Environmental Solutions

Assessment - Engineering - Management



Rock Haven Sanitarium @ 2713 Honolulu Avenue, Montrose, California

Prepared For:

Mr. John B. Hickman City Of Glendale Facilities Services

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Prepared By:

Environmental Solutions

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March 31, 2008



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March 31, 2008 Project No: ES08-015.Rpt

Mr. John B. Hickman <u>City Of Glendale</u> Facilities Services Superintendent 120 North Isabel Street Glendale, California 91206 ph. 818 - 548 - 3970 fx. 818 - 543 - 7132

Preliminary Asbestos & Lead-Paint Survey Report <u>Rock Haven Sanitarium</u> 2713 Honolulu Avenue, Montrose, California

Introduction: On March 25, 2008, Environmental Solutions performed a preliminary asbestos and lead-paint survey of the subject property located at the above location in Montrose, California. This preliminary asbestos and lead survey was performed on behalf of City of Glendale's Facilities Services Department, in order to identify by "non-destructive" bulk sampling and analysis as well as visual assessment, those construction or building materials in the property which are categorized according to US-EPA, AQMD and Cal-OSHA as "asbestos containing building materials" (ACBM) and lead containing paint.

This report is divided into two sections. The <u>asbestos survey section</u> presents only the positive/detected result of Polarized Light Microscopy (PLM) analysis in percent by weight & volume performed on thirty four (34) bulk samples collected from the suspected ACBM in the buildings. The entire laboratory PLM analyses can be reviewed in the attached exhibit of this report. The <u>lead-paint survey section</u> presents the AAS analytical results of the seven (7) bulk samples of commonly used and damaged paint colors used throughout the subject project site during our visit. Further, this report presents our final assessment of the PLM and AAS analyses result and proper response action as well as our final conclusion. Destructive sampling was not allowed for this survey.

Field Observations And Description Of The Buildings: The subject is a 3.5 acre land on a slight hillside consisting of a complex of 15 buildings referred to as Rock Haven Sanitarium. The buildings vary in size and architecture but common in construction materials. The construction date of most of the buildings were visually ascertained to be circa 1930. The buildings exterior walls and exterior windows share the two most common colors of earth-beige and dark brown paints. All buildings show indications of previous renovation in different degrees. We have presumed the old paints to be lead containing and have sampled them in several different buildings throughout the property. The buildings are individually described as follow;

<u>Building A</u>: This building is located at the northwest corner of the property and was not accessible for inspection. The building appeared to be a wood-framed stucco and plaster structure built on raised foundation and having been lightly renovated on its outside. No sampling was performed in this building.

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City of Glendale Facilities Services Rock Haven Sanitarium Preliminary Asbestos & Lead-Paint Survey Report March 31, 2008 Page 2

<u>Building B</u>: This building is a wood-framed stucco structure built on raised foundation and with newer drywall interior partitions and ceilings. We did not observe construction materials that are categorically ACM in this building. Samples of the exterior damaged/chipped paint were collected for lead analyses.

<u>Building C</u>: This is a large wood-framed stucco and plaster structure built on raised foundation with a crawlspace and basement which houses the older and the newer heater/HVAC ducting system. The building appears to have been lightly renovated. The interior ceilings are sprayed with acoustical ceiling materials and the majority of the floors are covered with newer 12"x12" vinyl floor tiles. Five samples of suspected ACM were collected from this building.

<u>Building D</u>: This is a large wood-framed stucco and plaster structure built on raised foundation with a utility crawl space. The floors are all hardwood throughout and the roof is pitched with asphalt shingle tiles. Other than presumed asbestos containing penetration mastic, no other categorical ACM was observed. Only one sample of the exterior paint was collected for asbestos content analysis.

<u>Building E</u>: This is a wood-framed plaster and stucco structure built on raised foundation. No HVAC system and/or related duct system was observed. The roof is pitched and covered with cement tiles. The floors are covered with 12"x12" vinyl floor tiles. The roof has presumed asbestos containing roof mastic. The ceilings are sprayed with acoustical ceiling materials. The bath-room walls are covered with presumed lead containing ceramic tiles. Three bulk samples were collected from this building for asbestos content.

<u>Building F</u>: This is a wood-framed plaster and stucco structure built on raised foundation with a pitched roof that is covered with asphalt shingles. We observed presumed asbestos containing roof mastic on this roof. The building uses gas heaters. The floors are hardwood and covered with carpet. The bath-room floor is covered with newer linoleum. The ceilings are sprayed with acoustical ceiling materials. Three bulk samples of presumed ACM were collected from this building.

<u>Building G</u>: This is a wood-framed stucco and plaster structure built on raised foundation with a basement which houses the heater ducts wrapped in asbestos containing thermal insulation. The floors are covered with newer 12"x12" floor tiles over hardwood. Older linoleum sheets were also observed under the carpet. Three bulk samples of presumed asbestos containing materials were collected from this building.

<u>Building H</u>: This is a wood-framed stucco and plaster structure built on raise foundation and a basement/crawlspace which houses the heating and ducting system. The ducts are insulated by asbestos containing thermal insulation materials. The roof is pitched and covered by asphalt shingles. We observed asbestos containing penetration mastic on this roof. The floors are covered with 12"x12" floor tiles and mastic. Two bulk samples of PACM were collected in this building.

<u>Building I</u>: This is a wood-framed stucco and plaster structure built on concrete slab. The roof is pitched with cement tiles. The floors are covered with 12"x12" floor tiles. Lead containing ceramic tiles were observed in the kitchen floor. The ceilings are sprayed with presumed asbestos containing acoustical materials. There is a freezer which has older presumed asbestos containing linoleum flooring. Four bulk samples of PACM were collected from this building. One sample of the exterior paint was collected for lead analysis.

City Of Glendale Facilities Services Rock Haven Sanitarium Preliminary Asbestos & Lead-Paint Survey Report March 31, 2008 Page 3

<u>Building J</u>: This is a wood-framed stucco and plaster structure built on raised foundation with a pitched roof covered with cement tiles. The floors are covered by 12"x12" vinyl floor tiles. The bath-room floor is covered with linoleum. The ceilings are sprayed with presumed ACM acoustical materials. No HVAC system was observed. Four bulk samples of PACM were collected from this building.

<u>Building K</u>: This is a wood-framed stucco and plaster structure built on concrete slab with a garage and a pitched roof with asphalt shingles. We observed presumed asbestos containing penetration mastic on its roof. No other PACM was observed in this building. Two bulk samples of the two common colors and damaged exterior paint were collected for lead analysis.

<u>Building L</u>: This is a wood-framed stucco and plaster structure built on concrete foundation. The ceilings are open to the wooden beams. Linoleum floor was observed in one closet. The floors are covered with carpet. There is a new HVAC system with fiber-glass insulation. One bulk sample of the linoleum was collected in this building.

<u>Building M</u>: This is a bungalow style wooden structure with wooden exterior panels and plastered interior walls. The roof is pitched and covered with asphalt shingles and asbestos containing penetration mastic. The bath-room floor is covered with linoleum. One room has 12"x12" floor tiles. The building has a new HVAC system with fiber-glass insulation. Two bulk samples were collected for asbestos analysis and one sample of the exterior paint color was collected for lead analysis.

Building N: This is a small wood-framed stucco and plaster storage structure built on concrete foundation. The roof is pitched and covered with asphalt shingles. No PACM was observed in this building.

Building O: This a metal and wood framed canopy with fiber-glass corrugated top. No PACM was observed.

Asbestos Bulk Sampling & Transmittal: The construction materials observed and sampled during this survey of each building are typical and common throughout the property. We observed the common and obvious construction materials on the interior and the exterior of the subject buildings. The common construction materials suspected of containing asbestos fibers are, 1) thermal system insulation (TSI), 2) sprayed acoustics on ceilings, 3) linoleum sheet and mastic and 4) different colors of 12"x12" floor tiles and mastic. Bulk samples from the floor tiles and linoleum were separated from the mastic and/or adhesive in the laboratory and analyzed independently. There were four such samples.

We collected 34 representative samples of the suspected or presumed ACBM from different areas of the project and where accessible. None of the roofs were accessed. No destructive sampling was performed. The bulk samples were collected into sealed plastic bags and identified individually with a unique sample numbers. The samples were transported with a chain of custody to EMS laboratories, Inc. in Pasadena, California for analyses. The samples were analyzed by Polarized Light Microscopy (PLM) method (EPA 600/M4-82-020) for detection of asbestos content.

This report presents the results of those sample analyses that indicate presence of asbestos fibers in the table of the next page as follows;

City Of Glendale Facilities Services Rock Haven Sanitarium Preliminary Asbestos & Lead-Paint Survey Report March 31, 2008 Page 4

Sample No.	Sample Type	Location	Condition	Area	Asbestos
06	thermal insulation	Building H on heater ducts	damaged	400 ft	80% Chrysotile
07	Linoleum Sheet	Building L in closet/storage	damaged	100 ft2	20% Chrysotile
20	thermal insulation	Building C on heater ducts	damaged	600 ft	80% Chrysotile
21	thermal insulation	Building C on heater ducts	damaged	600 ft	80% Chrysotile
24	thermal insulation	Building G on heater ducts	damaged	600 ft	80% Chrysotile
25	thermal insulation	Building G on heater ducts	damaged	600 ft	80% Chrysotile

Asbestos Survey Conclusion: The PLM analyses indicate presence of asbestos fibers at greater than one percent in the samples collected from the linoleum floor sheets in building "L" and the thermal system insulation on the HVAC and/or heater system in buildings "H", "C" and "G".

The linoleum and the TSI are both categorized by AQMD as "friable ACM". We have also presumed presence of approximately 2,000 ft2 of asbestos containing roof mastic throughout the property. The roof penetration mastic is categorized as "non-friable miscellaneous ACM" and is not regulated by EPA. However, the removal and disposal of this material must be performed by a licensed asbestos abatement contractor in accordance with AQMD Rule 1403 prior to any other disturbing construction activities.

The cost of abatement and disposal of the above asbestos containing materials have been estimated at \$40,000.

Lead-paint Bulk Sampling & Transmittal: There are two predominant color of beige-yellow and dark brown that have been used on all buildings throughout the property. According to our observations and assessment, the paint is categorized as "significantly damaged" in half of the surveyed buildings exterior surfaces. The regulations does not require removal of lead-containing paint from the subsurface prior to demolition, <u>unless the lead-paint has sustain significant damage</u>, delaminated/chipped or otherwise not adhered to the surface.

We collected seven (7) bulk samples of the chipped/delaminated paints of the two common color-paint from two different areas of the supporting members. The sample were collected in sealed plastic bags and transported to EMS laboratories, Inc. in Pasadena, California for analysis. The bulk samples were analyzed by atomic absorption spectrometry (AAS) analysis, EPA Method 3050M/7420 for detection of lead content in the bulk samples.

The AAS analyses results which are presented on the next page describe the concentrations in parts per million indicate as follow;

City Of Glendale Facilities Services Rock Haven Sanitarium Preliminary Asbestos & Lead-Paint Survey Report March 31, 2008 Page 5

Sample No.	Color & Matrix	General Location	AAS Results
Pb-01	dark brown color paint	Building B on all doors & windows	9600 ppm
Pb-02	earth-beige color paint	Building B on exterior stucco/components	220 ppm
Pb-03	earth-beige color paint	Building B on exterior stucco/components	530 ppm
Pb-04	earth-beige color paint	Building I on exterior stucco/components	<40 ppm
Pb-05	dark brown color paint	Building K on all doors & windows	9200 ppm
Pb-06	earth-beige color paint	Building K on exterior stucco/components	3100 ppm
Pb-07	earth-beige color paint	Building M on exterior stucco/components	97000 ppm

Lead-Paint Survey Conclusion: Based on the AAS analytical results, it is our opinion that all damaged or near damaged or de-laminated dark brown and earth-beige paints on the buildings are lead containing at above permissible levels. Although the current regulations do not require an owner to remove lead-paint from the property prior to demolition, they do require all damaged paints to be properly removed and stabilized prior to any construction activity. We conclude that, prior to further disturbance, all delaminated and damaged paints of all above colors be properly removed and disposed of by a licensed lead-abatement contractor and in accordance with current regulatory standards of EPA and CCR 1532.1.

The rough order of magnitude (ROM) of abatement and disposal of the damaged paints throughout the property has been estimated at \$35,000.

Special Note: Since the buildings are greater than 40 years old, presence of asbestos containing cement water pipes under ground and asbestos containing transite exhaust pipes inside certain walls is a high probability. Transite material were not observed during this survey. Such materials are considered "non-friable ACM" in intact condition. However these materials have the potential to become friable when broken in pieces. Transite pipes, if or when encountered during demolition activities, should also be removed by the asbestos abatement contractor prior to further disturbance.

The <u>preliminary</u> laboratory PLM and AAS analyses reports are attached under Exhibit I and Exhibit II and complete this report.

Environmental Solutions

Michael Rezvani, PE, REA, CAC Senior Environmental Consultant

PLM Analyses & Chain of Custody

Environmental Solutions

PLM Report

Report No:	120092	Client:	Environmental Solutions	
Date:	March 28, 2008		2601 E. Chevy Chase Drive	
Date Received:	March 26, 2008		Glendale, CA 91206	
Date Analyzed:	March 28, 2008	Attention:	Mike Rezvani	
Date/Time Collected:	3/26/08 by Mike Rezvani	Reference:	ES08-015, City of Glend./Rock Haven Sanit.	
Subject:	Polarized Light Microscopy Analysis for Asbestos	34	Samples	
Methodology:	"Method for Determination of Asbestos in Bulk Buildi	ng Materials." El	PA 600/R-93/116	
Accredited:	National Institute of Standards and Technology (NVLAP) #101218			
Certified:	California Department of Health Services Environmental Testing Laboratory ELAP 1119 County Sanitation Districts of Los Angeles County, Lab ID No. 10120			

Quality Control Sample (SRM 1866 Glass Fibers as the blank): None Detected

Sample ID	Location / Description	Visual Description	Asbestiform Minerals	Other Fibrous Materials
01	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
02	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
03 FT	NON-FRIABLE	BEIGE GRANULAR	**NONE DETECTED	NONE DETECTED
03 M	NON-FRIABLE	YELLOW STICKY	NONE DETECTED	NONE DETECTED
04	NON-FRIABLE	BEIGE RUBBERY, GRAY FIBROUS	NONE DETECTED	CELLULOSE 20%; SYNTHETICS 5%
05 FT	NON-FRIABLE	BLUE GRANULAR	**NONE DETECTED	NONE DETECTED
05 M	NON-FRIABLE	YELLOW STICKY	NONE DETECTED	NONE DETECTED
06	NON-FRIABLE	GRAY FIBROUS	CHRYSOTILE 80%	CELLULOSE 15%
07	NON-FRIABLE	BEIGE RUBBERY, GRAY FIBROUS	CHRYSOTILE 20%	CELLULOSE 5%
08 FT	NON-FRIABLE	BROWN GRANULAR	**NONE DETECTED	NONE DETECTED
09	NON-FRIABLE	WHITE RUBBERY	NONE DETECTED	NONE DETECTED
10	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED

Optical Microscopist

BMK/mt

B.M. Kolk, Laboratory Director

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The EPA method is a semi-quantitative procedure. The detection limit is between 0.1 - 1% by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

The test results reported are for the sample(s) delivered to us and may not represent the entire material from which the samples was taken. The EPA recommends three samples or more be taken from a "homogenous sampling area" before friable material is considered non-asbestos-containing.

** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot be detected by PLM. Confirmation by XRD or TEM is recommended by the EPA (Federal Register Vol. 59, No. 146).

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PLM Report

teport No:	120092		Client:	Environmental Solutions
Sample ID	Location / Description	Visual Description	Asbestiform Minerals	Other Fibrous Materials
11	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
12 FT	NON-FRIABLE	TAN GRANULAR	*NONE DETECTED	NONE DETECTED
13	NON-FRIABLE	BEIGE RUBBERY, GRAY FIBROUS	NONE DETECTED	CELLULOSE 5%; SYNTHETICS 15%
14	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
15	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
16 FT	NON-FRIABLE	RED GRANULAR	**NONE DETECTED	NONE DETECTED
17	NON-FRIABLE	WHITE PAINT	NONE DETECTED	NONE DETECTED
18	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
19	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
20	NON-FRIABLE	GRAY FIBROUS	CHRYSOTILE 80%	CELLULOSE 15%
21	NON-FRIABLE	GRAY FIBROUS	CHRYSOTILE 80%	CELLULOSE 15%
22 FT	NON-FRIABLE	BEIGE GRANULAR	**NONE DETECTED	NONE DETECTED
23 FT	NON-FRIABLE	TAN GRANULAR	**NONE DETECTED	NONE DETECTED
23 LINO	NON-FRIABLE	BROWN GRANULAR	NONE DETECTED	CELLULOSE 5%
24	NON-FRIABLE	GRAY FIBROUS	CHRYSOTILE 80%	CELLULOSE 15%
25	NON-FRIABLE	GRAY FIBROUS	CHRYSOTILE 80%	CELLULOSE 15%

Optical Microscopist

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B.M. Kolk, Laboratory Director

The EPA method is a semi-quantitative procedure. The detection limit is between 0.1 - 1% by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

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BMK/mt

PLM Report

Page 3 of 3

Report No:	120092		Client:	Environmental Solutions
Sample ID	Location / Description	Visual Description	Asbestiform Minerals	Other Fibrous Materials
26	NON-FRIABLE	WHITE RUBBERY, BROWN FIBROUS	NONE DETECTED	CELLULOSE 20%; SYNTHETICS 5%
27	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
28	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
29	NON-FRIABLE	BROWN GRANULAR	NONE DETECTED	NONE DETECTED
30	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED
31	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED

Optical Microscopist

BMK/mt

B.M. Kolk, Laboratory Director

The EPA method is a semi-quantitative procedure. The detection limit is between 0.1 - 1% by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

The test results reported are for the sample(s) delivered to us and may not represent the entire material from which the samples was taken. The EPA recommends three samples or more be taken from a "homogenous sampling area" before friable material is considered non-asbestos-containing. ** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot be detected by PLM. Confirmation by XRD or TEM is recommended by the EPA (Federal Register Vol. 59, No. 146).

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AAS Analyses & Chain of Custody

Environmental Solutions

EMS Laboratories

Page 2 of 2

Laboratory Report

Sample Info

Date of Analysis:	3/27/2008
Lab ID:	120093
Client:	Environmental Solutions
Date Received:	3/26/2008
Project Number:	ES 08-015
Analyte:	Pb
Matrix:	PAINT CHIP
Method:	EPA 3050M/7420
Comments:	

Reporting Limit (mg): 0.007 Method blank (mg): <0.007

Sample Results

Sample Name	Bulk Weight (g)	Pb Weight (mg)	Pb Concentration (ppm)
Pb-01	0.1698	1.6	9600
Pb-02	0.1728	0.037	220
Pb-03	0.1576	0.083	530
Pb-04	0.1753	< 0.007	< 40
Pb-05	0.1689	1.5	9200
Pb-06	0.1749	0.54	3100
Pb-07	0.1643	16	97000

Chemist: TM

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MAR-27-2008 04:36P FROM:EMS LAB	IS 6267965676	TO: 18182434921	P.3/3
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