HAZARDOUS MATERIALS SURVEY
REPORT OF

MALIBU HIGH SCHOOL
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT
30215 MORNING VIEW DRIVE
MALIBU, CALIFORNIA 90265

ATC PROJECT NO. 52.25526.0003

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1.0 INTRODUCTION

ATC Associates Inc. (ATC) was retained by Santa Monica Malibu Unified School District (SMMUSD) to conduct a hazardous material survey of Malibu High School located at 30215 Morning View Drive, Malibu California. The purpose of the survey was to determine the presence of hazardous materials in the school to facilitate the development of abatement specifications and the eventual removal of all impacted hazardous material prior to the modernization activities throughout the campus.

The scope of the project was to identify any accessible suspect asbestos-containing materials (ACM), lead-containing materials, and other hazardous materials including devices containing mercury, equipment containing polychlorinated biphenyls (PCBs), equipment containing chlorofluorocarbons (CFCs) and/or hydrochlorofluorocarbons (HCFCs), fluorescent light tubes, and other miscellaneous hazardous materials, at the above-referenced site.

This hazardous materials survey was conducted on March 2, 2009 through March 19, 2009 by the following State of California Division of Occupational Safety and Health (DOSH) Certified Asbestos Consultant (CAC), Certified Site Surveillance Technician (CSST), and California Department of Public Health (DPH) Certified Lead-Related Construction Inspector/Assessor (LRCIA) staff:

Mr. Paul Cota	(CAC #06-3978) and (LRCIA #14316)
Mr. Damon Carrier	(CSST #01-2954) and (LRCIA #19034)
Mr. Robert de la Torre	(CSST #00-2837) and (LRCIA #14598)
Ms. Cheryl Stewart	(CSST #02-3152)
Mr. Javier Silva	(CSST #06-3971)
Mr. Clint Reuter	

Prior to this hazardous materials survey, ATC was provided with the following asbestos and lead reports for Malibu High School:

- Asbestos Survey Project Record, prepared by CTL Environmental Services (CTL), dated April 1, 2008.

All field work and report preparation was performed under the direction and guidance of Mr. Paul Cota (Project Manager) and reviewed by Mr. Stephen Drengson (CAC #06-3975 and LRCIA #2895).

2.0 ASBESTOS

2.1 Sampling Methodology and Analysis

ATC typically surveys buildings in teams of two, one person documenting the proceedings of the survey, the other performing bulk sampling and other miscellaneous activities. The team performs a preliminary visual inspection of the building impacted to identify and quantify suspect ACM. A sampling strategy is then developed to provide representative sampling of the suspect ACM in accordance with the methods and procedures identified in the Asbestos Hazard Emergency Response Act (AHERA).

ATC field staff utilized semi-destructive sampling methods to collect samples of accessible suspect asbestos-containing building materials. Some areas of the buildings, e.g. occupied units, edges of roof, pipes, chases, etc. may not have been accessible at the time of the inspection.

Each sample is placed in a container; the container is sealed, labeled and placed in a storage bag. Samples are documented by entering the sample data on a bulk log, including a description of the material, sample number, location, condition, accessibility, friability, potential for damage, and quantity. Typically, the sample location is marked on an 8-1/2 x 11 inch not-to-scale floor plan. Throughout the process, special care is taken to prevent cross-contamination of the collected samples. Sampling equipment is cleaned after each sample is obtained. In addition, sample containers are placed directly beneath each sample location, when feasible, to collect any materials which may become dislodged during the sampling process. Any debris generated by the sampling is cleaned by wet-cleaning methods. Sample locations are appropriately repaired.

All bulk sample analysis is conducted by Polarized Light Microscopy (PLM) with dispersion staining as described in the "*Method for the Determination of Asbestos in Bulk Building Materials*" (EPA-600/R-93/116, July 1993). A suspect material is immersed in a solution of known refractive index and subjected to illumination of polarized light. The color displayed enables mineral identification. Quality control samples at a rate of 10% or one per project, whichever is greater, are reanalyzed by a second, independent analyst.

Please note, in California the abatement of materials with detectable quantities of asbestos - legally defined as materials containing percentages of asbestos greater than one-tenth of one percent (>0.1%) by area are defined as asbestos-containing construction material (ACCM) and regulated by the enforcement agency of the State of California, Department of Occupational Safety and Health (CAL/OSHA).

The amended National Emission Standard for Hazardous Air Pollutants (NESHAP), November 20, 1990, included a requirement that when the asbestos content of a bulk sample material is determined using procedures outlined and the asbestos content is estimated to be less than 10% by a method other than point counting, the parties legally responsible for a building (owner/operator) may (1) elect to assume the amount to be greater than 1% and treat the material as a regulated asbestos-containing material, or (2) require verification of the amount by the Point Counting method. The purpose of this procedure is to minimize false negative analysis (reporting the samples as containing less than 1% asbestos for asbestos-containing samples actually containing greater than 1%) and false positives (reporting the sample as

containing greater than 1% asbestos for samples containing less than 1% asbestos). Point Counting was included in NESHAP in response to an EPA study that found an unacceptable amount of false negative and false positive analyses by methods outlined in the interim method.

The samples were analyzed by Hygeia Laboratories, Inc. (Hygeia) located in Sierra Madre, California. Hygeia is certified by the State of California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) and accredited by the United States Department of Commerce National Institutes of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos bulk fiber analysis.

2.2 Results

ATC field technicians collected a total of one hundred twelve (112) bulk asbestos samples for analysis by Polarized Light Microscopy (PLM) with dispersion staining. ATC performed a positive stop procedure for homogeneous materials with positive results for asbestos during the analysis process and analyzed only one sample of the material.

Material containing greater than one-tenth of one percent (>0.1%) asbestos by weight is considered positive in this report and defined as ACCM or ACM, as previously described above.

The following table details the materials sampled and the location from which the samples were collected during the current survey. Table I lists the asbestos bulk sampling results. Materials identified as ACM or ACCM are denoted in **bold**. The asbestos laboratory analytical report and asbestos sampling logs of the materials sampled during the field survey are included in Appendix A. Site sampling diagrams are included in Appendix C.

Table I –Asbestos Survey Results

Sample #	Sampling Location	Material Description	Quantity	Analysis Results
001	Bldg. D – Room 101A Storage Room	2' x 4' Ceiling panel, white fissured	N/A	ND
002	Bldg. D – Room 101A	Carpet mastic, yellow	N/A	ND
003	Bldg. D – Room 101A	Carpet mastic, yellow	N/A	ND
004	Bldg. D – Room 101A	Carpet mastic, yellow	N/A	ND
005	Bldg. D – Room 101A Storage Room	Base cove mastic, white (associated with 4" Base cove, gray)	N/A	ND
006	Bldg. D – Room 101A	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
007	Bldg. D – Conference Room	12" x 12" floor tile, gray speckled	N/A	ND
008	Bldg. D – Conference Room	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
009	Bldg. D – Mechanical Room	Joint compound, white	N/A	ND
010	Bldg. E – Classroom 2	Base cove mastic, white (associated with 4" Base cove, dark blue)	N/A	ND
011	Bldg. E – Classroom 1	12" x 12" floor tile, gray speckled	N/A	ND

Sample #	Sampling Location	Material Description	Quantity	Analysis Results
012	Bldg. E – Classroom 1	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
013	Bldg. E – Classroom 10	Carpet mastic, yellow	N/A	ND
014	Bldg. G – Classroom 500	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
015	Bldg. G – Classroom 501	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
016	Bldg. G – Classroom 502	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
017	Bldg. I – Classroom 402 Dark Room 1	12" x 12" floor tile, white w/blue specks	N/A	ND
018	Bldg. I – Classroom 402 Dark Room 1	12" x 12" floor tile, white w/blue specks	N/A	ND
019	Bldg. I – Classroom 402 Dark Room 1	12" x 12" floor tile, white w/blue specks	N/A	ND
020	Bldg. I – Classroom 402 Dark Room 1	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, white w/blue specks)	N/A	ND
021	Bldg. I – Classroom 402 Dark Room 1	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, white w/blue specks)	N/A	ND
022	Bldg. I – Classroom 402 Dark Room 1	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, white w/blue specks)	N/A	ND
023	Bldg. I – Classroom 401	12" x 12" floor tile, gray speckled	N/A	ND
024	Bldg. I – Classroom 401	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
025	Bldg. I – Classroom 401	Base cove mastic, white (associated with 4" Base cove, dark blue)	N/A	ND
026	Bldg. I – Classroom 402 Dark Room 1	Base cove mastic, white (associated with 4" Base cove, gray)	N/A	ND
027	Bldg. I – Classroom 402	Base cove mastic, white (associated with 4" Base cove, gray)	N/A	ND
028	Bldg. I – Classroom 402	Base cove mastic, white (associated with 4" Base cove, gray)	N/A	ND
029	Bldg. I – Classroom 402	2' x 4' Ceiling Panel, white fissured	N/A	ND
030	Bungalow – Classroom 511	12" x 12" floor tile, blue speckled	N/A	ND
031	Bungalow – Classroom 511	12" x 12" floor tile, blue speckled	N/A	ND
032	Bungalow – Classroom 511	12" x 12" floor tile, blue speckled	N/A	ND
033	Bungalow – Classroom 511	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
034	Bungalow – Classroom 511	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
035	Bungalow – Classroom 511	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
036	Bungalow – Classroom 511	Carpet mastic, yellow	N/A	ND
037	Bungalow – Classroom 511	Carpet mastic, yellow	N/A	ND
038	Bungalow – Classroom 511	Carpet mastic, yellow	N/A	ND

Sample #	Sampling Location	Material Description	Quantity	Analysis Results
039	Bungalow – Classroom 511	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
040	Bungalow – Classroom 511	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
041	Bungalow – Classroom 511	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
042	Bungalow – Classroom 511	Wallboard, white (behind canvas wall)	N/A	ND
043	Bungalow – Classroom 511	Wallboard, white (behind canvas wall)	N/A	ND
044	Bungalow – Classroom 511	Wallboard, white (behind canvas wall)	N/A	ND
045	Bungalow – Classroom 512	12" x 12" floor tile, blue speckled	N/A	ND
046	Bungalow – Classroom 512	12" x 12" floor tile, blue speckled	N/A	ND
047	Bungalow – Classroom 512	12" x 12" floor tile, blue speckled	N/A	ND
048	Bungalow – Classroom 512	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
049	Bungalow – Classroom 512	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
050	Bungalow – Classroom 512	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
051	Bungalow – Classroom 512	Carpet mastic, yellow	N/A	ND
052	Bungalow – Classroom 512	Carpet mastic, yellow	N/A	ND
053	Bungalow – Classroom 512	Carpet mastic, yellow	N/A	ND
054	Bungalow – Classroom 512	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
055	Bungalow – Classroom 512	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
056	Bungalow – Classroom 512	Base cove mastic, white (associated with 4" Base cove, blue)	N/A	ND
057	Bungalow – Classroom 512	Wallboard, white (behind canvas wall)	N/A	ND
058	Bungalow – Classroom 512	Wallboard, white (behind canvas wall)	N/A	ND
059	Bungalow – Classroom 512	Wallboard, white (behind canvas wall)	N/A	ND
060	Bungalow – Classroom 513	12" x 12" floor tile, blue speckled	N/A	ND
061	Bungalow – Classroom 513	12" x 12" floor tile, blue speckled	N/A	ND
062	Bungalow – Classroom 513	12" x 12" floor tile, blue speckled	N/A	ND
063	Bungalow – Classroom 513	Floor tile mastic, black (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
064	Bungalow – Classroom 513	Floor tile mastic, black (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
065	Bungalow – Classroom 513	Floor tile mastic, black (associated w/ 12" x 12" floor tile, blue speckled)	N/A	ND
066	Bungalow – Classroom 513	Base cove mastic, white (associated with 4" Base cove, black)	N/A	ND

Sample #	Sampling Location	Material Description	Quantity	Analysis Results
067	Bungalow – Classroom 513	Base cove mastic, white (associated with 4" Base cove, black)	N/A	ND
068	Bungalow – Classroom 513	Base cove mastic, white (associated with 4" Base cove, black)	N/A	ND
069	Bungalow – Classroom 513	Wallboard, white (behind canvas wall)	N/A	ND
070	Bungalow – Classroom 513	Wallboard, white (behind canvas wall)	N/A	ND
071	Bungalow – Classroom 513	Wallboard, white (behind canvas wall)	N/A	ND
072	Bldg. F – Room 302A	Carpet mastic, yellow	N/A	ND
073	Bldg. F – Room 303	Base cove mastic, white (associated with 4" Base cove, dark blue)	N/A	ND
074	Bldg. F – Room 301A	1' x 2' Ceiling Tile, white pin-hole	N/A	ND
075	Bldg. F – Room 301C	1' x 2' Ceiling Tile, white pin-hole	N/A	ND
076	Bldg. F – Room 301 Entryway	1' x 2' Ceiling Tile, white pin-hole	N/A	ND
077	Bldg. A – Room 801	2' x 4' Ceiling Panel, white fissured	N/A	ND
078	Bldg. A – Room 800	Base cove mastic, white (associated with 4" Base cove, dark blue)	N/A	ND
079	Bldg. A – Room 800	Carpet mastic, yellow	N/A	ND
080	Bldg. H – Room 601	12" x 12" floor tile, gray speckled	N/A	ND
081	Bldg. H – Room 601	Floor tile mastic, yellow (associated w/ 12" x 12" floor tile, gray speckled)	N/A	ND
082	Bldg. H – Auditorium	Carpet mastic, yellow	N/A	ND
083	Bldg. H – Room 601	Base cove mastic, white (associated with 4" Base cove, dark gray)	N/A	ND
084	Bldg. B&C – Men's Restroom	2' x 4' Ceiling Panel, white fissured	N/A	ND
085	Bldg. B&C – Room 908D	Base cove mastic, white (associated with 4" Base cove, dark blue)	N/A	ND
R01	Bldg. A – Roof	Roofing composite	N/A	ND
R02	Bldg. A – Roof	Roof mastic, black	N/A	ND
R03	Bldg. A – Upper Roof	Roofing composite	N/A	ND
R04	Bldg. A – Upper Roof	Roof mastic, black	N/A	ND
R05	South Portico Roof	Roofing composite	N/A	ND
R06	Bldg. E – Roof	Roofing composite	N/A	ND
R07	Bldg. E – Roof	Roof mastic, black	N/A	ND
R08	**Bldg. E – Roof**	**Roof paint, silver**	**50 SF**	**<1% Chrysotile**
R09	Bldg. D&G – Portico Roof	Roofing composite	N/A	ND
R10	Bldg. I – Roof	Roofing composite	N/A	ND
R11	Bldg. I – Roof	Roof mastic, black	N/A	ND

Sample #	Sampling Location	Material Description	Quantity	Analysis Results
R12	Bldg. G – Roof	Roofing composite	N/A	ND
R13	Bldg. G – Roof	Roof mastic, black	N/A	ND
R14	Bldg. H – Auditorium Roof	Roofing composite	N/A	ND
R15	Bldg. H – Auditorium Roof	Roof mastic, black	N/A	ND
R16	Bldg. H – Cafeteria Roof	Roofing composite	N/A	ND
R17	Bldg. H – Cafeteria Roof	Roof mastic, black	N/A	ND
R18	Bldg. H – Student Store/ Cafeteria/ Restroom Roof	Roofing composite	N/A	ND
R19	Bldg. H – Student Store/ Cafeteria/ Restroom Roof	Roofing composite	N/A	ND
R20	Bldg. H – Student Store/ Cafeteria/ Restroom Roof	Roofing composite	N/A	ND
R21	Bldg. H – Student Store/ Cafeteria/ Restroom Roof	Roof mastic, black	N/A	ND
R22	Bldg. F – Roof	Roofing composite	N/A	ND
R23	Bldg. F – Roof	Roof mastic, black	N/A	ND
R24	Administration –Roof	Roofing composite	N/A	ND
R25	Administration –Roof	Roof mastic, black	N/A	ND
R26	Bldg. D – Roof	Roofing composite	N/A	ND
R27	Bldg. D – Roof	Roof mastic, black	N/A	ND

ND = None Detected
N/A = Not Applicable
SF = Square Feet

2.3 Conclusions and Recommendations

Based on the ATC survey results and previous CTL survey results, asbestos was identified in the materials listed in the following table (Table II). It should be assumed that any of the materials listed below if encountered within the building should be treated as ACM or ACCM.

Table II – Asbestos-Containing Materials and Quantities

Building A (Library)

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls and Walkway Ceilings	Good	2% Chrysotile	2,600 SF
9" x 9" Floor tile, tan & Mastic	Floor 1/ 800C, Ground Floor/ 820-822, Hallway, Office & Book Room	Good	Tile - 2% Chrysotile Mastic - 15% Chrysotile	2,770 SF

Material Description	Location	Condition	Results	Quantity
TSI elbows	Floor 1/ Above Ceiling	Good	3% Chrysotile 50% Amosite	40 EA
Chalkboard	Ground Floor/ 820, 821 & Book Room	Good	Assumed	6 EA
1' x 1' Wall tile & Mastic	Ground Floor/ 821	Good	<1% Chrysotile	250 SF

Building B & C (Administration Offices)

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls	Good	2% Chrysotile	4,800 SF
9" x 9" Floor tile, tan speckled	Throughout (except 909, 910, 912C)	Good	2% Chrysotile	3,500 SF
TSI elbows	Throughout - Above suspended ceiling	Good	2% Chrysotile 35% Amosite	80 EA
Exterior portico stucco	Exterior	Good	2% Chrysotile	1,400 SF
Joint compound	Throughout - Above suspended ceiling (except 901, 902, 911)	Good	2% Chrysotile	2,600 SF

Building D (Classrooms 101-212)

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls and Walkway Ceilings	Good	2% Chrysotile	1,100 SF
9" x 9" Floor tile, tan	101A, 113, 120	Good	2% Chrysotile	1,300 SF
TSI elbows	Custodian Room, Floor 1/ Above Ceiling	Good	35% Amosite	20 EA
Chalkboard	102-106, 200-212	Good	Assumed	60 EA

Building E (Classrooms 1-10)

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls and Walkway Ceilings	Good	2% Chrysotile	6,300 SF
9" x 9" Floor tile, tan & Mastic	16, Psychologist Office (under carpet), Office	Good	2% Chrysotile	700 SF
Transite panels	1-10 (above windows)	Good	Positive	320 SF
Joint compound	Perimeter Walls (above soffit ceiling)	Good	3% Chrysotile	800 SF
TSI elbows	Along Soffit (above ceiling), Restrooms	Good	3% Chrysotile	80 EA
Chalkboard	1-10	Good	Assumed	70 EA
Roof paint, silver	Bldg. E – Roof	Good	<1% Chrysotile	50 SF

Building F (Music Building)

Material Description	Location	Condition	Results	Quantity
9" x 9" Floor tile, tan	302A-302E, 303C	Good	5% Chrysotile	600 SF
Exterior stucco, smooth	Exterior Walls	Good	2% Chrysotile	900 SF
TSI elbows	Mechanical Room, Mechanical Room (above 301E)	Good	5-15% Chrysotile 20-40% Amosite	3 EA
Exterior stucco, rough	Exterior Walls	Good	<1% Chrysotile	2,700 SF
Joint compound	Mechanical Room, Mechanical Room (above 301E)	Good	3% Chrysotile	800 SF
Chalkboard	Throughout	Good	Assumed	40 SF
Heater Unit	Floor 1/ Mechanical Room	Good	Assumed	1 EA

Building G (Classrooms 500-506)

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls and Walkway Ceilings	Good	<1% Chrysotile	4,800 SF
TSI elbow	505A, 506, 506D	Good	2% Chrysotile	16 EA

Building H (Cafeteria, Auditorium and Kitchen)

Material Description	Location	Condition	Results	Quantity
9" x 9" Floor tile, gray & Mastic	605A	Good	2-5% Chrysotile	90 SF
TSI elbows	Attic Space	Good	5-7% Chrysotile	2 EA
Transite panels	Cafeteria	Good	35% Chrysotile	30 SF
Window putty	606	Good	<1% Chrysotile	40 LF

Building I (Classrooms 401 & 402)

Material Description	Location	Condition	Results	Quantity
9" x 9" Floor tile, tan	401, 401A, 402, 402A (under new tile), Electrical Room, Dark Room, Office	Good	3% Chrysotile	2,950 SF
Chalkboard	401, 402	Good	Assumed	4 EA

Building J (Old Gymnasium & Locker Rooms)

Material Description	Location	Condition	Results	Quantity
9" x 9" Floor tile, tan	Boys Office, Girls Office	Good	2% Chrysotile	1,600 SF
Pipe fitting insulation	Electrical Room	Good	35-40% Amosite	40 LF

Material Description	Location	Condition	Results	Quantity
Exterior stucco	Exterior Walls and Overhang Ceilings	Good	2% Chrysotile	2,200 SF
TSI pipe elbow	Storage 4	Good	10% Amosite	10 EA
Chalkboard	723, Southeast Room	Good	Assumed	3 EA

SF = Square Feet
LF = Linear Feet
EA = Each
TSI = Thermal System Insulation

If additional suspect materials are observed by the contractor during abatement, the consultant should be notified and the presence of these materials should be verified. All materials listed above should be removed and disposed of as ACM prior to any modernization activities.

Asbestos is a hazardous substance. Its condition, handling and disposal are regulated by Federal, State, and local agencies. ACMs and ACCMs generally do not pose a health threat unless the asbestos fibers are disturbed by renovation, construction or demolition and may become airborne and inhaled.

Prior to the planned modernization activities throughout the campus, ATC recommends removal of the ACMs and ACCMs noted above that will be impacted or disturbed. Contractors must use asbestos safe work practices when disturbing the material listed above.

A building material is considered to be ACM if at least one sample collected from the homogeneous material shows asbestos present in an amount greater than one percent (>1%) by weight. Materials with less than one percent (<1%) asbestos are not regulated by the United States Environmental Protection Agency (USEPA) or Federal Occupational Safety and Health Administration (OSHA). However, the State of California, Division of Occupational Safety and Health (DOSH) does regulate materials with greater than one-tenth of one percent (>0.1%) by weight under California Code of Regulations (CCR) Title 8, Section 1529. These materials are considered ACCM.

If PLM results indicate a material to contain trace amounts of asbestos (<1%), the building owner may choose to treat this material as ACM or have the material analyzed using the 1000 point count method. If the point count analysis is used, this result will be used for reporting purposes.

Building occupants and contractors working in an area where asbestos is present must be informed of the type and location of ACM. Since these materials are going to be impacted during the planned building demolition, ATC recommends abatement of all identified ACM by a California licensed, certified and registered asbestos abatement contractor. Asbestos abatement must be performed in accordance with Federal and State Occupational Safety and Health Administration (OSHA and CAL/OSHA), and South Coast Air Quality Management District (SCAQMD) regulations.

CAL/OSHA also requires employers to implement specific work practices, which protect workers from airborne asbestos exposure. Building materials, which contain even low levels of asbestos (trace amounts), can potentially generate significant concentrations of airborne

asbestos fibers when disturbed. Therefore, control measures should be instituted which adequately addresses worker health and safety during the planned modernization activities involving these materials.

3.0 LEAD-CONTAINING MATERIALS

3.1 Sampling Methodology and Analysis

ATC's field technicians conducted a visual inspection of the facility and observed all interior and exterior paint to be intact, with the exception of chipped or peeling paint observed in a few select areas. ATC's field staff utilized an X-Ray Fluorescence (XRF) Analyzer device as well as collected representative samples of suspect lead-based paint.

The lead testing was performed on-site using an XRF analyzer on various surfaces, according to the procedures identified in Chapter 7 of the *Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of LBP in Housing*, 1997 Revision, and the XRF-specific *Performance Characteristic Sheet* (PCS) methodology for the Thermo Scientific NITON® XLp 300 Series XRF analyzer.

The XLp 300 is the ideal tool for lead analysis. From its easy to use point-and-shoot operation to the high-strength, injection molded and environmentally sealed housing, the NITON XLp 300 is the right choice for demanding applications such as lead paint inspection and can provide valuable data in the field on soil and dust lead loadings. Further, every NITON XRF analyzer comes with completely encrypted data, for legally defensible results.

Supported by a Performance Characteristic Sheet (PCS) documenting no inconclusive, false positive, or false negative readings, as well as no need for substrate correction, the NITON 300 Series determines in seconds whether lead is positive (as defined by the U.S. EPA as greater than or equal to 1.0 mg/cm^2), or negative. Users in jurisdictions with more stringent standards can easily change the action level to ensure compliance with local regulations. Actual lead values are also displayed; permitting users to more accurately quantify the hazards associated with particular samples.

The Depth Index (DI) is a numerical indication of the amount of non-leaded paint covering the lead detected by the instrument. A DI of less than 1.5 indicates lead very near the surface layer of paint. A DI between 1.5 and 4.0 generally indicates moderately covered lead, and a DI greater than 4 indicates deeply buried lead.

The XRF analyzer uses a ^{109}Cd radioactive source to excite the electrons of the lead atoms, if present, in paints. As the lead atom electrons return to their normal state, they emit x-rays, which are counted by the analyzer. The resulting data was processed and converted to milligrams of lead per square centimeter of sampled surface area.

Additional lead-containing building substrates and components may be present in other building areas or hidden by floor, wall and ceiling finishes or otherwise may be inaccessible. The tested surfaces are chosen by protocol as representative of all surfaces in order to determine whether the premises were in compliance with HUD Guidelines.

Calibration

Upon arrival at the job site, a calibration test was performed to ensure that the instrument was operating properly. Procedures were as follows:

- Powered on instrument and let it stabilize for 5 minutes;
- Instrument showed the correct date and time (critical to obtaining accurate results);
- Performed an internal calibration prior to testing;
- Performed a separate calibration check on both the front and back sides of the manufacturer-supplied paint standard to determine the DI correction;
- Performed the required HUD calibration check using the NIST Standard Reference Manual (SRM) No. 7016;
- Performed calibration checks using Lead Paint standards every 2 hours, at the end of the testing session, and at extended delays in testing (as recommended by the manufacturer.

In all cases, the instrument was functioning within the standard deviation as defined by the manufacturer and PCS. All validation readings were recorded in a logbook, which accompanies the instrument. Additional information stored in the logbook includes the name of the operator, detector resolution, and additional manufacturer-recommended QC procedures.

Evaluating the Quality of XRF Testing

To check the quality of the readings, as specified in the PCS, 10 testing combinations for retesting were randomly selected from the building areas. The K+L variable time mode readings were used. There were 10 original and 10 retest XRF results.

Passing or failing the test was determined by the computed Retest Tolerance Limit. If the difference of the overall averages equaled or exceeded the Retest Tolerance Limit, the procedure was repeated with 10 new testing combinations. The XRF testing performed passed the quality check.

3.2 XRF Survey Results

ATC field technicians obtained one thousand one hundred and thirty (1,130) XRF readings. One thousand seventy-five (1,075) readings were taken throughout the interior and exterior of the building areas and fifty-five (55) readings were calibration checks.

The following table (Table III) represents the results of the XRF survey. The table only lists those materials analyzed and found to contain greater than or equal to 0.7 mg/cm2. (Los Angeles County Code definition of "dangerous level of lead-bearing substance"). The lead-based paint/materials XRF sampling logs of the materials sampled during the field survey are included in Appendix B. Site sampling diagrams are included in Appendix C.

Positive: An XRF reading is classified as positive if it is greater than or equal to 0.7 mg/cm^2.

Negative: An XRF reading is classified as negative if it is less than 0.7 mg/cm^2.

Table III – Positive XRF Survey Results

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
1619	2.3	Intact	1 EA	Bldg D/ Floor 1/ Custodial Room	North	Door	Wood	Blue
1622	2.2	Intact	1 EA	Bldg D/ Floor 1/ Mechanical Room	North	Door	Wood	Blue
1624	5.3	Intact	1 EA	Bldg D/ Floor 1/ Mechanical Room	East	Floor Drain	Porcelain	White
1665	9.1	Intact	20 SF	Bldg D/ Floor 2/ Room 215 – Custodian	South	6" x 4" Wall Tile	Ceramic	Beige
1666	7.2	Intact	1 EA	Bldg D/ Floor 2/ Room 215 – Custodian	South	Sink Basin	Porcelain	White
1667	10.3	Intact	1 EA	Bldg D/ Floor 2/ Room 215 – Custodian	North	Ladder	Metal	White
1716	7.9	Intact	1 EA	Bldg D/ Floor 2/ Classroom 213	East	Sink	Porcelain	White
1743	8.0	Intact	300 SF	Bldg E/ Floor 1/ 17- Prop Storage	East	4.25" x 4.25" Wall Tile	Ceramic	Green
1782	2.5	Intact	375 SF	Bldg E/ Floor 1/ Women's Restroom	West	4.25" x 4.25" Wall Tile	Ceramic	Blue
1816	2.7	Intact	550 SF	Bldg E/ Floor 1/ Boys Restroom	North	4.25" x 4.25" Wall Tile	Ceramic	Blue
1852	4.8	Intact	500 SF	Bldg E/ Floor 1/ 20	North	4.25" x 4.25" Wall Tile	Ceramic	Pink
1918	10.7	Intact	20 SF	Bldg G/ Floor 1/ 508- Custodian	West	Wall Tile	Ceramic	Yellow
1919	8.9	Intact	1 EA	Bldg G/ Floor 1/ 508- Custodian	North	Sink Basin	Porcelain	White
1957	6.1	Intact	3 SF	Bldg H/ Student Store/ Floor 1/ Hallway	North	Window Sill	Ceramic	Tan
1971	10.2	Intact	3 EA	Bldg H/ Kitchen/ Food Prep Area	Center	Floor Drain	Porcelain	White

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
1974	9.7	Intact	3 SF	Bldg H/ Kitchen/ 606	East	Window Sill	Ceramic	Tan
1986	7.3	Intact	9 SF	Bldg H/ Kitchen/ 601	North	Window Sill	Ceramic	Tan
2027	2.7	Intact	250 SF	Bldg H/ Room 620 – Boys Restroom	East	Wall Tile	Ceramic	Blue
2035	2.0	Intact	250 SF	Bldg H/ Room 621 – Girls Restroom	East	Wall Tile	Ceramic	Blue
2056	10.7	Intact	10 SF	Bldg F/ Floor 1/ 303A- Custodial	West	Wall Tile	Ceramic	Yellow
2057	5.2	Intact	1 EA	Bldg F/ Floor 1/ 303A- Custodial	West	Mop Sink Basin	Porcelain	White
2086	0.9	Intact	840 SF	Bldg J/ 700- Court	North	Wall	Brick	Turquoise
2087	6.7	Intact	70 SF	Building J/ 700- Court	East	Wall Tile	Ceramic	Beige
2112	10.2	Intact	120 SF	Building J/ 725- Weight Room	East	Support Column	Metal	White
2119	10.7	Intact	45 SF	Building J/ Boys Coach's Room	North	Support Column	Metal	White
2120	0.8	Intact	15 LF	Building J/ Coach's Room	North	Water Pipe	Metal	White
2129	10.7	Intact	500 SF	Building J/ Boys Locker Room	North	Wall Tile	Ceramic	Green Mosaic
2130	10.1	Intact	120 LF	Building J/ Boys Locker Room	North	Wall Trim	Ceramic	Green
2133	8.2	Intact	240 SF	Building J/ Boys Locker Room	West	Support Column	Metal	White
2142	3.0	Intact	1 EA	Building J/ Boys Restroom	East	Door	Wood	Blue

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
2143	1.1	Intact	1 EA	Building J/ Boys Restroom	East	Door Frame	Metal	Blue
2145	5.7	Intact	10 SF	Building J/ Janitor Room	South	Wall Tile	Ceramic	Green Mosaic
2146	4.9	Intact	1 EA	Building J/ Janitor Room	South	Mop Sink Basin	Porcelain	White
2152	7.0	Intact	1 EA	Building J/ 722-Boys P.E. Office	East	Window Sill	Ceramic	Green
2173	10.7	Intact	40 LF	Building J/ Kitchenette	West	Base Cove	Ceramic	White & Blue
2178	14.5	Intact	1 EA	Building J/ 703	North	Support Column	Metal	White
2182	7.3	Intact	500 SF	Building J/ Girls Locker Room	East	Wall Tile	Ceramic	White & Blue Mosaic
2184	10.7	Intact	120 LF	Building J/ Girls Locker Room	East	Wall Trim	Ceramic	Blue
2186	8.4	Intact	240 SF	Building J/ Girls Locker Room	North	Support Column	Metal	White
2196	2.8	Intact	1 EA	Building J/ Girls Restroom	North	Door	Wood	Blue
2205	18.2	Intact	10 LF	Building J/ 704-P.E. Office	West	Window Sill	Ceramic	Brown
2209	3.1	Intact	100 SF	Building J/ 706-Locker Room	East	Wall Tile	Ceramic	Blue
2216	10.7	Intact	4 LF	Building J/ 705-Office	North	Window Sill	Ceramic	White
2326	9.8	Intact	1 EA	Bldg B&C/ 912B	North	Sink	Porcelain	White
2345	10.7	Intact	8 LF	Bldg B&C/ 908A	North	Window Sill	Ceramic	White

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
2347	10.7	Intact	8 LF	Bldg B&C/ 908C	East	Window Sill	Ceramic	Brown
2353	10.7	Intact	1 EA	Bldg B&C/ 908E	North	Sink	Porcelain	White
2369	51.2	Intact	1 EA	Bldg B&C/ 900C-Copy Room	South	Sink	Porcelain	White
2376	6.5	Intact	20 LF	Bldg B&C/ 905A-Principal Restroom	North	Base Cove	Ceramic	Blue
2391	1.5	Intact	1 EA	Bldg B&C/ 902-Telephone	North	Doors	Wood	Blue
2395	10.7	Intact	10 SF	Bldg B&C/ Janitor Closet	South	Wall Tile	Ceramic	Brown
2396	2.4	Intact	1 EA	Bldg B&C/ Janitor Closet	South	Sink	Porcelain	White
2397	2.3	Intact	1 EA	Bldg B&C/ Janitor Closet	North	Door	Wood	Blue
2401	5.8	Intact	1 EA	Bldg B&C/ 904	East	Door	Wood	Blue
2403	0.8	Intact	500 SF	Bldg A/ 800-Library	South	Wall	Plaster	White
15	10.3	Intact	10 SF	Bldg A/ 825-Custodian	North	Wall Tile	Ceramic	Brown
16	2.6	Intact	1 EA	Bldg A/ 825A-Custodian	East	Mop Sink	Porcelain	White
41	8.8	Intact	20 SF	Bldg D/ Floor 1/ Exterior-near Room 105	South	Wall Tile	Ceramic	Brown
45	8.1	Intact	20 SF	Bldg D/ Floor 1/ Exterior/ Girls Restroom	South	Wall Tile	Ceramic	Brown
56	10.3	Intact	20 SF	Bldg D/ Floor 1/ Exterior-near Room 102	North	Wall Tile	Ceramic	Brown

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
59	8.6	Intact	25 SF	Bldg D/ Floor 1/ Exterior-Drinking Fountain	North	Wall Tile	Ceramic	Brown
72	10.7	Intact	30 SF	Bldg D/ Floor 2/ 216A-Hallway	West	Wall Tile	Ceramic	Brown
108	0.7	Intact	6 EA	Bldg H/ Cafeteria Auditorium/ Exterior / Food Line	South	Window Trim	Wood	Blue
110	0.7	Intact	30 LF	Bldg H/ Cafeteria Auditorium/ Exterior / Student Store	West	Window Trim	Wood	Blue
114	1.7	Intact	1 EA	Bldg H/ Cafeteria Auditorium/ Exterior	East	Vent Grill	Metal	Blue
115	2.3	Intact	3 LF	Bldg H/ Exterior/ Cafeteria Auditorium	East	Water Pipe	Metal	Brown
116	1.1	Intact	4 EA	Bldg H/ Exterior/ 603- Cafeteria	North	Vent Grill	Metal	Blue
118	1.8	Intact	1 EA	Bldg H/ Exterior/ 603	North	Door Frame	Metal	Blue
127	1.5	Intact	80 SF	Bldg H/ Cafeteria Auditorium/ Exterior/ Overhang	West	Facia	Metal	Blue
132	0.8	Intact	3 EA	Bldg H/ Exterior/ 620-621- Restroom	North West	Support Beam	Metal	Blue
134	1.4	Intact	15 LF	Bldg H/ Exterior/ Restrooms	South West	Gutter	Metal	Blue
135	0.8	Intact	150 SF	Bldg H/ Restrooms/ Exterior	South West	Facia	Metal	Blue
148	4.5	Intact	25 SF	Bldg B&C/ Main Office/ Exterior	East	Rain Gutter	Metal	Blue
157	2.9	Intact	1 EA	Bldg A/ Exterior/ Library	East	Access Door	Wood	Blue
158	2.3	Intact	20 SF	Bldg A/ Exterior/ Library	South	Down Spout	Metal	Blue

Sample #	XRF Results (mg/cm^2)	Condition of Paint	Qty	Building/ Floor/ Room/ Area	Location	Surface	Substrate	Color
161	3.7	Intact	20 SF	Bldg A/ Exterior/ Library	South West	Down Spout	Metal	Blue
163	4.2	Intact	50 SF	Bldg A/ Exterior/ Library	North West	Down Spout	Metal	Blue
179	1.2	Intact	1 EA	Bldg F/ Exterior	West	Drain Cover	Metal	Blue
185	7.6	Intact	20 SF	Bldg I/ Exterior	South West	Wall Tile	Ceramic	White
189	9.7	Intact	20 SF	Bldg I/ Exterior	South East	Wall Tile	Ceramic	White
198	5.6	Intact	100 SF	Bldg G/ Exterior	North West	Down Spout	Metal	Blue
199	13.8	Intact	100 SF	Bldg G/ Exterior	South West	Down Spout	Metal	Blue
214	25.7	Intact	1 EA	Bldg 511 & 512/ Exterior	Center	Fire Hydrant	Steel	Yellow
248	6.5	Intact	60 SF	Building J/ Exterior	North West	Down Spout	Metal	Blue
250	19.9	Intact	60 SF	Building J/ Exterior	North	Wall Tile	Ceramic	Yellow

EA = Each
SF = Square Feet
LF = Linear Feet

3.3 Laboratory Analysis Results

ATC field technicians also collected a total of twenty (20) paint-chip samples for analysis of lead content. The samples were submitted to Hygeia for analysis by Flame Atomic Absorption Spectrophotometry (Flame AAS) in accordance with EPA Method 7420 analytical protocol.

The following table (Table IV) represents the results of the paint chip analysis via Flame AAS. Samples found to contain lead-based paint are denoted in **bold**. Samples that contain detectable levels of lead are denoted with and asterisk. The Lead Laboratory Analytical Report of the materials sampled during the field survey is included in Appendix B. Site sampling diagrams are included in Appendix C.

Table IV - Lead-Based Paint Bulk Sample Survey Results

Sample #	Building/ Floor	Location	Surface	Substrate	Color	Results (ppm)
001	Bldg D/ Floor 1	Southwest Stairwell	Hand Rail	Metal	Blue	182*
002	Bldg E/ Floor 1	Room 15	Fence Frame	Metal	White	606*
003	Bldg E/ Floor 1	Room 20	Door	Wood	Blue	214*
004	Bldg E/ Floor 1	Room 14	Water Pipe	Metal	White	1,730*
005	Bldg F/ Floor 1	Recording Room	Wall	Plaster	Gray	<120
006	Bldg F/ Floor 1	Unknown	Door	Wood	Blue	<120
007	Bldg 620/ Floor 1	Boys Restroom	Wall	Plaster	White	<120
008	Bldg G/ Floor 1	Room 508	Wall	Plaster	White	<120
009	Building J/ Floor 1	Weight Room	Ceiling	Plaster	White	<120
010	Building J/ Floor 1	Restroom Hallway	Wall	Plaster	White	<120
011	Building J/ Floor 1	Kitchenette	Wall	Plaster	White	<120
012	Building J/ Floor 1	Girls Restroom	Door Frame	Metal	Blue	1,283*
013	Building J/ Floor 1	Court	Door	Wood	Blue	<120
014	Building J/ Floor 1	Locker Room	Wall	Plaster	White	<120
015	Building J/ Floor 1	Room 703	Water Pipe	Metal	White	2,779*
016	Bldg D/ Floor 2	Exterior	Support Beam	Metal	Blue	130*
017	Bldg D/ Floor 1	Exterior	Partition Wall Post	Metal	Blue	<120
018	**Bldg A/ Library/ Floor 1**	**Exterior**	**Access Door**	**Wood**	**Blue**	**24,020**
019	**Bldg A/ Library/ Floor 1**	**Exterior**	**Rain Gutter**	**Metal**	**Blue**	**93,020**
020	Bldg H/ Student Store/ Floor 1	Exterior	Window Frame	Wood	Blue	684*

ppm = Parts per Million
Bold = Lead-Based Paint: concentration greater than or equal to 0.5% lead by weight or 5,000 milligrams per kilogram (mg/kg) or parts per million (ppm) total lead.
* = Lead-containing coating: concentration above detection limit

3.4 Conclusions and Recommendations

Based on the ATC survey results, the lead-containing materials listed below in the table (Table V) meet the definition of lead-based paint. The California Department of Public Health (DPH) (as defined in Title 17 California Code of Regulations) and United States Department of Housing and Urban Development (HUD) define lead-based paint (LBP) as paints containing greater than 1.0 mg/cm^2, as well as, paints containing greater than or equal to 0.5% lead by weight or 5,000 milligrams per kilogram (mg/kg) or parts per million (ppm) total lead. Paint containing less than these amounts is generally termed "lead-containing paint" (LCP).

Table V – Lead-Containing Materials and Quantities

Building A (Library)

Material Description	Location	Condition	Quantity
Plaster Wall, white	Bldg A/ 800- Library	Intact	500 SF
Ceramic Wall Tile, brown	Bldg A/ 825A- Custodian	Intact	10 SF
Porcelain Mop Sink, white	Bldg A/ 825A- Custodian	Intact	1 EA
Metal Down Spout, blue	Bldg A/ Library / Exterior	Intact	50 SF
Wood Access Door, blue	Bldg A/ Library/ Exterior	Intact	2 EA
Metal Rain Gutter, blue	Bldg A/ Library/ Exterior	Intact	50 SF

Building B & C (Administration Offices)

Material Description	Location	Condition	Quantity
Porcelain Sink, white	Bldg B&C/ 900C- Copy Room, 908E, 912B & Janitor Closet	Intact	4 EA
Wood Door, blue	Bldg B&C/ 902- Telephone, 904 & Janitor Closet	Intact	3 EA
Ceramic Base Cove, blue	Bldg B&C/ 905A- Principal Restroom	Intact	20 LF
Ceramic Window Sill, white	Bldg B&C/ 908A	Intact	8 LF
Ceramic Window Sill, brown	Bldg B&C/ 908C	Intact	8 LF
Ceramic Wall Tile, brown	Bldg B&C/ Janitor Closet	Intact	10 SF
Metal Rain Gutter, blue	Bldg B&C/ Main Office/ Exterior	Intact	25 SF

Building D (Classrooms 101-212)

Material Description	Location	Condition	Quantity
Ceramic Wall Tile, brown	Bldg D/ Exterior/ Near Rooms 102 & 105, Drinking Fountain, Girls Restroom, Floor 2/ 216A- Hallway	Intact	115 SF
Wood Door, blue	Bldg D/ Custodial Room & Mechanical Room	Intact	2 EA
Porcelain Floor Drain, white	Bldg D/ Floor 1/ Mechanical Room	Intact	1 EA
Porcelain Sink, white	Bldg D/ Floor 2/ Classroom 213	Intact	1 EA
Metal Support Beam, blue	Bldg D/ Floor 2/ Exterior	Intact	200 SF

Material Description	Location	Condition	Quantity
6" x 4" Ceramic Wall Tile, beige	Bldg D/ Floor 2/ Room 215 – Custodian	Intact	20 SF
Porcelain Sink Basin, white	Bldg D/ Floor 2/ Room 215 – Custodian	Intact	1 EA
Metal Ladder, white	Bldg D/ Floor 2/ Room 215 – Custodian	Intact	1 EA

Building E (Classrooms 1-10)

Material Description	Location	Condition	Quantity
4.25" x 4.25" Ceramic Wall Tile, green	Bldg E/ 17- Prop Storage	Intact	300 SF
4.25" x 4.25" Ceramic Wall Tile, pink	Bldg E/ Room 20	Intact	500 SF
4.25" x 4.25" Ceramic Wall Tile, blue	Bldg E/ Boys Restroom & Women's Restroom	Intact	925 SF
Metal Water Pipe, white	Bldg E/ Room 14	Intact	5 SF
Metal Fence Frame, white	Bldg E/ Room 15	Intact	10 SF
Wood Door, blue	Bldg E/ Room 20	Intact	2 EA

Building F (Music Building)

Material Description	Location	Condition	Quantity
Metal Drain Cover, blue	Bldg F/ Exterior	Intact	1 EA
Ceramic Wall Tile. yellow	Bldg F/ 303A- Custodial	Intact	10 SF
Porcelain Mop Sink Basin, white	Bldg F/ 303A- Custodial	Intact	1 EA

Building G (Classrooms 500-506)

Material Description	Location	Condition	Quantity
Metal Down Spout, blue	Bldg G/ Exterior	Intact	100 SF
Ceramic Wall Tile. yellow	Bldg G/ 508- Custodian	Intact	20 SF
Porcelain Sink Basin, white	Bldg G/ 508- Custodian	Intact	1 EA

Building H (Cafeteria, Auditorium and Kitchen)

Material Description	Location	Condition	Quantity
Ceramic Wall Tile, blue	Bldg H/ Room 620 – Boys Restroom, Room 621 – Girls Restroom	Intact	500 SF
Ceramic Window Sill, tan	Bldg H/ Kitchen/ Rooms 601, 606 & Student Store/ Hallway	Intact	15 SF
Metal Door Frame, blue	Bldg H/ Exterior/ 603	Intact	1 EA
Metal Fascia, blue	Bldg H/ Exterior/ Overhang & Restrooms	Intact	230 SF
Metal Gutter, blue	Bldg H/ Exterior/ Restrooms	Intact	15 LF
Metal Support Beam, blue	Bldg H/ Exterior/ 620-621-Restroom	Intact	3 EA

Material Description	Location	Condition	Quantity
Metal Vent Grill, blue	Bldg H/ Exterior/ 603- Cafeteria	Intact	5 EA
Metal Water Pipe, brown	Bldg H/ Exterior	Intact	3 LF
Porcelain Floor Drain, white	Bldg H/ Kitchen/ Food Prep Area	Intact	3 EA
Wood Window Trim, blue	Bldg H/ Exterior / Food Line & Student Store	Intact	60 LF

Building I (Classrooms 401 & 402)

Material Description	Location	Condition	Quantity
Ceramic Wall Tile, white	Bldg I/ Exterior	Intact	20 SF

Building J (Old Gymnasium & Locker Rooms)

Material Description	Location	Condition	Quantity
Brick Wall, turquoise	Building J/ 700- Court	Intact	840 SF
Ceramic Base Cove, white & blue	Building J/ Kitchenette	Intact	40 LF
Ceramic Wall Tile, beige	Building J/ 700- Court	Intact	70 SF
Ceramic Wall Tile, blue	Building J/ 706- Locker Room	Intact	100 SF
Ceramic Wall Tile, green mosaic	Building J/ Boys Locker Room & Janitor Room	Intact	510 SF
Ceramic Wall Tile, white & blue mosaic	Building J/ Girls Locker Room	Intact	500 SF
Ceramic Wall Tile, yellow	Building J/ Exterior	Intact	60 SF
Ceramic Wall Trim, blue	Building J/ Girls Locker Room	Intact	120 LF
Ceramic Wall Trim, green	Building J/ Boys Locker Room	Intact	120 LF
Ceramic Window Sill, brown	Building J/ 704- P.E. Office	Intact	10 LF
Ceramic Window Sill, green	Building J/ 722- Boys P.E. Office	Intact	1 EA
Ceramic Window Sill, white	Building J/ 705- Girl's Coach's Office	Intact	4 LF
Metal Door Frame, blue	Building J/ Boys & Girls Restrooms	Intact	2 EA
Metal Down Spout, blue	Building J/ Exterior	Intact	60 SF
Metal Support Column, white	Building J/ Room 703, Room 725- Weight Room, Boys & Girls Locker Rooms, Boy's Coach's Room	Intact	645 SF
Metal Water Pipe, white	Building J/ Boy's Coach's Room	Intact	15 LF
Porcelain Mop Sink Basin, white	Building J/ Janitor Room	Intact	1 EA
Wood Door, blue	Building J/ Boys & Girls Restrooms	Intact	2 EA

Bungalows

Material Description	Location	Condition	Quantity
Steel Fire Hydrant, yellow	Bldg 511 & 512/ Exterior	Intact	1 EA

EA = Each

SF = Square Feet
LF = Linear Feet

Lead is a hazardous substance. Its condition, handling and disposal are regulated by Federal, State, and local agencies. Lead-containing materials, LBP and LCP generally do not pose a health risk unless the material is disturbed or sufficiently deteriorated to produce dust, which may become airborne and inhaled or ingested.

If lead-containing material, LBP or LCP will be impacted (activities such as such as demolition, sanding, sand /shot blasting, chipping or any other method of surface preparation which may cause potential airborne lead concentrations to exceed the CAL/OSHA action level) during the building renovation, ATC recommends removal and/or stabilization of those building materials denoted above that will be disturbed during the upcoming modernization, as well as, other surfaces of similar substrate, color and condition. Contractor must use lead safe work practices when disturbing any of the materials listed above.

Cal/OSHA regulations (8 CCR 1532.1 - Lead Construction Standard) do not provide a definition for "lead-based paint," but rather provide a Permissible Exposure Limit (PEL) for worker exposure to airborne lead particles of 50 micrograms per cubic meter of air (50 $\mu g/m^3$ for an 8-hour time-weighed average). The OSHA Lead Construction Standard also lists an Action Level of 30 $\mu g/m^3$ for an 8-hour time-weighted average. All employees (workers) and supervisors who are engaged in lead related construction and shown to be exposed to lead at or above the Permissible Exposure Limit, shall be trained by state-accredited training providers and certified by the California Department of Public Health.

Work activities impacting the lead-containing materials pose a potential exposure risk for workers and/or building occupants. Workers trained in proper safety and respiratory techniques should perform work activities that may impact the LBP. All construction work where an employee may be occupationally exposed to lead must comply with CAL/OSHA requirements. This regulation requires initial employee exposure monitoring to evaluate worker exposure during work that disturbs lead-containing materials (lead present in detectable levels). Any disturbance to LBP surfaces or materials, such as demolition, sanding, sand /shot blasting, chipping or any other method of surface preparation which may cause potential airborne lead concentrations above current regulatory levels are prohibited by state law.

4.0 OTHER HAZARDOUS MATERIALS

ATC's field technicians conducted a visual inspection of the buildings for the presence of Mercury in devices including thermostats and exterior flood lights, equipment containing polychlorinated biphenyls (PCBs) such as light ballasts, equipment containing chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) such as air conditioning units and refrigerators, fluorescent light tubes and compact fluorescent lights, and other miscellaneous hazardous materials.

4.1 Devices Containing Mercury

ATC's field staff observed thirty-eight (38) thermostats and sixty-two (62) Mercury Vapor Lights (MVL) throughout the interior and exterior of the facility.

Table VI –Mercury Locations and Quantities

Building	Material / Quantity
Building A	Thermostats – 7 MVLs – 7
Building B&C	Thermostats – 0 MVLs – 4
Building D	Thermostats – 11 MVLs – 18
Building E	Thermostats – 11 MVLs – 1
Building F	Thermostats – 3 MVLs – 6
Building G	Thermostats – 1 MVLs – 11
Building H	Thermostats – 2 MVLs – 8
Building I	Thermostats – 2 MVLs – 4
Bungalows	Thermostats – 1 MVLs – 3
Exterior	Thermostats – 0 MVLs – 0
TOTAL	**Thermostats – 38** **MVLs – 62**

Mercury is a heavy, shiny, silvery-white poisonous metal that is a liquid at room temperature. Liquid mercury evaporates at room temperature and gives off harmful, invisible, odorless vapors. Breathing these vapors causes the most harm to people, but mercury can also be harmful when swallowed or when it contacts broken skin. Mercury is quite toxic: it causes birth defects and works its way into the food chain. Women and children are most at risk from mercury poisoning, which can cause brain and nerve damage resulting in impaired coordination, blurred vision, tremors, irritability and memory loss.

Mercury is a fast-moving liquid that spreads quickly. Prompt containment and control of both the liquid and its vapors is very important. In general, do not remove the mercury from a device such as a switch.

All thermostats and MLVs that will be impacted by the scope of work should be kept intact, removed, and containerized in a manner that will prevent breakage, spillage, or release. Label and store the mercury-containing devices to ensure proper handling, transportation and disposal prior to modernization/demolition.

4.2 Equipment Containing Polychlorinated Biphenyls

ATC's field staff observed two thousand-nine hundred thirty-nine (2,939) ballasts throughout the classrooms. All ballasts that potentially contain PCBs and that will be impacted by the scope of work should be closely inspected and removed prior to modernization/demolition activities that impact them.

Table VII – Ballast Locations and Quantities

Building	Quantity
Building A	355
Building B&C	214
Building D	866
Building E	596
Building F	245
Building G	190
Building H	143
Building I	195
Bungalows	72
Exterior	63
TOTAL	**2,939**

PCBs are a family of chlorinated compounds that were dielectric or especially non-conductive. PCBs are oily liquids that are usually pale yellow to clear. PCBs are a family of chemicals manufactured and used in the United States until the late 1970's, which were mostly used in electrical devices like capacitors, transformers and lighting ballasts to protect their oils from breaking down at high temperatures. These substances are strictly regulated because of their

toxicity and persistence in the environment.

PCBs continue to be a major source of fish contamination, leading to fish consumption advisories for people. Management of PCBs is based on their concentration in an item. Materials with PCB concentrations of 50 parts per million (ppm) or greater are regulated by the U.S. EPA under the Toxic Substances Control Act.

All PCB light ballasts that are impacted by the scope of work should be kept intact, removed, and containerized in a manner that will prevent breakage, spillage, or release. Label and store the PCBs to ensure proper handling, transportation and disposal prior to modernization/demolition.

4.3 Equipment Containing Chlorofluorocarbons and Hydrochlorofluorocarbons

ATC's field staff observed thirty-six (36) air conditioning units throughout the school facility. These units may contain CFC's or HCFC's (Freon) and if impacted by the scope, should be properly recovered prior to modernization/demolition activities that impact them.

Table VIII – Air Conditioning Unit Locations and Quantities

Building	Quantity
Building A	3
Building B&C	0
Building D	13
Building E	11
Building F	2
Building G	0
Building H	0
Building I	4
Bungalows	3
Exterior	0
TOTAL	**36**

CFCs and HCFCs are man-made refrigerants that destroy the ozone layer. Federal laws also prohibit releases and also require recovery of these substances, as well as other refrigerants that are global warming gases or pose other health or environmental problems. They must be

properly recovered, using approved equipment operated by qualified technicians. The entity recovering these refrigerants must be registered with the DNR and supply documentation to whomever receives the scrapped equipment that the refrigerants were properly removed.

4.4 Fluorescent Light Tubes

ATC's field staff observed three thousand seven hundred (3,700) fluorescent light tubes and forty-one (41) Compact Fluorescent Lights (CFLs) throughout the classrooms. The tubes that will be impacted by the scope of work should be removed and disposed of properly in accordance with California Code of Regulations, Title 22, Division 4.5, Hazardous Waste Management prior to modernization/demolition activities.

Table IX – Fluorescent Light Tube / CFLs Locations and Quantities

Building	Material / Quantity
Building A	Tubes – 380 CFLs – 3
Building B&C	Tubes – 222 CFLs – 1
Building D	Tubes – 1,294 CFLs – 0
Building E	Tubes – 616 CFLs – 11
Building F	Tubes – 245 CFLs – 3
Building G	Tubes – 282 CFLs – 2
Building H	Tubes – 216 CFLs – 21
Building I	Tubes – 247 CFLs – 0
Bungalows	Tubes – 72 CFLs – 0
Exterior	Tubes – 126 CFLs – 0
TOTAL	**Tubes – 3,700** **CFLs – 41**

4.5 Miscellaneous Hazardous Materials

ATC's field staff observed motion detectors, heat detectors, smoke detectors, hydraulic door closers, and miscellaneous cleaning and chemical supplies throughout the site. These materials that will be impacted by the scope of work should be removed and disposed of properly (e.g., recycled) prior to modernization/demolition.

Table X – Miscellaneous Materials Locations and Quantities

Building	Material / Quantity
Building A	Motion Detectors – 3 Smoke/Heat Detectors – 2 Hydraulic Door Closers – 17 Exit Signs – 8 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 0 Fixed Refrigerators – 0
Building B&C	Motion Detectors – 6 Smoke/Heat Detectors – 4 Hydraulic Door Closers – 17 Exit Signs – 5 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 3 Fixed Refrigerators – 0
Building D	Motion Detectors – 23 Smoke Detectors – 0 Hydraulic Door Closers – 50 Exit Signs – 25 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 14 Fixed Refrigerators – 0
Building E	Motion Detectors – 12 Smoke/Heat Detectors – 0 Hydraulic Door Closers – 25 Exit Signs – 0 Misc. Cleaning and Chemical Supplies – ND Fire Extinguishers – 11 Fixed Refrigerators – 0
Building F	Motion Detectors – 3 Smoke Detectors – 0 Hydraulic Door Closers – 16 Exit Signs – 8 Misc. Cleaning and Chemical Supplies – ND Fire Extinguishers – 2 Fixed Refrigerators – 0
Building G	Motion Detectors – 4 Smoke/Heat Detectors – 0 Hydraulic Door Closers – 14 Exit Signs – 3 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 2 Fixed Refrigerators – 0
Building H	Motion Detectors – 8 Smoke Detectors – 0 Hydraulic Door Closers – 30 Exit Signs – 15 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 3 Fixed Refrigerators – 2

Building	Material / Quantity
Building I	Motion Detectors – 2 Smoke Detectors – 0 Hydraulic Door Closers – 7 Exit Signs – 1 Misc. Cleaning and Chemical Supplies – Observed Fire Extinguishers – 2 Fixed Refrigerators – 0
Bungalows	Motion Detectors – 3 Smoke Detectors – 0 Hydraulic Door Closers – 3 Exit Signs – 0 Misc. Cleaning and Chemical Supplies – ND Fire Extinguishers – 3 Fixed Refrigerators – 0
Exterior	Motion Detectors – 0 Smoke Detectors – 0 Hydraulic Door Closers – 0 Exit Signs – 0 Misc. Cleaning and Chemical Supplies – ND Fire Extinguishers – 0 Fixed Refrigerators – 0
TOTAL	**Motion Detectors – 64** **Smoke Detectors – 6** **Hydraulic Door Closers – 179** **Exit Signs – 73** **Misc. Cleaning and Chemical Supplies – Observed** **Fire Extinguishers – 40** **Fixed Refrigerators – 2**

ND = Not Detected

4.6 Conclusions and Recommendations

Based on information collected from the Hazardous Material Survey, ATC offers the following recommendations:

- Prior to the scheduled modernization/demolition activities, remove all items identified and listed above that will be impacted by the scope of work in Section 4 (other hazardous materials) in addition to impacted materials listed above in Table II (ACM) and Table V (lead) of this report in accordance with applicable Federal, State and local regulations.

- Perform a follow-up inspection of the site prior to the modernization/demolition to confirm all impacted hazardous items have been removed before commencing with modernization/demolition activities.

5.0 LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with principles and practices in the fields of environmental science and engineering. The results, findings, conclusions, and recommendations expressed in the report are based only on conditions that were noted during the noted dates of fieldwork. This warranty is in lieu of all other warranties either expressed or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the results and designs presented in this report.

This survey report was conducted with the clear understanding that the buildings are to be demolished completely. This survey and report are not intended to be used in any manner for renovation or "moving" of the buildings. Renovation and or moving have different criteria because of re-occupation.

The passage of time may result in a change in the environmental characteristics at this site and surrounding properties. This report does not warrant against future operations or conditions, nor does it warrant operations or conditions present of a type or at a location not investigated.

Reasonable effort is made by ATC personnel to locate and sample materials representative of the site structures. However, for any facility, the existence of unique or concealed materials or debris not observed by ATC is a possibility. ATC does not warrant, guarantee or profess to have the ability to locate or identify all concealed hazardous materials at the facility. This report is intended for the sole use of SMMUSD. This report is not intended to be utilized as a construction and/or bidding document, nor is this document designed to be used as a remediation or abatement specification. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

This inventory does not represent an exhaustive listing of types of materials that may be required to be removed from a building prior to modernization. Any conditions or materials that could not be visually identified on the surface were not inspected and may differ from those conditions or materials noted.

6.0 SIGNATURES

This report presents the results of the hazardous material survey that was prepared by Staff Scientist Ms. Rebecca Stark, and reviewed by Mr. Paul Cota and Mr. Stephen Drengson.

ATC appreciates the opportunity to be of service to SMMUSD on this project and looks forward to working with you on future assignments. In the meantime, if you have questions or comments regarding the information in this report or if we can be of further assistance, please do not hesitate to contact the undersigned in the ATC Los Angeles, California office at (323) 517-9780.

Respectfully submitted,
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