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Asbestos, Lead, and Other Hazardous Building Materials Investigation

MLK Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

February 2023

Acumen Project No. COB 2230

Prepared for:

City of Berkeley
Parks, Recreation & Waterfront Department
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1.0 Introduction

The purpose of this report is to present and discuss the findings of an asbestos, lead, and other hazardous building materials investigation that Acumen Industrial Hygiene, Inc. (Acumen) conducted for City of Berkeley, the Client, at the MLK Jr. Youth Services Center (Site). The Site is a one-story building with a gymnasium located at 1730 Oregon Street in Berkeley, California. Acumen's representative, Mr. Tam Pham, a registered California Asbestos Consultant (CAC) and Lead Inspector/Assessor (I/A), conducted this investigation on August 25, 2022.

We understand the purpose of this survey is for potential upgrades and renovations. At the time of the survey, the building was occupied. Our inspection was limited to accessible areas of the building. Destructive sampling of the building's roofs was conducted during this investigation with assistance by Statewide Roofing, Inc. (San Jose, CA), who performed roof patching after the roof samples were collected.

The objectives of this investigation were as follows:

- To identify regulated asbestos containing materials (RACMs), defined by Bay Area Air Quality Management District (BAAQMD). RACMs and Category I and II materials that will be rendered friable need to be removed if they are to be impacted by building renovation and before the building can be demolished.
- To identify asbestos containing materials (ACM) that would require compliance with California Department of Industrial Relations – Division of Occupational Safety and Health (Cal/OSHA) asbestos regulations and waste disposal. ACM is a manufactured construction material with an asbestos content that is greater than 1% by weight.
- To identify asbestos containing construction materials (ACCM) that would require compliance with Cal/OSHA asbestos regulations. ACCM is a manufactured construction material with an asbestos content that is greater than 0.1% by weight.
- To identify primarily deteriorated lead-based paints (LBPs) that would need stabilization/removal before building demolition or renovation to comply with California Environmental Protection Agency (EPA) hazardous waste disposal regulations regulated by the California Department of Toxic Substances Control (DTSC). The handling of LBPs would also require compliance with Cal/OSHA lead regulations (8CCR1532.1). The evaluation of paints was not intended to be either a lead inspection or a lead hazard evaluation as defined by Title 17 CCR 35001 *et seq*. Lead-based paint inspections in public or residential buildings are subject to California Department of Public Health (CDPH) regulations.
- To identify lead-containing materials (LCMs) primarily in ceramic tiles that would need to be removed before demolition or renovation for compliance with Cal/OSHA and DTSC regulations. The evaluation was not intended to be either a lead inspection or a lead hazard evaluation as defined by California Department of Public Health (17CCR35001 et seq).
- To visually identify other potential hazardous building materials that would require removal prior to demolition or renovation to comply with Cal-EPA DTSC hazardous waste disposal regulations. The handling of universal hazardous wastes also requires compliance with Cal/OSHA regulations. These universal hazardous wastes may include polychlorinated biphenyls (PCBs), mercury and Freon.
- Based on the age of the buildings (constructed or remodeled between 1950 and 1981), Acumen conducted representative sampling of "PCB priority building materials" consistent with the methods outlined in Protocol for Evaluating Priority PCBs-Containing Materials before Building

Demolition required by the Bay Area Stormwater Management Agencies Association (BASMAA, 2018). We included sampling for PCBs in "priority" building materials such as caulking, sealants, gaskets, mastics, thermal/fiberglass insulation and paints.

2.0 Summary of Investigation

2.1 Asbestos Survey Methods

The asbestos inspection consisted of a walkthrough of the Site to identify and sample suspect ACM. Acumen noted significant factors of the suspect ACM, including the friability of suspect materials. Friability describes the ability of a material to be crushed or crumbled, when dry, into a powder using hand pressure.

Where suspect ACMs were noted, bulk samples were collected and submitted with our chain of custody forms to Micro Analytical Laboratories, Inc. (Emeryville, CA) for analysis. This laboratory is accredited by the National Institute of Standards and Technology (NIST), National Voluntary Laboratory Accreditation Program (NVLAP) for selected test methods for asbestos. This laboratory also holds certification from the American Industrial Hygiene Association (AIHA). The asbestos laboratory results are shown in Appendix A.

Acumen collected fifty-six (56) asbestos samples at the Site. The suspect asbestos samples collected were analyzed by polarized light microscopy (PLM). The asbestos laboratory reports are shown in Appendix A. This method identifies the type(s) of asbestos present in the sample and its corresponding percent concentration(s). The reliable limit of quantification of this method is 1% asbestos. For samples reported as less than 1% (trace) asbestos, they were reanalyzed using a 400-point count PLM method (Federal Register, Volume 55, Number 224, November 20, 1990). Five (5) of the PLM samples were re-analyzed using 400 point counting methods.

2.2 Lead-Containing Materials and Paint Survey Methods

The lead inspection consisted of a walkthrough of the Site to identify deteriorated surface coatings and suspect LCMs. Paints that were in deteriorated condition (peeling, chipping, powdering, etc.) and ceramic tiles were sampled, noting the location, color, substrate, and extent of deterioration. Intact paints were also sampled, for Cal/OSHA compliance purposes.

We collected five (5) discrete paint samples for lead analysis. The samples were analyzed by flame atomic absorption (FLAA) spectrometry using Method 7420. The limit of quantification depends on the mass of the sample. Lead bulk materials (ceramic tiles) were not sampled due to the restrooms are still in used, and thus ceramic tiles are assumed to contain lead until proven otherwise.

Lead paint samples were submitted to Micro Analytical Laboratories, Inc. (Emeryville, CA) for analysis. This laboratory is accredited by the AIHA under the Environmental Lead Laboratory Accreditation Program (ELLAP) for selected lead analysis methods. When a result is noted to be less than (<) on the lead sample report, it should be interpreted as meaning below analytical detection limit. The lead laboratory results are also shown in Appendix A.

2.3 Other Hazardous Building Material Survey Methods

During this inspection, we visually verified the presence of other suspect hazardous building materials. We also tallied fluorescent light tubes and estimated the number of ballasts associated with them. Ballasts were assumed to contain PCBs and not sampled. PCB presence can be verified at the time of demolition or renovation as non-PCB ballasts will be so labeled.

We collected ten (10) PCB sample materials during our inspection. PCBs samples were analyzed using EPA Method 8082 by gas chromatography with electron capture detection (ECD). The PCB bulk samples were submitted to McCampbell Analytical, Inc. (Pittsburg, CA) for analysis. This laboratory is accredited by the AIHA under the National Environmental Laboratory Accreditation Program (NELAP) for selected lead analysis methods. The PCB laboratory results are also shown in Appendix A.

3.0 Narrative Summary of Findings

The one-story building with gymnasium was built slab-on grade with stucco perimeter walls (Photo 1). Interior finishes of the building consist of painted drywall with taping mud. Taping mud on non-asbestos drywall contains 2% asbestos. However, the composite analysis of the drywall and taping mud is less than 0.25% asbestos as determined by point counting analysis. Various floor tiles and floor black mastic contains up to 10% asbestos. Due to restrooms that are still in use, we were not able to perform destructive sampling of ceramic floor and wall tiles, spray applied acoustical ceiling and ceiling tile with adhesive. These materials are assumed to contain asbestos and lead until proven otherwise. Interior paints were found to be intact.

Exterior painted stucco was found not to contain asbestos. However black mastic and coating on stucco surface was found to have up to 10% asbestos. Intact paint on stucco contains 6,300 parts per million (ppm) lead. We observed loose and flaking paint on windowsill which contains 3,200 ppm lead on the roof. We core sampled the roof and found it does not contain asbestos. Curb core and black mastic at skylight were sampled and there contain up to 15% asbestos. We observed loose and flaking paint on windowsill which contains 3,200 ppm lead on the roof.

There are numerous fluorescent light fixtures, which are suspected to contain mercury (in the tubes), and possibly PCBs in their ballasts. This can be verified at time of abatement, prior to demolition or renovation. The exit signs and smoke detector contain batteries, which will require removal prior to building renovation. Sodium vapor lamps bulbs would have to be removed as well.

4.0 Detailed Findings and Discussion

4.1 Asbestos Findings and Discussion

The sampling results for asbestos containing materials are summarized on Table 1. The estimated quantity is for asbestos containing materials that can be found throughout the buildings and is not limited to only where the materials were sampled. Table 2 shows the sample results for those materials that did not contain detectable amounts of asbestos. The laboratory analytical results are included in Appendix A. Asbestos sample locations are illustrated on the Sample Location Maps provided in Appendix B. The diagrams indicate where the samples were taken, but locations of these materials are not limited to the areas sampled. Representative photographs of materials that have been identified are provided in Appendix C.

4.1.1 Friable Asbestos Containing Materials

During our investigation, we found friable asbestos containing materials based on bulk samples collected at the building.

- Taping mud contains 2% chrysotile asbestos (sample COB223016D, Photo 2) on non-asbestos drywall. Although it is considered friable, the material is exempt from BAAQMD regulations because the composite analysis of drywall and taping mud is less than 1% asbestos (<0.25%) as determined by 400 point counting analysis. The material is therefore considered non-RACM. We estimate there are approximately 9,000 square feet of this material present throughout the building.

The removal of this taping mud is considered Cal/OSHA Class II abatement procedures and the waste is considered construction debris.

- Paint/Coating on non-asbestos stucco (samples COB2230-10A, COB2230-10B, COB2230-10C and COB2230-10D, Photo 3) contains up to 1.36% asbestos as determined by 400 point counting analysis. There are approximately 11,000 square feet of this RACM present throughout the building. The removal of this material is considered Cal/OSHA Class I asbestos abatement.

4.1.2 Non-Friable Asbestos Containing Materials

During our investigation, we found non-friable asbestos containing materials based on bulk samples collected at the building.

- Black mastic on non-asbestos stucco contains 10% asbestos (samples COB2230-10A, COB2230-10B and COB2230-10D). This material was found under paint/coating on stucco, as mentioned above. This Category I non-friable material is present throughout the building and the removal quantity is included in the paint/coating material previously mentioned. All black mastic, regardless of its location, would need to be abated down to the stucco substrate.
- 12-inch beige vinyl floor tile and its associated black mastic contain up to 10% asbestos (samples COB2230-12A and COB2230-12B, Photo 4). There are approximately 1,800 square feet of these Category I non-friable materials present throughout the building and under carpet. The removal of these materials is considered Cal/OSHA Class II asbestos abatement. All black floor mastic and vinyl floor tile, regardless of their locations, would need to be abated down to the concrete floor substrate.
- Black mastic contains up to 2% asbestos (samples COB2230-15A, COB2230-15B and COB2230-19A, Photo 5). This material was found under 12-inch white vinyl floor tiles. There are approximately 1,500 square feet of this Category I non-friable material present throughout the building. The removal of this material is considered Cal/OSHA Class II asbestos abatement. All black floor mastic, regardless of its locations, would need to be abated down to the concrete floor substrate.
- 9-inch red and black vinyl floor tile contains 5% asbestos (samples COB2230-20A and COB2230-20B, Photo 6). There are approximately 250 square feet of this Category I non-friable material present throughout building. The removal of this material is considered Cal/OSHA Class II asbestos abatement. Since black floor mastic from other locations was found to contain asbestos, black floor mastic under this 9-inch tile would need to be abated as well. All black floor mastic and vinyl floor tile, regardless of their locations, would need to be abated down to the concrete floor substrate.
- Black mastic on the roof contains 5% asbestos (samples COB2230-05C, COB2230-08A and COB2230-08B, Photo 7). This material was sampled at the skylight and its curb. There are approximately 800 square feet of this Category I non-friable material present throughout the roof. The removal of this material is considered Cal/OSHA Class II asbestos abatement. All black mastic, regardless of its locations, would need to be abated and down to the roof substrate, if applicable.

4.1.3 Assumed Asbestos Material (Not Sample)

During our investigation, there were assumed non-friable asbestos containing materials found at the Site where samples were not collected because the area is still being used and destructive sampling was not feasible. Assumed asbestos containing materials should be sampled prior to renovation to confirm that they do not contain asbestos.

- Suspect spray applied acoustical ceiling is assumed (not sample) to contain asbestos (Photo 8) and it should be sampled to prove otherwise. There are approximately 2,000 square feet of this RACM material present throughout building. The removal of this material is considered Cal/OSHA Class I asbestos abatement.
- Suspect 12-inch white ceiling tile with adhesive ceiling are assumed (not sample) to contain asbestos (Photo 9) and should be sampled to prove otherwise. There are approximately 1,200 square feet of these Category I non-friable materials present throughout building. The removal of these materials is considered Cal/OSHA Class II asbestos abatement.
- Suspect ceramic wall and floor tile grout and mortar found in restrooms are assumed (not sample) to contain asbestos (Photo 10) and they should be sampled to prove otherwise. There are approximately 1,700 square feet of these Category I non-friable materials present throughout building. The removal of these materials is considered Cal/OSHA Class II asbestos abatement.

4.1.4 Regulated Asbestos Containing Materials

BAAQMD regulates air emissions from building demolition and renovation projects. This agency requires that materials with an asbestos content greater than 1% be removed before building demolition or renovation if they are either friable or the work will damage or otherwise render them friable.

We found RACM (paint/coating on stucco) and assumed RACM (acoustical ceiling) at the Site. The removal of RACMs requires 10-day advance notification to BAAQMD if more than 100 square feet or 100 linear feet are removed. Even if less than 100 square feet or linear feet are removed, the BAAQMD has rules regarding the methods of removal. Assumed RACM should be sampled to prove otherwise. The vinyl floor tile and black floor mastic may be considered RACM if the contractor uses mechanical methods to remove these materials and render them friable.

The taping mud is not considered RACM because the composite point counting results are less than 1% asbestos (less than 0.25% asbestos). BAAQMD allows the composite analysis of drywall and taping mud materials that are present throughout the Site. Since the composite result is less than 1% as determined by point count analysis, the wall system is non-RACM and is not regulated by this Agency. It is not considered a hazardous waste but is a construction waste. However, Cal/OSHA does not recognize composite analysis of materials and considers the taping mud an asbestos containing material because it contains up to 2% asbestos. The removal of this taping mud will need to be consistent with Cal/OSHA requirements for Class II work.

Asphalt encapsulated roofing materials are not considered regulated based on an EPA 1994 clarification (Federal Register 59, 31157) regarding asphalt encapsulated roofing materials. This presumes that the asphalt materials will not be removed either using power tools (e.g., rotating blade cutters) or other methods that will grind or otherwise pulverize this material. The roofing materials (skylight curb core) are considered non-friable and therefore non-RACM because these materials will remain intact during removal. The removal of these materials will need to be consistent with Cal/OSHA requirements for worker protection and the wastes will need to be segregated as Category I non-friable asbestos wastes.

4.1.5 Non-Asbestos Containing Materials

Refer to Table 2 for materials sampled that do not contain asbestos for the Site.

4.2 Detailed Lead Findings and Discussion

The result of this investigation determined that lead-based paint and lead-containing paint is present at the Site. Intact lead paints do not require paint-stabilization. However, deteriorated lead paints must be

stabilized prior to renovation. Where inspected, we found deteriorated paint (loose and flaking) at the Site. As shown on Table 3, we representatively sampled paints to comply with Cal/OSHA and DTSC waste disposal regulations during construction.

Paints that contain more than 5,000 ppm lead are considered "lead-based paint" and if deteriorated are considered a "lead-hazard" by the CDPH. Paint chip wastes or material that contains more than 1,000 ppm lead would be classified as California hazardous wastes. Deteriorated paint wastes or materials that contain more than 50 ppm lead, but less than 1,000 ppm lead would need to be re-analyzed by the Soluble Threshold Limit Concentration (STLC) to determine soluble lead content and by the US EPA Total Concentration for Leachable Pollutants (TCLP) test to determine whether the paint or material is either a California or a Federal hazardous waste. If the soluble test(s) exceed 5.0 mg/L, then the waste would be characterized as "hazardous waste" (either California, federal or both). If ceramic tile contains greater than 50 ppm, then it should also be removed and tested for leachable lead per the STLC/TCLP methods, prior to demolition or renovation.

Any construction work that disturbs lead-based or lead-containing materials (including demolition) will need to be conducted in accordance with Cal/OSHA's lead in construction regulations (8CCR1532.l). These regulations apply paints and materials that contains any detectable amounts of lead. In theory, this should not pose a significant problem as this regulation has been in effect since 1992. Lead containing materials may require separate disposal if they contain more than 50 ppm lead. This rule does not apply for intact paint.

Cal/OSHA's lead in construction standard (8CCR1532.1) requires a contractor whose work involves disturbing leaded materials to develop and implement a lead compliance plan. The written lead compliance plan would essentially acknowledge the presence of lead and would describe procedures to minimize airborne lead exposures (e.g., use of dust control, clean up debris daily with a HEPA vacuum, and use good personal hygiene procedures, etc.) consistent with either assumed or known airborne lead exposures. Additionally, if the paint is disturbed (e.g., sanding or chipping), contractor is required to conduct employee exposure assessment to determine appropriate protective measures, including medical surveillance and personal hygiene facilities, and to provide employee training on the hazards of lead related work. Note that lead related work in public buildings that exceeds Cal/OSHA's permissible exposure limit requires that the training be accredited lead worker training.

4.2.1 Lead-Based Paint

During our investigation, we found lead-based paint based on bulk samples collected.

- Exterior beige paint on stucco contains 6,300 ppm lead. This paint is intact and does not require paint-stabilization.

4.2.2 Lead-Containing Paint

During our investigation, we found deteriorated lead-containing paint based on bulk samples collected.

- Exterior green paint on wood windowsill contains 3,200 ppm lead (sample COB2230-PB03, Photo 11). There are approximately 50 square feet of this deteriorated (loose and flaking) paint present throughout the building that will require paint-stabilization and dispose as a hazardous waste.
- Beige paint with orange paint on wood contains 120 ppm lead. This paint is intact and does not require paint-stabilization.

4.2.3 Non-Lead-Containing Paints

During our investigation, we found non-lead-containing paints (below detection limit) based on bulk samples collected.

- Exterior silver paint on the HVAC ducting contains lead concentrations less than the detection limit (less than 82 ppm). This paint is intact and does not require paint-stabilization.
- Light blue paint on drywall contains lead concentrations less than the detection limit (less than 83 ppm). This paint is intact and does not require paint-stabilization.

4.3 Detailed PCB Findings and Discussion

The Resource Conservation and Recovery Act (RCRA) and the Toxic Substance Control Act (TSCA) defines PCB-containing materials as materials containing concentrations of greater than 500 ppm PCB. PCB-contaminated materials are defined as materials containing a concentration of greater than 50 ppm PCB, but less than 500 ppm PCB. Non-PCB materials are defined as containing a concentration of less than 50 ppm PCB.

An assessment was conducted to test for the presence of building materials that may contain PCB. We did not find PCB-containing materials based on bulk samples collected at the Site. Acumen sampled exterior window gasket, window putty, window sealant, vinyl floor tile with mastic and carpet adhesive, which do not contain a detectable concentration of PCBs. PCB bulk sample results can be found in Table 4. Light ballasts installed before 1980 likely contain PCBs, so these lights should be dismantled and inspected for PCB-free labeling throughout the Site.

4.4 Universal Hazardous Waste Findings and Discussion

DTSC has adopted regulations (SB 20 Electronic Waste Recycling Act) for the handling of universal waste or E-Waste. This category is a subset under all hazardous wastes. Universal wastes encompass a variety of electronic devices (including fluorescent lamps, light emitting diode (LED) lights, high-intensity discharge (HID) lamps, light ballasts, smoke detectors and emergency exit signs, mercury thermostats, cathode ray tubes, batteries, etc.) that usually contain mercury, lead, cadmium, chromium, and copper. These materials are considered toxic and are banned from landfill disposal. These materials must be collected and recycled prior to their disturbance during demolition or renovation. Fluorescent light tubes and mercury thermostats should be carefully removed without breaking and packaged for recycling.

Acumen visually assessed the Site and found fluorescent light fixtures that will require inspection and disposal as hazardous waste if they contain PCBs. The abatement contractor will need to assess ballasts and segregate those without the “No PCB” labeling for proper storage and disposal. The fluorescent light tubes are regulated because of their mercury content but these can be recycled instead of disposal as hazardous waste. Although recycling may be more expensive than disposal, it avoids the perpetual liability associated with the generation and disposal of hazardous wastes. High-intensity discharge lamps, emergency exit signs and smoke detectors contain batteries, which should be recycled as well. We also observed there is a heating, ventilation, air conditioning (HVAC) system on the roof that contains Freon, which will require recycling if the HVAC system was to be removed.

4.4.1 Summary of Universal Hazardous Wastes

The following lists the universal hazardous wastes found during this investigation at the Site.

- Approximately 45 fluorescent light fixtures with assumed PCB ballasts (Photo 12).
- Approximately (15) high-intensity discharge lamps (Photo 13)

- Four (4) exit signs with batteries
- Five (5) smoke detectors with batteries
- One (1) HVAC unit with Freon (Photo 14)

5.0 Recommendations

5.1 ACMs/LCMs During Building Demolition or Renovations

1. Notify potential demolition or renovation contractors of the presence of ACMs at the Site. Disturbance of ACM requires special training and procedures. A Cal/OSHA registered asbestos contractor is required for ACM removals. BAAQMD regulations require that ACM be properly removed and disposed, prior to demolition or renovation where they would be disturbed. This work will require notification to the BAAQMD 10-days prior to removal or if mechanical methods will be used to remove vinyl floor tile and black floor mastics.
2. Notify potential demolition or renovation contractors of the presence of lead-based and lead-containing paints. Deteriorated lead paint would need to be stabilized. Disturbance of the lead paints requires compliance with Cal/OSHA's lead in construction regulation. The paint chip waste is considered California hazardous waste based on its high lead-content.
3. Sample all assumed materials indicated in this report for asbestos and/or lead to determine if they would need to be removed prior to demolition or renovation.
4. If additional suspect materials were discovered during demolition or renovation, these materials should be sampled to confirm that they do not contain asbestos or lead prior to their removal.
5. The fluorescent lights, HID lamps, exit signs and smoke detector with batteries at Site will require dismantling and recycling. If not recycled, they would need to be disposed as universal or hazardous waste. The fluorescent light ballasts may contain PCBs, which require inspection to determine properly waste disposal.
6. Prior to submitting bids to perform abatement work, abatement contractors should field verify all the estimated quantity of ACM materials and other hazardous materials stated in this report.
7. Although there is no regulatory requirement for it, it would be advisable to develop either a work plan or specification for the handling of asbestos, lead, and hazardous materials during abatement.
8. The demolition or renovation contractor can recycle other universal hazardous wastes such as Freon, if specifically included in their scope of work.

6.0 Managing ACM/LBP in Place (For Portions to Remain)

1. If the building (of portions there-of) is not abated, the owner will need to notify building occupants and employees of the presence of asbestos, as required under California Health and Safety Code 25915.7-25919.7 (Connelly Bill) and by Cal/OSHA regulations. The materials have a low fiber release potential if it remains undisturbed. Notify contractor and maintenance employees of this report.
2. Prepare and implement an asbestos O&M program to manage ACMs that will remain in place. This asbestos O&M program should detail roles and responsibilities for managing ACM at the complex. The O&M program should establish written policies and procedures for asbestos safe work practices to minimize the potential for unauthorized disturbance of ACM, monitor the condition of ACM and respond to damage or deterioration of ACM, with the goal of preventing the release of airborne asbestos fibers. Implementation of the O&M program will require that

facility employees receive annual asbestos training. The O&M program should remain in place as long as ACM remains in the buildings.

3. The California - Proposition 65 rules require posting a sign warming of potential hazards because of the presence of asbestos and lead.

7.0 Conclusions

Our investigation discovered friable and non-friable asbestos containing materials, which will require abatement prior to demolition or renovation. Lead-based and lead-containing paints are present. Deteriorated lead paint should be stabilized prior to demolition or renovation to comply with environmental regulations pertaining to DTSC disposal regulations. Universal hazardous wastes will need to be removed and recycled or disposed as hazardous waste. If the building is not demolished, the asbestos and lead materials that would not be abated at this time would need to be managed under an Operations and Maintenance (O&M) program and disclosed to tenants and contractors if the building is to remain in use.

8.0 Limitations

Reasonable effort was made by Acumen personnel to locate, and sample suspect hazardous building materials. However, for any facility or building, the existence of unique or concealed ACM or lead-containing materials, other hazardous building materials and debris is a possibility. Acumen does not warrant, guarantee, or profess to have the ability to locate or identify all ACM or other hazardous materials at this facility. The intent of this report is for use in planning, for demolition or renovation purposes. All quantities of materials identified in this report should be field verified by contractors prior to submitting bids to perform abatement work. Additional confirmatory sampling and detailed quantification may be required if the renovation work uncovers additional suspect materials. The report is not intended as a CDPH or HUD defined “lead hazard evaluation” or “lead inspection”.

Acumen provided these services consistent with the level and skill ordinarily exercised by members of the profession currently providing similar services under similar circumstances at the time the services were provided. This statement is in lieu of other statements either expressed or implied. This report is intended for the sole use of the named client and their designees. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of certain other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user.

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of all conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for materials removal, further investigation or the need for modifications to the processes or procedures surveyed.

The client should recognize that all testing and remediation methods have reliability limitations, no method or number of sampling locations can guarantee that a condition will be discovered within the performance of the services as authorized by the client. Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were observed during Acumen’s inspection of the site.

Table 1

Asbestos Containing Material
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	BAAQMD[2]	EQ[3]	Sample No.
Flat Roof - East Side	Curb Core with Black Mastic at Skylight	Gypsum Board: ND Vinyl Board: ND Black Mastic: 5% CH	Cat I NF	800 SF	COB2230-05C
Flat Roof - East Side	Black Mastic on Skylight	Black Mastic: 15% CH	Cat I NF	Included Above	COB2230-08A
Flat Roof - East Side	Black Mastic on Skylight	Black Mastic: 15% CH	Cat I NF	Included Above	COB2230-08B
Flat Roof - East Side	Stucco	Point Count: 0.63% CH Stucco: ND Paint/Coating: < 1% Black Mastic: 10% CH	RACM	11,000 SF	COB2230-10A
Flat Roof - North Side	Stucco	Point Count: 1.36% CH Stucco: ND Paint/Coating: < 1% Black Mastic: 10% CH	RACM	Included Above	COB2230-10B
Exterior - Northwest	Stucco	Point Count: 0.88% CH Stucco: ND Paint/Coating: < 1%	RACM	Included Above	COB2230-10C
Exterior - Southeast	Stucco	Point Count: 1.02 % CH Stucco: ND Paint/Coating: < 1% Black Mastic: 10% CH	RACM	Included Above	COB2230-10D

Table 1 (continued)

Asbestos Containing Material
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	BAAQMD[2]	EQ[3]	Sample No.
First Floor - Computer Room	12x12" Beige with Splotches Vinyl Floor Tile with Black Mastic	Floor Tile: 2% CH Black Mastic: 10% CH	Cat I NF	1,800 SF	COB2230-12A
First Floor - Director Office	12x12" Beige with Splotches Vinyl Floor Tile with Black Mastic Under Carpet	Floor Tile: 2% CH Black Mastic: 10% CH	Cat I NF	Included Above	COB2230-12B
First Floor - Craft Room	12x12" White Vinyl Floor Tile with Black Mastic with Gray Splotches	Floor Tile: ND Black Mastic: 2% CH	Cat I NF	1,500 SF	COB2230-15A
First Floor - Entry	12x12" White with Gray Splotches Vinyl Floor Tile with Black Mastic	Floor Tile: ND Black Mastic: 2% CH	Cat I NF	Included Above	COB2230-15B
Attic - West Wall	Drywall with Taping Mud	Composite Point Count: 0.25% CH Composite Drywall & Taping Mud: <1% CH Drywall: ND Taping Mud: 2% CH Paint: ND	Non-RACM	9,000 SF	COB2230-16D
Kitchen	12x12” White with Brown Splotches Vinyl Floor Tile with Black Mastic	Vinyl Floor Tile: ND Black Mastic: 2% CH	Cat I NF	Included in 15A	COB2230-19A
First Floor Boxing Room	9x9” Red Vinyl Tile with Black Mastic	Floor Tile: 5% CH Black Mastic: ND	Cat I NF	250 SF	COB2230-20A

Table 1 (continued)

Asbestos Containing Material
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

First Floor – Electrical Room	9x9" Black Vinyl Floor Tile with Black Mastic	Floor Tile: 10% CH	Cat I NF	Included Above	COB2230-20B
First Floor – Various Locations	Spray Applied Acoustical Ceiling	Assumed Asbestos (Not Sampled)	RACM	2,000 SF	N/A
First Floor – Various Locations	12x12" White Ceiling Tile with Adhesive	Assumed Asbestos (Not Sampled)	Cat I NF	1,200 SF	N/A
First Floor - Restrooms	Various Floor and Wall Ceramic Tile Grout and Mortar	Assumed Asbestos (Not Sampled)	Cat I NF	1,700 SF	N/A

Footnotes

1. Results report percent (%) asbestos as determined by polarized light microscopy (PLM). Samples that are marked Point Count were analyzed by EPA-600/R93-116 (1993) method as determined by PLM 400 Point Count method and are reported as percentage (%) asbestos. CH = Chrysotile asbestos; AC = Actinolite asbestos; TR = Tremolite asbestos; AM = Amosite asbestos; CR = Crocidolite; Trace = levels of asbestos is less than 1%; ND = no asbestos detected; and Assumed = material to contain asbestos unless proven otherwise.
2. BAAQMD indicates classification into friable as Regulated Asbestos Containing Material (RACM) or Category I (Cat I) or Category II (Cat II) Non-Friable. Depending on methods of removal Category I or II non-friable ACMs could become rendered into friable/RACM. BAAQMD classifications are non-applicable (N/A) for materials with results that are ND for asbestos.
3. EQ means estimated quantity either in square feet (SF), linear feet (LF), or each unit (EA). Estimated quantities are non-applicable (N/A) for materials with results that are ND for asbestos. Estimated quantities should be confirmed by an abatement contractor prior to bid or removal. TBD = To Be Determined.

Table 2

Non-Asbestos Containing Materials
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	Sample No.
Curve Roof - East Side	Roof Field Core	Tar with Gravel Felt: ND Tar: ND Fiberglass Felt Layers: ND Insulation: ND	COB2230-01A
Curve Roof - West Side	Roof Field Core	Tar with Gravel Felt: ND Tar: ND Fiberglass Felt Layers: ND Insulation: ND	COB2230-01B
Curve Roof - East Side	Curb Core at Skylight	Tar with Gravel Felt: ND Tar: ND Fiberglass Felt Layers: ND Insulation: ND	COB2230-02A
Curve Roof - West Side	Curb Core at Skylight	Tar with Gravel Felt: ND Tar: ND Fiberglass Felt Layers: ND Insulation: ND	COB2230-02B
Curve Roof - West Side	Penetration Mastic at Vent	ND	COB2230-03A
Curve Roof - Center	Penetration Mastic at Vent	ND	COB2230-03B
Curve Roof - East Side	Penetration Mastic at Vent	ND	COB2230-03C
Flat Roof - West Side	Roof Field Core	Gypsum Board: ND Vinyl Board: ND	COB2230-04A
Flat Roof - North Side	Roof Field Core	Gypsum Board: ND Vinyl Board: ND	COB2230-04B
Flat Roof - East Side	Roof Field Core	Gypsum Board: ND Vinyl Board: ND	COB2230-04C
Flat Roof - West Side	Curb Core at Vent	Gypsum Board: ND Vinyl Board: ND	COB2230-05A
Flat Roof - East Side	Curb Core at HVAC Unit	Gypsum Board: ND Vinyl Board: ND	COB2230-05B
Flat Roof - West Side	White Sealant at Vent	ND	COB2230-06A

Table 2 (continued)

Non-Asbestos Containing Materials
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	Sample No.
Flat Roof - North Side	White Sealant at Electrical	ND	COB2230-06B
Flat Roof - East Side	White Sealant at Pipe	ND	COB2230-06C
Flat Roof - East Side	Parapet Wall	Gypsum Board: ND Vinyl Board: ND	COB2230-07A
Flat Roof - East Side	Parapet Wall	Gypsum Board: ND Vinyl Board: ND	COB2230-07B
Flat Roof - West Side	Parapet Wall	Gypsum Board: ND Vinyl Board: ND	COB2230-07C
Flat Roof - East Side	Black Mastic on HVAC Unit	ND	COB2230-08C
Flat Roof - East Side	Silver Paint on HVAC Ducting	ND	COB2230-09A
Flat Roof - East Side	Silver Paint on HVAC Ducting	ND	COB2230-09B
Roof - Center	Window Putty	ND	COB2230-11A
Roof - West Side	Window Putty	ND	COB2230-11B
Exterior - North	Window Putty	Putty: ND Paint: ND	COB2230-11C
First Floor - Front Office	12x12" Beige Vinyl Floor Tile with Yellow Mastic with Splotches	Floor Tile: ND Orange Mastic: ND	COB2230-12C
First Floor - Director Office	Yellow Carpet Adhesive	ND	COB2230-13A
First Floor - Director Office	Yellow Baseboard Mastic	ND	COB2230-14A
First Floor - Craft Room	Yellow Baseboard Mastic	Baseboard: ND Mastic: ND	COB2230-14B
First Floor - Game Room	Brown Baseboard Mastic	ND	COB2230-14C

Table 2 (continued)

Non-Asbestos Containing Materials
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	Sample No.
Computer Room	Texture Drywall with Taping Mud	Drywall: ND Texture: ND Paint: ND	COB223016A
Craft Room	Texture Drywall with Taping Mud	Drywall: ND Taping Mud: ND Tape/Paint: ND	COB223016B
Game Room	Drywall with Taping Mud	Drywall: ND Taping Mud: ND Tape/Paint: ND	COB223016C
Entry	Texture Drywall with Taping Mud	Drywall: ND Taping Mud: ND Paint: ND	COB223016E
Men's Restroom	Drywall with Taping Mud	Drywall: ND Taping Mud: ND Tape/Paint: ND	COB223016F
Director Office	Texture Drywall with Taping Mud	Drywall: ND Paint: ND	COB223016G
Storage	12x12" Light Pink with Splotches Vinyl Floor Tile with Black Mastic	Vinyl Floor Tile: ND Tan Mastic: ND	COB2230-17A
Game Room	12x12" Black with White Splotches Vinyl Floor Tile with Black Mastic	Vinyl Floor Tile: ND Tan Mastic: ND	COB2230-18A
First Floor - Front Office	Texture on Wood	Texture: ND Paint: ND	COB2230-21A
First Floor - Gymnasium	Texture on Wood	Texture: ND Paint: ND	COB2230-21B
First Floor - Gymnasium	Texture on Wood	Texture: ND Paint: ND	COB2230-21C
First Floor - Kitchen	Gray Sink Under Coating	ND	COB2230-22A

Footnote

1. Samples were analyzed by polarized light microscopy (PLM) and reported as not containing detectable amounts of asbestos. ND indicates that asbestos was not detected.

Table 3

Summary of Lead Paint Sample Results
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Result[1]	Condition[2]	EQ[3]	Sample No.
Roof - East Side	Silver Paint on the HVAC Ducting	< 82	Intact	N/A	COB2230-PB01
Roof - East Side	Exterior Beige Paint on Stucco	6,300	Intact	N/A	COB2230-PB02
Roof	Exterior Green Paint on Wood Windowsill	3,200	Deteriorated	50 SF	COB2230-PB03
First Floor - Game Room	Light Blue Paint on Drywall	< 83	Intact	N/A	COB2230-PB04
First Floor - Gymnasium	Beige Paint with Orange Paint on Wood	120	Intact	N/A	COB2230-PB05

Footnote

1. Samples are analyzed by Flame Atomic Absorption Spectrometry (AAS). U.S. EPA SW-846 Method 7420 is used for the instrumental analysis. Nitric acid and hydrogen peroxide digestion procedures are based on U.S. EPA SW-846, 3rd edition. Results reported in milligram per kilogram (mg/kg) or parts per million (ppm). The "<" sign means below analytical detection limit.
2. Intact paint requires no lead-stabilization; deteriorated paint with greater than 50 ppm lead must be stabilized prior to demolition or renovation.
3. EQ means estimated quantity in square feet (SF). Estimated quantities should be confirmed by an abatement contractor prior to bid or removal. N/A = Lead-stabilization is not required.

Table 4

Summary of PCB Sample Results
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

August 25, 2022

Location	Material	Results[1]	Sample No.
Roof – Center	Exterior Black Rubber Window Gasket	ND	COB2230-PCB01A
Roof – Center	Exterior Black Rubber Window Gasket	ND	COB2230-PCB01B
Roof – North	Exterior Window Putty	ND	COB2230-PCB02A
Roof – North	Exterior Window Putty	ND	COB2230-PCB02B
Exterior – North	Exterior Window Putty	ND	COB2230-PCB02C
Exterior – Northeast	Exterior Clear Window Sealant	ND	COB2230-PCB03A
Exterior – North	Exterior Clear Window Sealant	ND	COB2230-PCB03B
First Floor – Computer Room	Black Mastic under 12x12” Vinyl Floor Tile	ND	COB2230-PCB04A
First Floor – Kitchen	Black Mastic under 12x12” Vinyl Floor Tile	ND	COB2230-PCB04B
First Floor - Director Office	Yellow Carpet Adhesive	ND	COB2230-PCB04

Footnote

1. Samples were analyzed by Gas Chromatography. U.S. EPA Method 8082A is used to determine the concentrations of polychlorinated biphenyls (PCBs) as Aroclors or as individual PCB congeners in extracts from solid, tissue, and aqueous matrices, using open-tubular, capillary columns with electron capture detectors (ECD) or electrolytic conductivity detectors (ELCD). ND indicates that PCB was not detected.

ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING STREET #922 SAN FRANCISCO CA 94122

TEL 415 242 6060 FAX 415 242 6006

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Appendix A

Laboratory Reports

M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

February 2023

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-01A** Micro #: 294989-01 Analyst: JM BK **CURVE ROOF - EAST SIDE ROOF FIELD CORE**	**TAR WITH GRAVEL FELT: ND** **TAR: ND** **FIBERGLASS FELT LAYERS: ND** **INSULATION: ND**	25 % FIBROUS GLASS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-01B** Micro #: 294989-02 Analyst: JM **CURVE ROOF - WEST SIDE ROOF FIELD CORE**	**TAR WITH GRAVEL FELT: ND** **TAR: ND** **FIBERGLASS FELT LAYERS: ND** **INSULATION: ND**	25 % FIBROUS GLASS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-02A** Micro #: 294989-03 Analyst: JM **CURVE ROOF - EAST SIDE CURB CORE AT SKYLIGHT**	**TAR WITH GRAVEL FELT: ND** **TAR: ND** **FIBERGLASS FELT LAYERS: ND** **INSULATIONS: ND**	15 % CELLULOSE 25 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.
Client #: **COB2230-02B** Micro #: 294989-04 Analyst: JM **CURVE ROOF - WEST SIDE CURB CORE AT SKYLIGHT**	**TAR WITH GRAVEL FELT: ND** **TAR: ND** **FIBERGLASS FELT LAYERS: ND** **INSULATIONS: ND**	15 % CELLULOSE 25 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.
Client #: **COB2230-03A** Micro #: 294989-05 Analyst: JM **CURVE ROOF - WEST SIDE PENETRATION MASTIC AT VENT**	**ND**	3 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), and EPA-600/R93-116 (1993). The 1993 method covers all types of bulk materials and is based on the 1982 Method, with improved analytical techniques for layered samples as required for NESHAP compliance. Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM).Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties.Tremolite-asbestos or actinolite- asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; If asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems; compositing is based on customers' descriptions of material as "joint compound". Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-03B** Micro #: 294989-06 Analyst: JM **CURVE ROOF - CENTER** **PENETRATION MASTIC AT VENT**	**ND**	5 % CELLULOSE NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-03C** Micro #: 294989-07 Analyst: JM **CURVE ROOF - EAST SIDE** **PENETRATION MASTIC AT VENT**	**ND**	5 % CELLULOSE NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-04A** Micro #: 294989-08 Analyst: JM BK **FLAT ROOF - WEST SIDE - ROOF FIELD CORE**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-04B** Micro #: 294989-09 Analyst: JM **FLAT ROOF - NORTH SIDE - ROOF FIELD CORE**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-04C** Micro #: 294989-10 Analyst: JM **FLAT ROOF - EAST SIDE - ROOF FIELD CORE**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), and EPA-600/R93-116 (1993). The 1993 method covers all types of bulk materials and is based on the 1982 Method, with improved analytical techniques for layered samples as required for NESHAP compliance. Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM).Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties.Tremolite-asbestos or actinolite- asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems; compositing is based on customers' descriptions of material as "joint compound". Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-05A** Micro #: 294989-11 Analyst: JM BK **FLAT ROOF - WEST SIDE** **CURB CORE AT VENT**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-05B** Micro #: 294989-12 Analyst: JM **FLAT ROOF - EAST SIDE** **CURB CORE AT HVAC UNIT**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-05C** Micro #: 294989-13 Analyst: JM BK **FLAT ROOF - EAST SIDE** **CURB CORE AT SKYLIGHT**	**GYPSUM BOARD: ND** **VINYL BOARD: ND** **MASTIC (BLACK): 5% CHRYSOTILE ASBESTOS**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: TAR/ASPHALT, BINDER
Client #: **COB2230-06A** Micro #: 294989-14 Analyst: JM **FLAT ROOF - WEST SIDE** **WHITE SEALANT AT VENT**	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: **COB2230-06B** Micro #: 294989-15 Analyst: JM **FLAT ROOF - NORTH SIDE** **WHITE SEALANT AT ELECTRICAL**	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), and EPA-600/R93-116 (1993). The 1993 method covers all types of bulk materials and is based on the 1982 Method, with improved analytical techniques for layered samples as required for NESHAP compliance. Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM).Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties.Tremolite-asbestos or actinolite- asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems; compositing is based on customers' descriptions of material as "joint compound". Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-06C** Micro #: 294989-16 Analyst: JM **FLAT ROOF - EAST SIDE** **WHITE SEALANT AT PIPE**	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: **COB2230-07A** Micro #: 294989-17 Analyst: JM BK **FLAT ROOF - EAST SIDE** **PARAPET WALL**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.
Client #: **COB2230-07B** Micro #: 294989-18 Analyst: JM **FLAT ROOF - EAST SIDE** **PARAPET WALL**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.
Client #: **COB2230-07C** Micro #: 294989-19 Analyst: JM **FLAT ROOF - WEST SIDE** **PARAPET WALL**	**GYPSUM BOARD: ND** **VINYL BOARD: ND**	5 % CELLULOSE 5 % FIBROUS GLASS 3 % SYNTHETIC FIBERS NFM: 'GYPSUM' (CALCIUM SULFATE), MISC. PARTICLES.
Client #: **COB2230-08A** Micro #: 294989-20 Analyst: JM **FLAT ROOF - EAST SIDE** **BLACK MASTIC ON SKYLIGHT**	**MASTIC (BLACK): 15% CHRYSOTILE ASBESTOS**	NFM: TAR/ASPHALT, BINDER

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), and EPA-600/R93-116 (1993). The 1993 method covers all types of bulk materials and is based on the 1982 Method, with improved analytical techniques for layered samples as required for NESHAP compliance. Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM).Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties.Tremolite-asbestos or actinolite- asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems; compositing is based on customers' descriptions of material as "joint compound". Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: COB2230-08B Micro #: 294989-21 Analyst: JM BK FLAT ROOF - EAST SIDE BLACK MASTIC ON SKYLIGHT	**MASTIC (BLACK): 15% CHRYSOTILE ASBESTOS**	NFM: TAR/ASPHALT, BINDER
Client #: COB2230-08C Micro #: 294989-22 Analyst: JM BK FLAT ROOF - EAST SIDE BLACK MASTIC ON HVAC UNIT	**ND**	NFM: TAR/ASPHALT, BINDER
Client #: COB2230-09A Micro #: 294989-23 Analyst: JM FLAT ROOF - EAST SIDE - SILVER PAINT ON HVAC DUCTING	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: COB2230-09B Micro #: 294989-24 Analyst: JM FLAT ROOF - EAST SIDE - SILVER PAINT ON HVAC DUCTING	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: COB2230-10A Micro #: 294989-25 Analyst: JM BK FLAT ROOF - EAST SIDE - STUCCO	**STUCCO: ND** **PAINT / COATING: < 1%** **MASTIC (BLACK): 10% CHRYSOTILE ASBESTOS**	NFM: ROCK FRAGMENTS, CARBONATE, BINDER

Technical Supervisor: 8/31/2022
Baojia Ke, Ph.D. Date Reported

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MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
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1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-10B** Micro #: 294989-26 Analyst: JM BK **FLAT ROOF - NORTH SIDE - STUCCO**	**STUCCO: ND** **PAINT / COATING: < 1%** **MASTIC (BLACK): 10% CHRYSOTILE ASBESTOS**	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Client #: **COB2230-10C** Micro #: 294989-27 Analyst: JM BK **EXT - NORTH WEST - STUCCO**	**STUCCO: ND** **PAINT / COATING: < 1%** **INSUFFICIENT BLACK MASTIC FOR ANALYSIS**	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Client #: **COB2230-10D** Micro #: 294989-28 Analyst: JM BK **EXT - SOUTH EAST - STUCCO**	**STUCCO: ND** **PAINT / COATING: < 1%** **MASTIC (BLACK): 10% CHRYSOTILE ASBESTOS**	NFM: ROCK FRAGMENTS, CARBONATE, BINDER
Client #: **COB2230-11A** Micro #: 294989-29 Analyst: JM **ROOF - CENTER - WINDOW PUTTY**	**ND**	NFM: CARBONATE, MISC. PARTICLES
Client #: **COB2230-11B** Micro #: 294989-30 Analyst: JM **ROOF - WEST SIDE - WINDOW PUTTY**	**ND**	NFM: CARBONATE, MISC. PARTICLES

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

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1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: COB2230-11C Micro #: 294989-31 Analyst: JM EXT - NORTH - WINDOW PUTTY	PUTTY: ND PAINT: ND	NFM: CARBONATE, MISC. PARTICLES
Client #: COB2230-12A Micro #: 294989-32 Analyst: JM FLOOR 1 - COMPUTER ROOM - 12X12" BEIGE WITH SPLOTCHES UFT WITH BLACK MASTIC	FLOOR TILE: 2% CHRYSOTILE ASBESTOS MASTIC (BLACK): 10% CHRYSOTILE ASBESTOS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-12B Micro #: 294989-33 Analyst: JM FLOOR 1 - DIRECTOR OFFICE - 12X12" BEIGE WITH SPLOTCHES UFT WITH BLACK MASTIC UNDER CARPET	FLOOR TILE: 2% CHRYSOTILE ASBESTOS MASTIC (BLACK): 10% CHRYSOTILE ASBESTOS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-12C Micro #: 294989-34 Analyst: JM BK FLOOR 1 - FRONT OFFICE - 12X12" BEIGE WITH SPLOTCHES UFT WITH YELLOW MASTIC	FLOOR TILE: ND ORANGE MASTIC: ND	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-13A Micro #: 294989-35 Analyst: JM FLOOR 1 - DIRECTOR OFFICE - YELLOW CARPET ADHESIVE	ND	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES

Technical Supervisor: 8/31/2022

Baojia Ke, Ph.D. Date Reported

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1092
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1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: COB2230-14A Micro #: 294989-36 Analyst: JM FLOOR 1 - DIRECTOR OFFICE - YELLOW BASEBOARD MASTIC	ND	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: COB2230-14B Micro #: 294989-37 Analyst: JM FLOOR 1 - CRAFT ROOM YELLOW BASEBOARD MASTIC	BASEBOARD: ND MASTIC: ND	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: COB2230-14C Micro #: 294989-38 Analyst: JM FLOOR 1 - GAME ROOM BROWN BASEBOARD MASTIC	ND	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES
Client #: COB2230-15A Micro #: 294989-39 Analyst: JM BK FLOOR 1 - CRAFT ROOM 12X12" WHITE WITH GRAY SPLOTCHES VFT WITH BLACK MASTIC	FLOOR TILE: ND MASTIC (BLACK): 2% CHRYSOTILE ASBESTOS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-15B Micro #: 294989-40 Analyst: JM FLOOR 1 - ENTRY - 12X12" WHITE WITH GRAY SPLOTCHES UFT WITH BLACK MASTIC	FLOOR TILE: ND MASTIC (BLACK): 2% CHRYSOTILE ASBESTOS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.

Technical Supervisor: 8/31/2022

Baojia Ke, Ph.D. Date Reported

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Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB223016A** Micro #: 294989-41 Analyst: JM **COMPUTER ROOM** **TEXTURE DRYWALL WITH TAPING MUD**	**DRYWALL: ND** **TEXTURE: ND** **PAINT: ND** **(NO TAPING MUD IN THE SAMPLE)**	NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: **COB223016B** Micro #: 294989-42 Analyst: JM **CRAFT ROOM** **TEXTURE DRYWALL WITH TAPING MUD**	**DRYWALL: ND** **TAPING MUD: ND** **TAPE / PAINT: ND**	15 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: **COB223016C** Micro #: 294989-43 Analyst: JM **GAME ROOM** **DRYWALL WITH TAPING MUD**	**DRYWALL: ND** **TAPING MUD: ND** **TAPE / PAINT: ND**	15 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: **COB223016D** Micro #: 294989-44 Analyst: JM **WEST WALL** **DRYWALL WITH TAPING MUD**	**COMPOSITE DW & TM: <1% CHRYSOTILE ASBESTOS** **DRYWALL: ND** **TAPING MUD: 2% CHRYSOTILE ASBESTOS** **PAINT: ND**	5 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: **COB223016E** Micro #: 294989-45 Analyst: JM **ENTRY** **TEXTURE DRYWALL WITH TAPING MUD**	**DRYWALL: ND** **TAPING MUD: ND** **PAINT: ND**	5 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

NVLAP Lab Code 101872-0 (TESTING). Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), and EPA-600/R93-116 (1993). The 1993 method covers all types of bulk materials and is based on the 1982 Method, with improved analytical techniques for layered samples as required for NESHAP compliance. Asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (much less than 1%) may not be reliable or reproducible by PLM. Weight % cannot be determined by PLM. Asbestos with diameter below ~1 µm may not be detected by PLM. Absence of asbestos in dust, debris, and some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM).Interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties.Tremolite-asbestos or actinolite- asbestos may be indistinguishable by PLM from some similar, non-regulated amphiboles (e.g. the "Libby Amphiboles" richterite and winchite), and should be confirmed by TEM. The lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos; however, reliable determination of asbestos percent at this level cannot be done by PLM estimation; PLM Point Counting or TEM weight percent analysis are recommended. Only dominant non-asbestos materials (fibrous and non-fibrous) are listed. This analysis shall not be construed as conclusive for the presence of any reported materials other than asbestos, or for the absence of any non-asbestos material. Common interferences include, but are not limited to: cellulose, fibrous glass, other man-made vitreous fibers, synthetic fibers, elongate fragments of calcium sulfate, talc, wollastonite, animal hair, and other miscellaneous elongate particles. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. If more than one distinct sample is received in the same container, samples shall be marked with letters and analyzed separately. Layers within a sample are analyzed separately when feasible; if asbestos is detected, percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. The notation ND (or "NONE DETECTED") indicates a result of "NO ASBESTOS DETECTED" in a homogeneous sample, or in a layer of a heterogeneous sample. Composite asbestos percentages from multiple layers are applicable only to wallboard / joint compound systems; compositing is based on customers' descriptions of material as "joint compound". Customers are solely responsible for identification and description of bulk materials listed on field forms. Laboratory descriptions may differ from those given by customers. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Reanalyzed samples are denoted by two sets of analyst initials. Unless otherwise stated herein, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. NFM = Non-fibrous materials.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: COB223016F Micro #: 294989-46 Analyst: JM MENS' RESTROOM DRYWALL WITH TAPING MUD	DRYWALL: ND TAPING MUD: ND TAPE / PAINT: ND	15 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: COB223016G Micro #: 294989-47 Analyst: JM DIRECTOR OFFICE TEXTURE DRYWALL WITH TAPING MUD	DRYWALL: ND PAINT: ND (NO TEXTURE/JOINT COMPOUND IN THE SAMPLE)	15 % CELLULOSE 2 % FIBROUS GLASS NFM: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.
Client #: COB2230-17A Micro #: 294989-48 Analyst: JM STORAGE - 12" X 12" LIGHT PINK WITH SPLOTCHES VFT WITH BLACK MASTIC	VFT: ND MASTIC (TAN): ND INSUFFICIENT BLACK MASTIC FOR ANALYSIS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-18A Micro #: 294989-49 Analyst: JM BK GAME ROOM - 12" X 12" BLACK WITH WHITE SPLOTCHES VFT WITH BLACK MASTIC	VFT: ND MASTIC (TAN): ND INSUFFICIENT BLACK MASTIC FOR ANALYSIS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: COB2230-19A Micro #: 294989-50 Analyst: JM KITCHEN - 12" X 12" WHITE WITH BROWN SPLOTCHES VFT WITH BLACK MASTIC	VFT: ND MASTIC (BLACK): 2% CHRYSOTILE ASBESTOS	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

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MICRO ANALYTICAL LABORATORIES, INC.

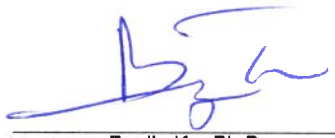
BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: **COB2230-20A** Micro #: 294989-51 Analyst: JM **FLOOR 1 - BOXING ROOM - 9" X 9" RED FT WITH BLACK MASTIC**	**FLOOR TILE: 5% CHRYSOTILE ASBESTOS** **MASTIC (BLACK): ND**	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: **COB2230-20B** Micro #: 294989-52 Analyst: JM **FLOOR 1 - ELECTRICAL ROOM 9" X 9" BLACK VFT WITH BLACK MASTIC**	**FLOOR TILE: 10% CHRYSOTILE ASBESTOS** **(MASTIC (BLACK) IS INSEPARABLE FROM FLOOR TILE WITHOUT CROSS-CONTAMINATION)**	NFM: SYNTHETIC MATERIAL, CARBONATE, ADHESIVE.
Client #: **COB2230-21A** Micro #: 294989-53 Analyst: JM **FLOOR 1 - FRONT OFFICE TEXTURE ON WOOD**	**TEXTURE: ND** **PAINT: ND**	NFM: CARBONATE, MISC. PARTICLES
Client #: **COB2230-21B** Micro #: 294989-54 Analyst: JM **FLOOR 1 - GYMNASIUM TEXTURE ON WOOD**	**TEXTURE: ND** **PAINT: ND**	NFM: CARBONATE, MISC. PARTICLES
Client #: **COB2230-21C** Micro #: 294989-55 Analyst: JM **FLOOR 1 - GYMNASIUM TEXTURE ON WOOD**	**TEXTURE: ND** **PAINT: ND**	NFM: CARBONATE, MISC. PARTICLES

Technical Supervisor:  8/31/2022

Baojia Ke, Ph.D. Date Reported

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MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - POLARIZED LIGHT MICROSCOPY (PLM)

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Paul Spillane
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1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In	**294989**
Total Samples	56
Date Sampled	08/25/2022
Date Received	08/29/2022
Date Analyzed	08/30/2022

SAMPLE IDENTIFICATION	ASBESTOS QUANTITY (AREA %) / TYPES / LAYERS If absent, ND Is Reported (No Asbestos Detected)	DOMINANT OTHER MATERIALS
Client #: COB2230-22A Micro #: 294989-56 Analyst: JM BK **FLOOR 1 - KITCHEN - GRAY SINK UNDER COATING**	**ND**	NFM: RESILIENT ORGANICALLY BOUND MATERIALS, MISC. PARTICLES

Technical Supervisor: _____ 8/31/2022
Baojia Ke, Ph.D. Date Reported

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(PLM) 294989

A

ACUMEN
INDUSTRIAL HYGIENE INC
1032 IRVING STREET #922 SAN FRANCISCO CA 94122-2216
TEL 415 242 6060 FAX 415 242 6006
WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB 2230

Location: MLK, Jr. Young Services Center
Address: 1730 Oregon Street Berkeley, CA
Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.
Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush
Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
1	COB2230-01A	Curve Roof	East side	Roof field core	PLM Asbestos
2	01B		West side		
3	02A		East side	Curb core at skylight	
4	02B		West side		
5	03A		West side	Penetration mastic at vent	
6	03B		Center		
7	03C		East side		
8	04A	Flat Roof	West side	Roof field core	
9	04B		North side		
10	04C		East side		

Other Instructions: Email results to lab@acumen-ih.com.

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent By: [signature]	Received By: ES
Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

Sample(s) Submitted Via: ☒ Hand Delivered ☐ Federal Express (Air Bill #_____) ☐ Other: _____

☐ NT ☐ WTE

294989

ACUMEN
INDUSTRIAL HYGIENE INC
1032 IRVING STREET #822 SAN FRANCISCO CA 94122-2216
TEL 415 242 6060 FAX 415 242 6006
WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB2230

Location: (Store)
Address:
Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.
Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush
Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
11	COB2230-05A	Flat Roof	West side	Curb core at vent	PCM Asbestos
12	05B		East side	HVAC unit	
13	05C			Skylight	
14	06A		West side	white sealant at vent	
15	06B		North side	electrical	
16	06C		East side	pipe	
17	07A		East side	Parapet wall	
18	07B				
19	07C		West side		
20	08A		East side	Black marks on skylight	

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ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING STREET #922 SAN FRANCISCO CA 94122-2216

TEL 415 242 6060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB2230

Location: <SAME>

Address:

Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.

Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush

Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
21	COB2230 – 08B	Flat Roof	East side	Skylight Black mastic on ~~[illegible]~~	PCM NO beads
22	08C			" " " HVAC unit	
23	09A			Silver paint on HVAC ducting	
24	09B			" " " " "	
25	10A		East side	Stucco	
26	10B		North side	"	
27	10C	Ext	North west	"	
28	10D		Southeast	"	
29	11A	Roof	center	window putty	
30	11B		west side	" "	

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TEL 415 242 6060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB 2230

Location: <SAME>

Address:

Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.

Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush

Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
31	COB2230-11C	EXT	North	Window putty	PCM Asbestos
32	12A	1	Computer Room	12X12" Beige w/ splotches VFT w/ black mastic	
33	12B	1	Director office	12X12" Beige w/ splotches VFT w/ black mastic under carpet	
34	12C	1	Front office	12X12" Beige w/ splotches VFT w/ yellow mastic	
35	13A	1	Director office	Yellow carpet adhesive	
36	14A	1		Yellow baseboard mastic	
37	14B	1	Craft Room		
38	14C	1	Game Room	Brown	
39	15A	1	Craft Room	12X12" white w/ gray splotches VFT w/ black mastic	
40	15B	1	Entry		

Other Instructions: Email results to lab@acumen-ih.com.

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Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

Sample(s) Submitted Via: ☐ Hand Delivered ☐ Federal Express (Air Bill #_____) ☐ Other: _____

☐ NT ☐ WTE

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ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING STREET #922 SAN FRANCISCO CA 94122-2216

TEL 415 242 6060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB2230

Location:
Address: <SAME>
Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.
Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush
Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
41	COB2230-16A	1	Computer Room	Texture drywall w/ taping mud	PCM Asbestos
42	16B	1	Craft Room	〃 〃 〃 〃 〃	〃
43	16C	1	game Room	Drywall w/ taping mud	〃
44	16D	Attic	west wall	〃 〃 〃 〃	〃
45	16E	1	Entry	Texture drywall w/ taping mud	〃
46	16F	1	Men's Restroom	Drywall w/ taping mud	〃
47	16G	1	Director office	Texture drywall w/ taping mud	〃
48	17A	1	Storage	~~[illegible]~~ 12x12" Light pink w/ splotches VFT w/ black mastic	〃
49	18A	1	game room	12x12" black w/ ~~white~~ white splotches VFT w/ black mastic	〃
50	19A	1	Kitchen	12x12" white w/ brown splotches VFT w/ black mastic	〃

Other Instructions: Email results to lab@acumen-ih.com.

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Sent By: [signature]	Received By: ES
Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

294989

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ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING STREET #922 SAN FRANCISCO CA 94122-2216

TEL 415 242 8060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

BULK CHAIN OF CUSTODY FORM

Project No. COB 2230

Location: <SAME>

Address:

Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.

Turnaround: [X] Normal [ ] 24 Hour [ ] Rush

Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
51	COB 2230 – 20A	1	Boxing Room	9x9" Red VFT w/ black mastic	PLM Asbestos
52	20B	1	Electrical Room	Black	
53	21A	1	Front office	Texture on wood	
54	21B	1	Gymasium		
55	21C	1			
56	22A	1	Kitchen	gray sink undercoating	
	Pb01	Roof	East side	Silver paint on tile decking	PLM LEAD
	Pb02	Roof		Beige Exterior paint on stucco	
	Pb03	Roof		Exterior green paint on wood window	Sill
	Pb04	1	Game Room	Light blue paint on drywall	
	Pb05	1	Gymasium	Beige paint on wood with orange paint	

Other Instructions: Email results to lab@acumen-ih.com.

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Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

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[ ] NT [ ] WTE

MICRO ANALYTICAL LABORATORIES, INC.

LEAD IN PAINT - FLAME AAS (SW846)

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR. YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In 294990
Total Samples 5
Date Sampled 08/25/2022
Date Received 08/29/2022
Date Analyzed 08/29/2022

Sample ID	Lead Concentration Weight Percent	mg/kg (ppm)	RDL
Client: COB2230-PB01 Lab: 294990-01 ROOF - EAST SIDE - SILVER PAINT ON THE HVAC DECKING	< 0.0082 %	< 82	0.0082 % 82 mg/kg
Client: COB2230-PB02 Lab: 294990-02 ROOF - EAST SIDE - EXTERIOR BEIGE PAINT ON STUCCO	0.63 %	6300	0.0830 % 830 mg/kg
Client: COB2230-PB03 Lab: 294990-03 ROOF - EXTERIOR GREEN PAINT ON WOOD WINDOW SILL	0.32 %	3200	0.0410 % 410 mg/kg
Client: COB2230-PB04 Lab: 294990-04 FLOOR 1 - GAME ROOM - LIGHT BLUE PAINT ON DRYWALL	< 0.0083 %	< 83	0.0083 % 83 mg/kg
Client: COB2230-PB05 Lab: 294990-05 FLOOR 1 - GYMNASIUM - BEIGE PAINT WITH ORANGE PAINT ON WOOD	0.012 %	120	0.0081 % 81 mg/kg

Technical Supervisor: _____ 8/29/2022
Long T. Nguyen, Chemistry Supervisor Date Reported

Analyst: RN

AIHA-LAP, LLC Accredited Laboratory, ID #101768. Samples are analyzed by Flame Atomic Absorption Spectrometry (AAS) using SOP 23-Paint. This SOP is based on U.S. EPA SW-846 Method 7420 for instrumental analysis, and on ASTM E-1645-21 for nitric acid and hydrogen peroxide digestion Unless otherwise indicated on this report, all required Quality Control samples have been determined to be in control prior to releasing these analytical results. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. Note: due to software limitations, the number of reported significant figures does not necessarily reflect the uncertainty of the analysis. If the amount of sample available for analysis is lower than advisable for this method, detection limits and uncertainty will be higher. This report must not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. Unit explanations: mg = milligrams; kg = kilograms; ppm = parts per million. N/A = Not Applicable. RDL = Report Detection Limit.

(AA PAINT)
~~298990~~ 294990

A

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TEL 415 242 6060 FAX 415 242 6006
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BULK CHAIN OF CUSTODY FORM

Project No. COB 2230

Location: <SAME>
Address:
Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.
Turnaround: [X] Normal [ ] 24 Hour [ ] Rush
Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
	COB2230 - 20A	1	Boxing Room	9x9" Red VFT w/ black mastic	PLM Asbestos
	20B	1	Electrical Room	Black	
	21A	1	Front office	Texture on wood	
	21B	1	Gymnasium		
	21C	1			
	22A	1	Kitchen	Gray sink undercoating	
1	Pb01	Roof	East side	Silver paint on white decking	FLAA LEAD
2	Pb02	Roof		~~Exterior~~ Beige paint on stucco	
3	Pb03	Roof		Exterior green paint on wood window sill	
4	Pb04	1	Game Room	Light blue paint on drywall	
5	Pb05	1	Gymnasium	Beige paint with orange paint on wood	

Other Instructions: Email results to lab@acumen-ih.com.

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent By: [signature]	Received By: [signature]
Date Submitted: 8/29/2022	Date Received: 8/29/22 C 1:57pm

Sample(s) Submitted Via: [ ] Hand Delivered [ ] Federal Express (Air Bill # ______) [ ] Other: ______

Rev 08/01

[ ] NT [ ] WTE

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM POINT COUNT

1092
Paul Spillane
Acumen Industrial Hygiene, Inc.
1032 Irving Street, #922
San Francisco, CA 94122-2216

PROJECT:
PROJECT NO. COB 2230
MLK, JR.
YOUNG SERVICES CENTER
1730 OREGON STREET
BERKELEY, CA

Micro Log In **295161**
Total Samples 5
Date Sampled 08/25/2022
Date Received 08/29/2022
Date Analyzed 09/07/2022

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client #: COB2230-10A Micro #: 295161-01 Analyst: SS FLAT ROOF - EAST SIDE - STUCCO (REANALYSIS OF PLM 294989-25) Asb. / Total Pts. 5 / 400 Matrix Removed 50% Sensitivity 0.126%	0.63% CHRYSOTILE ASBESTOS	Matrix Type: OPAQUES BINDER
Client #: COB2230-10B Micro #: 295161-02 Analyst: SS FLAT ROOF - NORTH SIDE - STUCCO (REANALYSIS OF PLM 294989-26) Asb. / Total Pts. 11 / 400 Matrix Removed 51% Sensitivity 0.123%	1.36% CHRYSOTILE ASBESTOS	Matrix Type: OPAQUES BINDER
Client #: COB2230-10C Micro #: 295161-03 Analyst: SS EXT - NORTH WEST - STUCCO (REANALYSIS OF PLM 294989-27) Asb. / Total Pts. 7 / 400 Matrix Removed 50% Sensitivity 0.126%	0.88% CHRYSOTILE ASBESTOS	Matrix Type: OPAQUES BINDER
Client #: COB2230-10D Micro #: 295161-04 Analyst: SS EXT - SOUTH EAST - STUCCO (REANALYSIS OF PLM 294989-28) Asb. / Total Pts. 8 / 400 Matrix Removed 49% Sensitivity 0.128%	1.02% CHRYSOTILE ASBESTOS	Matrix Type: OPAQUES BINDER
Client #: COB223016D Micro #: 295161-05 Analyst: BK WEST WALL DRYWALL WITH TAPING MUD (REANALYSIS OF PLM 294989-44) Asb. / Total Pts. 1 / 400 Matrix Removed 0% Sensitivity 0.250%	0.25% CHRYSOTILE ASBESTOS DRYWALL AND TAPING MUD COMPOSITE ANALYSIS.	Matrix Type: 'GYPSUM' (CALCIUM SULFATE), CARBONATE.

Technical Supervisor: _____ 9/7/2022
Baojia Ke, Ph.D. Date Reported

Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101 for building materials. Basic techniques follow EPA – Appendix E to Subpart E of 40 CFR Part 763; Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (originally published 1982), EPA-600/R93-116 (1993), and California ARB 435 (1991) for applicable soil, rock, or aggregate samples. NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 μm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Quantities of non-asbestos fibers are estimated, not point counted. Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Samples that were reanalyzed are denoted by two sets of analyst initials. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed as received. ND = NO ASBESTOS DETECTED.

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BULK CHAIN OF CUSTODY FORM

295161
400 pts count
3-5 days
2411989
ES

Project No. COB2230

Location: <SAME>

Address:

Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.

Turnaround: ☒ Normal ☐ 24 Hour ☐ Rush

Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
21	COB2230-08B	Flat Roof	East side	Skylight Black mastic on [redacted]	PCM NO beads
22	08C			HVAC unit	
23	09A			Silver paint on HVAC ducting	
24	09B				
25	(1) 10A		East side	Stucco	
26	(2) 10B		North side		
27	(3) 10C	EXT	Northwest		
28	(4) 10D		Southeast		
29	11A	Roof	center	window putty	
30	11B		west side		

Other Instructions: Email results to lab@acumen-ih.com.

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent By:	Received By: ES
Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

Sample(s) Submitted Via: ☒ Hand Delivered ☐ Federal Express (Air Bill # _____) ☐ Other: _____

☐ NT ☐ WTE

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BULK CHAIN OF CUSTODY FORM

295161 400 pts count 3-days ~~2214984~~ ES

Project No. COB2230

Location: Address: <SAME>

Sampling Date: 8/25/2022

Laboratory: Micro Analytical Laboratories, Inc.

Turnaround: [X] Normal ☐ 24 Hour ☐ Rush

Collection By: Tam Pham

	Sample No.	Floor	Location	Description	Method
41	COB2230-16A	1	Computer Room	Texture drywall w/ taping mud	PCM Asbestos
42	16B	1	Craft Room	| | | | |	|
43	16C	1	game Room	Drywall w/ taping mud	|
44	(5) 16D	Attic	West wall	| | | |	|
45	16E	1	Entry	Texture drywall w/ taping mud	|
46	16F	1	Men's Restroom	Drywall w/ taping mud	|
47	16G	1	Director office	Texture drywall w/ taping mud	|
48	17A	1	Storage	12X12" Light pink w/ splotches VFT w/ black mastic	|
49	18A	1	game Room	12x12" black w/ white splotches VFT w/ black mastic	|
50	19A	1	Kitchen	12x12" white w/ brown splotches VFT w/ black mastic	|

Other Instructions: Email results to lab@acumen-ih.com.

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports.

Sent By: [signature]	Received By: ES
Date Submitted: 8/29/2022	Date Received: 08/29/22 1:58 PM

 ☐ NT ☐ WTE

From: **Tam Pham** tam@acumen-ih.com
Subject: Re: 294989 - PLM - PROJECT NO. COB 2230
Date: September 4, 2022 at 11:40 AM
To: Micro Analytical Laboratories, Inc. contact@labmicro.onmicrosoft.com

Hi Baojia,
Yes please for 10D (thanks for checking). Please only analyze <1% paint/coating layer.

Thanks
tam.

> On Sep 4, 2022, at 11:36 AM, Micro Analytical Laboratories, Inc. <contact@labmicro.onmicrosoft.com> wrote:
>
> Hi Tam,
>
> Do you also like to include 10D for point count which has <1% chrysotile in paint/coating? And do you like us just to point count paint/coating layer only or analyze the whole sample including stucco and black mastic to get a composite result for the stucco samples?
>
> Thank you and have a great Labor Day!
>
> Baojia
>
> > On Sep 3, 2022, at 8:12 AM, Tam Pham <tam@acumen-ih.com> wrote:
> >
> > Hi Micro,
> > Please 400 point count samples: 10A, 10B, 10C and 16D with standard TAT
> >
> > Thanks
> > tam
> >
> > **From:** Micro Analytical Laboratories, Inc. <contact@labmicro.onmicrosoft.com>
> > **Sent:** Wednesday, August 31, 2022 2:53 PM
> > **To:** lab@acumen-ih.com Hyg. <lab@acumen-ih.com>
> > **Subject:** 294989 - PLM - PROJECT NO. COB 2230
> >
> > Enclosed please find the results of PLM Analysis - 294989
> >
> > PROJECT NO. COB 2230
> > MLK, JR. YOUNG SERVICES CENTER
> > 1730 OREGON STREET
> > BERKELEY, CA
> >
> > Thank You
> >
> > Micro Analytical Laboratories, Inc.
> >
> > contact@labmicro.com
> > www.labmicro.com
> >
> >

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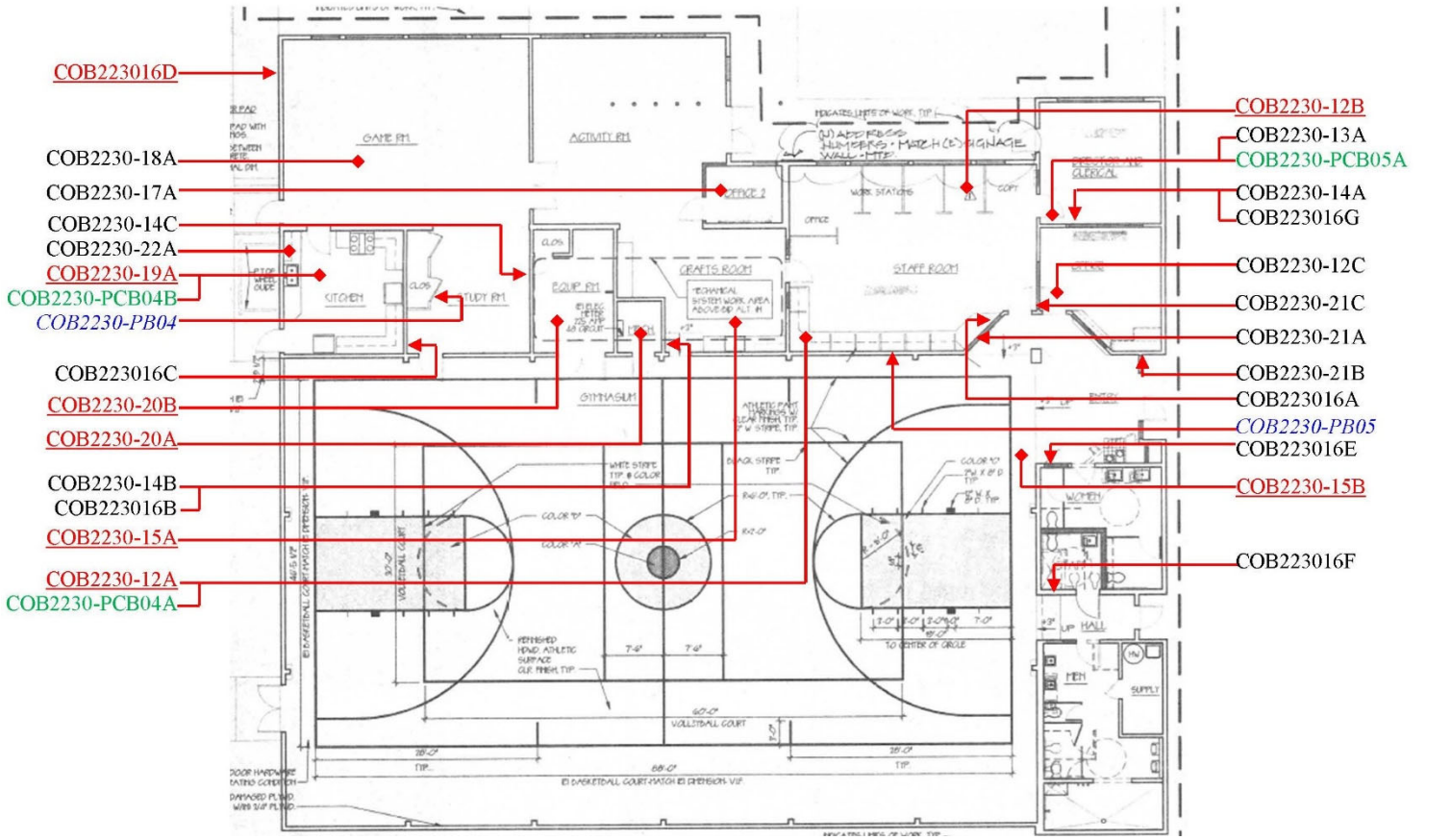
Appendix B

Sample Location Floor Plans

M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

February 2023



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Project

M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

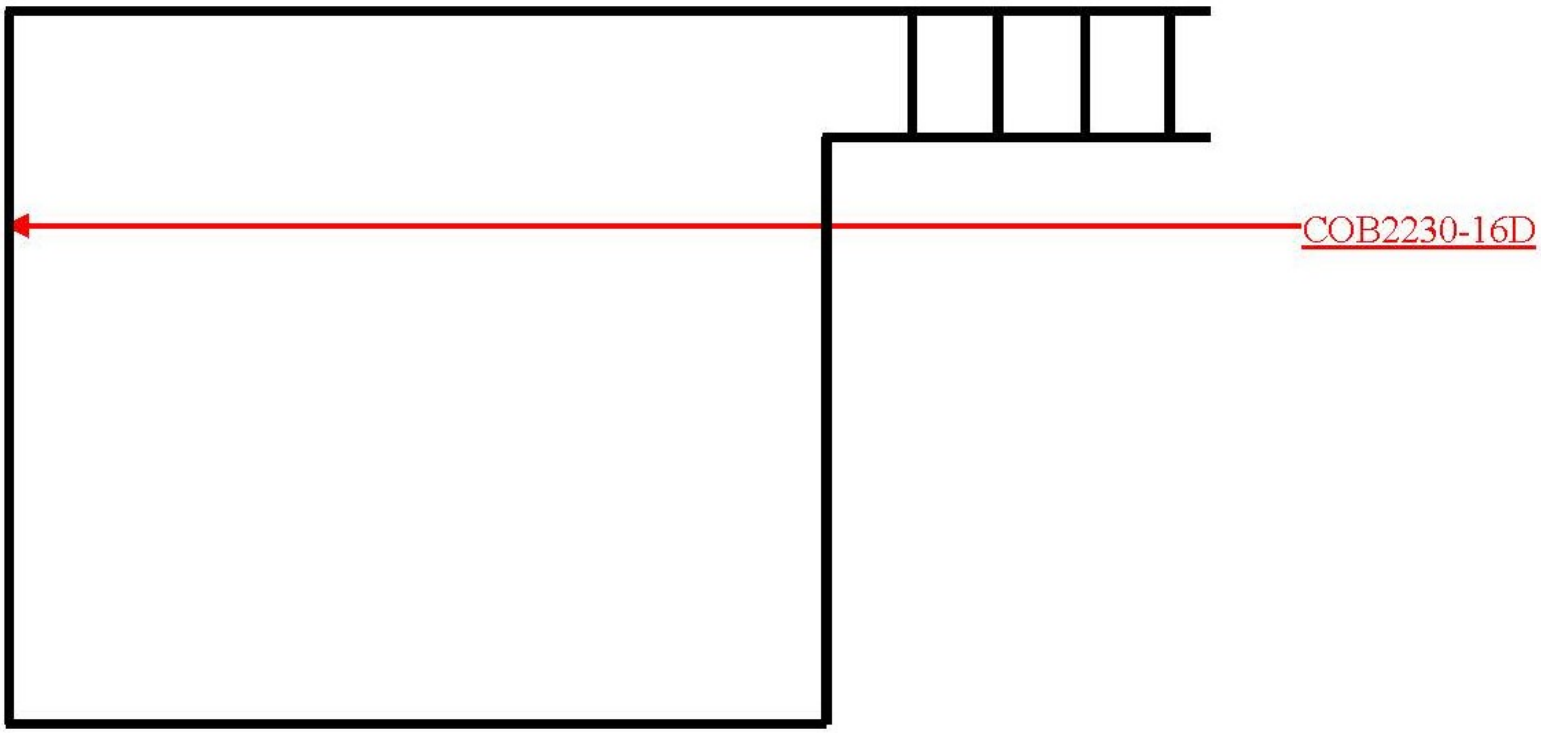
Project No.	Date
COB 2230	8/25/2022

Location

-

Level

First Floor



Vertical Sample
Floor Sample
Ceiling Sample
Red Asbestos Containing Material
Blue Lead Sample
Green PCB Sample
* Floor plan is not to scale.

N

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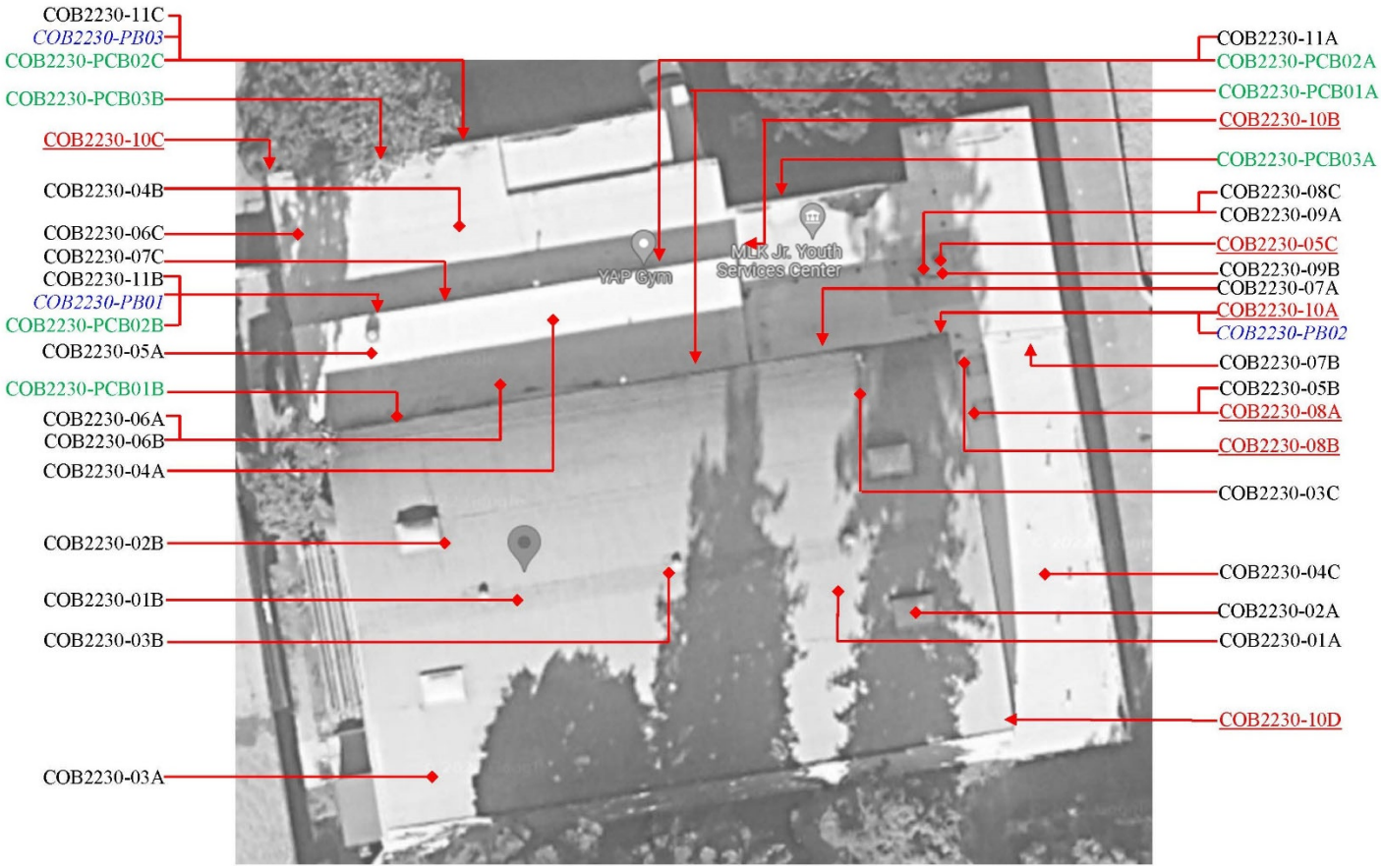
Project
M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

Project No.	Date
COB 2230	8/25/2022

Location
-

Level
Attic



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Project

M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

Project No.	Date
COB 2230	8/25/2022

Location

-

Level

Roof

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Appendix C

Photographs

M.L.K. Jr. Youth Services Center
1730 Oregon Street
Berkeley, CA

February 2023

Photo 1
MLK Jr. Youth Services Center is a one-story building with a gymnasium located at 1730 Oregon Street in Berkeley, California.

Photo 2
Taping mud contains 2% chrysotile asbestos on non-asbestos drywall.

Photo 3

Paint/Coating on non-asbestos stucco contains up to 1.36% asbestos as determined by 400 point counting analysis.

Photo 4

12-inch beige vinyl floor tile and its associated black mastic contain up to 10% asbestos.

Photo 5

Black mastic contains up to 2% asbestos. This material was found under 12-inch white vinyl floor tiles.

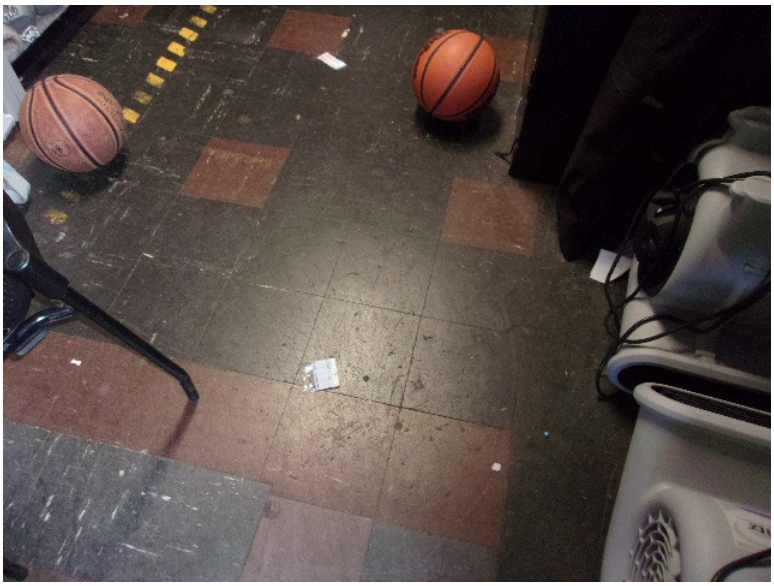

Photo 6

9-inch red and black vinyl floor tile contains 5% asbestos.

Photo 7

Black mastic on the roof contains 5% asbestos. This material was sampled at the skylight and its curb.

Photo 8

Suspect spray applied acoustical ceiling is assumed (not sample) to contain asbestos and it should be sampled to prove otherwise.

Photo 9

Suspect 12-inch white ceiling tile with adhesive ceiling are assumed (not sample) to contain asbestos and they should be sampled to prove otherwise.

Photo 10

Suspect ceramic wall and floor tile grout and mortar found in restrooms are assumed (not sample) to contain asbestos and they should be sampled to prove otherwise.

Photo 11
Exterior green paint on wood windowsill contains 3,200 ppm lead. This paint is deteriorated (loose and flaking) throughout the building that will require paint-stabilization and dispose as a hazardous waste.

Photo 12
Fluorescent light fixtures with assumed PCB ballasts.

Photo 13
High-intensity discharge lamps.

Photo 14
HVAC unit with Freon.