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PROJECT # **ASBESTOS SURVEY**



PROJECT NAME **BRIDGER BUILDING  
REPORT OF SURVEY & RECOMMENDATIONS  
NOVEMBER 10, 1987**

DOC TYPE **RPTS**





Table 1

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
<u>Penthouse</u>			
CCBB-1001B	10/10/87	Roofing Material	ND*
CCBB-1002B	10/10/87	Insulation, Cold Water Fire Back-up Tank	10% Amosite 65% Chrysotile
CCBB-1003B	10/10/87	Insulation, Cold Water Fire Back-up Tank	45% Amosite 20% Chrysotile
CCBB-1004B	10/10/87	Pipe Elbow	10% Chrysotile
CCBB-1005B	10/10/87	Pipe Elbow	2% Amosite 25% Chrysotile
CCBB-1006B	10/10/87	Fireproofing (An overhead structural members)	10% Chrysotile
CCBB-1007B	10/10/87	Fireproofing	15% Chrysotile
CCBB-1008B	10/10/87	Duct Tape	ND*
CCBB-1009B	10/10/87	Pipe Insulation (Straight Run)	50% Amosite 5% Chrysotile
CCBB-1010B	10/10/87	Pipe Insulation (Straight Run)	60% Amosite 10% Chrysotile
CCBB-1011B	10/10/87	Fireproofing	20% Chrysotile
CCBB-1012B	10/10/87	Fireproofing	20% Chrysotile

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1013B	10/10/87	Insulation from under metal casing on boiler	ND*
CCBB-1014B	10/10/87	Pipe Elbow Insulation	ND*
CCBB-1015B	10/10/87	Valve Cover Insulation	30% Amosite 5% Chrysotile
CCBB-1016B	10/10/87	Fireproofing	15% Chrysotile
CCBB-1017B	10/10/87	Caulking from air handler	3% Chrysotile
CCBB-1018B	10/10/87	Duct Tape	ND*
CCBB-1019B	10/10/87	Duct Tape	ND*
CCBB-1020B	10/10/87	Roof walking surface material	ND*
CCBB-1021B	10/10/87	Roofing material from south side of roof	ND*
<u>Tenth Floor</u>			
CCBB-1022B	10/10/87	Main (central) corridor, Fireproofing above susp. ceiling	15% Chrysotile
CCBB-1023B	10/10/87	Main corridor pipe elbow above susp. ceiling	20% Chrysotile

\*ND: No Asbestos Detected.

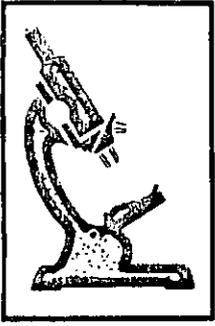


Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1024B	10/10/87	Main corridor above susp. ceiling pipe insulation (straight run)	70% Amosite
CCBB-1025B	10/10/87	Stairwell (west) Floor tile	5% Chrysotile
CCBB-1026B	10/10/87	Office-NE corner (Room 1015) Fireproofing	15% Chrysotile
CCBB-1027B	10/10/87	Office-NW corner (Room 1007) Fireproofing	10% Chrysotile
CCBB-1028B	10/10/87	SW corner (Room 1027) Fireproofing	20% Chrysotile
CCBB-1029B	10/10/87	SE corner (Room 1019) Fireproofing	20% Chrysotile
CCBB-1030B	10/10/87	SE corner (Room 1019) Floor tile	<1%-1% Chrysotile
<u>Ninth Floor</u>			
CCBB-1031B	10/10/87	Main Corridor E. of elevator Fireproofing	20% Chrysotile

\*ND: No Asbestos Detected.



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Occupational and Environmental Health

10 November 1987

**RECEIVED**  
NOV 12 1987  
DESIGN & CONST.  
MNGT. DIVISION

James V. Wondra  
Clark County  
Dept. of Public Works  
5051 Paradise Road  
Las Vegas, NV 89119

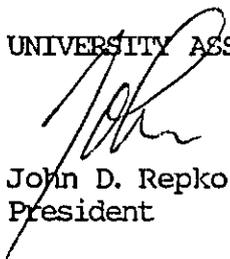
Dear Whitey,

Attached please find the report of the asbestos survey of the Bridger Building. You will find the cost estimate high, but it does include the fact that we would have to do the abatement floor by floor with moving times allotted between floors. I have also addressed the problem of renovation until such time as abatement can be completed.

If you have any questions, do not hesitate to call.

Sincerely,

UNIVERSITY ASSOCIATES, LTD.

  
John D. Repko, Ph.D.  
President

/dm  
WONDRA2.LTR

cc: Whitey  
Jvw  
11-10-87



CLARK COUNTY DEPARTMENT OF PUBLIC WORKS  
BRIDGER BUILDING  
LAS VEGAS, NEVADA

REPORT OF SURVEY AND RECOMMENDATIONS

SURVEY

On October 10, 1987, University Associates, Ltd., conducted an asbestos evaluation<sup>1</sup> of the Bridger Building. The purpose of this survey was to thoroughly and totally access, test, and document the existence of asbestos-containing material in order to make logical and prudent decisions regarding abatement actions. This inspection involved specified ceiling and mechanical and plumbing systems, including but not limited to the following area: mechanical and equipment rooms, roof and attic. The inspection included looking for and touching all suspect friable materials, including surfaces above ceilings and non-permanently concealed areas which may be entered during normal maintenance and repair. For purposes of this inspection and according to 40 CFR 763.103(d), friable material is regarded as any material applied on ceilings, walls, structural members, piping, ductwork or any other part of the building surfaces which, when dry, may be crumbled, pulverized or reduced to a powder by hand pressure. Also, because of the many uses to which asbestos has been put in public buildings, non-friable asbestos material was also noted wherein it may pose a special problem. Vinyl asbestos floor tile and roofing materials were sampled and analyzed in this inspection.

ANALYSIS

Asbestos identification is concerned with determining the presence, type and amount of asbestos within a bulk sample, such as insulation or ceiling material. The technique for examination of bulk samples are relatively straightforward and give an unambiguous result in most cases. All bulk samples were analyzed for asbestos using polarized light microscopy coupled with dispersion staining. This method utilizes a petrographic microscope which is a transmitted polarized light instrument, widely used in the geological and chemical sciences for identification and characterization of crystallographic properties.

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<sup>1</sup>Other potentially hazardous materials were evaluated, however, none were found.



Identification of asbestos is enhanced by the use of a McCrone dispersion staining objective. The term dispersion staining is used to describe the color effects produced when a transparent, colorless particle or fiber immersed in a liquid having a refractive index near to that of the particle, is viewed under a microscope by transmitted white light. While the accuracy of refractive index measurements by the dispersion staining technique (+0.001) is not much different from that obtainable by the well-known Becke line method, it has several important advantages. Primary among them is that in a preparation of several substances, it imparts diagnostic colors and relief effects only to the specific particles which the microscopist wishes to observe or count. Other colorless particles either are not optically stained, or are stained a different color, or possess a different morphology or orientation.

#### DISCUSSIONS

The samples were obtained from throughout the building, generally following a random sampling pattern and following the EPA procedures. The results of all samples are provided in Table 1. This table gives a listing of the samples obtained within the building areas, the location from which the sample was obtained, and the results, showing the type of asbestos and the percent content. Appended to this report are mini-drawings which show the locations from which samples were obtained. Each original sample obtained has been appropriately marked with the sample number, and date sample was taken to develop a chain of custody for each sample. These samples have been archived should they be needed in the future. The specific results of the laboratory analyses for all bulk samples are included with this report.

Analyses showed that there are asbestos-containing materials in the mechanical and plumbing systems, in the fireproofing on steel beams with a significant amount of overspray on the deck, and on some of the floor areas in the form of vinyl asbestos floor tile. No asbestos was found in the acoustical ceiling tiles, either the 2' X 4' or 12" X 12" configuration, or in the acoustical plaster on the ceilings of the parking garage (second through fourth floor areas). Figures, also included with this report, are illustrative of the asbestos-containing material and not meant to be exhaustive of all locations of asbestos-containing material.

In general, none of the areas surveyed contained asbestos in a form and condition which would constitute an eminent health hazard to building occupants. Of course, whenever asbestos occurs in buildings, there is always a probability of a potential health hazard if the material is disturbed or the condition of the material changes. Boiler and mechanical rooms, which possessed the greatest concentration of asbestos (both amosite and chrysotile, generally), present a potentially greater hazard and potentially



greater liability during periods of maintenance or repair. Areas beneath the existing fireproofing and above the suspended ceiling (i.e., in the air plenum) also present a greater hazard and liability when ceiling tiles are removed such as for maintenance or new construction. It is strongly recommended that ceiling tiles only be removed for necessary and required maintenance, that work be done during off-hours, and that new construction or remodeling be deferred until control actions can be instituted.

Until such time as an appropriate abatement program is implemented, a special operations and maintenance program should be implemented. This special program is recommended in order to clean up any existing asbestos fibers previously released, to prevent future release by minimizing asbestos disturbance or damage, and monitoring the condition of asbestos-containing material. The operations and maintenance program should continue until all asbestos-containing material is removed or the building demolished. This program should alert workers and building occupants to the location of asbestos-containing materials, train custodial and maintenance personnel in proper cleaning and maintenance, implement initial and periodic cleaning using special methods (for surfacing materials and pipe and boiler insulation only), establish a process that assures asbestos-containing material is not disturbed during building repairs and renovations, and periodically re-inspect areas with asbestos-containing materials

#### RECOMMENDATIONS

Based upon this survey and the preceding analysis and discussion, it is recommended that the most appropriate method for control in non-enclosed areas is complete removal. This recommendation is based upon the apparent risk and the fact that removal removes the asbestos completely, there is no ongoing monitoring required, and no record-keeping system need be established. In addition, removal is recommended because in most cases encapsulation is only a short-term solution; in a few years, depending on the quality of the encapsulant, whatever surface was encapsulated must be encapsulated again. In the case of pipe lagging, whenever pipe damage occurs, the friable asbestos is revealed and the health hazard also exposed. Vinyl asbestos floor tile does not need to be removed since it is non-friable and does not present a health hazard in its present form.

The total amount for the removal of asbestos-containing material from steel beams and decking and from mechanical and plumbing systems (all in non-enclosed areas) is estimated at \$1,230,000. This is based upon an approximate square footage of 78,400 square feet of fireproofing and approximately 4,500 lineal feet of mechanical system and pipe lagging insulation. If the enclosed ceiling areas are included (second through fourth floor parking garage steel beams, etc.) and an additional 29,400 square feet of fire-



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proofing, and approximately 750 lineal feet of piping is involved, the additional cost for this three-floor area is estimated at \$450,000. Thus, the total cost for removal from non-enclosed areas (i.e., penthouse, floors 10 through 5, and 1) and enclosed areas (i.e., floors 2 through 4) is estimated at \$1,680,000.

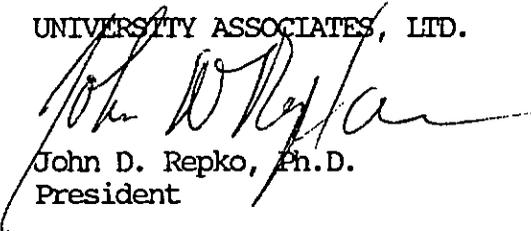
Because of the nature of the work being conducted in this building, abatement will have to be phased. That is, the contractor would only be able to work in certain portions of the building at any one time -- this is taken into account in the cost estimates. The above cost also takes into account prequalification of the contractor, that all work would be done under a single contract, and that the facility would be available to the contractor in a timely manner.

Added to these construction costs are consultant design services for preparation of drawings and specifications, air monitoring and abatement contract administration, and owner-related costs associated with partial shut-down of the facility and relocation of personnel to an alternate facility. In asbestos control work design, contract administration, and air monitoring may be as high as 10 to 15% of total construction costs.

Should you have any questions about this report, methodology, analysis, recommendations, or costs, do not hesitate to contact us.

Respectfully Submitted,

UNIVERSITY ASSOCIATES, LTD.

  
John D. Repko, Ph.D.  
President

November 6, 1987

xc: Valerie Mitchell, CIH  
University Associates, Ltd.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1032B	10/10/87	NE corner (Room 937) Fireproofing	7% Chrysotile
CCBB-1033B	10/10/87	NW corner (Room 907) Fireproofing	10% Chrysotile
CCBB-1034B	10/10/87	SW corner (Room 912) Fireproofing	1% Tremolite 10% Chrysotile
CCBB-1035B	10/10/87	SE corner (Room 928) Fireproofing	<1% Chrysotile
CCBB-1036B	10/10/87	NE corner (Room 937) Floor tile Kitchen area	ND*
<u>Eighth Floor</u>			
CCBB-1037B	10/10/87	Main corridor E. of elevator above susp. ceiling - Fireproofing	15% Chrysotile
CCBB-1038B	10/10/87	NE corner of floor-Attorney's office Fireproofing above ceiling	15% Chrysotile

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1039B	10/10/87	NW corner of floor-Attorney's office Fireproofing above ceiling	15% Chrysotile
CCBB-1040B	10/10/87	SW corner of floor-Attorney's office Fireproofing above ceiling	15% Chrysotile
CCBB-1041B	10/10/87	SE corner Attorney's office Fireproofing above ceiling	20% Chrysotile
<u>Seventh Floor</u>			
CCBB-1042B	10/10/87	E. of Elevator Fireproofing above ceiling	20% Chrysotile
CCBB-1043B	10/10/87	NE corner Fireproofing above ceiling	15% Chrysotile
CCBB-1044B	10/10/87	SE corner (com- puter room) Fireproofing above ceiling	15% Chrysotile
CCBB-1045B	10/10/87	SW corner Fireproofing above ceiling	20% Chrysotile

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1046B	10/10/87	NW corner Fireproofing above ceiling	20% Chrysotile
CCBB-1047B	10/10/87	SE corner (com- puter room) Floor tile	5% Chrysotile
CCBB-1048B	10/10/87	NW corner Floor tile	1% Chrysotile
<u>Sixth Floor</u>			
CCBB-1049B	10/10/87	Main corridor W. of elevator Fireproofing above susp. ceiling	15% Chrysotile
CCBB-1050B	10/10/87	SW corner of floor (Room 630) Fireproofing above susp. ceiling	10% Chrysotile
CCBB-1051B	10/10/87	NW corner of floor (Room 625) Fireproofing above ceiling	15% Chrysotile
CCBB-1052B	10/10/87	NE corner (Room 611) Fireproofing above ceiling	15% Chrysotile

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1053B	10/10/87	SE corner (Room 610) Fireproofing above ceiling	20% Chrysotile
<u>Fifth Floor</u>			
CCBB-1054B	10/10/87	Men's Restroom (Room 513) Pipe elbow insulation	35% Chrysotile
CCBB-1055B	10/10/87	Men's Restroom (Room 514) Fireproofing above ceiling	15% Chrysotile
CCBB-1056B	10/10/87	Room 513 Pipe insulation from straight sect.	50% Amosite 5% Chrysotile
CCBB-1057B	10/10/87	Room 513 Suspended ceiling material (2' X 4 panels)	ND*
CCBB-1058B	10/10/87	Lobby near ele- vator-12" X 12" ceiling tile material	ND*
CCBB-1059B	10/10/87	Room 520 - NW corner of floor Fireproofing above ceiling	20% Chrysotile

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1060B	10/10/87	SE corner-near Room 509 (1' X 1') ceiling tile sample	ND*
<u>Fourth Floor Parking Area</u>			
CCBB-1061B	10/10/87	Sprayed on ceiling plaster near space #93	ND*
CCBB-1062B	10/10/87	Fireproofing - above ceiling near space #93	15% Chrysotile
CCBB-1063B	10/10/87	Chiller room Pipe insulation	45% Amosite
CCBB-1064B	10/10/87	Chiller room Pipe insulation	50% Amosite
CCBB-1065B	10/10/87	Chiller room Pipe elbow mud	25% Chrysotile
<u>First Floor</u>			
CCBB-1066B	10/10/87	Janitorial closet W of main entrance Floor tile	ND*

\*ND: No Asbestos Detected.



Table 1, Continued

Results of Polarized Light Microscopy with Dispersion Staining  
Clark County Bridger Building

Sample Number	Date	Type of Sample	Result
CCBB-1067B	10/10/87	Rom 106 Ceiling tile (This ceiling in room 106, room 110, & in auditorium of Commissioner's Hearing Chambers.)	ND*
CCBB-1068B	10/10/87	Bottom of west stairwell Fireproofing	10% Chrysotile

\*ND: No Asbestos Detected.



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1068 SOUTHWEST STAIRWELL

1067 CONFERENCE ROOM

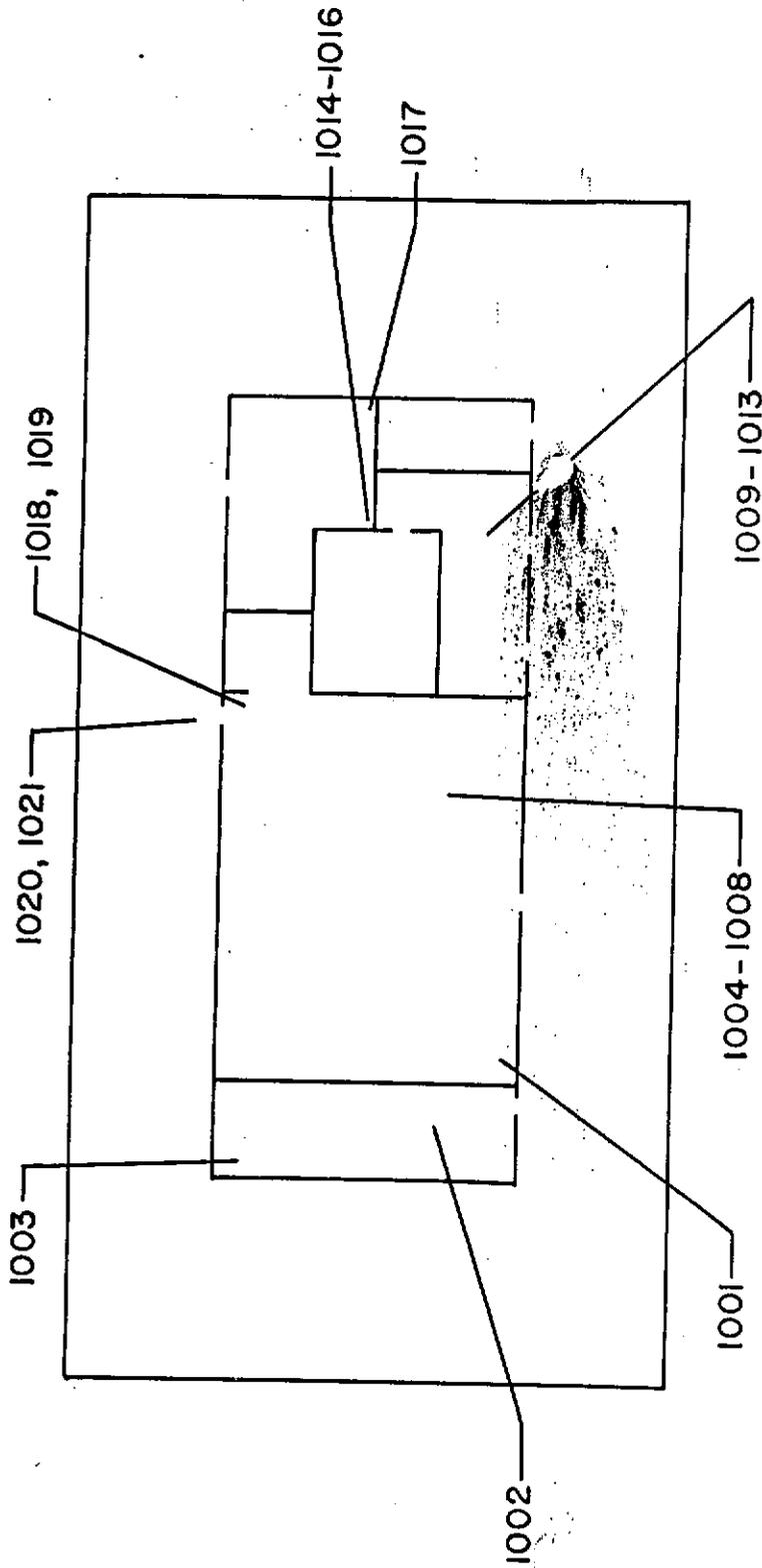
1066 JANITORS CLOSET



SAMPLE LAYOUT - 1ST FLOOR



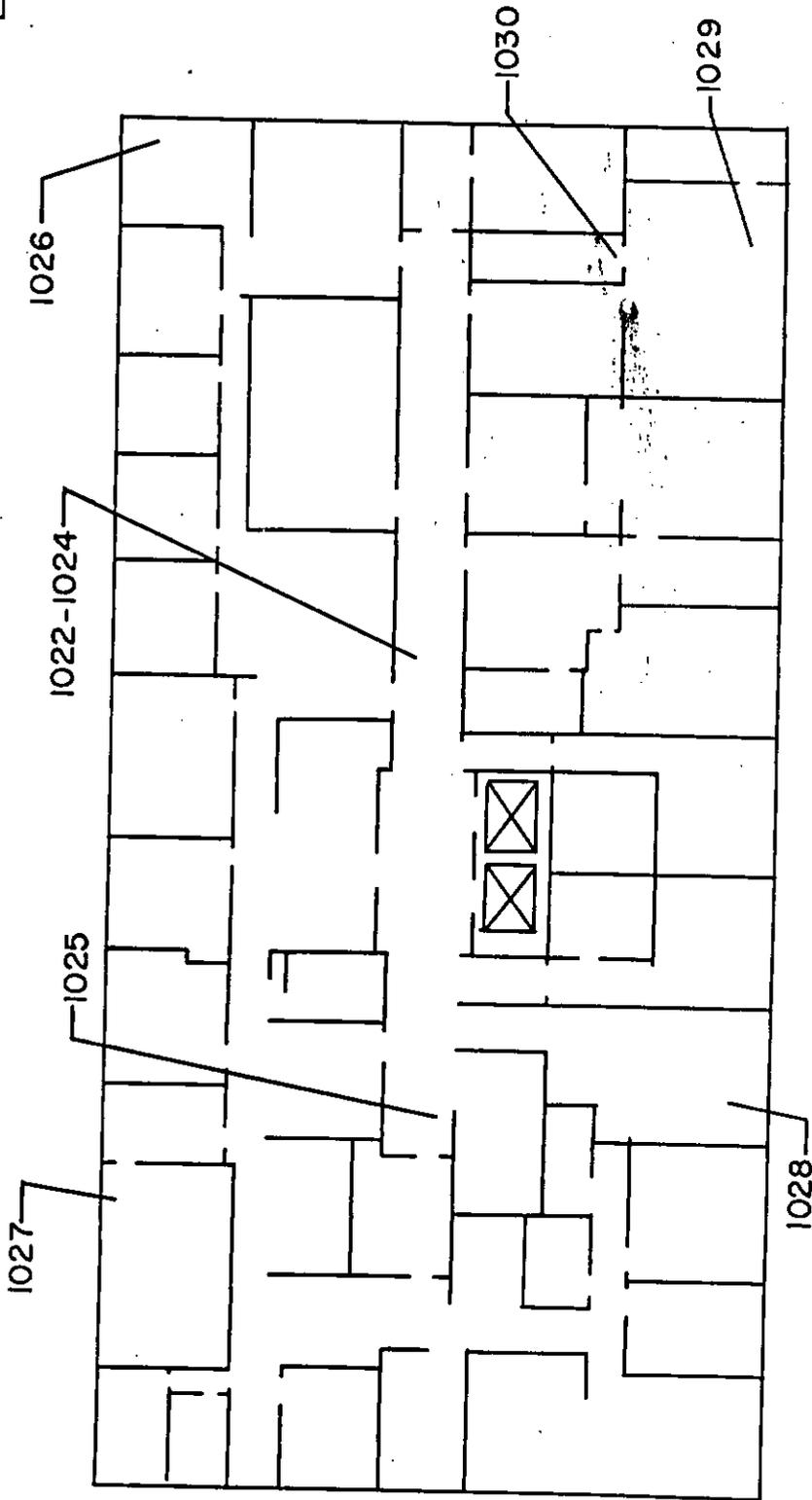
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SAMPLE LAYOUT - PENTHOUSE



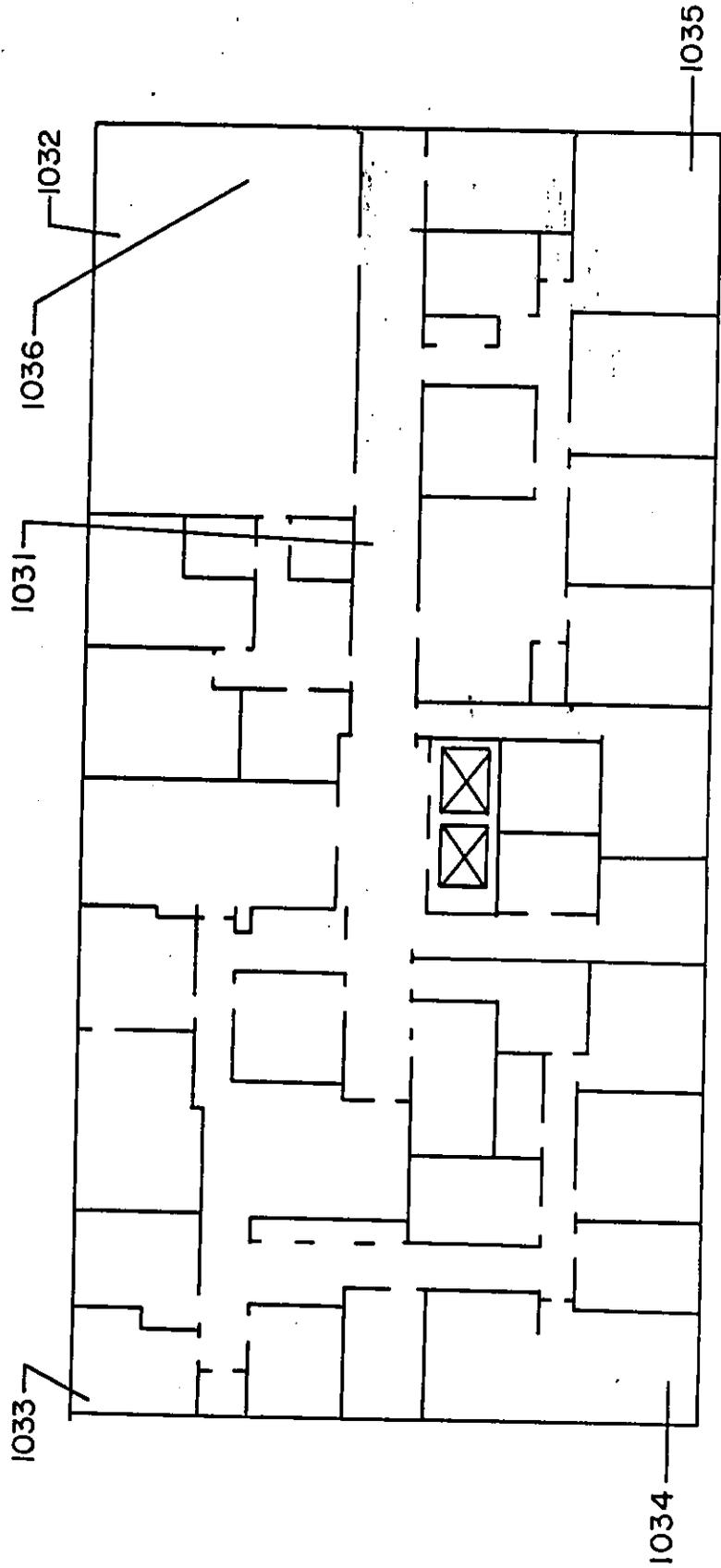
UNIVERSITY ASSOCIATES, LTD.



SAMPLE LAYOUT - 10TH FLOOR



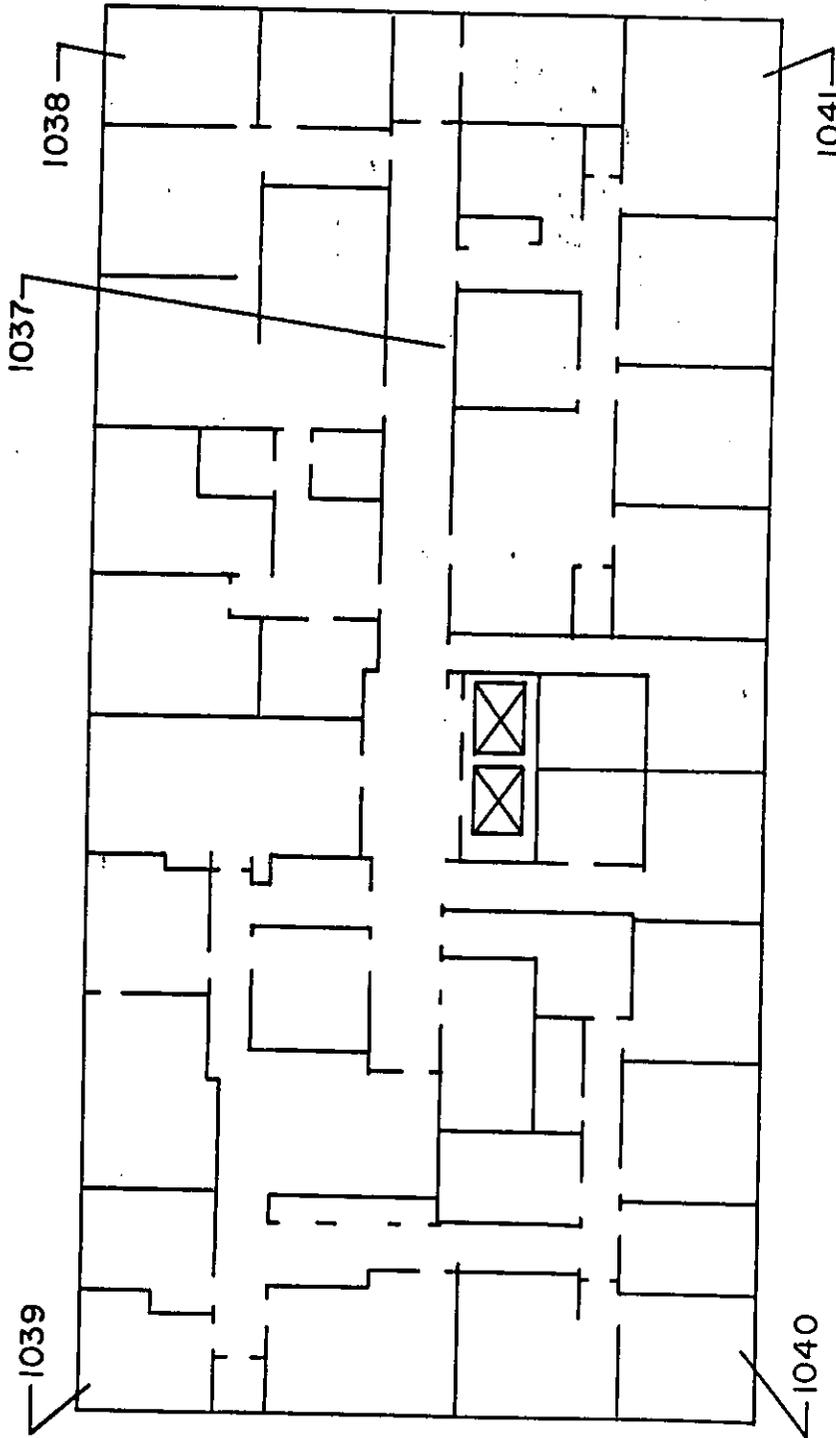
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SAMPLE LAYOUT - 9TH FLOOR



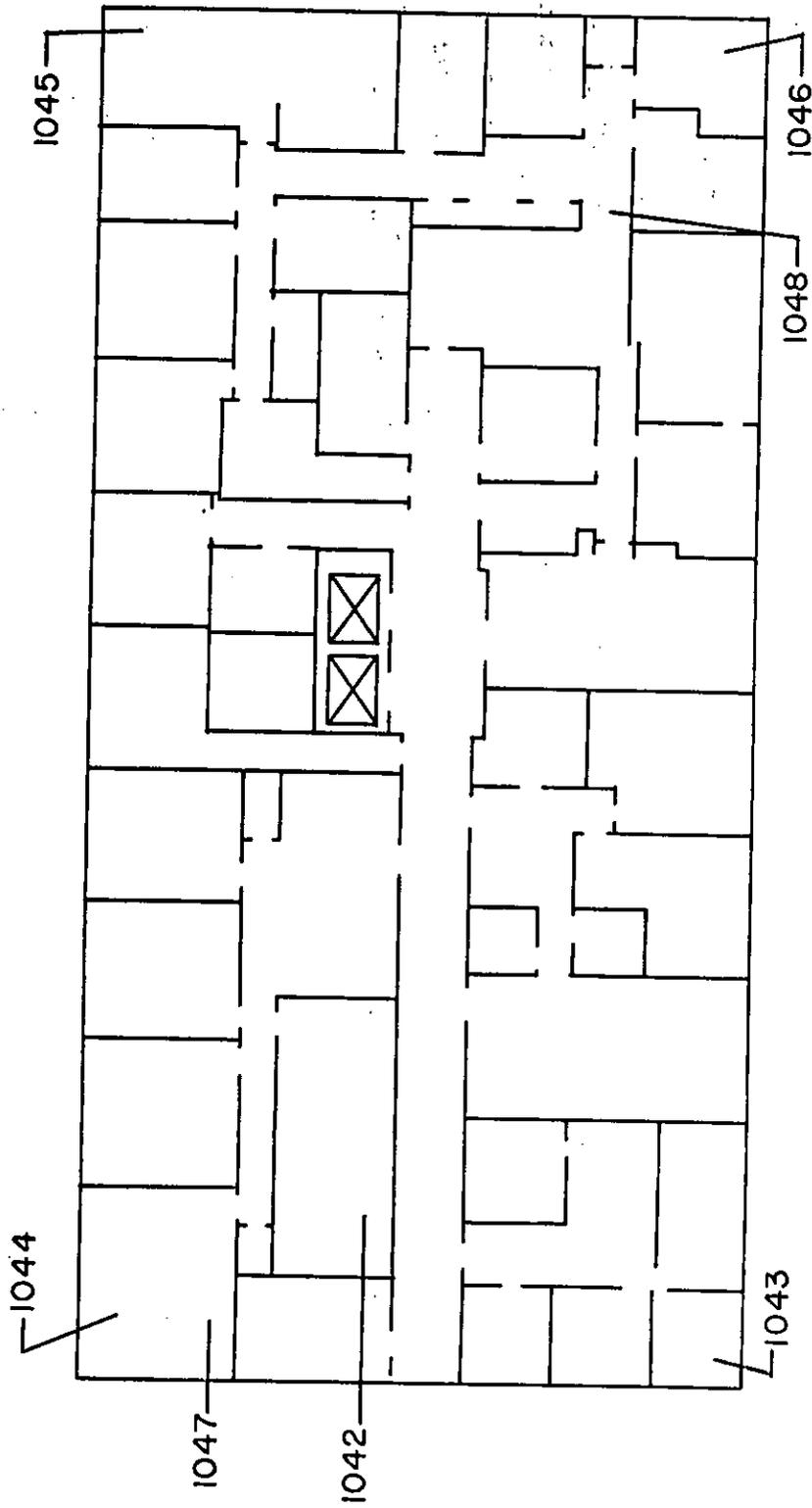
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SAMPLE LAYOUT - 8TH FLOOR



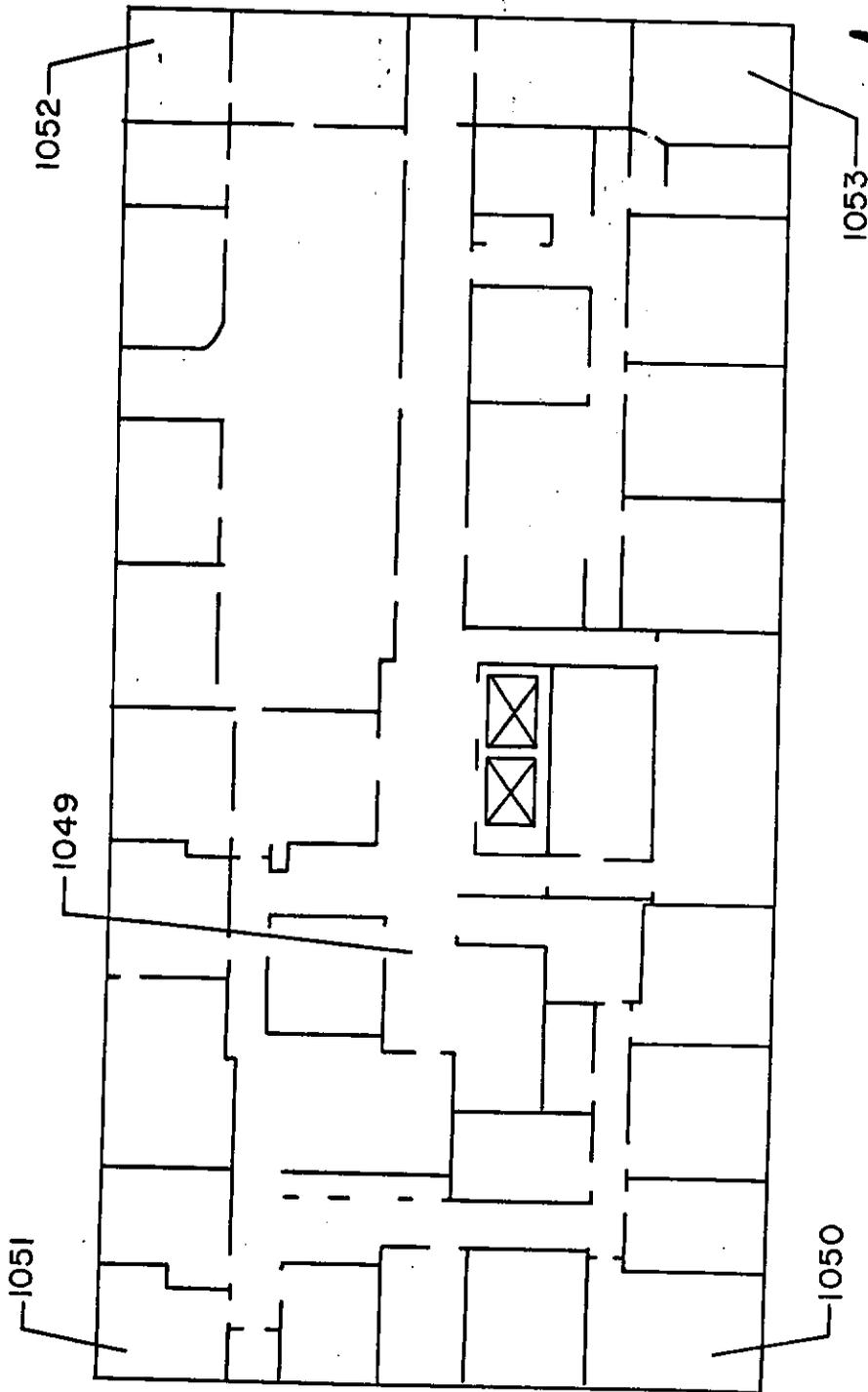
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SAMPLE LAYOUT -- 7TH FLOOR



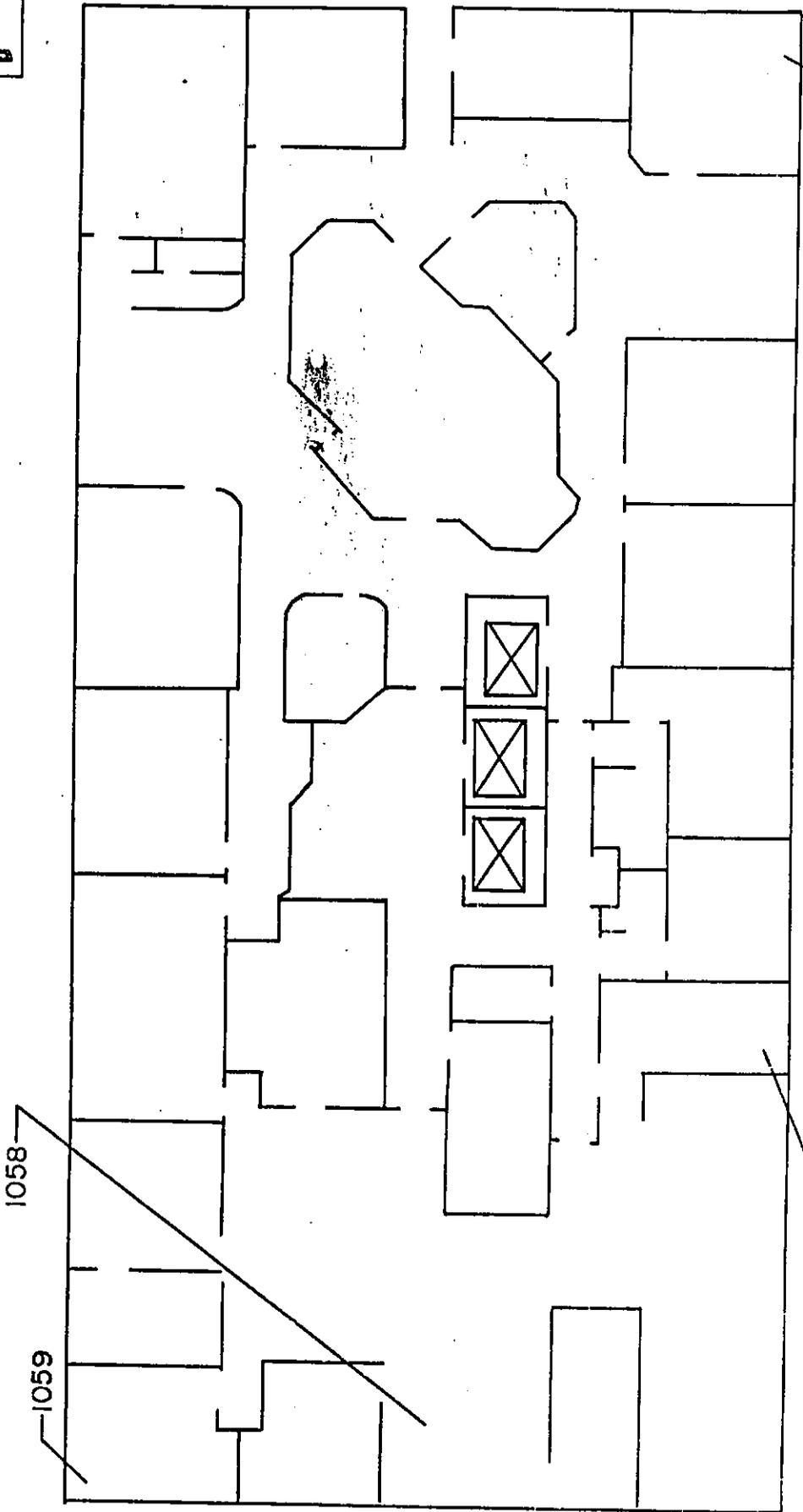
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SAMPLE LAYOUT - 6TH FLOOR



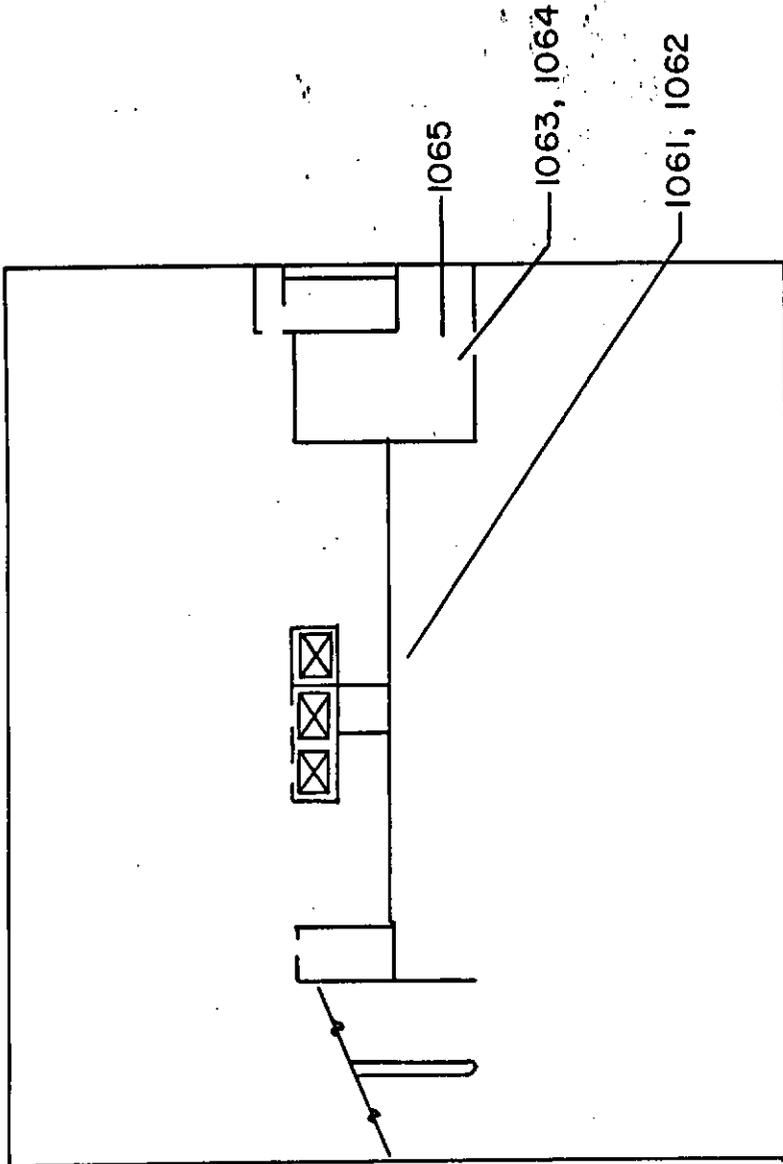
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SAMPLE LAYOUT - 5TH FLOOR



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SAMPLE LAYOUT - 4TH FLOOR

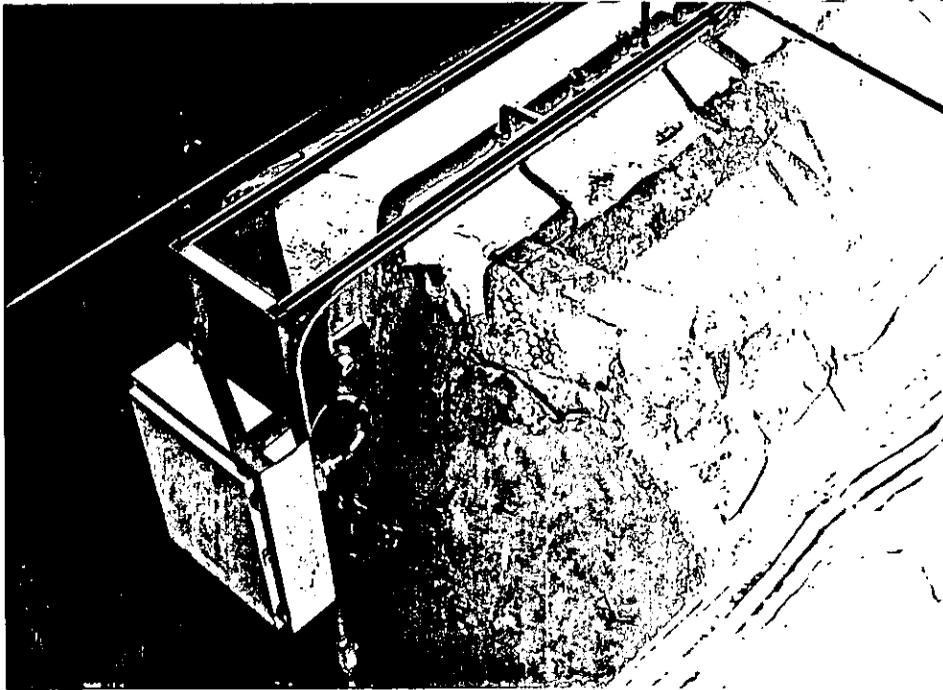


Figure 1. Penthouse Mechanical Area: Top View of Damaged Water Storage Tank Insulation.

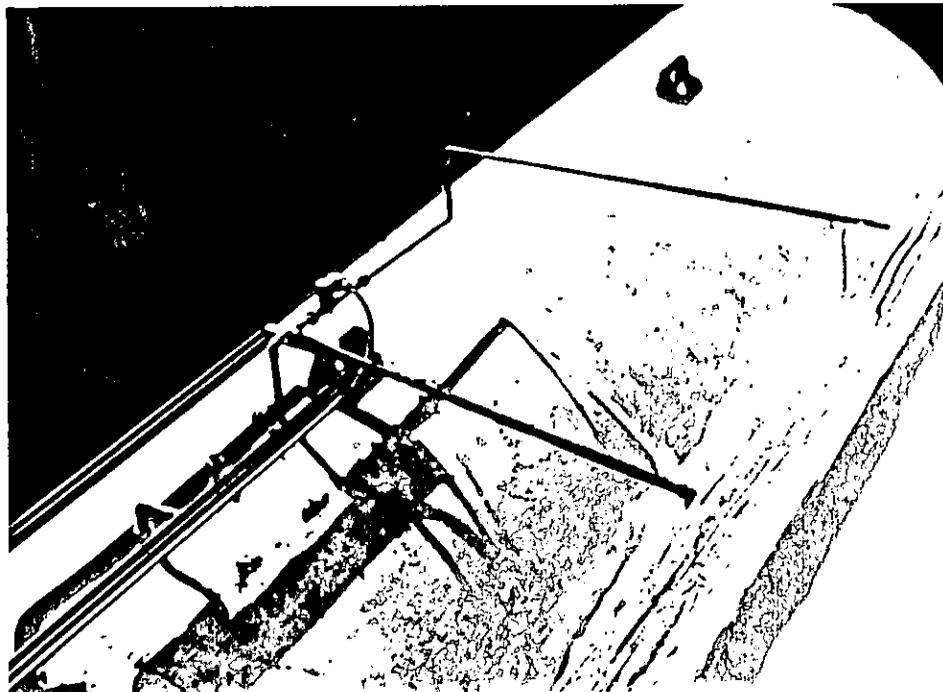


Figure 2. Penthouse Mechanical Area: Top View of Damaged Water Storage Tank Insulation.

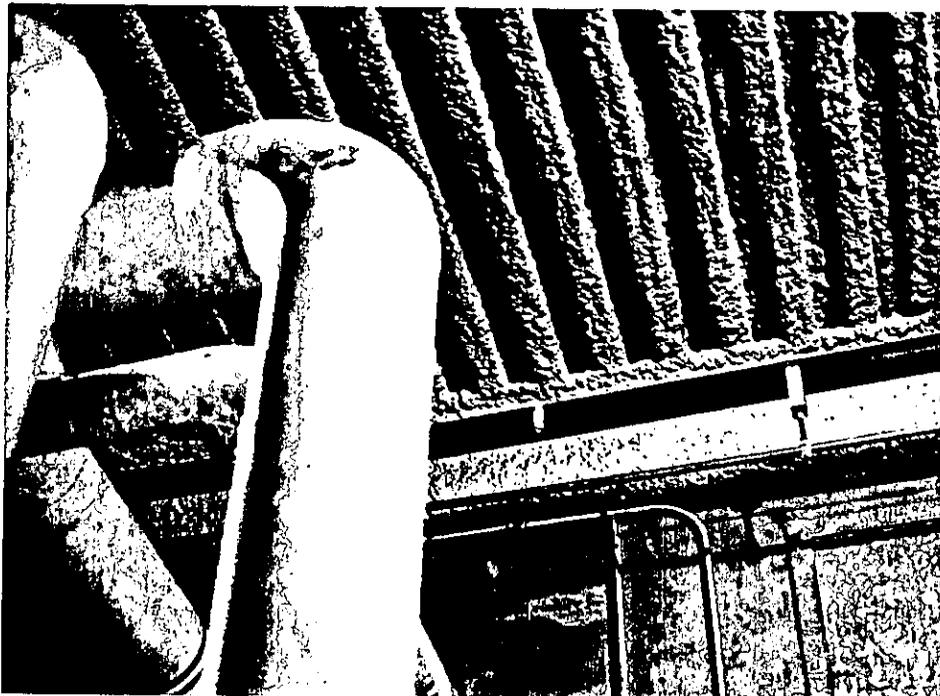


Figure 3. Penthouse Mechanical Room: View of Piping Insulation and Ceiling Deck Fireproofing.

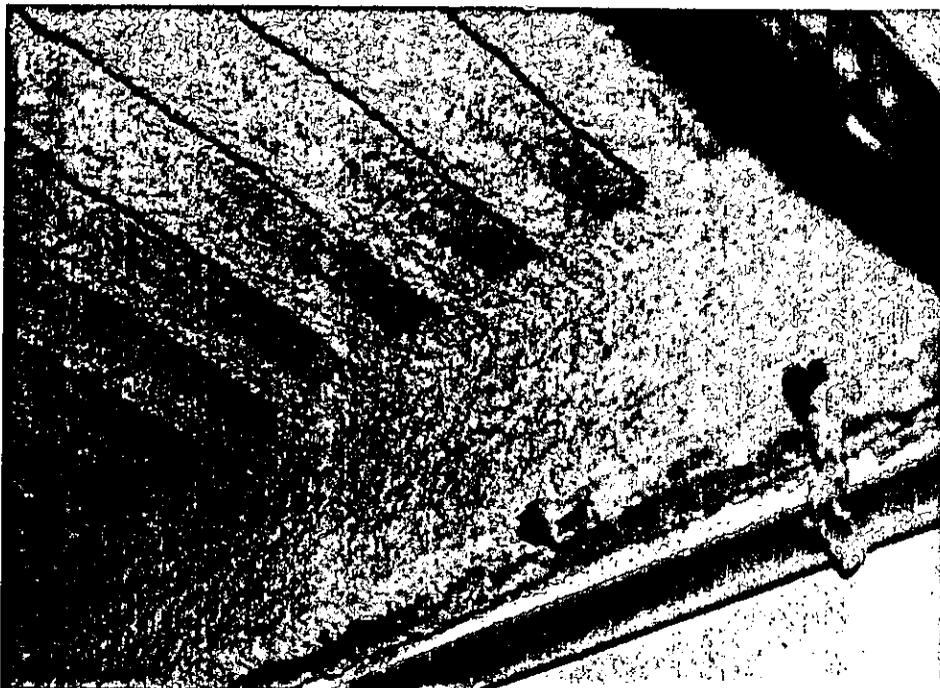


Figure 4. Penthouse Mechanical Room: View of Ceiling Deck Fireproofing



Figure 5. Penthouse Mechanical Room: View of Ceiling Deck Fireproofing

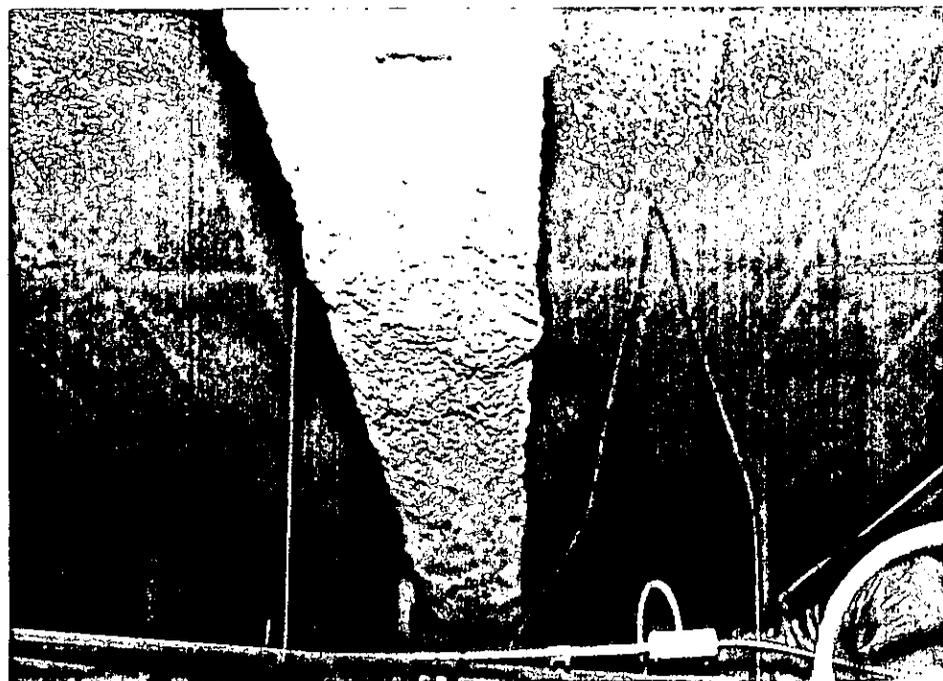


Figure 6. Typical Fireproofing on Structural Members With Over-spray on Associated Surfaces (Located Above Suspended Ceiling Panels).

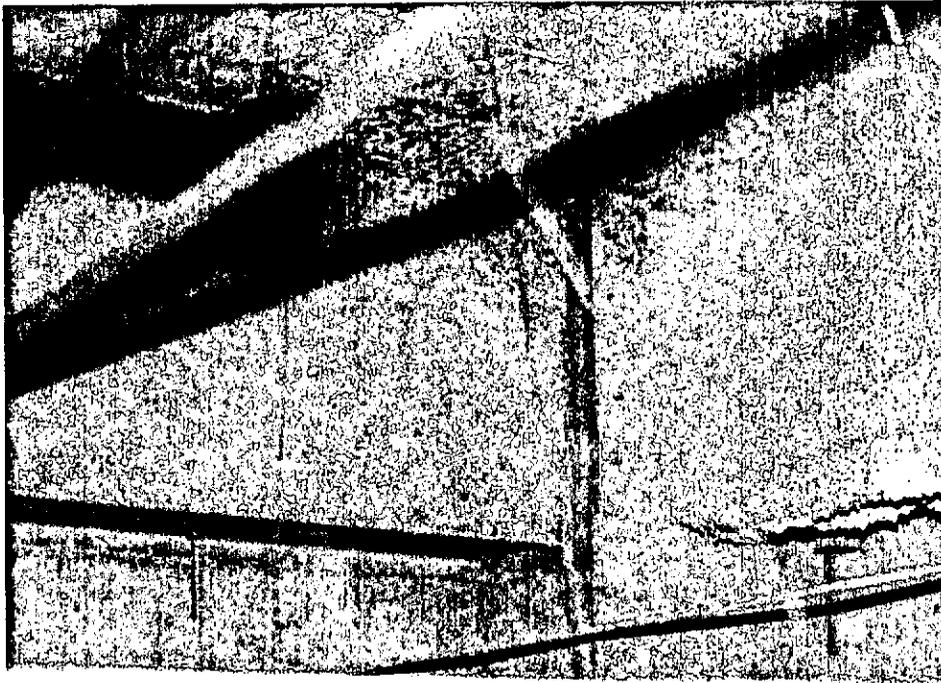


Figure 7. Typical Fireproofing on Structural Members With Over-spray on Associated Surfaces (Located Above Suspended Ceiling Panels).

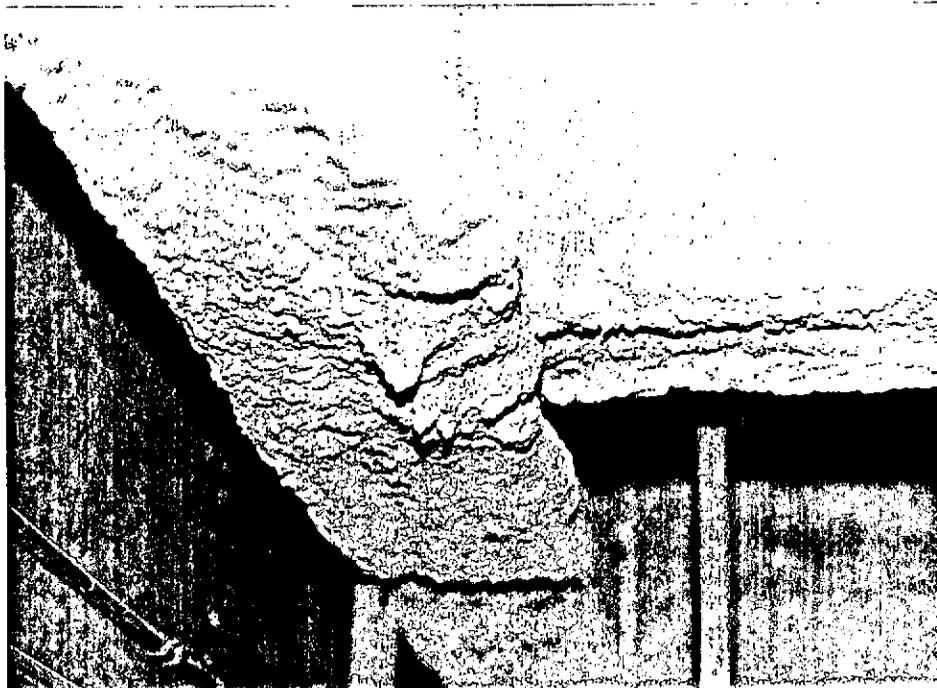


Figure 8. Typical Fireproofing on Structural Members (Located Above Suspended Ceiling Panels).



Figure 9. Typical Fireproofing on Structural Members With Over-spray on Associated Surfaces (Located Above Suspended Ceiling Panels).

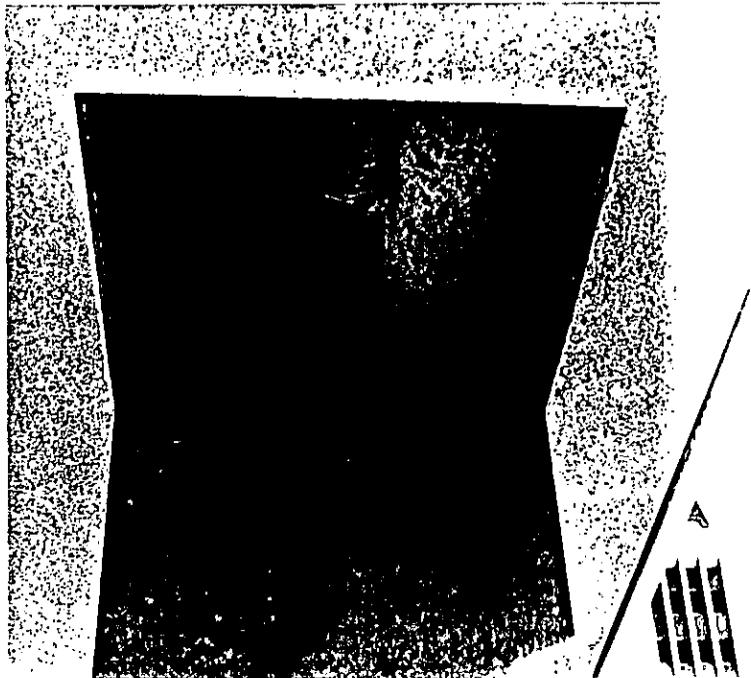
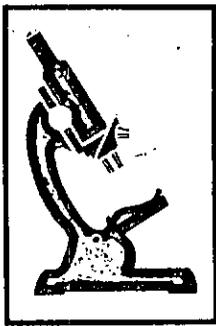


Figure 10. Fourth Floor Parking Area: View Through Ceiling Access Door of Fireproofing on Structural Member.



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*Occupational and Environmental Health: Laboratory Services*

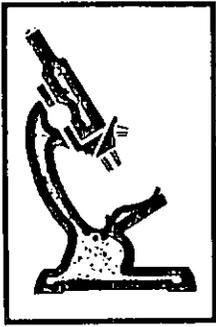
TO: Clark County Bridger Building  
225 Bridger Avenue  
Las Vegas, Nevada 89155

Sample Identification	CCBB-1001B	CCBB-1002B	CCBB-1003B
Laboratory Code Number	5257	5258	5259
Stereomicroscope Examination			
Is sample homogenous?	No	Yes	Yes
Does it contain layers?	Yes	No	No
Does it contain fibers?	No	Yes	Yes
Gross sample color.	black	white	white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	1 - 10% 2 - 65%	1 - 45% 2 - 20%
Total Percent Asbestos	0%	75%	65%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - <1%	1 - 2%	1 - 15% 2 - 5%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Clay - 1% Binder - 99%	Diatoms - 15% Binders - 8%	Clay and Binders - 15%

Analyst Juan Garcia

Date 10/15/87

Comments 1001B contained a piece of metal as one layer.



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Occupational and Environmental Health: Laboratory Services

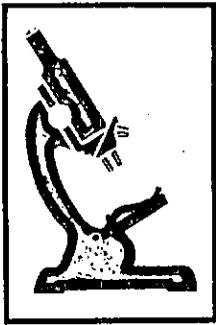
TO: Clark County Bridger Building  
225 Bridger Avenue  
Las Vegas, Nevada 89155

Sample Identification	CCBB-1004B	CCBB-1005B	CCBB-1006B
Laboratory Code Number	5260	5261	5262
	Stereomicroscope Examination		
Is sample homogenous?	Yes	No	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	No
Gross sample color.	off white	white/off white	brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 10%	1 - 2% 2 - 25%	2 - 10%
Total Percent Asbestos	10%	27%	10%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	1 - 50%	1 - 35%	1 - 1%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Diatoms - 25% Clay and Binders - 15%	Diatoms - 30% Clay and Binders - 13%	Mica - 40% Clay and Binders - 49%

Analyst Juan Garcia

Date 10/15/87

Comments 1005B contains a piece of styrofoam.



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Occupational and Environmental Health: Laboratory Services

TO: Clark County Bridger Building  
225 Bridger Avenue  
Las Vegas, Nevada 89155

Sample Identification	CCBB-1007B	CCBB-1008B	CCBB-1009B
Laboratory Code Number	5263	5264	5265
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	brown	off white	white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 15%	None Detected	1 - 50% 2 - 5%
Total Percent Asbestos	15%	0%	55%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify		2 - 100%	2 - 1%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 35% Clays and Binders - 50%		Binders - 44%

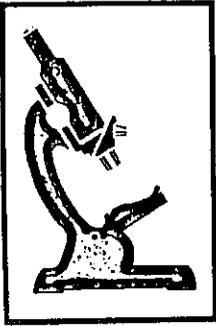
Analyst Juan Garcia

Date 10/15/87

Comments \_\_\_\_\_

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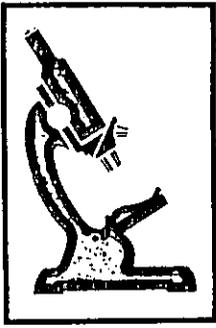
Sample Identification	CCBB-1010B	CCBB-1011B	CCBB-1012B
Laboratory Code Number	5266	5267	5268
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	white	brown	brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	1 - 60% 2 - 10%	2 - 20%	2 - 20%
Total Percent Asbestos	70%	20%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Clay and Binders - 30%	Mica - 35% Binders - 45%	Mica - 40% Binders - 40%

Analyst Juan Garcia

Date 10/15/87

Comments \_\_\_\_\_

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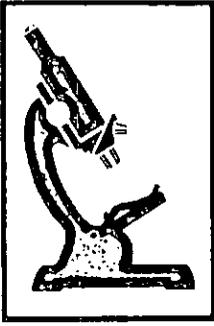
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Sample Identification	CCBB-1013B	CCBB-1014B	CCBB-1015B
Laboratory Code Number	5269	5270	5271
Stereomicroscope Examination			
Is sample homogenous?	No	No	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	No	Yes
Gross sample color.	off white	white	lt. brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	None Detected	1 - 30% 2 - 5%
Total Percent Asbestos	0%	0%	35%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	1 - 100%		1 - 15% 2 - 15%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify		Styrofoam-100%	Diatoms - 10% Clay and Binders - 25%

Analyst Juan Garcia

Date 10/15/87

Comments 1013B contained some black non-fibrous material. 1014B contains some brown fibrous material as a contaminant over the styrofoam. Contaminant contains about 25 - 30% chrysotile and at least 5% amosite.



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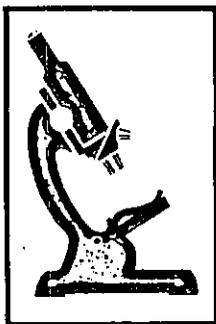
Las Vegas, Nevada 89155

Sample Identification	CCBB-1016B	CCBB-1017B	CCBB-1018B
Laboratory Code Number	5272	5273	5274
Stereomicroscope Examination			
Is sample homogenous?	Yes	No	Yes
Does it contain layers?	No	Yes	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	brown	off white/black	white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 15%	2 - 3%	None Detected
Total Percent Asbestos	15%	3%	0%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			2 - 99%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 40% Binders - 45%	Clay - 90% Binders - 7%	Binders - 1%

Analyst Juan Garcia

Date 10/15/87

Comments 1017B contains 10% chrysotile in black felt material.



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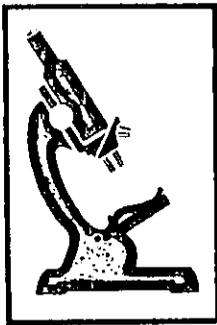
Sample Identification	CCBB-1019B	CCBB-1040B	CCBB-1041B
Laboratory Code Number	5275	5285	5286
	Stereomicroscope Examination		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	lt. brown	brown	lt. brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	2 - 15%	2 - 20%
Total Percent Asbestos		15%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - 99%		
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Binders - 1%	Mica - 30% Clay and Binders - 40%	Mica - 25% Clay and Binders - 55%

Analyst Juan Garcia

Date 10/15/87 and 10/16/87

Comments \_\_\_\_\_

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Sample Identification	CCBB-1042B	CCBB-1043B	CCBB-1044B
Laboratory Code Number	5287	5288	5289
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	brown	brown	brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 20%	2 - 15%	2 - 15%
Total Percent Asbestos	20%	15%	15%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 30% Clay and Binders - 50%	Mica - 40% Clay and Binders - 45%	Mica - 35% Clay and Binders - 50%

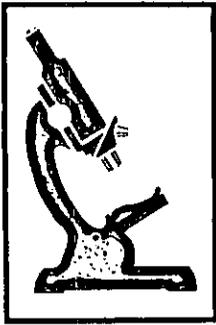
Analyst Juan Garcia

Date 10/16/87

Comments \_\_\_\_\_

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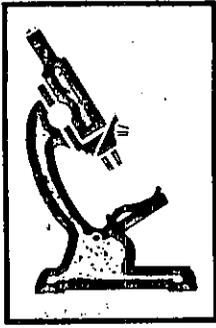
TO: Clark County Bridger Building  
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Sample Identification	CCBB-1045B	CCBB-1046B	CCBB-1047B
Laboratory Code Number	5290	5291	5292
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	No
Does it contain layers?	No	No	Yes
Does it contain fibers?	Yes	Yes	No
Gross sample color.	brown	brown	tan/black
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 20%	2 - 20%	2 - 5%
Total Percent Asbestos	20%	20%	5%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 40% Clay and Binders - 40%	Mica - 30% Clay and Binders - 50%	1 - 40% Clay and Binders - 55%

Analyst Juan Garcia

Date 10/16/87

Comments 1047B contains 30% chrysotile in adhesive.



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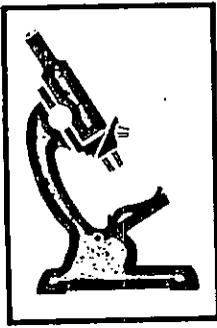
Sample Identification	CCBB-1048B	CCBB-1049B	CCBB-1020B
Laboratory Code Number	5293	5294	5295
Stereomicroscope Examination			
Is sample homogenous?	No	Yes	Yes
Does it contain layers?	Yes	No	No (Paint)
Does it contain fibers?	No	Yes	Yes
Gross sample color.	tan/black	lt. brown	black
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 1%	2 - 15%	None Detected
Total Percent Asbestos	1%	15%	0%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - 1%		2 - 15%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	1 - 40% Clay and Binders - 58%	Mica - 30% Clay and Binders - 55%	Mica - 25% Clay - 30% Binders - 30%

Analyst Juan Garcia

Date 10/16/87

Comments 1048B contains 10% chrysotile in adhesive.

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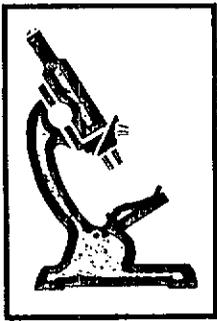
TO: Clark County Bridger Building  
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Sample Identification	CCBB-1021B	CCBB-1022B	CCBB-1023B
Laboratory Code Number	5296	5297	5298
	<b>Stereomicroscope Examination</b>		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No (Metal)	No	No
Does it contain fibers?	No	Yes	Yes
Gross sample color.	black	brown	off white
	<b>Polarized Light Analysis</b>		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	2 - 15%	2 - 20%
Total Percent Asbestos		15%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - <1%		1 - 35%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Clay - 25% Binders - 75%	Mica - 35% Clay and Binders - 50%	Diatoms - 30% Clay and Binders - 15%

Analyst Juan Garcia

Date 10/16/87

Comments \_\_\_\_\_  
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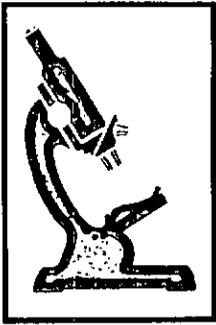
TO: Clark County Bridger Building  
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Sample Identification	CCBB-1024B	CCBB-1025B	CCBB-1026B
Laboratory Code Number	5299	5300	5301
Stereomicroscope Examination			
Is sample homogenous?	Yes	No	Yes
Does it contain layers?	No	Yes	No
Does it contain fibers?	Yes	No	Yes
Gross sample color.	white	off white/black	lt. brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	1 - 70%	2 - 5%	2 - 15%
Total Percent Asbestos	70%	5%	15%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - 1%	2 - <1%	
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Binders - 29%	1 - 45% Clay and Binders - 50%	Mica - 35% Clay - 50%

Analyst Juan Garcia

Date 10/16/87

Comments 1025B contains 7% chrysotile in adhesive.



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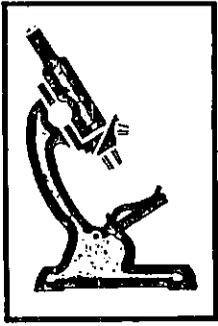
Sample Identification	CCBB-1027B	CCBB-1028B	CCBB-1029B
Laboratory Code Number	5302	5303	5304
	Stereomicroscope Examination		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	lt. brown	lt. brown	lt. brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 10%	2 - 20%	2 - 20%
Total Percent Asbestos	10%	20%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - <1%		
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 35% Clay - 55%	Mica - 30% Clay and Binders - 50%	Mica - 40% Clay and Binders - 40%

Analyst Juan Garcia

Date 10/16/87

Comments \_\_\_\_\_

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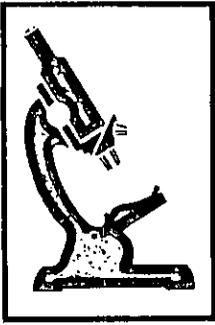
Las Vegas, Nevada 89155

Sample Identification	CCBB-1030B	CCBB-1032B	CCBB-1033B
Laboratory Code Number	5305	5306	5307
Stereomicroscope Examination			
Is sample homogenous?	No	Yes	Yes
Does it contain layers?	Yes	No	No
Does it contain fibers?	No	Yes	Yes
Gross sample color.	white/brown	white	white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - <1%-1%	2 - 7%	2 - 10%
Total Percent Asbestos	<1% - 1%	7%	10%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	1 - 65% Clay and Binders - 34%	Mica - 40% Clay and Binders - 53%	Mica - 40% Clay and Binders - 50%

Analyst Juan Garcia

Date 10/16/87 & 10/20/87

Comments 1030B <1% chrysotile in adhesive/matting material.



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Sample Identification	CCBB-1034B	CCBB-1036B	CCBB-1037B
Laboratory Code Number	5308	5309	5310
	Stereomicroscope Examination		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	No	Yes
Gross sample color.	white	off white	brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 10% Tremolite - 1%	None Detected	2 - 15%
Total Percent Asbestos	11%	0%	15%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify		2 - 1%	
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 50% Clay and Binders - 39%	1 - 60% Clay - 30% Binders - 9%	Mica - 40% Clay and Binders - 45%

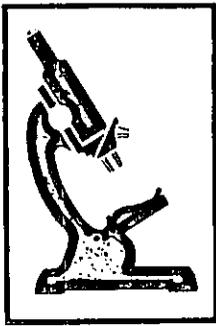
Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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Sample Identification	CCBB-1038B	CCBB-1039B	CCBB-1050B
Laboratory Code Number	5311	5312	5313
	Stereomicroscope Examination		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	No	Yes
Gross sample color.	brown	brown	brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 15%	2 - 15%	2 - 10%
Total Percent Asbestos	15%	15%	10%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify		2 - 1%	
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 50% Clay and Binders - 35%	Mica - 55% Clay and Binders - 29%	Mica - 45% Clay and Binders - 45%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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Sample Identification	CCBB-1051B	CCBB-1052B	CCBB-1053B
Laboratory Code Number	5314	5315	5316
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	brown	brown	brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 15%	2 - 15%	2 - 20%
Total Percent Asbestos	15%	15%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify			2 - 1%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Mica - 45% Clay and Binders - 40%	Mica - 50% Clay and Binders - 35%	Mica - 45% Clay and Binders - 34%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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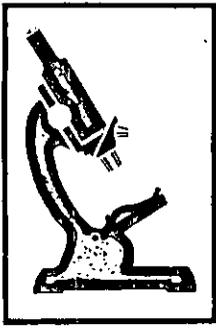
Sample Identification	CCBB-1060B	CCBB-1061B	CCBB-1062B
Laboratory Code Number	5323	5324	5325
	Stereomicroscope Examination		
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No (Paint)	No
Does it contain fibers?	Yes	No	Yes
Gross sample color.	lt. brown	brown	lt. brown
	Polarized Light Analysis		
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	None Detected	2 - 15%
Total Percent Asbestos	0%	0%	15%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	1 - 60% 2 - 30%		
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Clay - 10%	1 - 15% 3 - 35% Clay - 30% Binders - 20%	Mica - 45% Clay and Binders - 40%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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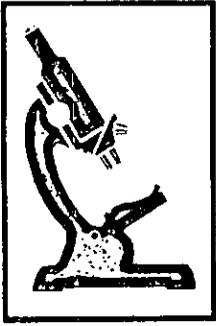
Sample Identification	CCBB-1057B	CCBB-1058B	CCBB-1059B
Laboratory Code Number	5320	5321	5322
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No (Paint)	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	brown	off white	brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	None Detected	2 - 20%
Total Percent Asbestos	0%	0%	20%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	1 - 45% 2 - 40%	1 - 60% 2 - 30%	
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Perlite - 15%	Binders - 10%	Mica - 50% Clay and Binders - 30%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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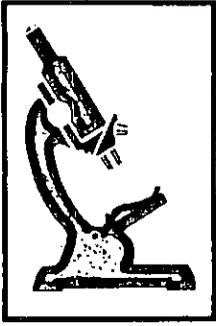
TO: Clark County Bridger Building  
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Sample Identification	CCBB-1054B	CCBB-1055B	CCBB-1056B
Laboratory Code Number	5317	5318	5319
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	white	white	white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 35%	2 - 15%	1 - 50% 2 - 5%
Total Percent Asbestos	35%	15%	55%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	1 - 40%		
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Diatoms - 5% Clay and Binders - 20%	Mica - 50% Clay and Binders - 35%	Diatoms - 1% Binders - 44%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_  
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Sample Identification	CCBB-1063B	CCBB-1064B	CCBB-1065B
Laboratory Code Number	5326	5327	5328
Stereomicroscope Examination			
Is sample homogenous?	Yes	No	Yes
Does it contain layers?	No	Yes	No
Does it contain fibers?	Yes	Yes	Yes
Gross sample color.	white	lt. brown	off white
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	1 - 45%	1 - 50%	2 - 25%
Total Percent Asbestos	45%	50%	25%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - 1%		1 - 20%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	Clay and Binders - 54%	Clay and Binders - 50%	Diatoms - 20% Clay and Binders - 35%

Analyst Juan Garcia

Date 10/20/87

Comments 1064B is a mixture of asbestos containing pipe insulation and a cloth (cellulose) wrap.



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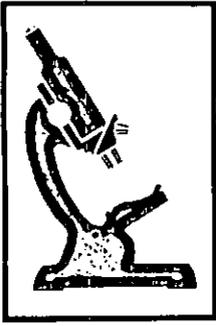
Sample Identification	CCBB-1066B	CCBB-1067B	CCBB-1068B
Laboratory Code Number	5329	5330	5331
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	Yes
Does it contain layers?	No	No (Paint)	No
Does it contain fibers?	No	Yes	Yes
Gross sample color.	off white	brown	lt. brown
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	None Detected	None Detected	2 - 10%
Total Percent Asbestos	0%	0%	10%
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	2 - 5%	1 - 60% 2 - 30%	2 - 1%
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	1 - 35% Clay - 15% Binders - 45%	Clay and Binders - 10%	Mica - 50% Clay and Binders - 39%

Analyst Juan Garcia

Date 10/20/87

Comments \_\_\_\_\_

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225 Bridger Avenue  
Las Vegas, Nevada 89155

Sample Identification	CCBB-1031B	CCBB-1035B	
Laboratory Code Number	5357	5358	
Stereomicroscope Examination			
Is sample homogenous?	Yes	Yes	
Does it contain layers?	No	No	
Does it contain fibers?	Yes	No	
Gross sample color.	brown	white	
Polarized Light Analysis			
Type of Asbestos Present 1 Amosite 2 Chrysotile 3 Crocidolite 4 Other, specify	2 - 20%	2 - Trace (<1%)	
Total Percent Asbestos	20%	<1%	
Other Fibrous Material 1 Fibrous glass 2 Cellulose 3 Synthetic 4 Other, specify	None Detected	None Detected	
Nonfibrous Material 1 Calcite 2 Gypsum 3 Quartz 4 Other, specify	2 - 40% Vermiculite 40%	2 - 40% Sand - 50% Vermiculite 10%	

Analyst James C. Kessler

Date 10/18/87

Comments \_\_\_\_\_  
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