/16 1150

Received by/Signature: MVOW Date/Time: 2/11/16 1150

Email Results to: MIDDAUGH@PBSENV.COM Turnaround Time: ASAP

BULK SAMPLE DATA FORM

	Sample #	Material	Location
1	-001 LW	PAINT DUST -144SI	RM C - GREEN COUNTERTOP
2	-002 LW	PAINT DUST -144SI	RM C - BLACK COUNTER
			* RESULTS IN ug/FT2
			* PLEASE CALL WITH RESULTS
			206.255.4659

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: Sky Valley Education Center
Lab ID: 1602175

February 20, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 14 sample(s) on 2/16/2016 for the analyses presented in the following report.

Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *02/20/2016*

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center
Lab Order: 1602175

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602175-001	Pb-001		02/16/2016 3:05 PM
1602175-002	Pb-002		02/16/2016 3:05 PM
1602175-003	Pb-003		02/16/2016 3:05 PM
1602175-004	Pb-004		02/16/2016 3:05 PM
1602175-005	Pb-005		02/16/2016 3:05 PM
1602175-006	Pb-006		02/16/2016 3:05 PM
1602175-007	Pb-007		02/16/2016 3:05 PM
1602175-008	Pb-008		02/16/2016 3:05 PM
1602175-009	Pb-009		02/16/2016 3:05 PM
1602175-010	Pb-010		02/16/2016 3:05 PM
1602175-011	Pb-011		02/16/2016 3:05 PM
1602175-012	Pb-012		02/16/2016 3:05 PM
1602175-013	Pb-013		02/16/2016 3:05 PM
1602175-014	Pb-014		02/16/2016 3:05 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602175**
Date: **2/20/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602175**
Date Reported: **2/20/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

Lab ID: 1602175-001 **Collection Date:**
Client Sample ID: **Pb-001** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	1,170	35.7	D	mg/Kg	100	2/18/2016 11:32:16 AM

Lab ID: 1602175-002 **Collection Date:**
Client Sample ID: **Pb-002** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	5,980	39.2	D	mg/Kg	100	2/18/2016 11:35:48 AM

Lab ID: 1602175-003 **Collection Date:**
Client Sample ID: **Pb-003** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	104	3.33	D	mg/Kg	10	2/18/2016 12:29:38 PM

Analytical Report

WO#: **1602175**
Date Reported: **2/20/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

Lab ID: 1602175-004 **Collection Date:**
Client Sample ID: **Pb-004** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	136	3.57	D	mg/Kg	10	2/18/2016 12:33:11 PM

Lab ID: 1602175-005 **Collection Date:**
Client Sample ID: **Pb-005** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	1,160	38.5	D	mg/Kg	100	2/18/2016 11:50:37 AM

Lab ID: 1602175-006 **Collection Date:**
Client Sample ID: **Pb-006** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	11.2	0.370		mg/Kg	1	2/18/2016 12:40:18 PM

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

Lab ID: 1602175-007 **Collection Date:**
Client Sample ID: **Pb-007** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	7,740	38.5	D	mg/Kg	100	2/18/2016 11:57:42 AM

Lab ID: 1602175-008 **Collection Date:**
Client Sample ID: **Pb-008** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	241	4.00	D	mg/Kg	10	2/18/2016 12:43:51 PM

Lab ID: 1602175-009 **Collection Date:**
Client Sample ID: **Pb-009** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	42,900	37.7	D	mg/Kg	100	2/18/2016 12:04:47 PM

Analytical Report

WO#: **1602175**
Date Reported: **2/20/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

Lab ID: 1602175-010 **Collection Date:**
Client Sample ID: **Pb-010** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	1,480	34.5	D	mg/Kg	100	2/18/2016 12:08:20 PM

Lab ID: 1602175-011 **Collection Date:**
Client Sample ID: **Pb-011** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	2,650	40.0	D	mg/Kg	100	2/18/2016 12:19:00 PM

Lab ID: 1602175-012 **Collection Date:**
Client Sample ID: **Pb-012** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	20.3	0.370		mg/Kg	1	2/18/2016 12:36:45 PM

Analytical Report

WO#: **1602175**
Date Reported: **2/20/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

Lab ID: 1602175-013 **Collection Date:**
Client Sample ID: **Pb-013** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13011		Analyst: TN
Lead	397	37.0	D	mg/Kg	100	2/18/2016 12:26:05 PM

Lab ID: 1602175-014 **Collection Date:**
Client Sample ID: **Pb-014** **Matrix:** Paint

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13038		Analyst: TN
Lead	359	37.7	D	mg/Kg	100	2/18/2016 2:20:21 PM

Work Order: 1602175
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**MB-13011**	SampType:	**MBLK**			Units:	**mg/Kg**	Prep Date:	**2/16/2016**	RunNo:	**27766**	
Client ID:	**MBLKS**	Batch ID:	**13011**					Analysis Date:	**2/18/2016**	SeqNo:	**522294**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.200									

Sample ID	**LCS-13011**	SampType:	**LCS**			Units:	**mg/Kg**	Prep Date:	**2/16/2016**	RunNo:	**27766**	
Client ID:	**LCSS**	Batch ID:	**13011**					Analysis Date:	**2/18/2016**	SeqNo:	**522295**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		26.3	0.200	25.00	0	105	80	120				

Sample ID	**1602163-002ADUP**	SampType:	**DUP**			Units:	**mg/Kg**	Prep Date:	**2/16/2016**	RunNo:	**27766**	
Client ID:	**BATCH**	Batch ID:	**13011**					Analysis Date:	**2/18/2016**	SeqNo:	**522297**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		18.6	0.153						16.65	11.3	20	

Sample ID	**1602163-002AMS**	SampType:	**MS**			Units:	**mg/Kg**	Prep Date:	**2/16/2016**	RunNo:	**27766**	
Client ID:	**BATCH**	Batch ID:	**13011**					Analysis Date:	**2/18/2016**	SeqNo:	**522301**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		35.9	0.153	19.08	16.65	101	75	125				

Sample ID	**1602163-002AMSD**	SampType:	**MSD**			Units:	**mg/Kg**	Prep Date:	**2/16/2016**	RunNo:	**27766**	
Client ID:	**BATCH**	Batch ID:	**13011**					Analysis Date:	**2/18/2016**	SeqNo:	**522302**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		39.3	0.153	19.08	16.65	119	75	125	35.85	9.10	20	

Work Order: 1602175
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**MB-13038**	SampType:	**MBLK**			Units:	**mg/Kg**	Prep Date:	**2/18/2016**		RunNo:	**27773**	
Client ID:	**MBLKS**	Batch ID:	**13038**					Analysis Date:	**2/18/2016**		SeqNo:	**522449**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		ND	0.200										

Sample ID	**LCS-13038**	SampType:	**LCS**			Units:	**mg/Kg**	Prep Date:	**2/18/2016**		RunNo:	**27773**	
Client ID:	**LCSS**	Batch ID:	**13038**					Analysis Date:	**2/18/2016**		SeqNo:	**522450**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		25.1	0.200	25.00	0	101	80	120					

Sample ID	**1602088-002ADUP**	SampType:	**DUP**			Units:	**mg/Kg-dry**	Prep Date:	**2/18/2016**		RunNo:	**27773**	
Client ID:	**BATCH**	Batch ID:	**13038**					Analysis Date:	**2/18/2016**		SeqNo:	**522452**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		130	0.181						96.87	29.5	20	R	

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	**1602088-002AMS**	SampType:	**MS**			Units:	**mg/Kg-dry**	Prep Date:	**2/18/2016**		RunNo:	**27773**	
Client ID:	**BATCH**	Batch ID:	**13038**					Analysis Date:	**2/18/2016**		SeqNo:	**522454**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		123	0.183	22.83	96.87	113	75	125					

Sample ID	**1602088-002AMSD**	SampType:	**MSD**			Units:	**mg/Kg-dry**	Prep Date:	**2/18/2016**		RunNo:	**27773**	
Client ID:	**BATCH**	Batch ID:	**13038**					Analysis Date:	**2/18/2016**		SeqNo:	**522455**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		106	0.183	22.83	96.87	41.5	75	125	122.7	14.3	20	S	

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602175**
Logged by:	**Erica Silva**	Date Received:	**2/16/2016 3:05:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Bulk Material		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

PBS | Engineering + Environmental

LEAD

FREMONT

1602175

Project: SKY VALLEY EDUCATION CENTER

Project #: 41373.000

Analysis requested: PAINT CHIP - TOTAL LEAD

Date: 2/15/16

Relinq'd by/Signature: [signature]

Date/Time:

Received by/Signature: [signature]

Date/Time: 2/16/16 1305

Fax results to:

- ☐ Brian Stanford
- ☐ Willem Mager
- ☑ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Tim Ogden
- ☐ Ferman Fletcher
- ☐ Prudy Stoudt-McRae
- ☐ Grant Baker
- ☐ Janet Murphy
- ☐ Harry Goren
- ☐ David Toy
- ☐ Mike Smith
- ☐ Chuck Greeb
- ☐ Christine Rmah

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☐ 24 Hours
- ☐ 48 Hours
- ☑ 3-5 Days
- ☐ Other

Report composite results for GWB/joint compound samples only

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	Pb-001	WHITE / WOOD	EXTERIOR COVERED WALKWAY	
	Pb-002	BROWN / METAL	EXTERIOR FACIA COVERED WALKWAY	
	Pb-003	TAN / METAL	EXTERIOR DOWN SPOUT	
	Pb-004	WHITE / METAL	EXTERIOR COVERED WALKWAY	
	Pb-005	WHITE / WOOD	EXTERIOR BLD-2 SOFFIT	
	Pb-006	WHITE / METAL	EXTERIOR TRIM OFFICE	
	Pb-007	WHITE / WOOD	EXTERIOR COVERED WALKWAY	
	Pb-008	LIGHT GRAY / METAL	EXTERIOR METAL HOPPER BLD-4	
	Pb-009	BROWN / CONCRETE	EXTERIOR WOOD SHOP SIDING	
	Pb-010	WHITE / WOOD	EXTERIOR ANNEX SOFFIT	
	Pb-011	BROWN / WOOD	EXTERIOR FACIA - ANNEX	
	Pb-012	BROWN / WOOD	EXTERIOR FACIA - BLDG-4	
	Pb-013	LIGHT BLUE / CONCRETE	INTERIOR COMMONS NE WALL	
	Pb-014	WHITE / GWB	INTERIOR ELECTRICAL RM ANNEX	

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

Bend | Boise | Coos Bay | Eugene | Portland | Seattle | Tri-Cities | Vancouver

March 22, 2016

David Toy
PBS Environmental - Seattle
2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

NVL LABS
INDUSTRIAL HYGIENE SERVICES
Laboratory | Management | Training

RE: Metals Analysis; NVL Batch # 1606160.00

Dear Mr. Toy,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm) , Percent (%) or mg/cm^2 by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft^2. TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m^3. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more details.

This report is considered highly confidential and will not be released without your approval. Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. if you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

Shalini Patel, Laboratory Analyst

ilac-MRA
AIHA LAP, LLC
ACCREDITED LABORATORY
INDUSTRIAL HYGIENE & ENVIRONMENTAL LEAD
ISO/IEC 17025:2005
LAB # 101861

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

Analysis Report

Total Lead (Pb)

Client: PBS Environmental - Seattle
Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Attention: **Mr. David Toy**
Project Location: Monroe - SD Sky Valley Education Center

Batch #: 1606160.00
Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 41373.000
Date Received: 3/21/2016
Samples Received: 2
Samples Analyzed: 2

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
16192170	41373.000-PB-100	0.0345	140.0	< 140.0	<0.0140
16192171	41373.000-PB-101	0.1880	53.0	< 53.0	<0.0053

Comments: Small sample size (<0.05g) for 41373.000-PB-100.

Sampled by: Client
Analyzed by: Yasuyuki Hida
Reviewed by: Shalini Patel
Date Analyzed: 03/22/2016
Date Issued: 03/22/2016

Shalini Patel, Laboratory Analyst

mg/ Kg =Milligrams per kilogram
Percent = Milligrams per kilogram / 10000
RL = Reporting Limit
'<' = Below the reporting Limit
Note : Method QC results are acceptable unless stated otherwise.
Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

Bench Run No: 2016-0322-5

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

LEAD LABORATORY SERVICES

Company PBS Environmental - Seattle
Address 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102
Project Manager Mr. David Toy
Phone (206) 233-9639

NVL Batch Number **1606160.00**
TAT 1 Day **AH** No
Rush TAT
Due Date 3/22/2016 **Time** 4:55 PM
Email david.toy@pbsenv.com
Fax (866) 727-0140

Project Name/Number: 41373.000 **Project Location:** Monroe - SD Sky Valley Education Center

Subcategory Flame AA (FAA)
Item Code FAA-02 EPA 7000B Lead by FAA <paint>

Total Number of Samples 2 Rush Samples

	Lab ID	Sample ID	Description	A/R
1	16192170	41373.000-PB-100		A
2	16192171	41373.000-PB-101		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Justin Shearer		NVL	3/21/16	1655
Analyzed by	Yasuyuki Hida		NVL	3/22/16	
Results Called by					
☐ **Faxed** ☐ **Emailed**					

Special Instructions:

Date: 3/21/2016
Time: 5:04 PM
Entered By: Justin Shearer

PBS

1606160

PROJECT: Monroe - SD Sky Valley Education Center **PROJ. #:** 41373.000

Analysis requested: Lead / PB **Date:** 3-21-16

Relinq'd by/Signature: [signature] **Date/Time:** 3-21-16 16:58

Received by/Signature: J. Shreves / [signature] **Date/Time:** 3-21-16 1655

Fax results to:

☐	Brian Stanford	☐	Prudy Stoudt-McRae	☐	Ferman Fletcher
☒	David Toy	☐	Grant Baker	☐	Tim Ogden
☒	Gregg Middaugh	☐	Janet Murphy	☐	Mike Smith
☐	Mark Hiley	☐	Willem Mager	☐	Chuck Greeb

TURN AROUND TIME:

☐	1 Hour	☒	24 Hours	☐	3-5 Days
☐	2 Hours	☐	48 Hours	☐	Other_____
☐	4 Hours				

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	PB-100	Blade Blue Paint	small gym North wall	
	PB-101	Beige Paint	small gym East wall	

March 22, 2016

David Toy
PBS Environmental - Seattle
2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1606161.00

Client Project: 41373.000
Location: Monroe - SD Sky Valley Education Center

Dear Mr. Toy,

Enclosed please find test results for the 2 sample(s) submitted to our laboratory for analysis on 3/21/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116** Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample Results

Lab Code: 102063-0

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: PBS Environmental - Seattle
Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Attention: Mr. David Toy
Project Location: Monroe - SD Sky Valley Education Center

Batch #: 1606161.00
Client Project #: 41373.000
Date Received: 3/21/2016
Samples Received: 2
Samples Analyzed: 2
Method: EPA/600/R-93/116 & EPA/600/M4-82-020

Lab ID: 16192172 **Client Sample #: 41373.000-200**
Location: Monroe - SD Sky Valley Education Center

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint and trace white soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Fine particles, Perlite, Glass beads	Cellulose 47%	**None Detected ND**
Paint, Mastic/Binder	Glass fibers 30%	

Lab ID: 16192173 **Client Sample #: 41373.000-201**
Location: Monroe - SD Sky Valley Education Center

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint and thin white soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Fine particles, Perlite, Glass beads	Cellulose 40%	**None Detected ND**
Paint, Mastic/Binder	Glass fibers 34%	

Sampled by: Client
Analyzed by: Nadezhda Prysyazhnyuk **Date:** 03/22/2016
Reviewed by: Nick Ly **Date:** 03/22/2016

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

NVL Laboratories, Inc.
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ASBESTOS LABORATORY SERVICES

Company PBS Environmental - Seattle
Address 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102
Project Manager Mr. David Toy
Phone (206) 233-9639

NVL Batch Number **1606161.00**
TAT 1 Day **AH** No
Rush TAT
Due Date 3/22/2016 **Time** 4:55 PM
Email david.toy@pbsenv.com
Fax (866) 727-0140

Project Name/Number: 41373.000 **Project Location:** Monroe - SD Sky Valley Education Center

Subcategory PLM Bulk
Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 2 Rush Samples

	Lab ID	Sample ID	Description	A/R
1	16192172	41373.000-200		A
2	16192173	41373.000-201		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Justin Shearer		NVL	3/21/16	1655
Analyzed by	Nadezhda		NVL	3/22/16	11:52 AM
Results Called by					
☐ **Faxed** ☐ **Emailed**					

Special Instructions:

Date: 3/21/2016
Time: 5:09 PM
Entered By: Justin Shearer

PBS **1606161**

PROJECT: Monroe - SD Sky Valley Education Center Project PROJ. #: 413.73.000

Analysis requested: PLM Date: 3-21-16

Relinq'd by/Signature: [signature] Date/Time: 3-21-16 16:58

Received by/Signature: J. Shearer/[signature] Date/Time: 3-21-16 1655

Fax results to:

☐	Brian Stanford	☐	Prudy Stoudt-McRae	☐	Ferman Fletcher
☒	David Toy	☐	Grant Baker	☐	Tim Ogden
☒	Gregg Middaugh	☐	Janet Murphy	☐	Mike Smith
☐	Mark Hiley	☐	Willem Mager	☐	Chuck Greeb

TURN AROUND TIME:

☐	1 Hour	☒	24 Hours	☐	3-5 Days
☐	2 Hours	☐	48 Hours	☐	Other_____
☐	4 Hours				

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	200	White acoustical Sound Board	small gym East wall	
	201	White acoustical Sound Board	small gym East wall	

Laboratory Chain of Custody Form

LAB COC

160088

PBS

Project: 41373.000 Bldg Name: SVEC Project#: MONROE SD

Analysis Requested: ASBESTOS PRESENCE/ABSENCE LAB:

Relinq'd by/Signature: Greg Muddaugh Date/Time: 1/29/16

Received by/Signature: Teresa Dunkle Date/Time: 1/29/16 1400

Email Results to: MUDDAUGH@PBSENV.COM Turnaround Time: RUSH

BULK SAMPLE DATA FORM

Sample #	Material	Location
-003	GWB CONSTRUCTION DEBRIS	RM 4
-004	" " "	LIB N. WALL
-005	" " "	ADMIN SERVER RM
-006	" " "	RM 20
-007		LIB. E. WALL

Reviewed by:

Results Released:

Fax Verbals USPS Email

Invoice Released:

Fax USPS Email

ASBESTOS NORTHWEST

NVLAP
200993-0

30620 Pacific Hwy S, #103,
Federal Way, WA 98003
(253) 941-4343

Attn: Gregg Middaugh,

Enclosed please find the analytical report for one or more samples submitted for analysis by Polarized Light Microscopy.

The samples were analyzed in accordance with EPA method 600/R-93/116 and 600/M4-82-020. The analyst used a stereomicroscope to visually inspect the sample to determine homogeneity and material descriptions. The sample was then viewed under the polarized light microscope to determine the presence and percentage of asbestos and non-asbestos fibers.

The limit of detection for PLM 600/R-93/116 is approximately 1%. The EPA recommends that samples found to have asbestos percentages 1%-10% be point counted to acquire a more accurate percentage. We provide 400 point counts and 1000 point counts. The limits of detection are 0.25% and 0.10% respectively.

After analysis is complete, all paperwork will be filed together, and kept in a secure locked filing cabinet away from other clients and laboratory staff. Asbestos Northwest ensures that the files will not be tampered with at any time, and will be removed from the filing cabinet only if the client requests a modification on the report or re-analysis. If you have any concerns or comments, feel free to contact Asbestos Northwest.

Thank you,

Cathy Butler

-These results are only applicable to the samples enclosed, and may not be reproduced, except in full, without the approval of the laboratory. This report may not be used to claim product endorsement by NVLAP, NIST, or any other agency.-

20161619 1 of 2

Laboratory Chain of Custody Form

PBS

Project: 41373.000 Bldg Name: SVEC Project #: MONROE SD

Analysis Requested: PLM

Relinq'd by/Signature: [signature] LAB: SAT

Received by/Signature: Date/Time: 2/9/16

Email Results to: Date/Time:

Turnaround Time: 24 HR

BULK SAMPLE DATA FORM

Sample #	Material	Location
-006	CB MASTIC	ANNEX HALL
-007	12" GCT - MED FISS. SM PINHOLE	ANNEX PREP - RM B
-008	CB MASTIC	ANNEX SPED. LAUNDRY NW CORNER
-009	12" GCT - MED FISS. SM PINHOLE	ANNEX RM C
-010	14" x 30" CT/TAN MASTIC	GATHERING PLACE - BOYS RR
-011	12" GCT - MED. FISS. SM PIN HOLE MASTIC BROWN	MAIN GYM - SW ENTRY
-012	12" GCT - LG+SM PINHOLE/BRN MASTIC	" " " "
-013	12" GCT - MED FISS. SM PIN/BRN MAST	GYM - BOYS LOCKER - COACHES OFF.
-014	12" GCT - LG+SM PIN/BRN MASTIC	MAIN GYM - SW ENTRY VESTIBULE
-015	2x4 LCT - MED. FISS. SM PIN	TECH BLDG - ART RM
-016	2x4 LCT " " " "	TECH BLDG - WOODSHOP
-017	12" GCT - MED. FISS SM PIN/BRN MASTIC	MONTESSORI CENTER POD
-018	12" GCT - " " " " "	LIBRARY E. ENTRY VESTIBULE
-019	2x4 LCT - MED. FISS SM PINH.	ADMIN STAFF RM
-020	2x4 LCT - " " " "	ADMIN STORE RM

20161019 7 2of2

Laboratory Chain of Custody Form

PBS

Project: MONROE SD Bldg Name: SVEC Project #: 41373.000

Analysis Requested: PLM

LAB: SAT

Relinq'd by/Signature: [signature] Date/Time: 2/9/16

Received by/Signature: Date/Time:

Email Results to: Turnaround Time: 24 HR

BULK SAMPLE DATA FORM

Sample #	Material	Location
-021	12" CT - HV4 FISS. SM PIN	ADMIN STAFF RM
-022	"	"
-023	12" CT - MED FISS. SM PIN	~~AMD~~ ADMIN BLDG BOYS RR
-024	"	"
-025	12" CT - MED FISS. MED PIN	FACS RM
-026	12" GCT " " " " / LT BR. MASTIC	" "
-027	" " " " " " "	" "
-028	12" GCT SM FISS MED PIN / LT BRN MASTIC	" "
-029	2'x4' LCT - BRIGHT WHITE	GATHERING AREA E.
-030	" " " "	" " "
-031	" " OFF WHITE	" " "
-032	" " " "	" " "
-033	BRN TACKBOARD MASTIC	ANNEX HALL -
-034	RED CONCRETE FLOOR	RM 23 - TECH BLDG

ASBESTOS NORTHWEST
Asbestos Northwest, LLC
30620 Pacific Hwy S, #103, Federal Way, WA 98003
Ph: (253) 941-4343 Fax: (253) 941-4175

NVLAP 200993-0

Batch Number: 201610197

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Greg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Project: Monroe SD

Date Received: 2/11/2016
Date Analyzed: 2/11/2016
Samples Received: 29
Samples Analyzed: 29
Project #: 41373

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
006	1	1	Brown mastic	Mastic/binder	2% Cellulose	**None Detected**
007	2	1	Brown fibrous material with paint	Filler, Paint	90% Cellulose	**None Detected**
008	3	1	Brown mastic	Mastic/binder	3% Cellulose	**None Detected**
009	4	1	Brown fibrous material with paint	Filler, Paint	90% Cellulose	**None Detected**
010	5	1	Brown fibrous material with paint	Filler, Paint	90% Cellulose	**None Detected**
011	6	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**
012	7	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**
013	8	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**
014	9	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

ASBESTOS NORTHWEST
Asbestos Northwest, LLC
30620 Pacific Hwy S, #103, Federal Way, WA 98003
Ph: (253) 941-4343 Fax: (253) 941-4175

NVLAP 200993-0

Batch Number: 201610197

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Greg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 2/11/2016
Date Analyzed: 2/11/2016
Samples Received: 29
Samples Analyzed: 29

Project: Monroe SD
Project #: 41373

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
015	10	1	Gray fibrous material with paint	Filler, Perlite, Paint	75% Glass fibers, Cellulose	**None Detected**
016	11	1	Gray fibrous material with paint	Filler, Perlite, Paint	75% Glass fibers, Cellulose	**None Detected**
017	12	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**
018	13	1	Brown fibrous material with paint	Filler, Paint	80% Cellulose	**None Detected**
		2	Dark brown mastic	Mastic/binder	2% Cellulose	**None Detected**
019	14	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
020	15	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
021	16	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose, Glass fibers	**None Detected**
022	17	1	Gray fibrous material with paint	Filler, Perlite, Paint	75% Glass fibers, Cellulose	**None Detected**
023	18	1	Brown fibrous material with paint	Filler, Paint	90% Cellulose	**None Detected**
024	19	1	Brown fibrous material with paint	Filler, Paint	90% Cellulose	**None Detected**
025	20	1	Gray fibrous material with paint	Filler, Perlite, Paint	65% Glass fibers, Cellulose	**None Detected**

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

ASBESTOS NORTHWEST
Asbestos Northwest, LLC
30620 Pacific Hwy S, #103, Federal Way, WA 98003
Ph: (253) 941-4343 Fax: (253) 941-4175

NVLAP 200993-0

Batch Number: 201610197

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Greg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Project: Monroe SD

Date Received: 2/11/2016
Date Analyzed: 2/11/2016
Samples Received: 29
Samples Analyzed: 29
Project #: 41373

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
026	21	1	Gray fibrous material with paint	Filler, Perlite, Paint	75% Glass fibers, Cellulose	**None Detected**
		2	Yellow mastic	Mastic/binder	4% Cellulose	**None Detected**
027	22	1	Gray fibrous material with paint	Filler, Perlite, Paint	85% Glass fibers, Cellulose	**None Detected**
		2	White paper with paint	Filler/binder, Gypsum/binder	75% Cellulose	**None Detected**
028	23	1	Gray fibrous material with paint	Filler, Perlite, Paint	85% Glass fibers, Cellulose	**None Detected**
		2	White paper with paint	Filler/binder, Gypsum/binder	75% Cellulose	**None Detected**
029	24	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
030	25	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
031	26	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
032	27	1	Gray fibrous material with paint	Filler, Perlite, Paint	80% Glass fibers, Cellulose	**None Detected**
033	28	1	Brown mastic with paint	Mastic/binder, Paint	5% Cellulose	**None Detected**
034	29	1	Red sandy Cementous material with paint	Filler, Binder, Sand, Paint	1% Cellulose	**None Detected**

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

201609255

Laboratory Chain of Custody Form

SAT

PBS

Project: SVEC Bldg Name: Project #: 41373.000

Analysis Requested: PLM LAB:

Relinq'd by/Signature: Gregg Middaugh Date/Time: 1/28/16

Received by/Signature: Dawn Date/Time: 1/28/16 13:05

Email Results to: GREGG MIDDAUGH Turnaround Time: RUSH

BULK SAMPLE DATA FORM

Sample #	Material	Location
-001	GWB/JT CPD	EAST PAD ATTIC
-002	GWB/JT CPD	SOUTH PAD ATTIC

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.:	Mr. Gregg Middaugh	**Client:**	PBS Engineering and Environmental, Seattle	**Address:**	2517 Eastlake Ave. E., Suite 100, Seattle, WA 98102
Job#:	41373.000	**Batch#:**	201609255	**Date Received:**	1/28/2016
Samples Rec'd:	2	**Date Analyzed:**	1/28/2016	**Samples Analyzed:**	2
Project Loc.:	SVEC				

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-001	1	Off-white powdery material with paper	2	**Chrysotile**	Binder/filler	28	Cellulose
		2	White chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	22	Cellulose, Glass fibers
2	-002	1	Off-white powdery material	2	**Chrysotile**	Filler, Binder	3	Cellulose
		2	White chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	24	Cellulose, Glass fibers

PBS | Engineering + Environmental

20160900

SAT

Project: SVEC

Project #: 41373.000

Analysis requested: PLM

Date: 2/18/16

Relinq'd by/Signature: Gregg Middaugh

Date/Time:

Received by/Signature: Casie

Date/Time: ~~2/19/16 15:05~~ 2/22/16 9:40

Analyzed by Casie SAT

Fax results to:

- ☐ Brian Stanford
- ☐ Willem Mager
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Tim Ogden
- ☐ Ferman Fletcher
- ☐ Prudy Stoudt-McRae
- ☐ Grant Baker
- ☐ Janet Murphy
- ☐ Harry Goren
- ☐ David Toy
- ☐ Mike Smith
- ☐ Chuck Greeb
- ☐ Christine Rmah

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 3-5 Days
- ☐ Other_____

Report composite results for GWB/joint compound samples only

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	-035	CHEM COUNTER	RM E	

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

Bend | Boise | Coos Bay | Eugene | Portland | Seattle | Tri-Cities | Vancouver

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Gregg Middaugh
Client: PBS Engineering and Environmental, Seattle
Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA 98102
Job#: 41373.000
Batch#: 201609600
Date Received: 2/19/2016
Samples Rec'd: 1
Date Analyzed: 2/22/2016
Samples Analyzed: 1
Project Loc.: SVEC

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-035	1	Black hard brittle material		**None detected**	Filler, Binder	2	Cellulose

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

Job Number: 160087 **SEA**

Report Number: 160087R01
Report Date: 2/1/2016

Client: **PBS Engineering + Environmental**
Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102
Project Name: SVEC - North Pod
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160087 - S1	001-SIL - Floor Grinding - Rm 19	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016

EPA 600-R-93-116 - TEM - Bulk Qualitative

Preparation of the above sample was conducted in accordance with the EPA protocol EPA/600/R 93/116 for the identification of regulated asbestiform minerals in bulk building materials. Briefly, each sample was taken from at least three randomly selected areas. The sample was ground and suspended in 20ml of laboratory reagent water. The suspension was then pipetted onto a pre-coated 200 mesh copper TEM grid and examined by TEM microscopy. After confirmation of the principal mineral type by diffraction and EDS chemistry, the presence or absence of asbestiform regulated minerals was determined. Fibers with an aspect ratio of at least 20:1, greater than 5 micrometers in length, and with proper diffraction and chemistry were counted as regulated asbestiform mineral types.

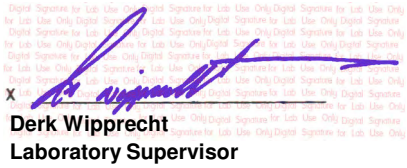
This test report relates only to the items tested in this report. The scope of this analysis is to differentiate purified regulated asbestiform minerals that have been added to bulk building materials. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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Fax: (206) 789-8424
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EPA 600-R-93-116 - TEM - Bulk Qualitative

Job Number: 160087 **SEA**
Report Number: 160087R01
Client: PBS Engineering + Environmental
Date Received: 1/29/2016
Project Name: SVEC - North Pod

Client Sample No: **001-SIL**
Lab/Cor Sample No: **S1**
Client Description: **Floor Grinding - Rm 19**
Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
None Detect (Asbestos)			

Reviewed by:

X

Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
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Final Report

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EPA 600-R-93-116 - TEM - Bulk Qualitative

Job Number: 160087 **SEA**
Report Number: 160087R01
Client: PBS Engineering + Environmental
Date Received: 1/29/2016
Project Name: SVEC - North Pod

Client Sample No: **001-SIL**
Lab/Cor Sample No: **S1**
Client Description: **Floor Grinding - Rm 19**
Date Sampled:

Container Weight	**13.60763 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.66375 g**	**Filter Post Hydrolysis**	**0.05612 g**
Orig Sample Weight	**0.05612 g**	**After Hydrolysis Weight**	**0.05612 g**
Weight After Ash	**13.66375 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.05612 g**	**Hydrolysis Adjusted Weight**	**0.05612 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	None Detect (Asbestos)			

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

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Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

Job Number: 160088 **SEA**

Report Number: 160088R01

Report Date: 2/1/2016

Client: **PBS Engineering + Environmental**

Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102

Project Name: Monroe SD - SVEC

Project No.: 41373.000

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160088 - S1	-003 - GWB Construction Debris - Rm 4	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016
160088 - S2	-004 - GWB Construction Debris - Lib. N. Wall	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016
160088 - S3	-005 - GWB Construction Debris - Admin Server Rm	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016
160088 - S4	-006 - GWB Construction Debris - Rm 20	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016
160088 - S5	-007 - GWB Construction Debris - Lib. E. Wall	EPA 600-R-93-116 - TEM - Bulk Qualitative		1/29/2016

EPA 600-R-93-116 - TEM - Bulk Qualitative

Preparation of the above sample was conducted in accordance with the EPA protocol EPA/600/R 93/116 for the identification of regulated asbestiform minerals in bulk building materials. Briefly, each sample was taken from at least three randomly selected areas. The sample was ground and suspended in 20ml of laboratory reagent water. The suspension was then pipetted onto a pre-coated 200 mesh copper TEM grid and examined by TEM microscopy. After confirmation of the principal mineral type by diffraction and EDS chemistry, the presence or absence of asbestiform regulated minerals was determined. Fibers with an aspect ratio of at least 20:1, greater than 5 micrometers in length, and with proper diffraction and chemistry were counted as regulated asbestiform mineral types.

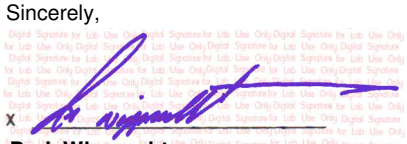
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If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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Fax: (206) 789-8424
http://www.labcor.net

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EPA 600-R-93-116 - TEM - Bulk Qualitative

Job Number: 160088 **SEA**
Report Number: 160088R01
Client: PBS Engineering + Environmental
Date Received: 1/29/2016
Project Name: Monroe SD - SVEC

Client Sample No: **-003** Lab/Cor Sample No: **S1**
Client Description: **GWB Construction Debris - Rm 4** Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
None Detect (Asbestos)			

Client Sample No: **-004** Lab/Cor Sample No: **S2**
Client Description: **GWB Construction Debris - Lib. N. Wall** Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
Chrysotile	**Present**		

Client Sample No: **-005** Lab/Cor Sample No: **S3**
Client Description: **GWB Construction Debris - Admin Server Rm** Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
None Detect (Asbestos)			

Client Sample No: **-006** Lab/Cor Sample No: **S4**
Client Description: **GWB Construction Debris - Rm 20** Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
None Detect (Asbestos)			

Client Sample No: **-007** Lab/Cor Sample No: **S5**
Client Description: **GWB Construction Debris - Lib. E. Wall** Date Sampled:

Analyte Description	Absence/Presence	Gravimetric Reduction	Weight Percent
		Acid Solubles	**0.00%**
		Organics	**0.00%**
Chrysotile	**Present**		

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
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A Professional Service Corporation in the Northwest

EPA 600-R-93-116 - TEM - Bulk Qualitative

Job Number: 160088 **SEA**
Report Number: 160088R01
Client: PBS Engineering + Environmental
Date Received: 1/29/2016
Project Name: Monroe SD - SVEC

Client Sample No: **-003** Lab/Cor Sample No: **S1**
Client Description: **GWB Construction Debris - Rm 4** Date Sampled:

Container Weight	**13.62052 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.62110 g**	**Filter Post Hydrolysis**	**0.00058 g**
Orig Sample Weight	**0.00058 g**	**After Hydrolysis Weight**	**0.00058 g**
Weight After Ash	**13.62110 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.00058 g**	**Hydrolysis Adjusted Weight**	**0.00058 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	None Detect (Asbestos)			

Client Sample No: **-004** Lab/Cor Sample No: **S2**
Client Description: **GWB Construction Debris - Lib. N. Wall** Date Sampled:

Container Weight	**13.65292 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.67886 g**	**Filter Post Hydrolysis**	**0.02594 g**
Orig Sample Weight	**0.02594 g**	**After Hydrolysis Weight**	**0.02594 g**
Weight After Ash	**13.67886 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.02594 g**	**Hydrolysis Adjusted Weight**	**0.02594 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	Chrysotile	Present	Mg, Si	

ItemType	ItemNum	Confirmed	Comment
Brightfield	P46722BF		
Diffraction	P46722DF	DW 2/1/2016	0.53nm Row Spacing
Spectra	P46722SP	DW 2/1/2016	

Client Sample No: **-005** Lab/Cor Sample No: **S3**
Client Description: **GWB Construction Debris - Admin Server Rm** Date Sampled:

Container Weight	**13.58676 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.61187 g**	**Filter Post Hydrolysis**	**0.02511 g**
Orig Sample Weight	**0.02511 g**	**After Hydrolysis Weight**	**0.02511 g**
Weight After Ash	**13.61187 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.02511 g**	**Hydrolysis Adjusted Weight**	**0.02511 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	None Detect (Asbestos)			

Client Sample No: **-006** Lab/Cor Sample No: **S4**
Client Description: **GWB Construction Debris - Rm 20** Date Sampled:

Container Weight	**13.67454 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.67950 g**	**Filter Post Hydrolysis**	**0.00496 g**
Orig Sample Weight	**0.00496 g**	**After Hydrolysis Weight**	**0.00496 g**
Weight After Ash	**13.67950 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.00496 g**	**Hydrolysis Adjusted Weight**	**0.00496 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

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Seattle, WA 98117

Final Report

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EPA 600-R-93-116 - TEM - Bulk Qualitative

Job Number: 160088 **SEA**
Report Number: 160088R01
Client: PBS Engineering + Environmental
Date Received: 1/29/2016
Project Name: Monroe SD - SVEC

Client Sample No: **-006** Lab/Cor Sample No: **S4**
Client Description: **GWB Construction Debris - Rm 20** Date Sampled:

Container Weight	**13.67454 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.67950 g**	**Filter Post Hydrolysis**	**0.00496 g**
Orig Sample Weight	**0.00496 g**	**After Hydrolysis Weight**	**0.00496 g**
Weight After Ash	**13.67950 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.00496 g**	**Hydrolysis Adjusted Weight**	**0.00496 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	None Detect (Asbestos)			

Client Sample No: **-007** Lab/Cor Sample No: **S5**
Client Description: **GWB Construction Debris - Lib. E. Wall** Date Sampled:

Container Weight	**13.57913 g**	**Hydrolysis Filter PreWeight**	**0.00000 g**
Weight Before Ash	**13.58676 g**	**Filter Post Hydrolysis**	**0.00763 g**
Orig Sample Weight	**0.00763 g**	**After Hydrolysis Weight**	**0.00763 g**
Weight After Ash	**13.58676 g**	**Hydrolysis Aliquot**	**0.003 ml**
Particulate After Ash	**0.00763 g**	**Hydrolysis Adjusted Weight**	**0.00763 g**
Percent Organics	**0.00%**	**Acid Solubles**	**0.00%**

Grid	Analyte	Absence/Presence	Elements	Comment
G1	Chrysotile	Present	Mg, Si	Gypsum Dust Present

ItemType	ItemNum	Confirmed	Comment
Brightfield	P46723BF		
Diffraction	P46723DF	DW 2/1/2016	0.53nm Row Spacing
Spectra	P46723SP	DW 2/1/2016	

Reviewed by:

X _____
Derk Wipprecht
Laboratory Supervisor

ANALYTICAL REPORT

Report Date: March 14, 2016

Gregg Middaugh
PBS Engineering & Environmental
2517 Eastlake Ave. East
Suite 100
Seattle, WA 98102

Phone: (206) 233-9639
Fax: (206) 762-4780
E-mail: gregg.middaugh@pbsenv.com

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **001-SIL-A** Collected: 02/12/2016
Lab ID: 1606163001 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.069**	**0.083**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	<0.010	<0.012	<15	0.010	0.030
Cristobalite	<0.020	<0.024	<29	0.020	0.030
Tridymite	<0.020	<0.024	<29	0.020	0.030

Sample ID: **002-SIL-A** Collected: 02/12/2016
Lab ID: 1606163002 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.024	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.010)**	**(0.012)**	0.010	0.030
Cristobalite	<0.020	<0.024	0.020	0.030
Tridymite	<0.020	<0.024	0.020	0.030

ANALYTICAL REPORT

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **003-SIL-A** Collected: 02/13/2016
Lab ID: 1606163003 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 837 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.024	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 837 L

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	<0.010	<0.012	0.010	0.030
Cristobalite	<0.020	<0.024	0.020	0.030
Tridymite	<0.020	<0.024	0.020	0.030

Sample ID: **004-SIL-A** Collected: 02/13/2016
Lab ID: 1606163004 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.042**	**0.050**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 832 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.011)**	**(0.013)**	**(25)**	0.010	0.030
Cristobalite	<0.020	<0.024	<48	0.020	0.030
Tridymite	<0.020	<0.024	<48	0.020	0.030

Sample ID: **005-SIL-A** Collected: 02/18/2016
Lab ID: 1606163005 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 925 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.026**	**0.028**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 925 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.012)**	**(0.013)**	**(46)**	0.010	0.030
Cristobalite	<0.020	<0.022	<77	0.020	0.030
Tridymite	<0.020	<0.022	<77	0.020	0.030

ANALYTICAL REPORT

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **006-SIL-A** Collected: 02/18/2016
Lab ID: 1606163006 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 810 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.025	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 810 L

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.012)**	**(0.015)**	0.010	0.030
Cristobalite	<0.020	<0.025	0.020	0.030
Tridymite	<0.020	<0.025	0.020	0.030

Sample ID: **007-SIL-A** Collected: 02/19/2016
Lab ID: 1606163007 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 884 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.034**	**0.038**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 884 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.011)**	**(0.012)**	**(31)**	0.010	0.030
Cristobalite	<0.020	<0.023	<59	0.020	0.030
Tridymite	<0.020	<0.023	<59	0.020	0.030

Sample ID: **008-SIL-A** Collected: 02/19/2016
Lab ID: 1606163008 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 953 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.021	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 953 L

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.012)**	**(0.012)**	0.010	0.030
Cristobalite	<0.020	<0.021	0.020	0.030
Tridymite	<0.020	<0.021	0.020	0.030

ANALYTICAL REPORT

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **009-SIL-A** Collected: 02/22/2016
Lab ID: 1606163009 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 808 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.023**	**0.028**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 808 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.011)**	**(0.014)**	**(49)**	0.010	0.030
Cristobalite	<0.020	<0.025	<87	0.020	0.030
Tridymite	<0.020	<0.025	<87	0.020	0.030

Sample ID: **010-SIL-A** Collected: 02/22/2016
Lab ID: 1606163010 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 1109 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	**0.021**	**0.019**	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 1109 L

Analyte	Result (mg/sample)	Result (mg/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.011)**	**(0.0095)**	**(50)**	0.010	0.030
Cristobalite	<0.020	<0.018	<95	0.020	0.030
Tridymite	<0.020	<0.018	<95	0.020	0.030

Sample ID: **011-SIL-A** Collected: 02/23/2016
Lab ID: 1606163011 Sampling Location: SVEC Received: 03/01/2016

Method: NIOSH 0600 Mod., MW PVC Filter **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: Air Volume 1008 L

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.020	0.020

Method: NIOSH 7500 Mod. **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: Air Volume 1008 L

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.011)**	**(0.011)**	0.010	0.030
Cristobalite	<0.020	<0.020	0.020	0.030
Tridymite	<0.020	<0.020	0.020	0.030

ANALYTICAL REPORT

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **012-SIL-A** Collected: 02/23/2016
Lab ID: 1606163012 Sampling Location: SVEC Received: 03/01/2016

Method: **NIOSH 0600 Mod., MW PVC Filter** **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: **Air Volume 1020 L**

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.020	0.020

Method: **NIOSH 7500 Mod.** **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: **Air Volume 1020 L**

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	**(0.010)**	**(0.010)**	0.010	0.030
Cristobalite	<0.020	<0.020	0.020	0.030
Tridymite	<0.020	<0.020	0.020	0.030

Sample ID: **013-SIL-A** Collected: 02/24/2016
Lab ID: 1606163013 Sampling Location: SVEC Received: 03/01/2016

Method: **NIOSH 0600 Mod., MW PVC Filter** **Media:** PVC Filter **Analyzed:** 03/03/2016
Sampling Parameter: **Air Volume 927 L**

Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)
Respirable Dust	<0.020	<0.022	0.020

Method: **NIOSH 7500 Mod.** **Media:** PVC Filter **Analyzed:** 03/07/2016
Sampling Parameter: **Air Volume 927 L**

Analyte	Result (mg/sample)	Result (mg/m³)	LOD (mg/sample)	RL (mg/sample)
Quartz	<0.010	<0.011	0.010	0.030
Cristobalite	<0.020	<0.022	0.020	0.030
Tridymite	<0.020	<0.022	0.020	0.030

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
NIOSH 0600 Mod., MW PVC Filter	/S/ Marianne Schmith 03/03/2016 12:19	/S/ Christopher R. Hansen 03/03/2016 14:05
NIOSH 7500 Mod.	/S/ Paul M. Megerdichian 03/07/2016 14:10	/S/ Jeff Ward 03/08/2016 08:43

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: **34-1606163**
Client Project ID: 41373.000/SVEC
Purchase Order: 41373.000
Project Manager: Stella Hanis

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA-LAP, LLC (ISO 17025 and AIHA-LAP, LLC IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA-LAP, LLC (ISO 17025, AIHA-LAP, LLC ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
NA = Not Applicable.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

SALT LAKE CITY

1606163

ALS
Phone: (800)-458-1493 or
(513) 733-5336
Fax: (513) 733-5347
STELLA HANIS
Project Manager

ANALYTICAL REQUEST FORM

17366

☒ **REGULAR Status**

☐ **RUSH Status Required - ADDITIONAL CHARGE** 1606163

RESULTS REQUIRED BY _____ DATE

CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 2-27-16 Purchase Order No. 41373.000

Company Name PBS ENVIRONMENTAL

Address 2517 EASTLAKE AVE E.

SEATTLE (City) WA (State) 98102 (Zip)

Send Report To GREGG MIDDAUGH

Email Address MIDDAUGH@PBSENV.COM

Telephone ( ) 206. 255. 4659

Fax Telephone ( ) _____

Billing Address (if different) SAME

Quote No. _____

Sampling Site SVEC

Date/Time of Collection 2/13 - 2/27

Project No. 41373.000

Lab Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
	-001-SIL-A	A	832	NIOSH 7500
	-002-SILA		832	
	-003-SIL-A		834	
	-004-SIL-A		832	
	-005-SIL-A		925	
	-006-SIL-A		810	
	-007-SIL-A		884	
	-008-SIL-A		953	
	-009-SIL-A		808	
	-010-SIL-A		1109	
	-011-SIL-A		1008	
	-012-SIL-A		1020	
	-013-SIL-A		927	
	-014-SIL-A		BLANK	
	-015-SIL-A		BLANK	
	~~-016-SIL-A~~			

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Gregg Middaugh	2/27/16	Courtney Jaspoe	03-01-16 10:11
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY						DELIVERY METHOD:	CLIENT	DROP BOX	FEDEX	UPS
COOLER TEMP:	°C	pH ADJUSTMENTS:					STD MAIL	PRTY MAIL	ALS	COURIER	OTHER:
COOLING METHOD:	NONE	COOLER	WET ICE	DRY ICE	ICE PACK	CUSTODY SEALS:	NONE	COOLER	PACKAGE	SAMPLES	
						EQUIP. RETURNED:					

SILICA AIR SAMPLES

LABORATORY DATA SHEET

PBS
2517 Eastlake Ave. E. #100
Seattle, WA 98102
206/233-9639
FAX 206-762-4780

Project Name: SKY VALLEY E.C.
Project No.: 41373.000
Location: MONROE, WA
IH: GRANT BAKER
SAMPLE MEDIA/ANALYTICAL METHOD: RESPIRABLE SILICA - NIOSH 7500
WEATHER: N/A
TEMP: 56° +/-
R.H. —
FIELD COUNT: 100
Conditions:

RELINQUISHED BY (SIGN.): [signature] DATE/TIME: 2-25-16
ANALYZED BY:
DATE/TIME:
REMARKS:
RECEIVED BY (SIGN.):
DATE/TIME:
ANALYZED BY:
DATE/TIME:
TWA:

CODES: P PERSONAL; IWA INDOOR WORK AREA; OWA OUTDOOR WORK AREA; C CLEARANCE; A AMBIENT AIR; B BLANK; PRE PRE-ABATEMENT; EX EXCURSION; TEM CLEARANCE SAMPLE; GBA GLOVE BAG AREA; H HEPA

DATE	SAMPLE NUMBER	CODE	PUMP	LOCATION ACTIVITY / PERSON	BLANK AVG	TIME ON	TIME OFF	TOTAL TIME	FLOW PRE	FLOW POST	FLOW AVG	OTA VOL	FIBERS/ FIELD	FIBERS/ CC
2-12-16	001-Sil-A	A		EAST POD - RM 9	NA	9:44	3:17	333	2.5	2.5	2.5	832	NA	NA
2-12-16	002-Sil-A	A		EAST POD - RM 13		9:49	3:22	333	2.5	2.5	2.5	832		
2-13-16	003-Sil-A	A		EAST POD - CENTER		6:07	11:42	335	2.5	2.5	2.5	837		
2-13-16	004-Sil-A	A		NORTH POD - CENTER		6:13	11:46	333	2.5	2.5	2.5	832		
2-18-16	005-SIL-A	A		RM 19		10:37	4:47	370	2.5	2.5	2.5	925		
2-18-16	006-SIL-A	A		RM 14		10:45	4:45	360	2.5	2.0	2.25	810		
2-19-16	007-SIL-A	A		RM 4		8:02	2:35	393	2.5	2.5	2.25	884.25		
2-19-16	008-SIL-A	A		RM 2		8:09	2:30	381	2.5	2.5	2.5	953		
2-22-16	009-SIL-A	A		RM 5		8:52	3:36	404	2.5	1.5	2.0	808		
2-22-16	010-SIL-A	A		RM 6		8:45	3:32	407	2.5	2.95	2.725	1109		
2-23-16	011-SIL-A	A		ART RM		8:57	3:40	403	2.5	2.5	2.5	1008		
2-23-16	012-SIL-A	A		KILN RM		8:56	3:44	408	2.5	2.5	2.5	1020	V	V
2-24	013-SIL-A	A		RM 7		8:55	3:37	403	2.5	2.1	2.3	927		
2-24	014-SIL	B		FIELD BLANK	V	—						—	DO	NOT
2-24	015-SIL	B		FIELD BLANK		—						—	ANALYZE	
Reference Slide #			Count											

CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K
A TestAmerica Company

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * (866) 871-1884
Phoenix, AZ: 1501 West Knudsen drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☐	☐
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	
Heavy	☐	☐	☐	☐	

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2517 EASTLAKE AVE E. SEATTLE, WA 98102
Contact:	GREGG MIDDAUGH	Special Instructions:	
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:	—	Sampling Date & Time:	2-12-16
PO Number:	41373.000	Sampled By:	GM/JP

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
DM001	ANNEX / Rm B	B	STD	→	→
DM002	Annex / Rm D				
DM003	Annex / Rm C				
DM004	S. POD / Rm 2				
DM005	S. POD				
DM006	S. POD / Rm 6				
DM007	S. POD / Rm 7				
DM008	ADMIN / RECEPTION				
DM009	ADMIN / STAFF				
DM010	S. POD / Rm 4				
DM011	S. POD / Rm 5	↓	↓	↓	↓

REQUESTED SERVICES

Non-Culturable

Spore Trap	Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	Legionella culture	Total Coliform, E. coli (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Other Requests: Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	ALLERGEN - DUST MITE
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001496795

SAMPLE TYPE CODES			
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
AIS – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Gregg Middaugh	2-18-16		

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CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K
A TestAmerica Company

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Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * (800) 651-3802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☐	☐	☐	☐	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

001496795

Requests

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2517 EASTLAKE AVE E. SEATTLE, WA 98102
Contact:	GREGG MIDDAUGH	Special Instructions:	
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:	—	Sampling Date & Time:	2-17-16
PO Number:	41373.000	Sampled By:	GM/JP

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
DM012	N. POD	B	STD	—	—
DM013	N. POD / Rm 14				
DM014	LIBRARY				
DM015	GATHERING				
DM016	CTE				
DM017	MUSIC RM				
DM018	E. POD / Rm 13				
DM019	E. POD				
DM020	E. POD / Rm 9				
DM021	N. POD / Rm 18B				
DM022	E. POD / Rm 11				

Non-Culturable: Spore Trap | Tape Swab Bulk

Trauma, Dust, Debris, Soil, Surface Fabric

Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	Legionella culture	Total Coliform, E. coli (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	ALLERGEN - DUST MITE
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SAMPLE TYPE CODES

BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
AIS – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Gregg Middaugh	2-18-16		
FedEx	2-19-16		930

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Phoenix, AZ: 1501 West Knudsen drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☐	☐
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	
Heavy	☐	☐	☐	☐	

001496795

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2517 EASTLAKE AVE E.
Contact:	GREGG MIDDAUGH	Special Instructions:	SEATTLE, WA 98102
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:	—	Sampling Date & Time:	2-17-16
PO Number:	41373.000	Sampled By:	GM/JP

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
DM023	N. Pod / Rm 20	B	STD	—	—
DM024	N. Pod / Attic	"	"	"	"
DM025	E. Pod / Attic	"	"	"	"
DM026	S. Pod / Attic	"	"	"	"

Non-Culturable				Swab / Bulk		Water, Dust, Other												Other Requests			
Spore Trap																					
Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	*Legionella* culture	Total Coliform, *E. coli* (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	ALLERGEN – DUST MITE				
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SAMPLE TYPE CODES

BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
AIS – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Gregg Middaugh	2-18-16		

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CHAIN OF CUSTODY

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SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☐	
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	☐
Heavy	☐	☐	☐	☐	

001502282

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2517 EASTLAKE AVE EAST
Contact:	GREGG MIDAUGH	Special Instructions:	SEATTLE, WA 98102
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:		Sampling Date & Time:	2/25/16
PO Number:	41373.000	Sampled By:	GM

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
DM 001	ANNEX / RM B	B	STD		
DM 002	ANNEX / RM D				
DM 003	ANNEX / RM C				
DM 004	S. POD / RM 2				
DM 006	S. POD / RM 6				
DM 011	S. POD / RM 5				
DM 012	N. POD				
DM 014	LIBRARY				
DM 018	E. POD / RM 13				
DM 019	E. POD				
DM 020	E. POD / RM 9				

Non-Culturable		BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates														Other Requests			
Spore Trap	Tape Swab Bulk	Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	Legionella culture	Total Coliform, E. coli (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	ALLERGEN - DUST MITE
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SAMPLE TYPE CODES

BC – BioCassette™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
AIS – Andersen		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
	2-29-16		
FDX	3-2-16		

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Phoenix, AZ: 1501 West Knudsen drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 5000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☐	☐	☐	☐	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☒	☐	☐	☐	

R 001502282

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2517 EASTLAKE AVE EAST
Contact:	GREGG MIDDAUGH	Special Instructions:	SEATTLE, WA 98102
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:		Sampling Date & Time:	2/25/16
PO Number:	41373.000	Sampled By:	GM

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of... weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
DM021	N. POD / Rm 18	B	STD	—	—

Non-Culturable				BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates										Other Requests			
Spore Trap		Tape Swab Bulk															
Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qual/Naive)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	Legionella culture	Total Coliform, E. coli (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	Quanti-Tray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒ ALLERGEN - DUST MITE
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SAMPLE TYPE CODES			
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
A1S – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
[signature]	2-29-16		
FEDEX 1000	3-2-16	[signature]	

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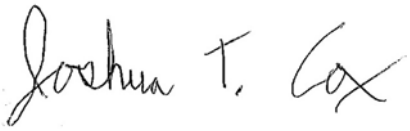
EMLab P&K
A TestAmerica Company

Report for:

Mr. Greg Middaugh
PBS Engineering and Environmental: Seattle
2517 Eastlake Ave E.
Suite 100
Seattle, WA 98102

Regarding: Project: 41373.000; SVEC
EML ID: 1496795

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:
Allergen-ELISA individual: 02-25-2016

Service SOPs: Allergen-ELISA individual (EM-BC-S-1049)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-26-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:	DM005: S. Pod
Sample Type	Dust sample
Measurement	0.03 gram
Lab ID-Version‡:	6918863-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:	DM007: S. Pod/Rm 7
Sample Type	Dust sample
Measurement	0.077 gram
Lab ID-Version‡:	6918865-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:	DM008: Admin/Reception
Sample Type	Dust sample
Measurement	0.061 gram
Lab ID-Version‡:	6918866-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-26-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM009: Admin/Staff		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6918867-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM010: S. Pod/Rm 4		
Sample Type					Dust sample		
Measurement					0.031 gram		
Lab ID-Version‡:					6918868-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM013: N.Pod/ Rm 14		
Sample Type					Dust sample		
Measurement					0.058 gram		
Lab ID-Version‡:					6918871-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-26-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM015: Gathering		
Sample Type					Dust sample		
Measurement					0.038 gram		
Lab ID-Version‡:					6918873-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM016: CTE		
Sample Type					Dust sample		
Measurement					0.031 gram		
Lab ID-Version‡:					6918874-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM017: Music Rm		
Sample Type					Dust sample		
Measurement					0.038 gram		
Lab ID-Version‡:					6918875-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	1.18	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
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(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-26-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM022: E. Pod/Rm 11		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6918880-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	1.89	Low	mcg/gram

Comments:

Location:					DM023: N. Pod/Rm 20		
Sample Type					Dust sample		
Measurement					0.076 gram		
Lab ID-Version‡:					6918881-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM024: N. Pod/Attic		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6918882-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-26-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM025: E. Pod/Attic		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6918883-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM026: S. Pod/Attic		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6918884-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

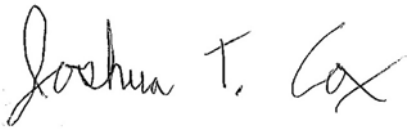
EMLab P&K
A TestAmerica Company

Report for:

Mr. Greg Middaugh
PBS Engineering and Environmental: Seattle
2517 Eastlake Ave E.
Suite 100
Seattle, WA 98102

Regarding: Project: 41373.000; SVEC
EML ID: 1502282

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:
Allergen-ELISA individual: 03-04-2016

Service SOPs: Allergen-ELISA individual (EM-BC-S-1049)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-25-2016
Date of Receipt: 03-02-2016
Date of Report: 03-07-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM001: Annex/RM B		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6946792-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM002: Annex/ RM D		
Sample Type					Dust sample		
Measurement					0.056 gram		
Lab ID-Version‡:					6946793-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM003: Annex/ RM C		
Sample Type					Dust sample		
Measurement					0.06 gram		
Lab ID-Version‡:					6946794-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-25-2016
Date of Receipt: 03-02-2016
Date of Report: 03-07-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM004: S. Pod/ RM 2		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6946795-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM006: S. Pod/ RM 6		
Sample Type					Dust sample		
Measurement					0.065 gram		
Lab ID-Version‡:					6946796-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM011: S. Pod/ RM 5		
Sample Type					Dust sample		
Measurement					0.082 gram		
Lab ID-Version‡:					6946797-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-25-2016
Date of Receipt: 03-02-2016
Date of Report: 03-07-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:					DM012: N. Pod		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6946798-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM014: LIbrary		
Sample Type					Dust sample		
Measurement					0.1 gram		
Lab ID-Version‡:					6946799-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:					DM018: E. Pod/ Rm 13		
Sample Type					Dust sample		
Measurement					0.036 gram		
Lab ID-Version‡:					6946800-1		
Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-25-2016
Date of Receipt: 03-02-2016
Date of Report: 03-07-2016

ALLERGEN REPORT: ELISA METHODOLOGY

Location:	DM019: E. Pod
Sample Type	Dust sample
Measurement	1 sample
Lab ID-Version‡:	6946801-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.01	-	-	-	< 0.01	Not Applicable	mcg/sample
Dust Mite: Der p1	0.01	-	-	-	< 0.01	Not Applicable	mcg/sample

Comments: Total sample weight was less than 0.03g. Analysis of insufficient dust is not recommended. Results are reported per sample.

Location:	DM020: E. Pod/RM 9
Sample Type	Dust sample
Measurement	0.1 gram
Lab ID-Version‡:	6946802-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

Location:	DM021: N. Pod/RM 18
Sample Type	Dust sample
Measurement	0.1 gram
Lab ID-Version‡:	6946803-1

Allergen Types	Detection Limit	Threshold Limit Low	Threshold Limit Significant	Threshold Limit High	Sample Result	Sample Range	Unit*
Dust Mite: Der f1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram
Dust Mite: Der p1	0.39	< 2	2 - 10	> 10	< 0.39	Low	mcg/gram

Comments:

* Unit: mcg - Micrograms of allergen, U - Cockroach Bla g1 units, ng - nanograms of allergen.

‡A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

NOTE: A threshold limit cell without a numeric value indicates that no limit is currently available.

RADON LAB

PBS | Engineering + Environmental

Project: SVEC Project #: 41373,000

Analysis requested: RADON Date:

Relinq'd by/Signature: Gregg Middaugh Date/Time: 2/23/16

Received by/Signature: Date/Time:

Fax results to:

☐	Brian Stanford	☐	Ferman Fletcher	☐	David Toy
☐	Willem Mager	☐	Prudy Stoudt-McRae	☐	Mike Smith
☒	Gregg Middaugh	☐	Grant Baker	☐	Chuck Greeb
☐	Mark Hiley	☐	Janet Murphy	☐	Christine Rmah
☐	Tim Ogden	☐	Harry Goren		

TURN AROUND TIME:

☐	1 Hour	☐	24 Hours	☐	3-5 Days
☐	2 Hours	☐	48 Hours	☐	Other
☐	4 Hours				

Report composite results for GWB/joint compound samples only

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	7103082	RADON TEST KIT	MUSIC #2	
	7103086	" " "	LIBRARY #2	
		EMAIL RESULTS TO:		
		MIDDAUGH@PBSENV.COM		
		206.255.4659		

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

Bend | Boise | Coos Bay | Eugene | Portland | Seattle | Tri-Cities | Vancouver

COPIES ~~COPY~~ **Laboratory Chain of Custody Form** GREGG MIDDAUGH 206-255-4659

PBS

Project: 41373 Bldg Name: SKY VALLEY EC Project #: 41373

Analysis Requested: RADON LAB:

Relinq'd by/Signature: Date/Time: 2-11-16

Received by/Signature: Date/Time:

Email Results to: GREGG MIDDAUGH - gregg-middaugh@pbsenv.com Turnaround Time: —

BULK SAMPLE DATA FORM

Sample #	Material	Location
7103069	RADON	WOODSHOP
7103079		Rm 22 ART
7103087		SMALL GYM
7103074		GATHERING AREA
7103068		MUSIC RM
7103071		Rm D
7103077		Rm A
7103076		Rm B
7103073		ADMIN
7103081		STAFF RM
7103085		Rm 20
7103070		NORTH POD
7103084		Rm 14
7103067		Rm 13
7103066		EAST POD

Laboratory Chain of Custody Form

PBS

Project: _____ Bldg Name: _____ Project #: _____

Analysis Requested: _____ LAB: _____

Relinq'd by/Signature: _____ Date/Time: _____

Received by/Signature: _____ Date/Time: _____

Email Results to: _____ Turnaround Time: _____

BULK SAMPLE DATA FORM

Sample #	Material	Location
7103065	RADON	LIBRARY OMIT
7103072	"	Rm 5
7103063	"	SOUTH POD
14		

February 18, 2016

** LABORATORY ANALYSIS REPORT **

P2057 / HARRY GOREN / PBS ENVIRONMENTAL

Kit #	pCi/L	Hours	Started	Ended	Analyzed	NOTES	MST%	°F
7103063	< 0.3	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.8%	70
7103065	????	25	2016-02-09 @ 9:00 am	2016-02-10 @ 10:00 am	2016-02-18	DNI	5.7%	70
7103066	< 0.3	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.1%	70
7103067	< 0.3	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		7.3%	70
7103068	3.3 ± 0.7	48	2016-02-09 @ 11:00 am	2016-02-11 @ 11:00 am	2016-02-18		5.1%	70
7103069	0.6 ± 0.5	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		6.5%	70
7103070	0.8 ± 0.5	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		6.5%	70
7103071	0.8 ± 0.6	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.8%	70
7103072	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.8%	70
7103073	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.9%	70
7103074	< 0.3	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		6.7%	70
7103076	< 0.3	49	2016-02-09 @ 9:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.9%	70
7103077	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.9%	70
7103078	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		8.0%	70
7103079	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.9%	70
7103081	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		6.7%	70
7103084	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		5.9%	70
7103085	< 0.3	48	2016-02-09 @ 10:00 am	2016-02-11 @ 10:00 am	2016-02-18		7.5%	70

Air Chek, Inc. 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

February 25, 2016

** LABORATORY ANALYSIS REPORT **

P2057 / HARRY GOREN / PBS ENVIRONMENTAL

Kit #	pCi/L	Hours	Started	Ended	Analyzed	NOTES	MST%	°F
7103082	3.2 ± 0.3	95	2016-02-18 @ 2:00 pm	2016-02-22 @ 1:00 pm	2016-02-25		5.9%	70
7103086	1.0 ± 0.2	95	2016-02-18 @ 2:00 pm	2016-02-22 @ 1:00 pm	2016-02-25		6.0%	70

Air Chek, Inc. 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

08-Feb-2016

Gregg Middaugh
PBS
2517 Eastlake Ave. East, Suite 100
Seattle, WA 98102

Tel: (206) 255-4659
Fax:

Re: SVEC; 41373.000 Work Order: **1602287**

Dear Gregg,

ALS Environmental received 12 samples on 06-Feb-2016 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ALS Environmental

Date: 08-Feb-16

Client:	PBS
Project:	SVEC; 41373.000
Work Order:	1602287

Case Narrative

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 08-Feb-16

Client: PBS
Project: SVEC; 41373.000
Work Order: **1602287**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1602287-01	-001 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-02	-002 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-03	-003 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-04	-004 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-05	-005 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-06	-006 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-07	-001 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-08	-002 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-09	-003 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-10	-004 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-11	-005 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-12	-006 PCB-A	Air		2/4/2016	2/6/2016	☐

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -001 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-01
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 13:43	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -002 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-02
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 13:56	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -003 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-03
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:10	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -004 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-04
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:23	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -005 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-05
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:37	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -006 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-06
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:50	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -001 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-07
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	**0.17**	**0.10**	**0.000088**	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -002 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-08
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -003 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-09
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -004 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-10
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -005 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-11
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	**0.36**	**0.10**	**0.00019**	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -006 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-12
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: 08-Feb-16

Client: PBS

Work Order: 1602287

Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33679** Instrument ID: **GC3** Method: **SW8082**

MBLK Sample ID: **MBLK-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:02 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218109** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	0.347	0	*0.5*	0	*69.4*	*52.7-131*	0			
Surr: Tetrachloro-m-xylene	0.381	0	*0.5*	0	*76.2*	*48.4-86.6*	0			

LCS Sample ID: **LCS-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:16 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218110** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	7.607	1.0	10	0	76.1	67.5-137	0			
Surr: Decachlorobiphenyl	0.369	0	*0.5*	0	*73.8*	*52.7-131*	0			
Surr: Tetrachloro-m-xylene	0.405	0	*0.5*	0	*81*	*48.4-86.6*	0			

LCSD Sample ID: **LCSD-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:29 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218111** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	7.024	1.0	10	0	70.2	67.5-137	7.607	7.97	15	
Surr: Decachlorobiphenyl	0.366	0	*0.5*	0	*73.2*	*52.7-131*	0.369	*0.816*	*15*	
Surr: Tetrachloro-m-xylene	0.392	0	*0.5*	0	*78.4*	*48.4-86.6*	0.405	*3.26*	*15*	

The following samples were analyzed in this batch:

1602287-01A	1602287-02A	1602287-03A
1602287-04A	1602287-05A	1602287-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: PBS
Work Order: 1602287
Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33684** Instrument ID: **GC3** Method: **ETO10A**

MBLK Sample ID: **MBLK-33684-33684** Units: **µg/sample** Analysis Date: **2/6/2016**
Client ID: Run ID: **GC3_160206B** SeqNo: **1218209** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
Surr: Decachlorobiphenyl	0.0388	0	*0.05*	0	*77.6*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0394	0	*0.05*	0	*78.8*	*45.7-110*	0			

LCS Sample ID: **LCS-33684-33684** Units: **µg/sample** Analysis Date: **2/6/2016**
Client ID: Run ID: **GC3_160206B** SeqNo: **1218210** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	0.7529	0.10	1	0	75.3		0			
Surr: Decachlorobiphenyl	0.0371	0	*0.05*	0	*74.2*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0434	0	*0.05*	0	*86.8*	*45.7-110*	0			

The following samples were analyzed in this batch:

1602287-07A	1602287-08A	1602287-09A
1602287-10A	1602287-11A	1602287-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 08-Feb-16

Client: PBS
Project: SVEC; 41373.000
WorkOrder: **1602287**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **PBS-SEATTLE** Date/Time Received: **06-Feb-16 00:00**

Work Order: **1602287** Received by: **SMS**

Checklist completed by: Shawn Smythe 06-Feb-16
eSignature Date

Reviewed by: Shawn Smythe 06-Feb-16
eSignature Date

Matrices:
Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	8.3		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: SVEC
Lab ID: 1602076

February 09, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 3 sample(s) on 2/8/2016 for the analyses presented in the following report.

Polychlorinated Biphenyls (PCB) by EPA 8082

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *02/09/2016*

CLIENT: PBS Engineering & Environmental
Project: SVEC
Lab Order: 1602076

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602076-001	-1001	02/08/2016 12:00 PM	02/08/2016 5:47 PM
1602076-002	-1002	02/08/2016 12:00 PM	02/08/2016 5:47 PM
1602076-003	-1003	02/08/2016 12:00 PM	02/08/2016 5:47 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602076**

Date: **2/9/2016**

CLIENT: PBS Engineering & Environmental

Project: SVEC

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-001A) required Acid Cleanup Procedure (Using Method No 3665A).
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-002A) required Acid Cleanup Procedure (Using Method No 3665A).
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-003A) required Acid Cleanup Procedure (Using Method No 3665A).
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-001A) required Florisil Cleanup Procedure (Using Method No 3620C).
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-002A) required Florisil Cleanup Procedure (Using Method No 3620C).
Prep Comments for METHOD (PREP-PCB-WP), SAMPLE (1602076-003A) required Florisil Cleanup Procedure (Using Method No 3620C).

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602076**
Date Reported: **2/9/2016**

Client: PBS Engineering & Environmental
Collection Date: 2/8/2016 12:00:00 PM
Project: SVEC
Lab ID: 1602076-001
Matrix: Wipe
Client Sample ID: -1001

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 12955		Analyst: CM
Aroclor 1016	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1221	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1232	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1242	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1248	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1254	0.684	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1260	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1262	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Aroclor 1268	ND	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Total PCBs	0.684	0.100		µg/wipe	1	2/9/2016 12:28:00 PM
Surr: Decachlorobiphenyl	66.1	51.9-127		%Rec	1	2/9/2016 12:28:00 PM
Surr: Tetrachloro-m-xylene	88.1	10-121		%Rec	1	2/9/2016 12:28:00 PM

Analytical Report

WO#: **1602076**
Date Reported: **2/9/2016**

Client: PBS Engineering & Environmental
Collection Date: 2/8/2016 12:00:00 PM
Project: SVEC
Lab ID: 1602076-002
Matrix: Wipe
Client Sample ID: -1002

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 12955		Analyst: CM
Aroclor 1016	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1221	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1232	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1242	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1248	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1254	1.74	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1260	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1262	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Aroclor 1268	ND	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Total PCBs	1.74	0.100		µg/wipe	1	2/9/2016 12:40:00 PM
Surr: Decachlorobiphenyl	247	51.9-127	S	%Rec	1	2/9/2016 12:40:00 PM
Surr: Tetrachloro-m-xylene	90.1	10-121		%Rec	1	2/9/2016 12:40:00 PM

NOTES:
S - Outlying surrogate recovery(ies) observed due to suspected matrix effect.

Analytical Report

WO#: **1602076**
Date Reported: **2/9/2016**

Client: PBS Engineering & Environmental
Collection Date: 2/8/2016 12:00:00 PM
Project: SVEC
Lab ID: 1602076-003
Matrix: Wipe
Client Sample ID: -1003

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 12955		Analyst: CM
Aroclor 1016	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1221	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1232	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1242	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1248	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1254	6.48	0.500	D	µg/wipe	5	2/9/2016 1:23:00 PM
Aroclor 1260	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1262	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Aroclor 1268	ND	0.100		µg/wipe	1	2/9/2016 12:52:00 PM
Total PCBs	6.48	0.500	D	µg/wipe	5	2/9/2016 1:23:00 PM
Surr: Decachlorobiphenyl	76.9	51.9-127		%Rec	1	2/9/2016 12:52:00 PM
Surr: Tetrachloro-m-xylene	74.6	10-121		%Rec	1	2/9/2016 12:52:00 PM

Work Order: 1602076
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: **MB-12955**	SampType: **MBLK**	Units: **µg/wipe**	Prep Date: **2/9/2016**	RunNo: **27503**
Client ID: **MBLKS**	Batch ID: **12955**		Analysis Date: **2/9/2016**	SeqNo: **518880**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Total PCBs	ND	0.100									
Surr: Decachlorobiphenyl	252		200.0		126	51.9	127				
Surr: Tetrachloro-m-xylene	212		200.0		106	10	121				

Sample ID: **LCS1-12955**	SampType: **LCS**	Units: **µg/wipe**	Prep Date: **2/9/2016**	RunNo: **27503**
Client ID: **LCSS**	Batch ID: **12955**		Analysis Date: **2/9/2016**	SeqNo: **518877**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.972	0.100	1.000	0	97.2	56.1	127				
Aroclor 1260	1.05	0.100	1.000	0	105	59.6	133				
Surr: Decachlorobiphenyl	246		200.0		123	51.9	127				
Surr: Tetrachloro-m-xylene	194		200.0		97.1	10	121				

Sample ID: **LCS1D-12955**	SampType: **LCS**	Units: **µg/wipe**	Prep Date: **2/9/2016**	RunNo: **27503**
Client ID: **LCSS**	Batch ID: **12955**		Analysis Date: **2/9/2016**	SeqNo: **518878**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.37	0.100	1.000	0	137	56.1	127	0.9720	34.3		S
Aroclor 1260	1.51	0.100	1.000	0	151	59.6	133	1.050	35.9		S
Surr: Decachlorobiphenyl	327		200.0		163	51.9	127		0		S
Surr: Tetrachloro-m-xylene	263		200.0		132	10	121		0		S

Work Order: 1602076
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: **LCS1D-12955** SampType: **LCS** Units: **µg/wipe** Prep Date: **2/9/2016** RunNo: **27503**
Client ID: **LCSS** Batch ID: **12955** Analysis Date: **2/9/2016** SeqNo: **518878**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying QC recoveries observed. A duplicate analysis was performed and recovered within range.

Sample ID: **LCS2-12955** SampType: **LCS** Units: **µg/wipe** Prep Date: **2/9/2016** RunNo: **27503**
Client ID: **LCSS** Batch ID: **12955** Analysis Date: **2/9/2016** SeqNo: **518879**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	1.03	0.100	1.000	0	103	65	135				
Surr: Decachlorobiphenyl	234		200.0		117	51.9	127				
Surr: Tetrachloro-m-xylene	192		200.0		96.0	10	121				

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602076**
Logged by:	**Erica Silva**	Date Received:	**2/8/2016 5:47:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
		Bulk Materials		
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	21.2
Sample	21.3
Temp Blank	21.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1602076

Date: 2/8/16

Page: 1 of: 1

Client: PBS
Address: 2517 EASTLAKE
City, State, Zip: SEATTLE, WA
Telephone: Fax:

Project Name: SVEC
Project No: 41373.000
Location: RM 11
Collected by: CM
Report To (PM): GREGG MILLIGAN
PM Email: MILLIGAN@PBSENV.COM

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 -1001	2/8	12PM	B								X						OIL FROM MOTOR
2 -1002	↓	↓	B								X						CARPET MASTIC
3 -1003	↓	↓	B								X						DUST IN U.V.
4																	
5																	
6																	
7																	
8																	
9																	
10																	

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: 24 HR TURN 2/9 5PM

Relinquished	Date/Time	Received	Date/Time
x [signature]	2/8/16	x [signature]	2/8/16 17:47
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

ANALYTICAL REPORT

Report Date: February 15, 2016

Gregg Middaugh
PBS Engineering & Environmental
2517 Eastlake Ave. East
Suite 100
Seattle, WA 98102

Phone: (206) 233-9639
Fax: (206) 762-4780
E-mail: middaugh@pbsenv.com

Workorder: **34-1604304**
Project ID: PBS Env 021216
Purchase Order: 41373
Project Manager Stella Hanis

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
007-PCB-W	1604304001	NA	02/12/16	RM 1
008-PCB-W	1604304002	NA	02/12/16	RM 2
009-PCB-W	1604304003	NA	02/12/16	RM 3
010-PCB-W	1604304004	NA	02/12/16	RM 4
011-PCB-W	1604304005	NA	02/12/16	RM 7
012-PCB-W	1604304006	NA	02/12/16	RM 6
013-PCB-W	1604304007	NA	02/12/16	RM 13
014-PCB-W	1604304008	NA	02/12/16	RM 12
015-PCB-W	1604304009	NA	02/12/16	RM 10
016-PCB-W	1604304010	NA	02/12/16	RM 9
017-PCB-W	1604304011	NA	02/12/16	RM 8
018-PCB-W	1604304012	NA	02/12/16	E. POD
019-PCB-W	1604304013	NA	02/12/16	ART
020-PCB-W	1604304014	NA	02/12/16	RM 23
021-PCB-W	1604304015	NA	02/12/16	WOOD
022-PCB-W	1604304016	NA	02/12/16	KILN
023-PCB-W	1604304017	NA	02/12/16	RM 22
024-PCB-W	1604304018	NA	02/12/16	SM GYM E
025-PCB-W	1604304019	NA	02/12/16	SM GYM W
026-PCB-W	1604304020	NA	02/12/16	BOYS LOCKER
027-PCB-W	1604304021	NA	02/12/16	GIRLS LOCKER
028-PCB-W	1604304022	NA	02/12/16	LG GYM
029-PCB-W	1604304023	NA	02/12/16	WT RM
030-PCB-W	1604304024	NA	02/12/16	GATHERING
031-PCB-W	1604304025	NA	02/12/16	FACS
032-PCB-W	1604304026	NA	02/12/16	FACS OFF E
033-PCB-W	1604304027	NA	02/12/16	MUSIC
034-PCB-W	1604304028	NA	02/12/16	MUSIC OFF
035-PCB-W	1604304029	NA	02/12/16	MUSIC PRACT

ANALYTICAL REPORT

Workorder: **34-1604304**

Project ID: PBS Env 021216

Purchase Order: 41373

Project Manager Stella Hanis

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
036-PCB-W	1604304030	NA	02/12/16	MUSIC PRACT
037-PCB-W	1604304031	NA	02/12/16	MUSIC SPA
038-PCB-W	1604304032	NA	02/12/16	ANNEX RM F
039-PCB-W	1604304033	NA	02/12/16	SP. ED-WEST
040-PCB-W	1604304034	NA	02/12/16	SP.ED.-EAST
041-PCB-W	1604304035	NA	02/12/16	RM F PREP
042-PCB-W	1604304036	NA	02/12/16	ANNEX HALL W
043-PCB-W	1604304037	NA	02/12/16	ANNEX HALL E
044-PCB-W	1604304038	NA	02/12/16	ANNEX RM C
045-PCB-W	1604304039	NA	02/12/16	ANNEX RM A
046-PCB-W	1604304040	NA	02/12/16	ANNEX RM B
047-PCB-W	1604304041	NA	02/12/16	ANNEX RM D
048-PCB-W	1604304042	NA	02/12/16	ANNEX GIRLS
049-PCB-W	1604304043	NA	02/12/16	RM 14
050-PCB-W	1604304044	NA	02/12/16	RM 15
051-PCB-W	1604304045	NA	02/12/16	RM 20
052-PCB-W	1604304046	NA	02/12/16	RM 16A
053-PCB-W	1604304047	NA	02/12/16	RM 17
054-PCB-W	1604304048	NA	02/12/16	N. POD GIRLS
055-PCB-W	1604304049	NA	02/12/16	N. POD
056-PCB-W	1604304050	NA	02/12/16	RM 19
057-PCB-W	1604304051	NA	02/12/16	RM 18
058-PCB-W	1604304052	NA	02/12/16	N. POD BOYS
059-PCB-W	1604304053	NA	02/12/16	HALL-S. POD
060-PCB-W	1604304054	NA	02/12/16	S. POD GIRLS
061-PCB-W	1604304055	NA	02/12/16	S. POD BOYS
062-PCB-W	1604304056	NA	02/12/16	ADMIN SUPPLY
063-PCB-W	1604304057	NA	02/12/16	GARY MARK
064-PCB-W	1604304058	NA	02/12/16	ADMIN SERVER
065-PCB-W	1604304059	NA	02/12/16	ADMIN STAFF
066-PCB-W	1604304060	NA	02/12/16	KAREN OFF
067-PCB-W	1604304061	NA	02/12/16	CTE RR
068-PCB-W	1604304062	NA	02/12/16	MUSIC STORAGE
069-PCB-W	1604304063	NA	02/12/16	GATHERING OFF
070-PCB-W	1604304064	NA	02/12/16	CAFE
071-PCB-W	1604304065	NA	02/12/16	E. GATHER
072-PCB-W	1604304066	NA	02/12/16	GIRLS-TECH
073-PCB-W	1604304067	NA	02/12/16	TECH-HALL
074-PCB-W	1604304068	NA	02/12/16	SM GYM STORAGE
075-PCB-W	1604304069	NA	02/12/16	TECH BOY

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **007-PCB-W** | Sampling Site: RM 1 | Received: 02/12/2016
Lab ID: 1604304001 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **008-PCB-W** | Sampling Site: RM 2 | Received: 02/12/2016
Lab ID: 1604304002 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **009-PCB-W** | Sampling Site: RM 3 | Received: 02/12/2016
Lab ID: 1604304003 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **010-PCB-W** | Sampling Site: RM 4 | Received: 02/12/2016
Lab ID: 1604304004 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **011-PCB-W** | Sampling Site: RM 7 | Received: 02/12/2016
Lab ID: 1604304005 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **012-PCB-W** | Sampling Site: RM 6 | Received: 02/12/2016
Lab ID: 1604304006 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **013-PCB-W** | Sampling Site: RM 13 | Received: 02/12/2016
Lab ID: 1604304007 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **014-PCB-W** | Sampling Site: RM 12 | Received: 02/12/2016
Lab ID: 1604304008 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **015-PCB-W** | Sampling Site: RM 10 | Received: 02/12/2016
Lab ID: 1604304009 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **016-PCB-W** | Sampling Site: RM 9 | Received: 02/12/2016
Lab ID: 1604304010 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **017-PCB-W** | Sampling Site: RM 8 | Received: 02/12/2016
Lab ID: 1604304011 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **018-PCB-W** | Sampling Site: E. POD | Received: 02/12/2016
Lab ID: 1604304012 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **019-PCB-W** | Sampling Site: ART | Received: 02/12/2016
Lab ID: 1604304013 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **020-PCB-W** | Sampling Site: RM 23 | Received: 02/12/2016
Lab ID: 1604304014 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **021-PCB-W** | Sampling Site: WOOD | Received: 02/12/2016
Lab ID: 1604304015 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **022-PCB-W** | Sampling Site: KILN | Received: 02/12/2016
Lab ID: 1604304016 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **023-PCB-W** | Sampling Site: RM 22 | Received: 02/12/2016
Lab ID: 1604304017 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **024-PCB-W** | Sampling Site: SM GYM E | Received: 02/12/2016
Lab ID: 1604304018 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **025-PCB-W** | Sampling Site: SM GYM W | Received: 02/12/2016
Lab ID: 1604304019 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **026-PCB-W** | Sampling Site: BOYS LOCKER | Received: 02/12/2016
Lab ID: 1604304020 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22811 (HBN: 164181)	**Initial:** 1 wipe	**Batch:**	EGC/6155 (HBN: 164210)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **027-PCB-W** | Sampling Site: GIRLS LOCKER | Received: 02/12/2016
Lab ID: 1604304021 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **028-PCB-W** | Sampling Site: LG GYM | Received: 02/12/2016
Lab ID: 1604304022 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	**3.4**	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **029-PCB-W** | Sampling Site: WT RM | Received: 02/12/2016
Lab ID: 1604304023 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **030-PCB-W** | Sampling Site: GATHERING | Received: 02/12/2016
Lab ID: 1604304024 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **031-PCB-W** | Sampling Site: FACS | Received: 02/12/2016
Lab ID: 1604304025 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **032-PCB-W** | Sampling Site: FACS OFF E | Received: 02/12/2016
Lab ID: 1604304026 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **033-PCB-W** | Sampling Site: MUSIC | Received: 02/12/2016
Lab ID: 1604304027 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **034-PCB-W** | Sampling Site: MUSIC OFF | Received: 02/12/2016
Lab ID: 1604304028 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **035-PCB-W** | Sampling Site: MUSIC PRACT | Received: 02/12/2016
Lab ID: 1604304029 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **036-PCB-W** | Sampling Site: MUSIC PRACT | Received: 02/12/2016
Lab ID: 1604304030 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **037-PCB-W** | Sampling Site: MUSIC SPA | Received: 02/12/2016
Lab ID: 1604304031 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **038-PCB-W** | Sampling Site: ANNEX RM F | Received: 02/12/2016
Lab ID: 1604304032 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **039-PCB-W** | Sampling Site: SP. ED-WEST | Received: 02/12/2016
Lab ID: 1604304033 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **040-PCB-W** | Sampling Site: SP.ED.-EAST | Received: 02/12/2016
Lab ID: 1604304034 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **041-PCB-W** | Sampling Site: RM F PREP | Received: 02/12/2016
Lab ID: 1604304035 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **042-PCB-W** | Sampling Site: ANNEX HALL W | Received: 02/12/2016
Lab ID: 1604304036 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **043-PCB-W** | Sampling Site: ANNEX HALL E | Received: 02/12/2016
Lab ID: 1604304037 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **044-PCB-W** | Sampling Site: ANNEX RM C | Received: 02/12/2016
Lab ID: 1604304038 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **045-PCB-W** | Sampling Site: ANNEX RM A | Received: 02/12/2016
Lab ID: 1604304039 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **046-PCB-W** | Sampling Site: ANNEX RM B | Received: 02/12/2016
Lab ID: 1604304040 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE03
Batch:	ENVX/22812 (HBN: 164183)	**Initial:** 1 wipe	**Batch:**	EGC/6156 (HBN: 164211)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/13/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **047-PCB-W** | Sampling Site: ANNEX RM D | Received: 02/12/2016
Lab ID: 1604304041 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **048-PCB-W** | Sampling Site: ANNEX GIRLS | Received: 02/12/2016
Lab ID: 1604304042 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **049-PCB-W** | Sampling Site: RM 14 | Received: 02/12/2016
Lab ID: 1604304043 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **050-PCB-W** | Sampling Site: RM 15 | Received: 02/12/2016
Lab ID: 1604304044 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **051-PCB-W** | Sampling Site: RM 20 | Received: 02/12/2016
Lab ID: 1604304045 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **052-PCB-W** | Sampling Site: RM 16A | Received: 02/12/2016
Lab ID: 1604304046 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **053-PCB-W** | Sampling Site: RM 17 | Received: 02/12/2016
Lab ID: 1604304047 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **054-PCB-W** | Sampling Site: N. POD GIRLS | Received: 02/12/2016
Lab ID: 1604304048 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **055-PCB-W** | Sampling Site: N. POD | Received: 02/12/2016
Lab ID: 1604304049 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 21 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **056-PCB-W** | Sampling Site: RM 19 | Received: 02/12/2016
Lab ID: 1604304050 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **057-PCB-W** | Sampling Site: RM 18 | Received: 02/12/2016
Lab ID: 1604304051 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **058-PCB-W** | Sampling Site: N. POD BOYS | Received: 02/12/2016
Lab ID: 1604304052 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **059-PCB-W** | Sampling Site: HALL-S. POD | Received: 02/12/2016
Lab ID: 1604304053 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **060-PCB-W** | Sampling Site: S. POD GIRLS | Received: 02/12/2016
Lab ID: 1604304054 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **061-PCB-W** | Sampling Site: S. POD BOYS | Received: 02/12/2016
Lab ID: 1604304055 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **062-PCB-W** | Sampling Site: ADMIN SUPPLY | Received: 02/12/2016
Lab ID: 1604304056 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **063-PCB-W** | Sampling Site: GARY MARK | Received: 02/12/2016
Lab ID: 1604304057 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **064-PCB-W** | Sampling Site: ADMIN SERVER | Received: 02/12/2016
Lab ID: 1604304058 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **065-PCB-W** | Sampling Site: ADMIN STAFF | Received: 02/12/2016
Lab ID: 1604304059 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **066-PCB-W** | Sampling Site: KAREN OFF | Received: 02/12/2016
Lab ID: 1604304060 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22815 (HBN: 164195)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **067-PCB-W** | Sampling Site: CTE RR | Received: 02/12/2016
Lab ID: 1604304061 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **068-PCB-W** | Sampling Site: MUSIC STORAGE | Received: 02/12/2016
Lab ID: 1604304062 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **069-PCB-W** | Sampling Site: GATHERING OFF | Received: 02/12/2016
Lab ID: 1604304063 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **070-PCB-W** | Sampling Site: CAFE | Received: 02/12/2016
Lab ID: 1604304064 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **071-PCB-W** | Sampling Site: E. GATHER | Received: 02/12/2016
Lab ID: 1604304065 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **072-PCB-W** | Sampling Site: GIRLS-TECH | Received: 02/12/2016
Lab ID: 1604304066 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **073-PCB-W** | Sampling Site: TECH-HALL | Received: 02/12/2016
Lab ID: 1604304067 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Sample ID: **074-PCB-W** | Sampling Site: SM GYM STORAGE | Received: 02/12/2016
Lab ID: 1604304068 | Media: Wipe
Matrix: Wipe | Sampling Parameter: NA

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: 075-PCB-W
Lab ID: 1604304069
Matrix: Wipe
Sampling Site: TECH BOY
Media: Wipe
Sampling Parameter: NA
Received: 02/12/2016

Analysis Method - SW 8082

Preparation:	EPA 3550, Sonic Ext, Wipe	**Weight/Volume**	**Analysis:**	SW 8082, Wipe	**Instrument ID:** GCE30
Batch:	ENVX/22816 (HBN: 164205)	**Initial:** 1 wipe	**Batch:**	EGC/6159 (HBN: 164220)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 20 mL	**Analyzed:**	02/12/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	RL (ug/sample)	Dilution	Qual
Aroclor 1221	ND	1.0	1	
Aroclor 1232	ND	1.0	1	
Aroclor 1016	ND	1.0	1	
Aroclor 1242	ND	1.0	1	
Aroclor 1248	ND	1.0	1	
Aroclor 1254	ND	1.0	1	
Aroclor 1260	ND	1.0	1	
Aroclor 1262	ND	1.0	1	
Aroclor 1268	ND	1.0	1	

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
SW 8082	/S/ Mila V. Potekhin 02/14/2016 17:01	/S/ Steven J. Sagers 02/15/2016 10:14
SW 8082	/S/ Steven J. Sagers 02/14/2016 14:46	/S/ Mila V. Potekhin 02/15/2016 10:37

Laboratory Contact Information

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ANALYTICAL REPORT

Workorder: 34-1604304
Client: PBS Environmental
Project Manager: Stella Hanis

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

ALS | Environmental
4388 Glendale Milford Rd.
Cincinnati, Ohio 45242
Phone: (800)-458-1493 or
(513) 733-5336
Fax: (513) 733-5347

STELLA HANIS
Project Manager

ANALYTICAL REQUEST FORM

17353

☐ **REGULAR Status**

☒ **RUSH Status Required - ADDITIONAL CHARGE**
RESULTS REQUIRED BY 2/8/16 8 AM
DATE
CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 2/4/16 Purchase Order No. 41373.000
Company Name PBS ENGINEERING & ENV.
Address 2517 EASTLAKE AVE E.
SEATTLE (City) WA (State) 98102 (Zip)
Send Report To GREGG MIDDAUGH
Email Address MIDDAUGH@PBSENV.COM
Telephone (206) 255-4659
Fax Telephone ( )

Billing Address (if different)

Quote No.
Sampling Site SVEC
Date/Time of Collection 2/4/16
Project No. 41373.000

1602287

Lab Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known	
01	-001 PCB-W	WIPE	N/A	EPA 8020	Rm 11 Rm 5 S. POD ADMIN SCI PREP MUSIC
02	-002 PCB-W	↓	↓	↓	
03	-003 PCB-W				
04	-004 PCB-W				
05	-005 PCB-W				
06	-006 PCB-W	↓	↓	↓	
07	-001 PCB-A	AIR	1920	EPA TO-10A	Rm 11 Rm 5 S. POD ADMIN SCI PREP MUSIC
08	-002 PCB-A	↓	↓	↓	
09	-003 PCB-A				
10	-004 PCB-A				
11	-005 PCB-A				
12	-006 PCB-A	↓	↓	↓	

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

CHAIN OF CUSTODY

Relinquished by: (Signature) Gregg Middaugh	Date / Time 2/4 6PM	Received by: (Signature)	Date / Time 2/5/16 0901 (2/6/16)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY						DELIVERY METHOD:	STD MAIL	PRTY MAIL	ALS	CLIENT	COURIER	DROP BOX	FEDEX	OTHER:	(UPS)
COOLER TEMP: 8.3 °C		pH ADJUSTMENTS:				CUSTODY SEALS:	(NONE)	COOLER	PACKAGE	SAMPLES					
COOLING METHOD:	NONE	(COOLER)	WET ICE	DRY ICE	(ICE PACK)	EQUIP. RETURNED:									

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1604303**

Limits:	Method	**Preparation:**	EPA 3540 Soxhlet Ext., EPA TO-10A	**Analysis:**	EPA TO-10A
Basis:	ALS Laboratory Group	**Batch:**	ENVX/22813 (HBN: 164189)	**Batch:**	EGC/6160 (HBN: 164221)
		Prepared By:	Peter Tran	**Analyzed By:**	Mila V. Potekhin

Blank

MB: 488337
Analyzed: 02/14/2016 00:00
Units: ug/sample

Analyte	Result	MDL	RL
Aroclor 1260	ND	NA	0.100
Aroclor 1254	ND	NA	0.100
Aroclor 1221	ND	NA	0.100
Aroclor 1232	ND	NA	0.100
Aroclor 1248	ND	NA	0.100
Aroclor 1016	ND	NA	0.100
Aroclor 1242	ND	NA	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 488338
Analyzed: 02/14/2016 00:00
Dilution: 1
Units: ug/sample

LCSD: 488339
Analyzed: 02/14/2016 00:00
Dilution: 1
Units: ug/sample

Analyte	LCS Result	LCS Target	LCS % Rec	QC Limits		LCSD Result	LCSD % Rec	RPD	QC Limits	
Aroclor 1260	4.27	5.00	* 85.4			4.32	* 86.4	* 86.4		
Aroclor 1254	4.35	5.00	* 86.9			4.33	* 86.6	* 86.6		
Aroclor 1221	3.63	5.00	* 72.5			3.68	* 73.5	* 73.5		
Aroclor 1232	4.24	5.00	* 84.8			4.30	* 85.9	* 85.9		
Aroclor 1248	4.37	5.00	* 87.5			4.41	* 88.3	* 88.3		
Aroclor 1016	4.38	5.00	* 87.7			4.43	* 88.6	* 88.6		
Aroclor 1242	4.34	5.00	* 86.8			4.38	* 87.5	* 87.5		
Aroclor 1268	4.38	5.00	* 87.5			4.44	* 88.8	* 88.8		
Aroclor 1262	4.28	5.00	* 85.6			4.34	* 86.7	* 86.7		

Comments

Sample 014 was lost during the extraction process.

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Mila V. Potekhin	/S/ Steven J. Sagers
02/15/2016 09:23	02/15/2016 11:05

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit
● - Result is above the calibration range

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected (U - Qualifier also flags analyte as not detected)
NA - Not Applicable
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1604303**

Limits:	Method	**Preparation:**	EPA 3540 Soxhlet Ext., EPA TO-10A	**Analysis:**	EPA TO-10A
Basis:	ALS Laboratory Group	**Batch:**	ENVX/22814 (HBN: 164190)	**Batch:**	EGC/6161 (HBN: 164222)
		Prepared By:	Peter Tran	**Analyzed By:**	Mila V. Potekhin

Blank

MB: 488340
Analyzed: 02/14/2016 00:00
Units: ug/sample

Analyte	Result	MDL	RL
Aroclor 1260	ND	NA	0.100
Aroclor 1254	ND	NA	0.100
Aroclor 1221	ND	NA	0.100
Aroclor 1232	ND	NA	0.100
Aroclor 1248	ND	NA	0.100
Aroclor 1016	ND	NA	0.100
Aroclor 1242	ND	NA	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 488341
Analyzed: 02/14/2016 00:00
Dilution: 1
Units: ug/sample

LCSD: 488342
Analyzed: 02/14/2016 00:00
Dilution: 1
Units: ug/sample

Analyte	LCS Result	Target	% Rec	QC Limits		LCSD Result	% Rec	RPD	QC Limits	
Aroclor 1260	4.08	5.00	* 81.6			4.14	* 82.8	* 82.8		
Aroclor 1254	4.08	5.00	* 81.7			4.14	* 82.8	* 82.8		
Aroclor 1221	4.05	5.00	* 81.0			4.08	* 81.7	* 81.7		
Aroclor 1232	4.19	5.00	* 83.8			4.23	* 84.6	* 84.6		
Aroclor 1248	4.20	5.00	* 84.0			4.25	* 85.0	* 85.0		
Aroclor 1016	4.30	5.00	* 86.0			4.36	* 87.3	* 87.3		
Aroclor 1242	4.24	5.00	* 84.8			4.31	* 86.1	* 86.1		
Aroclor 1268	4.19	5.00	* 83.7			4.18	* 83.5	* 83.5		
Aroclor 1262	3.96	5.00	* 79.2			3.99	* 79.7	* 79.7		

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Mila V. Potekhin	/S/ Steven J. Sagers
02/15/2016 10:16	02/15/2016 11:10

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit
⬣ - Result is above the calibration range

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected (U - Qualifier also flags analyte as not detected)
NA - Not Applicable
QC results are not adjusted for moisture correction, where applicable

08-Feb-2016

Gregg Middaugh
PBS
2517 Eastlake Ave. East, Suite 100
Seattle, WA 98102

Tel: (206) 255-4659
Fax:

Re: SVEC; 41373.000 Work Order: **1602287**

Dear Gregg,

ALS Environmental received 12 samples on 06-Feb-2016 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ALS Environmental

Date: 08-Feb-16

Client:	PBS
Project:	SVEC; 41373.000
Work Order:	1602287

Case Narrative

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 08-Feb-16

Client: PBS
Project: SVEC; 41373.000
Work Order: **1602287**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1602287-01	-001 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-02	-002 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-03	-003 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-04	-004 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-05	-005 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-06	-006 PCB-W	Wipe		2/4/2016	2/6/2016	☐
1602287-07	-001 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-08	-002 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-09	-003 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-10	-004 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-11	-005 PCB-A	Air		2/4/2016	2/6/2016	☐
1602287-12	-006 PCB-A	Air		2/4/2016	2/6/2016	☐

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -001 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-01
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 13:43	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -002 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-02
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 13:56	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -003 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-03
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:10	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -004 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-04
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:23	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -005 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-05
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:37	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -006 PCB-W
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-06
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE	Method: **SW8082**	Area **0 cm2**	Analyst: **TSA**
Date Analyzed: 2/6/2016 14:50	Reporting Limit		
	µg/sample	µg/sample	ug/100cm2
Aroclor 1016	ND	1.0	NA
Aroclor 1221	ND	1.0	NA
Aroclor 1232	ND	1.0	NA
Aroclor 1242	ND	1.0	NA
Aroclor 1248	ND	1.0	NA
Aroclor 1254	ND	1.0	NA
Aroclor 1260	ND	1.0	NA

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -001 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-07
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	**0.17**	**0.10**	**0.000088**	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -002 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-08
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -003 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-09
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -004 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-10
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -005 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-11
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	**0.36**	**0.10**	**0.00019**	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: *08-Feb-16*

Client: PBS
Project: SVEC; 41373.000
Sample ID: -006 PCB-A
Collection Date: 2/4/2016

Work Order: 1602287
Lab ID: 1602287-12
Matrix: AIR

Analytical Results

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1920**	Analyst: **TSA**
Date Analyzed: 2/6/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000052	
Aroclor 1221	ND	0.10	<0.000052	
Aroclor 1232	ND	0.10	<0.000052	
Aroclor 1242	ND	0.10	<0.000052	
Aroclor 1248	ND	0.10	<0.000052	
Aroclor 1254	ND	0.10	<0.000052	
Aroclor 1260	ND	0.10	<0.000052	
Aroclor 1262	ND	0.10	<0.000052	
Aroclor 1268	ND	0.10	<0.000052	

Note:

ALS Environmental

Date: 08-Feb-16

Client: PBS

Work Order: 1602287

Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33679** Instrument ID: **GC3** Method: **SW8082**

MBLK Sample ID: **MBLK-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:02 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218109** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	0.347	0	*0.5*	0	*69.4*	*52.7-131*	0			
Surr: Tetrachloro-m-xylene	0.381	0	*0.5*	0	*76.2*	*48.4-86.6*	0			

LCS Sample ID: **LCS-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:16 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218110** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	7.607	1.0	10	0	76.1	67.5-137	0			
Surr: Decachlorobiphenyl	0.369	0	*0.5*	0	*73.8*	*52.7-131*	0			
Surr: Tetrachloro-m-xylene	0.405	0	*0.5*	0	*81*	*48.4-86.6*	0			

LCSD Sample ID: **LCSD-33679-33679** Units: **µg/sample** Analysis Date: **2/6/2016 01:29 PM**

Client ID: Run ID: **GC3_160206A** SeqNo: **1218111** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	7.024	1.0	10	0	70.2	67.5-137	7.607	7.97	15	
Surr: Decachlorobiphenyl	0.366	0	*0.5*	0	*73.2*	*52.7-131*	0.369	*0.816*	*15*	
Surr: Tetrachloro-m-xylene	0.392	0	*0.5*	0	*78.4*	*48.4-86.6*	0.405	*3.26*	*15*	

The following samples were analyzed in this batch:

1602287-01A	1602287-02A	1602287-03A
1602287-04A	1602287-05A	1602287-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: PBS
Work Order: 1602287
Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33684** Instrument ID: **GC3** Method: **ETO10A**

MBLK Sample ID: **MBLK-33684-33684** Units: **µg/sample** Analysis Date: **2/6/2016**
Client ID: Run ID: **GC3_160206B** SeqNo: **1218209** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
Surr: Decachlorobiphenyl	0.0388	0	*0.05*	0	*77.6*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0394	0	*0.05*	0	*78.8*	*45.7-110*	0			

LCS Sample ID: **LCS-33684-33684** Units: **µg/sample** Analysis Date: **2/6/2016**
Client ID: Run ID: **GC3_160206B** SeqNo: **1218210** Prep Date: **2/6/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	0.7529	0.10	1	0	75.3		0			
Surr: Decachlorobiphenyl	0.0371	0	*0.05*	0	*74.2*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0434	0	*0.05*	0	*86.8*	*45.7-110*	0			

The following samples were analyzed in this batch:

1602287-07A	1602287-08A	1602287-09A
1602287-10A	1602287-11A	1602287-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 08-Feb-16

Client: PBS
Project: SVEC; 41373.000
WorkOrder: **1602287**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **PBS-SEATTLE** Date/Time Received: **06-Feb-16 00:00**

Work Order: **1602287** Received by: **SMS**

Checklist completed by: Shawn Smythe 06-Feb-16
eSignature Date

Reviewed by: Shawn Smythe 06-Feb-16
eSignature Date

Matrices:
Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	8.3		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS | Environmental
4388 Glendale Milford Rd.
Cincinnati, Ohio 45242
Phone: (800)-458-1493 or
(513) 733-5336
Fax: (513) 733-5347

STELLA HANIS
Project Manager

ANALYTICAL REQUEST FORM

L002754 17365

☐ REGULAR Status RUSH ONLY HIGHLIGHTED SAMPLE - STANDARD TURN ON REMAINER

☒ RUSH Status Required - ADDITIONAL CHARGE

RESULTS REQUIRED BY 2-23-16 TUES
DATE

CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 5/18/16 Purchase Order No. 41373

Company Name PBS ENG + ENV

Address 2517 EASTLAKE AVE E SUITE 100

SEATTLE (City) WA (State) 98102 (Zip)

Send Report To GREGG MIDDAUGH

Email Address gregg.middaugh@pbsenv.com

Telephone (206) 233-9639

Fax Telephone ( )

Billing Address (if different) SAME

Quote No.

Sampling Site SVEC

Date/Time of Collection

Project No. 41373.000

ng/m3

Lab Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
# 01	021-PCB-A	A	2050	EPA TO-10A
# 02	022-PCB-A		1988	
03	032-PCB-A		2042	
04	033-PCB-A		2038	
05	034-PCB-A		1968	
# 06	035-PCB-A		2013	
07	036-PCB-A		1968	
08	037-PCB-A		2009	
09	038-PCB-A		1968	
10	039-PCB-A		2029	
11	040-PCB-A		2034	
12	041-PCB-A		1968	
13	042-PCB-A		2025	
14	043-PCB-A		2009	
15	044-PCB-A		1993	

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

CHAIN OF CUSTODY

Relinquished by: (Signature) Gregg Middaugh	Date / Time 5/18/16	Received by: (Signature) [illegible]	Date / Time 5/19/16 09:23
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY

COOLER TEMP: 16.3 °C | pH ADJUSTMENTS:

COOLING METHOD: NONE COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT STD MAIL PRTY MAIL ALS COURIER DROP BOX FEDEX OTHER UPS

CUSTODY SEALS: NONE COOLER PACKAGE SAMPLES

EQUIP. RETURNED:

* RUSH ONLY HIGHLIGHTED SAMPLES — STANDARD TURN ON REMAINER.

[For lab use only]

ANALYTICAL REQUEST FORM

1402756

1. ☐ REGULAR Status

* ☑ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY 2-23-16 ; TUES
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/18/16 Purchase Order No. 41373,000

3. Company Name PBS ENG & ENV
Address 2517 EASTLAKE AVE E.
SEATTLE, WA 98102
Person to Contact GREGG MURDAUGH
Telephone (206) 255 4659
Fax Telephone ( )
E-mail Address
Billing Address (if different from above)
SAME

4. Quote No.
ALS Project Manager HANNS

5. Sample Collection
Sampling Site SVEC
Industrial Process SCHOOL
Date of Collection
Time Collected
Date of Shipment
Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

	Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
16	045-PCB-A	A	2050	EPA TO15A	1	
17 *	046-PCB-A		2,160			
18	047-PCB-A		2071			
19	048-PCB-A		2058			
20	049-PCB-A		2079			
21 *	050-PCB-A		~~2169~~	2058		
22	051-PCB-A		2075			
23 *	052-PCB-A		2,169			
24	053-PCB-A		2075			
25 *	054-PCB-A		2,157			
26 *	055-PCB-A		2,821			
27 *	056-PCB-A		2,132			
28	057-PCB-A		1984			
29	~~[illegible]~~ 058-PCB-A	V	1968	V	V	

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Gregg Murdaugh	Date/Time	5/18/16
Received by	[signature]	Date/Time	2/19/16 09:23
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

*RUSH HIGHLIGHTED SAMPLE - STANDARD TURN ON REMAINDER

[For lab use only]

ANALYTICAL REQUEST FORM

1607756

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY 2-23-16 TUES
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/18/16 Purchase Order No. 41373,000

3. Company Name PBS ENG. & ENV.
Address 2517 EASTLAKE AVE E
SEATTLE, WA 98102
Person to Contact GREGG MIDDAUGH
Telephone ( ) 206. 255. 4659
Fax Telephone ( ) —
E-mail Address
Billing Address (if different from above) SAME

4. Quote No.
ALS Project Manager HANNIS

5. Sample Collection
Sampling Site SVEC
Industrial Process SCHOOL
Date of Collection
Time Collected
Date of Shipment
Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
30 -059	AIR	1,898	EPA TO-10A	1	
31 -060		1,993			
32 -061		1,993			
33 -062		1,997			
34 -063		2001			
35 -064		1875			
36 -065		2033			
37 -066		2107			
38 -067		1939			
39 -068		1993			
40 -069	OMIT				
41 -070	OMIT				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m^3 3. ppm 4. % 5. µg/m^3 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Gregg Middaugh	Date/Time	5/18/16
Received by	[signature]	Date/Time	5/19/16 09:23
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

29-Feb-2016

Gregg Middaugh
PBS
2517 Eastlake Ave. East, Suite 100
Seattle, WA 98102

Tel: (206) 255-4659
Fax:

Re: SVEC; 41373.000 Work Order: **1602756**

Dear Gregg,

ALS Environmental received 39 samples on 19-Feb-2016 09:23 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 29.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ALS Environmental

Date: 29-Feb-16

Client: PBS
Project: SVEC; 41373.000
Work Order: **1602756**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1602756-01	021-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-02	022-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-03	032-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-04	033-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-05	034-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-06	035-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-07	036-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-08	037-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-09	038-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-10	039-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-11	040-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-12	041-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-13	042-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-14	043-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-15	044-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-16	045-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-17	046-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-18	047-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-19	048-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-20	049-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-21	050-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-22	051-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-23	052-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-24	053-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-25	054-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-26	055-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-27	056-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-28	057-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-29	058-PCB-A	Air		2/18/2016	2/19/2016 09:23	☐
1602756-30	059	Air		2/18/2016	2/19/2016 09:23	☐
1602756-31	060	Air		2/18/2016	2/19/2016 09:23	☐
1602756-32	061	Air		2/18/2016	2/19/2016 09:23	☐
1602756-33	062	Air		2/18/2016	2/19/2016 09:23	☐
1602756-34	063	Air		2/18/2016	2/19/2016 09:23	☐
1602756-35	064	Air		2/18/2016	2/19/2016 09:23	☐
1602756-36	065	Air		2/18/2016	2/19/2016 09:23	☐
1602756-37	066	Air		2/18/2016	2/19/2016 09:23	☐
1602756-38	067	Air		2/18/2016	2/19/2016 09:23	☐

Client: PBS
Project: SVEC; 41373.000
Work Order: **1602756**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1602756-39	068	Air		2/18/2016	2/19/2016 09:23	☐

ALS Environmental

Date: 29-Feb-16

Client: PBS
Project: SVEC; 41373.000
Work Order: 1602756

Case Narrative

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: *29-Feb-16*

Client: PBS
Project: SVEC; 41373.000

Work Order: 1602756

Analytical Results

Lab ID: 1602756-01A
Client Sample ID: 021-PCB-A

Collection Date: 2/18/2016
Matrix: AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2050**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-02A
Client Sample ID: 022-PCB-A

Collection Date: 2/18/2016
Matrix: AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1988**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-03A **Collection Date:** 2/18/2016
Client Sample ID: 032-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2042**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-04A **Collection Date:** 2/18/2016
Client Sample ID: 033-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2038**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-05A **Collection Date:** 2/18/2016
Client Sample ID: 034-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1968**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000051
Aroclor 1221	ND	0.10	<0.000051
Aroclor 1232	ND	0.10	<0.000051
Aroclor 1242	ND	0.10	<0.000051
Aroclor 1248	ND	0.10	<0.000051
Aroclor 1254	ND	0.10	<0.000051
Aroclor 1260	ND	0.10	<0.000051
Aroclor 1262	ND	0.10	<0.000051
Aroclor 1268	ND	0.10	<0.000051

Lab ID: 1602756-06A **Collection Date:** 2/18/2016
Client Sample ID: 035-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2013**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-07A **Collection Date:** 2/18/2016
Client Sample ID: 036-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1968**	Analyst: **TSA**
Date Analyzed: 2/23/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000051
Aroclor 1221	ND	0.10	<0.000051
Aroclor 1232	ND	0.10	<0.000051
Aroclor 1242	ND	0.10	<0.000051
Aroclor 1248	ND	0.10	<0.000051
Aroclor 1254	ND	0.10	<0.000051
Aroclor 1260	ND	0.10	<0.000051
Aroclor 1262	ND	0.10	<0.000051
Aroclor 1268	ND	0.10	<0.000051

Lab ID: 1602756-08A **Collection Date:** 2/18/2016
Client Sample ID: 037-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2009**	Analyst: **TSA**
Date Analyzed: 2/23/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-09A **Collection Date:** 2/18/2016
Client Sample ID: 038-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1968**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000051
Aroclor 1221	ND	0.10	<0.000051
Aroclor 1232	ND	0.10	<0.000051
Aroclor 1242	ND	0.10	<0.000051
Aroclor 1248	ND	0.10	<0.000051
Aroclor 1254	ND	0.10	<0.000051
Aroclor 1260	ND	0.10	<0.000051
Aroclor 1262	ND	0.10	<0.000051
Aroclor 1268	ND	0.10	<0.000051

Lab ID: 1602756-10A **Collection Date:** 2/18/2016
Client Sample ID: 039-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2029**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-11A **Collection Date:** 2/18/2016
Client Sample ID: 040-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2034**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-12A **Collection Date:** 2/18/2016
Client Sample ID: 041-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1968**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000051
Aroclor 1221	ND	0.10	<0.000051
Aroclor 1232	ND	0.10	<0.000051
Aroclor 1242	ND	0.10	<0.000051
Aroclor 1248	ND	0.10	<0.000051
Aroclor 1254	**0.10**	**0.10**	**0.000053**
Aroclor 1260	ND	0.10	<0.000051
Aroclor 1262	ND	0.10	<0.000051
Aroclor 1268	ND	0.10	<0.000051

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-13A **Collection Date:** 2/18/2016
Client Sample ID: 042-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2025**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-14A **Collection Date:** 2/18/2016
Client Sample ID: 043-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2009**	Analyst: **TSA**
Date Analyzed: 2/23/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-15A **Collection Date:** 2/18/2016
Client Sample ID: 044-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1993**	Analyst: **TSA**
Date Analyzed: 2/24/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Lab ID: 1602756-16A **Collection Date:** 2/18/2016
Client Sample ID: 045-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2050**	Analyst: **TSA**
Date Analyzed: 2/24/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	**0.11**	**0.10**	**0.000053**
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-17A **Collection Date:** 2/18/2016
Client Sample ID: 046-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2160**	Analyst: **TSA**
Date Analyzed: 2/22/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000046
Aroclor 1221	ND	0.10	<0.000046
Aroclor 1232	ND	0.10	<0.000046
Aroclor 1242	**0.10**	**0.10**	**0.000048**
Aroclor 1248	ND	0.10	<0.000046
Aroclor 1254	ND	0.10	<0.000046
Aroclor 1260	ND	0.10	<0.000046
Aroclor 1262	ND	0.10	<0.000046
Aroclor 1268	ND	0.10	<0.000046

Lab ID: 1602756-18A **Collection Date:** 2/18/2016
Client Sample ID: 047-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2071**	Analyst: **TSA**
Date Analyzed: 2/24/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000048
Aroclor 1221	ND	0.10	<0.000048
Aroclor 1232	ND	0.10	<0.000048
Aroclor 1242	ND	0.10	<0.000048
Aroclor 1248	ND	0.10	<0.000048
Aroclor 1254	ND	0.10	<0.000048
Aroclor 1260	ND	0.10	<0.000048
Aroclor 1262	ND	0.10	<0.000048
Aroclor 1268	ND	0.10	<0.000048

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-19A **Collection Date:** 2/18/2016
Client Sample ID: 048-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2058**	Analyst: **TSA**
Date Analyzed: 2/24/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-20A **Collection Date:** 2/18/2016
Client Sample ID: 049-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2079**	Analyst: **TSA**
Date Analyzed: 2/24/2016	Reporting Limit		
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000048
Aroclor 1221	ND	0.10	<0.000048
Aroclor 1232	ND	0.10	<0.000048
Aroclor 1242	ND	0.10	<0.000048
Aroclor 1248	ND	0.10	<0.000048
Aroclor 1254	ND	0.10	<0.000048
Aroclor 1260	ND	0.10	<0.000048
Aroclor 1262	ND	0.10	<0.000048
Aroclor 1268	ND	0.10	<0.000048

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-21A **Collection Date:** 2/18/2016
Client Sample ID: 050-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2058**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000049
Aroclor 1221	ND	0.10	<0.000049
Aroclor 1232	ND	0.10	<0.000049
Aroclor 1242	ND	0.10	<0.000049
Aroclor 1248	ND	0.10	<0.000049
Aroclor 1254	ND	0.10	<0.000049
Aroclor 1260	ND	0.10	<0.000049
Aroclor 1262	ND	0.10	<0.000049
Aroclor 1268	ND	0.10	<0.000049

Lab ID: 1602756-22A **Collection Date:** 2/18/2016
Client Sample ID: 051-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2075**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000048
Aroclor 1221	ND	0.10	<0.000048
Aroclor 1232	ND	0.10	<0.000048
Aroclor 1242	ND	0.10	<0.000048
Aroclor 1248	ND	0.10	<0.000048
Aroclor 1254	ND	0.10	<0.000048
Aroclor 1260	ND	0.10	<0.000048
Aroclor 1262	ND	0.10	<0.000048
Aroclor 1268	ND	0.10	<0.000048

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-23A **Collection Date:** 2/18/2016
Client Sample ID: 052-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2169**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000046
Aroclor 1221	ND	0.10	<0.000046
Aroclor 1232	ND	0.10	<0.000046
Aroclor 1242	**0.11**	**0.10**	**0.000051**
Aroclor 1248	ND	0.10	<0.000046
Aroclor 1254	ND	0.10	<0.000046
Aroclor 1260	ND	0.10	<0.000046
Aroclor 1262	ND	0.10	<0.000046
Aroclor 1268	ND	0.10	<0.000046

Lab ID: 1602756-24A **Collection Date:** 2/18/2016
Client Sample ID: 053-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2075**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000048
Aroclor 1221	ND	0.10	<0.000048
Aroclor 1232	ND	0.10	<0.000048
Aroclor 1242	ND	0.10	<0.000048
Aroclor 1248	ND	0.10	<0.000048
Aroclor 1254	ND	0.10	<0.000048
Aroclor 1260	ND	0.10	<0.000048
Aroclor 1262	ND	0.10	<0.000048
Aroclor 1268	ND	0.10	<0.000048

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-25A **Collection Date:** 2/18/2016
Client Sample ID: 054-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2157**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000046
Aroclor 1221	ND	0.10	<0.000046
Aroclor 1232	ND	0.10	<0.000046
Aroclor 1242	**0.23**	**0.10**	**0.00011**
Aroclor 1248	ND	0.10	<0.000046
Aroclor 1254	ND	0.10	<0.000046
Aroclor 1260	ND	0.10	<0.000046
Aroclor 1262	ND	0.10	<0.000046
Aroclor 1268	ND	0.10	<0.000046

Lab ID: 1602756-26A **Collection Date:** 2/18/2016
Client Sample ID: 055-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2821**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000035
Aroclor 1221	ND	0.10	<0.000035
Aroclor 1232	ND	0.10	<0.000035
Aroclor 1242	ND	0.10	<0.000035
Aroclor 1248	ND	0.10	<0.000035
Aroclor 1254	ND	0.10	<0.000035
Aroclor 1260	ND	0.10	<0.000035
Aroclor 1262	ND	0.10	<0.000035
Aroclor 1268	ND	0.10	<0.000035

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-27A **Collection Date:** 2/18/2016
Client Sample ID: 056-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2132**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000047
Aroclor 1221	ND	0.10	<0.000047
Aroclor 1232	ND	0.10	<0.000047
Aroclor 1242	**0.57**	**0.10**	**0.00027**
Aroclor 1248	ND	0.10	<0.000047
Aroclor 1254	ND	0.10	<0.000047
Aroclor 1260	ND	0.10	<0.000047
Aroclor 1262	ND	0.10	<0.000047
Aroclor 1268	ND	0.10	<0.000047

Lab ID: 1602756-28A **Collection Date:** 2/18/2016
Client Sample ID: 057-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1984**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-29A **Collection Date:** 2/18/2016
Client Sample ID: 058-PCB-A **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1968**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000051
Aroclor 1221	ND	0.10	<0.000051
Aroclor 1232	ND	0.10	<0.000051
Aroclor 1242	ND	0.10	<0.000051
Aroclor 1248	ND	0.10	<0.000051
Aroclor 1254	ND	0.10	<0.000051
Aroclor 1260	ND	0.10	<0.000051
Aroclor 1262	ND	0.10	<0.000051
Aroclor 1268	ND	0.10	<0.000051

Lab ID: 1602756-30A **Collection Date:** 2/18/2016
Client Sample ID: 059 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1898**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000053
Aroclor 1221	ND	0.10	<0.000053
Aroclor 1232	ND	0.10	<0.000053
Aroclor 1242	**0.39**	**0.10**	**0.00021**
Aroclor 1248	ND	0.10	<0.000053
Aroclor 1254	ND	0.10	<0.000053
Aroclor 1260	ND	0.10	<0.000053
Aroclor 1262	ND	0.10	<0.000053
Aroclor 1268	ND	0.10	<0.000053

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-31A **Collection Date:** 2/18/2016
Client Sample ID: 060 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1993**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	**0.29**	**0.10**	**0.00015**
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Lab ID: 1602756-32A **Collection Date:** 2/18/2016
Client Sample ID: 061 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1993**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	ND	0.10	<0.000050
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-33A **Collection Date:** 2/18/2016
Client Sample ID: 062 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1997**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	**0.31**	**0.10**	**0.00015**
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Lab ID: 1602756-34A **Collection Date:** 2/18/2016
Client Sample ID: 063 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2001**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000050
Aroclor 1221	ND	0.10	<0.000050
Aroclor 1232	ND	0.10	<0.000050
Aroclor 1242	**0.51**	**0.10**	**0.00025**
Aroclor 1248	ND	0.10	<0.000050
Aroclor 1254	ND	0.10	<0.000050
Aroclor 1260	ND	0.10	<0.000050
Aroclor 1262	ND	0.10	<0.000050
Aroclor 1268	ND	0.10	<0.000050

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-35A **Collection Date:** 2/18/2016
Client Sample ID: 064 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1875**	Analyst: **TSA**
Date Analyzed: 2/22/2016		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000053	
Aroclor 1221	ND	0.10	<0.000053	
Aroclor 1232	ND	0.10	<0.000053	
Aroclor 1242	**0.19**	**0.10**	**0.000099**	
Aroclor 1248	ND	0.10	<0.000053	
Aroclor 1254	ND	0.10	<0.000053	
Aroclor 1260	ND	0.10	<0.000053	
Aroclor 1262	ND	0.10	<0.000053	
Aroclor 1268	ND	0.10	<0.000053	

Lab ID: 1602756-36A **Collection Date:** 2/18/2016
Client Sample ID: 065 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **2033**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000049	
Aroclor 1221	ND	0.10	<0.000049	
Aroclor 1232	ND	0.10	<0.000049	
Aroclor 1242	ND	0.10	<0.000049	
Aroclor 1248	ND	0.10	<0.000049	
Aroclor 1254	ND	0.10	<0.000049	
Aroclor 1260	ND	0.10	<0.000049	
Aroclor 1262	ND	0.10	<0.000049	
Aroclor 1268	ND	0.10	<0.000049	

Note:

Client: PBS **Work Order:** 1602756
Project: SVEC; 41373.000

Analytical Results

Lab ID: 1602756-37A **Collection Date:** 2/18/2016
Client Sample ID: 066 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **2107**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000047
Aroclor 1221	ND	0.10	<0.000047
Aroclor 1232	ND	0.10	<0.000047
Aroclor 1242	ND	0.10	<0.000047
Aroclor 1248	ND	0.10	<0.000047
Aroclor 1254	ND	0.10	<0.000047
Aroclor 1260	ND	0.10	<0.000047
Aroclor 1262	ND	0.10	<0.000047
Aroclor 1268	ND	0.10	<0.000047

Lab ID: 1602756-38A **Collection Date:** 2/18/2016
Client Sample ID: 067 **Matrix:** AIR

Analyses

PCBS BY EPA TO-10	Method: **ETO10A**	Air Volume (L): **1939**	Analyst: **TSA**
Date Analyzed: 2/24/2016		Reporting Limit	
	µg/sample	µg/sample	mg/m3
Aroclor 1016	ND	0.10	<0.000052
Aroclor 1221	ND	0.10	<0.000052
Aroclor 1232	ND	0.10	<0.000052
Aroclor 1242	ND	0.10	<0.000052
Aroclor 1248	ND	0.10	<0.000052
Aroclor 1254	ND	0.10	<0.000052
Aroclor 1260	ND	0.10	<0.000052
Aroclor 1262	ND	0.10	<0.000052
Aroclor 1268	ND	0.10	<0.000052

Note:

ALS Environmental

Date: *29-Feb-16*

Client: PBS
Project: SVEC; 41373.000

Work Order: 1602756

Analytical Results

Lab ID: 1602756-39A
Client Sample ID: 068

Collection Date: 2/18/2016
Matrix: AIR

Analyses

PCBS BY EPA TO-10		Method: **ETO10A**	Air Volume (L): **1993**	Analyst: **TSA**
Date Analyzed: 2/24/2016	µg/sample	Reporting Limit µg/sample	mg/m3	
Aroclor 1016	ND	0.10	<0.000050	
Aroclor 1221	ND	0.10	<0.000050	
Aroclor 1232	ND	0.10	<0.000050	
Aroclor 1242	ND	0.10	<0.000050	
Aroclor 1248	ND	0.10	<0.000050	
Aroclor 1254	ND	0.10	<0.000050	
Aroclor 1260	ND	0.10	<0.000050	
Aroclor 1262	ND	0.10	<0.000050	
Aroclor 1268	ND	0.10	<0.000050	

Note:

ALS Environmental

Date: 29-Feb-16

Client: PBS

Work Order: 1602756

Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33928** Instrument ID: **GC3** Method: **ETO10A**

MBLK Sample ID: **MBLK-33928-33928** Units: **µg/sample** Analysis Date: **2/22/2016**

Client ID: Run ID: **GC3_160222B** SeqNo: **1226288** Prep Date: **2/19/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
Surr: Decachlorobiphenyl	0.0287	0	*0.05*	0	*57.4*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0382	0	*0.05*	0	*76.4*	*45.7-110*	0			

LCS Sample ID: **LCS-33928-33928** Units: **µg/sample** Analysis Date: **2/22/2016**

Client ID: Run ID: **GC3_160222B** SeqNo: **1226289** Prep Date: **2/19/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	0.667	0.10	1	0	66.7		0			
Surr: Decachlorobiphenyl	0.0303	0	*0.05*	0	*60.6*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0367	0	*0.05*	0	*73.4*	*45.7-110*	0			

The following samples were analyzed in this batch:

1602756-01A	1602756-02A	1602756-06A
1602756-17A	1602756-21A	1602756-23A
1602756-25A	1602756-26A	1602756-27A
1602756-30A	1602756-31A	1602756-32A
1602756-33A	1602756-34A	1602756-35A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: PBS
Work Order: 1602756
Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **33991** Instrument ID: **GC3** Method: **ETO10A**

MBLK Sample ID: **MBLK-33991-33991** Units: **µg/sample** Analysis Date: **2/23/2016**
Client ID: Run ID: **GC3_160223A** SeqNo: **1227889** Prep Date: **2/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
Surr: Decachlorobiphenyl	0.0276	0	*0.05*	0	*55.2*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.032	0	*0.05*	0	*64*	*45.7-110*	0			

LCS Sample ID: **LCS-33991-33991** Units: **µg/sample** Analysis Date: **2/23/2016**
Client ID: Run ID: **GC3_160223A** SeqNo: **1227890** Prep Date: **2/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	0.6135	0.10	1	0	61.4		0			
Surr: Decachlorobiphenyl	0.0332	0	*0.05*	0	*66.4*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0387	0	*0.05*	0	*77.4*	*45.7-110*	0			

The following samples were analyzed in this batch:

1602756-03A	1602756-04A	1602756-05A
1602756-07A	1602756-08A	1602756-09A
1602756-10A	1602756-11A	1602756-12A
1602756-13A	1602756-14A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: PBS
Work Order: 1602756
Project: SVEC; 41373.000

QC BATCH REPORT

Batch ID: **34005** Instrument ID: **GC3** Method: **ETO10A**

MBLK Sample ID: **MBLK-34005-34005** Units: **µg/sample** Analysis Date: **2/24/2016**
Client ID: Run ID: **GC3_160224B** SeqNo: **1227959** Prep Date: **2/23/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
Surr: Decachlorobiphenyl	0.0295	0	*0.05*	0	*59*	*41.6-116*	0			
Surr: Tetrachloro-m-xylene	0.0404	0	*0.05*	0	*80.8*	*45.7-110*	0			

LCS Sample ID: **LCS-34005-34005** Units: **µg/sample** Analysis Date: **2/24/2016**
Client ID: Run ID: **GC3_160224B** SeqNo: **1227960** Prep Date: **2/23/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	0.679	0.10	1	0	67.9		0			
Surr: Decachlorobiphenyl	0.0331	0	*0.05*	0	*66.2*	*35.7-104*	0			
Surr: Tetrachloro-m-xylene	0.0438	0	*0.05*	0	*87.6*	*45.7-110*	0			

The following samples were analyzed in this batch:

1602756-15A	1602756-16A	1602756-18A
1602756-19A	1602756-20A	1602756-22A
1602756-24A	1602756-28A	1602756-29A
1602756-36A	1602756-37A	1602756-38A
1602756-39A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 29-Feb-16

Client: PBS
Project: SVEC; 41373.000
WorkOrder: **1602756**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **PBS-SEATTLE** Date/Time Received: **19-Feb-16 09:23**

Work Order: **1602756** Received by: **SNH**

Checklist completed by: Stephanie Harrington 19-Feb-16 Reviewed by: Shawn Smythe 22-Feb-16
eSignature Date eSignature Date

Matrices:
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	16.3		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ANALYTICAL REPORT

Report Date: February 15, 2016

Gregg Middaugh
PBS Engineering & Environmental
2517 Eastlake Ave. East
Suite 100
Seattle, WA 98102

Phone: (206) 233-9639
Fax: (206) 762-4780
E-mail: middaugh@pbsenv.com

Workorder: **34-1604303**
Project ID: PBS Env 021216
Purchase Order: 41373
Project Manager Stella Hanis

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
007-PCB-A	1604303001	02/09/16	02/12/16	
008-PCB-A	1604303002	02/09/16	02/12/16	
009-PCB-A	1604303003	02/09/16	02/12/16	
010-PCB-A	1604303004	02/09/16	02/12/16	
011-PCB-A	1604303005	02/09/16	02/12/16	
012-PCB-A	1604303006	02/09/16	02/12/16	
013-PCB-A	1604303007	02/09/16	02/12/16	
014-PCB-A	1604303008	02/10/16	02/12/16	
015-PCB-A	1604303009	02/09/16	02/12/16	
016-PCB-A	1604303010	02/09/16	02/12/16	
017-PCB-A	1604303011	02/09/16	02/12/16	
018-PCB-A	1604303012	02/09/16	02/12/16	
019-PCB-A	1604303013	02/09/16	02/12/16	
020-PCB-A	1604303014	02/10/16	02/12/16	
023-PCB-A	1604303015	02/10/16	02/12/16	
024-PCB-A	1604303016	02/10/16	02/12/16	
025-PCB-A	1604303017	02/10/16	02/12/16	
026-PCB-A	1604303018	02/10/16	02/12/16	
027-PCB-A	1604303019	02/10/16	02/12/16	
028-PCB-A	1604303020	02/10/16	02/12/16	
029-PCB-A	1604303021	02/10/16	02/12/16	
030-PCB-A	1604303022	02/10/16	02/12/16	
031-PCB-A	1604303023	02/10/16	02/12/16	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **007-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303001 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2374 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<42	0.10	1	
Aroclor 1254	ND	<42	0.10	1	
Aroclor 1221	ND	<42	0.10	1	
Aroclor 1232	ND	<42	0.10	1	
Aroclor 1248	ND	<42	0.10	1	
Aroclor 1016	ND	<42	0.10	1	
Aroclor 1242	ND	<42	0.10	1	
Aroclor 1268	ND	<42	0.10	1	
Aroclor 1262	ND	<42	0.10	1	

Sample ID: **008-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303002 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2312 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<43	0.10	1	
Aroclor 1254	ND	<43	0.10	1	
Aroclor 1221	ND	<43	0.10	1	
Aroclor 1232	ND	<43	0.10	1	
Aroclor 1248	ND	<43	0.10	1	
Aroclor 1016	ND	<43	0.10	1	
Aroclor 1242	ND	<43	0.10	1	
Aroclor 1268	ND	<43	0.10	1	
Aroclor 1262	ND	<43	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **009-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303003 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2320 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<43	0.10	1	
Aroclor 1254	ND	<43	0.10	1	
Aroclor 1221	ND	<43	0.10	1	
Aroclor 1232	ND	<43	0.10	1	
Aroclor 1248	ND	<43	0.10	1	
Aroclor 1016	ND	<43	0.10	1	
Aroclor 1242	ND	<43	0.10	1	
Aroclor 1268	ND	<43	0.10	1	
Aroclor 1262	ND	<43	0.10	1	

Sample ID: **010-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303004 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2267 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<44	0.10	1	
Aroclor 1254	ND	<44	0.10	1	
Aroclor 1221	ND	<44	0.10	1	
Aroclor 1232	ND	<44	0.10	1	
Aroclor 1248	ND	<44	0.10	1	
Aroclor 1016	ND	<44	0.10	1	
Aroclor 1242	ND	<44	0.10	1	
Aroclor 1268	ND	<44	0.10	1	
Aroclor 1262	ND	<44	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **011-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303005 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2230 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<45	0.10	1	
Aroclor 1254	ND	<45	0.10	1	
Aroclor 1221	ND	<45	0.10	1	
Aroclor 1232	ND	<45	0.10	1	
Aroclor 1248	ND	<45	0.10	1	
Aroclor 1016	ND	<45	0.10	1	
Aroclor 1242	ND	<45	0.10	1	
Aroclor 1268	ND	<45	0.10	1	
Aroclor 1262	ND	<45	0.10	1	

Sample ID: **012-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303006 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2214 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<45	0.10	1	
Aroclor 1254	ND	<45	0.10	1	
Aroclor 1221	ND	<45	0.10	1	
Aroclor 1232	ND	<45	0.10	1	
Aroclor 1248	ND	<45	0.10	1	
Aroclor 1016	ND	<45	0.10	1	
Aroclor 1242	ND	<45	0.10	1	
Aroclor 1268	ND	<45	0.10	1	
Aroclor 1262	ND	<45	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **013-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303007 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2140 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<47	0.10	1	
Aroclor 1254	ND	<47	0.10	1	
Aroclor 1221	ND	<47	0.10	1	
Aroclor 1232	ND	<47	0.10	1	
Aroclor 1248	ND	<47	0.10	1	
Aroclor 1016	ND	<47	0.10	1	
Aroclor 1242	ND	<47	0.10	1	
Aroclor 1268	ND	<47	0.10	1	
Aroclor 1262	ND	<47	0.10	1	

Sample ID: **014-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303008 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1968 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **015-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303009 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2181 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<46	0.10	1	
Aroclor 1254	ND	<46	0.10	1	
Aroclor 1221	ND	<46	0.10	1	
Aroclor 1232	ND	<46	0.10	1	
Aroclor 1248	ND	<46	0.10	1	
Aroclor 1016	ND	<46	0.10	1	
Aroclor 1242	ND	<46	0.10	1	
Aroclor 1268	ND	<46	0.10	1	
Aroclor 1262	ND	<46	0.10	1	

Sample ID: **016-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303010 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2169 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<46	0.10	1	
Aroclor 1254	ND	<46	0.10	1	
Aroclor 1221	ND	<46	0.10	1	
Aroclor 1232	ND	<46	0.10	1	
Aroclor 1248	ND	<46	0.10	1	
Aroclor 1016	ND	<46	0.10	1	
Aroclor 1242	ND	<46	0.10	1	
Aroclor 1268	ND	<46	0.10	1	
Aroclor 1262	ND	<46	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **017-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303011 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2156 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<46	0.10	1	
Aroclor 1254	ND	<46	0.10	1	
Aroclor 1221	ND	<46	0.10	1	
Aroclor 1232	ND	<46	0.10	1	
Aroclor 1248	ND	<46	0.10	1	
Aroclor 1016	ND	<46	0.10	1	
Aroclor 1242	ND	<46	0.10	1	
Aroclor 1268	ND	<46	0.10	1	
Aroclor 1262	ND	<46	0.10	1	

Sample ID: **018-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303012 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2144 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<47	0.10	1	
Aroclor 1254	ND	<47	0.10	1	
Aroclor 1221	ND	<47	0.10	1	
Aroclor 1232	ND	<47	0.10	1	
Aroclor 1248	ND	<47	0.10	1	
Aroclor 1016	ND	<47	0.10	1	
Aroclor 1242	ND	<47	0.10	1	
Aroclor 1268	ND	<47	0.10	1	
Aroclor 1262	ND	<47	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **019-PCB-A** | Sampling Site: NA | Collected: 02/09/2016
Lab ID: 1604303013 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 2079 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<48	0.10	1	
Aroclor 1254	ND	<48	0.10	1	
Aroclor 1221	ND	<48	0.10	1	
Aroclor 1232	ND	<48	0.10	1	
Aroclor 1248	ND	<48	0.10	1	
Aroclor 1016	ND	<48	0.10	1	
Aroclor 1242	ND	<48	0.10	1	
Aroclor 1268	ND	<48	0.10	1	
Aroclor 1262	ND	<48	0.10	1	

Sample ID: **023-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303015 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1968 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **024-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303016 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1968 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

Sample ID: **025-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303017 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1976 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22813 (HBN: 164189)	**Initial:** 1 filter	**Batch:**	EGC/6160 (HBN: 164221)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **026-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303018 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1972 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

Sample ID: **027-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303019 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1972 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **028-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303020 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1968 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

Sample ID: **029-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303021 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1976 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Analytical Results

Sample ID: **030-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303022 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1980 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

Sample ID: **031-PCB-A** | Sampling Site: NA | Collected: 02/10/2016
Lab ID: 1604303023 | Media: PUF Tube | Received: 02/12/2016
Matrix: Air | Sampling Parameter: Air Volume 1968 L

Analysis Method - EPA TO-10A

Preparation:	EPA 3540 Soxhlet Ext., EPA TO-10A	**Weight/Volume**	**Analysis:**	EPA TO-10A, PCBs Air	**Instrument ID:** GCE03
Batch:	ENVX/22814 (HBN: 164190)	**Initial:** 1 filter	**Batch:**	EGC/6161 (HBN: 164222)	**Percent Solid:** NA
Prepared:	02/12/2016	**Final:** 10 mL	**Analyzed:**	02/14/2016 00:00	**Report Basis:** Wet

Analyte	Result (ug/sample)	Result (ng/m³)	RL (ug/sample)	Dilution	Qual
Aroclor 1260	ND	<51	0.10	1	
Aroclor 1254	ND	<51	0.10	1	
Aroclor 1221	ND	<51	0.10	1	
Aroclor 1232	ND	<51	0.10	1	
Aroclor 1248	ND	<51	0.10	1	
Aroclor 1016	ND	<51	0.10	1	
Aroclor 1242	ND	<51	0.10	1	
Aroclor 1268	ND	<51	0.10	1	
Aroclor 1262	ND	<51	0.10	1	

Comments

Quality Control: EPA TO-10A - (HBN: 164221)

Sample 014 was lost during the extraction process.

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA TO-10A	/S/ Mila V. Potekhin 02/15/2016 10:16	/S/ Steven J. Sagers 02/15/2016 11:11

Laboratory Contact Information

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General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1604303
Client: PBS Environmental
Project Manager: Stella Hanis

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

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STELLA HANIS
Project Manager

ANALYTICAL REQUEST FORM

L002754 17365

☐ REGULAR Status RUSH ONLY HIGHLIGHTED SAMPLE - STANDARD TURN ON REMAINER

☒ RUSH Status Required - ADDITIONAL CHARGE

RESULTS REQUIRED BY 2-23-16 TUES
DATE

CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 5/18/16 Purchase Order No. 41373

Company Name PBS ENG + ENV

Address 2517 EASTLAKE AVE E SUITE 100

SEATTLE (City) WA (State) 98102 (Zip)

Send Report To GREGG MIDDAUGH

Email Address gregg.middaugh@pbsenv.com

Telephone (206) 233-9639

Fax Telephone ( )

Billing Address (if different) SAME

Quote No.

Sampling Site SVEC

Date/Time of Collection

Project No. 41373.000

ng/m3

Lab Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
# 01	021-PCB-A	A	2050	EPA TO-10A
# 02	022-PCB-A		1988	
03	032-PCB-A		2042	
04	033-PCB-A		2038	
05	034-PCB-A		1968	
# 06	035-PCB-A		2013	
07	036-PCB-A		1968	
08	037-PCB-A		2009	
09	038-PCB-A		1968	
10	039-PCB-A		2029	
11	040-PCB-A		2034	
12	041-PCB-A		1968	
13	042-PCB-A		2025	
14	043-PCB-A		2009	
15	044-PCB-A		1993	

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

CHAIN OF CUSTODY

Relinquished by: (Signature) Gregg Middaugh	Date / Time 5/18/16	Received by: (Signature) [illegible]	Date / Time 5/19/16 09:23
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY

COOLER TEMP: 16.3 °C | pH ADJUSTMENTS:

COOLING METHOD: NONE COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT STD MAIL PRTY MAIL ALS COURIER DROP BOX FEDEX OTHER UPS

CUSTODY SEALS: NONE COOLER PACKAGE SAMPLES

EQUIP. RETURNED:

* RUSH ONLY HIGHLIGHTED SAMPLES — STANDARD TURN ON REMAINER.

[For lab use only]

ANALYTICAL REQUEST FORM

1402756

1. ☐ REGULAR Status

* ☑ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY 2-23-16 ; TUES
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/18/16 Purchase Order No. 41373,000

3. Company Name PBS ENG & ENV
Address 2517 EASTLAKE AVE E.
SEATTLE, WA 98102
Person to Contact GREGG MURDAUGH
Telephone (206) 255 4659
Fax Telephone ( )
E-mail Address
Billing Address (if different from above)
SAME

4. Quote No.
ALS Project Manager HANNS

5. Sample Collection
Sampling Site SVEC
Industrial Process SCHOOL
Date of Collection
Time Collected
Date of Shipment
Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

	Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
16	045-PCB-A	A	2050	EPA TO15A	1	
17 *	046-PCB-A		2,160			
18	047-PCB-A		2071			
19	048-PCB-A		2058			
20	049-PCB-A		2079			
21 *	050-PCB-A		~~2169~~	2058		
22	051-PCB-A		2075			
23 *	052-PCB-A		2,169			
24	053-PCB-A		2075			
25 *	054-PCB-A		2,157			
26 *	055-PCB-A		2,821			
27 *	056-PCB-A		2,132			
28	057-PCB-A		1984			
29	~~[illegible]~~ 058-PCB-A	V	1968	V	V	

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Gregg Murdaugh	Date/Time	5/18/16
Received by	[signature]	Date/Time	2/19/16 09:23
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

*RUSH HIGHLIGHTED SAMPLE - STANDARD TURN ON REMAINDER

[For lab use only]

ANALYTICAL REQUEST FORM

1607756

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY 2-23-16 TUES
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/18/16 Purchase Order No. 41373,000

3. Company Name PBS ENG. & ENV.
Address 2517 EASTLAKE AVE E
SEATTLE, WA 98102
Person to Contact GREGG MIDDAUGH
Telephone ( ) 206. 255. 4659
Fax Telephone ( ) —
E-mail Address
Billing Address (if different from above) SAME

4. Quote No.
ALS Project Manager HANNIS

5. Sample Collection
Sampling Site SVEC
Industrial Process SCHOOL
Date of Collection
Time Collected
Date of Shipment
Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
30 -059	AIR	1,898	EPA TO-10A	1	
31 -060		1,993			
32 -061		1,993			
33 -062		1,997			
34 -063		2001			
35 -064		1875			
36 -065		2033			
37 -066		2107			
38 -067		1939			
39 -068		1993			
40 -069	OMIT				
41 -070	OMIT				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m^3 3. ppm 4. % 5. µg/m^3 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Gregg Middaugh	Date/Time	5/18/16
Received by	[signature]	Date/Time	5/19/16 09:23
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

Job Number: 160116 **SEA**

Report Number: 160116R01

Report Date: 2/8/2016

Client: **PBS Engineering + Environmental**

Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102

Project Name: SVEC

Project No.: 41373.000

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160116 - S1	-001 - Sm. Gym South	NV, Air, Fungal & Part. ID		2/5/2016
160116 - S2	-002 - Sm. Gym North	NV, Air, Fungal & Part. ID		2/5/2016
160116 - S3	-003 - Outdoor East	NV, Air, Fungal & Part. ID		2/5/2016
160116 - S4	-004 - Outdoor South	NV, Air, Fungal & Part. ID		2/5/2016

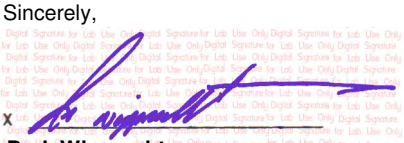
Nonviable Air Air samples follow preparation and analysis techniques outlined in Method 5 of the laboratory SOP; this method is based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Samples were collected using either an Air-O-Cell, Cyclex–D, Allergenco-D, or M2 Multi-Mold nonviable air sampling cassette. Characteristic morphologies were observed by optical microscopy at a magnification of 600x. For each individual particle type observed, data was reported in particles per cubic meter of air (m3).

Due to various factors that influence uncertainty (media type, particle loading, staining, instrumentation and other variable aspects of the method), only the first two figures reported are considered to be significant. The area analyzed on each sample is 20%.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160116
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160116R01
Date Received: 2/5/2016

Lab/Cor ID:	S1	S2
Sample No.:	-001	-002
Description:	Sm. Gym South	Sm. Gym North
Sample Measure:	150 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 2/8/2016	DW - 2/8/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	6	30	200	4	20	133
Aspergillus/ Penicillium-like	25	125	833	24	120	800
Basidiospores	159	795	5300	169	845	5633
Botrytis						
Cladosporium				1	5	33
Epicoccum				1	5	33
Ganoderma	3	15	100	1	5	33
Myxo./ Periconia/ Smuts	2	10	67	2	10	67
Nigrospora				1	5	33
Summary Total:	**195**	**975**	**6500**	**203**	**1015**	**6765**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	1144	5720	38133	721	3605	24033
Charred Wood Fragments				2	10	67
Cotton Fibers	7	35	233	20	100	667
Crystalline Particulates	385	1925	12833	253	1265	8433
Dander	255	1275	8500	283	1415	9433
Hair				1	5	33
Manufactured Fibers	10	50	333	3	15	100
Pollen, Miscellaneous						
Soot	34	170	1133	15	75	500
Starch	3	15	100	2	10	67
Tire Fragments	24	120	800	34	170	1133
Toner Particles	1	5	33			
Summary Total:	**1863**	**9315**	**62098**	**1334**	**6670**	**44466**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160116
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

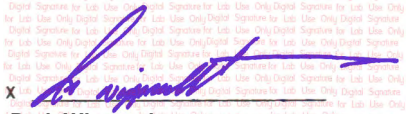
Report Number: 160116R01
Date Received: 2/5/2016

Lab/Cor ID:	S3	S4
Sample No.:	-003	-004
Description:	Outdoor East	Outdoor South
Sample Measure:	150 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 2/8/2016	DW - 2/8/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	26	130	867	15	75	500
Aspergillus/ Penicillium-like	65	325	2167	61	305	2033
Basidiospores	761	3805	25367	444	2220	14800
Botrytis	1	5	33	1	5	33
Cladosporium				6	30	200
Epicoccum						
Ganoderma	2	10	67	3	15	100
Myxo./ Periconia/ Smuts	1	5	33	3	15	100
Nigrospora				1	5	33
Summary Total:	**856**	**4280**	**28534**	**534**	**2670**	**17799**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	231	1155	7700	601	3005	20033
Charred Wood Fragments						
Cotton Fibers				4	20	133
Crystalline Particulates	306	1530	10200	433	2165	14433
Dander	15	75	500	18	90	600
Hair						
Manufactured Fibers	1	5	33	8	40	267
Pollen, Miscellaneous				1	5	33
Soot	51	255	1700	53	265	1767
Starch	1	5	33	2	10	67
Tire Fragments	81	405	2700	162	810	5400
Toner Particles						
Summary Total:	**686**	**3430**	**22866**	**1282**	**6410**	**42733**

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

* - Raw Counts per 20% of Sample
** - Total Count per Sample

Fungal / Particulate Sample Chain of Custody Record

160116

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENV
Address: 2517 EASTLAKE
City, State, Zip: SEATTLE WA
Contact: GREGG MIDDAUGH
Phone: 206 2554659 **Fax:**
Email:
Other Info:

Analysis Type:
Nonviable Options:
- ___ Fungal ID
- X Fungal & Particulate ID
- ___ Particulate ID
- ___ Quantitative Analysis *(Total Count)*
- ___ Qualitative Analysis *(Relative Abundance)*

Viable Options:
- ___ Complete Analysis
- ___ Genera Only ___ Stachy Only

Turnaround Time:
- ___ 6 hr RUSH*
- ___ 24 hours*
- X 48 hours
- ___ 3 days *(NV Std)*
- ___ 5 days
- ___ Viable *(7-10 days)*

Project Name: SVEC **Project Number:** 41373.000 **P.O. Number:** —

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Sample Time: Off	Sample Flow Rate: Start	Sample Flow Rate: End	Sample Flow Rate: Avg	Total Volume / Area
-001	5m. 64m SOUTH	X												2/5	1025	1035	15	15	15	150
-002	5m 64m NORTH	X													10:29	10:39	15	15	15	150
-003	OUTDOOR EAST	X													1022	1032	15	15	15	150
-004	OUTDOOR SOUTH	X													1020	1030	15	15	15	150

Internal Lab Use Only:
Prelim Released: ___ By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal
Final Results Released: ___ By: ☐ Fax ☐ Phone ☐ E-mail
Hardcopy / Invoice Mailed: ___
QC & Data Reviewed By: ___

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

**** Call ahead for TATs of 24hrs or less***

Relinquished by: [signature] Date: 2/5/16 Time: 2PM
Received by: [signature] Date: 2/5/16 Time: 3PM
Relinquished by: ___ Date: ___ Time: ___
Received by: ___ Date: ___ Time: ___

Fungal / Particulate Sample Chain of Custody Record

Pg 1 of 2 160200

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EASTLAKE AVE E
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: MIDDAUGH@PBSENV.COM
Other Info:

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: MSD - SVEC **Project Number:** 41373.000 **P.O. Number:** —

		Sample Information												Sampling Information						
		Sample Type									Media Type									
		Air		Swab		Bulk		Dust		Tape				Sample Date	Sample Time		Sample Flow Rate			Total Volume / Area
Sample #	Sample Description	NV	V	NV	V	NV	V	NV	V	NV	MEA	Stachy	Other		On	Off	Start	End	Avg	
-016 PA	Rm 9	X												2-19	233	244	15	15	15	165
-017 PA	ADMIN. - STAFF	↓												↓	1249	1259	15	15	15	150
-018 PA	Rm D														1138	1156	15	15	15	240
-019 PA	Rm C														1135	1145	15	15	15	150
-020 PA	Rm B														1200	1210	15	15	15	150
-021 PA	ART														1218	1228	15	15	15	150
-022 PA	WOOD SHOP														1222	1235	15	15	15	195
-023 PA	Rm 13														433	446	15	15	15	195
-024 PA	ADMIN. RECEPTION														351	403	15	15	15	180
-025 PA	GATHERING	↓												↓	356	406	15	15	15	150

Internal Lab Use Only:
Prelim Released: Final Results Released: Hardcopy / Invoice Mailed:
By ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal By ☐ Fax ☐ Phone ☐ E-mail QC & Data Reviewed By

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: G Middaugh Date: 2/29/16 Time: _____ Relinquished by: _____ Date: _____ Time: _____

Received by: A Zengo Date: 2/29/16 Time: 11:50 AM Received by: _____ Date: _____ Time: _____

Fungal / Particulate Sample Chain of Custody Record

Pg 2 of 2 160200

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EAST LAKE AVE E
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: MIDDAUGH@PBSENV.COM
Other Info:

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: MSD - SVEC **Project Number:** 41373.000 **P.O. Number:** —

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Off	Sample Flow Rate: Start	End	Avg	Total Volume / Area
025A-PA	OUTDOOR	X												2-19	1107	1117	15.3	15.3	15.3	153
125B-PA	OUTDOOR	X												2-19	1118	1128	15.3	15.3	15.3	153

Internal Lab Use Only:
Prelim Released: By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal
Final Results Released: By: ☐ Fax ☐ Phone ☐ E-mail
Hardcopy / Invoice Mailed:
QC & Data Reviewed By:

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

** Call ahead for TATs of 24hrs or less*

Relinquished by: G Middaugh Date: 7/27/16 Time: _____
Received by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

Job Number: 160200 **SEA**

Report Number: 160200R01

Report Date: 3/4/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: MSD - SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160200 - S1	-016 PA - Rm 9	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S2	-017 PA - Admin. - Staff	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S3	-018 PA - Rm D	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S4	-019 PA - Rm C	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S5	-020 PA - Rm B	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S6	-021 PA - Art	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S7	-022 PA - Wood Shop	NV, Air, Fungal & Part. ID	Overloaded with amorphous, crystalline, wood and paper particles.	2/29/2016
160200 - S8	-023 PA - Rm 13	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S9	-024 PA - Admin. Reception	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S10	-025 PA - Gathering	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S11	-025A-PA - Outdoor	NV, Air, Fungal & Part. ID		2/29/2016
160200 - S12	-025B-PA - Outdoor	NV, Air, Fungal & Part. ID		2/29/2016

Nonviable Air Air samples follow preparation and analysis techniques outlined in Method 5 of the laboratory SOP; this method is based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Samples were collected using either an Air-O-Cell, Cyclex–D, Allergenco-D, or M2 Multi-Mold nonviable air sampling cassette. Characteristic morphologies were observed by optical microscopy at a magnification of 600x. For each individual particle type observed, data was reported in particles per cubic meter of air (m3).

Due to various factors that influence uncertainty (media type, particle loading, staining, instrumentation and other variable aspects of the method), only the first two figures reported are considered to be significant. The area analyzed on each sample is 20%.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: **160200**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	**S1**	**S2**
Sample No.:	-016 PA	-017 PA
Description:	Rm 9	Admin. - Staff
Sample Measure:	165 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	30	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	**Raw Count***	**Total Count****	**Total/m³**	**Raw Count***	**Total Count****	**Total/m³**
Arthrinium						
Ascospores	2	10	61			
Aspergillus/ Penicillium-like	2	10	61	7	35	233
Aureobasidium				1	5	33
Basidiospores	27	135	818	27	135	900
Cercospora sp.						
Chaetomium						
Cladosporium				2	10	67
Epicoccum						
Fusarium sp.						
Ganoderma	1	5	30			
Hyphal Fragments						
Myxo./ Periconia/ Smuts				1	5	33
Pithomyces						
Ulocladium						
Summary Total:	**32**	**160**	**970**	**38**	**190**	**1266**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S1	S2
Sample No.:	-016 PA	-017 PA
Description:	Rm 9	Admin. - Staff
Sample Measure:	165 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	30	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	187	935	5667	2101	10505	70033
Cotton Fibers	3	15	91	28	140	933
Crystalline Particulates	108	540	3273	787	3935	26233
Dander	71	355	2152	126	630	4200
Feather Barbule				1	5	33
Glass Fibers						
Hair	1	5	30			
Insect Parts						
Manufactured Fibers	2	10	61	2	10	67
Paper						
Pollen, Miscellaneous	2	10	61	1	5	33
Rust Fragments				1	5	33
Soot	22	110	667	68	340	2267
Starch				8	40	267
Tire Fragments				5	25	167
Toner Particles						
Wood Fragments						
Summary Total:	**396**	**1980**	**12002**	**3128**	**15640**	**104266**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S3	S4
Sample No.:	-018 PA	-019 PA
Description:	Rm D	Rm C
Sample Measure:	240 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	21	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Arthrinium	1	5	21			
Ascospores	2	10	42	2	10	67
Aspergillus/ Penicillium-like	3	15	62	8	40	267
Aureobasidium				1	5	33
Basidiospores	80	400	1667	54	270	1800
Cercospora sp.						
Chaetomium						
Cladosporium	2	10	42			
Epicoccum						
Fusarium sp.						
Ganoderma	2	10	42	1	5	33
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Pithomyces				1	5	33
Ulocladium						
Summary Total:	**90**	**450**	**1876**	**67**	**335**	**2233**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S3	S4
Sample No.:	-018 PA	-019 PA
Description:	Rm D	Rm C
Sample Measure:	240 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	21	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	97	485	2021	107	535	3567
Cotton Fibers				5	25	167
Crystalline Particulates	44	220	917	68	340	2267
Dander	20	100	417	52	260	1733
Feather Barbule				1	5	33
Glass Fibers						
Hair				1	5	33
Insect Parts						
Manufactured Fibers				7	35	233
Paper						
Pollen, Miscellaneous	1	5	21	2	10	67
Rust Fragments						
Soot	12	60	250	10	50	333
Starch	1	5	21			
Tire Fragments				2	10	67
Toner Particles				3	15	100
Wood Fragments						
Summary Total:	**175**	**875**	**3647**	**258**	**1290**	**8600**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S5	S6
Sample No.:	-020 PA	-021 PA
Description:	Rm B	Art
Sample Measure:	150 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Arthrinium						
Ascospores	1	5	33	2	10	67
Aspergillus/ Penicillium-like	5	25	167	6	30	200
Aureobasidium						
Basidiospores	20	100	667	14	70	467
Cercospora sp.						
Chaetomium						
Cladosporium	1	5	33	2	10	67
Epicoccum						
Fusarium sp.						
Ganoderma	1	5	33	1	5	33
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Pithomyces						
Ulocladium						
Summary Total:	**28**	**140**	**933**	**25**	**125**	**834**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S5	S6
Sample No.:	-020 PA	-021 PA
Description:	Rm B	Art
Sample Measure:	150 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	40	200	1333	3179	15895	105967
Cotton Fibers	19	95	633	3	15	100
Crystalline Particulates	19	95	633	1364	6820	45467
Dander	101	505	3367	86	430	2867
Feather Barbule						
Glass Fibers	1	5	33			
Hair				1	5	33
Insect Parts						
Manufactured Fibers	5	25	167	6	30	200
Paper						
Pollen, Miscellaneous						
Rust Fragments	2	10	67	1	5	33
Soot				54	270	1800
Starch	1	5	33	14	70	467
Tire Fragments	4	20	133	2	10	67
Toner Particles	1	5	33	1	5	33
Wood Fragments						
Summary Total:	**193**	**965**	**6432**	**4711**	**23555**	**157034**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S7	S8
Sample No.:	-022 PA	-023 PA
Description:	Wood Shop	Rm 13
Sample Measure:	195 L	195 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	26	26
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:	Overloaded with amorphous, crystalline, wood and paper particles.	

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Arthrinium						
Ascospores				6	30	154
Aspergillus/ Penicillium-like				2	10	51
Aureobasidium				10	50	256
Basidiospores				16	80	410
Cercospora sp.						
Chaetomium						
Cladosporium				6	30	154
Epicoccum				1	5	26
Fusarium sp.						
Ganoderma						
Hyphal Fragments				4	20	103
Myxo./ Periconia/ Smuts						
Pithomyces				1	5	26
Ulocladium				1	5	26
Summary Total:				**47**	**235**	**1206**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: **160200**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	**S7**	**S8**
Sample No.:	-022 PA	-023 PA
Description:	Wood Shop	Rm 13
Sample Measure:	195 L	195 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	26	26
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:	Overloaded with amorphous, crystalline, wood and paper particles.	

Nonfungal Identification	**Raw Count***	**Total Count****	**Total/m³**	**Raw Count***	**Total Count****	**Total/m³**
Amorphous Particulates				4994	24970	128051
Cotton Fibers				15	75	385
Crystalline Particulates				1485	7425	38077
Dander						
Feather Barbule						
Glass Fibers						
Hair						
Insect Parts				1	5	26
Manufactured Fibers				10	50	256
Paper						
Pollen, Miscellaneous				2	10	51
Rust Fragments				9	45	231
Soot				99	495	2538
Starch				9	45	231
Tire Fragments				2	10	51
Toner Particles				3	15	77
Wood Fragments						
Summary Total:				**6629**	**33145**	**169974**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: **160200**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	**S9**	**S10**
Sample No.:	-024 PA	-025 PA
Description:	Admin. Reception	Gathering
Sample Measure:	180 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	AT - 3/4/2016
MRL:	28	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	**Raw Count***	**Total Count****	**Total/m³**	**Raw Count***	**Total Count****	**Total/m³**
Arthrinium				2	10	67
Ascospores	2	10	56	2	10	67
Aspergillus/ Penicillium-like	2	10	56	16	80	533
Aureobasidium	2	10	56	2	10	67
Basidiospores	7	35	194	8	40	267
Cercospora sp.						
Chaetomium						
Cladosporium				10	50	333
Epicoccum						
Fusarium sp.						
Ganoderma						
Hyphal Fragments				3	15	100
Myxo./ Periconia/ Smuts						
Pithomyces						
Ulocladium						
Summary Total:	**13**	**65**	**362**	**43**	**215**	**1434**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S9	S10
Sample No.:	-024 PA	-025 PA
Description:	Admin. Reception	Gathering
Sample Measure:	180 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	AT - 3/4/2016
MRL:	28	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	985	4925	27361	3872	19360	129067
Cotton Fibers	8	40	222	20	100	667
Crystalline Particulates	459	2295	12750	1095	5475	36500
Dander	102	510	2833	168	840	5600
Feather Barbule						
Glass Fibers						
Hair				1	5	33
Insect Parts						
Manufactured Fibers	2	10	56	3	15	100
Paper						
Pollen, Miscellaneous						
Rust Fragments						
Soot	31	155	861	109	545	3633
Starch	2	10	56	6	30	200
Tire Fragments	3	15	83			
Toner Particles						
Wood Fragments						
Summary Total:	**1592**	**7960**	**44222**	**5274**	**26370**	**175800**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160200
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	S11	S12
Sample No.:	-025A-PA	-025B-PA
Description:	Outdoor	Outdoor
Sample Measure:	153 L	153 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Arthrinium						
Ascospores	9	45	294	24	120	784
Aspergillus/ Penicillium-like	7	35	229	7	35	229
Aureobasidium						
Basidiospores	193	965	6307	240	1200	7843
Cercospora sp.				2	10	65
Chaetomium						
Cladosporium	3	15	98	6	30	196
Epicoccum						
Fusarium sp.				1	5	33
Ganoderma	4	20	131	6	30	196
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Pithomyces						
Ulocladium	1	5	33			
Summary Total:	**217**	**1085**	**7092**	**286**	**1430**	**9346**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: **160200**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160200R01
Date Received: 2/29/2016

Lab/Cor ID:	**S11**	**S12**
Sample No.:	-025A-PA	-025B-PA
Description:	Outdoor	Outdoor
Sample Measure:	153 L	153 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Nonfungal Identification	**Raw Count***	**Total Count****	**Total/m³**	**Raw Count***	**Total Count****	**Total/m³**
Amorphous Particulates	281	1405	9183	396	1980	12941
Cotton Fibers	1	5	33			
Crystalline Particulates	454	2270	14837	480	2400	15686
Dander	11	55	359	8	40	261
Feather Barbule						
Glass Fibers						
Hair						
Insect Parts						
Manufactured Fibers				2	10	65
Paper						
Pollen, Miscellaneous	76	380	2484	65	325	2124
Rust Fragments	3	15	98			
Soot	77	385	2516	101	505	3301
Starch						
Tire Fragments	25	125	817	25	125	817
Toner Particles						
Wood Fragments				1	5	33
Summary Total:	**928**	**4640**	**30327**	**1078**	**5390**	**35228**

Reviewed by:

* - Raw Counts per 20% of Sample
** - Total Count per Sample

Fungal / Particulate Sample Chain of Custody Record

160199

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

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Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EASTLAKE AVE E
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: MIDDAUGH@PBSENV.COM
Other Info:

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr RUSH*
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: MSD - SVEC **Project Number:** 41373.000 **P.O. Number:** —

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Sample Time: Off	Sample Flow Rate: Start	Sample Flow Rate: End	Sample Flow Rate: Avg	Total Volume / Area
-026 PA	Rm 5	X												2-24	1146	1202	15	15	15	240
-027 PA	Rm 6	↓												↓	1147	1206	15	15	15	285
-028 PA	Rm 7														1205	1222	15	15	15	255
-029 PA	Rm 11														1209	1223	15	15	15	210
030 PA	GIRLS LOCKER Rm														1229	1243	15	15	15	210
031 PA	MUSIC														1247	100	15	15	15	195
032 PA	CTE														1249	110	15	15	15	315
033 PA	GATHERING PLACE														108	123	15	15	15	225
034 PA	OUT DOOR														113	126	15	15	15	195
035 PA	OUT DOOR	↓												↓	130	144	15	15	15	210

Internal Lab Use Only:
Prelim Released: ____ Final Results Released: ____ Hardcopy / Invoice Mailed: ____
By: ☒ Fax ☒ Phone ☐ E-mail ☐ Verbal By: ☒ Fax ☒ Phone ☐ E-mail QC & Data Reviewed By: ____

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: G Middaugh Date: 2/29/16 Time: ____
Received by: C Zuniga Date: 2/29/16 Time: 11:50AM
Relinquished by: ____ Date: ____ Time: ____
Received by: ____ Date: ____ Time: ____

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Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160199 **SEA**

Report Number: 160199R01

Report Date: 3/3/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: MSD - SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160199 - S1	-026 PA - Rm 5	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S2	-027 PA - Rm 6	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S3	-028 PA - Rm 7	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S4	-029 PA - Rm 11	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S5	-030 PA - Girls Locker Rm	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S6	-031 PA - Music	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S7	-032 PA - CTE	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S8	-033 PA - Gathering Place	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S9	-034 PA - Outdoor	NV, Air, Fungal & Part. ID		2/29/2016
160199 - S10	-035 PA - Outdoor	NV, Air, Fungal & Part. ID		2/29/2016

Nonviable Air Air samples follow preparation and analysis techniques outlined in Method 5 of the laboratory SOP; this method is based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Samples were collected using either an Air-O-Cell, Cyclex–D, Allergenco-D, or M2 Multi-Mold nonviable air sampling cassette. Characteristic morphologies were observed by optical microscopy at a magnification of 600x. For each individual particle type observed, data was reported in particles per cubic meter of air (m3).

Due to various factors that influence uncertainty (media type, particle loading, staining, instrumentation and other variable aspects of the method), only the first two figures reported are considered to be significant. The area analyzed on each sample is 20%.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

x

Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
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Seattle, WA 98117

Final Report

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Nonviable Air

Job Number: 160199
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Lab/Cor ID:	S1	S2
Sample No.:	-026 PA	-027 PA
Description:	Rm 5	Rm 6
Sample Measure:	240 L	285 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/3/2016	DW - 3/3/2016
MRL:	21	18
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	5	25	104	2	10	35
Aspergillus/ Penicillium-like	4	20	83	8	40	140
Aureobasidium				3	15	53
Basidiospores	51	255	1062	76	380	1333
Botrytis						
Cladosporium	3	15	62	1	5	18
Ganoderma						
Hyphal Fragments	1	5	21	5	25	88
Myxo./ Periconia/ Smuts	1	5	21			
Oidium/ Peronospora						
Ulocladium						
Summary Total:	**65**	**325**	**1353**	**95**	**475**	**1667**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	1958	9790	40792	4004	20020	70246
Cotton Fibers	5	25	104	11	55	193
Crystalline Particulates	787	3935	16396	1111	5555	19491
Dander	156	780	3250	219	1095	3842
Glass Fibers	1	5	21			
Hair				1	5	18
Insect Parts	1	5	21			
Manufactured Fibers	16	80	333	11	55	193
Pollen, Alder						
Pollen, Miscellaneous	6	30	125	5	25	88
Rust Fragments	14	70	292	10	50	175
Soot	111	555	2312	94	470	1649
Starch				1	5	18
Tire Fragments	7	35	146	6	30	105
Toner Particles	1	5	21	1	5	18
Wood Fragments						
Summary Total:	**3063**	**15315**	**63813**	**5474**	**27370**	**96036**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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Fax: (206) 789-8424
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A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160199
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Lab/Cor ID:	S3	S4
Sample No.:	-028 PA	-029 PA
Description:	Rm 7	Rm 11
Sample Measure:	255 L	210 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/3/2016	DW - 3/3/2016
MRL:	20	24
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	2	10	39	4	20	95
Aspergillus/ Penicillium-like	7	35	137	10	50	238
Aureobasidium						
Basidiospores	60	300	1176	76	380	1810
Botrytis						
Cladosporium	4	20	78	1	5	24
Ganoderma						
Hyphal Fragments	2	10	39	5	25	119
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora				1	5	24
Ulocladium				1	5	24
Summary Total:	**75**	**375**	**1469**	**98**	**490**	**2334**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	644	3220	12627	2068	10340	49238
Cotton Fibers	4	20	78	24	120	571
Crystalline Particulates	275	1375	5392	1276	6380	30381
Dander	44	220	863	189	945	4500
Glass Fibers						
Hair						
Insect Parts						
Manufactured Fibers	1	5	20	12	60	286
Pollen, Alder						
Pollen, Miscellaneous	8	40	157	16	80	381
Rust Fragments	2	10	39			
Soot	45	225	882	135	675	3214
Starch	2	10	39	5	25	119
Tire Fragments	3	15	59			
Toner Particles				2	10	48
Wood Fragments						
Summary Total:	**1028**	**5140**	**20156**	**3727**	**18635**	**88738**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160199
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Lab/Cor ID:	S5	S6
Sample No.:	-030 PA	-031 PA
Description:	Girls Locker Rm	Music
Sample Measure:	210 L	195 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/3/2016	DW - 3/3/2016
MRL:	24	26
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores				2	10	51
Aspergillus/ Penicillium-like	4	20	95	1	5	26
Aureobasidium						
Basidiospores	46	230	1095	15	75	385
Botrytis						
Cladosporium	2	10	48			
Ganoderma	1	5	24			
Hyphal Fragments				1	5	26
Myxo./ Periconia/ Smuts	1	5	24			
Oidium/ Peronospora						
Ulocladium						
Summary Total:	**54**	**270**	**1286**	**19**	**95**	**488**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	264	1320	6286	111	555	2846
Cotton Fibers				5	25	128
Crystalline Particulates	182	910	4333	381	1905	9769
Dander	34	170	810	53	265	1359
Glass Fibers						
Hair				1	5	26
Insect Parts				1	5	26
Manufactured Fibers				2	10	51
Pollen, Alder						
Pollen, Miscellaneous	10	50	238			
Rust Fragments				6	30	154
Soot	110	550	2619	43	215	1103
Starch						
Tire Fragments	5	25	119	2	10	51
Toner Particles	1	5	24			
Wood Fragments						
Summary Total:	**606**	**3030**	**14429**	**605**	**3025**	**15513**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160199
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Lab/Cor ID:	S7	S8
Sample No.:	-032 PA	-033 PA
Description:	CTE	Gathering Place
Sample Measure:	315 L	225 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/3/2016	DW - 3/3/2016
MRL:	16	22
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	1	5	16	1	5	22
Aspergillus/ Penicillium-like	9	45	143	10	50	222
Aureobasidium	2	10	32			
Basidiospores	32	160	508	19	95	422
Botrytis						
Cladosporium	4	20	63	1	5	22
Ganoderma						
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora						
Ulocladium						
Summary Total:	**48**	**240**	**762**	**31**	**155**	**688**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	4026	20130	63905	2970	14850	66000
Cotton Fibers	41	205	651	35	175	778
Crystalline Particulates	1760	8800	27937	1386	6930	30800
Dander	303	1515	4810	134	670	2978
Glass Fibers						
Hair						
Insect Parts						
Manufactured Fibers	8	40	127	20	100	444
Pollen, Alder				2	10	44
Pollen, Miscellaneous	20	100	317	7	35	156
Rust Fragments	10	50	159	7	35	156
Soot	118	590	1873	106	530	2356
Starch	5	25	79	11	55	244
Tire Fragments						
Toner Particles	1	5	16	5	25	111
Wood Fragments						
Summary Total:	**6292**	**31460**	**99874**	**4683**	**23415**	**104067**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160199
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Lab/Cor ID:	S9	S10
Sample No.:	-034 PA	-035 PA
Description:	Outdoor	Outdoor
Sample Measure:	195 L	210 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/3/2016	DW - 3/3/2016
MRL:	26	24
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Ascospores	5	25	128	6	30	143
Aspergillus/ Penicillium-like	7	35	179	6	30	143
Aureobasidium				6	30	143
Basidiospores	81	405	2077	63	315	1500
Botrytis				1	5	24
Cladosporium	4	20	103	4	20	95
Ganoderma	2	10	51	1	5	24
Hyphal Fragments				1	5	24
Myxo./ Periconia/ Smuts	2	10	51	1	5	24
Oidium/ Peronospora						
Ulocladium						
Summary Total:	**101**	**505**	**2589**	**89**	**445**	**2120**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Amorphous Particulates	869	4345	22282	732	3660	17429
Cotton Fibers	2	10	51	10	50	238
Crystalline Particulates	633	3165	16231	622	3110	14810
Dander	18	90	462	66	330	1571
Glass Fibers						
Hair						
Insect Parts						
Manufactured Fibers	3	15	77	5	25	119
Pollen, Alder						
Pollen, Miscellaneous	90	450	2308	72	360	1714
Rust Fragments	5	25	128			
Soot	112	560	2872	124	620	2952
Starch						
Tire Fragments						
Toner Particles						
Wood Fragments	3	15	77			
Summary Total:	**1735**	**8675**	**44488**	**1631**	**8155**	**38833**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Final Report

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Nonviable Air

Job Number: **160199**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160199R01
Date Received: 2/29/2016

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

* - Raw Counts per 20% of Sample
** - Total Count per Sample

Fungal / Particulate Sample Chain of Custody Record

Pg 1 of 2 160201

Lab/Cor, Inc
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Seattle, WA 98117

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Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EASTLAKE AVE E
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: MIDDAUGH@PBSENV.COM
Other Info:

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days Viable
___ *(7-10 days)*

Project Name: MSD - SVEC **Project Number:** 41373.000 **P.O. Number:** —

		Sample Information												Sampling Information						
		Sample Type									Media Type									
		Air		Swab		Bulk		Dust		Tape										
Sample #	Sample Description	NV	V	NV	V	NV	V	NV	V	NV	MEA	Stachy	Other	Sample Date	Sample Time On	Sample Time Off	Sample Flow Rate Start	Sample Flow Rate End	Sample Flow Rate Avg	Total Volume / Area
-005PA	LIBRARY	X												2/18	319	333	15	15	15	210
-006 PA	EAST POD CENTER	↓												↓	322	335	15	15	15	225
-007 PA	Rm 2														400	414	15.4	15.4	15.4	216
-008 PA	SOUTH POD CENTER														358	413	15.4	15.4	15.7	236
-009 PA	Rm 4														402	417	15.4	15.4	15.4	231
-010 PA	Rm 19														448	458	15	15	15	150
-011 PA	Rm 14														454	504	15	15	15	150
-012 PA	Rm 20														449	459	15	15	15	150
-013 AA	NORTH POD CENTER														452	502	15	15	15	150
-014 PA	OUTDOORS	↓												↓	312	328	15	15.4	15.2	245

Internal Lab Use Only:
Prelim Released: Final Results Released: Hardcopy / Invoice Mailed:
By ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal By ☐ Fax ☐ Phone ☐ E-mail QC & Data Reviewed By:

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: [signature] Date: 2/29/16 Time: ____ Relinquished by: ____ Date: ____ Time: ____

Received by: [signature] Date: 2/29/16 Time: 11:50AM Received by: ____ Date: ____ Time: ____

Fungal / Particulate Sample Chain of Custody Record

Pg 2 of 2 160201

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EASTLAKE AVE E
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: MIDDAUGH@PBSENV.COM
Other Info:

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: MSD - SVEC **Project Number:** 41373,000 **P.O. Number:** —

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Sample Time: Off	Sample Flow Rate: Start	Sample Flow Rate: End	Sample Flow Rate: Avg	Total Volume / Area
-015 PA	OUTDOORS	X												2/18	314	325	15.4	15.4	15.4	169

Internal Lab Use Only:
Prelim Released: Final Results Released: Hardcopy / Invoice Mailed:
By ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal By ☐ Fax ☐ Phone ☐ E-mail QC & Data Reviewed By:

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

Relinquished by: G Middaugh Date: 2/29/16 Time: ___
Received by: A Longe Date: 2/29/16 Time: 11:50AM

Relinquished by: ___ Date: ___ Time: ___
Received by: ___ Date: ___ Time: ___

** Call ahead for TATs of 24hrs or less*

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Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

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Job Number: 160201 **SEA**

Report Number: 160201R01
Report Date: 3/4/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: MSD - SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160201 - S1	-005 PA - Library	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S2	-006 PA - East Pod Center	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S3	-007 PA - Rm 2	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S4	-008 PA - South Pod Center	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S5	-009 PA - Rm 4	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S6	-010 PA - Rm 19	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S7	-011 PA - Rm 14	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S8	-012 PA - Rm 20	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S9	-013 PA - North Pod Center	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S10	-014 PA - Outdoors	NV, Air, Fungal & Part. ID		2/29/2016
160201 - S11	-015 PA - Outdoors	NV, Air, Fungal & Part. ID		2/29/2016

Nonviable Air Air samples follow preparation and analysis techniques outlined in Method 5 of the laboratory SOP; this method is based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Samples were collected using either an Air-O-Cell, Cyclex–D, Allergenco-D, or M2 Multi-Mold nonviable air sampling cassette. Characteristic morphologies were observed by optical microscopy at a magnification of 600x. For each individual particle type observed, data was reported in particles per cubic meter of air (m3).

Due to various factors that influence uncertainty (media type, particle loading, staining, instrumentation and other variable aspects of the method), only the first two figures reported are considered to be significant. The area analyzed on each sample is 20%.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

X

Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	S1	S2
Sample No.:	-005 PA	-006 PA
Description:	Library	East Pod Center
Sample Measure:	210 L	225 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	24	22
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria						
Ascospores	1	5	24	1	5	22
Aspergillus/ Penicillium-like	12	60	286	9	45	200
Aureobasidium	4	20	95	5	25	111
Basidiospores	18	90	429	7	35	156
Cladosporium	3	15	71	6	30	133
Ganoderma						
Hyphal Fragments	2	10	48	3	15	67
Myxo./ Periconia/ Smuts	1	5	24			
Oidium/ Peronospora						
Pestalotia sp.						
Summary Total:	**41**	**205**	**977**	**31**	**155**	**689**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae				1	5	22
Amorphous Particulates	4290	21450	102143	3454	17270	76756
Charred Wood Fragments						
Cotton Fibers	51	255	1214	61	305	1356
Crystalline Particulates	2244	11220	53429	1606	8030	35689
Dander	366	1830	8714	430	2150	9556
Glass Fibers						
Hair	1	5	24			
Manufactured Fibers	16	80	381	7	35	156
Pollen, Miscellaneous						
Rust Fragments	7	35	167	6	30	133
Soot	76	380	1810	48	240	1067
Starch	7	35	167			
Tire Fragments				6	30	133
Toner Particles	5	25	119			
Unidentified particles: Grass						
Wood Fragments	1	5	24			
Summary Total:	**7064**	**35320**	**168192**	**5619**	**28095**	**124868**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	S3	S4
Sample No.:	-007 PA	-008 PA
Description:	Rm 2	South Pod Center
Sample Measure:	216 L	236 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	23	21
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria	1	5	23			
Ascospores				1	5	21
Aspergillus/ Penicillium-like				1	5	21
Aureobasidium				3	15	64
Basidiospores	16	80	370	14	70	297
Cladosporium	2	10	46	9	45	191
Ganoderma				2	10	42
Hyphal Fragments	1	5	23	1	5	21
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora				1	5	21
Pestalotia sp.				1	5	21
Summary Total:	**20**	**100**	**462**	**33**	**165**	**699**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae						
Amorphous Particulates	436	2180	10093	2816	14080	59661
Charred Wood Fragments						
Cotton Fibers	5	25	116	24	120	508
Crystalline Particulates	192	960	4444	1122	5610	23771
Dander	26	130	602	83	415	1758
Glass Fibers						
Hair						
Manufactured Fibers	1	5	23	5	25	106
Pollen, Miscellaneous	6	30	139			
Rust Fragments				8	40	169
Soot	21	105	486	63	315	1335
Starch				6	30	127
Tire Fragments	2	10	46	5	25	106
Toner Particles				2	10	42
Unidentified particles: Grass						
Wood Fragments						
Summary Total:	**689**	**3445**	**15949**	**4134**	**20670**	**87583**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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7619 6th Ave NW
Seattle, WA 98117

Final Report

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	S5	S6
Sample No.:	-009 PA	-010 PA
Description:	Rm 4	Rm 19
Sample Measure:	231 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	22	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria	1	5	22			
Ascospores				3	15	100
Aspergillus/ Penicillium-like	1	5	22			
Aureobasidium						
Basidiospores	15	75	325	12	60	400
Cladosporium	1	5	22	1	5	33
Ganoderma						
Hyphal Fragments	2	10	43			
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora						
Pestalotia sp.						
Summary Total:	**20**	**100**	**434**	**16**	**80**	**533**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae						
Amorphous Particulates	963	4815	20844	150	750	5000
Charred Wood Fragments						
Cotton Fibers	15	75	325	8	40	267
Crystalline Particulates	378	1890	8182	51	255	1700
Dander	75	375	1623	13	65	433
Glass Fibers						
Hair						
Manufactured Fibers	2	10	43	1	5	33
Pollen, Miscellaneous	2	10	43	7	35	233
Rust Fragments	1	5	22			
Soot	42	210	909	13	65	433
Starch				3	15	100
Tire Fragments	3	15	65			
Toner Particles						
Unidentified particles: Grass						
Wood Fragments						
Summary Total:	**1481**	**7405**	**32056**	**246**	**1230**	**8199**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	S7	S8
Sample No.:	-011 PA	-012 PA
Description:	Rm 14	Rm 20
Sample Measure:	150 L	150 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	33
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria						
Ascospores				1	5	33
Aspergillus/ Penicillium-like						
Aureobasidium	1	5	33			
Basidiospores	16	80	533	13	65	433
Cladosporium	1	5	33			
Ganoderma	1	5	33	1	5	33
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora						
Pestalotia sp.						
Summary Total:	**19**	**95**	**632**	**15**	**75**	**499**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae						
Amorphous Particulates	128	640	4267	80	400	2667
Charred Wood Fragments						
Cotton Fibers	2	10	67	4	20	133
Crystalline Particulates	57	285	1900	33	165	1100
Dander	14	70	467	8	40	267
Glass Fibers						
Hair						
Manufactured Fibers						
Pollen, Miscellaneous	3	15	100	11	55	367
Rust Fragments						
Soot	12	60	400	14	70	467
Starch						
Tire Fragments	6	30	200			
Toner Particles						
Unidentified particles: Grass						
Wood Fragments				1	5	33
Summary Total:	**222**	**1110**	**7401**	**151**	**755**	**5034**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	S9	S10
Sample No.:	-013 PA	-014 PA
Description:	North Pod Center	Outdoors
Sample Measure:	150 L	245 L
Media Type:	Fungal-AllergencoD	Fungal-AllergencoD
Analyst - Analysis Date:	DW - 3/4/2016	DW - 3/4/2016
MRL:	33	20
Scope - Magnification:	Olympus BHS - 600	Olympus BHS - 600
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria						
Ascospores				10	50	204
Aspergillus/ Penicillium-like	1	5	33	4	20	82
Aureobasidium						
Basidiospores	14	70	467	58	290	1184
Cladosporium	1	5	33	1	5	20
Ganoderma				1	5	20
Hyphal Fragments	1	5	33			
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora						
Pestalotia sp.						
Summary Total:	**17**	**85**	**566**	**74**	**370**	**1510**

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae						
Amorphous Particulates	79	395	2633	374	1870	7633
Charred Wood Fragments	2	10	67			
Cotton Fibers	4	20	133	4	20	82
Crystalline Particulates	48	240	1600	86	430	1755
Dander	23	115	767	42	210	857
Glass Fibers				2	10	41
Hair						
Manufactured Fibers				1	5	20
Pollen, Miscellaneous	1	5	33	110	550	2245
Rust Fragments	1	5	33			
Soot	4	20	133	23	115	469
Starch	3	15	100			
Tire Fragments				3	15	61
Toner Particles						
Unidentified particles: Grass				5	25	102
Wood Fragments						
Summary Total:	**165**	**825**	**5499**	**650**	**3250**	**13265**

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Nonviable Air

Job Number: 160201
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Lab/Cor ID:	**S11**	
Sample No.:	-015 PA	
Description:	Outdoors	
Sample Measure:	169 L	
Media Type:	Fungal-AllergencoD	
Analyst - Analysis Date:	DW - 3/4/2016	
MRL:	30	
Scope - Magnification:	Olympus BHS - 600	
Notes:		

Fungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Alternaria						
Ascospores	8	40	237			
Aspergillus/ Penicillium-like	13	65	385			
Aureobasidium						
Basidiospores	55	275	1627			
Cladosporium						
Ganoderma						
Hyphal Fragments						
Myxo./ Periconia/ Smuts						
Oidium/ Peronospora						
Pestalotia sp.						
Summary Total:	**76**	**380**	**2249**			

Nonfungal Identification	Raw Count*	Total Count**	Total/m³	Raw Count*	Total Count**	Total/m³
Algae						
Amorphous Particulates	93	465	2751			
Charred Wood Fragments						
Cotton Fibers	2	10	59			
Crystalline Particulates	87	435	2574			
Dander	15	75	444			
Glass Fibers						
Hair						
Manufactured Fibers	2	10	59			
Pollen, Miscellaneous	76	380	2249			
Rust Fragments						
Soot	39	195	1154			
Starch	1	5	30			
Tire Fragments						
Toner Particles						
Unidentified particles: Grass						
Wood Fragments						
Summary Total:	**315**	**1575**	**9320**			

* - Raw Counts per 20% of Sample
** - Total Count per Sample

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Final Report

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Nonviable Air

Job Number: **160201**
Client: **PBS Engineering + Environmental**
Project Name: MSD - SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160201R01
Date Received: 2/29/2016

Reviewed by:



X

Derk Wipprecht
Laboratory Supervisor

* - Raw Counts per 20% of Sample
** - Total Count per Sample

160140 Pg 1 of 3

Fungal / Particulate Sample Chain of Custody Record

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS ENVIRONMENTAL
Address: 2517 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MADAWAY
Phone: _____ **Fax:** _____
Email: _____
Other Info: _____

Analysis Type:
Nonviable Options:
- ___ Fungal ID
- X Fungal & Particulate ID
- ___ Particulate ID
- ___ Quantitative Analysis *(Total Count)*
- ___ Qualitative Analysis *(Relative Abundance)*

Viable Options:
- ___ Complete Analysis
- ___ Genera Only ___ Stachy Only

Turnaround Time:
- ___ 6 hr **RUSH***
- ___ 24 hours*
- ___ 48 hours
- ___ 3 days *(NV Std)*
- X 5 days Viable *(7-10 days)*

Project Name: SVEC **Project Number:** 41373.000 **P.O. Number:** _____

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Off	Sample Flow Rate: Start	End	Avg	Total Volume / Area
MTS-1	MUSIC WEST									X				2/11/16						
MTS-2	GATHERING N. CTR									↓				↓						
MTS-3	SM GYM - WRESTLING																			
MTS-4	WOODSHOP WEST																			
MTS-5	RM 23 SW																			
MTS-6	SOUTH POD																			
MTS-7	RM 2 W.																			
MTS-8	RM 7 E.																			
MTS-9	EAST POD																			
MTS-10	RM 13 N.									↓				↓						

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Final Results Released By: ☐ Fax ☐ Phone ☐ E-mail
Hardcopy / Invoice Mailed:
QC & Data Reviewed By:

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

**** Call ahead for TATs of 24hrs or less***

Relinquished by: _____ Date: 2/12/16 Time: _____
Received by: _____ Date: 2/12/16 Time: 12:28 pm
Relinquished by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____

160140 Pg 2 of 3

Fungal / Particulate Sample Chain of Custody Record

Lab/Cor, Inc
7619 6th Ave NW
Seattle, WA 98117

Office (206) 781-0155
Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS
Address: 2517 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: _____ Fax: _____
Email: _____
Other Info: _____

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: SVEC **Project Number:** 41373,000 **P.O. Number:** _____

Sample #	Sample Description	Sample Information: Sample Type: Air NV	Air V	Swab NV	Swab V	Bulk NV	Bulk V	Dust NV	Dust V	Tape NV	Media Type: MEA	Stachy	Other	Sampling Information: Sample Date	Sample Time: On	Off	Sample Flow Rate: Start	End	Avg	Total Volume / Area
MTS-11	Rm 9 SE									X				2/4/15						
MTS-12	Rm 14 W.									↓				↓						
MTS-13	Rm 20 SW																			
MTS-14	N. POD																			
MTS-15	LIBRARY NE																			
MTS-16	Rm B N. CTR																			
MTS-17	Rm D S. CTR																			
MTS-18	ADMIN RECEPT N.																			
MTS-19	STAFF Rm NW																			
MTS-20	Rm C NE									↓				↓						

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QC & Data Reviewed By: _____

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: _____ Date: 2/12/16 Time: _____
Received by: _____ Date: 2/12/16 Time: 12:28PM
Relinquished by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____

Fungal / Particulate Sample Chain of Custody Record

160140

Lab/Cor, Inc
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Seattle, WA 98117

Office (206) 781-0155
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mail@labcor.net
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Client: PBS
Address: 2517 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: _____ Fax: _____
Email: _____
Other Info: _____

Analysis Type:
Nonviable Options:
___ Fungal ID
X Fungal & Particulate ID
___ Particulate ID
___ Quantitative Analysis *(Total Count)*
___ Qualitative Analysis *(Relative Abundance)*
Viable Options:
___ Complete Analysis
___ Genera Only ___ Stachy Only

Turnaround Time:
___ 6 hr **RUSH***
___ 24 hours*
___ 48 hours
___ 3 days *(NV Std)*
X 5 days
___ Viable *(7-10 days)*

Project Name: SVEC **Project Number:** 41373,000 **P.O. Number:** _____

		Sample Information												Sampling Information						
		Sample Type									Media Type									
		Air		Swab		Bulk		Dust		Tape				Sample Date	Sample Time		Sample Flow Rate			Total Volume / Area
Sample #	Sample Description	NV	V	NV	V	NV	V	NV	V	NV	MEA	Stachy	Other		On	Off	Start	End	Avg	
MTS-21	CTE NW									X				2/11						
MTS-22	Rm 6 EAST									↓				2/12						
MTS-23	Rm 5 SOUTH													2/12						
MTS-24	Rm 4 WEST													2/12						
MTS-25	Rm 11 NORTHEAST													2/12						
MTS-26	Rm 18 WEST													2/12						
MTS-27	ACT Rm EAST													2/12						
MTS-28	N. POD ATTIC SOUTH													2/12						
MTS-29	E. POD ATTIC WEST													2/12						
MTS-30	S. POD ATTIC NORTH									↓				2/12						

Internal Lab Use Only:
Prelim Released: _____ By: X Fax X Phone X E-mail X Verbal
Final Results Released: _____ By: X Fax X Phone X E-mail
Hardcopy / Invoice Mailed: _____
QC & Data Reviewed By: _____

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. **** Call ahead for TATs of 24hrs or less***

Relinquished by: _____ Date: 2/12/16 Time: _____ Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: 2/12/16 Time: 12:20PM Received by: _____ Date: _____ Time: _____

Lab/Cor, Inc.
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Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160140 **SEA**

Report Number: 160140R03
Report Date: 2/22/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160140 - S1	MTS-1 - Music West	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S2	MTS-2 - Gathering N. CTR	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S3	MTS-3 - Sm Gym - Wrestling	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S4	MTS-4 - Woodshop West	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S5	MTS-5 - Rm 23 SW	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S6	MTS-6 - South Pod	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S7	MTS-7 - Rm 2 W.	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S8	MTS-8 - Rm 7 E.	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S9	MTS-9 - East Pod	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S10	MTS-10 - Rm 13 N.	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S11	MTS-11 - Rm 9 SE	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S12	MTS-12 - Rm 14 W.	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S13	MTS-13 - Rm 20 SW	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S14	MTS-14 - N. Pod	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S15	MTS-15 - Library NE	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S16	MTS-16 - Rm B N. CTR	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S17	MTS-17 - Rm D S. CTR	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S18	MTS-18 - Admin Recept N.	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S19	MTS-19 - Staff Rm NW	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S20	MTS-20 - Rm C NE	NV, Surface, Fungal & Part. ID Qual.		2/12/2016
160140 - S21	MTS-21 - CTE NW	NV, Surface, Fungal & Part. ID Qual.		2/12/2016

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Job Number: 160140 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160140R03
Report Date: 2/22/2016

160140 - S22	MTS-22 - Rm 6 East	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S23	MTS-23 - Rm 5 South	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S24	MTS-24 - Rm 4 West	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S25	MTS-25 - Rm 11 Northeast	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S26	MTS-26 - Rm 18 West	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S27	MTS-27 - Art Rm East	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S28	MTS-28 - N. Pod Attic South	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S29	MTS-29 - E. Pod Attic West	NV, Surface, Fungal & Part. ID Qual.	2/12/2016
160140 - S30	MTS-30 - S. Pod Attic North	NV, Surface, Fungal & Part. ID Qual.	2/12/2016

Nonviable Surface

Surface samples (Swab or Tape) follow preparation and analysis techniques outlined in Method 7 and Method 9 of the laboratory SOP; these methods are based on guidelines from the Pan-American Aerobiology Association Standardized Protocol and ASTM Method 7391-09. Swab samples were suspended in a Peptone/ Tween buffered solution and stained using lacto-cotton blue. A 0.05 ml sub-sample of the buffered solution was then examined. Tape samples were mounted on a slide and stained using lacto-cotton blue.

Qualitative Analysis:
Characteristic morphologies were observed using optical microscopy at a magnification of 600x. Fungal and Particulates counts were reported in Relative Abundance (High, Moderate, Low, and Trace). The Minimum Reporting Limit (MRL) is 1 Fungal/ Particulate count (Trace Relative Abundance).

Quantitative Analysis:
Characteristic morphologies were observed using optical microscopy at a magnification of 600x. Fungal and Particulates counts were reported as the Total Concentration for each Fungal and Particulate type. The Minimum Reporting Limit (MRL) is 4 Fungal/ Particulate Counts/ cm2 for Swab Samples and 6 Fungal/ Particulate Counts/ cm2 for Tape Samples.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S1	S2
Sample No.:	MTS-1	MTS-2
Description:	Music West	Gathering N. CTR
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Low	Trace
Aureobasidium		
Basidiospores	Moderate	
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Low	
Epicoccum	Trace	
Ganoderma		
Hyphal Fragments		
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		
Pithomyces	Trace	Trace
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers	Low	
Crystalline Particulates	Moderate	Moderate
Dander	Moderate	Moderate
Feather Barbule		
Glass Fibers	Trace	
Hair		

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Seattle, WA 98117

Final Report

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S1**	**S2**
Sample No.:	MTS-1	MTS-2
Description:	Music West	Gathering N. CTR
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Insect Parts		
Manufactured Fibers	Low	Trace
Paint Spheres/ Chips		
Paper	Moderate	
Pollen, Miscellaneous	Trace	
Pollen, Pine		
Rust Fragments		
Soot	Low	Moderate
Starch		
Tire Fragments	Low	Trace
Toner Particles		
Wood Fragments		Trace

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S3	S4
Sample No.:	MTS-3	MTS-4
Description:	Sm Gym - Wrestling	Woodshop West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		Trace
Ascospores		Trace
Aspergillus/ Penicillium-like	Trace	Low
Aureobasidium		
Basidiospores	Low	
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Trace	
Epicoccum		
Ganoderma	Trace	
Hyphal Fragments		
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers		
Crystalline Particulates	High	Moderate
Dander	High	Moderate
Feather Barbule		
Glass Fibers	Trace	
Hair	Trace	

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S3**	**S4**
Sample No.:	MTS-3	MTS-4
Description:	Sm Gym - Wrestling	Woodshop West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Moderate
Paint Spheres/ Chips		
Paper		Low
Pollen, Miscellaneous	Trace	
Pollen, Pine		
Rust Fragments		Low
Soot	Moderate	
Starch		Low
Tire Fragments	Low	Moderate
Toner Particles		Moderate
Wood Fragments	Trace	High

Trace = <10 counts in examined area
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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S5	S6
Sample No.:	MTS-5	MTS-6
Description:	Rm 23 SW	South Pod
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria	Trace	
Ascospores	Trace	Low
Aspergillus/ Penicillium-like	Low	Moderate
Aureobasidium		
Basidiospores	Moderate	Moderate
Bipolaris sp.		
Botrytis		Trace
Cercospora sp.		
Chaetomium	Trace	
Cladosporium	Low	Low
Epicoccum	Trace	Low
Ganoderma		Low
Hyphal Fragments	Trace	
Myxo./ Periconia/ Smuts		Trace
Nigrospora		
Oidium/ Peronospora		
Pithomyces		Trace
Polythrincium		
Rust Spore	Trace	Trace
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		Trace
Amorphous Particulates	Moderate	Moderate
Cotton Fibers		
Crystalline Particulates	Low	High
Dander	Moderate	High
Feather Barbule		
Glass Fibers	Trace	Trace
Hair		

Trace = <10 counts in examined area
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Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

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Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S5**	**S6**
Sample No.:	MTS-5	MTS-6
Description:	Rm 23 SW	South Pod
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	AT
Analysis Date:	2/15/2016	2/15/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Moderate
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		Trace
Pollen, Pine		
Rust Fragments		
Soot	Moderate	High
Starch	Trace	Moderate
Tire Fragments		Low
Toner Particles	Low	
Wood Fragments		Trace

Trace = <10 counts in examined area
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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S7	S8
Sample No.:	MTS-7	MTS-8
Description:	Rm 2 W.	Rm 7 E.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	DW
Analysis Date:	2/15/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		Trace
Ascospores		
Aspergillus/ Penicillium-like	Moderate	Trace
Aureobasidium		
Basidiospores	Moderate	Low
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium	Low	
Cladosporium	Trace	
Epicoccum	Low	
Ganoderma	Moderate	Trace
Hyphal Fragments	Moderate	
Myxo./ Periconia/ Smuts		
Nigrospora	Trace	
Oidium/ Peronospora	Trace	
Pithomyces	Trace	
Polythrincium		
Rust Spore		
Ulocladium	Trace	

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers	Low	Low
Crystalline Particulates	Moderate	High
Dander	High	Moderate
Feather Barbule	Trace	Low
Glass Fibers	Low	
Hair		Low

Trace = <10 counts in examined area
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Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S7**	**S8**
Sample No.:	MTS-7	MTS-8
Description:	Rm 2 W.	Rm 7 E.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	AT	DW
Analysis Date:	2/15/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Low
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine	Trace	
Rust Fragments		
Soot	Moderate	Low
Starch	Low	
Tire Fragments	Low	Low
Toner Particles		
Wood Fragments		High

Trace = <10 counts in examined area
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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S9	S10
Sample No.:	MTS-9	MTS-10
Description:	East Pod	Rm 13 N.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores		Trace
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium		Trace
Basidiospores	Low	Trace
Bipolaris sp.		
Botrytis		
Cercospora sp.		Trace
Chaetomium		
Cladosporium		
Epicoccum		
Ganoderma	Trace	Trace
Hyphal Fragments		
Myxo./ Periconia/ Smuts	Trace	
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Low	Low
Cotton Fibers	Trace	Trace
Crystalline Particulates	Moderate	Low
Dander	Moderate	Moderate
Feather Barbule	Trace	
Glass Fibers	Trace	
Hair		

Trace = <10 counts in examined area
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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S9**	**S10**
Sample No.:	MTS-9	MTS-10
Description:	East Pod	Rm 13 N.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Moderate
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		Trace
Pollen, Pine		
Rust Fragments		
Soot	Low	Low
Starch		
Tire Fragments	Low	Moderate
Toner Particles		
Wood Fragments	Trace	Trace

Trace = <10 counts in examined area
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Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S11	S12
Sample No.:	MTS-11	MTS-12
Description:	Rm 9 SE	Rm 14 W.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores		Low
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium		
Basidiospores	Trace	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Trace	Trace
Epicoccum		Trace
Ganoderma		Low
Hyphal Fragments		Trace
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		
Pithomyces		Trace
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	High
Cotton Fibers	Low	
Crystalline Particulates	Moderate	High
Dander	Moderate	High
Feather Barbule		Trace
Glass Fibers	Trace	
Hair		

Trace = <10 counts in examined area
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High = >70% coverage of examined area

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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S11**	**S12**
Sample No.:	MTS-11	MTS-12
Description:	Rm 9 SE	Rm 14 W.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous	Trace	
Pollen, Pine		
Rust Fragments		
Soot	Low	Moderate
Starch		Trace
Tire Fragments	Moderate	High
Toner Particles		
Wood Fragments	Trace	

Trace = <10 counts in examined area
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Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S13	S14
Sample No.:	MTS-13	MTS-14
Description:	Rm 20 SW	N. Pod
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium		
Basidiospores	Moderate	Low
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Low	
Epicoccum		Trace
Ganoderma	Low	
Hyphal Fragments		Trace
Myxo./ Periconia/ Smuts	Trace	Trace
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	High	Moderate
Cotton Fibers	Low	
Crystalline Particulates	High	Moderate
Dander	High	Moderate
Feather Barbule		Trace
Glass Fibers		
Hair		

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High = >70% coverage of examined area

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Nonviable Surface

Job Number: **160140**
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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S13**	**S14**
Sample No.:	MTS-13	MTS-14
Description:	Rm 20 SW	N. Pod
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Moderate
Paint Spheres/ Chips		
Paper	Moderate	Trace
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Moderate	Low
Starch	Trace	Trace
Tire Fragments	Moderate	Low
Toner Particles	Trace	
Wood Fragments		Trace

Trace = <10 counts in examined area
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High = >70% coverage of examined area

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Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S15	S16
Sample No.:	MTS-15	MTS-16
Description:	Library NE	Rm B N. CTR
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		Trace
Ascospores		
Aspergillus/ Penicillium-like	Trace	Low
Aureobasidium		
Basidiospores	Trace	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium		Low
Epicoccum		Trace
Ganoderma		
Hyphal Fragments	Trace	Trace
Myxo./ Periconia/ Smuts		Trace
Nigrospora	Trace	
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers	Trace	Low
Crystalline Particulates	Moderate	Moderate
Dander	High	High
Feather Barbule	Low	Trace
Glass Fibers		
Hair	Trace	

Trace = <10 counts in examined area
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High = >70% coverage of examined area

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Nonviable Surface

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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S15**	**S16**
Sample No.:	MTS-15	MTS-16
Description:	Library NE	Rm B N. CTR
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	High	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Low	Low
Starch		
Tire Fragments	Low	Moderate
Toner Particles		
Wood Fragments		Trace

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S17	S18
Sample No.:	MTS-17	MTS-18
Description:	Rm D S. CTR	Admin Recept N.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Low	Low
Aureobasidium		
Basidiospores	Moderate	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Trace	Low
Epicoccum	Trace	Low
Ganoderma	Low	
Hyphal Fragments	Trace	
Myxo./ Periconia/ Smuts	Trace	
Nigrospora		
Oidium/ Peronospora	Trace	
Pithomyces	Trace	Trace
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	High	Moderate
Cotton Fibers	Low	
Crystalline Particulates	High	Moderate
Dander	High	Moderate
Feather Barbule		
Glass Fibers		High
Hair	Low	

Trace = <10 counts in examined area
Low = <30% coverage of examined area
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Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S17**	**S18**
Sample No.:	MTS-17	MTS-18
Description:	Rm D S. CTR	Admin Recept N.
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	High	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous	Trace	
Pollen, Pine		
Rust Fragments		
Soot	Moderate	Moderate
Starch	Low	
Tire Fragments	Trace	Low
Toner Particles		Moderate
Wood Fragments	Low	Trace

Trace = <10 counts in examined area
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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S19	S20
Sample No.:	MTS-19	MTS-20
Description:	Staff Rm NW	Rm C NE
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores		Trace
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium		
Basidiospores	Low	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Trace	Low
Epicoccum		
Ganoderma		Trace
Hyphal Fragments		
Myxo./ Periconia/ Smuts		Trace
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers		
Crystalline Particulates	Moderate	Moderate
Dander	Moderate	High
Feather Barbule		Trace
Glass Fibers	Moderate	
Hair		Low

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S19**	**S20**
Sample No.:	MTS-19	MTS-20
Description:	Staff Rm NW	Rm C NE
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Moderate	Moderate
Paint Spheres/ Chips	Moderate	Moderate
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Low	Moderate
Starch		
Tire Fragments	Moderate	Low
Toner Particles		Trace
Wood Fragments	Moderate	Trace

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S21	S22
Sample No.:	MTS-21	MTS-22
Description:	CTE NW	Rm 6 East
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Low	Trace
Aureobasidium		
Basidiospores	Moderate	Moderate
Bipolaris sp.		Trace
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Low	Trace
Epicoccum	Trace	Trace
Ganoderma	Trace	
Hyphal Fragments	Trace	Trace
Myxo./ Periconia/ Smuts	Trace	Trace
Nigrospora		
Oidium/ Peronospora		
Pithomyces		Trace
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	Moderate
Cotton Fibers		
Crystalline Particulates	Low	Low
Dander	High	High
Feather Barbule		
Glass Fibers		
Hair		

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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7619 6th Ave NW
Seattle, WA 98117

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S21**	**S22**
Sample No.:	MTS-21	MTS-22
Description:	CTE NW	Rm 6 East
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	High	Moderate
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Low	Moderate
Starch	High	
Tire Fragments	Low	Low
Toner Particles		
Wood Fragments		Trace

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Final Report

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S23	S24
Sample No.:	MTS-23	MTS-24
Description:	Rm 5 South	Rm 4 West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Moderate	Low
Aureobasidium		
Basidiospores	Low	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium		Low
Epicoccum		Trace
Ganoderma		Trace
Hyphal Fragments	Trace	
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium	Trace	
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	Moderate	High
Cotton Fibers		
Crystalline Particulates	Low	High
Dander	High	High
Feather Barbule		
Glass Fibers		
Hair		

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Seattle, WA 98117

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A Professional Service Corporation in the Northwest

Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S23**	**S24**
Sample No.:	MTS-23	MTS-24
Description:	Rm 5 South	Rm 4 West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		Trace
Manufactured Fibers	Moderate	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Moderate	Low
Starch		Low
Tire Fragments	Trace	Low
Toner Particles		Low
Wood Fragments	Trace	Low

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S25	S26
Sample No.:	MTS-25	MTS-26
Description:	Rm 11 Northeast	Rm 18 West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	Trace
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium		
Basidiospores	Moderate	Moderate
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Low	Low
Epicoccum	Trace	Trace
Ganoderma		Low
Hyphal Fragments	Trace	Low
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		Trace
Pithomyces	Trace	Trace
Polythrincium	Trace	
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	High	High
Cotton Fibers		
Crystalline Particulates	High	Moderate
Dander	High	High
Feather Barbule		
Glass Fibers	Trace	Trace
Hair		

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Seattle, WA 98117

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Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S25**	**S26**
Sample No.:	MTS-25	MTS-26
Description:	Rm 11 Northeast	Rm 18 West
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		Trace
Manufactured Fibers	High	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Moderate	Moderate
Starch		
Tire Fragments	Low	Moderate
Toner Particles		Low
Wood Fragments	Moderate	Low

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S27	S28
Sample No.:	MTS-27	MTS-28
Description:	Art Rm East	N. Pod Attic South
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores	Trace	
Aspergillus/ Penicillium-like	Low	Trace
Aureobasidium		
Basidiospores	Trace	Low
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium	Trace	Trace
Epicoccum		Trace
Ganoderma	Trace	
Hyphal Fragments	Low	Low
Myxo./ Periconia/ Smuts		
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	High	High
Cotton Fibers		
Crystalline Particulates	High	High
Dander	Moderate	Low
Feather Barbule		
Glass Fibers	Trace	High
Hair	Trace	

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: **160140**
Client: **PBS Engineering + Environmental**
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	**S27**	**S28**
Sample No.:	MTS-27	MTS-28
Description:	Art Rm East	N. Pod Attic South
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Low	Moderate
Paint Spheres/ Chips		Low
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Low	Moderate
Starch	High	Low
Tire Fragments	Low	Low
Toner Particles	Trace	Trace
Wood Fragments	Low	Moderate

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S29	S30
Sample No.:	MTS-29	MTS-30
Description:	E. Pod Attic West	S. Pod Attic North
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Fungal Identification	Relative Abundance	Relative Abundance
Alternaria		
Ascospores		Trace
Aspergillus/ Penicillium-like	Trace	Trace
Aureobasidium	Trace	Low
Basidiospores	Trace	Trace
Bipolaris sp.		
Botrytis		
Cercospora sp.		
Chaetomium		
Cladosporium		Trace
Epicoccum		
Ganoderma	Trace	
Hyphal Fragments	Low	Low
Myxo./ Periconia/ Smuts		Trace
Nigrospora		
Oidium/ Peronospora		
Pithomyces		
Polythrincium		
Rust Spore		
Ulocladium		

Nonfungal Identification	Relative Abundance	Relative Abundance
Algae		
Amorphous Particulates	High	High
Cotton Fibers		
Crystalline Particulates	High	High
Dander	Trace	Moderate
Feather Barbule		
Glass Fibers	Low	Moderate
Hair		

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

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Seattle, WA 98117

Final Report

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http://www.labcor.net

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Nonviable Surface

Job Number: 160140
Client: PBS Engineering + Environmental
Project Name: SVEC
Project No.: 41373.000
Reference No.:

Report Number: 160140R03
Date Received: 2/12/2016

Lab/Cor ID:	S29	S30
Sample No.:	MTS-29	MTS-30
Description:	E. Pod Attic West	S. Pod Attic North
Sample Measure:	1 each	1 each
Media Type:	Fungal-BioTape	Fungal-BioTape
Analyst:	DW	DW
Analysis Date:	2/19/2016	2/19/2016
Notes:		

Insect Parts		
Manufactured Fibers	Trace	High
Paint Spheres/ Chips		
Paper		
Pollen, Miscellaneous		
Pollen, Pine		
Rust Fragments		
Soot	Moderate	Moderate
Starch		
Tire Fragments		
Toner Particles	Trace	Trace
Wood Fragments	Moderate	Low

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

Trace = <10 counts in examined area
Low = <30% coverage of examined area
Moderate = 30% - 70% coverage of examined area
High = >70% coverage of examined area

Pg 1 of 3 160188

Chain of Custody Record

LabCor Portland, Inc.
4321 SW Corbett, Ste A
Portland, OR 97239

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENG+ENV.
Customer Address: 2517 EASTLAKE
City, State, Zip: SEATTLE, WA
Contact: G. MIDDAUGH Phone: ____
Contact Email: MIDDAUGH@PBSENV.COM
Invoicing Email: —
Other info (Verbals, etc): ____

Analytical Protocol:
- ___ PLM –Visual estimate
- ___ PLM – 400 Pt. Count
- ___ PLM – Gravimetric
- ___ AHERA
- X EPAII, Mod EPA II
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- ___ TEM Bulk
- ___ EPA/600/R-04/004 (TEM Vermiculite)

Other ____

Requested Turnaround Time:
- X 5 days
- ___ 3 days
- ___ 2 days
- ___ 24 hours*
- ___ 6 hours*
- ___ 4 hours*

** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: SVEC **Project No.:** 41373.000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			Volume				
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank	
-009 TEM	Rm 2	2-18	1145	237	172	10.3	9.2	9.75	~~1677~~ 1686				
-010 TEM	Rm 4	2-18	1159	221	140	10.3	10.3	10.3	1442				✓
-011 TEM	Rm 5	2-18	1209	215	126	10.3	10.3	10.3	1298				✓
-012 TEM	Rm 6	2-18	1217	227	130	10.3	10.3	10.3	1339				✓
-013 TEM	Rm 7	2-18	1226	232	126	10.3	10.3	10.3	1298				✓
-014 TEM	SOUTH POD CENTER	2-18	1235	247	132	10.3	10.3	10.3	1360				✓
-015 TEM	LIBRARY	2-18	103	317	134	10.3	10.3	10.3	1380				✓
-016 TEM	EAST POD CENTER	2-18	120	321	121	10.3	10.3	10.3	1246				✓
-017 TEM	Rm 9	2-19	950	100	190	10.3	9.2	9.75	~~1853~~ 1862				
-018 TEM	Rm 13	2-19	200	431	151	10.3	10.3	10.3	1555				✓

By signing below you are agreeing to comply with Lab/Cor's Terms and Conditions

Relinquished by: G Middaugh Date: 2/23/16 Time: ____ Received by: Jessica Arnold Date: 2/24/16 Time: 10:00

Relinquished by: ____ Date: ____ Time: ____ Received by: ____ Date: ____ Time: ____

Internal Lab Use Only:
Date/Time Prelim Released: ____ Date/Time Final Results Released: ____ Invoice Hardcopy/e-mailed: ____
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: ____

Corrections made in black sharpie on Volume.--SH 2/24/16

1601188

Chain of Custody Record

LabCor Portland, Inc.
4321 SW Corbett, Ste A
Portland, OR 97239

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENG+ENV.
Customer Address: 2517 EASTLAKE
City, State, Zip: SEATTLE, WA
Contact: G. MIDDAUGH **Phone:** _____
Contact Email: MIDDAUGH@PBSENV.COM
Invoicing Email: —
Other info (Verbals, etc): _____

Analytical Protocol:
___PLM –Visual estimate
___PLM – 400 Pt. Count
___PLM – Gravimetric
___AHERA
X EPAII, Mod EPA II
___NIOSH 7402 (TEM)
___NIOSH 7400 (PCM)
___TEM Bulk
___EPA/600/R-04/004 (TEM Vermiculite)
Other _____

Requested Turnaround Time:
X 5 days
___3 days
___2 days
___24 hours*
___6 hours*
___4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: SVEC **Project No.:** 41373.000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			Volume			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
-019 TEM	Rm 14	2-18	840	110	270	10.3	10.3	10.3	2781			
-020 TEM	NORTH POD CENTER	2-18	240	447	127	10.3	10.3	10.3	1308			
-021 TEM	Rm 20	2-18	241	448	127	10.3	10.3	10.3	1308			
-022 TEM	ADMIN- STAFF Rm	2-19	1015	1247	152	10.3	10.3	10.3	1566			
-023 TEM	ADMIN - RECEPTION	2-19	127	350	143	10.3	10.3	10.3	1473			
-024 TEM	Rm C	2-19	900	1130	150	10.3	10.3	10.3	1545			
-025 TEM	Rm D	2-19	900	1135	155	10.3	10.3	10.3	1597			
-026 TEM	Rm B	2-19	900	1157	177	10.3	9.2	9.75	1726			
-027 TEM	ART Rm	2-19	900	1216	196	10.3	10.3	10.3	~~2019~~ 2017			
-028 TEM	WOODSHOP	2-19	925	1222	177	10.3	9.8	10.0	1779			

By signing below you are agreeing to comply with Lab/Cor's Terms and Conditions

Relinquished by: G Middaugh Date: 2/23/16 Time: _____ Received by: Jessica Hinkle Date: 2/24/16 Time: 1000

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Internal Lab Use Only:
Date/Time Prelim Released: _____ Date/Time Final Results Released: _____ Invoice Hardcopy/e-mailed: _____
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: _____

 160188

Chain of Custody Record

LabCor Portland, Inc.
4321 SW Corbett, Ste A
Portland, OR 97239

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENG+ENV.
Customer Address: 2517 EASTLAKE
City, State, Zip: SEATTLE, WA
Contact: G. MIDDAUGH **Phone:** _____
Contact Email: MIDDAUGH@PBSENV.COM
Invoicing Email: —
Other info (Verbals, etc): _____

Analytical Protocol:
___ PLM –Visual estimate
___ PLM – 400 Pt. Count
___ PLM – Gravimetric
___ AHERA
X EPAII, Mod EPA II
___ NIOSH 7402 (TEM)
___ NIOSH 7400 (PCM)
___ TEM Bulk
___ EPA/600/R-04/004 (TEM Vermiculite)
Other _____

Requested Turnaround Time:
X 5 days
___ 3 days
___ 2 days
___ 24 hours*
___ 6 hours*
___ 4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: SVEC **Project No.:** 41373.000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			Volume			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
-029 TEM	GATHERING-GIRLS RR	2-19	150	355	125	10.3	10.3	10.3	1288			
-030 TEM	OUTDOOR (1)	2-22	1023	1252	149	10.3	10.3	10.3	1535			
-031 TEM	OUTDOOR (2)	2-22	1030	1257	147	10.3	9.5	9.9	1455			
-032 TEM	LAB BLANK	HOLD – DO NOT ANALYZE							0			
-033 TEM	LAB BLANK								0			

By signing below you are agreeing to comply with Lab/Cor's Terms and Conditions

Relinquished by: G. Middaugh Date: 2/23 Time: _____ Received by: Jessica Dunkle Date: 2/24/16 Time: 10:00

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Internal Lab Use Only:
Date/Time Prelim Released: _____ Date/Time Final Results Released: _____ Invoice Hardcopy/e-mailed: _____
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: _____

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
Fax: (206) 789-8424
http://www.labcor.net

Job Number: 160188 **SEA**

Report Number: 160188R01

Report Date: 3/2/2016

Client: **PBS Engineering + Environmental**

Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102

Project Name: SVEC

Project No.: 41373.000

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160188 - S1	-009 TEM - Rm 2	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S2	-010 TEM - Rm 4	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S3	-011 TEM - Rm 5	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S4	-012 TEM - Rm 6	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S5	-013 TEM - Rm 7	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S6	-014 TEM - South Pod Center	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S7	-015 TEM - Library	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S8	-016 TEM - East Pod Center	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S9	-017 TEM - Rm 9	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S10	-018 TEM - Rm 13	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S11	-019 TEM - Rm 14	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S12	-020 TEM - North Pod Center	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S13	-021 TEM - Rm 20	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S14	-022 TEM - Admin - Staff Rm	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S15	-023 TEM - Admin - Reception	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S16	-024 TEM - Rm C	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S17	-025 TEM - Rm D	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S18	-026 TEM - Rm B	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S19	-027 TEM - Art Rm	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S20	-028 TEM - Woodshop	EPA Level 2 - Modified - Direct		2/24/2016
160188 - S21	-029 TEM - Gathering - Girls RR	EPA Level 2 - Modified - Direct		2/24/2016

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Final Report

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Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Report Date: 3/2/2016

160188 - S22	-030 TEM - Outdoor (1)	EPA Level 2 - Modified - Direct	2/24/2016
160188 - S23	-031 TEM - Outdoor (2)	EPA Level 2 - Modified - Direct	2/24/2016
160188 - S24	-032 TEM - Lab Blank	EPA Level 2 - Modified - Direct	2/24/2016
160188 - S25	-033 TEM - Lab Blank	EPA Level 2 - Modified - Direct	2/24/2016

EPA Level 2 - Modified - Direct

Preparation and analysis of the above samples was conducted in accordance with the EPA Level 2 method (Direct) for the identification of asbestos. Briefly, the samples were collapsed with a solution of N,N-dimethylformamide and acetic acid, then etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

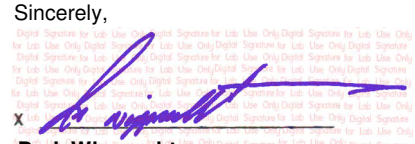
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification of between 15,000x-20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification. Grid preparations are evaluated by the analyst before commencing analysis. Proper preparations have >75% replicate coverage, have a 10% etch rate, have acceptable particulate loading and show no evidence of preparation remnants (chemical or material).

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

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A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Rapid Summary

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.	Client Sample No.	Description	Structure Type	Filter Density (s/mm2)	Concen-tration* (struct/cc)	95% Confidence Interval (struct/cc)	Struct Count[1] Prim/Total	Analytical Sens. (sruct/cc) :
S1	-009 TEM	Rm 2	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.013 - Poisson	0	0.00364
S2	-010 TEM	Rm 4	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.016 - Poisson	0	0.00424
S3	-011 TEM	Rm 5	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00471
S4	-012 TEM	Rm 6	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00456
S5	-013 TEM	Rm 7	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00471
S6	-014 TEM	South Pod Center	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.017 - Poisson	0	0.00449
S7	-015 TEM	Library	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.016 - Poisson	0	0.00443
S8	-016 TEM	East Pod Center	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.018 - Poisson	0	0.0049
S9	-017 TEM	Rm 9	**Mod. EPA2 TOTAL >0.5µm**	15.9	0.003	0 - 0.018 - Poisson	1	0.0033
S10	-018 TEM	Rm 13	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.014 - Poisson	0	0.00393
S11	-019 TEM	Rm 14	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.002	0 - 0.008 - Poisson	0	0.0022
S12	-020 TEM	North Pod Center	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00467
S13	-021 TEM	Rm 20	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00467
S14	-022 TEM	Admin - Staff Rm	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.014 - Poisson	0	0.0039
S15	-023 TEM	Admin - Reception	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.015 - Poisson	0	0.00415
S16	-024 TEM	Rm C	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.015 - Poisson	0	0.00396

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

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EPA Level 2 - Modified - Direct Rapid Summary

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.	Client Sample No.	Description	Structure Type	Filter Density (s/mm2)	Concen-tration* (struct/cc)	95% Confidence Interval (struct/cc)	Struct Count[1] Prim/Total	Analytical Sens. (sruct/cc) :
S17	-025 TEM	Rm D	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.014 - Poisson	0	0.00383
S18	-026 TEM	Rm B	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.013 - Poisson	0	0.00354
S19	-027 TEM	Art Rm	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.003	0 - 0.011 - Poisson	0	0.00303
S20	-028 TEM	Woodshop	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.003	0 - 0.013 - Poisson	0	0.00344
S21	-029 TEM	Gathering - Girls RR	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.018 - Poisson	0	0.00474
S22	-030 TEM	Outdoor (1)	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.015 - Poisson	0	0.00398
S23	-031 TEM	Outdoor (2)	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.015 - Poisson	0	0.0042
S24	-032 TEM	Lab Blank	**Mod. EPA2 TOTAL >0.5µm**	0	Not Applicable	Not Applicable	0	NA
S25	-033 TEM	Lab Blank	**Mod. EPA2 TOTAL >0.5µm**	0	Not Applicable	Not Applicable	0	NA

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S1

Client Sample No.: -009 TEM
Description: Rm 2

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1677
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00364
Detection Limit. (struc/cc) : 0.0109

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.013 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.013 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.013 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S2

Client Sample No.: -010 TEM
Description: Rm 4

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1442
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00424
Detection Limit. (struc/cc) : 0.01267

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.016 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S3

Client Sample No.: -011 TEM
Description: Rm 5

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1298
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00471
Detection Limit. (struc/cc) : 0.01408

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S4

Client Sample No.: -012 TEM
Description: Rm 6

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1339
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00456
Detection Limit. (struc/cc) : 0.01365

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S5

Client Sample No.: -013 TEM
Description: Rm 7

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1298
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00471
Detection Limit. (struc/cc) : 0.01408

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S6

Client Sample No.: -014 TEM
Description: South Pod Center

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1360
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00449
Detection Limit. (struc/cc) : 0.01344

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S7

Client Sample No.: -015 TEM
Description: Library

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1380
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00443
Detection Limit. (struc/cc) : 0.01324

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.016 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S8

Client Sample No.: -016 TEM
Description: East Pod Center

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1246
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.0049
Detection Limit. (struc/cc) : 0.01466

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.018 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S9

Client Sample No.: -017 TEM
Description: Rm 9

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1853
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.0033
Detection Limit. (struc/cc) : 0.00986

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.003	0 - 0.012 - Poisson	0	
Mod. EPA2 >=5.0µm	15.9	0.003	0 - 0.018 - Poisson	1	
Mod. EPA2 TOTAL >0.5µm	15.9	0.003	0 - 0.018 - Poisson	1	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S10

Client Sample No.: -018 TEM
Description: Rm 13

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1555
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00393
Detection Limit. (struc/cc) : 0.01175

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.014 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S11

Client Sample No.: -019 TEM
Description: Rm 14

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 2781
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.0022
Detection Limit. (struc/cc) : 0.00657

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.002	0 - 0.008 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.002	0 - 0.008 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.002	0 - 0.008 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S12

Client Sample No.: -020 TEM
Description: North Pod Center

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1308
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00467
Detection Limit. (struc/cc) : 0.01397

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S13

Client Sample No.: -021 TEM
Description: Rm 20

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1308
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00467
Detection Limit. (struc/cc) : 0.01397

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S14

Client Sample No.: -022 TEM
Description: Admin - Staff Rm

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/29/2016	Philips 410	18000

Volume (L) : 1566
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.0039
Detection Limit. (struc/cc) : 0.01167

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.014 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S15

Client Sample No.: -023 TEM
Description: Admin - Reception

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1473
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00415
Detection Limit. (struc/cc) : 0.0124

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.015 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S16

Client Sample No.: -024 TEM
Description: Rm C

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1545
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00396
Detection Limit. (struc/cc) : 0.01183

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.015 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S17

Client Sample No.: -025 TEM
Description: Rm D

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1597
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00383
Detection Limit. (struc/cc) : 0.01144

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.014 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.014 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S18

Client Sample No.: -026 TEM
Description: Rm B

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1726
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00354
Detection Limit. (struc/cc) : 0.01059

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.013 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.013 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.013 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S19

Client Sample No.: -027 TEM
Description: Art Rm

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 2019
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00303
Detection Limit. (struc/cc) : 0.00905

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.003	0 - 0.011 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.003	0 - 0.011 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.003	0 - 0.011 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S20

Client Sample No.: -028 TEM
Description: Woodshop

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1779
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00344
Detection Limit. (struc/cc) : 0.01027

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.003	0 - 0.013 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.003	0 - 0.013 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.003	0 - 0.013 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S21

Client Sample No.: -029 TEM
Description: Gathering - Girls RR

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1288
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00474
Detection Limit. (struc/cc) : 0.01419

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.018 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S22

Client Sample No.: -030 TEM
Description: Outdoor (1)

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1535
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00398
Detection Limit. (struc/cc) : 0.0119

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.015 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S23

Client Sample No.: -031 TEM
Description: Outdoor (2)

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 1455
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.0042
Detection Limit. (struc/cc) : 0.01256

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.015 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.015 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S24

Client Sample No.: -032 TEM
Description: Lab Blank

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 0
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : NA
Detection Limit. (struc/cc) : NA

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	Not Applicable	Not Applicable	0	
Mod. EPA2 >=5.0µm	0	Not Applicable	Not Applicable	0	
Mod. EPA2 TOTAL >0.5µm	0	Not Applicable	Not Applicable	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160188 **SEA**
Client: PBS Engineering + Environmental
Project Name: SVEC

Report Number: 160188R01
Date Received: 2/24/2016

Lab/Cor Sample No.: S25
Client Sample No.: -033 TEM
Description: Lab Blank

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/2/2016	Philips 410	18000

Volume (L) : 0
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : NA
Detection Limit. (struc/cc) : NA

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	Not Applicable	Not Applicable	0	
Mod. EPA2 >=5.0µm	0	Not Applicable	Not Applicable	0	
Mod. EPA2 TOTAL >0.5µm	0	Not Applicable	Not Applicable	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Raw Data

Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S1
Client Sample No: -009 TEM
Description: Rm 2

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C41				NSD							
G1	2	C42				NSD							
G1	3	E41				NSD							
G1	4	E42				NSD							
G2	5	C33				NSD							
G2	6	C34				NSD							

Lab/Cor Sample No: S2
Client Sample No: -010 TEM
Description: Rm 4

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C31				NSD							
G1	2	C32				NSD							
G1	3	E31				NSD							
G1	4	E32				NSD							
G2	5	F41				NSD							
G2	6	F42				NSD							

Lab/Cor Sample No: S3
Client Sample No: -011 TEM
Description: Rm 5

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C31				NSD							
G1	2	C32				NSD							
G1	3	E31				NSD							
G1	4	E32				NSD							
G2	5	B43				NSD							
G2	6	B44				NSD							

Lab/Cor Sample No: S4
Client Sample No: -012 TEM
Description: Rm 6

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E33				NSD							
G1	2	E34				NSD							
G1	3	F33				NSD							
G1	4	F34				NSD							
G2	5	C31				NSD							
G2	6	C32				NSD							

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Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S5
Client Sample No: -013 TEM
Description: Rm 7

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	F31				NSD							
G1	2	F32				NSD							
G1	3	G31				NSD							
G1	4	G32				NSD							
G2	5	E33				NSD							
G2	6	E34				NSD							

Lab/Cor Sample No: S6
Client Sample No: -014 TEM
Description: South Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	G31				NSD							
G1	2	G32				NSD							
G1	3	H31				NSD							
G1	4	H32				NSD							
G2	5	E33				NSD							
G2	6	E31				NSD							

Lab/Cor Sample No: S7
Client Sample No: -015 TEM
Description: Library

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C33				NSD							
G1	2	C34				NSD							
G1	3	E33				NSD							
G1	4	E34				NSD							
G2	5	F41				NSD							
G2	6	F42				NSD							

Lab/Cor Sample No: S8
Client Sample No: -016 TEM
Description: East Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E31				NSD							
G1	2	E32				NSD							
G1	3	C31				NSD							
G1	4	C32				NSD							
G2	5	F43				NSD							
G2	6	F44				NSD							

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Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S9
Client Sample No: -017 TEM
Description: Rm 9

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	F31	ADQ	1		Fiber	12	0.5	24	Tremolite	Mg, Si, Ca, Fe		ModEPA2_>=5, ModEPA2_TOTAL

ItemType	ItemNum	Confirmed	Comment
Brightfield	P47312BF		
Diffraction	P47312DF	DW 2/29/2016	0.53nm Row Spacing
Spectra	P47312SP	DW 2/29/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	2	F32				NSD							
G1	3	G31				NSD							
G1	4	G32				NSD							
G2	5	E33				NSD							
G2	6	E34				NSD							

Lab/Cor Sample No: S10
Client Sample No: -018 TEM
Description: Rm 13

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C31				NSD							
G1	2	C32				NSD							
G1	3	E31				NSD							
G1	4	E32				NSD							
G2	5	F33				NSD							
G2	6	F34				NSD							

Lab/Cor Sample No: S11
Client Sample No: -019 TEM
Description: Rm 14

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E33				NSD							
G1	2	E34				NSD							
G1	3	F33				NSD							
G1	4	F34				NSD							
G2	5	E31				NSD							
G2	6	E32				NSD							

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Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S12
Client Sample No: -020 TEM
Description: North Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	G41				NSD							
G1	2	G42				NSD							
G1	3	H41				NSD							
G1	4	H42				NSD							
G2	5	E33				NSD							
G2	6	E34				NSD							

Lab/Cor Sample No: S13
Client Sample No: -021 TEM
Description: Rm 20

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E43				NSD							
G1	2	E44				NSD							
G1	3	F43				NSD							
G1	4	F44				NSD							
G2	5	G31				NSD							
G2	6	G32				NSD							

Lab/Cor Sample No: S14
Client Sample No: -022 TEM
Description: Admin - Staff Rm

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	B51				NSD							
G1	2	B52				NSD							
G1	3	C51				NSD							
G1	4	C52				NSD							
G2	5	E33				NSD							
G2	6	E34				NSD							

Lab/Cor Sample No: S15
Client Sample No: -023 TEM
Description: Admin - Reception

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C41				NSD							
G1	2	C42				NSD							
G1	3	E41				NSD							
G1	4	E42				NSD							
G2	5	E33				NSD							
G2	6	E34				NSD							

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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Fax: (206) 789-8424
http://www.labcor.net

A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Raw Data

Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S16
Client Sample No: -024 TEM
Description: Rm C

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	B41				NSD							
G1	2	B42				NSD							
G1	3	C41				NSD							
G1	4	C42				NSD							
G2	5	F43				NSD							
G2	6	F44				NSD							

Lab/Cor Sample No: S17
Client Sample No: -025 TEM
Description: Rm D

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	B41				NSD							
G1	2	B42				NSD							
G1	3	C41				NSD							
G1	4	C42				NSD							
G2	5	E31				NSD							
G2	6	E32				NSD							

Lab/Cor Sample No: S18
Client Sample No: -026 TEM
Description: Rm B

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C32				NSD							
G1	2	E31				NSD							
G1	3	E32				NSD							
G1	4	F31				NSD							
G2	5	E43				NSD							
G2	6	E44				NSD							

Lab/Cor Sample No: S19
Client Sample No: -027 TEM
Description: Art Rm

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C33				NSD							
G1	2	C34				NSD							
G1	3	E33				NSD							
G1	4	E34				NSD							
G2	5	G41				NSD							
G2	6	G42				NSD							

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EPA Level 2 - Modified - Direct Raw Data

Job Number: 160188 **SEA** **Ref. 68-02-3266** **Report Number:** 160188R01
Client: PBS Engineering + Environmental **Date Received:** 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S20
Client Sample No: -028 TEM
Description: Woodshop

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	F43				NSD							
G1	2	F44				NSD							
G1	3	G43				NSD							
G1	4	G44				NSD							
G2	5	C43				NSD							
G2	6	C44				NSD							

Lab/Cor Sample No: S21
Client Sample No: -029 TEM
Description: Gathering - Girls RR

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C51				NSD							
G1	2	C52				NSD							
G1	3	E51				NSD							
G1	4	E52				NSD							
G2	5	H33				NSD							
G2	6	H34				NSD							

Lab/Cor Sample No: S22
Client Sample No: -030 TEM
Description: Outdoor (1)

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	F51				NSD							
G1	2	F52				NSD							
G1	3	G51				NSD							
G1	4	G52				NSD							
G2	5	F33				NSD							
G2	6	F34				NSD							

Lab/Cor Sample No: S23
Client Sample No: -031 TEM
Description: Outdoor (2)

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	F53				NSD							
G1	2	F54				NSD							
G1	3	G53				NSD							
G1	4	G54				NSD							
G2	5	H41				NSD							
G2	6	H42				NSD							

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EPA Level 2 - Modified - Direct Raw Data

Job Number: 160188 **SEA** **Ref. 68-02-3266**
Report Number: 160188R01
Client: PBS Engineering + Environmental
Date Received: 2/24/2016
Project Name: SVEC
Project No.: 41373.000

Lab/Cor Sample No: S24
Client Sample No: -032 TEM
Description: Lab Blank

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	G53				NSD							
G1	2	G54				NSD							
G1	3	H53				NSD							
G1	4	H54				NSD							
G2	5	E43				NSD							
G2	6	E44				NSD							

Lab/Cor Sample No: S25
Client Sample No: -033 TEM
Description: Lab Blank

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E41				NSD							
G1	2	E42				NSD							
G1	3	F41				NSD							
G1	4	F42				NSD							
G2	5	C33				NSD							
G2	6	C34				NSD							

Count Categories

ModEPA2_>=5	Mod. EPA2 >=5.0µm	ModEPA2_0.5-5	Mod. EPA2 >=0.5µm - <5.0µm	ModEPA2_TOT	Mod. EPA2 TOTAL >0.5µm

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160103 **SEA**

Report Number: 160103R01
Report Date: 2/3/2016

Client: **PBS Engineering + Environmental**
Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102
Project Name: Monroe School District
Project No.: 41373.00
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160103 - S1	001-TEM - On Post @ NW Corner of Daycare (East)	EPA Level 2 - Modified - Direct		2/2/2016
160103 - S2	002-TEM - On Stand @ End of Wood Wall Across from Café	EPA Level 2 - Modified - Direct		2/2/2016
160103 - S3	003-TEM - On Dishwasher in NE Corner of Café	EPA Level 2 - Modified - Direct		2/2/2016
160103 - S4	004-TEM - Blank - Do Not Run	EPA Level 2 - Modified - Direct	Not Analyzed	2/2/2016
160103 - S5	005-TEM - Blank - Do Not Run	EPA Level 2 - Modified - Direct	Not Analyzed	2/2/2016

EPA Level 2 - Modified - Direct

Preparation and analysis of the above samples was conducted in accordance with the EPA Level 2 method (Direct) for the identification of asbestos. Briefly, the samples were collapsed with a solution of N,N-dimethylformamide and acetic acid, then etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

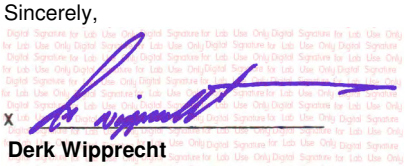
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification of between 15,000x-20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification. Grid preparations are evaluated by the analyst before commencing analysis. Proper preparations have >75% replicate coverage, have a 10% etch rate, have acceptable particulate loading and show no evidence of preparation remnants (chemical or material).

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Final Report

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A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Rapid Summary

Job Number: 160103 **SEA**

Report Number: 160103R01

Client: PBS Engineering + Environmental

Date Received: 2/2/2016

Project Name: Monroe School District

Lab/Cor Sample No.	Client Sample No.	Description	Structure Type	Filter Density (s/mm2)	Concen-tration* (struct/cc)	95% Confidence Interval (struct/cc)	Struct Count[1] Prim/Total	Analytical Sens. (sruct/cc) :
S1	001-TEM	On Post @ NW Corner of Daycare (East)	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.017 - Poisson	0	0.00464
S2	002-TEM	On Stand @ End of Wood Wall Across from Café	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.017 - Poisson	0	0.00449
S3	003-TEM	On Dishwasher in NE Corner of Café	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.016 - Poisson	0	0.00434

Reviewed by:

X _____

Derk Wipprecht
Laboratory Supervisor

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

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A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Summary Data

Job Number: 160103 **SEA**
Report Number: 160103R01
Client: PBS Engineering + Environmental
Date Received: 2/2/2016
Project Name: Monroe School District

Lab/Cor Sample No.: S1

Client Sample No.: 001-TEM
Description: On Post @ NW Corner of Daycare (East)

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/3/2016	Philips 410	18000

Volume (L) : 1317
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00464
Detection Limit. (struc/cc) : 0.01387

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S2

Client Sample No.: 002-TEM
Description: On Stand @ End of Wood Wall Across from Café

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/3/2016	Philips 410	18000

Volume (L) : 1360
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00449
Detection Limit. (struc/cc) : 0.01344

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.017 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.017 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.017 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160103 **SEA**
Client: PBS Engineering + Environmental
Project Name: Monroe School District

Report Number: 160103R01
Date Received: 2/2/2016

Lab/Cor Sample No.: S3
Client Sample No.: 003-TEM
Description: On Dishwasher in NE Corner of Café

Analyst(s)	Analysis Date	Microscope	Magnification
DW	2/3/2016	Philips 410	18000

Volume (L) : 1208
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 7
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.0735
Analytical Sens. (struc/cc) : 0.00434
Detection Limit. (struc/cc) : 0.01297

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.016 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Reviewed by:

X

Derk Wipprecht
Laboratory Supervisor

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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Final Report

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EPA Level 2 - Modified - Direct Raw Data

Job Number: 160103 **SEA** **Ref. 68-02-3266**
Report Number: 160103R01
Client: PBS Engineering + Environmental
Date Received: 2/2/2016
Project Name: Monroe School District
Project No.: 41373.00

Lab/Cor Sample No: S1
Client Sample No: 001-TEM
Description: On Post @ NW Corner of Daycare (East)

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	B33				NSD							
G1	2	B34				NSD							
G1	3	C33				NSD							
G1	4	C34				NSD							
G2	5	E43				NSD							
G2	6	E44				NSD							

Lab/Cor Sample No: S2
Client Sample No: 002-TEM
Description: On Stand @ End of Wood Wall Across from Café

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	B31				NSD							
G1	2	B32				NSD							
G1	3	C31				NSD							
G1	4	C32				NSD							
G2	5	F31				NSD							
G2	6	F32				NSD							

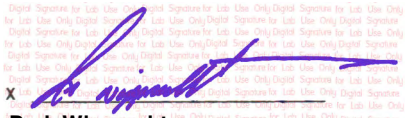
Lab/Cor Sample No: S3
Client Sample No: 003-TEM
Description: On Dishwasher in NE Corner of Café

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	E34				NSD							
G1	2	F33				NSD							
G1	3	F34				NSD							
G1	4	G33				NSD							
G1	5	G34				NSD							
G2	6	E33				NSD							
G2	7	E34				NSD							

Count Categories

ModEPA2_>=5	Mod. EPA2 >=5.0µm	ModEPA2_0.5-5	Mod. EPA2 >=0.5µm - <5.0µm	ModEPA2_TOT	Mod. EPA2 TOTAL >0.5µm

Reviewed by:



Derk Wipprecht
Laboratory Supervisor

160122

Chain of Custody Record

SEA
LabCor Portland, Inc.
4321 SW Corbett, Ste A
Portland, OR 97239

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENGINEERING & ENVIRONMENTAL
Customer Address: 2517 EASTLAKE AVE E SUITE 100
City, State, Zip: SEATTLE, WA 98102
Contact: GREGG MIDDAUGH **Phone:** 206.255.4659
Contact Email: Gregg.middaugh@pbsenv.com
Invoicing Email:
Other info (Verbals, etc):

Analytical Protocol:
- ___ PLM –Visual estimate
- ___ PLM – 400 Pt. Count
- ___ PLM – Gravimetric
- [redacted]
- X EPAII, Mod EPA II
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- ___ TEM Bulk
- ___ EPA/600/R-04/004 (TEM Vermiculite)

Other ___

Requested Turnaround Time:
- ___ 5 days
- ___ 3 days
- ___ 2 days
- X 24 hours*
- ___ 6 hours*
- ___ 4 hours*

** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: SKY VALLEY EDUCATION CENTER **Project No.:** 41373 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail)			Time			LPM - Flow Rate			Volume			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
006	SOUTH POD ATTIC SPACE TEM AREA SAMPLES	2/8/16	10:13	12:13	120	10.0	10.0	10.0	1200			
007	EAST POD ATTIC SPACE TEM AREA SAMPLES	2/8/16	10:27	12:27	120	10.0	10.0	10.0	1200			
008	NORTH POD ATTIC SPACE TEM AREA SAMPLES	2/8/16	10:34	12:40	126	10.0	10.0	10.0	1260			
KH 009a	BLANK											
KH 010a	BLANK											

By signing below you are agreeing to comply with LabCor's Terms and Conditions

Relinquished by: [signature] Date: 2-8-16 Time: ___ Received by: [signature] Date: 2/8/16 Time: 17:40

Relinquished by: ___ Date: ___ Time: ___ Received by: ___ Date: ___ Time: ___

Internal Lab Use Only:
Date/Time Prelim Released: ___ Date/Time Final Results Released: ___ Invoice Hardcopy/e-mailed: ___
By: ☐Phone ☐E-mail ☐Verbal By: ☐Phone ☐E-mail Reviewed By: ___

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160122 **SEA**

Report Number: 160122R01

Report Date: 2/9/2016

Client: PBS Engineering + Environmental

Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102

Project Name: Sky Valley Education Center

Project No.: 41373

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160122 - S1	006 - South Pod Attic Space TEM Area Samples	EPA Level 2 - Modified - Direct		2/8/2016
160122 - S2	007 - East Pod Attic Space TEM Area Samples	EPA Level 2 - Modified - Direct		2/8/2016
160122 - S3	008 - North Pod Attic Space TEM Area Samples	EPA Level 2 - Modified - Direct		2/8/2016
160122 - S4	009 - Blank	EPA Level 2 - Modified - Direct	Not Analyzed	2/8/2016
160122 - S5	010 - Blank	EPA Level 2 - Modified - Direct	Not Analyzed	2/8/2016

EPA Level 2 - Modified - Direct

Preparation and analysis of the above samples was conducted in accordance with the EPA Level 2 method (Direct) for the identification of asbestos. Briefly, the samples were collapsed with a solution of N,N-dimethylformamide and acetic acid, then etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

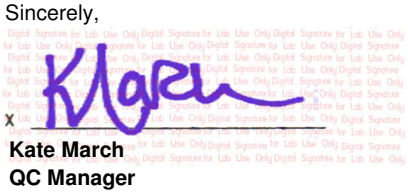
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification of between 15,000x-20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification. Grid preparations are evaluated by the analyst before commencing analysis. Proper preparations have >75% replicate coverage, have a 10% etch rate, have acceptable particulate loading and show no evidence of preparation remnants (chemical or material).

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Kate March
QC Manager

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Final Report

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A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Rapid Summary

Job Number: 160122 **SEA**
Client: PBS Engineering + Environmental
Project Name: Sky Valley Education Center

Report Number: 160122R01
Date Received: 2/8/2016

Lab/Cor Sample No.	Client Sample No.	Description	Structure Type	Filter Density (s/mm2)	Concen-tration* (struct/cc)	95% Confidence Interval (struct/cc)	Struct Count[1] Prim/Total	Analytical Sens. (sruct/cc) :
S1	006	South Pod Attic Space TEM Area Samples	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.016 - Poisson	0	0.00437
S2	007	East Pod Attic Space TEM Area Samples	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.004	0 - 0.016 - Poisson	0	0.00437
S3	008	North Pod Attic Space TEM Area Samples	**Mod. EPA2 TOTAL >0.5µm**	0	< 0.005	0 - 0.018 - Poisson	0	0.00485

Reviewed by:

X _____
Kate March
QC Manager

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor, Inc.
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Final Report

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A Professional Service Corporation in the Northwest

EPA Level 2 - Modified - Direct Summary Data

Job Number: 160122 **SEA**
Report Number: 160122R01
Client: PBS Engineering + Environmental
Date Received: 2/8/2016
Project Name: Sky Valley Education Center

Lab/Cor Sample No.: S1

Client Sample No.: 006
Description: South Pod Attic Space TEM Area Samples

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Volume (L) : 1200
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 7
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.0735
Analytical Sens. (struc/cc) : 0.00437
Detection Limit. (struc/cc) : 0.01305

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.016 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Lab/Cor Sample No.: S2

Client Sample No.: 007
Description: East Pod Attic Space TEM Area Samples

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Volume (L) : 1200
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 7
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.0735
Analytical Sens. (struc/cc) : 0.00437
Detection Limit. (struc/cc) : 0.01305

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.004	0 - 0.016 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.004	0 - 0.016 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Summary Data

Job Number: 160122 **SEA**
Client: PBS Engineering + Environmental
Project Name: Sky Valley Education Center

Report Number: 160122R01
Date Received: 2/8/2016

Lab/Cor Sample No.: S3
Client Sample No.: 008
Description: North Pod Attic Space TEM Area Samples

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Volume (L) : 1260
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 6
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.063
Analytical Sens. (struc/cc) : 0.00485
Detection Limit. (struc/cc) : 0.0145

Structure Type	Filter Density (s/mm2)	Concen-tration* (struc/cc)	95% Confidence Interval (struc/cc)	Structure Count[1] Prim/Total	
Mod. EPA2 >=0.5µm - <5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 >=5.0µm	0	< 0.005	0 - 0.018 - Poisson	0	
Mod. EPA2 TOTAL >0.5µm	0	< 0.005	0 - 0.018 - Poisson	0	

[1] Concentration and 95% Confidence Level are calculated based upon the number showing under the Structure Count header.

Reviewed by:

X _____
Kate March
QC Manager

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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EPA Level 2 - Modified - Direct Raw Data

Job Number: 160122 **SEA** **Ref. 68-02-3266**
Report Number: 160122R01
Client: PBS Engineering + Environmental
Date Received: 2/8/2016
Project Name: Sky Valley Education Center
Project No.: 41373

Lab/Cor Sample No: S1
Client Sample No: 006
Description: South Pod Attic Space TEM Area Samples

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C34				NSD							
G1	2	E33				NSD							
G1	3	E42				NSD							
G1	4	F41				NSD							
G2	5	E42				NSD							
G2	6	F41				NSD							
G2	7	F42				NSD							

Lab/Cor Sample No: S2
Client Sample No: 007
Description: East Pod Attic Space TEM Area Samples

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C34				NSD							
G1	2	E33				NSD							
G1	3	E42				NSD							
G1	4	F41				NSD							
G2	5	E42				NSD							
G2	6	F41				NSD							
G2	7	F42				NSD							

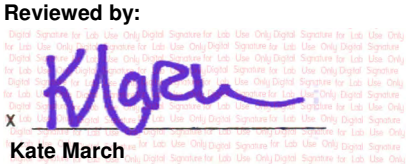
Lab/Cor Sample No: S3
Client Sample No: 008
Description: North Pod Attic Space TEM Area Samples

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G1	1	C34				NSD							
G1	2	E33				NSD							
G1	3	E42				NSD							
G1	4	F41				NSD							
G2	5	C42				NSD							
G2	6	E41				NSD							

Count Categories

ModEPA2_>=5	Mod. EPA2 >=5.0µm	ModEPA2_0.5-5	Mod. EPA2 >=0.5µm - <5.0µm	ModEPA2_TOT	Mod. EPA2 TOTAL >0.5µm

Reviewed by:



Kate March
QC Manager

160202 Pg 1 of 3

Chain of Custody Record

LabCor [redacted] Inc.
[redacted]
Office ph (503) 224-5055
Staff@labcorpdx.net
www.labcor.net

Customer Name: PBS ENVIRONMENTAL
Customer Address: 2514 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH Phone: 2062554659
Contact Email: —
Invoicing Email: —
Other info (Verbals, etc): TEM MICROVAC DUST

Analytical Protocol:
___PLM –Visual estimate
___PLM – 400 Pt. Count
___PLM – Gravimetric
___AHERA
___EPAII, Mod EPA II
___NIOSH 7402 (TEM)
___NIOSH 7400 (PCM)
___TEM Bulk
___EPA/600/R-04/004 (TEM Vermiculite)
Other TEM MICROVAC DUST

Requested Turnaround Time:
X 5 days
___3 days
___2 days
___24 hours*
___6 hours*
___4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: MSD - SVEC **Project No.:** 41373,000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			AREA			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
-004 MV	SOUTH POD CENTER	2-22							100 cm²			
-005 MV	Rm 7											
-006 MV	LIBRARY											
-007 MV	EAST POD CENTER											
-008 MV	Rm 9											
-009 MV	Rm 13											
-010 MV	Rm 14											
-011 MV	Rm 20											
-012 MV	NORTH POD CENTER											
-013 MV	Rm 2											

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Relinquished by: [signature] Date: 2-25-16 Time: ___ Received by: ___ Date: ___ Time: ___

Relinquished by: [signature] Date: 2/29/16 Time: 11:50AM Received by: ___ Date: ___ Time: ___

Internal Lab Use Only:
Date/Time Prelim Released: ___ Date/Time Final Results Released: ___ Invoice Hardcopy/e-mailed: ___
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: ___

160202 Pg 2 of 3

Chain of Custody Record

LabCor [redacted] Inc.

[redacted]

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENVIRONMENTAL
Customer Address: 2514 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH Phone: 206.254.4659
Contact Email: —
Invoicing Email: —
Other info (Verbals, etc): TEM MICROVAC DUST

Analytical Protocol:
___PLM –Visual estimate
___PLM – 400 Pt. Count
___PLM – Gravimetric
___AHERA
___EPAII, Mod EPA II
___NIOSH 7402 (TEM)
___NIOSH 7400 (PCM)
___TEM Bulk
___EPA/600/R-04/004 (TEM Vermiculite)
Other TEM MICROVAC DUST

Requested Turnaround Time:
X 5 days
___3 days
___2 days
___24 hours*
___6 hours*
___4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: MSD - SVEC **Project No.:** 41373.000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			AREA			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
014 MV	Rm 22 - ART	2-24							100 cm²			
015 MV	Rm 21 - WOODSHOP											
016 MV	SMALL GYM											
017 MV	GIRLS LOCKER											
018 MV	GATHERING PLACE											
019 MV	MUSIC											
020 MV	CTE											
021 MV	STAFF - ADMIN											
022 MV	RECEPT - ADMIN											
023 MV	Rm B											

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Relinquished by: [signature] Date: 2/29/16 Time: 11:50 AM Received by: _____ Date: _____ Time: _____

Internal Lab Use Only:
Date/Time Prelim Released: _____ Date/Time Final Results Released: _____ Invoice Hardcopy/e-mailed: _____
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: _____

160202 Pg 3 of 3

Chain of Custody Record

LabCor [redacted] Inc.

[redacted]

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Customer Name: PBS ENVIRONMENTAL
Customer Address: 2517 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH Phone: 2062554659
Contact Email: —
Invoicing Email: —
Other info (Verbals, etc): TEM MICROVAC DUST

Analytical Protocol:
___PLM –Visual estimate
___PLM – 400 Pt. Count
___PLM – Gravimetric
___AHERA
___EPAII, Mod EPA II
___NIOSH 7402 (TEM)
___NIOSH 7400 (PCM)
___TEM Bulk
___EPA/600/R-04/004 (TEM Vermiculite)
Other TEM MICROVAC DUST

Requested Turnaround Time:
X 5 days
___3 days
___2 days
___24 hours*
___6 hours*
___4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: MSD - SVEC **Project No.:** 41373.000 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			AREA			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg	TOTAL	IWA	OWA	Blank
024 MV	Rm D	2-24							100 cm²			
025 MV	Rm C	2-24							100 cm²			

By signing below you are agreeing to comply with Lab/Cor's Terms and Conditions

Relinquished by: [signature] Date: 2-25-16 Time: ___ Received by: ___ Date: ___ Time: ___

Relinquished by: [signature] Date: 2/29/16 Time: 11:50 AM Received by: ___ Date: ___ Time: ___

Internal Lab Use Only:
Date/Time Prelim Released: ___ Date/Time Final Results Released: ___ Invoice Hardcopy/e-mailed: ___
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By: ___

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Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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http://www.labcor.net

Job Number: 160202 **SEA**

Report Number: 160202R01

Report Date: 3/4/2016

Client: PBS Engineering + Environmental

Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102

Project Name: MSD - SVEC

Project No.: 41373.000

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160202 - S1	-004 MV - South Pod Center	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S2	-005 MV - Rm 7	ASTM D5755-03 - Microvac		2/29/2016
160202 - S3	-006 MV - Library	ASTM D5755-03 - Microvac		2/29/2016
160202 - S4	-007 MV - East Pod Center	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S5	-008 MV - Rm 9	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S6	-009 MV - Rm 13	ASTM D5755-03 - Microvac		2/29/2016
160202 - S7	-010 MV - Rm 14	ASTM D5755-03 - Microvac		2/29/2016
160202 - S8	-011 MV - Rm 20	ASTM D5755-03 - Microvac		2/29/2016
160202 - S9	-012 MV - North Pod Center	ASTM D5755-03 - Microvac	Some Mg, Al, Si fibers present.	2/29/2016
160202 - S10	-013 MV - Rm 2	ASTM D5755-03 - Microvac		2/29/2016
160202 - S11	-014 MV - Rm 22 - Art	ASTM D5755-03 - Microvac	Some Al, Si fibers present and some Ti fibers.	2/29/2016
160202 - S12	-015 MV - Rm 21 - Woodshop	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S13	-016 MV - Small Gym	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S14	-017 MV - Girls Locker	ASTM D5755-03 - Microvac	Not Analyzed Sample Blown Out - Not prepped or analyzed	2/29/2016
160202 - S15	-018 MV - Gathering Place	ASTM D5755-03 - Microvac		2/29/2016
160202 - S16	-019 MV - Music	ASTM D5755-03 - Microvac		2/29/2016
160202 - S17	-020 MV - CTE	ASTM D5755-03 - Microvac		2/29/2016
160202 - S18	-021 MV - Staff - Admin	ASTM D5755-03 - Microvac		2/29/2016
160202 - S19	-022 MV - Recept - Admin	ASTM D5755-03 - Microvac		2/29/2016
160202 - S20	-023 MV - Rm B	ASTM D5755-03 - Microvac		2/29/2016
160202 - S21	-024 MV - Rm D	ASTM D5755-03 - Microvac		2/29/2016
160202 - S22	-025 MV - Rm C	ASTM D5755-03 - Microvac		2/29/2016

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A Professional Service Corporation in the Northwest

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Report Date: 3/4/2016

ASTM D5755-03 - Microvac

Preparation and analysis of the above samples was conducted in accordance with the ASTM # D-5755-03 for the identification of asbestos in dust. Briefly, the samples were sampled by using a microvac technique onto 0.45 µm pore size mixed cellulose ester (MCE) filters. Sample cassettes were rinsed in distilled, particle-free water, sonicated lightly to homogenize and removed particulates. Aliquots were taken and filtered onto 0.22 µm pore size mixed cellulose ester filters, then air-dried. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

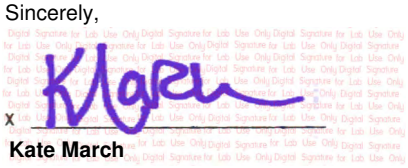
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification between 15,000 - 20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Kate March
QC Manager

Lab/Cor, Inc.
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Final Report

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A Professional Service Corporation in the Northwest

ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S2
Client Sample No.: -005 MV
Description: Rm 7
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

Lab/Cor Sample No.: S3
Client Sample No.: -006 MV
Description: Library
Filter Fraction: 1 **Aliquot Dilution:** 0.025
Residual Ash Vol: 20 ml **Final Dilution:** 0.025
Begin Volume: 20 ml
Volume Taken: 0.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 8
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.084
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	6433.333	2586.2 - 13255.424 - Poisson	7	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	6433.333	2586.2 - 13255.424 - Poisson	7	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S6
Client Sample No.: -009 MV
Description: Rm 13
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.05 ml
Aliquot Dilution: 0.0025
Final Dilution: 0.0025

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 7352.381
Detection Limit. (struc/cm2) : 21983.619

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Asbestos >=5.0µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Libby-Other >0.5µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 7352.381	0 - 27122.933 - Poisson	0	

Lab/Cor Sample No.: S7
Client Sample No.: -010 MV
Description: Rm 14
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.1 ml
Aliquot Dilution: 0.005
Final Dilution: 0.005

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 3676.19
Detection Limit. (struc/cm2) : 10991.81

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	220571.429	168314.381 - 283919.543 - Poisson	60	
ASTM Asbestos >=5.0µm	18380.952	5970.133 - 42897.467 - Poisson	5	
ASTM Libby-Other >0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Total Asbestos >=0.5µm	238952.381	184412.419 - 304565.029 - Poisson	65	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

Lab/Cor, Inc.
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Final Report

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A Professional Service Corporation in the Northwest

ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S8
Client Sample No.: -011 MV
Description: Rm 20
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.05 ml
Aliquot Dilution: 0.0025
Final Dilution: 0.0025

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 7352.381
Detection Limit. (struc/cm2) : 21983.619

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Asbestos >=5.0µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Libby-Other >0.5µm	< 7352.381	0 - 27122.933 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 7352.381	0 - 27122.933 - Poisson	0	

Lab/Cor Sample No.: S9
Client Sample No.: -012 MV
Description: North Pod Center
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.5 ml
Aliquot Dilution: 0.025
Final Dilution: 0.025

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 8
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.084
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S10
Client Sample No.: -013 MV
Description: Rm 2
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.1 ml
Aliquot Dilution: 0.005
Final Dilution: 0.005

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 3676.19
Detection Limit. (struc/cm2) : 10991.81

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/3/2016	JEOL 1200 EX	20000
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	7352.381	889.638 - 26560.476 - Poisson	2	
ASTM Asbestos >=5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Libby-Other >0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Total Asbestos >=0.5µm	7352.381	889.638 - 26560.476 - Poisson	2	

Lab/Cor Sample No.: S11
Client Sample No.: -014 MV
Description: Rm 22 - Art
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.025 ml
Aliquot Dilution: 0.00125
Final Dilution: 0.00125

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 14704.762
Detection Limit. (struc/cm2) : 43967.238

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 14704.762	0 - 54245.867 - Poisson	0	
ASTM Asbestos >=5.0µm	< 14704.762	0 - 54245.867 - Poisson	0	
ASTM Libby-Other >0.5µm	< 14704.762	0 - 54245.867 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 14704.762	0 - 54245.867 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S15
Client Sample No.: -018 MV
Description: Gathering Place
Filter Fraction: 1 **Aliquot Dilution:** 0.005
Residual Ash Vol: 20 ml **Final Dilution:** 0.005
Begin Volume: 20 ml
Volume Taken: 0.1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 3676.19
Detection Limit. (struc/cm2) : 10991.81

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Asbestos >=5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Libby-Other >0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	

Lab/Cor Sample No.: S16
Client Sample No.: -019 MV
Description: Music
Filter Fraction: 1 **Aliquot Dilution:** 0.025
Residual Ash Vol: 20 ml **Final Dilution:** 0.025
Begin Volume: 20 ml
Volume Taken: 0.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 8
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.084
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1838.095	222.41 - 6640.119 - Poisson	2	
ASTM Asbestos >=5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	2757.143	568.89 - 8057.29 - Poisson	3	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S17
Client Sample No.: -020 MV
Description: CTE
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 1 ml
Aliquot Dilution: 0.05
Final Dilution: 0.05

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 367.619
Detection Limit. (struc/cm2) : 1099.181

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000
JH	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concentration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim	Total
ASTM Asbestos >=0.5µm - <5.0µm	367.619	9.19 - 2048.373 - Poisson	1	
ASTM Asbestos >=5.0µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Libby-Other >0.5µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Total Asbestos >=0.5µm	367.619	9.19 - 2048.373 - Poisson	1	

Lab/Cor Sample No.: S18
Client Sample No.: -021 MV
Description: Staff - Admin
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 1 ml
Aliquot Dilution: 0.05
Final Dilution: 0.05

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 367.619
Detection Limit. (struc/cm2) : 1099.181

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/4/2016	Hitachi 7000FA	20000

Structure Type	Concentration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim	Total
ASTM Asbestos >=0.5µm - <5.0µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Asbestos >=5.0µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Libby-Other >0.5µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 367.619	0 - 1356.147 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S19
Client Sample No.: -022 MV
Description: Recept - Admin
Filter Fraction: 1 **Aliquot Dilution:** 0.025
Residual Ash Vol: 20 ml **Final Dilution:** 0.025
Begin Volume: 20 ml
Volume Taken: 0.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 735.238
Detection Limit. (struc/cm2) : 2198.362

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/4/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 735.238	0 - 2712.293 - Poisson	0	
ASTM Asbestos >=5.0µm	735.238	18.381 - 4096.747 - Poisson	1	
ASTM Libby-Other >0.5µm	< 735.238	0 - 2712.293 - Poisson	0	
ASTM Total Asbestos >=0.5µm	735.238	18.381 - 4096.747 - Poisson	1	

Lab/Cor Sample No.: S20
Client Sample No.: -023 MV
Description: Rm B
Filter Fraction: 1 **Aliquot Dilution:** 0.025
Residual Ash Vol: 20 ml **Final Dilution:** 0.025
Begin Volume: 20 ml
Volume Taken: 0.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 735.238
Detection Limit. (struc/cm2) : 2198.362

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/4/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	735.238	18.381 - 4096.747 - Poisson	1	
ASTM Asbestos >=5.0µm	< 735.238	0 - 2712.293 - Poisson	0	
ASTM Libby-Other >0.5µm	< 735.238	0 - 2712.293 - Poisson	0	
ASTM Total Asbestos >=0.5µm	735.238	18.381 - 4096.747 - Poisson	1	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160202 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160202R01
Date Received: 2/29/2016

Lab/Cor Sample No.: S21
Client Sample No.: -024 MV
Description: Rm D
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.1 ml
Aliquot Dilution: 0.005
Final Dilution: 0.005

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 3676.19
Detection Limit. (struc/cm2) : 10991.81

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000

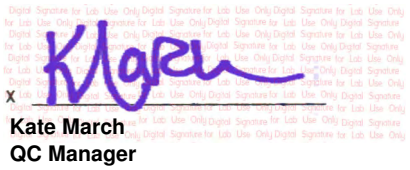
Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	11028.571	2275.562 - 32229.162 - Poisson	3	
ASTM Asbestos >=5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Libby-Other >0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Total Asbestos >=0.5µm	11028.571	2275.562 - 32229.162 - Poisson	3	

Lab/Cor Sample No.: S22
Client Sample No.: -025 MV
Description: Rm C
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.25 ml
Aliquot Dilution: 0.0125
Final Dilution: 0.0125

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 1470.476
Detection Limit. (struc/cm2) : 4396.724

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/4/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	



Kate March
QC Manager

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S2
Client Sample No: -005 MV
Description: Rm 7

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E44				NSD							
G10	2	C32				NSD							
G11	3	E42				NSD							
G11	4	G34				NSD							

Lab/Cor Sample No: S3
Client Sample No: -006 MV
Description: Library

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E32				NSD							
G10	2	G31	CDQ	1		Fiber	1.47	0.1	14.7	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J47402SP	KM 3/3/2016	
Diffraction	J47402DF	KM 3/3/2016	0.53nm ROW SPACING
Brightfield	J47402BF		

G10	2	G31	CD	2		Fiber	0.85	0.1	8.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CD	3		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CM	4		Fiber	2.5	0.08	31.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CD	5		Fiber	1	0.1	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CD	6		Fiber	1.4	0.08	17.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E33				NSD							
G11	6	G51				NSD							
G12	7	E41				NSD							
G12	8	F41	CD	7		Bundle	1.7	0.12	14.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03**
Report Number: 160202R01
Client: PBS Engineering + Environmental
Date Received: 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S6
Client Sample No: -009 MV
Description: Rm 13

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F41				NSD							
G10	2	E43				NSD							
G10	3	E32				NSD							
G10	4	G32				NSD							
G10	5	H33				NSD							
G11	6	E41				NSD							
G11	7	F44				NSD							
G11	8	C43				NSD							
G11	9	C52				NSD							
G11	10	E52				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S7
Client Sample No: -010 MV
Description: Rm 14

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F34	CDQ	1		Matrix 15-0	4.8	4.5	1.1	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J47411SP	KM 3/3/2016	
Diffraction	J47411DF	KM 3/3/2016	0.53nm ROW SPACING
Brightfield	J47411BF		

G10	2	E32	CD	2		Cluster 4-0	2.5	2	1.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	3		Bundle	1.1	0.12	9.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	4		Fiber	2	0.11	18.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	5		Fiber	2.85	0.1	28.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CM	6		Fiber	1.1	0.1	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	7		Bundle	1.25	0.13	9.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CM	8		Matrix 2-0	1.5	0.8	1.9	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CM	9		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	10		Matrix 2-0	1.8	0.7	2.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CM	11		Fiber	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	12		Matrix 3-0	2.6	1.2	2.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E32	CD	13		Fiber	2	0.1	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CD	14		Matrix 1-0	5.2	3.1	1.7	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E42	CM	15		Fiber	1.1	0.1	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CM	16		Fiber	0.5	0.08	6.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CM	17		Fiber	4.8	0.08	60	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CM	18		Fiber	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E42	CD	19		Bundle	4.5	0.22	20.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CD	20		Fiber	3.2	0.1	32	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	21		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	22		Fiber	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CD	23		Bundle	1.2	0.2	6	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S7
Client Sample No: -010 MV
Description: Rm 14

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	4	F44	CM	24		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	25		Fiber	1.1	0.1	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	26		Fiber	2	0.1	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	27		Fiber	0.8	0.05	16	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	28		Fiber	0.9	0.1	9	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	29		Fiber	0.7	0.1	7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	30		Matrix 4-0	1.8	1.1	1.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	31		Bundle	1.8	0.15	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	32		Bundle	1.1	0.13	8.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	33		Bundle	3.9	0.11	35.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	34		Fiber	0.65	0.012	54.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	35		Matrix 8-2	7.5	1.2	6.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	5	E43	CD	36		Fiber	0.5	0.08	6.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CD	37		Matrix 4-0	2.5	1	2.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	5	E43	CM	38		Fiber	0.9	0.08	11.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	6	F51	CD	39		Bundle	4.9	0.12	40.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	6	F51	CD	40		Fiber	1.1	0.1	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	6	F51	CD	41		Fiber	9	0.1	90	Chrysotile			ASTM_>=5.0, ASTM_Total
G12	7	H42	CD	42		Bundle	2	0.15	13.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	7	H42	CD	43		Fiber	1.1	0.1	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	7	H42	CD	44		Matrix 1-0	1.2	0.3	4	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	7	H42	CD	45		Bundle	3.8	0.4	9.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CD	46		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CD	47		Bundle	1.1	0.13	8.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CD	48		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CM	49		Fiber	0.8	0.05	16	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S7
Client Sample No: -010 MV
Description: Rm 14

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G12	8	K41	CD	50		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CD	51		Cluster 8-0	4.5	1.5	3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	8	K41	CD	52		Cluster 5-0	2.1	0.9	2.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	9	F43	CD	53		Fiber	0.8	0.08	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	9	F43	CM	54		Fiber	0.8	0.05	16	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	9	F43	CD	55		Fiber	0.7	0.08	8.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	9	F43	CM	56		Matrix 1-0	2	1.2	1.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CD	57		Fiber	3.5	0.11	31.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CM	58		Matrix 1-0	1.5	0.8	1.9	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CM	59		Fiber	0.9	0.1	9	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CD	60		Matrix 15-0	10	5.5	1.8	Chrysotile			ASTM_>=5.0, ASTM_Total
G12	10	K52	CM	61		Fiber	0.9	0.08	11.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CD	62		Matrix 20-2	7.2	3	2.4	Chrysotile			ASTM_>=5.0, ASTM_Total
G12	10	K52	CM	63		Fiber	0.9	0.08	11.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CM	64		Fiber	1.2	0.08	15	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G12	10	K52	CD	65		Fiber	0.9	0.1	9	Chrysotile			ASTM_Total, ASTM_0.5-5.0

Lab/Cor Sample No: S8
Client Sample No: -011 MV
Description: Rm 20

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E41				NSD							
G10	2	F44				NSD							
G11	3	E33				NSD							
G11	4	F44				NSD							
G11	5	E32				NSD							
G11	6	C42				NSD							
G12	7	F42				NSD							
G12	8	G42				NSD							
G12	9	C34				NSD							
G12	10	E34				NSD							

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Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S9
Client Sample No: -012 MV
Description: North Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E31				NSD							
G10	2	E32				NSD							
G10	3	F33				NSD							
G10	4	F42				NSD							
G11	5	C42				NSD							
G11	6	E41				NSD							
G11	7	E44				NSD							
G11	8	F43				NSD							

Lab/Cor Sample No: S10
Client Sample No: -013 MV
Description: Rm 2

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C42				NSD							
G10	2	E41	CDQ	1		Fiber	1.5	0.1	15	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J47416SP	KM 3/3/2016	
Diffraction	J47416DF	KM 3/3/2016	0.53nm ROW SPACING
Brightfield	J47416BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	3	E44				NSD							
G10	4	F43				NSD							
G11	5	E34				NSD							
G11	6	F33	CD	2		Fiber	0.8	0.1	8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	7	F42				NSD							
G11	8	G41				NSD							
G12	9	E42				NSD							
G12	10	F42				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S11
Client Sample No: -014 MV
Description: Rm 22 - Art

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	1	C34				NSD							
G7	2	E41				NSD							
G7	3	E42				NSD							
G7	4	F41				NSD							
G7	5	F44				NSD							
G8	6	C34				NSD							
G8	7	E33				NSD							
G8	8	E42				NSD							
G8	9	F41				NSD							
G8	10	F44				NSD							

Lab/Cor Sample No: S15
Client Sample No: -018 MV
Description: Gathering Place

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C34				NSD							
G10	2	E33				NSD							
G10	3	E42				NSD							
G10	4	F41				NSD							
G10	5	F44				NSD							
G11	6	C34				NSD							
G11	7	E33				NSD							
G11	8	E42				NSD							
G11	9	F41				NSD							
G11	10	F44				NSD							

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Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S16
Client Sample No: -019 MV
Description: Music

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C31	CDQ	1		Matrix 200-5	47.8	30.2	1.6	Chrysotile	Mg, Si		ASTM_>=5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J47435SP	KM 3/4/2016	
Diffraction	J47435DF	KM 3/4/2016	0.53nm ROW SPACING
Brightfield	J47435BF		

G10	2	C34	CD	2		Bundle	2.2	0.12	18.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	3	E33				NSD							
G10	4	F44	CD	3		Matrix 1-0	1.2	0.3	4	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	5	G43				NSD							
G11	6	F43				NSD							
G11	7	C43				NSD							
G11	8	H51				NSD							

Lab/Cor Sample No: S17
Client Sample No: -020 MV
Description: CTE

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C42				NSD							
G10	2	E44	AZQ	1		Fiber	2.1	0.3	7	Tremolite	Mg, Si, Ca, Fe		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F47425BF		
Diffraction	F47425DF	JH 3/4/2016	[3 1 10] ZONE AXIS ID
Spectra	F47425SP	JH 3/4/2016	

G10	3	F52				NSD							
G10	4	E62				NSD							
G10	5	G61				NSD							
G11	6	F23				NSD							
G11	7	F24				NSD							
G11	8	C33				NSD							
G11	9	F41				NSD							
G11	10	E43				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S18
Client Sample No: -021 MV
Description: Staff - Admin

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	B41				NSD							
G10	2	E41				NSD							
G10	3	F41				NSD							
G10	4	G53				NSD							
G10	5	F61				NSD							
G11	6	C53				NSD							
G11	7	E52				NSD							
G11	8	G52				NSD							
G11	9	H42				NSD							
G11	10	F31				NSD							

Lab/Cor Sample No: S19
Client Sample No: -022 MV
Description: Recept - Admin

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E41				NSD							
G10	2	G41				NSD							
G10	3	H51				NSD							
G10	4	G61				NSD							
G10	5	E62				NSD							
G11	6	E52				NSD							
G11	7	G51				NSD							
G11	8	H43				NSD							
G11	9	G42				NSD							
G11	10	E34	AQ	1		Fiber	5	0.18	27.8	Tremolite			ASTM_>=5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Brightfield	F47433BF		
Spectra	F47433SP	JH 3/4/2016	
Diffraction	F47433DF		[1 0 0] ZONE AXIS ID

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03** **Report Number:** 160202R01
Client: PBS Engineering + Environmental **Date Received:** 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S20
Client Sample No: -023 MV
Description: Rm B

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C41				NSD							
G10	2	B43				NSD							
G10	3	E51	AQ	1		Matrix 1-0	4.9	3.2	1.5	Actinolite	Mg, Al, Si, Ca, Fe		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F47436BF		
Spectra	F47436SP	JH 3/4/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	4	G51				NSD							
G10	5	G61				NSD							
G11	6	G52				NSD							
G11	7	E54				NSD							
G11	8	C52				NSD							
G11	9	E42				NSD							
G11	10	G31				NSD							

Lab/Cor Sample No: S21
Client Sample No: -024 MV
Description: Rm D

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	1	E34				NSD							
G7	2	F34	CDQ	1		Matrix 15-0	2.65	1.88	1.4	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J47437SP	KM 3/4/2016	
Diffraction	J47437DF	KM 3/4/2016	0.53nm ROW SPACING
Brightfield	J47437BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	3	F41				NSD							
G7	4	G41	CD	2		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G7	4	G41	CD	3		Fiber	0.7	0.11	6.4	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G7	5	G43				NSD							
G8	6	E43				NSD							
G8	7	E62				NSD							
G8	8	F51				NSD							
G8	9	F52				NSD							
G8	10	E51				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160202 **SEA** **Ref. D5755-03**
Report Number: 160202R01
Client: PBS Engineering + Environmental
Date Received: 2/29/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S22
Client Sample No: -025 MV
Description: Rm C

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C34				NSD							
G10	2	E33				NSD							
G10	3	E42				NSD							
G10	4	F41				NSD							
G10	5	F44				NSD							
G11	6	C34				NSD							
G11	7	E33				NSD							
G11	8	E42				NSD							
G11	9	F41				NSD							
G11	10	G42				NSD							

Count Categories

ASTM_>=5.0	ASTM Asbestos >=5.0µm	ASTM_0.5-5.0	ASTM Asbestos >=0.5µm - <5.0µm	ASTM_Total	ASTM Total Asbestos >=0.5µm
ASTMD_Other	ASTM Libby-Other >0.5µm				

Reviewed by:

X _____

Kate March
QC Manager

TEM / PCM / PLM Chain of Custody Record

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Seattle, WA 98117

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Fax (206) 789-8424

mail@labcor.net
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Client: PBS ENG + ENV
Address: 2K 2517 EASTLAKE
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: 206.255.4659 Fax: —
Email: —
Other Info: —

Analytical Protocol:
- ___ AHERA
- ___ Modified EPA II
- ___ EPA II (Yamate)
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- X ASTM Dust
- ___ EPA 100.1/ 100.2
- ___ ISO: 10312
- ___ Bulk PLM
- ___ Bulk TEM ☐ Quantitative ☐ Semi-Quant ☐ Qualitative

Turnaround Time:
- X 5 days
- ___ 3 days
- ___ 2 days
- ___ 24 hours*
- ___ 6 hr **RUSH***
- ___ Redeposit

Project Name: SVEC **Project Number:** 41373.000 **P.O. Number:** —

Sample Number	Sample Description	Sample Date	Sample Time			Flow Rate (lpm)			Total ~~Volume~~ AREA	IWA	OWA	Blank
			On	Off	Total	Start	End	Avg				
-004MV	SOUTH POD CENTER	3/4							100CM²			
-007MV	EAST POD CENTER	↓							↓			
-008MV	RM 9											
-015MV	RM 21 - WOODSHOP											
-016 MV	SMALL GYM											
-017 MV	GIRLS LOCKER	↓							↓			

Internal Lab Use Only:
Prelim Released: _____ By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal
Final Results Released: _____ By: ☐ Fax ☐ Phone ☐ E-mail
Hardcopy Invoice Released: _____ ☐ Mail ☐ E-mail
Reviewed By: _____

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

** Call ahead for TATs of 24hrs or less*

Relinquished by: _____ Date: 3/7/16 Time: _____
Received by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____

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Seattle, WA 98117

Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160236 **SEA**

Report Number: 160236R01

Report Date: 3/11/2016

Client: **PBS Engineering + Environmental**

Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102

Project Name: MSD - SVEC

Project No.: 41373.000

PO Number:

Sub Project:

Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160236 - S1	-004 MV - South Pod Center	ASTM D5755-03 - Microvac		3/7/2016
160236 - S2	-007 MV - East Pod Center	ASTM D5755-03 - Microvac		3/7/2016
160236 - S3	-008 MV - Rm 9	ASTM D5755-03 - Microvac		3/7/2016
160236 - S4	-015 MV - Rm 21 - Woodshop	ASTM D5755-03 - Microvac		3/7/2016
160236 - S5	-016 MV - Small Gym	ASTM D5755-03 - Microvac		3/7/2016
160236 - S6	-017 MV - Girls Locker	ASTM D5755-03 - Microvac		3/7/2016

ASTM D5755-03 - Microvac

Preparation and analysis of the above samples was conducted in accordance with the ASTM # D-5755-03 for the identification of asbestos in dust. Briefly, the samples were sampled by using a microvac technique onto 0.45 µm pore size mixed cellulose ester (MCE) filters. Sample cassettes were rinsed in distilled, particle-free water, sonicated lightly to homogenize and removed particulates. Aliquots were taken and filtered onto 0.22 µm pore size mixed cellulose ester filters, then air-dried. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

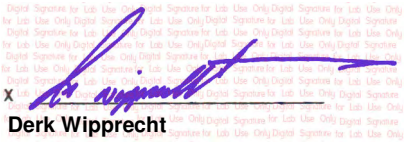
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification between 15,000 - 20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Derk Wipprecht
Laboratory Supervisor

Lab/Cor, Inc.
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Final Report

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160236 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160236R01
Date Received: 3/7/2016

Lab/Cor Sample No.: S1
Client Sample No.: -004 MV
Description: South Pod Center
Filter Fraction: 1 **Aliquot Dilution:** 0.005
Residual Ash Vol: 20 ml **Final Dilution:** 0.005
Begin Volume: 20 ml
Volume Taken: 0.1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 3676.19
Detection Limit. (struc/cm2) : 10991.81

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/10/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Asbestos >=5.0µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Libby-Other >0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 3676.19	0 - 13561.467 - Poisson	0	

Lab/Cor Sample No.: S2
Client Sample No.: -007 MV
Description: East Pod Center
Filter Fraction: 1 **Aliquot Dilution:** 0.0125
Residual Ash Vol: 20 ml **Final Dilution:** 0.0125
Begin Volume: 20 ml
Volume Taken: 0.25 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 1470.476
Detection Limit. (struc/cm2) : 4396.724

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/11/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160236 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160236R01
Date Received: 3/7/2016

Lab/Cor Sample No.: S3
Client Sample No.: -008 MV
Description: Rm 9
Filter Fraction: 1 **Aliquot Dilution:** 0.0125
Residual Ash Vol: 20 ml **Final Dilution:** 0.0125
Begin Volume: 20 ml
Volume Taken: 0.25 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 1470.476
Detection Limit. (struc/cm2) : 4396.724

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/11/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	

Lab/Cor Sample No.: S4
Client Sample No.: -015 MV
Description: Rm 21 - Woodshop
Filter Fraction: 1 **Aliquot Dilution:** 0.01
Residual Ash Vol: 100 ml **Final Dilution:** 0.0005
Begin Volume: 100 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 36761.905
Detection Limit. (struc/cm2) : 109918.095

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/11/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 36761.905	0 - 135614.667 - Poisson	0	
ASTM Asbestos >=5.0µm	< 36761.905	0 - 135614.667 - Poisson	0	
ASTM Libby-Other >0.5µm	< 36761.905	0 - 135614.667 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 36761.905	0 - 135614.667 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160236 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160236R01
Date Received: 3/7/2016

Lab/Cor Sample No.: S5
Client Sample No.: -016 MV
Description: Small Gym
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.25 ml
Aliquot Dilution: 0.0125
Final Dilution: 0.0125

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 1470.476
Detection Limit. (struc/cm2) : 4396.724

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/11/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	

Lab/Cor Sample No.: S6
Client Sample No.: -017 MV
Description: Girls Locker
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 0.25 ml
Aliquot Dilution: 0.0125
Final Dilution: 0.0125

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 10
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.105
Analytical Sens. (struc/cm2) : 1470.476
Detection Limit. (struc/cm2) : 4396.724

Analyst(s)	Analysis Date	Microscope	Magnification
DW	3/11/2016	Philips 410	18000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1470.476	0 - 5424.587 - Poisson	0	



Derk Wipprecht
Laboratory Supervisor

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160236 **SEA** **Ref. D5755-03** **Report Number:** 160236R01
Client: PBS Engineering + Environmental **Date Received:** 3/7/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S1
Client Sample No: -004 MV
Description: South Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C31				NSD							
G10	2	C32				NSD							
G10	3	E31				NSD							
G10	4	E32				NSD							
G10	5	F31				NSD							
G10	6	F32				NSD							
G10	7	G31				NSD							
G11	8	E31				NSD							
G11	9	E32				NSD							
G11	10	F31				NSD							

Lab/Cor Sample No: S2
Client Sample No: -007 MV
Description: East Pod Center

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G13	1	C34				NSD							
G13	2	E33				NSD							
G13	3	E34				NSD							
G13	4	F33				NSD							
G13	5	F34				NSD							
G13	6	G33				NSD							
G13	7	G34				NSD							
G14	8	F52				NSD							
G14	9	G51				NSD							
G14	10	G52				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160236 **SEA** **Ref. D5755-03** **Report Number:** 160236R01
Client: PBS Engineering + Environmental **Date Received:** 3/7/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S3
Client Sample No: -008 MV
Description: Rm 9

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G13	1	E42				NSD							
G13	2	F41				NSD							
G13	3	F42				NSD							
G13	4	G41				NSD							
G13	5	G42				NSD							
G13	6	H41				NSD							
G13	7	H42				NSD							
G14	8	F33				NSD							
G14	9	F34				NSD							
G14	10	G33				NSD							

Lab/Cor Sample No: S4
Client Sample No: -015 MV
Description: Rm 21 - Woodshop

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G16	1	B31				NSD							
G16	2	B32				NSD							
G16	3	C31				NSD							
G16	4	C32				NSD							
G16	5	E31				NSD							
G16	6	E32				NSD							
G16	7	F31				NSD							
G17	8	E33				NSD							
G17	9	E34				NSD							
G17	10	F33				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160236 **SEA** **Ref. D5755-03** **Report Number:** 160236R01
Client: PBS Engineering + Environmental **Date Received:** 3/7/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S5
Client Sample No: -016 MV
Description: Small Gym

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G13	1	C33				NSD							
G13	2	C34				NSD							
G13	3	E33				NSD							
G13	4	E34				NSD							
G13	5	F33				NSD							
G13	6	F34				NSD							
G13	7	G33				NSD							
G14	8	E31				NSD							
G14	9	E32				NSD							
G14	10	F31				NSD							

Lab/Cor Sample No: S6
Client Sample No: -017 MV
Description: Girls Locker

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G13	1	C31				NSD							
G13	2	C32				NSD							
G13	3	E31				NSD							
G13	4	E32				NSD							
G13	5	F31				NSD							
G13	6	F32				NSD							
G13	7	G31				NSD							
G14	8	E31				NSD							
G14	9	E32				NSD							
G14	10	F31				NSD							

Count Categories

ASTM_>=5.0	ASTM Asbestos >=5.0µm	ASTM_0.5-5.0	ASTM Asbestos >=0.5µm - <5.0µm	ASTM_Total	ASTM Total Asbestos >=0.5µm
ASTMD_Other	ASTM Libby-Other >0.5µm				

Reviewed by:

X

Derk Wipprecht
Laboratory Supervisor

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Seattle, WA 98117

Analysis Report Cover

Final Report

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Job Number: 160121 **SEA**

Report Number: 160121R01
Report Date: 2/9/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: Sky Valley Education Center
Project No.: 41373
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160121 - S1	001-MV - Montessori Pod Attic - South Pod-	ASTM D5755-03 - Microvac		2/8/2016
160121 - S2	002-MV - Humanities Pod Attic - North Pod-	ASTM D5755-03 - Microvac		2/8/2016
160121 - S3	003-MV - Math and Science Pod Attic -East Pod-	ASTM D5755-03 - Microvac		2/8/2016

ASTM D5755-03 - Microvac

Preparation and analysis of the above samples was conducted in accordance with the ASTM # D-5755-03 for the identification of asbestos in dust. Briefly, the samples were sampled by using a microvac technique onto 0.45 µm pore size mixed cellulose ester (MCE) filters. Sample cassettes were rinsed in distilled, particle-free water, sonicated lightly to homogenize and removed particulates. Aliquots were taken and filtered onto 0.22 µm pore size mixed cellulose ester filters, then air-dried. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

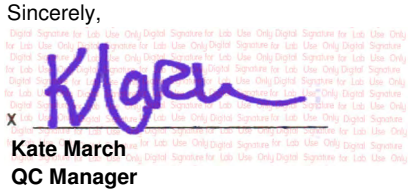
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification between 15,000 - 20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Kate March
QC Manager

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160121 **SEA**
Client: PBS Engineering + Environmental
Project Name: Sky Valley Education Center

Report Number: 160121R01
Date Received: 2/8/2016

Lab/Cor Sample No.: S1
Client Sample No.: 001-MV
Description: Montessori Pod Attic -South Pod-
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	32166.667	22404.543 - 44736.481 - Poisson	35	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	32166.667	22404.543 - 44736.481 - Poisson	35	

Lab/Cor Sample No.: S2
Client Sample No.: 002-MV
Description: Humanities Pod Attic -North Pod-
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	11947.619	6361.648 - 20431.348 - Poisson	13	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	11947.619	6361.648 - 20431.348 - Poisson	13	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160121 **SEA**
Client: PBS Engineering + Environmental
Project Name: Sky Valley Education Center

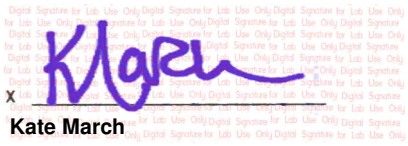
Report Number: 160121R01
Date Received: 2/8/2016

Lab/Cor Sample No.: S3
Client Sample No.: 003-MV
Description: Math and Science Pod Attic -East Pod-
Filter Fraction: 1 **Aliquot Dilution:** 0.125
Residual Ash Vol: 20 ml **Final Dilution:** 0.125
Begin Volume: 20 ml
Volume Taken: 2.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 367.619
Detection Limit. (struc/cm2) : 1099.181

Analyst(s)	Analysis Date	Microscope	Magnification
KM	2/9/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Asbestos >=5.0µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Libby-Other >0.5µm	< 367.619	0 - 1356.147 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 367.619	0 - 1356.147 - Poisson	0	



Kate March
QC Manager

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160121 **SEA** **Ref. D5755-03** **Report Number:** 160121R01
Client: PBS Engineering + Environmental **Date Received:** 2/8/2016
Project Name: Sky Valley Education Center
Project No.: 41373

Lab/Cor Sample No: S1
Client Sample No: 001-MV
Description: Montessori Pod Attic -South Pod-

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C44	CDQ	1		Fiber	1.65	0.08	20.6	Chrysotile	Mg, Si		ASTM_0.5-5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J46859SP	KM 2/9/2016	
Diffraction	J46859DF	KM 2/9/2016	0.53nm ROW SPACING
Brightfield	J46859BF		

G10	1	C44	CM	2		Fiber	0.65	0.08	8.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CM	3		Fiber	0.85	0.08	10.6	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CM	4		Matrix 1-0	1.6	0.4	4	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CD	5		Bundle	1.6	0.12	13.3	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CD	6		Fiber	0.85	0.1	8.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CM	7		Cluster 5-0	1.3	0.7	1.9	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	C44	CM	8		Fiber	1.3	0.08	16.2	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CD	9		Fiber	1.6	0.08	20	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CD	10		Fiber	1.1	0.05	22	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CM	11		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CD	12		Bundle	0.7	0.13	5.4	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CM	13		Fiber	0.6	0.05	12	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E41	CD	14		Fiber	0.65	0.08	8.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Diffraction	J46860DF	KM 2/9/2016	0.53nm ROW SPACING

G10	2	E41	CM	15		Matrix 1-0	1.8	1.5	1.2	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CM	16		Matrix 1-0	0.75	0.12	6.2	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CD	17		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CD	18		Fiber	0.65	0.08	8.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CD	19		Bundle	1.2	0.15	8	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CD	20		Bundle	1.7	0.18	9.4	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CD	21		Bundle	1.85	0.4	4.6	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CM	22		Fiber	0.95	0.12	7.9	Chrysotile			ASTM_0.5-5.0, ASTM_Total

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Final Report

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160121 **SEA** **Ref. D5755-03** **Report Number:** 160121R01
Client: PBS Engineering + Environmental **Date Received:** 2/8/2016
Project Name: Sky Valley Education Center
Project No.: 41373

Lab/Cor Sample No: S1
Client Sample No: 001-MV
Description: Montessori Pod Attic -South Pod-

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	3	F43	CM	23		Fiber	1.5	0.08	18.8	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	CM	24		Fiber	1.4	0.08	17.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	F43	ADQ	25		Fiber	2.4	0.28	8.6	Tremolite	Mg, Al, Si, Ca, Fe		ASTM_0.5-5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J46861SP	KM 2/9/2016	
Diffraction	J46861DF	KM 2/9/2016	0.53nm ROW SPACING
Brightfield	J46861BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	3	F43	CM	26		Fiber	0.8	0.08	10	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CD	27		Fiber	1.3	0.12	10.8	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CD	28		Cluster 3-0	2.4	0.4	6	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CM	29		Fiber	1.2	0.08	15	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CD	30		Matrix 1-0	2.1	0.8	2.6	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CM	31		Fiber	0.6	0.08	7.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CD	32		Matrix 1-0	1.2	0.2	6	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CM	33		Fiber	0.9	0.08	11.2	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CD	34		Bundle	3.2	0.45	7.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	G42	CM	35		Fiber	1.5	0.08	18.8	Chrysotile			ASTM_0.5-5.0, ASTM_Total

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160121 **SEA** **Ref. D5755-03** **Report Number:** 160121R01
Client: PBS Engineering + Environmental **Date Received:** 2/8/2016
Project Name: Sky Valley Education Center
Project No.: 41373

Lab/Cor Sample No: S2
Client Sample No: 002-MV
Description: Humanities Pod Attic -North Pod-

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E43	CDQ	1		Fiber	1.2	0.1	12	Chrysotile	Mg, Si		ASTM_0.5-5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J46858SP	KM 2/9/2016	
Diffraction	J46858DF	KM 2/9/2016	0.53nm ROW SPACING
Brightfield	J46858BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E43	CD	2		Fiber	0.65	0.08	8.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	1	E43	CD	3		Fiber	1.2	0.08	15	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E44	CD	4		Fiber	0.65	0.1	6.5	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E44	CM	5		Matrix 1-0	0.9	0.4	2.2	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E44	CD	6		Fiber	0.7	0.1	7	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E44	CM	7		Fiber	1.1	0.1	11	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	2	E44	CD	8		Bundle	2.4	0.12	20	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	E51	CD	9		Fiber	3.5	0.1	35	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	E51	CM	10		Fiber	2	0.1	20	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G10	3	E51	CM	11		Fiber	1.1	0.1	11	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	H41	CD	12		Fiber	0.65	0.08	8.1	Chrysotile			ASTM_0.5-5.0, ASTM_Total
G11	4	H41	CM	13		Fiber	0.8	0.08	10	Chrysotile			ASTM_0.5-5.0, ASTM_Total

Lab/Cor Sample No: S3
Client Sample No: 003-MV
Description: Math and Science Pod Attic -East Pod-

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G13	1	F43				NSD							
G13	2	F44				NSD							
G14	3	C42				NSD							
G14	4	E41				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160121 **SEA** **Ref. D5755-03** **Report Number:** 160121R01

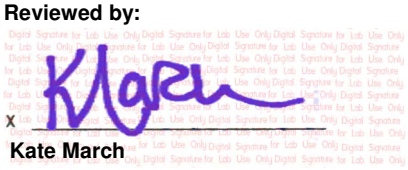
Client: PBS Engineering + Environmental **Date Received:** 2/8/2016

Project Name: Sky Valley Education Center

Project No.: 41373

Count Categories					
ASTM_>=5.0	ASTM Asbestos >=5.0µm	ASTM_0.5-5.0	ASTM Asbestos >=0.5µm - <5.0µm	ASTM_Total	ASTM Total Asbestos >=0.5µm
ASTMD_Other	ASTM Libby-Other >0.5µm				

Reviewed by:



Kate March
QC Manager

160121

SEA

LabCor Portland, Inc.
4321 SW Corbett, Ste A
Portland, OR 97239

Office ph (503) 224-5055
Staff@labcorpdx.net

www.labcor.net

Chain of Custody Record

Customer Name: PBS ENGINEERING & ENVIRONMENTAL
Customer Address: 2517 EASTLAKE AVE E SUITE 100
City, State, Zip: SEATTLE, WA 98102
Contact: GREGG MIDDAUGH Phone: 206.255.4659
Contact Email: Gregg.middaugh@pbsenv.com
Invoicing Email:
Other info (Verbals, etc):

Analytical Protocol:
___ PLM –Visual estimate
___ PLM – 400 Pt. Count
___ PLM – Gravimetric
___ AHERA
___ EPAII, Mod EPA II
___ NIOSH 7402 (TEM)
___ NIOSH 7400 (PCM)
___ TEM Bulk
___ EPA/600/R-04/004 (TEM Vermiculite)
Other AST DUST

Requested Turnaround Time:
___ 5 days
___ 3 days
___ 2 days
X 24 hours*
___ 6 hours*
___ 4 hours*
** Please call ahead for TATs of 24hrs or less, all TATs not available for all analyses*

Project Name: SKY VALLEY EDUCATION CENTER **Project No.:** 41373 **P.O. No.:** —

Bulk Samples need only Sample Number, Description and Date (if avail).			Time			LPM - Flow Rate			~~AREA~~ ~~Volume~~ TOTAL			
Sample No.	Sample Description	Date	On	Off	Total	Begin	End	Avg		IWA	OWA	Blank
001-MV	MONTESSORI POD ATTIC -SOUTH POD-	2/5/16	—					—	100 cm²			
002-MV	HUMANITIES POD ATTIC -NORTH POD-	2/5/16	—					—	100 cm²			
003-MV	MATH & SCIENCE POD ATTIC -EAST POD-	2/5/16	—					—	100 cm²			

By signing below you are agreeing to comply with Lab/Cor's Terms and Conditions

Relinquished by: [signature] Date: 2-8-16 Time: Received by: [signature] Date: 2/8/16 Time: 1740

Relinquished by: Date: Time: Received by: Date: Time:

Internal Lab Use Only:
Date/Time Prelim Released: Date/Time Final Results Released: Invoice Hardcopy/e-mailed:
By : ☐Phone ☐E-mail ☐Verbal By : ☐Phone ☐E-mail Reviewed By:

160309 Pg 1 of 2

TEM / PCM / PLM Chain of Custody Record

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mail@labcor.net
www.labcor.net

Client: PBS
Address:
City, State, Zip: SEATTLE
Contact: MIDDAUGH
Phone: Fax:
Email:
Other Info:

Analytical Protocol:
- ___ AHERA
- ___ Modified EPA II
- ___ EPA II (Yamate)
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- X ASTM Dust
- ___ EPA 100.1/ 100.2
- ___ ISO: 10312
- ___ Bulk PLM
- ___ Bulk TEM ☐ Quantitative ☐ Semi-Quant ☐ Qualitative

Turnaround Time:
- ___ 5 days
- ___ 3 days
- ___ 2 days
- X 24 hours*
- ___ 6 hr **RUSH***
- ___ Redeposit

Project Name: SVEC **Project Number:** 41373.000 **P.O. Number:** —

Sample Number	Sample Description	Sample Date	Sample Time On	Sample Time Off	Sample Time Total	Flow Rate (lpm) Start	Flow Rate (lpm) End	Flow Rate (lpm) Avg	Total ~~Volume~~ AREA	IWA	OWA	Blank
-520	Rm D - TEACHER DESK	3/28							100 cm²			
-521	Rm D - SE VFT SE NEAR WINDOW											
-522	Rm D - ENTRY TOP OF CAB.											
-523	Rm D - TOP OF GRN CAB W.											
-524	Rm D - VFT NW CORNER											
-525	Rm 14 - CPT N. BOOKSHELF											
-526	Rm 14 - ENTRY CPT W.											
-527	Rm 14 - TOP N. BOOKSHELF											
-528	Rm 14 - TOP OF BLT-IN BKSHF											
-529	Rm 14 - SM. BKSHF W. ENTRY											

Internal Lab Use Only
Prelim Released: ___ Final Results Released: ___ Hardcopy Invoice Released: ___ ☐ Mail ☐ E-mail
By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal By: ☐ Fax ☐ Phone ☐ E-mail Reviewed By: ___

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: [signature] Date: 3/28 Time: ___
Received by: [signature] L/C Date: 3/31 Time: 0830

Relinquished by: ___ Date: ___ Time: ___
Received by: ___ Date: ___ Time: ___

TEM / PCM / PLM Chain of Custody Record

160309

Pg 2 of 2

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Seattle, WA 98117

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Fax (206) 789-8424

mail@labcor.net
www.labcor.net

Client: PBS
Address:
City, State, Zip: SEATTLE
Contact: G. MIDDAUGH
Phone: Fax:
Email:
Other Info:

Analytical Protocol:
- ___ AHERA
- ___ Modified EPA II
- ___ EPA II (Yamate)
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- X ASTM Dust
- ___ EPA 100.1/ 100.2
- ___ ISO: 10312
- ___ Bulk PLM
- ___ Bulk TEM ☐ Quantitative ☐ Semi-Quant ☐ Qualitative

Turnaround Time:
- ___ 5 days
- ___ 3 days
- ___ 2 days
- X 24 hours*
- ___ 6 hr **RUSH***
- ___ Redeposit

Project Name: SVEC **Project Number:** 41373 **P.O. Number:**

Sample Number	Sample Description	Sample Date	Sample Time			Flow Rate (lpm)			Total ~~Volume~~ AREA	IWA	OWA	Blank
			On	Off	Total	Start	End	Avg				
-530	LIBRARY - E. WALL CPT	3/28							100 cm²			
-531	" - E. BOOKSHELF FICTION	↓							↓			
-532	" - SW. WALL CPT											
-533	" - SW WALL - TOP OF BOOKSHELF											
-534	" - NE WALL - CPT											
-535	" - NE WALL - TOP OF BOOKSHELF	↓							↓			

Internal Lab Use Only:
Prelim Released: By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal — Final Results Released: By: ☐ Fax ☐ Phone ☐ E-mail — Hardcopy Invoice Released: ☐ Mail ☐ E-mail — Reviewed By:

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Relinquished by: G. Middaugh Date: 3/28 Time:
Received by: c/c Date: 3/31 Time: 0830

Relinquished by: Date: Time:
Received by: Date: Time:

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Analysis Report Cover

Final Report

A Professional Service Corporation in the Northwest

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Job Number: 160309 **SEA**

Report Number: 160309R02
Report Date: 3/31/2016

Client: **PBS Engineering + Environmental**
Address: **2517 Eastlake Ave E**
Suite 100
Seattle, WA 98102
Project Name: MSD - SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160309 - S1	-520 - Rm D - Teacher Desk	ASTM D5755-03 - Microvac		3/31/2016
160309 - S2	-521 - Rm D - SE VFT SE Near Window	ASTM D5755-03 - Microvac		3/31/2016
160309 - S3	-522 - Rm D - Entry Top of Cab.	ASTM D5755-03 - Microvac		3/31/2016
160309 - S4	-523 - Rm D - Top of Grn Cab W.	ASTM D5755-03 - Microvac		3/31/2016
160309 - S5	-524 - Rm D - VFT NW Corner	ASTM D5755-03 - Microvac		3/31/2016
160309 - S6	-525 - Rm 14 - Cpt N. Bookshelf	ASTM D5755-03 - Microvac		3/31/2016
160309 - S7	-526 - Rm 14 - Entry Cpt W.	ASTM D5755-03 - Microvac		3/31/2016
160309 - S8	-527 - Rm 14 - Top N. Bookshelf	ASTM D5755-03 - Microvac		3/31/2016
160309 - S9	-528 - Rm 14 - Top of Blt-in Bkshf	ASTM D5755-03 - Microvac		3/31/2016
160309 - S10	-529 - Rm 14 - Sm. Bkshf W. Entry	ASTM D5755-03 - Microvac		3/31/2016
160309 - S11	-530 - Library - E. Wall Cpt	ASTM D5755-03 - Microvac		3/31/2016
160309 - S12	-531 - Library - E. Bookshelf Fiction	ASTM D5755-03 - Microvac		3/31/2016
160309 - S13	-532 - Library - SW. Wall Cpt	ASTM D5755-03 - Microvac		3/31/2016
160309 - S14	-533 - Library - SW. Wall - Top of Bookshelf	ASTM D5755-03 - Microvac		3/31/2016
160309 - S15	-534 - Library - NE Wall - Cpt	ASTM D5755-03 - Microvac		3/31/2016
160309 - S16	-535 - Library - NE Wall - Top of Bookshelf	ASTM D5755-03 - Microvac		3/31/2016

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Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Report Date: 3/31/2016

ASTM D5755-03 - Microvac

Preparation and analysis of the above samples was conducted in accordance with the ASTM # D-5755-03 for the identification of asbestos in dust. Briefly, the samples were sampled by using a microvac technique onto 0.45 µm pore size mixed cellulose ester (MCE) filters. Sample cassettes were rinsed in distilled, particle-free water, sonicated lightly to homogenize and removed particulates. Aliquots were taken and filtered onto 0.22 µm pore size mixed cellulose ester filters, then air-dried. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification between 15,000 - 20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

X

Kate March
QC Manager

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S1
Client Sample No.: -520
Description: Rm D - Teacher Desk
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	919.048	22.976 - 5120.933 - Poisson	1	

Lab/Cor Sample No.: S2
Client Sample No.: -521
Description: Rm D - SE VFT SE Near Window
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	11947.619	6361.648 - 20431.348 - Poisson	13	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	11947.619	6361.648 - 20431.348 - Poisson	13	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S3
Client Sample No.: -522
Description: Rm D - Entry Top of Cab.
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	919.048	22.976 - 5120.933 - Poisson	1	

Lab/Cor Sample No.: S4
Client Sample No.: -523
Description: Rm D - Top of Grn Cab W.
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1838.095	222.41 - 6640.119 - Poisson	2	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1838.095	222.41 - 6640.119 - Poisson	2	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S5
Client Sample No.: -524
Description: Rm D - VFT NW Corner
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1838.095	222.41 - 6640.119 - Poisson	2	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1838.095	222.41 - 6640.119 - Poisson	2	

Lab/Cor Sample No.: S6
Client Sample No.: -525
Description: Rm 14 - Cpt N. Bookshelf
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Asbestos >=5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1838.095	222.41 - 6640.119 - Poisson	2	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S7
Client Sample No.: -526
Description: Rm 14 - Entry Cpt W.
Filter Fraction: 1 **Aliquot Dilution:** 0.025
Residual Ash Vol: 20 ml **Final Dilution:** 0.025
Begin Volume: 20 ml
Volume Taken: 0.5 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 8
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.084
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1838.095	222.41 - 6640.119 - Poisson	2	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1838.095	222.41 - 6640.119 - Poisson	2	

Lab/Cor Sample No.: S8
Client Sample No.: -527
Description: Rm 14 - Top N. Bookshelf
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	129585.714	102512.857 - 167305.714 - Gaussian	141	
ASTM Asbestos >=5.0µm	22057.143	14133.114 - 32820.11 - Poisson	24	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	151642.857	119630.002 - 195451.43 - Gaussian	165	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S9
Client Sample No.: -528
Description: Rm 14 - Top of Blt-in Bkshf
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

Lab/Cor Sample No.: S10
Client Sample No.: -529
Description: Rm 14 - Sm. Bkshf W. Entry
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	4595.238	1492.533 - 10724.367 - Poisson	5	
ASTM Asbestos >=5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	5514.286	2023.743 - 12002.762 - Poisson	6	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S11
Client Sample No.: -530
Description: Library - E. Wall Cpt
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

Lab/Cor Sample No.: S12
Client Sample No.: -531
Description: Library - E. Bookshelf Fiction
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	5514.286	2023.743 - 12002.762 - Poisson	6	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	5514.286	2023.743 - 12002.762 - Poisson	6	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S13
Client Sample No.: -532
Description: Library - SW. Wall Cpt
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

Lab/Cor Sample No.: S14
Client Sample No.: -533
Description: Library - SW. Wall - Top of Bookshelf
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
KM	3/31/2016	JEOL 1200 EX	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 919.048	0 - 3390.367 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160309 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160309R02
Date Received: 3/31/2016

Lab/Cor Sample No.: S15
Client Sample No.: -534
Description: Library - NE Wall - Cpt
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

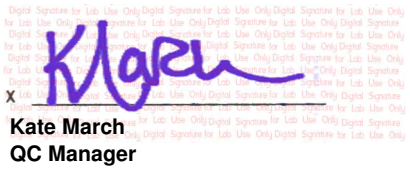
Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	919.048	22.976 - 5120.933 - Poisson	1	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	919.048	22.976 - 5120.933 - Poisson	1	

Lab/Cor Sample No.: S16
Client Sample No.: -535
Description: Library - NE Wall - Top of Bookshelf
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 193
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 919.048
Detection Limit. (struc/cm2) : 2747.952

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1838.095	222.41 - 6640.119 - Poisson	2	
ASTM Asbestos >=5.0µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Libby-Other >0.5µm	< 919.048	0 - 3390.367 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1838.095	222.41 - 6640.119 - Poisson	2	



Kate March
QC Manager

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S1
Client Sample No: -520
Description: Rm D - Teacher Desk

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C31	CDQ	1		Fiber	3.8	0.07	54.3	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48087BF		
Spectra	F48087SP	JH 3/31/2016	
Diffraction	F48087DF	JH 3/31/2016	0.53nm ROW SPACING

G10	2	E42				NSD							
G10	3	E52				NSD							
G11	4	G51				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S2
Client Sample No: -521
Description: Rm D - SE VFT SE Near Window

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C42	CDQ	1		Fiber	3.17	0.08	39.6	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48088SP	KM 3/31/2016	
Diffraction	J48088DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48088BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	E42	CD	2		Fiber	1.5	0.08	18.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E42	CD	3		Fiber	4.25	0.1	42.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E42	CM	4		Fiber	1.2	0.08	15	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	E42	CM	5		Fiber	4.5	0.1	45	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E41	CM	6		Fiber	0.95	0.11	8.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E41	NAM	7		Fiber	1.51	0.23	6.6	Non Asbestos Mineral		possible Hornblende	

ItemType	ItemNum	Confirmed	Comment
Spectra	J48089SP	KM 3/31/2016	
Diffraction	J48089DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48089BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	3	E41	CD	8		Fiber	3.3	0.1	33	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E41	CM	9		Bundle	3.1	0.13	23.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F41	CM	10		Fiber	1.25	0.1	12.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F41	CD	11		Fiber	3.2	0.1	32	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F41	CM	12		Fiber	1.5	0.08	18.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F41	CD	13		Fiber	2.45	0.1	24.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F41	CM	14		Fiber	0.8	0.08	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S3
Client Sample No: -522
Description: Rm D - Entry Top of Cab.

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E42				NSD							
G10	2	F42				NSD							
G11	3	F42				NSD							
G11	4	G42	CDQ	1		Matrix 1-1	5.35	0.3	17.8	Chrysotile	Mg, Si		ASTM_>=5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J48091SP	KM 3/31/2016	
Diffraction	J48091DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48091BF		

Lab/Cor Sample No: S4
Client Sample No: -523
Description: Rm D - Top of Grn Cab W.

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E41	ADQ	1		Fiber	1	0.2	5	Actinolite	Mg, Al, Si, Ca, Fe		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48092BF		
Spectra	F48092SP	JH 3/31/2016	
Diffraction	F48092DF	JH 3/31/2016	0.53nm ROW SPACING

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E41	AQ	2		Fiber	2.2	0.25	8.8	Tremolite	Mg, Si, Ca		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48094BF		
Spectra	F48094SP	JH 3/31/2016	
Diffraction	F48094DF	JH 3/31/2016	0.53nm ROW SPACING

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	F41				NSD							
G11	3	B43				NSD							
G11	4	F53				NSD							

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ASTM D5755-03 - Microvac Raw Data

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Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S5
Client Sample No: -524
Description: Rm D - VFT NW Corner

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E34	CDQ	1		Matrix 1-0	1.5	0.6	2.5	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48095SP	KM 3/31/2016	
Brightfield	J48095BF		
Diffraction	J48095DF	KM 3/31/2016	0.53nm ROW SPACING

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E34	CD	2		Matrix 1-0	1.25	0.6	2.1	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Diffraction	J48096DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48096BF		

G10	2	F32	NSD
G11	3	E43	NSD
G11	4	G51	NSD

Lab/Cor Sample No: S6
Client Sample No: -525
Description: Rm 14 - Cpt N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F61	CDQ	1		Bundle	1.9	0.1	19	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48103BF		
Diffraction	F48103DF	JH 3/31/2016	0.53nm ROW SPACING
Spectra	F48103SP	JH 3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	C44	CD	2		Matrix 1-1	12	5	2.4	Chrysotile			ASTM_>=5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48104BF		

G11	3	A42	NSD
G11	4	B34	NSD

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Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S7
Client Sample No: -526
Description: Rm 14 - Entry Cpt W.

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	1	E42				NSD							
G7	2	F42				NSD							
G7	3	C32				NSD							
G7	4	E32	CDQ	1		Bundle	1.8	0.15	12	Chrysotile	Mg,s l		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48119SP	KM 3/31/2016	
Diffraction	J48119DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48119BF		

G7	5	G32				NSD							
G8	6	E42	CD	2		Fiber	0.85	0.08	10.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G8	7	E43				NSD							
G8	8	G33				NSD							

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Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F33	CDQ	1		Bundle	2.5	0.09	27.8	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48120BF		
Diffraction	F48120DF	JH 3/31/2016	0.53nm ROW SPACING
Spectra	F48120SP	JH 3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F33	CD	2		Cluster 12-0	1.5	1.5	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	3		Matrix 1-0	1	0.5	2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	4		Bundle	2	0.1	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	5		Cluster 10-0	2.5	1.5	1.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	6		Fiber	2	0.09	22.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	7		Fiber	4	0.06	66.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	8		Bundle	6.5	0.1	65	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	1	F33	CD	9		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	10		Bundle	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	11		Cluster 3-0	0.7	0.5	1.4	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	12		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	13		Cluster 3-0	1	1	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	14		Cluster 200-2	20	13	1.5	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	1	F33	CD	15		Fiber	0.6	0.06	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	16		Bundle	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	17		Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	18		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	19		Cluster 5-0	1.5	1	1.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	20		Bundle	4	0.2	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	21		Cluster 3-0	4	2.5	1.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	22		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CDQ	23		Cluster 12-1	7.5	5	1.5	Chrysotile			ASTM_>=5.0, ASTM_Total

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Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F33	CD	24		Bundle	9	0.1	90	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	1	F33	CD	25		Bundle	25	20	1.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	1	F33	CD	26		Cluster 6-0	4.9	2.7	1.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	27		Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	28		Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	29		Fiber	1.3	0.06	21.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	30		Fiber	2.5	0.06	41.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	31		Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	32		Bundle	2	0.2	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	33		Cluster 15-0	4	3	1.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	1	F33	CD	34		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	35		Matrix 1-0	3	2.5	1.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	36		Bundle	4	0.2	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	37		Bundle	9	0.3	30	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	38		Cluster 4-0	2.6	0.4	6.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	39		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	40		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	41		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	42		Fiber	1.5	0.05	30	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	43		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	44		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	45		Fiber	1	0.05	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	46		Cluster 10-0	3.8	1.5	2.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	47		Matrix 1-0	4.5	0.15	30	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	48		Fiber	1.9	0.06	31.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	49		Fiber	3.5	0.06	58.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	H41	CD	50		Bundle	2.3	0.2	11.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	51		Bundle	4.8	0.6	8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	52		Bundle	8.5	2	4.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	53		Cluster 12-0	4.8	3	1.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	54		Cluster 4-0	1.5	1.2	1.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	55		Bundle	2.5	0.3	8.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	56		Matrix 50-4	13	7	1.9	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	57		Bundle	4.8	0.2	24	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	58		Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	59		Fiber	2	0.05	40	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	60		Bundle	2	0.15	13.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	61		Bundle	2.7	0.1	27	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	62		Matrix 2-0	7	4	1.8	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	63		Cluster 4-0	4	2	2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	64		Fiber	2.5	0.06	41.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	65		Matrix 1-0	8	4.5	1.8	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	66		Bundle	2.4	0.15	16	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	67		Bundle	1.2	0.1	12	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	68		Cluster 1-0	4	1.5	2.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	69		Cluster 3-0	3.5	1.6	2.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	70		Cluster 3-0	2.5	1	2.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	71		Bundle	2.5	0.1	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	72		Bundle	2.7	0.15	18	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	73		Bundle	6	0.1	60	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	74		Bundle	2.6	0.1	26	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	75		Bundle	4	0.15	26.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	H41	CD	76		Cluster 3-0	1.5	1.5	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	77		Cluster 3-0	1.6	0.5	3.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	78		Cluster 2-0	1	0.9	1.1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	H41	CD	79		Cluster 20-0	7.5	2.5	3	Chrysotile			ASTM_>=5.0, ASTM_Total
G10	2	H41	CD	80		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	81		Fiber	1.2	0.06	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	82		Fiber	1.8	0.05	36	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	83		Fiber	1.9	0.06	31.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	84		Bundle	1	0.5	2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	85		Matrix 1-0	6.5	2	3.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E61	CM	86		Matrix 100-0	17	11	1.5	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E61	CM	87		Bundle	2.7	0.15	18	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	88		Matrix 20-0	4.5	3.5	1.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	89		Bundle	1.5	0.4	3.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	90		Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	91		Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	92		Bundle	2	0.08	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	93		Bundle	1.5	0.08	18.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	94		Fiber	1	0.06	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	95		Bundle	2.6	0.1	26	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	96		Fiber	2.5	0.05	50	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	97		Bundle	1.5	0.12	12.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	98		Matrix 20-0	4	3.5	1.1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	99		Bundle	1	0.15	6.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	100		Fiber	1	0.05	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	101		Fiber	1.2	0.05	24	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	3	E61	CM	102	Fiber	2.4	0.05	48	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	103	Matrix 2-0	3.5	1.5	2.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	104	Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	105	Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	106	Bundle	1.2	0.15	8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	107	Bundle	2.5	0.15	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	108	Bundle	2.5	0.2	12.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	109	Cluster 2-0	4	0.2	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	110	Bundle	3	0.15	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	111	Matrix 1-0	3	3	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	112	Fiber	4.5	0.06	75	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	113	Bundle	2.5	0.2	12.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	114	Matrix 20-0	4.5	2.5	1.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	115	Cluster 4-0	4.8	2.2	2.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	116	Fiber	2.5	0.05	50	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	117	Matrix 100-0	10	8	1.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E61	CM	118	Bundle	12	0.25	48	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E61	CM	119	Fiber	1.5	0.05	30	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	120	Bundle	1.5	0.2	7.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	121	Fiber	1.5	0.06	25	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	122	Matrix 75-0	15	10	1.5	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	3	E61	CM	123	Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	124	Matrix 1-0	1.5	0.5	3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	125	Fiber	1	0.05	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	126	Bundle	1.5	0.15	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	E61	CM	127	Matrix 1-0	7	1.5	4.7	Chrysotile			ASTM_>=5.0, ASTM_Total

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	4	F44	CM	128		Cluster 5-0	2	2	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	129		Bundle	1.5	0.3	5	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	130		Cluster 2-0	1.2	1	1.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	131		Bundle	2.8	0.2	14	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	132		Bundle	2	0.2	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	133		Matrix 3-0	18	10	1.8	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	134		Bundle	3.2	0.15	21.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	135		Bundle	2	0.12	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	136		Cluster 2-0	2	1.8	1.1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	137		Matrix 1-0	7	3	2.3	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	138		Cluster 2-0	1.2	1	1.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	139		Bundle	3.5	0.15	23.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	140		Bundle	5.5	1.6	3.4	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	141		Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	142		Cluster 3-0	1.8	0.5	3.6	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	143		Fiber	2.5	0.06	41.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	144		Fiber	1	0.05	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	145		Bundle	2.5	0.12	20.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	146		Fiber	2	0.05	40	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	147		Fiber	1.8	0.04	45	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	148		Bundle	18	5	3.6	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	149		Cluster 4-0	3.5	1.5	2.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	150		Cluster 6-0	2.8	2.5	1.1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	151		Bundle	2.5	0.15	16.7	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	152		Fiber	1	0.05	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	153		Bundle	3	0.15	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S8
Client Sample No: -527
Description: Rm 14 - Top N. Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	4	F44	CM	154		Bundle	2	0.2	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	155		Bundle	1.5	0.15	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	156		Matrix 100-10	35	10	3.5	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	157		Matrix 200-50	15	12	1.2	Chrysotile			ASTM_>=5.0, ASTM_Total
G11	4	F44	CM	158		Bundle	3.5	0.15	23.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	159		Bundle	2	0.1	20	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	160		Fiber	1.5	0.05	30	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	161		Bundle	1.5	0.15	10	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	162		Fiber	2.5	0.05	50	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	163		Fiber	2	0.05	40	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	164		Fiber	1.2	0.05	24	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F44	CM	165		Fiber	1.2	0.05	24	Chrysotile			ASTM_Total, ASTM_0.5-5.0

Lab/Cor Sample No: S9
Client Sample No: -528
Description: Rm 14 - Top of Blt-in Bkshf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	B32				NSD							
G10	2	F42				NSD							
G11	3	F41				NSD							
G11	4	H41				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S10
Client Sample No: -529
Description: Rm 14 - Sm. Bkshf W. Entry

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F44	CDQ	1		Bundle	2.85	0.12	23.8	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48122SP	KM 3/31/2016	
Diffraction	J48122DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48122BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F44	CD	2		Fiber	1.2	0.08	15	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G10	2	F31	ADQ	3		Fiber	2.3	0.38	6.1	Actinolite	Mg, Al, Si, Ca, Fe		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48123SP	KM 3/31/2016	
Diffraction	J48123DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48123BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	F31	AQ	4		Matrix 1-1	14	12.5	1.1	Actinolite	Mg, Al, Si, Ca, Fe		ASTM_>=5.0, ASTM_Total

ItemType	ItemNum	Confirmed	Comment
Spectra	J48124SP	KM 3/31/2016	
Brightfield	J48124BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	F31	AX	5		Fiber	2.5	0.4	6.2	Actinolite			ASTM_Total, ASTM_0.5-5.0
G11	3	F42	CDQ	6		Bundle	2	0.15	13.3	Chrysotile	Mg, Si		ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Spectra	J48125SP	KM 3/31/2016	
Diffraction	J48125DF	KM 3/31/2016	0.53nm ROW SPACING
Brightfield	J48125BF		

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	4	E41				NSD							

Lab/Cor Sample No: S11
Client Sample No: -530
Description: Library - E. Wall Cpt

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C42				NSD							
G10	2	F44				NSD							
G11	3	F43				NSD							
G11	4	H43				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref. D5755-03** **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S12
Client Sample No: -531
Description: Library - E. Bookshelf Fiction

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F53				NSD							
G10	2	H41	CDQ	1		Bundle	4.9	0.09	54.4	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed	Comment
Brightfield	F48127BF		
Diffraction	F48127DF	JH 3/31/2016	0.53nm ROW SPACING
Spectra	F48127SP	JH 3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	3	F33	CM	2		Fiber	1.2	0.05	24	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	F33	CM	3		Bundle	2.2	0.2	11	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	F33	CM	4		Cluster 2-0	2	1	2	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	F33	CM	5		Cluster 4-0	1.4	1.4	1	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	3	F33	CM	6		Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0
G11	4	F23				NSD							

Lab/Cor Sample No: S13
Client Sample No: -532
Description: Library - SW. Wall Cpt

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	E42				NSD							
G10	2	G31				NSD							
G11	3	F51				NSD							
G11	4	G43				NSD							

Lab/Cor Sample No: S14
Client Sample No: -533
Description: Library - SW. Wall - Top of Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	F41				NSD							
G10	2	G33				NSD							
G11	3	F54				NSD							
G11	4	C61				NSD							

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160309 **SEA** **Ref.** D5755-03 **Report Number:** 160309R02
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S15
Client Sample No: -534
Description: Library - NE Wall - Cpt

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	B52				NSD							
G10	2	F44				NSD							
G11	3	C51				NSD							
G11	4	F41	CDQ	1		Fiber	2.6	0.08	32.5	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed		Comment
Brightfield	F48126BF			
Diffraction	F48126DF	JH	3/31/2016	0.53nm ROW SPACING
Spectra	F48126SP	JH	3/31/2016	

Lab/Cor Sample No: S16
Client Sample No: -535
Description: Library - NE Wall - Top of Bookshelf

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	C31	CDQ	1		Fiber	1.1	0.09	12.2	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed		Comment
Brightfield	F48128BF			
Diffraction	F48128DF	JH	3/31/2016	0.53nm ROW SPACING
Spectra	F48128SP	JH	3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	2	F41				NSD							
G11	3	F41				NSD							
G11	4	H51	CM	2		Fiber	2	0.06	33.3	Chrysotile			ASTM_Total, ASTM_0.5-5.0

Count Categories

ASTM_>=5.0	ASTM Asbestos >=5.0µm	ASTM_0.5-5.0	ASTM Asbestos >=0.5µm - <5.0µm	ASTM_Total	ASTM Total Asbestos >=0.5µm
ASTMD_Other	ASTM Libby-Other >0.5µm				

Reviewed by:

x

Kate March
QC Manager

160310

TEM / PCM / PLM Chain of Custody Record

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Client: PBS
Address:
City, State, Zip: SEATTLE
Contact: GREGG MIDDAUGH
Phone: Fax:
Email:
Other Info:

Analytical Protocol:
- ___ AHERA
- ___ Modified EPA II
- ___ EPA II (Yamate)
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- X ASTM Dust
- ___ EPA 100.1/ 100.2
- ___ ISO: 10312
- ___ Bulk PLM
- ___ Bulk TEM ☐ Quantitative ☐ Semi-Quant ☐ Qualitative

Turnaround Time:
- ___ 5 days
- ___ 3 days
- ___ 2 days
- X 24 hours*
- ___ 6 hr **RUSH***
- ___ Redeposit

Project Name: SVEC **Project Number:** 41373.000 **P.O. Number:**

Sample Number	Sample Description	Sample Date	Sample Time			Flow Rate (lpm)			Total ~~Volume~~ AREA	IWA	OWA	Blank
			On	Off	Total	Start	End	Avg				
-510	Rm 16 - TOP OF FILE CAB	3/28							100cm²			
-511	Rm 17 - TOP OF SHELF											
-512	Rm 18 - TOP OF SHELF											
-513	Rm 19 - TOP OF SHELF											
-514	Rm A - LOW SHELF W.											
-515	Rm F - COUNTER TOP E.											
-516	ANNEX HALL - TOP OF WOOD CABINET											
-517	MUSIC - PIANO											
-518	MUSIC - E. CPT											
-519	MUSIC - W. CPT											

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Prelim Released: ___ By: ☐ Fax ☐ Phone ☐ E-mail ☐ Verbal Final Results Released: ___ By: ☐ Fax ☐ Phone ☐ E-mail Hardcopy Invoice Released: ___ ☐ Mail ☐ E-mail Reviewed By: ___

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts. ** Call ahead for TATs of 24hrs or less*

Relinquished by: [signature] Date: 3/28 Time: ___
Received by: [signature] c/c Date: 3/31 Time: 0830
Relinquished by: ___ Date: ___ Time: ___
Received by: ___ Date: ___ Time: ___

TEM / PCM / PLM Chain of Custody Record 160310

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Client: PBS
Address:
City, State, Zip: SEATTLE, WA
Contact: GREGG MIDDAUGH
Phone: Fax:
Email:
Other Info:

Analytical Protocol:
- ___ AHERA
- ___ Modified EPA II
- ___ EPA II (Yamate)
- ___ NIOSH 7402 (TEM)
- ___ NIOSH 7400 (PCM)
- X ASTM Dust
- ___ EPA 100.1/ 100.2
- ___ ISO: 10312
- ___ Bulk PLM
- ___ Bulk TEM ☐ Quantitative ☐ Semi-Quant ☐ Qualitative

Turnaround Time:
- ___ 5 days
- ___ 3 days
- ___ 2 days
- X 24 hours*
- ___ 6 hr **RUSH***
- ___ Redeposit

Project Name: SVEC **Project Number:** 41373,000 **P.O. Number:** —

Sample Number	Sample Description	Sample Date	Sample Time			Flow Rate (lpm)			Total ~~Volume~~ AREA	IWA	OWA	Blank
			On	Off	Total	Start	End	Avg				
-500	Rm 1 - CPT N.	3/28							100 cm²			
-501	Rm 3 - TOP OF SHELF											
-502	Rm 4 - LOWER SHELF											
-503	Rm 5 - LOWER SHELF											
-504	Rm 6 - TOP OF SHELF											
-505	Rm 8 - DESK SHELF											
-506	Rm 10 - TOP OF SHELF											
-507	Rm 11 - TOP OF SHELF											
-508	Rm 12 - TOP OF SHELF											
-509	Rm 15 - CPT W.	↓							↓			

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Final Results Released: ☐ Mail ☐ E-mail By: ☐ Fax ☐ Phone ☐ E-mail
Hardcopy Invoice Released: ☐ Mail ☐ E-mail Reviewed By:

By signing below you are agreeing to comply with Lab/Cor's Requests, Tenders and Contracts.

** Call ahead for TATs of 24hrs or less*

Relinquished by: [signature] Date: 3/28 Time:
Received by: [signature] Date: 3/31 Time: 0830

Relinquished by: Date: Time:
Received by: Date: Time:

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Seattle, WA 98117

Analysis Report Cover

Prelim Report

A Professional Service Corporation in the Northwest

Phone: (206) 781-0155
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Job Number: 160310 **SEA**

Report Number: 160310R01
Report Date: 3/31/2016

Client: PBS Engineering + Environmental
Address: 2517 Eastlake Ave E
Suite 100
Seattle, WA 98102
Project Name: MSD - SVEC
Project No.: 41373.000
PO Number:
Sub Project:
Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
160310 - S1	-500 - Rm 1 - Cpt N.	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S2	-501 - Rm 3 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S3	-502 - Rm 4 - Lower Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S4	-503 - Rm 5 - Lower Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S5	-504 - Rm 6 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S6	-505 - Rm 8 - Desk Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S7	-506 - Rm 10 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S8	-507 - Rm 11 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S9	-508 - Rm 12 - Top of shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S10	-509 - Rm 15 - Cpt W.	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S11	-510 - Rm 16 - Top of File Cab	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S12	-511 - Rm 17 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S13	-512 - Rm 18 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S14	-513 - Rm 19 - Top of Shelf	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S15	-514 - Rm A - Low Shelf W.	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S16	-515 - Rm F - Counter Top E.	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S17	-516 - Annex Hall - Top of Wood Cabinet	ASTM D5755-03 - Microvac	Not Analyzed	3/31/2016
160310 - S18	-517 - Music - Piano	ASTM D5755-03 - Microvac		3/31/2016
160310 - S19	-518 - Music - E. Cpt	ASTM D5755-03 - Microvac		3/31/2016
160310 - S20	-519 - Music - W. Cpt	ASTM D5755-03 - Microvac		3/31/2016

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Prelim Report

Phone: (206) 781-0155
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http://www.labcor.net

A Professional Service Corporation in the Northwest

Job Number: 160310 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160310R01
Report Date: 3/31/2016

ASTM D5755-03 - Microvac

Preparation and analysis of the above samples was conducted in accordance with the ASTM # D-5755-03 for the identification of asbestos in dust. Briefly, the samples were sampled by using a microvac technique onto 0.45 µm pore size mixed cellulose ester (MCE) filters. Sample cassettes were rinsed in distilled, particle-free water, sonicated lightly to homogenize and removed particulates. Aliquots were taken and filtered onto 0.22 µm pore size mixed cellulose ester filters, then air-dried. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethlyformamide / Acetone baths until cleared of filter debris.

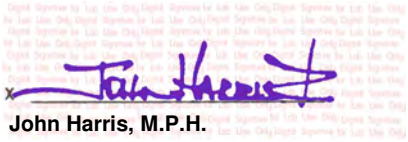
Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification between 15,000 - 20,000x, with an accelerating voltage of 100 KV. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer

The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



John Harris, M.P.H.
Laboratory Director

Lab/Cor, Inc.
7619 6th Ave NW
Seattle, WA 98117

Prelim Report

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160310 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160310R01
Date Received: 3/31/2016

Lab/Cor Sample No.: S18
Client Sample No.: -517
Description: Music - Piano
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 1833.333
Detection Limit. (struc/cm2) : 5481.667

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1833.333	45.833 - 10215.333 - Poisson	1	
ASTM Asbestos >=5.0µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1833.333	45.833 - 10215.333 - Poisson	1	

Lab/Cor Sample No.: S19
Client Sample No.: -518
Description: Music - E. Cpt
Filter Fraction: 1 **Aliquot Dilution:** 0.05
Residual Ash Vol: 20 ml **Final Dilution:** 0.05
Begin Volume: 20 ml
Volume Taken: 1 ml

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 1833.333
Detection Limit. (struc/cm2) : 5481.667

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Asbestos >=5.0µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Total Asbestos >=0.5µm	< 1833.333	0 - 6763.167 - Poisson	0	

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Summary Data

Job Number: 160310 **SEA**
Client: PBS Engineering + Environmental
Project Name: MSD - SVEC

Report Number: 160310R01
Date Received: 3/31/2016

Lab/Cor Sample No.: S20
Client Sample No.: -519
Description: Music - W. Cpt
Filter Fraction: 1
Residual Ash Vol: 20 ml
Begin Volume: 20 ml
Volume Taken: 1 ml

Aliquot Dilution: 0.05
Final Dilution: 0.05

Sample Area/Mass/Volume (cm²) : 100
Lab Filter Area (mm2) : 385
Grid Openings Analyzed : 4
Average Grid Opening Area : 0.0105
Area Analyzed (mm2) : 0.042
Analytical Sens. (struc/cm2) : 1833.333
Detection Limit. (struc/cm2) : 5481.667

Analyst(s)	Analysis Date	Microscope	Magnification
JH	3/31/2016	Hitachi 7000FA	20000

Structure Type	Concen-tration (struc/cm2)	95% Confidence Interval (struc/cm2)	Structure Count[1] Prim/Total	
ASTM Asbestos >=0.5µm - <5.0µm	1833.333	45.833 - 10215.333 - Poisson	1	
ASTM Asbestos >=5.0µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Libby-Other >0.5µm	< 1833.333	0 - 6763.167 - Poisson	0	
ASTM Total Asbestos >=0.5µm	1833.333	45.833 - 10215.333 - Poisson	1	

John Harris, M.P.H.
Laboratory Director

* One-sided upper 95% Poisson confidence limits may be used to calculate sample concentrations ([Struc count] * [Analytical Sensitivity]) when the structure count is below 4. The limits are: 0 str - 0, 1 str - 1, 2 str - 2, 3 str - 3

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ASTM D5755-03 - Microvac Raw Data

Job Number: 160310 **SEA** **Ref. D5755-03** **Report Number:** 160310R01
Client: PBS Engineering + Environmental **Date Received:** 3/31/2016
Project Name: MSD - SVEC
Project No.: 41373.000

Lab/Cor Sample No: S18
Client Sample No: -517
Description: Music - Piano

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	B34				NSD							
G10	2	C41	CDQ	1		Bundle	1.5	0.22	6.8	Chrysotile			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed		Comment
Brightfield	F48130BF			
Diffraction	F48130DF	JH	3/31/2016	0.53nm ROW SPACING
Spectra	F48130SP	JH	3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	3	C51				NSD							
G11	4	B54				NSD							

Lab/Cor Sample No: S19
Client Sample No: -518
Description: Music - E. Cpt

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	G43				NSD							
G10	2	F42				NSD							
G11	3	E51				NSD							
G11	4	G43				NSD							

Lab/Cor Sample No: S20
Client Sample No: -519
Description: Music - W. Cpt

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	1	G52	AZQ	1		Fiber	2	0.28	7.1	Actinolite			ASTM_Total, ASTM_0.5-5.0

ItemType	ItemNum	Confirmed		Comment
Brightfield	F48129BF			
Diffraction	F48129DF	JH	3/31/2016	[3 1 0] ZONE AXIS ID
Spectra	F48129SP	JH	3/31/2016	

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G11	2	E44				NSD							
G12	3	C42				NSD							
G12	4	F33				NSD							

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ASTM D5755-03 - Microvac Raw Data

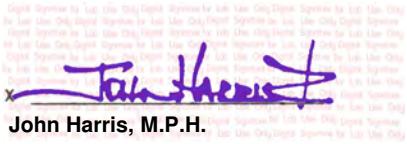
Job Number: 160310 **SEA** **Ref. D5755-03**

Report Number: 160310R01
Date Received: 3/31/2016

Client: PBS Engineering + Environmental
Project Name: MSD - SVEC
Project No.: 41373.000

Count Categories					
ASTM_>=5.0	ASTM Asbestos >=5.0µm	ASTM_0.5-5.0	ASTM Asbestos >=0.5µm - <5.0µm	ASTM_Total	ASTM Total Asbestos >=0.5µm
ASTMD_Other	ASTM Libby-Other >0.5µm				

Reviewed by:



John Harris, M.P.H.
Laboratory Director

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: SVEC
Lab ID: 1603085

March 14, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 3 sample(s) on 3/7/2016 for the analyses presented in the following report.

Hydrocarbon Identification by NWTPH-HCID
Mercury by EPA Method 7471
Organochlorine Pesticides by EPA Method 8081
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *03/14/2016*

CLIENT: PBS Engineering & Environmental
Project: SVEC
Lab Order: 1603085

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1603085-001	-001 SOILS	03/04/2016 12:00 AM	03/07/2016 2:45 PM
1603085-002	-002 SOILS	03/04/2016 12:00 AM	03/07/2016 2:45 PM
1603085-003	-003 SOILS	03/04/2016 12:00 AM	03/07/2016 2:45 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1603085**
Date: **3/14/2016**

CLIENT: PBS Engineering & Environmental
Project: SVEC

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1603085**

Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental

Collection Date: 3/4/2016

Project: SVEC

Lab ID: 1603085-001

Matrix: Soil

Client Sample ID: -001 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13201		Analyst: CM
Toxaphene	ND	0.132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Alpha BHC	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Beta BHC	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Gamma BHC (Lindane)	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Delta BHC	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Heptachlor	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Aldrin	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Heptachlor epoxide	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
gamma-Chlordane	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endosulfan I	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
alpha-Chlordane	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Dieldrin	ND	0.0132		mg/Kg-dry	1	3/11/2016 12:52:00 PM
4,4´-DDE	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endrin	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endosulfan II	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
4,4´-DDD	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endrin aldehyde	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endosulfan sulfate	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
4,4´-DDT	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Endrin ketone	ND	0.0265		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Methoxychlor	ND	0.0662		mg/Kg-dry	1	3/11/2016 12:52:00 PM
Surr: Decachlorobiphenyl	65.1	26.5-158		%Rec	1	3/11/2016 12:52:00 PM
Surr: Tetrachloro-m-xylene	61.6	11-150		%Rec	1	3/11/2016 12:52:00 PM
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 13178		Analyst: EC
Gasoline	ND	26.0		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Mineral Spirits	ND	39.0		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Kerosene	ND	65.0		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Diesel (Fuel Oil)	ND	65.0		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Heavy Oil	ND	130		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Mineral Oil	ND	130		mg/Kg-dry	1	3/8/2016 2:20:00 PM
Surr: 2-Fluorobiphenyl	106	50-150		%Rec	1	3/8/2016 2:20:00 PM
Surr: o-Terphenyl	106	50-150		%Rec	1	3/8/2016 2:20:00 PM
Mercury by EPA Method 7471				Batch ID: 13168		Analyst: MW
Mercury	ND	0.302		mg/Kg-dry	1	3/8/2016 12:33:03 PM

Analytical Report

WO#: **1603085**

Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental **Collection Date:** 3/4/2016

Project: SVEC

Lab ID: 1603085-001 **Matrix:** Soil

Client Sample ID: -001 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13205		Analyst: TN
Arsenic	5.45	0.106		mg/Kg-dry	1	3/11/2016 1:03:22 PM
Cadmium	ND	0.212		mg/Kg-dry	1	3/11/2016 1:03:22 PM
Chromium	26.0	0.106		mg/Kg-dry	1	3/11/2016 1:03:22 PM
Lead	17.8	0.212		mg/Kg-dry	1	3/11/2016 1:03:22 PM
Sample Moisture (Percent Moisture)				Batch ID: R28124		Analyst: SL
Percent Moisture	26.2			wt%	1	3/9/2016 12:55:46 PM

Analytical Report

WO#: **1603085**

Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental **Collection Date:** 3/4/2016

Project: SVEC

Lab ID: 1603085-002 **Matrix:** Soil

Client Sample ID: -002 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13201		Analyst: CM
Toxaphene	ND	0.164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Alpha BHC	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Beta BHC	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Gamma BHC (Lindane)	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Delta BHC	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Heptachlor	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Aldrin	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Heptachlor epoxide	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
gamma-Chlordane	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endosulfan I	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
alpha-Chlordane	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Dieldrin	ND	0.0164		mg/Kg-dry	1	3/11/2016 1:14:00 PM
4,4´-DDE	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endrin	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endosulfan II	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
4,4´-DDD	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endrin aldehyde	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endosulfan sulfate	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
4,4´-DDT	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Endrin ketone	ND	0.0328		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Methoxychlor	ND	0.0820		mg/Kg-dry	1	3/11/2016 1:14:00 PM
Surr: Decachlorobiphenyl	44.5	26.5-158		%Rec	1	3/11/2016 1:14:00 PM
Surr: Tetrachloro-m-xylene	39.9	11-150		%Rec	1	3/11/2016 1:14:00 PM
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 13178		Analyst: EC
Gasoline	ND	31.3		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Mineral Spirits	ND	46.9		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Kerosene	ND	78.2		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Diesel (Fuel Oil)	ND	78.2		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Heavy Oil	ND	156		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Mineral Oil	ND	156		mg/Kg-dry	1	3/8/2016 2:51:00 PM
Surr: 2-Fluorobiphenyl	120	50-150		%Rec	1	3/8/2016 2:51:00 PM
Surr: o-Terphenyl	120	50-150		%Rec	1	3/8/2016 2:51:00 PM
Mercury by EPA Method 7471				Batch ID: 13168		Analyst: MW
Mercury	ND	0.362		mg/Kg-dry	1	3/8/2016 12:34:40 PM

Analytical Report

WO#: **1603085**

Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental

Collection Date: 3/4/2016

Project: SVEC

Lab ID: 1603085-002

Matrix: Soil

Client Sample ID: -002 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13205		Analyst: TN
Arsenic	13.5	0.122		mg/Kg-dry	1	3/11/2016 1:06:55 PM
Cadmium	0.460	0.244		mg/Kg-dry	1	3/11/2016 1:06:55 PM
Chromium	57.4	0.122		mg/Kg-dry	1	3/11/2016 1:06:55 PM
Lead	52.9	0.244		mg/Kg-dry	1	3/11/2016 1:06:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R28124		Analyst: SL
Percent Moisture	39.4			wt%	1	3/9/2016 12:55:46 PM

Analytical Report

WO#: **1603085**
Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental
Collection Date: 3/4/2016
Project: SVEC
Lab ID: 1603085-003
Matrix: Soil
Client Sample ID: -003 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13201		Analyst: CM
Toxaphene	ND	0.152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Alpha BHC	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Beta BHC	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Gamma BHC (Lindane)	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Delta BHC	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Heptachlor	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Aldrin	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Heptachlor epoxide	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
gamma-Chlordane	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endosulfan I	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
alpha-Chlordane	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Dieldrin	ND	0.0152		mg/Kg-dry	1	3/11/2016 1:46:00 PM
4,4´-DDE	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endrin	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endosulfan II	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
4,4´-DDD	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endrin aldehyde	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endosulfan sulfate	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
4,4´-DDT	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Endrin ketone	ND	0.0304		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Methoxychlor	ND	0.0761		mg/Kg-dry	1	3/11/2016 1:46:00 PM
Surr: Decachlorobiphenyl	41.7	26.5-158		%Rec	1	3/11/2016 1:46:00 PM
Surr: Tetrachloro-m-xylene	42.0	11-150		%Rec	1	3/11/2016 1:46:00 PM
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 13178		Analyst: EC
Gasoline	ND	30.1		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Mineral Spirits	ND	45.1		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Kerosene	ND	75.2		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Diesel (Fuel Oil)	ND	75.2		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Heavy Oil	ND	150		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Mineral Oil	ND	150		mg/Kg-dry	1	3/8/2016 3:22:00 PM
Surr: 2-Fluorobiphenyl	121	50-150		%Rec	1	3/8/2016 3:22:00 PM
Surr: o-Terphenyl	121	50-150		%Rec	1	3/8/2016 3:22:00 PM
Mercury by EPA Method 7471				Batch ID: 13168		Analyst: MW
Mercury	ND	0.346		mg/Kg-dry	1	3/8/2016 12:39:34 PM

Analytical Report

WO#: **1603085**

Date Reported: **3/14/2016**

Client: PBS Engineering & Environmental

Collection Date: 3/4/2016

Project: SVEC

Lab ID: 1603085-003

Matrix: Soil

Client Sample ID: -003 SOILS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 13205		Analyst: TN
Arsenic	13.1	0.120		mg/Kg-dry	1	3/11/2016 1:17:36 PM
Cadmium	0.298	0.240		mg/Kg-dry	1	3/11/2016 1:17:36 PM
Chromium	47.8	0.120		mg/Kg-dry	1	3/11/2016 1:17:36 PM
Lead	36.7	0.240		mg/Kg-dry	1	3/11/2016 1:17:36 PM
Sample Moisture (Percent Moisture)				Batch ID: R28124		Analyst: SL
Percent Moisture	35.5			wt%	1	3/9/2016 12:55:46 PM

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**MB-13205**	SampType:	**MBLK**	Units:	**mg/Kg**	Prep Date:	**3/11/2016**	RunNo:	**28170**
Client ID:	**MBLKS**	Batch ID:	**13205**			Analysis Date:	**3/11/2016**	SeqNo:	**529749**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.100									
Cadmium	ND	0.200									
Chromium	ND	0.100									
Lead	ND	0.200									

Sample ID	**LCS-13205**	SampType:	**LCS**	Units:	**mg/Kg**	Prep Date:	**3/11/2016**	RunNo:	**28170**
Client ID:	**LCSS**	Batch ID:	**13205**			Analysis Date:	**3/11/2016**	SeqNo:	**529750**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.5	0.100	50.00	0	95.0	80	120				
Cadmium	2.43	0.200	2.500	0	97.3	80	120				
Chromium	50.2	0.100	50.00	0	100	80	120				
Lead	24.8	0.200	25.00	0	99.3	80	120				

Sample ID	**1603116-001ADUP**	SampType:	**DUP**	Units:	**mg/Kg-dry**	Prep Date:	**3/11/2016**	RunNo:	**28170**
Client ID:	**BATCH**	Batch ID:	**13205**			Analysis Date:	**3/11/2016**	SeqNo:	**529752**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.0	0.181						10.03	0.274	20	
Cadmium	0.470	0.363						0.4795	2.10	20	
Chromium	17.7	0.181						18.83	6.36	20	
Lead	27.7	0.363						26.58	4.13	20	

Sample ID	**1603116-001AMS**	SampType:	**MS**	Units:	**mg/Kg-dry**	Prep Date:	**3/11/2016**	RunNo:	**28170**
Client ID:	**BATCH**	Batch ID:	**13205**			Analysis Date:	**3/11/2016**	SeqNo:	**529756**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	104	0.181	90.73	10.03	104	75	125				
Cadmium	4.63	0.363	4.537	0.4795	91.4	75	125				
Chromium	129	0.181	90.73	18.83	121	75	125				

Date: *3/14/2016*

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**1603116-001AMS**	SampType:	**MS**			Units:	**mg/Kg-dry**	Prep Date:	**3/11/2016**		RunNo:	**28170**	
Client ID:	**BATCH**	Batch ID:	**13205**					Analysis Date:	**3/11/2016**		SeqNo:	**529756**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Lead		76.5	0.363	45.37	26.58	110	75	125					

Sample ID	**1603116-001AMSD**	SampType:	**MSD**			Units:	**mg/Kg-dry**	Prep Date:	**3/11/2016**		RunNo:	**28170**	
Client ID:	**BATCH**	Batch ID:	**13205**					Analysis Date:	**3/11/2016**		SeqNo:	**529757**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic		105	0.183	91.48	10.03	104	75	125	104.2	1.11	20		
Cadmium		4.48	0.366	4.574	0.4795	87.5	75	125	4.627	3.18	20		
Chromium		128	0.183	91.48	18.83	120	75	125	128.9	0.498	20		
Lead		77.5	0.366	45.74	26.58	111	75	125	76.48	1.36	20		

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID	**MB-13168**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **3/7/2016**		RunNo: **28107**	
Client ID:	**MBLKS**	Batch ID: **13168**					Analysis Date: **3/8/2016**		SeqNo: **528252**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.250									

Sample ID	**LCS-13168**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **3/7/2016**		RunNo: **28107**	
Client ID:	**LCSS**	Batch ID: **13168**					Analysis Date: **3/8/2016**		SeqNo: **528253**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.518	0.250	0.5000	0	104	80	120				

Sample ID	**1603071-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **3/7/2016**		RunNo: **28107**	
Client ID:	**BATCH**	Batch ID: **13168**					Analysis Date: **3/8/2016**		SeqNo: **528255**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.296						0		20	

Sample ID	**1603071-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **3/7/2016**		RunNo: **28107**	
Client ID:	**BATCH**	Batch ID: **13168**					Analysis Date: **3/8/2016**		SeqNo: **528256**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.602	0.290	0.5803	0.01170	102	70	130				

Sample ID	**1603071-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **3/7/2016**		RunNo: **28107**	
Client ID:	**BATCH**	Batch ID: **13168**					Analysis Date: **3/8/2016**		SeqNo: **528257**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.643	0.302	0.6031	0.01170	105	70	130	0.6024	6.51	20	

Date: *3/14/2016*

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Hydrocarbon Identification by NWTPH-HCID

Sample ID **LCS-13178**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **3/8/2016**	RunNo: **28119**
Client ID: **LCSS**	Batch ID: **13178**		Analysis Date: **3/8/2016**	SeqNo: **528617**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	447	50.0	500.0	0	89.4	65	135				
Surr: 2-Fluorobiphenyl	20.4		20.00		102	50	150				
Surr: o-Terphenyl	19.2		20.00		95.8	50	150				

Sample ID **MB-13178**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **3/8/2016**	RunNo: **28119**
Client ID: **MBLKS**	Batch ID: **13178**		Analysis Date: **3/8/2016**	SeqNo: **528618**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	20.0									
Mineral Spirits	ND	30.0									
Kerosene	ND	50.0									
Diesel (Fuel Oil)	ND	50.0									
Heavy Oil	ND	100									
Mineral Oil	ND	100									
Surr: 2-Fluorobiphenyl	20.4		20.00		102	50	150				
Surr: o-Terphenyl	20.2		20.00		101	50	150				

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID	**TOXAPHENE CCVA**	SampType:	**CCV**	Units:	**mg/L**	Prep Date:	**3/11/2016**	RunNo:	**28171**
Client ID:	**CCV**	Batch ID:	**13201**			Analysis Date:	**3/11/2016**	SeqNo:	**529796**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	169	0.100	200.0	0	84.5	50	150				

Sample ID	**MB-13201**	SampType:	**MBLK**	Units:	**mg/Kg**	Prep Date:	**3/10/2016**	RunNo:	**28171**
Client ID:	**MBLKS**	Batch ID:	**13201**			Analysis Date:	**3/11/2016**	SeqNo:	**529792**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.100									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4´-DDE	ND	0.0200									
Endrin	ND	0.0200									
Endosulfan II	ND	0.0200									
4,4´-DDD	ND	0.0200									
Endrin aldehyde	ND	0.0200									
Endosulfan sulfate	ND	0.0200									
4,4´-DDT	ND	0.0200									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0500									
Surr: Decachlorobiphenyl	0.0450		0.05000		90.0	26.5	158				
Surr: Tetrachloro-m-xylene	0.0384		0.05000		76.8	11	150				

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **LCS-13201** SampType: **LCS** Units: **µg/Kg** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **LCSS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529791**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.213	0.0100	0.2000	0	106	54.2	139				
Beta BHC	0.231	0.0100	0.2000	0	116	56.5	142				
Gamma BHC (Lindane)	0.227	0.0100	0.2000	0	113	55.5	142				
Delta BHC	0.213	0.0100	0.2000	0	107	47.4	157				
Heptachlor	0.244	0.0100	0.2000	0	122	54	141				
Aldrin	0.204	0.0100	0.2000	0	102	43.7	147				
Heptachlor epoxide	0.216	0.0100	0.2000	0	108	56.2	137				
gamma-Chlordane	0.207	0.0100	0.2000	0	103	58.5	136				
Endosulfan I	0.206	0.0100	0.2000	0	103	60	132				
alpha-Chlordane	0.208	0.0100	0.2000	0	104	46.1	140				
Dieldrin	0.203	0.0100	0.2000	0	102	61.2	133				
4,4´-DDE	0.197	0.0200	0.2000	0	98.3	55.4	142				
Endrin	0.225	0.0200	0.2000	0	113	56.5	143				
Endosulfan II	0.191	0.0200	0.2000	0	95.5	62	143				
4,4´-DDD	0.210	0.0200	0.2000	0	105	53.3	145				
Endrin aldehyde	0.181	0.0200	0.2000	0	90.7	39.5	153				
Endosulfan sulfate	0.186	0.0200	0.2000	0	93.2	53.8	148				
4,4´-DDT	0.201	0.0200	0.2000	0	100	48.2	152				
Endrin ketone	0.219	0.0200	0.2000	0	110	28.5	162				
Methoxychlor	0.178	0.0500	0.2000	0	88.9	34.6	159				
Surr: Decachlorobiphenyl	0.0490		0.05000		98.0	26.5	158				
Surr: Tetrachloro-m-xylene	0.0438		0.05000		87.6	11	150				

Sample ID **1603085-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-001 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529785**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.126						0		30	
Alpha BHC	ND	0.0126						0		30	
Beta BHC	ND	0.0126						0		30	
Gamma BHC (Lindane)	ND	0.0126						0		30	

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1603085-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-001 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529785**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	ND	0.0126						0		30	
Heptachlor	ND	0.0126						0		30	
Aldrin	ND	0.0126						0		30	
Heptachlor epoxide	ND	0.0126						0		30	
gamma-Chlordane	ND	0.0126						0		30	
Endosulfan I	ND	0.0126						0		30	
alpha-Chlordane	ND	0.0126						0		30	
Dieldrin	ND	0.0126						0		30	
4,4´-DDE	ND	0.0253						0		30	
Endrin	ND	0.0253						0		30	
Endosulfan II	ND	0.0253						0		30	
4,4´-DDD	ND	0.0253						0		30	
Endrin aldehyde	ND	0.0253						0		30	
Endosulfan sulfate	ND	0.0253						0		30	
4,4´-DDT	ND	0.0253						0		30	
Endrin ketone	ND	0.0253						0		30	
Methoxychlor	ND	0.0631						0		30	
Surr: Decachlorobiphenyl	0.0236		0.06314		37.4	26.5	158		0		
Surr: Tetrachloro-m-xylene	0.0212		0.06314		33.6	11	150		0		

Sample ID **1603085-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-002 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.354	0.0165	0.3298	0	107	49.1	158				
Beta BHC	0.378	0.0165	0.3298	0	115	50.9	160				
Gamma BHC (Lindane)	0.389	0.0165	0.3298	0	118	55.3	157				
Delta BHC	0.355	0.0165	0.3298	0	108	55.8	160				
Heptachlor	0.449	0.0165	0.3298	0	136	59.1	150				
Aldrin	0.339	0.0165	0.3298	0	103	46.4	145				
Heptachlor epoxide	0.367	0.0165	0.3298	0	111	48.5	151				

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1603085-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-002 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
gamma-Chlordane	0.348	0.0165	0.3298	0	106	50.9	143				
Endosulfan I	0.342	0.0165	0.3298	0	104	46.4	149				
alpha-Chlordane	0.348	0.0165	0.3298	0	106	46.3	153				
Dieldrin	0.343	0.0165	0.3298	0	104	51	147				
4,4´-DDE	0.317	0.0330	0.3298	0	96.2	39.9	162				
Endrin	0.417	0.0330	0.3298	0	126	51.3	151				
Endosulfan II	0.322	0.0330	0.3298	0	97.6	51	152				
4,4´-DDD	0.367	0.0330	0.3298	0	111	45.8	160				
Endrin aldehyde	0.310	0.0330	0.3298	0	93.9	38.3	156				
Endosulfan sulfate	0.311	0.0330	0.3298	0	94.2	53.2	154				
4,4´-DDT	0.345	0.0330	0.3298	0	105	45.7	168				
Endrin ketone	0.392	0.0330	0.3298	0	119	68.3	144				
Methoxychlor	0.319	0.0825	0.3298	0	96.9	43.4	178				
Surr: Decachlorobiphenyl	0.0588		0.08245		71.3	26.5	158				
Surr: Tetrachloro-m-xylene	0.0521		0.08245		63.2	11	150				

Sample ID **1603085-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-002 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.386	0.0161	0.3227	0	120	49.1	158	0.3535	8.84	30	
Beta BHC	0.412	0.0161	0.3227	0	128	50.9	160	0.3779	8.52	30	
Gamma BHC (Lindane)	0.425	0.0161	0.3227	0	132	55.3	157	0.3887	8.81	30	
Delta BHC	0.392	0.0161	0.3227	0	121	55.8	160	0.3550	9.85	30	
Heptachlor	0.496	0.0161	0.3227	0	154	59.1	150	0.4487	9.92	30	S
Aldrin	0.371	0.0161	0.3227	0	115	46.4	145	0.3392	8.93	30	
Heptachlor epoxide	0.404	0.0161	0.3227	0	125	48.5	151	0.3665	9.75	30	
gamma-Chlordane	0.386	0.0161	0.3227	0	120	50.9	143	0.3481	10.3	30	
Endosulfan I	0.382	0.0161	0.3227	0	118	46.4	149	0.3421	11.0	30	
alpha-Chlordane	0.387	0.0161	0.3227	0	120	46.3	153	0.3484	10.4	30	
Dieldrin	0.381	0.0161	0.3227	0	118	51	147	0.3426	10.7	30	

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1603085-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **3/10/2016** RunNo: **28171**
Client ID: **-002 SOILS** Batch ID: **13201** Analysis Date: **3/11/2016** SeqNo: **529788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDE	0.382	0.0323	0.3227	0	119	39.9	162	0.3173	18.6	30	
Endrin	0.471	0.0323	0.3227	0	146	51.3	151	0.4165	12.3	30	
Endosulfan II	0.363	0.0323	0.3227	0	113	51	152	0.3219	12.1	30	
4,4´-DDD	0.412	0.0323	0.3227	0	128	45.8	160	0.3670	11.5	30	
Endrin aldehyde	0.361	0.0323	0.3227	0	112	38.3	156	0.3095	15.4	30	
Endosulfan sulfate	0.354	0.0323	0.3227	0	110	53.2	154	0.3105	13.1	30	
4,4´-DDT	0.391	0.0323	0.3227	0	121	45.7	168	0.3450	12.4	30	
Endrin ketone	0.445	0.0323	0.3227	0	138	68.3	144	0.3918	12.7	30	
Methoxychlor	0.368	0.0807	0.3227	0	114	43.4	178	0.3195	14.2	30	
Surr: Decachlorobiphenyl	0.0359		0.08068		44.4	26.5	158		0		
Surr: Tetrachloro-m-xylene	0.0323		0.08068		40.0	11	150		0		

NOTES:
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.

Date: *3/14/2016*

Work Order: 1603085
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1603093-002ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/9/2016** RunNo: **28124**
Client ID: **BATCH** Batch ID: **R28124** Analysis Date: **3/9/2016** SeqNo: **528773**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.6	0.500						12.63	14.2	20	

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1603085**
Logged by:	**Erica Silva**	Date Received:	**3/7/2016 2:45:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		No cooler present		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
		Unknown prior to receipt		
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐
		Please refer to Item Information		
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (Internal): 1603085

Date: 3/4/16

Page: 1 of: 1

Client: PBS ENGINEERING & ENV.
Address: 2517 EASTLAKE
City, State, Zip: SEATTLE WA
Telephone: 206.255.4659 Fax:

Project Name: SVEC
Project No: 41375.000 Collected by: B.M.
Location:
Report To (PM): MIDDAUGH
PM Email:

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T)	Dissolved (D)	Anions (IC)**	EDB (8011)	PESTICIDES				Comments
1 -001 SOILS	3/4		S				X					X				X					2 CONTAINERS
2 -002 SOILS	3/4		S				X					X				X					"
3 -003 SOILS	3/4		S				X					X				X					"
4																					
5																					
6																					
7																					
8																					
9																					
10																					

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Relinquished	Date/Time	Received	Date/Time
x [signature]	3/7/16	x [signature]	03/07/16 2:45pm
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day (STD)

^Please coordinate with the lab in advance

Fremont ANALYTICAL

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): _____

Date: 3/4/16

Page: 1 of: 1

Client: PBS ENGINEERING & ENV.
Address: 2517 EASTLAKE
City, State, Zip: SEATTLE WA
Telephone: 206.255.4659 Fax: _____

Project Name: SVEC
Project No: 41373.000 Collected by: B.M.
Location: _____
Report To (PM): MIDDAUGH
PM Email: _____

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)**	EDB (8011)	PESTICIDES			Comments
1 -001 SOILS	3/4		S				X					X			X				2 CONTAINERS -SE GARDEN
2 -002 SOILS	3/4		S				X					X			X				" -NW GARDEN
3 -003 SOILS	3/4		S				X					X			X				" - NORTH PLAYFIELD
4																			
5																			
6																			
7																			
8																			
9																			
10																			

**Metals Analysis (Circle): (MTCA-5) RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
x [signature]	3/7/16	x	
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day (STD)
^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: SVEC
Lab ID: 1602174

February 29, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 3 sample(s) on 2/16/2016 for the analyses presented in the following report.

Organochlorine Pesticides by EPA Method 8081
Polychlorinated Biphenyls (PCB) by EPA 8082

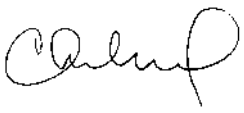
This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,



Chelsea Ward
Project Manager

Date: *02/29/2016*

CLIENT: PBS Engineering & Environmental
Project: SVEC
Lab Order: 1602174

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602174-001	-1100		02/16/2016 3:05 PM
1602174-002	-1101		02/16/2016 3:05 PM
1602174-003	-1102		02/16/2016 3:05 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602174**

Date: **2/29/2016**

CLIENT: PBS Engineering & Environmental

Project: SVEC

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602174**

Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: SVEC

Lab ID: 1602174-001 **Matrix:** Solid

Client Sample ID: -1100

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1221	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1232	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1242	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1248	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1254	6.51	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1260	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1262	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Aroclor 1268	ND	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Total PCBs	6.51	1.89		mg/Kg	1	2/17/2016 5:11:00 PM
Surr: Decachlorobiphenyl	108	33.3-140		%Rec	1	2/17/2016 5:11:00 PM
Surr: Tetrachloro-m-xylene	114	23.2-142		%Rec	1	2/17/2016 5:11:00 PM
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13058		Analyst: CM
Toxaphene	ND	0.990		mg/Kg	1	2/24/2016 12:39:00 PM
Alpha BHC	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Beta BHC	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Gamma BHC (Lindane)	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Delta BHC	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Heptachlor	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Aldrin	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Heptachlor epoxide	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
gamma-Chlordane	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Endosulfan I	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
alpha-Chlordane	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
Dieldrin	ND	0.0990		mg/Kg	1	2/24/2016 12:39:00 PM
4,4´-DDE	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Endrin	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Endosulfan II	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
4,4´-DDD	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Endrin aldehyde	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Endosulfan sulfate	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
4,4´-DDT	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Endrin ketone	ND	0.198		mg/Kg	1	2/24/2016 12:39:00 PM
Methoxychlor	ND	0.495		mg/Kg	1	2/24/2016 12:39:00 PM
Surr: Decachlorobiphenyl	91.0	26.5-158		%Rec	1	2/24/2016 12:39:00 PM
Surr: Tetrachloro-m-xylene	69.4	11-150		%Rec	1	2/24/2016 12:39:00 PM

Analytical Report

WO#: **1602174**
Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental
Project: SVEC
Lab ID: 1602174-001
Client Sample ID: **-1100**

Collection Date:
Matrix: Solid

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Organochlorine Pesticides by EPA Method 8081 Batch ID: 13058 Analyst: CM

NOTES:
Additional confirmation performed by GCMS

Analytical Report

WO#: **1602174**

Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: SVEC

Lab ID: 1602174-002

Matrix: Solid

Client Sample ID: -1101

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1221	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1232	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1242	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1248	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1254	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1260	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1262	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Aroclor 1268	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Total PCBs	ND	1.75		mg/Kg	1	2/17/2016 5:22:00 PM
Surr: Decachlorobiphenyl	125	33.3-140		%Rec	1	2/17/2016 5:22:00 PM
Surr: Tetrachloro-m-xylene	124	23.2-142		%Rec	1	2/17/2016 5:22:00 PM
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13058		Analyst: CM
Toxaphene	ND	0.971		mg/Kg	1	2/24/2016 12:49:00 PM
Alpha BHC	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Beta BHC	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Gamma BHC (Lindane)	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Delta BHC	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Heptachlor	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Aldrin	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Heptachlor epoxide	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
gamma-Chlordane	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Endosulfan I	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
alpha-Chlordane	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
Dieldrin	ND	0.0971		mg/Kg	1	2/24/2016 12:49:00 PM
4,4´-DDE	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Endrin	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Endosulfan II	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
4,4´-DDD	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Endrin aldehyde	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Endosulfan sulfate	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
4,4´-DDT	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Endrin ketone	ND	0.194		mg/Kg	1	2/24/2016 12:49:00 PM
Methoxychlor	ND	0.485		mg/Kg	1	2/24/2016 12:49:00 PM
Surr: Decachlorobiphenyl	86.1	26.5-158		%Rec	1	2/24/2016 12:49:00 PM
Surr: Tetrachloro-m-xylene	68.3	11-150		%Rec	1	2/24/2016 12:49:00 PM

Analytical Report

WO#: **1602174**
Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental
Project: SVEC
Lab ID: 1602174-002
Client Sample ID: **-1101**

Collection Date:
Matrix: Solid

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Organochlorine Pesticides by EPA Method 8081 Batch ID: 13058 Analyst: CM

NOTES:
Additional confirmation performed by GCMS

Analytical Report

WO#: **1602174**

Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: SVEC

Lab ID: 1602174-003

Matrix: Solid

Client Sample ID: -1102

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1221	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1232	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1242	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1248	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1254	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1260	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1262	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Aroclor 1268	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Total PCBs	ND	1.96		mg/Kg	1	2/17/2016 5:32:00 PM
Surr: Decachlorobiphenyl	122	33.3-140		%Rec	1	2/17/2016 5:32:00 PM
Surr: Tetrachloro-m-xylene	120	23.2-142		%Rec	1	2/17/2016 5:32:00 PM
Organochlorine Pesticides by EPA Method 8081				Batch ID: 13058		Analyst: CM
Toxaphene	ND	0.935		mg/Kg	1	2/24/2016 1:00:00 PM
Alpha BHC	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Beta BHC	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Gamma BHC (Lindane)	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Delta BHC	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Heptachlor	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Aldrin	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Heptachlor epoxide	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
gamma-Chlordane	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Endosulfan I	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
alpha-Chlordane	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
Dieldrin	ND	0.0935		mg/Kg	1	2/24/2016 1:00:00 PM
4,4´-DDE	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Endrin	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Endosulfan II	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
4,4´-DDD	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Endrin aldehyde	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Endosulfan sulfate	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
4,4´-DDT	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Endrin ketone	ND	0.187		mg/Kg	1	2/24/2016 1:00:00 PM
Methoxychlor	ND	0.467		mg/Kg	1	2/24/2016 1:00:00 PM
Surr: Decachlorobiphenyl	79.5	26.5-158		%Rec	1	2/24/2016 1:00:00 PM
Surr: Tetrachloro-m-xylene	67.5	11-150		%Rec	1	2/24/2016 1:00:00 PM

Analytical Report

WO#: **1602174**
Date Reported: **2/29/2016**

Client: PBS Engineering & Environmental
Project: SVEC
Lab ID: 1602174-003
Client Sample ID: **-1102**

Collection Date:
Matrix: Solid

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Organochlorine Pesticides by EPA Method 8081 Batch ID: 13058 Analyst: CM

NOTES:
Additional confirmation performed by GCMS

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **MB-13029** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **MBLKS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522851**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Total PCBs	ND	0.100									
Surr: Decachlorobiphenyl	54.6		50.00		109	33.3	140				
Surr: Tetrachloro-m-xylene	51.0		50.00		102	23.2	142				

Sample ID **LCS1-13029** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.820	0.100	1.000	0	82.0	42.3	147				
Aroclor 1260	0.858	0.100	1.000	0	85.8	45.2	151				
Surr: Decachlorobiphenyl	55.8		50.00		112	33.3	140				
Surr: Tetrachloro-m-xylene	51.4		50.00		103	23.2	142				

Sample ID **LCS1D-13029** SampType: **LCSD** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS02** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522849**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.02	0.100	1.000	0	102	42.3	147	0.8202	21.5	20	R
Aroclor 1260	1.06	0.100	1.000	0	106	45.2	151	0.8584	21.3	20	R
Surr: Decachlorobiphenyl	64.8		50.00		130	33.3	140		0		
Surr: Tetrachloro-m-xylene	57.7		50.00		115	23.2	142		0		

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **LCS1D-13029**	SampType: **LCSD**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**			
Client ID: **LCSS02**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522849**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
R - High RPD observed, spike recoveries are within range.

Sample ID **LCS2-13029**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**			
Client ID: **LCSS**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522850**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.969	0.100	1.000	0	96.9	44	117				
Surr: Decachlorobiphenyl	50.9		50.00		102	33.3	140				
Surr: Tetrachloro-m-xylene	48.6		50.00		97.3	23.2	142				

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **MB-13058** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **MBLKS** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524265**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.100									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4´-DDE	ND	0.0200									
Endrin	ND	0.0200									
Endosulfan II	ND	0.0200									
4,4´-DDD	ND	0.0200									
Endrin aldehyde	ND	0.0200									
Endosulfan sulfate	ND	0.0200									
4,4´-DDT	ND	0.0200									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0500									
Surr: Decachlorobiphenyl	0.0337		0.05000		67.4	26.5	158				
Surr: Tetrachloro-m-xylene	0.0254		0.05000		50.9	11	150				

Sample ID **LCS-13058** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **LCSS** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524264**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.153	0.0100	0.2000	0	76.6	54.2	139				
Beta BHC	0.181	0.0100	0.2000	0	90.6	56.5	142				
Gamma BHC (Lindane)	0.173	0.0100	0.2000	0	86.3	55.5	142				

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **LCS-13058** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **LCSS** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524264**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	0.158	0.0100	0.2000	0	79.2	47.4	157				
Heptachlor	0.171	0.0100	0.2000	0	85.3	54	141				
Aldrin	0.171	0.0100	0.2000	0	85.4	43.7	147				
Heptachlor epoxide	0.187	0.0100	0.2000	0	93.7	56.2	137				
gamma-Chlordane	0.174	0.0100	0.2000	0	86.8	58.5	136				
Endosulfan I	0.166	0.0100	0.2000	0	83.1	60	132				
alpha-Chlordane	0.174	0.0100	0.2000	0	87.0	46.1	140				
Dieldrin	0.181	0.0100	0.2000	0	90.7	61.2	133				
4,4´-DDE	0.162	0.0200	0.2000	0	81.2	55.4	142				
Endrin	0.234	0.0200	0.2000	0	117	56.5	143				
Endosulfan II	0.169	0.0200	0.2000	0	84.7	62	143				
4,4´-DDD	0.188	0.0200	0.2000	0	93.9	53.3	145				
Endrin aldehyde	0.177	0.0200	0.2000	0	88.3	39.5	153				
Endosulfan sulfate	0.166	0.0200	0.2000	0	82.8	53.8	148				
4,4´-DDT	0.162	0.0200	0.2000	0	81.1	48.2	152				
Endrin ketone	0.216	0.0200	0.2000	0	108	28.5	162				
Methoxychlor	0.208	0.0500	0.2000	0	104	34.6	159				
Surr: Decachlorobiphenyl	0.0425		0.05000		85.0	26.5	158				
Surr: Tetrachloro-m-xylene	0.0298		0.05000		59.6	11	150				

Sample ID **1602231-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524259**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.117						0		30	
Alpha BHC	ND	0.0117						0		30	
Beta BHC	ND	0.0117						0		30	
Gamma BHC (Lindane)	ND	0.0117						0		30	
Delta BHC	ND	0.0117						0		30	
Heptachlor	ND	0.0117						0		30	
Aldrin	ND	0.0117						0		30	

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1602231-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524259**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptachlor epoxide	ND	0.0117						0		30	
gamma-Chlordane	ND	0.0117						0		30	
Endosulfan I	ND	0.0117						0		30	
alpha-Chlordane	ND	0.0117						0		30	
Dieldrin	ND	0.0117						0		30	
4,4´-DDE	ND	0.0233						0		30	
Endrin	ND	0.0233						0		30	
Endosulfan II	ND	0.0233						0		30	
4,4´-DDD	ND	0.0233						0		30	
Endrin aldehyde	ND	0.0233						0		30	
Endosulfan sulfate	ND	0.0233						0		30	
4,4´-DDT	ND	0.0233						0		30	
Endrin ketone	ND	0.0233						0		30	
Methoxychlor	ND	0.0584						0		30	
Surr: Decachlorobiphenyl	0.0400		0.05836		68.6	26.5	158		0		
Surr: Tetrachloro-m-xylene	0.0302		0.05836		51.7	11	150		0		

Sample ID **1602231-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524261**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.188	0.0109	0.2182	0	86.1	49.1	158				
Beta BHC	0.230	0.0109	0.2182	0	106	50.9	160				
Gamma BHC (Lindane)	0.221	0.0109	0.2182	0	101	55.3	157				
Delta BHC	0.197	0.0109	0.2182	0	90.4	55.8	160				
Heptachlor	0.221	0.0109	0.2182	0	101	59.1	150				
Aldrin	0.204	0.0109	0.2182	0	93.4	46.4	145				
Heptachlor epoxide	0.229	0.0109	0.2182	0	105	48.5	151				
gamma-Chlordane	0.209	0.0109	0.2182	0	95.8	50.9	143				
Endosulfan I	0.201	0.0109	0.2182	0	92.2	46.4	149				
alpha-Chlordane	0.208	0.0109	0.2182	0	95.3	46.3	153				

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1602231-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524261**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dieldrin	0.219	0.0109	0.2182	0	101	51	147				
4,4´-DDE	0.188	0.0218	0.2182	0	86.0	39.9	162				
Endrin	0.294	0.0218	0.2182	0	135	51.3	151				
Endosulfan II	0.184	0.0218	0.2182	0	84.2	51	152				
4,4´-DDD	0.225	0.0218	0.2182	0	103	45.8	160				
Endrin aldehyde	0.215	0.0218	0.2182	0	98.5	38.3	156				
Endosulfan sulfate	0.194	0.0218	0.2182	0	88.7	53.2	154				
4,4´-DDT	0.197	0.0218	0.2182	0	90.3	45.7	168				
Endrin ketone	0.274	0.0218	0.2182	0	126	68.3	144				
Methoxychlor	0.249	0.0546	0.2182	0	114	43.4	178				
Surr: Decachlorobiphenyl	0.0482		0.05455		88.3	26.5	158				
Surr: Tetrachloro-m-xylene	0.0351		0.05455		64.4	11	150				

Sample ID **1602231-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524262**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.175	0.0108	0.2166	0	80.9	49.1	158	0.1879	7.03	30	
Beta BHC	0.214	0.0108	0.2166	0	99.0	50.9	160	0.2303	7.19	30	
Gamma BHC (Lindane)	0.206	0.0108	0.2166	0	95.0	55.3	157	0.2206	6.98	30	
Delta BHC	0.185	0.0108	0.2166	0	85.6	55.8	160	0.1972	6.24	30	
Heptachlor	0.203	0.0108	0.2166	0	93.6	59.1	150	0.2213	8.74	30	
Aldrin	0.187	0.0108	0.2166	0	86.1	46.4	145	0.2038	8.84	30	
Heptachlor epoxide	0.210	0.0108	0.2166	0	96.8	48.5	151	0.2286	8.61	30	
gamma-Chlordane	0.191	0.0108	0.2166	0	88.0	50.9	143	0.2090	9.21	30	
Endosulfan I	0.185	0.0108	0.2166	0	85.2	46.4	149	0.2012	8.59	30	
alpha-Chlordane	0.190	0.0108	0.2166	0	87.7	46.3	153	0.2080	9.07	30	
Dieldrin	0.200	0.0108	0.2166	0	92.5	51	147	0.2195	9.15	30	
4,4´-DDE	0.168	0.0217	0.2166	0	77.6	39.9	162	0.1877	11.0	30	
Endrin	0.268	0.0217	0.2166	0	124	51.3	151	0.2938	9.07	30	
Endosulfan II	0.162	0.0217	0.2166	0	74.8	51	152	0.1838	12.7	30	

Work Order: 1602174
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID **1602231-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/22/2016** RunNo: **27872**
Client ID: **BATCH** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524262**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	0.206	0.0217	0.2166	0	95.0	45.8	160	0.2247	8.78	30	
Endrin aldehyde	0.196	0.0217	0.2166	0	90.4	38.3	156	0.2149	9.36	30	
Endosulfan sulfate	0.173	0.0217	0.2166	0	80.1	53.2	154	0.1936	10.9	30	
4,4´-DDT	0.177	0.0217	0.2166	0	81.8	45.7	168	0.1970	10.6	30	
Endrin ketone	0.249	0.0217	0.2166	0	115	68.3	144	0.2742	9.64	30	
Methoxychlor	0.218	0.0541	0.2166	0	101	43.4	178	0.2489	13.0	30	
Surr: Decachlorobiphenyl	0.0400		0.05414		73.9	26.5	158		0		
Surr: Tetrachloro-m-xylene	0.0316		0.05414		58.3	11	150		0		

Sample ID **TOXAPHENE CCV** SampType: **CCV** Units: **mg/L** Prep Date: **2/24/2016** RunNo: **27872**
Client ID: **CCV** Batch ID: **13058** Analysis Date: **2/24/2016** SeqNo: **524268**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	137	0.100	200.0	0	68.7	50	150				

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602174**
Logged by:	**Erica Silva**	Date Received:	**2/16/2016 3:05:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Bulk Material		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record

Fremont Analytical

1311 N. 35th Street
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1602174

Date: 2/15/16

Page: 1 of: 1

Client: PBS ENGINEERING & ENV.
Address: 2517 EASTLAKE AVE E.
City, State, Zip SEATTLE, WA Tel: 2062564659
Reports To (PM): G. MIDDAUGH Fax: Email:

Project Name: SVEC
Location:
Collected by: MONROE SD
Project No: 41373.000

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	BTEX: EPA 8260 EPA 8021b	Gasoline Range Organics	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Cl Pesticides (EPA 8081)	Cl Herbicides (EPA 8151A)	Metals* (6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)**	Comments/Depth
1 -1100	NA	NA	BULK							X	X						RM 8 CPT [redacted]
2 -1101	↓	↓	↓							X	X						RM 12 CPT
3 -1102	↓	↓	↓							X	X						EAST POD CENTER
4																	
5																	
6																	
7																	
8																	
9																	
10																	

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
x Gregg Middaugh	2/16/16	x	2/16/16 1505
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT -> Next Day 2 Day 3 Day (STD)

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

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Seattle, WA 98103
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PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: Sky Valley Education Center
Lab ID: 1602176

February 23, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 10 sample(s) on 2/16/2016 for the analyses presented in the following report.

Polychlorinated Biphenyls (PCB) by EPA 8082

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *02/23/2016*

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center
Lab Order: 1602176

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602176-001	001-PCB-C		02/16/2016 3:05 PM
1602176-002	002-PCB-C		02/16/2016 3:05 PM
1602176-003	003-PCB-C		02/16/2016 3:05 PM
1602176-004	004-PCB-C		02/16/2016 3:05 PM
1602176-005	005-PCB-C		02/16/2016 3:05 PM
1602176-006	006-PCB-C		02/16/2016 3:05 PM
1602176-007	007-PCB-C		02/16/2016 3:05 PM
1602176-008	008-PCB-C		02/16/2016 3:05 PM
1602176-009	009-PCB-C		02/16/2016 3:05 PM
1602176-010	010-PCB-C		02/16/2016 3:05 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602176**
Date: **2/23/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

WorkOrder Narrative:
I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-001

Matrix: Solid

Client Sample ID: 001-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1221	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1232	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1242	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1248	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1254	1,130	92.6	D	mg/Kg	100	2/18/2016 3:35:00 PM
Aroclor 1260	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1262	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Aroclor 1268	ND	0.926		mg/Kg	1	2/17/2016 5:43:00 PM
Total PCBs	1,130	92.6	D	mg/Kg	100	2/18/2016 3:35:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	39.1	33.3-140		%Rec	1	2/17/2016 5:43:00 PM
Surr: Tetrachloro-m-xylene	62.6	23.2-142		%Rec	1	2/17/2016 5:43:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602176-002 **Matrix:** Solid

Client Sample ID: 002-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1221	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1232	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1242	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1248	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1254	5,530	943	D	mg/Kg	1000	2/18/2016 4:08:00 PM
Aroclor 1260	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1262	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Aroclor 1268	ND	0.943		mg/Kg	1	2/17/2016 5:54:00 PM
Total PCBs	5,530	943	D	mg/Kg	1000	2/18/2016 4:08:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	46.6	33.3-140		%Rec	1	2/17/2016 5:54:00 PM
Surr: Tetrachloro-m-xylene	27.7	23.2-142		%Rec	1	2/17/2016 5:54:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-003

Matrix: Solid

Client Sample ID: **003-PCB-C**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1221	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1232	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1242	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1248	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1254	4,420	455	D	mg/Kg	500	2/18/2016 4:19:00 PM
Aroclor 1260	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1262	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Aroclor 1268	ND	0.909		mg/Kg	1	2/17/2016 6:05:00 PM
Total PCBs	4,420	455	D	mg/Kg	500	2/18/2016 4:19:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	60.1	33.3-140		%Rec	1	2/17/2016 6:05:00 PM
Surr: Tetrachloro-m-xylene	50.7	23.2-142		%Rec	1	2/17/2016 6:05:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-004

Matrix: Solid

Client Sample ID: 004-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1221	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1232	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1242	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1248	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1254	1.04	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1260	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1262	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Aroclor 1268	ND	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Total PCBs	1.04	0.862		mg/Kg	1	2/17/2016 6:38:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	59.9	30.8-168		%Rec	1	2/17/2016 6:38:00 PM
Surr: Tetrachloro-m-xylene	59.4	36.9-159		%Rec	1	2/17/2016 6:38:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-005

Matrix: Solid

Client Sample ID: 005-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	2.28	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1254	15.4	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Total PCBs	17.7	0.962		mg/Kg	1	2/17/2016 6:48:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	123	33.3-140		%Rec	1	2/17/2016 6:48:00 PM
Surr: Tetrachloro-m-xylene	120	23.2-142		%Rec	1	2/17/2016 6:48:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-006

Matrix: Solid

Client Sample ID: **006-PCB-C**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	3.92	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1221	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1232	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1242	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1248	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1254	4.91	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1260	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1262	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Aroclor 1268	ND	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Total PCBs	8.83	0.877		mg/Kg	1	2/17/2016 6:59:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	107	33.3-140		%Rec	1	2/17/2016 6:59:00 PM
Surr: Tetrachloro-m-xylene	90.2	23.2-142		%Rec	1	2/17/2016 6:59:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-007

Matrix: Solid

Client Sample ID: 007-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	1.25	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1221	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1232	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1242	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1248	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1254	2.01	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1260	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1262	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Aroclor 1268	ND	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Total PCBs	3.26	1.00		mg/Kg	1	2/17/2016 7:10:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	133	33.3-140		%Rec	1	2/17/2016 7:10:00 PM
Surr: Tetrachloro-m-xylene	127	23.2-142		%Rec	1	2/17/2016 7:10:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602176-008 **Matrix:** Solid

Client Sample ID: 008-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1221	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1232	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1242	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1248	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1254	3,660	1,000	D	mg/Kg	1000	2/18/2016 4:29:00 PM
Aroclor 1260	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1262	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Aroclor 1268	ND	1.00		mg/Kg	1	2/17/2016 7:21:00 PM
Total PCBs	3,660	1,000	D	mg/Kg	1000	2/18/2016 4:29:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	45.6	30.8-168		%Rec	1	2/17/2016 7:21:00 PM
Surr: Tetrachloro-m-xylene	57.6	36.9-159		%Rec	1	2/17/2016 7:21:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602176-009

Matrix: Solid

Client Sample ID: 009-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1254	5,730	962	D	mg/Kg	1000	2/18/2016 4:40:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 7:32:00 PM
Total PCBs	5,730	962	D	mg/Kg	1000	2/18/2016 4:40:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	65.6	30.8-168		%Rec	1	2/17/2016 7:32:00 PM
Surr: Tetrachloro-m-xylene	45.9	36.9-159		%Rec	1	2/17/2016 7:32:00 PM

Analytical Report

WO#: **1602176**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602176-010 **Matrix:** Solid

Client Sample ID: 010-PCB-C

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1221	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1232	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1242	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1248	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1254	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1260	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1262	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Aroclor 1268	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Total PCBs	ND	0.980		mg/Kg	1	2/17/2016 7:43:00 PM
Surr: 2,2´,3,3´,4,4´,5,5´,6,6´-Decachlorobiphenyl	313	33.3-140	S	%Rec	1	2/17/2016 7:43:00 PM
Surr: Tetrachloro-m-xylene	108	23.2-142		%Rec	1	2/17/2016 7:43:00 PM

NOTES:

S - Outlying surrogate recovery observed (high bias). Sample is non-detect; no further action required.

Work Order: 1602176
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **MB-13029** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **MBLKS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522851**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Total PCBs	ND	0.100									
Surr: Decachlorobiphenyl	54.6		50.00		109	33.3	140				
Surr: Tetrachloro-m-xylene	51.0		50.00		102	23.2	142				

Sample ID **LCS1-13029** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.820	0.100	1.000	0	82.0	42.3	147				
Aroclor 1260	0.858	0.100	1.000	0	85.8	45.2	151				
Surr: Decachlorobiphenyl	55.8		50.00		112	33.3	140				
Surr: Tetrachloro-m-xylene	51.4		50.00		103	23.2	142				

Sample ID **LCS1D-13029** SampType: **LCSD** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS02** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522849**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.02	0.100	1.000	0	102	42.3	147	0.8202	21.5	20	R
Aroclor 1260	1.06	0.100	1.000	0	106	45.2	151	0.8584	21.3	20	R
Surr: Decachlorobiphenyl	64.8		50.00		130	33.3	140		0		
Surr: Tetrachloro-m-xylene	57.7		50.00		115	23.2	142		0		

Work Order: 1602176
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID	**LCS1D-13029**	SampType: **LCSD**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**	
Client ID:	**LCSS02**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522849**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
R - High RPD observed, spike recoveries are within range.

Sample ID	**LCS2-13029**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**	
Client ID:	**LCSS**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522850**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.969	0.100	1.000	0	96.9	44	117				
Surr: Decachlorobiphenyl	50.9		50.00		102	33.3	140				
Surr: Tetrachloro-m-xylene	48.6		50.00		97.3	23.2	142				

Sample ID	**1660 CCVD**	SampType: **CCV**			Units: **mg/Kg**		Prep Date: **2/18/2016**		RunNo: **27800**	
Client ID:	**CCV**	Batch ID: **13029**					Analysis Date: **2/18/2016**		SeqNo: **523280**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.923	0.100	1.000	0	92.3	80	120				
Aroclor 1260	0.989	0.100	1.000	0	98.9	80	120				
Surr: Decachlorobiphenyl	209		200.0		105	50.2	159				
Surr: Tetrachloro-m-xylene	223		200.0		111	60.3	134				

Sample ID	**1254 CCVD**	SampType: **CCV**			Units: **mg/Kg**		Prep Date: **2/18/2016**		RunNo: **27800**	
Client ID:	**CCV**	Batch ID: **13029**					Analysis Date: **2/18/2016**		SeqNo: **523273**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.907	0.100	1.000	0	90.7	80	120				
Surr: Decachlorobiphenyl	178		200.0		89.0	50.2	159				
Surr: Tetrachloro-m-xylene	222		200.0		111	60.3	134				

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602176**
Logged by:	**Erica Silva**	Date Received:	**2/16/2016 3:05:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Bulk Material		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

PBS | Engineering + Environmental

FREMONT

1602176

Project: Sky Valley Education Center Project #: 41373.000

Analysis requested: PCB - 8082 Date: 2/15/16

Relinq'd by/Signature: [signature] Date/Time:

Received by/Signature: [signature] Date/Time: 2/16/16 1505

Fax results to:

☐	Brian Stanford	☐	Ferman Fletcher	☐	David Toy
☐	Willem Mager	☐	Prudy Stoudt-McRae	☐	Mike Smith
☑	Gregg Middaugh	☐	Grant Baker	☐	Chuck Greeb
☐	Mark Hiley	☐	Janet Murphy	☐	Christine Rmah
☐	Tim Ogden	☐	Harry Goren		

TURN AROUND TIME:

☐	1 Hour	☐	24 Hours	☑	3-5 Days
☐	2 Hours	☐	48 Hours	☐	Other_____
☐	4 Hours				

Report composite results for GWB/joint compound samples only

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	001-PCB-C	GRAY - METAL WINDOW	BLDG-3 WEST WINDOW-	
	002-PCB-C	LIGHT GRAY-METAL Column	BLG-3 WEST EXTERIOR Column	
	003-PCB-C	GRAY-METAL WINDOW	MAIN OFFICE - WEST EXTR	
	004-PCB-C	GRAY - METAL DOOR	N. POD RM 14 EXTERIOR DOOR	
	005-PCB-C	TAN - METAL WINDOW	S. POD RM 4 EXTERIOR WINDOW	
	006-PCB-C	BROWN - METAL DOOR	Rm 7 - EXT DOOR INT FRAME	
	007-PCB-C	"	Rm 20 - "	
	008-PCB-C	GREY - METAL WINDOW	Rm 7 - INT WINDOW FRAME	
	009-PCB-C	"	Rm 20 - "	
	010-PCB-C	DK BRN - METAL WINDOW	Rm 23 - "	
		CAULK		

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

Bend | Boise | Coos Bay | Eugene | Portland | Seattle | Tri-Cities | Vancouver

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: SVEC
Lab ID: 1602173

February 17, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 3 sample(s) on 2/16/2016 for the analyses presented in the following report.

Polychlorinated Biphenyls (PCB) by EPA 8082

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *02/17/2016*

CLIENT: PBS Engineering & Environmental
Project: SVEC
Lab Order: 1602173

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602173-001	-1004	02/15/2016 12:00 AM	02/16/2016 3:05 PM
1602173-002	-1005	02/15/2016 12:00 AM	02/16/2016 3:05 PM
1602173-003	-1006	02/15/2016 12:00 AM	02/16/2016 3:05 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602173**
Date: **2/17/2016**

CLIENT: PBS Engineering & Environmental
Project: SVEC

WorkOrder Narrative:
I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Sample Cleanup Comments:
1602173-001A 158720 Acid: Prep Comments for METHOD (PREP-PCB-S), SAMPLE (1602173-001A) required Acid Cleanup Procedure (Using Method No 3665A).
1602173-002A 158721 Acid: Prep Comments for METHOD (PREP-PCB-S), SAMPLE (1602173-002A) required Acid Cleanup Procedure (Using Method No 3665A).
1602173-003A 158722 Acid: Prep Comments for METHOD (PREP-PCB-S), SAMPLE (1602173-003A) required Acid Cleanup Procedure (Using Method No 3665A).

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602173**

Date Reported: **2/17/2016**

Client: PBS Engineering & Environmental

Collection Date: 2/15/2016

Project: SVEC

Lab ID: 1602173-001

Matrix: Solid

Client Sample ID: -1004

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13021		Analyst: CM
Aroclor 1016	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1254	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 1:41:00 PM
Surr: Decachlorobiphenyl	94.6	33.3-140		%Rec	1	2/17/2016 1:41:00 PM
Surr: Tetrachloro-m-xylene	101	23.2-142		%Rec	1	2/17/2016 1:41:00 PM

Analytical Report

WO#: **1602173**

Date Reported: **2/17/2016**

Client: PBS Engineering & Environmental

Collection Date: 2/15/2016

Project: SVEC

Lab ID: 1602173-002

Matrix: Solid

Client Sample ID: -1005

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13021		Analyst: CM
Aroclor 1016	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1254	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 1:54:00 PM
Surr: Decachlorobiphenyl	79.5	33.3-140		%Rec	1	2/17/2016 1:54:00 PM
Surr: Tetrachloro-m-xylene	79.4	23.2-142		%Rec	1	2/17/2016 1:54:00 PM

Analytical Report

WO#: **1602173**

Date Reported: **2/17/2016**

Client: PBS Engineering & Environmental

Collection Date: 2/15/2016

Project: SVEC

Lab ID: 1602173-003

Matrix: Solid

Client Sample ID: -1006

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13021		Analyst: CM
Aroclor 1016	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1221	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1232	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1242	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1248	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1254	1.42	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1260	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1262	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Aroclor 1268	ND	1.00		mg/Kg	1	2/17/2016 2:04:00 PM
Surr: Decachlorobiphenyl	94.2	33.3-140		%Rec	1	2/17/2016 2:04:00 PM
Surr: Tetrachloro-m-xylene	99.5	23.2-142		%Rec	1	2/17/2016 2:04:00 PM

Work Order: 1602173
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **MB-13021** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/16/2016** RunNo: **27646**
Client ID: **MBLKS** Batch ID: **13021** Analysis Date: **2/17/2016** SeqNo: **521763**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Surr: Decachlorobiphenyl	52.0		50.00		104	33.3	140				
Surr: Tetrachloro-m-xylene	42.4		50.00		84.8	23.2	142				

Sample ID **LCS1-13021** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/16/2016** RunNo: **27646**
Client ID: **LCSS** Batch ID: **13021** Analysis Date: **2/17/2016** SeqNo: **521760**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.931	0.100	1.000	0	93.1	42.3	147				
Aroclor 1260	0.958	0.100	1.000	0	95.8	45.2	151				
Surr: Decachlorobiphenyl	57.2		50.00		114	33.3	140				
Surr: Tetrachloro-m-xylene	49.7		50.00		99.4	23.2	142				

Sample ID **LCS1D-13021** SampType: **LCSD** Units: **mg/Kg** Prep Date: **2/16/2016** RunNo: **27646**
Client ID: **LCSS02** Batch ID: **13021** Analysis Date: **2/17/2016** SeqNo: **521762**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.970	0.100	1.000	0	97.0	42.3	147	0.9306	4.19	20	
Aroclor 1260	1.01	0.100	1.000	0	101	45.2	151	0.9584	4.97	20	
Surr: Decachlorobiphenyl	53.6		50.00		107	33.3	140		0		
Surr: Tetrachloro-m-xylene	45.2		50.00		90.5	23.2	142		0		

Date: *2/17/2016*

Work Order: 1602173
CLIENT: PBS Engineering & Environmental
Project: SVEC

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **LCS2-13021** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/16/2016** RunNo: **27646**
Client ID: **LCSS** Batch ID: **13021** Analysis Date: **2/17/2016** SeqNo: **521761**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.920	0.100	1.000	0	92.0	44	117				
Surr: Decachlorobiphenyl	30.3		50.00		60.7	33.3	140				
Surr: Tetrachloro-m-xylene	24.4		50.00		48.9	23.2	142				

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602173**
Logged by:	**Erica Silva**	Date Received:	**2/16/2016 3:05:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Bulk Material		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

1311 N. 35th Street
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1602173

Date: 2/15/16 Page: 1 of: 1

Client: PBS ENGINEERING & ENV
Address: 2517 EASTLAKE AVE E.
City, State, Zip: SEATTLE, WA Tel:
Reports To (PM): G. MIDDAUGH Fax: Email: MIDDAUGH@PBSENV.COM

Project Name: SVEV
Location:
Collected by: GREG MIDDAUGH
Project No: 41373.000

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	BTEX	EPA 8260	EPA 8021b	Gasoline Range Organics	Hydrocarbon Identification (PCBs)	Diesel/Heavy Oil Range Organics	SEMI VOC (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Cl Pesticides (EPA 8081)	Cl Herbicides (EPA 8151A)	Metals* (6010 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	Comments/Depth
1 -1004	NA	2/15	BULK										X						RM 1 - CAT MASTIC
2 -1005	NA												X						RM 13 - CAT MASTIC
3 -1006	NA												X						NORTH PAD - CENTER
4																			
5																			
6																			
7																			
8																			
9																			
10																			

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposal (fee may be assessed if samples are retained after 30 days)

Special Remarks:

Relinquished: G. Middaugh Date/Time: 2/15/16
Received: Date/Time: 2/16/16 1505
Relinquished: Date/Time:
Received: Date/Time:

TAT – Next Day 2 Day 3 Day STD

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

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Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PBS Engineering & Environmental
Gregg Middaugh
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: Sky Valley Education Center
Lab ID: 1602177

February 23, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 14 sample(s) on 2/16/2016 for the analyses presented in the following report.

Polychlorinated Biphenyls (PCB) by EPA 8082

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *02/23/2016*

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center
Lab Order: 1602177

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1602177-001	001-PCB-P		02/16/2016 3:05 PM
1602177-002	002-PCB-P		02/16/2016 3:05 PM
1602177-003	003-PCB-P		02/16/2016 3:05 PM
1602177-004	004-PCB-P		02/16/2016 3:05 PM
1602177-005	005-PCB-P		02/16/2016 3:05 PM
1602177-006	006-PCB-P		02/16/2016 3:05 PM
1602177-007	007-PCB-P		02/16/2016 3:05 PM
1602177-008	008-PCB-P		02/16/2016 3:05 PM
1602177-009	009-PCB-P		02/16/2016 3:05 PM
1602177-010	010-PCB-P		02/16/2016 3:05 PM
1602177-011	011-PCB-P		02/16/2016 3:05 PM
1602177-012	012-PCB-P		02/16/2016 3:05 PM
1602177-013	013-PCB-P		02/16/2016 3:05 PM
1602177-014	014-PCB-P		02/16/2016 3:05 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1602177**
Date: **2/23/2016**

CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

WorkOrder Narrative:
I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-001 **Matrix:** Paint

Client Sample ID: 001-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1254	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Total PCBs	ND	0.962		mg/Kg	1	2/17/2016 7:54:00 PM
Surr: Decachlorobiphenyl	54.7	30.8-168		%Rec	1	2/17/2016 7:54:00 PM
Surr: Tetrachloro-m-xylene	49.6	36.9-159		%Rec	1	2/17/2016 7:54:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-002

Matrix: Paint

Client Sample ID: **002-PCB-P**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1221	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1232	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1242	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1248	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1254	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1260	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1262	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Aroclor 1268	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Total PCBs	ND	0.943		mg/Kg	1	2/17/2016 8:04:00 PM
Surr: Decachlorobiphenyl	57.5	30.8-168		%Rec	1	2/17/2016 8:04:00 PM
Surr: Tetrachloro-m-xylene	51.7	36.9-159		%Rec	1	2/17/2016 8:04:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-003 **Matrix:** Paint

Client Sample ID: 003-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1221	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1232	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1242	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1248	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1254	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1260	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1262	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Aroclor 1268	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Total PCBs	ND	0.962		mg/Kg	1	2/17/2016 8:15:00 PM
Surr: Decachlorobiphenyl	56.5	30.8-168		%Rec	1	2/17/2016 8:15:00 PM
Surr: Tetrachloro-m-xylene	52.4	36.9-159		%Rec	1	2/17/2016 8:15:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-004

Matrix: Paint

Client Sample ID: **004-PCB-P**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1221	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1232	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1242	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1248	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1254	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1260	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1262	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Aroclor 1268	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Total PCBs	ND	0.980		mg/Kg	1	2/17/2016 8:26:00 PM
Surr: Decachlorobiphenyl	41.9	30.8-168		%Rec	1	2/17/2016 8:26:00 PM
Surr: Tetrachloro-m-xylene	41.4	36.9-159		%Rec	1	2/17/2016 8:26:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-005

Matrix: Paint

Client Sample ID: 005-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1221	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1232	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1242	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1248	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1254	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1260	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1262	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Aroclor 1268	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Total PCBs	ND	1.00		mg/Kg	1	2/17/2016 8:37:00 PM
Surr: Decachlorobiphenyl	64.9	30.8-168		%Rec	1	2/17/2016 8:37:00 PM
Surr: Tetrachloro-m-xylene	58.3	36.9-159		%Rec	1	2/17/2016 8:37:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-006 **Matrix:** Paint

Client Sample ID: 006-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1221	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1232	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1242	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1248	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1254	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1260	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1262	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Aroclor 1268	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Total PCBs	ND	0.980		mg/Kg	1	2/17/2016 8:48:00 PM
Surr: Decachlorobiphenyl	48.4	30.8-168		%Rec	1	2/17/2016 8:48:00 PM
Surr: Tetrachloro-m-xylene	49.5	36.9-159		%Rec	1	2/17/2016 8:48:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-007 **Matrix:** Paint

Client Sample ID: 007-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13029		Analyst: CM
Aroclor 1016	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1221	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1232	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1242	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1248	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1254	1.80	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1260	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1262	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Aroclor 1268	ND	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Total PCBs	1.80	0.980		mg/Kg	1	2/17/2016 8:59:00 PM
Surr: Decachlorobiphenyl	67.9	30.8-168		%Rec	1	2/17/2016 8:59:00 PM
Surr: Tetrachloro-m-xylene	61.2	36.9-159		%Rec	1	2/17/2016 8:59:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-008

Matrix: Paint

Client Sample ID: **008-PCB-P**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 1:33:00 PM
Surr: Decachlorobiphenyl	63.7	30.8-168		%Rec	1	2/23/2016 1:33:00 PM
Surr: Tetrachloro-m-xylene	71.6	36.9-159		%Rec	1	2/23/2016 1:33:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-009 **Matrix:** Paint

Client Sample ID: 009-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 1:44:00 PM
Surr: Decachlorobiphenyl	73.3	30.8-168		%Rec	1	2/23/2016 1:44:00 PM
Surr: Tetrachloro-m-xylene	81.6	36.9-159		%Rec	1	2/23/2016 1:44:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-010 **Matrix:** Paint

Client Sample ID: 010-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 1:56:00 PM
Surr: Decachlorobiphenyl	54.8	30.8-168		%Rec	1	2/23/2016 1:56:00 PM
Surr: Tetrachloro-m-xylene	66.3	36.9-159		%Rec	1	2/23/2016 1:56:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-011 **Matrix:** Paint

Client Sample ID: 011-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 2:08:00 PM
Surr: Decachlorobiphenyl	30.2	30.8-168	S	%Rec	1	2/23/2016 2:08:00 PM
Surr: Tetrachloro-m-xylene	38.2	36.9-159		%Rec	1	2/23/2016 2:08:00 PM

NOTES:

S - Outlying surrogate recovery(ies) observed. All other laboratory and field samples recovered within range.

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-012

Matrix: Paint

Client Sample ID: 012-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 2:20:00 PM
Surr: Decachlorobiphenyl	63.2	30.8-168		%Rec	1	2/23/2016 2:20:00 PM
Surr: Tetrachloro-m-xylene	75.1	36.9-159		%Rec	1	2/23/2016 2:20:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental **Collection Date:**

Project: Sky Valley Education Center

Lab ID: 1602177-013 **Matrix:** Paint

Client Sample ID: 013-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1254	0.196	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Total PCBs	0.196	0.100		mg/Kg	1	2/23/2016 2:32:00 PM
Surr: Decachlorobiphenyl	55.2	30.8-168		%Rec	1	2/23/2016 2:32:00 PM
Surr: Tetrachloro-m-xylene	66.0	36.9-159		%Rec	1	2/23/2016 2:32:00 PM

Analytical Report

WO#: **1602177**

Date Reported: **2/23/2016**

Client: PBS Engineering & Environmental

Collection Date:

Project: Sky Valley Education Center

Lab ID: 1602177-014

Matrix: Paint

Client Sample ID: 014-PCB-P

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 8082				Batch ID: 13070		Analyst: CM
Aroclor 1016	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1221	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1232	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1242	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1248	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1254	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1260	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1262	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Aroclor 1268	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Total PCBs	ND	0.100		mg/Kg	1	2/23/2016 2:43:00 PM
Surr: Decachlorobiphenyl	81.1	30.8-168		%Rec	1	2/23/2016 2:43:00 PM
Surr: Tetrachloro-m-xylene	92.1	36.9-159		%Rec	1	2/23/2016 2:43:00 PM

Work Order: 1602177
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **MB-13029** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **MBLKS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522851**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Total PCBs	ND	0.100									
Surr: Decachlorobiphenyl	54.6		50.00		109	33.3	140				
Surr: Tetrachloro-m-xylene	51.0		50.00		102	23.2	142				

Sample ID **LCS1-13029** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.820	0.100	1.000	0	82.0	42.3	147				
Aroclor 1260	0.858	0.100	1.000	0	85.8	45.2	151				
Surr: Decachlorobiphenyl	55.8		50.00		112	33.3	140				
Surr: Tetrachloro-m-xylene	51.4		50.00		103	23.2	142				

Sample ID **LCS1D-13029** SampType: **LCSD** Units: **mg/Kg** Prep Date: **2/17/2016** RunNo: **27800**
Client ID: **LCSS02** Batch ID: **13029** Analysis Date: **2/17/2016** SeqNo: **522849**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.02	0.100	1.000	0	102	42.3	147	0.8202	21.5	20	R
Aroclor 1260	1.06	0.100	1.000	0	106	45.2	151	0.8584	21.3	20	R
Surr: Decachlorobiphenyl	64.8		50.00		130	33.3	140		0		
Surr: Tetrachloro-m-xylene	57.7		50.00		115	23.2	142		0		

Work Order: 1602177
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID	**LCS1D-13029**	SampType: **LCSD**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**	
Client ID:	**LCSS02**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522849**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
R - High RPD observed, spike recoveries are within range.

Sample ID	**LCS2-13029**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/17/2016**		RunNo: **27800**	
Client ID:	**LCSS**	Batch ID: **13029**					Analysis Date: **2/17/2016**		SeqNo: **522850**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.969	0.100	1.000	0	96.9	44	117				
Surr: Decachlorobiphenyl	50.9		50.00		102	33.3	140				
Surr: Tetrachloro-m-xylene	48.6		50.00		97.3	23.2	142				

Sample ID	**MB-13070**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **2/23/2016**		RunNo: **27839**	
Client ID:	**MBLKS**	Batch ID: **13070**					Analysis Date: **2/23/2016**		SeqNo: **523546**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.100									
Aroclor 1221	ND	0.100									
Aroclor 1232	ND	0.100									
Aroclor 1242	ND	0.100									
Aroclor 1248	ND	0.100									
Aroclor 1254	ND	0.100									
Aroclor 1260	ND	0.100									
Aroclor 1262	ND	0.100									
Aroclor 1268	ND	0.100									
Total PCBs	ND	0.100									
Surr: Decachlorobiphenyl	28.7		50.00		57.4	30.8	168				
Surr: Tetrachloro-m-xylene	32.8		50.00		65.5	36.9	159				

Work Order: 1602177
CLIENT: PBS Engineering & Environmental
Project: Sky Valley Education Center

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID **LCS1-13070** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/23/2016** RunNo: **27839**
Client ID: **LCSS** Batch ID: **13070** Analysis Date: **2/23/2016** SeqNo: **523543**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.629	0.100	1.000	0	62.9	42.3	147				
Aroclor 1260	0.603	0.100	1.000	0	60.3	45.2	151				
Surr: Decachlorobiphenyl	34.9		50.00		69.9	30.8	168				
Surr: Tetrachloro-m-xylene	37.5		50.00		74.9	36.9	159				

Sample ID **LCS1D-13070** SampType: **LCSD** Units: **mg/Kg** Prep Date: **2/23/2016** RunNo: **27839**
Client ID: **LCSS02** Batch ID: **13070** Analysis Date: **2/23/2016** SeqNo: **523544**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.652	0.100	1.000	0	65.2	42.3	147	0.6290	3.65	20	
Aroclor 1260	0.614	0.100	1.000	0	61.4	45.2	151	0.6028	1.81	20	
Surr: Decachlorobiphenyl	34.8		50.00		69.6	30.8	168		0		
Surr: Tetrachloro-m-xylene	39.9		50.00		79.8	36.9	159		0		

Sample ID **LCS2-13070** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/23/2016** RunNo: **27839**
Client ID: **LCSS** Batch ID: **13070** Analysis Date: **2/23/2016** SeqNo: **523545**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.498	0.100	1.000	0	49.8	44	117				
Surr: Decachlorobiphenyl	26.1		50.00		52.1	30.8	168				
Surr: Tetrachloro-m-xylene	29.5		50.00		58.9	36.9	159				

Sample Log-In Check List

Client Name:	**PBS**	Work Order Number:	**1602177**
Logged by:	**Erica Silva**	Date Received:	**2/16/2016 3:05:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Bulk Material		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	19.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

PBS | Engineering + Environmental

FREMONT

1602176

Project: SKY VALLEY EDUCATION CENTER Project #: 41373-000

Analysis requested: PCB PAINT - 8082 Date: 2/15/16

Relinq'd by/Signature: [signature] Date/Time: 2/15/16

Received by/Signature: [signature] Date/Time: 2/16/16 1505

Fax results to:

☐	Brian Stanford	☐	Ferman Fletcher	☐	David Toy
☐	Willem Mager	☐	Prudy Stoudt-McRae	☐	Mike Smith
☑	Gregg Middaugh	☐	Grant Baker	☐	Chuck Greeb
☐	Mark Hiley	☐	Janet Murphy	☐	Christine Rmah
☐	Tim Ogden	☐	Harry Goren		

TURN AROUND TIME:

☐	1 Hour	☐	24 Hours	☑	3-5 Days
☐	2 Hours	☐	48 Hours	☐	Other_____
☐	4 Hours				

Report composite results for GWB/joint compound samples only

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	001-PCB-P	WHITE / WOOD	EXTERIOR COVERED WALKWAY	
	002-PCB-P	BROWN / METAL	EXTERIOR FACIA COVERED WALKWAY	
	003-PCB-P	TAN / METAL	EXTERIOR DOWN SPOUT	
	004-PCB-P	WHITE / METAL	EXTERIOR COVERED WALKWAY	
	005-PCB-P	WHITE / WOOD	EXTERIOR COVERED WALKWAY ANNEX	
	006-PCB-P	WHITE / METAL	EXTERIOR WHITE TRIM - OFFICE	
	007-PCB-P	WHITE / WOOD	EXTERIOR COVERED WALKWAY - OFFICE	
	008-PCB-P	LIGHT GRAY / METAL	EXTERIOR HUPPER 310-4	
	009-PCB-P	BROWN / CONCRETE	EXTERIOR WOOD SHEAR 3-WALL	
	010-PCB-P	WHITE / WOOD	EXTERIOR ANNEX SOFFIT	
	011-PCB-P	BROWN / WOOD	EXTERIOR FACIA ANNEX	
	012-PCB-P	BROWN / WOOD	EXTERIOR FACIA 310-4	
	013-PCB-P	LIGHT BLUE / CONCRETE	INTERIOR COMMONS NE WALL	
	014-PCB-P	WHITE / GWB	INTERIOR ELECTRICAL RM ANNEX	

2517 Eastlake Avenue East, Suite 101, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

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CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K
A TestAmerica Company

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * (866) 671-1884
Phoenix, AZ: 1501 West Knudsen drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☑	☐
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	
Heavy	☐	☐	☐	☐	

001496728

CONTACT INFORMATION

Company:	PBS ENVIRONMENTAL	Address:	2514 EASTLAKE AVE E.
Contact:	GREGG MIDDAUGH	Special Instructions:	SEATTLE, WA 98102
Phone:	206.255.4659		

PROJECT INFORMATION

Project ID:	41373.000		
Project Description:	SVEC		
Project Zip Code:	—	Sampling Date & Time:	2-17-16
PO Number:	41373.000	Sampled By:	GM/JP

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
1103	LEAHY FILTER MEDIA	B	STD	—	—

Non-Culturable

Spore Trap		Tape/Swab/Bulk		BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates											Other Requests			
Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp.)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	Legionella culture	Total Coliform, E. coli (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen		Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	~~Fiberglass only~~	DUST CHARACTERIZATION
☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☒ ALLERGEN – DUST MITE

SAMPLE TYPE CODES

BC – BioCassette™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
AS – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Gregg Middaugh	2-18-16		
~~FedEx~~ UPS	2-19-16	[illegible]	9:20

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at http://www.emlab.com/s/main/serviceterms.html

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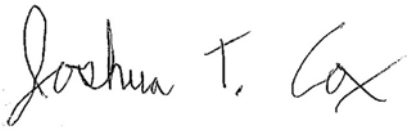
EMLab P&K
A TestAmerica Company

Report for:

Mr. Greg Middaugh
PBS Engineering and Environmental: Seattle
2517 Eastlake Ave E.
Suite 100
Seattle, WA 98102

Regarding: Project: 41373.000; SVEC
EML ID: 1496728

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:
Direct microscopic exam (Qualitative): 02-22-2016

Service SOPs: Direct microscopic exam (Qualitative) (EM-MY-S-1039)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-22-2016

DIRECT MICROSCOPIC EXAMINATION REPORT

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 6918976-1, Analysis Date: 02/22/2016: Bulk sample 1: White Hepa Media Material				
Filter	Very few	None	None	Normal trapping
Lab ID-Version: 6918977-1, Analysis Date: 02/22/2016: Bulk sample 2: Black Pre-Filter				
Black Pre-Filter	Very few	None	None	Normal trapping

* Indicative of normal conditions, i.e. seen on surfaces everywhere. Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen mirrors that usually seen outdoors.

† Quantities of molds seen growing are listed in the MOLD GROWTH column and are graded <1+ to 4+, with 4+ denoting the highest numbers.

†† Some comments may refer to the following: Most surfaces collect a mix of spores which are normally present in the outdoor environment. At times it is possible to note a skewing of the distribution of spore types, and also to note "marker" genera which may indicate indoor mold growth. Marker genera are those spore types which are present normally in very small numbers, but which multiply indoors when conditions are favorable for growth.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
The limit of detection is < 1+ when mold growth is detected.

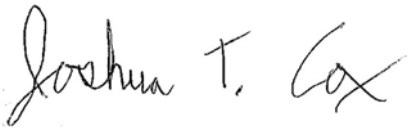
EMLab P&K
A TestAmerica Company

Report for:

Mr. Greg Middaugh
PBS Engineering and Environmental: Seattle
2517 Eastlake Ave E.
Suite 100
Seattle, WA 98102

Regarding: Project: 41373.000; SVEC
EML ID: 1496728

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:
Dust characterization: 02-22-2016

Service SOPs: Dust characterization (EM-MY-S-1044)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-22-2016

PARTICULATE CHARACTERIZATION - DIRECT MICROSCOPIC EXAMINATION REPORT

Location:	1: White Hepa Media Material	2: Black Pre-Filter
Comments (see below)	None	None
Lab ID-Version‡:	6918978-1	6918979-1
	Percentage (%)†	Percentage (%)†
Algae		
Amorphous debris	10	10
Animal hair		2
Cellulose fibers	5	14
Crystalline particles		
Epithelial (skin) cells	84	70
Feather barbs		2
Fern, moss, etc.		
Fungal spores	1	1
Glass fiber		
Human hair		
Hyphal fragments		
Insect parts		
Mites		
Other (wood, trichome, etc.)		
Pollen		1
Starch particles		
Synthetic fibers		

Comments:

† The percentages reported are approximate values.

Particle types listed without a percentage or data entry were not detected during the course of the analysis for the respective sample.

Interpretation is left to the company and/or persons who conducted the field work.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
A TestAmerica Company

Report for:

Mr. Greg Middaugh
PBS Engineering and Environmental: Seattle
2517 Eastlake Ave E.
Suite 100
Seattle, WA 98102

Regarding: Project: 41373.000; SVEC
EML ID: 1496728

Approved by:



Approved Signatory
Renee Luna

Dates of Analysis:
Asbestos PLM: 02-22-2016

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
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(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: PBS Engineering and Environmental: Seattle
C/O: Mr. Greg Middaugh
Re: 41373.000; SVEC

Date of Sampling: 02-17-2016
Date of Receipt: 02-19-2016
Date of Report: 02-22-2016

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	2
Total Samples Analyzed:	2
Total Samples with Layer Asbestos Content > 1%:	0

Location: 1, White Hepa Media Material

Lab ID-Version‡: 6918973-1

Sample Layers	Asbestos Content
White Fibrous Material	ND
Composite Non-Asbestos Content:	99% Synthetic Fibers < 1% Cellulose
Sample Composite Homogeneity:	Good

Location: 2, Black Pre-Filter

Lab ID-Version‡: 6918972-1

Sample Layers	Asbestos Content
Black Semi-Fibrous Material (Filter)	ND
Composite Non-Asbestos Content:	55% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".