HMS, Inc.

HAZARD MANAGEMENT SERVICES, INC.

4200 Rocklin Rd., Ste. 7
Rocklin, CA 95677-2860
(916) 632-6800 • (916) 632-6841 Fax

February 28, 2005

Mr. Kip Hansen
Maintenance and Operations Manager
Chico Unified School District
2455 Carmichael Drive
Chico, CA 95928

Re: Final Report of Air Sampling for Asbestos in Classroom F-1 at Chico Senior High School

Dear Mr. Hansen:

This report presents results of the air sampling conducted by HMS, Inc. on February 25, 2005, in classroom F-2 at Chico Senior High School following the clean-up efforts by AC Industrial. The clearance air sampling for asbestos was conducted in the classroom following the decontamination of the room after a contractor inadvertently created a major fiber release of asbestos when a closet door was cut with a skill saw. The interior of the fire rated door contained a core of asbestos, which was not known at the time before the contractor saw cut the opening in the door.

On February 24, 2005, HMS, Inc. provided a final visual inspection inside the classroom and in the adjacent Closet Room 995, Storage Room 996, and the Studio Room 999 (Office), which are all joined to classroom F-2. Very little additional cleaning was required of AC Industrial and was completed by 3:00 PM. The room was left overnight with the HVAC fan unit operating with the outside air damper in the one half open position. In addition, there were two negative air units inside the room exhausting out the north window with outside make-up air entering the room from a north window and the south door. Two additional negative air units were left in place in re-circulation mode to provide additional disturbance in the room and filtration. I also placed two 24" box fans inside the room for additional air disturbance. All of the above fan units were operating overnight to maximize dilution of the room spaces to optimize the chances for passing the clearance air testing.

On February 25, 2005, I returned to conduct clearance air monitoring of the room spaces. Five air samples were collected onto 0.45 micron mixed cellulose ester filters following the US EPA AHERA (AHERA) protocol. A leaf blower was used to disturb the floors and walls of the room and the various items on counters, tables, shelving, etc. Air samples were delivered to Asbestech of Carmichael, CA for asbestos analysis by transmission electron microscopy. On four of the five air samples collected, there was no asbestos detected, while on one air sample, there was only one asbestos structure. The results of the testing found the average of asbestos concentration to be well below 70 asbestos structures per square millimeter, thus meeting the clearance criteria established by AHERA for re-occupancy. Results of the testing were relayed to you and to AC Industrial on Friday evening on the same day to allow AC Industrial to return and remove their equipment on Saturday morning.

Thank you for using HMS, Inc. Please call me at (916) 632-6800, if you have any questions.

Sincerely,

Richard Beall, CIH, CSP
Senior Industrial Hygienist

D:\Clients\CHICO.USD\R1599 Chico HS FiberRelease\Final Report.wpd

C: asbestos binder

PO Box 5041, Santa Clara, CA 95056-5041, (408) 249-7080, (408) 249-7082 Fax
367 Civic Drive, Ste. 7, Pleasant Hill, CA 94523-1936, (925) 363-3442, (925) 363-7897 Fax
PO Box 576848, Modesto, CA 95357-6848, (209) 551-2000, (209) 575-5657 Fax
371 E. Bullard Ave., Ste. 109, Fresno, CA 93710-5217, (559) 436-0277, (559) 436-0279 Fax
4949 Buckley Way, #108, Bakersfield, CA 93309-4881, (661) 833-0351, (661) 833-0361 Fax

HMS, Inc.

AIRBORNE ASBESTOS FIBER Analysis Report Form for Hazard Management Services, Inc.

4200 ROCKLIN ROAD, STE. 7
ROCKLIN, CA 95677
(916) 632-6800
FAX (916) 632-6841

JOB I.D.: R1599 **CLIENT:** Chico USD **COLLECTED BY:** Rick Beall

DATE COLLECTED: 02/25/05 **DATE SUBMITTED:** 02/25/05 **LAB SUBMITTED TO:** Asbestech

ANALYSIS REQUESTED: TEM, AHERA **TURNAROUND TIME:** Need Results by 0800 on Saturday, 02/26/05

JOB SITE: Chico Senior High School
901 The Esplanada
Chico, CA 95926

Sample#	Location Activity Date Collected	Rota	LPM AVG.	On/Off Total	Vol. (L)
HMS-R1599-500CA	Classroom F-2 Clearance Air Sample	HV-7	10.0	1000 hr.	1,560 Liters
			10.0	1236 hr.	
			10.0	156 min.	
HMS-R1599-501CA	Classroom F-2 Clearance Air Sample	HV-7	10.0	1000 hr.	1,560 Liters
			10.0	1236 hr.	
			10.0	156 min.	
HMS-R1599-502CA	Classroom F-2 Clearance Air Sample	HV-7	10.0	1000 hr.	1,560 Liters
			10.0	1236 hr.	
			10.0	156 min.	
HMS-R1599-503CA	Classroom F-2 Clearance Air Sample	HV-7	10.0	1000 hr.	1,560 Liters
			10.0	1236 hr.	
			10.0	156 min.	
HMS-R1599-504CA	Classroom F-2 in Office Clearance Air Sample	HV-7	10.0	1000 hr.	1,560 Liters
			10.0	1236 hr.	
			10.0	156 min.	

All Samples collected on 0.45µ MCE filters.

D:\Clients\ChicoUSD\R1599\022505TEMClearAir.wpd

ASBESTECH

6825 Fair Oaks Blvd., Suite 103, Carmichael, CA 95608 : Tel. (916) 481-8902

TEM Air Filter Analysis Summary Form

Asbestech Lab # 4652-107-1233

Client Hazard Management Services, Inc.

Client Job # R1599

Job Site Chico U.S.D., Chico Sr. High School, 901 The Esplanade, Chico, CA

TEM Method AHERA Method

Date Received 2/25/05

Date Analyzed 2/25/05

Verbal Results 2/25/05 ;

Fax Results 2/25/05 ;

Sample ID	Sample Volume	# of Structures	Analytical Sensitivity	Structures per mm^2	Structures per CC
500CA	1560	1	0.0044	17.68	0.0044
501CA	1560	ND	0.0044	< 17.68	< 0.0044
502CA	1560	ND	0.0044	< 17.68	< 0.0044
503CA	1560	ND	0.0044	< 17.68	< 0.0044
504CA	1560	ND	0.0044	< 17.68	< 0.0044

verage Structures per mm^2 17.68

Average Structures per CC 0.0044

Lab Director _____ Analyst _____

ASBESTECH

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Hazard Management Services, Inc.
4200 Rocklin Rd., Ste.7
Rocklin, CA 95677
PHONE #: (916) 632-6800
Fax #: (916) 632-6841
ATTENTION: Rick Beall

Job Site:
Chico U.S.D., Chico Sr. High School, Chico, CA

Job #:
R1599

Login #	4652
Date Received	2/25/5
Report Date	2/25/5
Lab ID # / Lot #	107 / 1233
Total Samples	5

AHERA TEM ANALYTICAL REPORT

The method used is "40 CFR Part 763", Appendix A to Subpart E, Friday October 30, 1987

Client #
HMS-R1599-500CA
Lab ID #
107 -1233 - 01
Location / Description:
Clearance Air classroom F-2

CALCULATED ASBESTOS STRUCTURE CONCENTRATION

Per mm² < 5 µm		Per mm² ≥ 5 µm	TOTAL₂ Per mm	TOTAL Per CC
17.7	<	17.7	**17.7**	**0.0044**

Per cc < 5 µm		Per cc ≥ 5 µm
0.0044	<	0.0044

AIR SAMPLING DATA

Time on 10:00	Time off 12:36
Elapsed Time	156 min
Ave. LPM	10
Sample Volume	1560 Liters

FILTER DATA

Type	MCE
Diameter	25 mm
Area	385 mm²
Pore Size	0.45 µm

TEM OPERATING PARAMETERS

Magnification	20,000 x
G.O. Area	0.00808 mm²
G.O. Counted	7
Effective Scan Area	0.05656 mm²

ANALYTICAL SENSITIVITY

0.0044 Structures / cc

ASBESTIFORM STRUCTURE COUNT

	< 5 µm	≥ 5 µm		< 5 µm	≥ 5 µm		
Chrysotile	1	0	Actinolite	0	0	Fiberglass	0
Amosite	0	0	Tremolite	0	0	Gypsum	0
Crocidolite	0	0	Anthophyllite	0	0	Miscellaneous	0

COMMENTS:

1 Chrysotile structure detected.

KEY:
ND - None Detected
G.O. - Grid Opening

Analyst _____ Lab Director _____

NVLAP #101442

ASBESTECH

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Hazard Management Services, Inc.
4200 Rocklin Rd., Ste.7
Rocklin, CA 95677
PHONE #: (916) 632-6800
Fax #: (916) 632-6841
ATTENTION: Rick Beall

Job Site:
Chico U.S.D., Chico Sr. High School, Chico, CA

Job #:
R1599

Login # 4652
Date Received 2/25/5
Report Date 2/25/5
Lab ID # / Lot # 107 / 1233
Total Samples 5

AHERA TEM ANALYTICAL REPORT

The method used is "40 CFR Part 763", Appendix A to Subpart E, Friday October 30, 1987

Client #
HMS-R1599-501CA
Lab ID #
107 -1233 - 02
Location / Description:
Clearance Air classroom F-2

CALCULATED ASBESTOS STRUCTURE CONCENTRATION

Per mm² < 5 µm	Per mm² ≥ 5 µm	TOTAL₂ Per mm	TOTAL Per CC
< 17.7	< 17.7	< 17.7	< 0.0044

Per cc < 5 µm	Per cc ≥ 5 µm
< 0.0044	< 0.0044

AIR SAMPLING DATA

on 10:00	Time off 12:36
apsed Time	156 min
Ave. LPM	10
Sample Volume	1560 Liters

FILTER DATA

Type	MCE
Diameter	25 mm
Area	385 mm²
Pore Size	0.45 µm

TEM OPERATING PARAMETERS

Magnification	20,000 x
G.O. Area	0.00808 mm²
G.O. Counted	7
Effective Scan Area	0.05656 mm²

ANALYTICAL SENSITIVITY

0.0044 Structures / cc

ASBESTIFORM STRUCTURE COUNT

	< 5 µm	≥ 5 µm		< 5 µm	≥ 5 µm		
Chrysotile	0	0	Actinolite	0	0	Fiberglass	0
Amosite	0	0	Tremolite	0	0	Gypsum	0
Crocidolite	0	0	Anthophyllite	0	0	Miscellaneous	0

COMMENTS:

No asbestos structures detected.

KEY:
· None Detected
- Grid Opening

Analyst _____ Lab Director _____

NVLAP #101442

ASBESTECH

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Hazard Management Services, Inc.
4200 Rocklin Rd., Ste.7
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PHONE #: (916) 632-6800
Fax #: (916) 632-6841
ATTENTION: Rick Beall

Job Site:
Chico U.S.D., Chico Sr. High School, Chico, CA

Job #:
R1599

Login #	4652
Date Received	2/25/5
Report Date	2/25/5
Lab ID # / Lot #	107 / 1233
Total Samples	5

AHERA TEM ANALYTICAL REPORT

The method used is "40 CFR Part 763", Appendix A to Subpart E, Friday October 30, 1987

Client #
HMS-R1599-502CA
Lab ID #
107 -1233 - 03
Location / Description:
Clearance Air classroom F-2

CALCULATED ASBESTOS STRUCTURE CONCENTRATION

Per mm² < 5 µm	Per mm² ≥ 5 µm	TOTAL₂ Per mm	TOTAL Per CC
< 17.7	< 17.7	< 17.7	< 0.0044

Per cc < 5 µm	Per cc ≥ 5 µm
< 0.0044	< 0.0044

AIR SAMPLING DATA

Time on 10:00	Time off 12:36
Elapsed Time	156 min
Ave. LPM	10
Sample Volume	1560 Liters

FILTER DATA

Type	MCE
Diameter	25 mm
Area	385 mm²
Pore Size	0.45 µm

TEM OPERATING PARAMETERS

Magnification	20,000 x
G.O. Area	0.00808 mm²
G.O. Counted	7
Effective Scan Area	0.05656 mm²

ANALYTICAL SENSITIVITY

0.0044 Structures / cc

ASBESTIFORM STRUCTURE COUNT

	< 5 µm	≥ 5 µm		< 5 µm	≥ 5 µm		
Chrysotile	0	0	Actinolite	0	0	Fiberglass	0
Amosite	0	0	Tremolite	0	0	Gypsum	0
Crocidolite	0	0	Anthophyllite	0	0	Miscellaneous	0

COMMENTS:

No asbestos structures detected.

KEY:
ND - None Detected
G.O. - Grid Opening

Analyst _____ Lab Director _____

NVLAP #101442

ASBESTECH

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Hazard Management Services, Inc.
4200 Rocklin Rd., Ste.7
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PHONE #: (916) 632-6800
Fax #: (916) 632-6841
ATTENTION: Rick Beall

Job Site:
Chico U.S.D., Chico Sr. High School, Chico, CA

Job #:
R1599

Login # 4652
Date Received 2/25/5
Report Date 2/25/5
Lab ID # / Lot # 107 / 1233
Total Samples 5

AHERA TEM ANALYTICAL REPORT

The method used is "40 CFR Part 763", Appendix A to Subpart E, Friday October 30, 1987

Client #
HMS-R1599-503CA
Lab ID #
107 -1233 - 04
Location / Description:
Clearance Air classroom F-2

CALCULATED ASBESTOS STRUCTURE CONCENTRATION

Per mm² < 5 µm	Per mm² ≥ 5 µm	TOTAL₂ Per mm	TOTAL Per CC
< 17.7	< 17.7	< 17.7	< 0.0044

Per cc < 5 µm	Per cc ≥ 5 µm
< 0.0044	< 0.0044

AIR SAMPLING DATA

T on 10:00	Time off 12:36
psed Time	156 min
Ave. LPM	10
Sample Volume	1560 Liters

FILTER DATA

Type	MCE
Diameter	25 mm
Area	385 mm²
Pore Size	0.45 µm

TEM OPERATING PARAMETERS

Magnification	20,000 x
G.O. Area	0.00808 mm²
G.O. Counted	7
Effective Scan Area	0.05656 mm²

ANALYTICAL SENSITIVITY

0.0044 Structures / cc

ASBESTIFORM STRUCTURE COUNT

	< 5 µm	≥ 5 µm		< 5 µm	≥ 5 µm		
Chrysotile	0	0	Actinolite	0	0	Fiberglass	0
Amosite	0	0	Tremolite	0	0	Gypsum	0
Crocidolite	0	0	Anthophyllite	0	0	Miscellaneous	0

COMMENTS:

No asbestos structures detected.

KEY:
- None Detected
· Grid Opening

Analyst _____ Lab Director _____

NVLAP #101442

ASBESTECH

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Hazard Management Services, Inc.
4200 Rocklin Rd., Ste.7
Rocklin, CA 95677
PHONE #: (916) 632-6800
Fax #: (916) 632-6841
ATTENTION: Rick Beall

Job Site:
Chico U.S.D., Chico Sr. High School, Chico, CA

Job #:
R1599

Login #	4652
Date Received	2/25/5
Report Date	2/25/5
Lab ID # / Lot #	107 / 1233
Total Samples	5

AHERA TEM ANALYTICAL REPORT

The method used is "40 CFR Part 763", Appendix A to Subpart E, Friday October 30, 1987

Client #
HMS-R1599-504CA
Lab ID #
107 -1233 - 05
Location / Description:
Clearance Air classroom F-2 in office

CALCULATED ASBESTOS STRUCTURE CONCENTRATION

Per mm² < 5 µm	Per mm² ≥ 5 µm	TOTAL₂ Per mm	TOTAL Per CC
< 17.7	< 17.7	< 17.7	< 0.0044

Per cc < 5 µm	Per cc ≥ 5 µm
< 0.0044	< 0.0044

AIR SAMPLING DATA

Time on 10:00	Time off 12:36
Elapsed Time	156 min
Ave. LPM	10
Sample Volume	1560 Liters

FILTER DATA

Type	MCE
Diameter	25 mm
Area	385 mm²
Pore Size	0.45 µm

TEM OPERATING PARAMETERS

Magnification	20,000 x
G.O. Area	0.00808 mm²
G.O. Counted	7
Effective Scan Area	0.05656 mm²

ANALYTICAL SENSITIVITY

0.0044 Structures / cc

ASBESTIFORM STRUCTURE COUNT

	< 5 µm	≥ 5 µm		< 5 µm	≥ 5 µm		
Chrysotile	0	0	Actinolite	0	0	Fiberglass	0
Amosite	0	0	Tremolite	0	0	Gypsum	0
Crocidolite	0	0	Anthophyllite	0	0	Miscellaneous	0

COMMENTS:

No asbestos structures detected.

KEY:
ND - None Detected
G.O. - Grid Opening

Analyst _____ Lab Director _____

NVLAP #101442

ASBESTOS ABATEMENT PROJECT
SCOPE OF WORK
HMS # R1599

Chico Senior High School–Classroom F-2
901 The Esplanade
Chico, CA 95926

OVERVIEW

This project includes the cleaning and decontamination of F-2, Closet Room 995, Storage Room 996, and Studio Room 999 following the disturbance of the asbestos containing block insulation inside of the door of Storage Room 996. During the weekend of February 18, 2005, a contractor used a skill saw to cut an opening in the lower door of Storage Room 996 for installation of a louver vent. The interior of the door contained a white block material that was disturbed, resulting in white debris inside of the classroom and attached rooms. The classroom and adjoining rooms were closed on Monday morning after holding several classes inside of the room, when the incident was brought to the attention of the Maintenance and Operations (M&O) Department. The classroom was locked out and restricted to access to students and staff until bulk samples of the white debris collected by M&O were submitted to a laboratory for asbestos analysis. The results of the testing identified 5% Chrysotile and 3% Amosite asbestos in the white debris.

This event is considered a major fiber release episode with regards to the USEPA AHERA regulations and requires clean-up by AHERA accredited asbestos workers.

The asbestos contractor is responsible for cleaning these classroom spaces in compliance with all applicable Local, State, and Federal regulations, and the following specifications.

MATERIAL TO BE ABATED

This project includes removal of all visible and invisible dust inside of the classroom and other associated rooms identified above. The project includes cleaning of all surfaces inside of the room, including but not limited to, tables, chairs, cabinets, walls, floors, stored items, and the HVAC system.

CONTAINMENT AND ABATEMENT REQUIREMENTS

Currently, the classroom and adjoining spaces are secure from other staff and students. The contractor is required to maintain this security during the course of the project. Access to the space will be from the south door of Studio 999, which serves as an office for this classroom and classroom F-1. The outside south door shall be posted with an Asbestos Warning Sign in accordance with Cal/OSHA requirements.

The following work procedures and work practices shall be conducted by the contractor:

1. The contractor shall first HEPA vacuum all horizontal and vertical surfaces in all of the spaces, starting at the Closet Room 995 where the lower door was cut. There is still visible debris present inside the closet on all stored items, on the floor of the room surrounding the closet, on surrounding table top surfaces, and on stored items on the shelving adjacent to the closet. Visible white dust is also present on the surface of the doors to the closet and the adjacent storage room. It is assumed that all horizontal and vertical surfaces inside of all room spaces are contaminated and require this first pass of cleaning by HEPA vacuuming. The contractor should use hose attachments to facilitate vacuuming the various objects in the room such as bristle brushes, wands, nozzles, etc.

2. Items shall be taken out of boxes and from shelving to facilitate the cleaning of the stored items. Boxes that are sealed and not open are not required to be opened; however, the outside of the boxes shall be thoroughly cleaned. The contractor may chose to dispose of some empty cardboard

boxes in lieu of spending inordinate amount of time cleaning them.

3. Following the initial HEPA vacuuming, the contractor shall immediately follow with wet wiping all horizontal and vertical surfaces of hard smooth surface items and fixtures, including all tables, counters, shelving, walls, and the floor area.

4. After the initial HEPA vacuuming has been completed, and after the wet wiping has been completed throughout the rooms, the contractor may then install a minimum of two 2000 cfm rated HEPA filtered negative air units into the room and exhaust them out the northeast window of the classroom. Make-up air shall be provided by opening the northwest window of the classroom and an open south entry door.

5. During the weekend when the lower door was cut open, the chairs were stored upside down on the tables; therefore, it is important for the contractor to thoroughly clean all sides of the chairs especially the underside. The contractor shall use an airless sprayer to clean all surfaces of the chairs with high pressure and low water volume. The contractor may remove all of the chairs from the room after cleaning and place them outside the building within the secure fenced off locked area. There may be other hard surface items within the room the contractor may choose to power wash with the airless sprayer. This airless sprayer water cleaning shall be performed within a mini-enclosure with a catch basin to capture the water. The water shall be collected and filtered using a filter down to 1.0 micron particle size and then the water may be discharged into the sink located in the classroom.

6. The contractor shall then re-clean all surfaces in the room spaces again including all horizontal and vertical surfaces. At this time, the contractor shall open all drawers, cabinets, etc. within all room spaces and clean the interior of all stored items.

7. After all visible dust has been cleaned from the room and from the surface of items in the room, the contractor may want to consider using a leaf blower on selected items. This technique can be effective in cleaning the interior of the computer or the slide projector or computer monitor that are stored in the closet. There are holes within these items which a leaf blower could be used to "clean" the interior of these selected components. If this is performed, the leaf blowing should be performed with the item within close proximity to the negative air units exhausting outside of the room. This cleaning technique can only be performed after all visible dust from the exterior surfaces has been removed by HEPA vacuuming or by wet wiping. It cannot be used to clean surfaces or materials will visible dust.

8. The contractor is responsible for moving all cabinets, tables, book cases, etc. to access behind these movable items and clean the floor and all surfaces of the items. The underside of tables shall be thoroughly cleaned at this time.

9. While this cleaning activity is being performed, the contractor can begin cleaning the interior of the two HVAC systems serving the spaces. There is one HVAC system serving the classroom with four supply registers and two return registers identified. In the Studio 999 office area, there is a separate HVAC system that appears to serve this space only. The interior of the return registers shall be accessed so the contractor can clean any lining that might possibly be present. The contractor shall install negative air units sequentially to all four of the supply registers and operate the negative air units to assist in flushing the interior of the units. In addition, the contractor shall access the roof, remove any filters and discard them as a non-friable asbestos waste, and proceed to clean the interior of the HVAC unit. The coils shall be cleaned with water or chemical agent designed for HVAC systems. In addition, any lining material that is accessible from the HVAC unit shall be HEPA

vacuumed by the contractor.

10. Following the third cleaning of the room space, all contents, and after the HVAC system has been cleaned, the contractor shall install the two negative air units used to clean the HVAC system inside of the room and allowed to operate in re-circulation "scrubbing" mode to aide in maximum air disturbance and filtration at the same time. These negative air units may be turned on in this fashion during the final cleaning phase by the contractor.

11. The two HVAC systems shall be turned on at this time and the fans shall operate in the "on mode" to allow air flow and movement during the flushing and exhausting phase of final cleaning.

12. A final visual inspection shall be conducted by the supervisor of the contractor prior to one being conducted by HMS, Inc. HMS, Inc. will conduct a final visual inspection to assist the contractor in identifying any items, or areas that may have been missed.

13. At the conclusion of the final visual inspection, and any re-cleaning that is required, all pre-filters associated with the four negative air units shall be removed and replaced with new pre-filters.

14. The two HVAC fan units, two negative air units exhausting out the building, and the two negative air units used in the flushing mode shall be left operating with make-up air provided to the space overnight. At this time HMS, Inc. may place additional large box fans inside of the room spaces for additional air movement to aide in the dispersion of particulate for eventual exhaust through the negative air units.

15. HMS, Inc. will return on the following day to collect clearance air samples within the space.

WORKER PROTECTION

At a minimum, the contractor employees are required to wear half-face respirators with HEPA cartridges and disposable coveralls during abatement activities.

ELECTRICAL AND WATER HOOK-UPS

The Owner shall provide access for electrical and water hook-ups. The contractor is responsible for all hook-ups, electrical cords, GFCI's, water hoses, and hose bibs necessary for attachment. GFCI's are required on all electrical circuits in use. There is a sink in the room for water access, and plenty of electrical circuits inside of the rooms.

DECONTAMINATION OF WORKERS

Since this project includes cleaning, there is no requirement for a shower. The contractor shall provide clean potable water outside of the building at the south entrance to Studio 999 for cleaning of the workers hands, face, respirators, and lower arms upon leaving the work area. All workers shall clean their arms, face, and hands upon leaving the work area.

NEGATIVE PRESSURE, EXHAUST, AND MAKE-UP AIR

Negative pressure will not be attempted on this project, since the intent is to clean the spaces with large volumes of outside air for dilution; therefore, the contractor shall install, at a minimum, two 2000 cfm rated negative air units inside of the room and exhaust the air through the northeast window located at the upper north wall of the classroom. The flexible exhaust ducts shall be placed out the plastic sealed window and

secured in a fashion to direct the exhaust air upward, so the air is not directed down towards the surrounding students and staff outside the building.

The contractor shall install a plywood insert at the south access door opening with expanded metal for security during off hours. Make-up air shall be provided from at least two locations including the northwest window at the north wall of the classroom (furthest from the exhaust location) and from the south door. During off hours, a plywood insert with the expanded metal is required at the south door.

DISTRICT'S RESPONSIBILITIES

The School District is responsible for disconnection of any motion detectors or alarms within the work area during the work periods.

VISUAL INSPECTION

HMS, Inc. shall provide a final visual inspection of the work space following the work performed by the abatement contractor. The contractor shall clean additional surfaces within the work area upon direction by HMS, Inc., if it is determined that inadequate cleaning has been performed.

CLEARANCE CRITERIA

At the conclusion of the cleaning, HMS, Inc. will collected five air samples in accordance with the AHERA standard using aggressive sampling procedures. All clearance air samples will be analyzed by transmission electron microscopy (TEM), and performed by Asbestech, following collection of air samples by HMS, Inc. The clearance criteria for releasing the contractor is the AHERA Standard.

NEGATIVE AIR UNIT CRITERIA

All HEPA systems shall be brought on-site clean including HEPA vacuums and negative air units. The project manager for HMS, Inc. may inspect the interior of the air filtration devices, and may reject the units from the project if they are brought on-site dirty with visible debris present.

This contract requires a minimum of four negative air units rated at 2000 cfm. Two of the negative air units will be installed in the work area and exhausted out the building to draw in large volumes of outside air. Two additional negative air units will be used to assist in cleaning the HVAC duct system and to be used at the end of the project in re-circulation mode to assist in cleaning or "scrubbing" the work spaces. Since these two negative air units will be used to "scrub" the interior space by exhausting into the room, **new HEPA filters and pre-filters are required for these two units that will be used for re-circulation.**

DISPOSAL REQUIREMENTS

All asbestos waste generated from the work site shall be disposed as non-hazardous asbestos waste, with the exception of any HEPA vacuumed debris. All waste material generated on this project shall be placed into two six-mil plastic bags properly labeled. Since all visible debris will be HEPA vacuumed, there is no waste stream anticipated on this project (besides the HEPA vacuumed waste) that will exceed 1% asbestos; therefore, any waste stream such as rags, filters, disposable coveralls, respirators, etc. may be disposed as non-hazardous asbestos waste, thus only the OSHA warning labels will be required on the waste bags.

Asbestos Scope of Work
Chico Senior High School
Room F-2

BID BOND, PAYMENT, AND PERFORMANCE BONDS

A Payment Bond, and Performance Bond are not required on this project, unless otherwise required by the School District.

DAMAGE TO BUILDING WALL FINISHES

The contractor is responsible for damage to interior building surfaces due to spray glue or to excessive use of nails, staples, or tacks. The contractor is not allowed to use spray glue on building surfaces, asphalt, concrete, or other surfaces on this project. Spray glue may only be used on poly or other equipment owned by the contractor.

CONTRACTOR SUBMITTALS

The contractor is responsible for submitting the documents on the attached list of items to the School District.

WORK PERIODS

All work is to be performed at a time agreed upon between the contractor and the School District.

PREPARED BY

Richard Beall, CIH, CSP
Senior Industrial Hygienist
Hazard Management Services, Inc.
February 18, 2005

ATTACHMENTS

Bulk Sample Analytical Report

Asbestos Scope of Work
Chico Senior High School
Room F-2

Submittal List (Contractor to Provide items to the School District)

1. _____ State of California - Contractor's State License

2. _____ CSLB Asbestos Certification

3. _____ Certificate of Registration for Asbestos-related Work

4. _____ General Liability Insurance Certificate

   a) ___ Occurrence
   b) ___ Asbestos/Lead Activities or Abatement Certificate
   c) N/A Owner Named as Additional Insured
   d) N/A HMS, Inc. Named as Additional Insured

5. _____ Auto Insurance

6. _____ Workers' Compensation Insurance

7. N/A Statement of Non-use of Subcontractors or

   a) ___ Name of Each Subcontractor
   b) ___ License Number for Each Subcontractor
   c) ___ General Liability Insurance Certificate for Each Subcontractor

      1) ___ Minimum Coverage of $1,000,000.00
      2) ___ Owner Named as Additional Insured
      3) ___ HMS, Inc. Named as Additional Insured

   d) ___ Auto Insurance Certificate for Each Subcontractor
   e) ___ Workers' Compensation Insurance Certificate for Each Subcontractor

      1) ___ Owner Named as Additional Insured
      2) ___ HMS, Inc. Named as Additional Insured

9. _____ Written Notification to CAL/OSHA

10. N/A Written Notification to US EPA NESHAP

11. N/A Copies of City Permits (e.g. Parking or Waste Bin) or Statement That no Permits are Required

12. N/A Statement That no Equipment Will be Rented for use With Asbestos or a Statement From Each Rental Company Acknowledging Their Equipment Will be Exposed to Asbestos

13. N/A Emergency Telephone Numbers

   a) ___ Local Police Department

b) ___ Sheriff Department
c) ___ Fire Department
d) ___ Emergency Medical Facility and Directions to That Facility From the Site

14. N/A Written Emergency Plans

15. _____ Written Work Plan

16. N/A Written Schedule

17. _____ Worker Documentation (Must Include at Least One Supervisor)

a) ___ Training Records for Asbestos - AHERA (Supervisor and Worker)*
b) ___ Medical Examination Written Opinion Final Report for Each Employee*
c) ___ Respiratory Fit Tests for Each Employee*

18. _____ Equipment list, MSDS for all materials to be used on the project, including but not limited to, spray glue, encapsulants, wetting agents, mastic remover, etc.

19. _____ Name of laboratory/person used for PCM analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent NIOSH Proficiency Analytical Testing (PAT) Program results.

20. N/A Written Statement That OSHA Monitoring Will be Performed During the Project

21. _____ Manufacturers documentation of 1.0 micron filter capability required for waste water

22. N/A Name of Transporter (if a hazardous waste)

23. N/A Hazardous Waste Transporter Registration (if Applicable) **Is required only if work to be conducted involves the removal and disposal of "friable" asbestos waste as determined either by definition or designated within the Asbestos Abatement Specifications/Procedures and associated attached Exhibits.**

24. _____ Waste Facility Documentation

a) ___ Name and Site Address
b) ___ EPA Identification Number (if Applicable)
c) ___ Copy of Current Permit Authorizing Asbestos Waste Receipt and Disposal

* No Contractor's worker will be allowed to conduct asbestos related work, enter a containment, or regulated area prior to verification of AHERA, respirator, and medical documentation. This verification must either be onsite or faxed to HMS, Inc. prior to entry.

Asbestos Scope of Work
Chico Senior High School
Room F-2

Interim Construction Submittals

Upon request by the Owner or HMS, Inc., the Contractor shall provide copies of documentation identified to be pertinent to the project.

Post Construction Submittal List

Contractor shall provide the following post-construction submittals to HMS, Inc. within thirty (30) days of the completion of asbestos abatement work.

1. _____ Copies of revised notifications to regulatory agencies.

2. _____ Information on all new workers not covered by the pre-construction submittals and not submitted during the project.

3. _____ A copy of worker exposure monitoring results collected in compliance with DOSH regulations (Title 8 CCR, Section 1529) including daily/representative/full-shift/breathing-zone air samples, and 30-minute excursion samples.

4. _____ A copy of the worker/visitor log showing the following for all persons entering the work area: date, name, social security number, entering, and leaving times, company or agency represented, and reason for entry. The Contractor's time records will not be accepted in lieu of a worker/visitor log.

5. _____ Copies of all accident reports submitted during the course of work. **If no accidents occur during the project this should be stated in writing by the Contractor.**

6. _____ Receipts from the landfill operator acknowledging the Contractor's delivery of wastes, including dates, container types and quantities, tare weights or material delivered, and all appropriate signatures.

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Forensic Analytical

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Chico Unified School Dist
Ron Jones

2455 Carmichael Drive
Chico, CA 95928

Client ID: 2921
Report Number: B069776
Date Received: 02/15/05
Date Analyzed: 02/15/05
Date Printed: 02/15/05
First Reported: 02/15/05

Job ID/Site: Chico Sr High - Modernization

Date(s) Collected: 02/14/2005

FASI Job ID: 2921-79
Total Samples Submitted: 3
Total Samples Analyzed: 3

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
CSH1	10393840						
Layer: Beige Semi-Fibrous Powder		Chrysotile	5 %	Amosite	3 %		
Total Composite Values of Fibrous Components: Asbestos (8%)							
Cellulose (30 %) Fibrous Glass (7 %) Synthetic (10 %)							
CSH2	10393841						
Layer: Beige Semi-Fibrous Powder		Chrysotile	5 %	Amosite	3 %		
Total Composite Values of Fibrous Components: Asbestos (8%)							
Cellulose (45 %) Fibrous Glass (7 %) Synthetic (10 %)							
SH3	10393842						
Layer: Beige Semi-Fibrous Powder		Chrysotile	3 %	Amosite	2 %		
Total Composite Values of Fibrous Components: Asbestos (5%)							
Cellulose (45 %) Fibrous Glass (7 %) Synthetic (10 %)							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

3777 Depot Road, Suite 409, Hayward, California 94545-2761 • Telephone: 510/887-8828 800/827-FASI Fax: 510/887 4218

National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

AIRBORNE ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101442-0

ASBESTECH
6825 Fair Oaks Blvd., Suite 103
Carmichael, CA 95608
Mr. Tommy Conlon
Phone: 916-481-8902 Fax: 916-481-3975
E-Mail: asbestoslab@hotmail.com

NVLAP Code	*Designation*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

June 30, 2005

Effective through

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

ASBESTECH
CARMICHAEL, CA

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

June 30, 2005
Effective through

For the National Institute of Standards and Technology

NVLAP Lab Code: 101442-0

Industrial Hygiene Proficiency Analytical Testing Results

This document contains three sub-reports relating to IHPAT Round 158. The first report contains your laboratory's results listed per contaminant, per sample. The second report contains your past proficiency data for 2 and 4 rounds respectively (where applicable), and the final report contains summary results for all laboratories for IHPAT round 158.

Testing Results for IHPAT Round 158

Performance Limits and round proficiency criteria are based in part on **AIHA's Laboratory Assurance Policy.** The policy modules are available for public viewing at http://www.aiha.org/LaboratoryServices/html/labAccredPolicyTOC.htm (For proficiency analytical testing requirements, please see Policy Module 6B, Section 6B.2 for IHPAT and Policy Module 6C Section 6C.2 for ELPAT Lead-in-Air).

Contaminant	Units	#	Result	Ref. Value	Lower Limit	Upper Limit	z-Score	Rating
Asbestos / Fibers (ASB)	F/MM2	1	151.70	155.64	48.25	324.20		A
	F/MM2	2	240.60	221.84	87.94	416.59		A
	F/MM2	3	367.60	409.68	167.54	758.32		A
	F/MM2	4	70.70	72.09	36.16	120.28		A

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Chico Unified School Dist
Ron Jones

2455 Carmichael Drive
Chico, CA 95928

Client ID: 2921
Report Number: B069776
Date Received: 02/15/05
Date Analyzed: 02/15/05
Date Printed: 02/15/05
First Reported: 02/15/05

Job ID/Site: Chico Sr High - Modernization

Date(s) Collected: 02/14/2005

FASI Job ID: 2921-79
Total Samples Submitted: 3
Total Samples Analyzed: 3

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
CSH1	10393840						
Layer: Beige Semi-Fibrous Powder		Chrysotile	**5 %**	Amosite	**3 %**		
Total Composite Values of Fibrous Components: **Asbestos (8%)**							
Cellulose (30 %) Fibrous Glass (7 %) Synthetic (10 %)							
CSH2	10393841						
Layer: Beige Semi-Fibrous Powder		Chrysotile	**5 %**	Amosite	**3 %**		
Total Composite Values of Fibrous Components: **Asbestos (8%)**							
[illegible]ulose (45 %) Fibrous Glass (7 %) Synthetic (10 %)							
C[illegible]	10393842						
[illegible]yer: Beige Semi-Fibrous Powder		Chrysotile	**3 %**	Amosite	**2 %**		
Total Composite Values of Fibrous Components: **Asbestos (5%)**							
Cellulose (45 %) Fibrous Glass (7 %) Synthetic (10 %)							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Forensic Analytical 2921-79 Analysis Request Form

Client Name & Address:
Chico Unified School District
2455 Carmichael Drive
Chico, CA 95928

Contact: Leroy Christophersen
Phone #: 530-891-3195
Fax#: (530) 891-3190
Site: Chico Sr. High
Job: Modernization

P.O. #: 050289 **Date:** 2/14/05
Turn Around Time: 8 hr/ 12hr / 24hr / 48 hr / ext:
Due Date: 2/17 / **Due Time:** : am/pm
☑ PLM: ☑ Standard / ☐ Point Count ☐ PCM: NIOSH 7400
☐ TEM Air: ☐ AHERA / ☐ Yamate2 / ☐ NIOSH 7402
☐ TEM Bulk: ☐ Quantitative / ☐ Qualitative / ☐ Chatfield
☐ TEM Water: ☐ Potable / ☐ Non-Potable / ☐ Wt %
☐ TEM Microvac
☐ Special Project:
☐ Metals Analysis: Method
Matrix:
Analytes:

Comments:

Sample ID	Date/ Time	Sample Location/Description	FOR AIR SAMPLES ONLY Type	Time On/Off	Avg. LPM	Total Time	Sample Area or Air Volume
CSH1	2/14 10:00am	Rm F-2	A P C				
CSH2	〃	〃	A P C				
CSH3	〃	〃	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled by: Leroy Date: 2/14/05 Time: 11:00am
Shipped via: ☑ Fed Ex ☐ Airborne ☐ UPS ☐ US Mail ☐ Courier ☐ Drop Off ☐ Other:

Relinquished by:	Relinquished by:	Relinquished by:
Date / Time:	Date / Time:	Date / Time:
Received by: Melissa Cornell	Received by:	Received by:
Date / Time: 2/15/05 @ 1130A	Date / Time:	Date / Time:
Condition Acceptable? ☑ Yes ☐ No	Condition Acceptable? ☐ Yes ☐ No	Condition Acceptable? ☐ Yes ☐ No

San Francisco Office: 3777 Depot Road, Suite 409, Hayward, California 94545 / Telephone: (510)887-8828 (800)827-FASI / Fax: (510)887-4218
Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 / Telephone: (310)763-2374 / Fax: (310)763-8684
Portland Office: 17400 SW Upper Boones Ferry Road, Suite 245, Durham, Oregon 97224 / Telephone: (503)595-1001 (877)410-1888 / Fax: (503)595-1006
Las Vegas Office: 3900 Paradise Road, Suite 181, Las Vegas, Nevada 89109 / Telephone: (702)784-0040 / Fax: (702)784-0030