INSPECTION REPORT

ASBESTOS

SEATTLE, WA - RIVERTON HEIGHTS STATION

15250 32ND AVENUE S

SEATAC, WA 98188-9998

ACKNOWLEDGEMENT

This report was prepared by Maxim Technologies, Inc. utilizing a report format created by the United States Postal Service (USPS) in the Microsoft software program "Access" Version 4.2, dated October 21, 1996, and was presented to the USPS in both hard copy and electronic, diskette format. Additional information concerning this program, the report format, and instructions for obtaining survey data electronically can be obtained from Mr. Daniel Bryant, USPS Western Area, Denver 303/391-5189. Because this report can be electronically updated following any asbestos abatement project, the user should be certain that the copy of the report in use is the most current version. Additional information can be obtained from your District Environmental Coordinator.

UNITED STATES POSTAL SERVICE
ASBESTOS SURVEY

SURVEY CONTRIBUTORS / CONTRACT INFORMATION

USER AGENCY:	**United States Postal Service**
FACILITY NAME:	**Seattle, WA - Riverton Heights Station Post Office**
FINANCE/SUB #:	**547616/615**
FACILITY ADDRESS:	**15250 32nd Avenue S** **P.O. Box 9998** **SeaTac, WA 98188-9998**
FACILITY TELEPHONE #:	**(206) 242-0022**
USPS SITE CONTACT:	**Mr. Bill Chambers**
DATE OF SURVEY:	**05/13/1997**
CONSULTING FIRM NAME:	**Maxim Technologies, Inc.**
CONSULTING FIRM ADDRESS:	**1610 B Street** **P.O. Box 4699** **Helena, MT 59604-4699**
CONSULTING FIRM PHONE #:	**(406) 443-5210**
CONTRACT NUMBER:	**072976-95-B-0004**
PROJECT NUMBER:	**5609702640.A1**
WORK ORDER NUMBER:	**742.00**
LABORATORY ADDRESS:	**Maxim Technologies, Inc.** **600 South 25th Street** **Billings, MT 59101-4549**
LABORATORY PHONE #:	**(406)248-9161**

The following Asbestos Survey Report was compiled and written by:

Inspector's Signature: Tom Weaver by SH

Tom Weaver

EPA Accredited Building Inspector

State Accreditation No.: **Vermont 97-1123: Expiration 4/98**

This Asbestos Survey was reviewed by:

Certified Industrial Hygienist Signature: Kathleen A. Smit by DD

Kathleen A. Smit

Certified Industrial Hygienist

ABIH Cert. #: **2700**

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INTRODUCTION

An inspection of the Seattle, WA - Riverton Heights Station Post Office located at 15250 32nd Avenue S, P.O. Box 9998 SeaTac, WA 98188-9998, was conducted to identify friable and nonfriable known or suspected asbestos-containing building materials (ACBM). The scope of the inspection included:

1) Pre-survey Tasks

· Inform employees, management, and union representatives, of the ACBM inspection process.

· Review existing as-built drawings and develop a preliminary sampling plan.

2) An ACBM Inspection

· Inspect, identify, and sample suspect ACBM

· Photographic documentation of ACBM

3) A report documenting sampling procedures and results of ACBM

EXECUTIVE SUMMARY

Maxim Technologies, Inc. was retained by the United States Postal Service to perform asbestos inspection services at the Seattle, WA - Riverton Heights Station Post Office located at 15250 32nd Avenue S, SeaTac, WA 98188-9998. No previous asbestos survery is known to have been performed at this facility.

The Seattle, WA - Riverton Heights Station Post Office was constructed in 1974. The facility is a single-story, slab-on-grade, brick structure with 17,214 square feet of building space. Interior finishes observed at the facility consist of brick, sheetrock and plaster walls, sheetrock and panelled ceilings, and vinyl tile floors with rubber wall base moldings. The facility is heated by an oil-fired hot water forced air furnace. Pipes and pipe fittings observed at the facility are insulated with fiberglass and thermal insulation joint compound. The roof is a flat Firestone Single Ply Roofing Membrane System.

Asbestos

Maxim Technologies, Inc. conducted an asbestos inspection at the Seattle, WA - Riverton Heights Station Post Office on 5/13/97. The following homogeneous areas of asbestos-containing building materials were identified through laboratory analysis, or have been assumed asbestos-containing according to the USPS statement of work dated 10/21/96. For particular locations see C.2. and C.3.

Materials Confirmed or Assumed to Contain Asbestos

12" x 12" Floor Tile	12" x 12" Cream Floor Tile
12" x 24" Floor Tile	12" x 24" Black Floor Plank
Mastic under Floor Tile/etc.	Mastic Under 12" x 12" Cream Floor Tile
Mastic under Floor Tile/etc.	Mastic Under 12" x 24" Black Floor Plank
Roofing Materials	Roofing Membrane System - Asphaltic Material Under Membrane Assumed Positive
Stucco	Stucco Facia at Top of Wall - Assumed Positive
Undercoating-S.S.Sinks-etc.	Undercoating on Sink

All asbestos-containing materials observed at the facility were in good condition and activities that would render the materials friable should be avoided. Damaged, friable ACBM requiring immediate management action were not observed.

Based on Maxim's assessment of the building, we recommend that a formal, written operations and maintenance program be developed to assist in maintaining the ACBM within the building. This program would include provisions for the routine reinspection of the identified ACBM, appropriate maintenance and cleaning procedures for the facility and a method for informing in-house and contract workers of the hazards associated with the ACBM, as well as proper work methods. The presence of ACBM within the building should be included in the hazard communication information provided to all building occupants and USPS personnel.

The roofing system and stucco of the facility were not sampled. They were observed to be in good condition and their integrity was not compromised by sampling. The roofing and stucco materials are assumed to be ACBM. Maxim also recommends that prior to disturbance, removal or disposal of the roofing system that samples be collected and analyzed for asbestos content.

PURPOSE AND SCOPE OF WORK

The purpose of this survey is to determine the amount, location, and condition of all friable and non-friable ACBMs located in the Seattle, WA - Riverton Heights Station Post Office located at 15250 32nd Avenue S, SeaTac,WA . Once ACBMs are identified, recommended response actions (based upon Hazard Rankings) are included for each Homogeneous Material in each Functional Space.

BUILDING CHARACTERIZATION

A.1. SECTION SUMMARY

The Building Information Report (Section A.2.) provides information on the age of the facility, type of construction, and type of heating ventilation and cooling system employed along with the facility's typical hours of operation and percentage of the facility surveyed.

The Functional Area Summary (Section A.3.) lists the Floor and Room number and Description of all Functional Areas addressed in this Survey.

A Site Location Map and a Floor Plan Layout for the Facility (Sections A.4. and A.5.) are also found in this section. Actual homogeneous areas and functional spaces are identified in the floor plan. Floor plans relate directly to all following sections and will assist with identifying asbestos locations described in Section C.

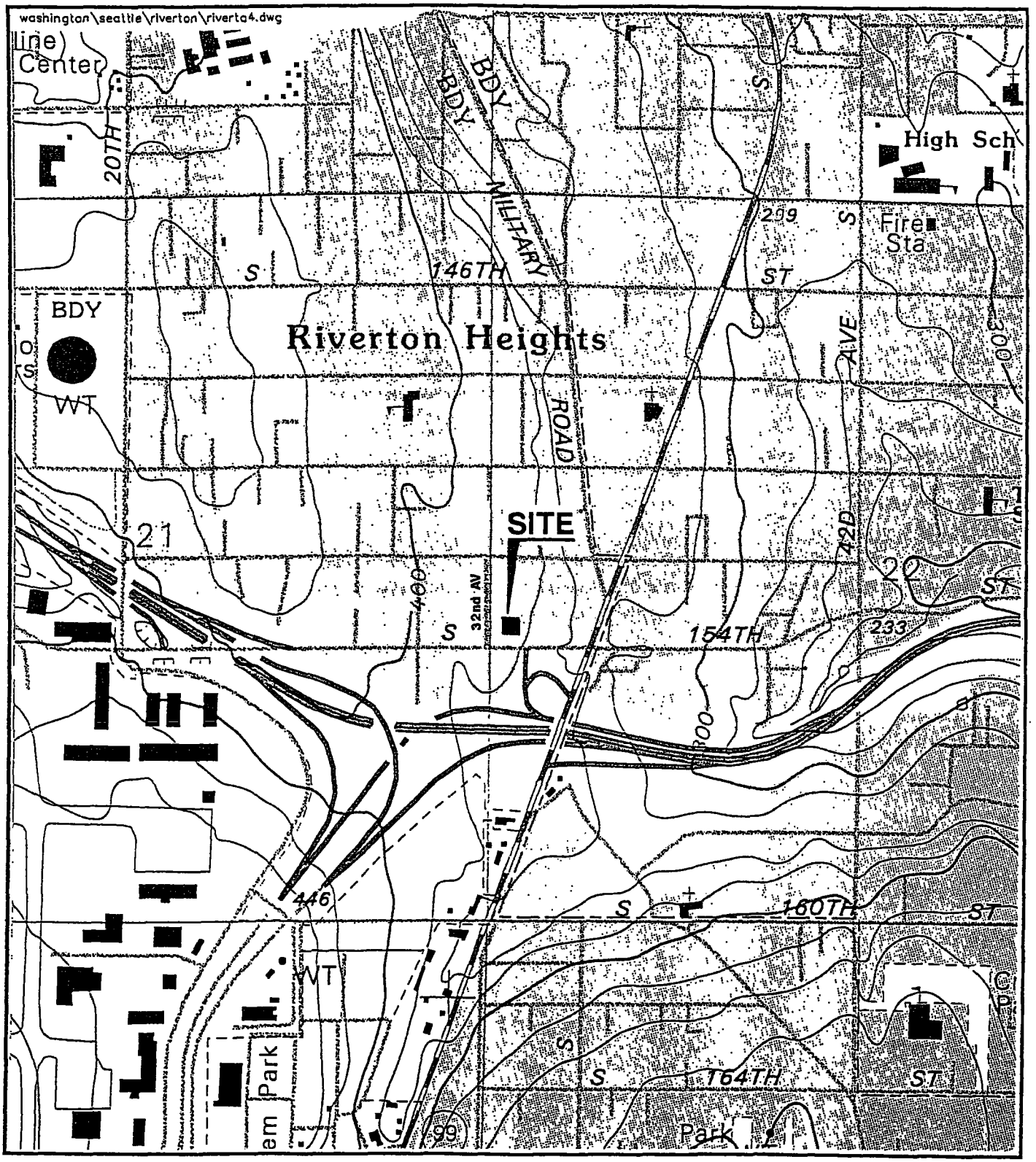
A.2. BUILDING INFORMATION

FACILITY ID:	547616/615
CLIENT:	UNITED STATES POSTAL SERVICE
USPS CONTRACT WORK:	Maxim Technologies, Inc.,5609702640.A1
WORK ORDER #:	742.00
FACILITY NAME:	Seattle, WA - Riverton Heights Station Post Office
ADDRESS:	15250 32nd Avenue S P.O. Box 9998 SeaTac, WA 98188-9998
TELEPHONE:	(206) 242-0022
CONTACT NAME:	Mr. Bill Chambers
DATE OF INSPECTION:	05/13/1997
ON-SITE INSPECTORS:	Tom Weaver
DATE(S) OF CONSTRUCTION:	1974
PORTION OF BUILDING INSPECTED (PERCENTAGE):	100%
SQUARE FOOTAGE:	17,214
BUILDING CONSTRUCTION:	Brick, Slab on Grade
HVAC SYSTEM:	Oil-Fired Hot Water Forced Air
HOURS OF OPERATION:	8:30 AM - 3:30 PM (M-F)
FACILITY DRAWINGS AVAILABLE	No
FMS (FVS) PRINTOUT:	No

A.3. FUNCTIONAL AREA SUMMARY

Floor:	Room:	Desc of Functional Area:	Comments:
1st	101	LOBBIES	Box Lobby
1st	102	LOBBIES	Service Lobby
1st	103	WORK-ROOM/MAIL PROC.	Work Room
1st	104	OFFICES/COMP. ROOMS	Manager's Office
1st	105	VAULTS/ACCT. PAPERS	Vault
1st	106	LOADING DOCK/STORAGE	Supply Room
1st	107	LOADING DOCK/STORAGE	Storage Room
1st	108	LOADING DOCK/STORAGE	Mail Vestibule
1st	109	JANITOR CLOSET	Janitor Closet
1st	110	KITCHEN AREA	Lunch Room
1st	111	LOCKER ROOMS	Men's Locker Room
1st	112	RESTROOMS	Men's Restroom
1st	113	LOCKER ROOMS	Women's Locker Room
1st	114	RESTROOMS	Women's Restroom
1st	115	ENTRANCES AND EXIT AREAS	Entrance Vestibule
1st	116	LOADING DOCK/STORAGE	Loading Dock
1st	117	BOILER/CHILLER ROOMS	Boiler/Chiller Room
1st	118	L.O.G.	Look Out Gallery
1st	119	ROOFS, SIDING AND PANELING	Exterior
2nd	200	ROOFS, SIDING AND PANELING	Roof
CST	COST		CONSULTANT'S COST

A.4. SITE LOCATION MAP



From USGS 7.5' Des Moines Quad

MAXIM 5609702640.A1

Contract No.: 072976-95-B-0004	Location Map
Work Order No.: 742.00	U.S. Postal Service - Asbestos Survey
Finance No.: 547616/615	Riverton Heights Station, SeaTac, Washington
Date: August 1997	FIGURE A.4

A.5. FLOOR PLAN LAYOUT FOR FACILITY

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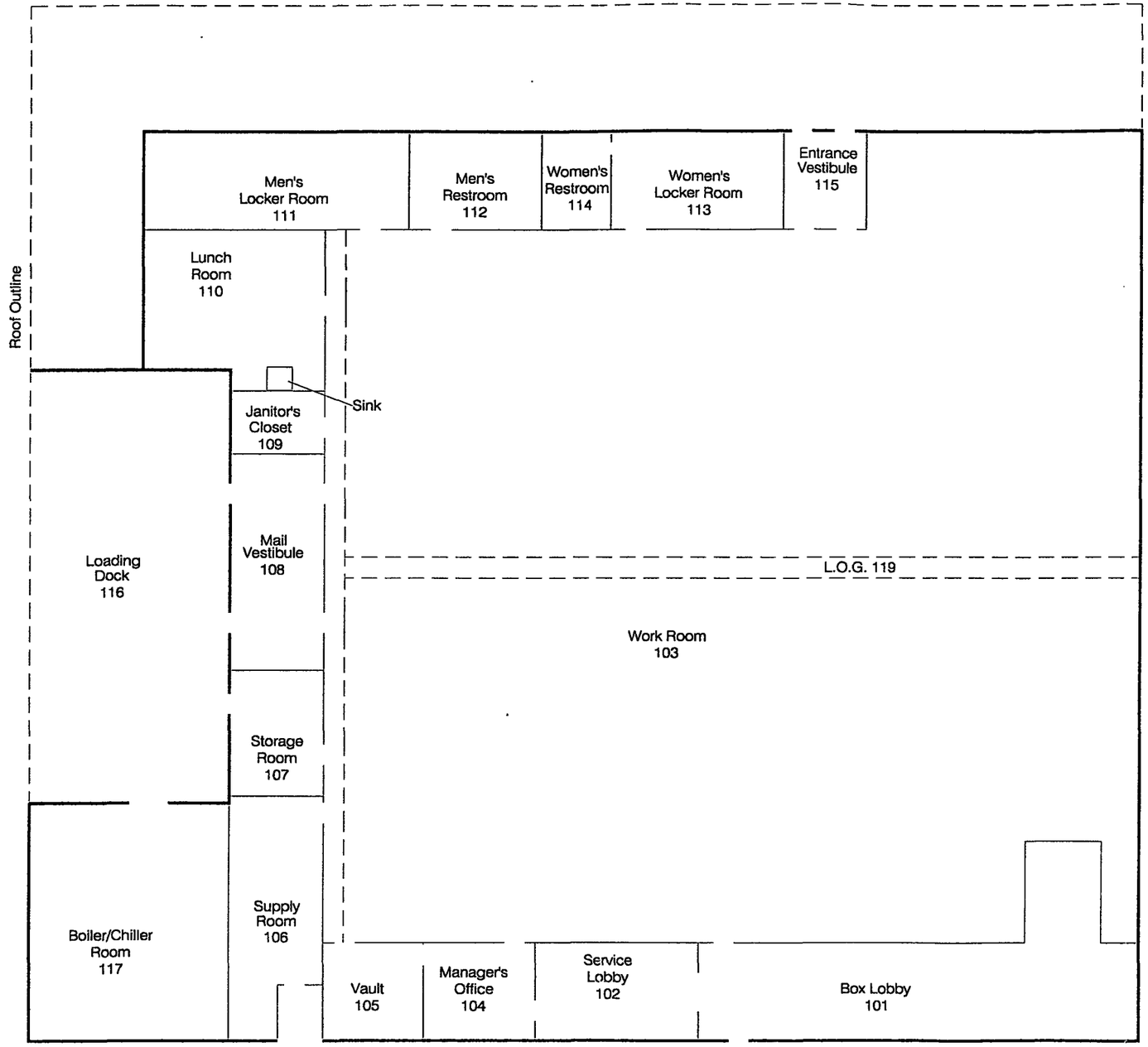


N

0 Feet 18

Note
Functional Area 118 is the Exterior
Functional Area 200 is the Roof

MAXIM 5609702640.A1

Contract No.: 072976-95-B-0004	Floor Plan
Work Order No.: 742.00	U.S. Postal Service - Asbestos Survey
Finance No.: 547616/615	Riverton Heights Branch, SeaTac, Washington
Date: June 1997	FIGURE A.5

SECTION B

FUNCTIONAL AREA REVIEW DESCRIPTION

B.1. SECTION SUMMARY

This Section explains the entries in Section C.3. Examples of Functional Area categories are provided in Section G: References "General Categories of Functional Areas". The facility Functional Areas (by floor) are described in the Section A.3.

B.2. FUNCTIONAL AREA SURVEY

In Section C, the reader will find the inspection data in detail organized by Functional Floor and Area Location. Section A.3. provides the Functional Area Summary for the facility.

FUNCTIONAL AREA

The floor and location number together make up the functional space identification.

FUNCTIONAL AREA DESCRIPTION

This describes the use of the functional area.

HOMOGENEOUS MATERIAL DESCRIPTION

This column will provide a description of the material which will consider such factors as size, application, and color. This description will also aid in distinguishing between different homogeneous materials within a functional area.

SACBM

Suspected Asbestos-Containing Building Materials (SACBM) are materials identified for sampling which may or may not be regulated ACBM.

Thermal System Insulation (TSI) is any insulation applied to heating or mechanical system components.

Surfacing material (S) refers to a wide range of products applied to building surfaces.

Floor Covering (F).

Miscellaneous Material (M) is any material not included in the first three (3) categories.

QUANTITY

This will have the approximate linear footage (LF), square footage(SF) or number of insulated fittings (FTGS) of ACBM.

IS THE MATERIAL FRIABLE?

Y = Yes N = No

ASSOCIATED BULK SAMPLE No.

This will list the sample number associated with the particular material.

RISK ASSESSMENT/HAZARD RANKING

Each known or assumed asbestos-containing material is assessed for condition. The Hazard Potential Classification Decision Tree is presented in Section G, References. It identifies the procedure for assigning hazard rankings of materials as related to the degree of damage observed.

B.2. FUNCTIONAL AREA SURVEY (Continued)

In Table C.3. a Hazard Ranking of 0 means the material is not asbestos (I.e. not regulated - less than or equal to one percent). A Hazard Ranking of 1 to 7 in Table C.3, means that the material is asbestos (greater than one percent).

B.3. REPRESENTATIVE LIST OF MATERIALS LIKELY TO CONTAIN ASBESTOS

T.S.I.

NE	T1 Gasket Materials
S	T2 Pipe Joint Insulation
NE	T3 Straight Pipe Insulation
NE	T4 HVAC Connector Material (adjoining air ducts)
NE	T5 Tank Insulation
NE	T6 Boiler Insulation
NE	T7 Boiler Breaching / Ductwork / Firebrick
NE	T8 Duct Insulation
NE	T9 Patching Material

SURFACING MATERIALS (SPRAY-ON)

NE	S1 Surfaced-Sprayed, Applied or Troweled-on Materials, Ceilings and Beams
NE	S2 Spray-on Fireproofing

MISCELLANEOUS MATERIALS

NE	M1 Roofing Materials (*only sample without damage to the roofing material*)
NE	M2 Exterior Siding Material
S	M3 Wallboard / Taping Material
NE	M4 Transite (cooling tower on roof, soffits, pipes, etc.)
S	M5 Ceiling Panels (special attention to dock areas)
NE	M6 Ceiling Tiles
S	M7 Plaster
NE	M8 Caulking
NE	M9 Fire Door Insulation (assumed to be ACM if fire doors are present)
S	M10 Undercoating / Stainless Steel Sinks / etc.
NE	M11 Electrical Insulation
S	M12 Baseboard
NE	M13 Tile Debris
NE	M14 Metalbestos Chimney
S	M15 Stucco
S	M16 Other

FLOOR COVERING

NE	F1 Linoleum (seamless floor covering)
S	F2 12" x 12" Floor Tile
NE	F3 9" x 9" Floor Tile
S	F4 12" x 24" Floor Plank
S	F5 Mastic under Floor Tile / Seamless / Ceiling Tiles / Carpet / Plank-Tile

S **Inspector collected (a) bulk sample(s) of the material**

NE **Material was not observed to be present during inspection**

SECTION C

ASBESTOS LOCATIONS

C.1. SECTION SUMMARY

This section contains the heart of this exercise. Herein lies the comprehensive list of survey results for the facility. The data allows the reader to determine the specific areas of the facility which harbor asbestos. The material is also characterized as to type and risk. Section G (Response Actions Based on Hazard Ranking) explains the risk assessment assignment process. Section B.2 provides definitions of C.3 Table Terms.

· In Section C.3. (Table) a Risk Assessment/Hazard Ranking of zero (0) means that the material is not asbestos (i.e. less than or equal to one percent - not regulated).

· A Risk Assessment/Hazard Ranking entry of one (1) to seven (7) in Section C.3. means that the material is asbestos.

· Homogeneous Materials can only be identified from Section C.3. by reviewing both the entry under the Homogeneous Material Description column and the associated Comment column entry for any room number.

· A Homogeneous Material can appear in multiple Functional Areas. A Homogeneous Material which appears in multiple Function Areas may not be sampled in each Functional Area in which it appears.

C.2. ACBM HOMOGENEOUS AREA LOCATIONS FLOOR PLANS

C.3. Homogeneous Material Summary By Functional Floor and Area Locations

Facility Name: **Seattle, WA - Riverton Heights Station Post Office**

Address: **15250 32nd Avenue S**

City, State, ZIP Code: **SeaTac, WA 98188-9998**

Finance No./Sub-Loc. No **547616/615**

Date of Inspection: **05/13/1997**

Site Inspected By: **Tom Weaver**

Floor No	Room No	Functional Area	SACBM Type	Homogeneous Material Description	QTY	ACBM	Friable	Associated Bulk Sample No	Risk Assess./ Hazard Ranking	Comments
1st	101	Lobbies	M	Ceiling Panels	0	No	No	M5.1A,B,C	0	2' x 4' White Fissured Ceiling Panel
1st	101	Lobbies	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls
1st	102	Lobbies	F	12" x 12" Floor Tile	426	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	102	Lobbies	F	Mastic under Floor Tile/etc.	426	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	102	Lobbies	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	102	Lobbies	M	Ceiling Panels	0	No	No	M5.1A,B,C	0	2' x 4' White Fissured Ceiling Panel
1st	102	Lobbies	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls
1st	103	Work-Room/Mail Proc.	F	12" x 24" Floor Tile	10700	Yes	No	F4.1A,B,C	1b	12" x 24" Black Floor Plank
1st	103	Work-Room/Mail Proc.	F	Mastic under Floor Tile/etc.	10700	Yes	No	F5.2A,B,C	1b	Mastic Under 12" x 24" Black Floor Plank
1st	103	Work-Room/Mail Proc.	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	103	Work-Room/Mail Proc.	M	Ceiling Panels	0	No	No	M5.1A,B,C	0	2' x 4' White Fissured Ceiling Panel
1st	103	Work-Room/Mail Proc.	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	103	Work-Room/Mail Proc.	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls
1st	104	Offices/Comp. Rooms	F	12" x 12" Floor Tile	194	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	104	Offices/Comp. Rooms	F	Mastic under Floor Tile/etc.	194	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile

A Risk Assessment/Hazard Ranking of zero (0) means that the material is not Asbestos (less than or equal to one percent - not regulated). A Risk Assessment/Hazard Ranking of one (1) to seven (7) means that the Material is Asbestos.

Floor No	Room No	Functional Area	SACBM Type	Homogeneous Material Description	QTY	ACBM	Friable	Associated Bulk Sample No	Risk Assess./ Hazard Ranking	Comments
1st	104	Offices/Comp. Rooms	M	Baseboard	0	No	No	M12.2A,B,C	0	Mastic Under 4" Brown Wall Base
1st	104	Offices/Comp. Rooms	M	Ceiling Panels	0	No	No	M5.1A,B,C	0	2' x 4' White Fissured Ceiling Panel
1st	104	Offices/Comp. Rooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls
1st	105	Vaults/Acct. Papers	F	12" x 12" Floor Tile	137	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	105	Vaults/Acct. Papers	F	Mastic under Floor Tile/etc.	137	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	105	Vaults/Acct. Papers	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	106	Loading Dock/Storage	F	12" x 12" Floor Tile	385	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	106	Loading Dock/Storage	F	Mastic under Floor Tile/etc.	385	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	106	Loading Dock/Storage	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	106	Loading Dock/Storage	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	106	Loading Dock/Storage	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls And Ceiling
1st	107	Loading Dock/Storage	F	12" x 12" Floor Tile	228	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	107	Loading Dock/Storage	F	Mastic under Floor Tile/etc.	228	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	107	Loading Dock/Storage	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	107	Loading Dock/Storage	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	107	Loading Dock/Storage	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls And Ceiling
1st	108	Loading Dock/Storage	F	12" x 24" Floor Tile	390	Yes	No	F4.1A,B,C	1b	12" x 24" Black Floor Plank
1st	108	Loading Dock/Storage	F	Mastic under Floor Tile/etc.	390	Yes	No	F5.2A,B,C	1b	Mastic Under 12" x 24" Black Floor Plank
1st	108	Loading Dock/Storage	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	108	Loading Dock/Storage	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	108	Loading Dock/Storage	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls And Ceiling
1st	109	Janitor Closet	F	12" x 12" Floor Tile	104	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	109	Janitor Closet	F	Mastic under Floor Tile/etc.	104	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile

A Risk Assessment/Hazard Ranking of zero (0) means that the material is not Asbestos (less than or equal to one percent - not regulated). A Risk Assessment/Hazard Ranking of one (1) to seven (7) means that the Material is Asbestos.

Floor No	Room No	Functional Area	SACBM Type	Homogeneous Material Description	QTY	ACBM	Friable	Associated Bulk Sample No	Risk Assess./ Hazard Ranking	Comments
1st	109	Janitor Closet	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	109	Janitor Closet	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	109	Janitor Closet	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls And Ceiling
1st	110	Kitchen Area	F	12" x 12" Floor Tile	572	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	110	Kitchen Area	F	Mastic under Floor Tile/etc.	572	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	110	Kitchen Area	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	110	Kitchen Area	M	Undercoating-S.S.Sinks-etc.	14.6	Yes	No	M10.1A,B,C	3	Undercoating on Sink
1st	110	Kitchen Area	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls And Ceiling
1st	111	Locker Rooms	F	Mastic under Floor Tile/etc.	481	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	111	Locker Rooms	M	12" x 12" Floor Tile	481	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	111	Locker Rooms	M	Baseboard	0	No	No	M12.A,B,C	0	Mastic Under 4" Black Wall Base
1st	111	Locker Rooms	M	Plaster	0	No	No	M7.1A,B,C	0	Painted Plaster - LOG Walls
1st	111	Locker Rooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	112	Restrooms	F	12" x 12" Floor Tile	0	No	No	None Taken	0	12" x 12" Self-Adhesive Vinyl Tile on Wall
1st	112	Restrooms	F	Ceramic Tile - Not Suspect	0	No	No	None Taken	0	Ceramic Floor Tile - Not Suspect
1st	112	Restrooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	113	Locker Rooms	F	12" x 12" Floor Tile	332	Yes	No	F2.1A,B,C	1b	12" x 12" Cream Floor Tile
1st	113	Locker Rooms	F	Mastic under Floor Tile/etc.	332	Yes	No	F5.3A,B,C	1b	Mastic Under 12" x 12" Cream Floor Tile
1st	113	Locker Rooms	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	113	Locker Rooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	114	Restrooms	F	Ceramic Tile -Not Suspect	0	No	No	None Taken	0	Ceramic Floor Tile - Not Suspect
1st	114	Restrooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	115	Entrances and Exit Areas	F	12" x 24" Floor Tile	139	Yes	No	F4.1A,B,C	1b	12" x 24" Black Floor Plank

A Risk Assessment/Hazard Ranking of zero (0) means that the material is not Asbestos (less than or equal to one percent - not regulated). A Risk Assessment/Hazard Ranking of one (1) to seven (7) means that the Material is Asbestos.

C.3. Homogeneous Material Summary By Functional Floor and Area Locations

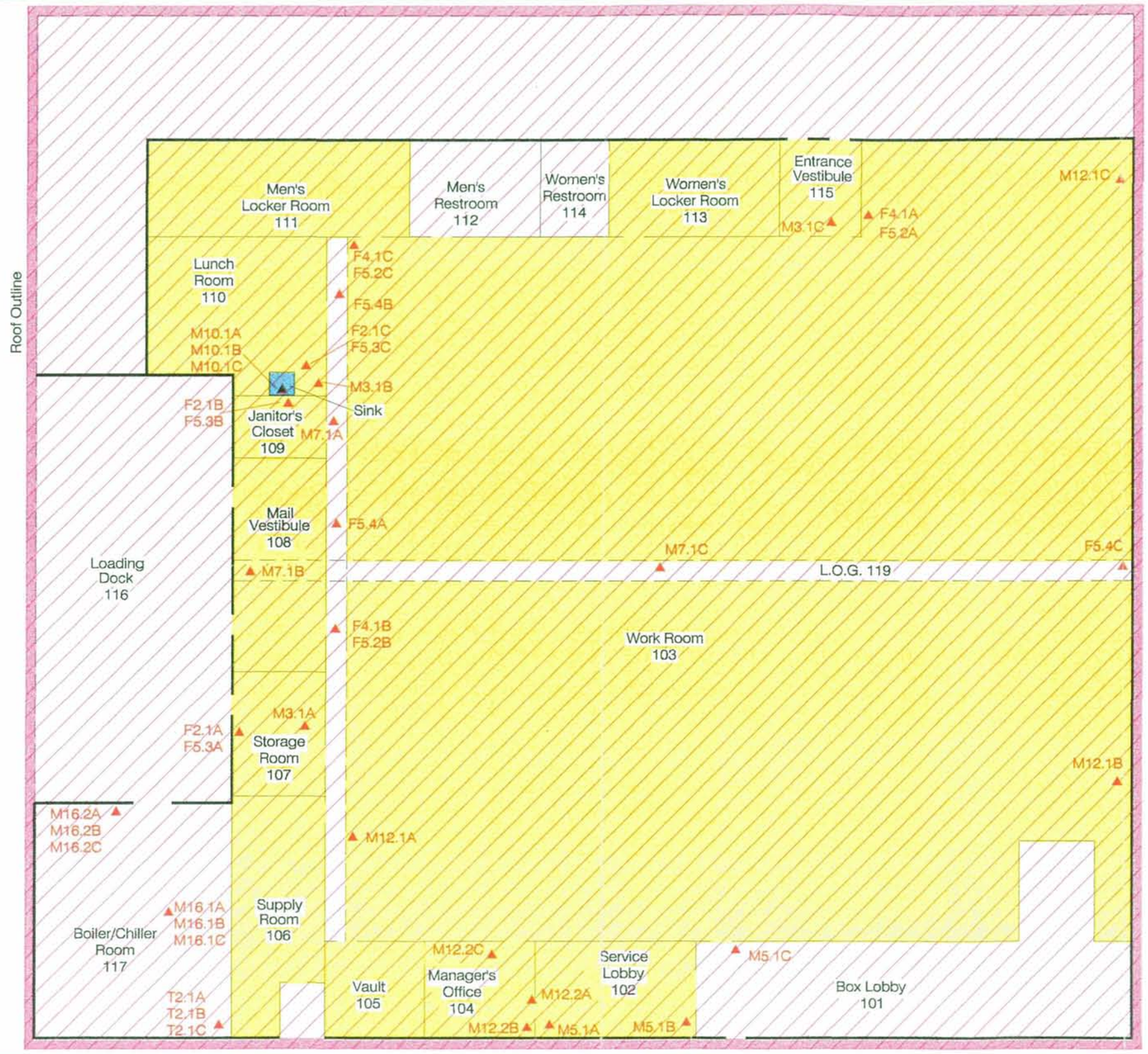
Floor No	Room No	Functional Area	SACBM Type	Homogeneous Material Description	QTY	ACBM	Friable	Associated Bulk Sample No	Risk Assess./ Hazard Ranking	Comments
1st	115	Entrances and Exit Areas	F	Mastic under Floor Tile/etc.	139	Yes	No	F5.2A,B,C	1b	Mastic Under 12" x 24" Black Floor Plank
1st	115	Entrances and Exit Areas	M	Baseboard	0	No	No	M12.1A,B,C	0	Mastic Under 4" Black Wall Base
1st	115	Entrances and Exit Areas	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	116	Loading Dock/Storage	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Ceiling
1st	117	Boiler/Chiller Rooms	M	Coating Over Insulation	0	No	No	M16.2A,B,C	0	Coating Over Fiberglass Pipe Insulation
1st	117	Boiler/Chiller Rooms	M	Vibration Isolator	0	No	No	M16.1A,B,C	0	Vibration Isolator
1st	117	Boiler/Chiller Rooms	M	Wallboard/Taping Material	0	No	No	M3.1A,B,C	0	Walls and Ceiling
1st	117	Boiler/Chiller Rooms	T	Pipe Joint Insulation	0	No	No	T2.1A,B,C	0	Cold Water Pipe Joint Insulation
1st	118	L.O.G.	F	Mastic under Floor Tile/etc.	0	No	No	F5.4A,B,C	0	Mastic Under Brown Carpet
1st	118	L.O.G.	M	Plaster	0	No	No	M7.1A,B,C	0	Walls and Ceiling
1st	119	Roofs, Siding and Paneling	M	Stucco	2432	Yes	No	None Taken	1b	Stucco Facia at Top of Wall - Assumed Positive
2nd	200	Roofs, Siding and Paneling	M	Roofing Materials	24000	Yes	No	None Taken	1b	Roofing Membrane System - Asphaltic Material Under Membrane Assumed Positive

22

A Risk Assessment/Hazard Ranking of zero (0) means that the material is not Asbestos (less than or equal to one percent - not regulated). A Risk Assessment/Hazard Ranking of one (1) to seven (7) means that the Material is Asbestos.

C.3. Homogeneous Material Summary By Functional Floor and Area Locations

d: \washington\seattle\rivertonheights\rvrtnhtc2.dwg



N

0 Feet 18

Note
Functional Area 118 is the Exterior
Functional Area 200 is the Roof

ACBM (floor tile and mastic)

ACBM (undercoat on sink)

ACBM (stucco - assumed positive)

Suspect ACBM Sample Location

ACBM (roof - assumed positive)

Contract No.: 072976-95-B-0004	ACBM Homogenous Area Locations
Work Order No.: 742.00	U.S. Postal Service - Asbestos Survey
Finance No.: 547616/615	Riverton Heights Branch, SeaTac, Washington
Date: June 1997	FIGURE C.2

MAXIM 5609702640.A1

SECTION D

BULK SAMPLING

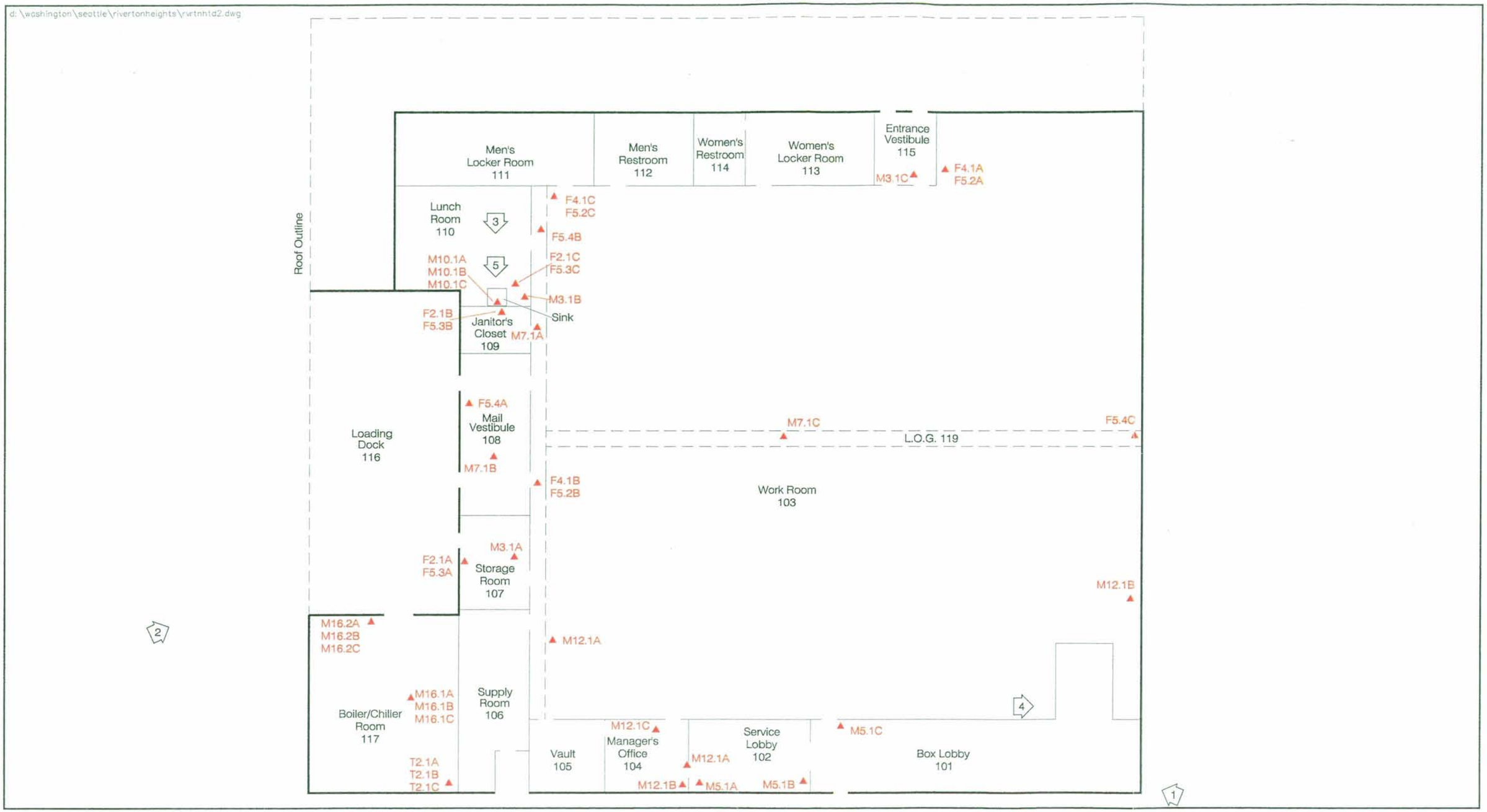
D.1. SECTION SUMMARY

This section documents the proper handling of collected bulk samples (D4.) and provides associated analytical results (D3.).

Section D.2. provides a facility floor plan where all bulk sample collections and photographs are identified by photograph and sample numbers. Sampling followed AHERA protocols. The method of analysis is contained within the laboratory's report.

D.2. BULK SAMPLE AND PHOTOGRAPH LOCATIONS

d: \washington\seattle\rivertonheights\rvrtnhtd2.dwg



N

0 Feet 18

Note
Functional Area 118 is the Exterior
Functional Area 200 is the Roof

▲ Suspect ACBM Sample Location

1 Photo Number and Location

Contract No.: 072976-95-B-0004	Bulk Sample and Photograph Locations
Work Order No.: 742.00	U.S. Postal Service - Asbestos Survey
Finance No.: 547616/615	Riverton Heights Branch, SeaTac, Washington
Date: June 1997	FIGURE D.2

MAXIM 5609702640.A1

D.3. BULK SAMPLE ANALYSIS RESULTS

Maxim

600 South 25th Street
P O Box 30615
Billings, MT 59107
(406) 248-9161
FAX (406) 248-9282

TECHNICAL REPORT

REPORT TO: UNITED STATES POSTAL SERVICE
SEATTLE DISTRICT
415 1ST AVENUE NORTH
SEATTLE WA 98109-9991

DATE: June 5, 1997
JOB NUMBER: 94-943
SHEET: 1 of 6
INVOICE NO.: G4018

REPORT OF: Building Material Analysis - USPS - Riverton Heights Station - Platinum #5609702640.A1

SAMPLE IDENTIFICATION:

On May 21, 1997, our laboratory received 42 building material samples from Tom Weaver. A completed chain of custody record was received which identified the above referenced project as the source of the samples. Our laboratory assigned laboratory numbers 114653 through 114694 to the samples. This analysis was performed using an Olympus BH-2 polarizing microscope at magnifications of 40X to 400X in general accordance with EPA Method 600/R4-93-116, July 1993, which employs polarized light microscopic techniques with dispersion staining for identification of mineral forms of asbestos.

There are currently six types of mineral fiber that are regulated as asbestos minerals. These are divided into two categories: serpentine asbestos and amphibole asbestos. Serpentine asbestos is called chrysotile, which is the most commonly encountered type of asbestos in the United States. Five of the asbestos minerals are amphiboles. Included in this group are fibrous grunerite (amosite), fibrous riebeckite (crocidolite), fibrous anthophyllite, fibrous tremolite and fibrous actinolite. All reported percentages are by volume estimates.

The EPA test method for bulk analysis (EPA/600/R-93/116) states in paragraph 2.2.2. that "the detection limit for visual estimation is a function of the quantity of sample analyzed, the nature of matrix interference, sample preparation, and fiber size and distribution. Asbestos may be detected in concentrations of less than one percent by area if sufficient material is analyzed. Samples may contain fibers too small to be resolved by PLM (<0.25 micrometers in diameter) so detection of those fibers by this method may not be possible".

In the case of nonhomogeneous samples (samples which contain more than one visually distinct material which is not mixed), concentrations of materials are given for each layer and composite values are given for the entire sample. The quantification of asbestos in the sample is intended to be a volume estimate only. The concentrations of various components reported for these samples are intended to represent the materials received at our laboratory for testing only. Variations in the concentrations due to the limitations of the visual test method, equipment, and operator are given below. For the range:

1 - 10%, true concentrations may vary ±5% from the reported value
10 - 50%, true concentrations may vary ±10% from the reported value
50 - 100%, true concentrations may vary ±10% from the reported value

According to the National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision Final Rule in the Federal Register, Volume 55, Number 224 dated November 20, 1990, any friable material containing less than 10 percent asbestos by the Polarized Light Microscopy (PLM) Method is recommended to be verified by the Point Count Method using PLM. Friable asbestos material means any material containing more than one percent asbestos as determined by the visual PLM method, that when dry can be crumbled, pulverized or reduced to powder with hand pressure. This rule applies to building renovations and demolitions.

The U.S. EPA Clarification of the Asbestos NESHAP Requirement to perform Point Counting dated May 8, 1991 states:

- First, that a sample which contains no asbestos by visual PLM does not have to be point counted.
- Second, the owner or operator of the building may choose to assume the asbestos amount to be greater than one percent and treat the material as asbestos containing material (ACM) or require point counting for verification.
- Third, if a result obtained by point counting is different from a result obtained by visual estimation, the point count result will be used.

We will hold the samples for sixty (60) days in the event you choose to have future analysis performed on any sample containing less than 10 percent asbestos.

The results are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable.

On April 1, 1989, our laboratory was assigned "accredited" status by the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program, (NVLAP).

Analyzed by: Mike Atness

Reviewed by: Debbie Dilley

rmr

Maxim

BUILDING MATERIAL ANALYSIS
ASBESTOS CONTENT

USPS - RIVERTON HEIGHTS STATION
5609702640.A1

June 5, 1997
Job No. 94-943
Sheet 3 of 6

Lab No.	Sample Identification	Sample Description	Asbestos Identification and Estimated Quantity	Non-Asbestos Fibrous Material Identification and Estimated Quantity
114653	M3.1A; sheetrock and joint compound, Room 107	Two layers: 1) White crystalline solid w/woven layer (90%) 2) White fibrous layer (10%)	None Detected None Detected	2% Fibrous Glass 98% Nonfibrous Binder 90% Cellulose 10% Nonfibrous Binder
114654	M3.1B; sheetrock and joint compound, Room 103	Three layers: 1) White crystalline solid w/paint (20%) 2) White/tan fibrous layer (50%) 3) White chalky solid (30%)	None Detected None Detected None Detected	<1% Fibrous Glass 99% Nonfibrous Binder 90% Cellulose 10% Nonfibrous Binder 1% Fibrous Glass 99% Nonfibrous Binder
114655	M3.1C; sheetrock and joint compound, Room 110	Three layers: 1) White crystalline solid (5%) 2) White/tan fibrous layer (60%) 3) White chalky solid (35%)	None Detected None Detected None Detected	100% Nonfibrous Binder 90% Cellulose 10% Nonfibrous Binder 1% Fibrous Glass 99% Nonfibrous Binder
114656	M5.1A; 2'x4' white fissure ceiling panel, Room 102	One layer: 1) Beige fibrous solid (100%)	None Detected	30% Cellulose 40% Mineral Wool 30% Nonfibrous Binder and Perlite
114657	M5.1B; 2'x4' white fissure ceiling panel, Room 102	One layer: 1) Beige fibrous solid (100%)	None Detected	30% Cellulose 40% Mineral Wool 30% Nonfibrous Binder and Perlite
114658	M5.1C; 2'x4' white fissure ceiling panel, Room 101	One layer: 1) Beige fibrous solid (100%)	None Detected	30% Cellulose 40% Mineral Wool 30% Nonfibrous Binder and Perlite
114659	M12.1A; mastic under black baseboard, Room 104	One layer: 1) Brown resinous solid (100%)	None Detected	<1% Talc 99% Nonfibrous Binder

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BUILDING MATERIAL ANALYSIS
ASBESTOS CONTENT

USPS - RIVERTON HEIGHTS STATION
5609702640.A1

June 5, 1997
Job No. 94-943
Sheet 4 of 6

Lab No.	Sample Identification	Sample Description	Asbestos Identification and Estimated Quantity	Non-Asbestos Fibrous Material Identification and Estimated Quantity
114660	M12.1B; mastic under black baseboard, Room 104	One layer: 1) Brown resinous solid (100%)	None Detected	100% Nonfibrous Binder
114661	M12.1C; mastic under black baseboard, Room 104	One layer: 1) Brown resinous solid (100%)	None Detected	100% Nonfibrous Binder
114662	F4.1A; 1'x2' floor plank, Room 103	One layer: 1) Black solid (100%)	35% Chrysotile	65% Nonfibrous Binder
114663	F4.1B; 1'x2' floor plank, Room 103		HOLD - Not Analyzed	
114664	F4.1C; 1'x2' floor plank, Room 103		HOLD - Not Analyzed	
114665	F5.2A; mastic under F4.1, Room 103	One layer: 1) Black resin (100%)	4% Chrysotile	96% Nonfibrous Binder
114666	F5.2B; mastic under F4.1, Room 103		HOLD - Not Analyzed	
114667	F5.2C; mastic under F4.1, Room 103		HOLD - Not Analyzed	
114668	M7.1A; painted plaster, Room 119	One layer: 1) Off-white solid (100%)	None Detected	<1% Cellulose 99% Nonfibrous Binder and Mica
114669	M7.1B; painted plaster, Room 119	One layer: 1) Off-white solid (100%)	None Detected	<1% Cellulose 99% Nonfibrous Binder and Mica
114670	M7.1C; painted plaster, Room 119	One layer: 1) Off-white solid (100%)	None Detected	100% Nonfibrous Binder and Mica
114671	M12.2A; mastic under brown baseboard, Room 103	Two layers: 1) Brown resinous solid (3%) 2) White resin (97%)	None Detected None Detected	100% Nonfibrous Binder 100% Nonfibrous Binder

BUILDING MATERIAL ANALYSIS
ASBESTOS CONTENT

USPS - RIVERTON HEIGHTS STATION
5609702640.A1

June 5, 1997
Job No. 94-943
Sheet 5 of 6

Lab No.	Sample Identification	Sample Description	Asbestos Identification and Estimated Quantity	Non-Asbestos Fibrous Material Identification and Estimated Quantity
114672	M12.2B; mastic under brown baseboard, Room 103	One layer: 1) White resin (100%)	None Detected	100% Nonfibrous Binder
114673	M12.2C; mastic under brown baseboard, Room 104	One layer: 1) White resin (100%)	None Detected	100% Nonfibrous Binder
114674	F2.1A; 12"x12" cream floor tile, Room 107	One layer: 1) Cream solid (100%)	6% Chrysotile	94% Nonfibrous Binder
114675	F2.1B; 12"x12" cream floor tile, Room 109		HOLD - Not Analyzed	
114676	F2.1C; 12"x12" cream floor tile, Room 110		HOLD - Not Analyzed	
114677	F5.3A; mastic under F2.1, Room 107	One layer: 1) Black resin (100%)	15% Chrysotile	85% Nonfibrous Binder
114678	F5.3B; mastic under F2.1, Room 109		HOLD - Not Analyzed	
114679	F5.3C; mastic under F2.1, Room 110		HOLD - Not Analyzed	
114680	M10.1A; coating on bottom of sink, Room 110	One layer: 1) Pink solid (100%)	10% Chrysotile	90% Nonfibrous Binder
114681	M10.1B; coating on bottom of sink, Room 110		HOLD - Not Analyzed	
114682	M10.1C; coating on bottom of sink, Room 110		HOLD - Not Analyzed	
114683	T2.1A; cold water pipe joint insulation, Room 117	One layer: 1) Beige fibrous mass w/woven mat (100%)	None Detected	3% Cellulose 20% Mineral Wool 77% Nonfibrous Binder
114684	T2.1B; cold water pipe joint insulation, Room 117	One layer: 1) Beige fibrous mass (100%)	None Detected	2% Cellulose 20% Mineral Wool 78% Nonfibrous Binder

Maxim

BUILDING MATERIAL ANALYSIS
ASBESTOS CONTENT

USPS - RIVERTON HEIGHTS STATION
5609702640.A1

June 5, 1997
Job No. 94-943
Sheet 6 of 6

Lab No.	Sample Identification	Sample Description	Asbestos Identification and Estimated Quantity	Non-Asbestos Fibrous Material Identification and Estimated Quantity
114685	T2.1C; cold water pipe joint insulation, Room 117	One layer: 1) Beige fibrous mass (100%)	None Detected	1% Cellulose 20% Mineral Wool 79% Nonfibrous Binder
114686	M16.1A; vibration isolator, Room 117	One layer: 1) Woven mat w/black flexible coating (100%)	None Detected	20% Fibrous Glass 80% Nonfibrous Binder
114687	M16.1B; vibration isolator, Room 117	One layer: 1) Woven mat w/black flexible coating (100%)	None Detected	20% Fibrous Glass 80% Nonfibrous Binder
114688	M16.1C; vibration isolator, Room 117	One layer: 1) Woven mat w/black flexible coating (100%)	None Detected	20% Fibrous Glass 80% Nonfibrous Binder
114689	F5.4A; mastic under brown carpet, Room 119	One layer: 1) Brown resinous powder (100%)	None Detected	2% Cellulose 98% Nonfibrous Binder
114690	F5.4B; mastic under brown carpet, Room 119	One layer: 1) Brown resinous powder (100%)	None Detected	2% Cellulose 98% Nonfibrous Binder
114691	F5.4C; mastic under brown carpet, Room 119	One layer: 1) Brown resinous powder (100%)	None Detected	2% Cellulose 98% Nonfibrous Binder
114692	M16.2A; coating of pipe wrapped insulation Room 117	One layer: 1) Tan coating w/fibrous mass & brown resin (100%)	None Detected	10% Cellulose 15% Mineral Wool 75% Nonfibrous Binder
114693	M16.2B; coating of pipe wrapped insulation Room 117	One layer: 1) Two woven mats w/silver foil (100%)	None Detected	10% Cellulose 10% Fibrous Glass 5% Mineral Wool 75% Nonfibrous Binder
114694	M16.2C; coating of pipe wrapped insulation Room 117	One layer: 1) White fibrous mass w/silver foil (100%)	None Detected	10% Cellulose 10% Fibrous Glass 10% Mineral Wool 70% Nonfibrous Binder

D.4. BULK SAMPLE CHAIN OF CUSTODY

HELENA, MONTANA

CHAIN OF CUSTODY RECORD

BULK ASBESTOS AND LEAD SAMPLES

Riverton Heights Station — Building Name

U.S.P.S. SEATTLE DISTRICT — Client Name

5609702640.A1 — Job Number

15250 32ND AVE. SO. Seattle, WA — Building Location/Address

415 1ST AVE NORTH — Client Address

5/19/97 — Date

TOM WEAVER/MAXIM-MISSOULA — Collected By/Send Report To

SEATTLE, WA 98109-9991

10 DAY — Turn Around Time

Laboratory Number	Sample Number	Sample Description and Location	Room	Date Collected	Analysis Required	Results
114653	M3.1 A	sheetrock & joint compound	107	5/13/97	PLM-Asbestos	
54	M3.1 B	↓	110 103			
55	M3.1 C	↓	115 110			
56	M5.1 A	2'x4' white fissure Ceiling Panel	102			
57	M5.1 B	↓	102			
58	M5.1 C	↓	101			
59	M12.1 A	Mastic under BLACK baseboard	103 104			
60	M12.1 B	↓	103 104			
61	M12.1 C	↓	103 104			
62	F4.1 A	1'x2' Floor Plank	103			
63	F4.1 B	↓	103			
64	F4.1 C	↓	103			

Date	Total Samples Shipped	Relinquished By:	Received By	Total Samples Received
5/19/97	(42)	Tom Weaver		
5/21/97 0830		Relinquished To: USPS	Received By	Total Samples Received 42

Page 1 OF 4

Laboratory Address: Maxim Technologies, Inc. 600 South 25th Street, Billings, MT 59101 (406) 248-9169

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HELENA, MONTANA

CHAIN OF CUSTODY RECORD

BULK ASBESTOS AND LEAD SAMPLES

Riverton Heights Station Building Name	U.S.P.S. SEATTLE DISTRICT Client Name	5609702640.A1 Job Number
 Building Location/Address	415 1ST AVE NORTH Client Address	5/12/97 Date
TOM WEAVER/MAXIM-MISSOULA Collected By/Send Report To	SEATTLE, WA 98109-9991	10 DAY Turn Around Time

Laboratory Number	Sample Number	Sample Description and Location	Room	Date Collected	Analysis Required	Results
11466465	F5.2 A	Mastic under F4-1	103	5/13/97	PLM-Asbestos	
6566	F5.2 B	↓	103			
6667	F5.2 C	↓	103			
6768	M7.1 A	Painted plaster	119			
6869	M7-1 B	↓	119			
6970	M7-1 C	↓	119			
7071	M12.2 A	Mastic under BROWN baseboard	104 103			
7172	M12.2 B	↓	104 103			
7273	M12.2C	↓	104			
7374	F2.1.A	12"x12" cream floor tile	107			
7475	F2.1 B	↓	109			
7576	F2.1 C	↓	110			

Date	Total Samples Shipped	Relinquished By:	Received By	Total Samples Received
5/19/97	(42)	Tom Weaver		
0820 5/21/97		Relinquished To: dep USPS	Received By K E Cleveland	Total Samples Received 42

[redacted] HELENA [redacted]

CHAIN OF CUSTODY RECORD

BULK ASBESTOS AND LEAD SAMPLES

Riverton Heights Station Building Name	U.S.P.S. SEATTLE DISTRICT Client Name	5609702640.A1 Job Number
 Building Location/Address	415 1ST AVE NORTH Client Address	5/19/97 Date
TOM WEAVER/MAXIM-MISSOULA Collected By/Send Report To	SEATTLE, WA 98109-9991	10 DAY Turn Around Time

Laboratory Number	Sample Number	Sample Description and Location	Room	Date Collected	Analysis Required	Results
11467677	F5.3 A	Mastic under F2.1	107	5/13/97	PLM-Asbestos	
~~7778~~	F5.3 B		109			
~~7879~~	F5.3 C		110			
~~7980~~	M10.1 A	coating on bottom of sink	110			
~~8081~~	M10.1 B		110			
~~8182~~	M10.1 C		110			
~~8283~~	T2.1 A	Cold water pipe joint insulation	117			
~~8384~~	T2.1 B		117			
~~8485~~	T2.1 C		117			
~~8586~~	M16.1 A	Vibration Isolator.	117			
~~8687~~	M16.1 B		117			
~~8788~~	M16.1 C		117			

Date	Total Samples Shipped	Relinquished By:	Received By	Total Samples Received
5/19/97	(42)	Tom Weaver	[signature]	
0820 5/21/97		Relinquished By USPS	Received By [signature]	Total Samples Received 42

Page 3 OF 4

Laboratory Address: Maxim Technologies, Inc. 600 South 25th Street, Billings, MT 59101 (406) 248-9169

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HELENA, MONTANA

CHAIN OF CUSTODY RECORD

BULK ASBESTOS AND LEAD SAMPLES

Riverton Heights Station
Building Name

U.S.P.S. SEATTLE DISTRICT
Client Name

5609702640.A1
Job Number

Building Location/Address

415 1st AVE NORTH
Client Address

5/19/97
Date

TOM WEAVER/MAXIM-MISSOULA
Collected By/Send Report To

SEATTLE, WA 98109-9991

10 DAY
Turn Around Time

36

Laboratory Number	Sample Number	Sample Description and Location	Room	Date Collected	Analysis Required	Results
11468889	FS.4A	Mastic under Brown carpet	119	5/13/97	PLM Asbestos	
8990	FS.4B	↓	119	↓	↓	
9091	FS.4C	↓	119	↓	↓	
9192	M16.2A	Coating of pipe wrapped Insul.	117	↓	↓	
9293	M16.2B	↓	117	↓	↓	
9394	M16.2C	↓	117	↓	↓	
		—LAST—				

Date	Total Samples Shipped	Relinquished By:	Received By	Total Samples Received
5/19/97	(42)	Tom Weaver	[signature]	
0830 5/21/97		Relinquished ~~To~~: ley USPS	Received By [signature]	42

Page 4 OF 4

Laboratory Address: Maxim Technologies, Inc. 600 South 25th Street, Billings, MT 59101 (406) 248-9169

SECTION E

PHOTOGRAPHS

E.1. SECTION SUMMARY

Photographs of Homogeneous ACBM areas identified in the floor plans in Sections C.2 and D.2.

E.2. PHOTOGRAPHS OF HOMOGENEOUS ACBM AREA

PHOTO #1 - FRONT OF FACILITY

PHOTO #2 - REAR OF FACILITY

PHOTO #3 - 12"x12" CREAM FLOOR TILE (F2.1) AND MASTIC (F5.3)

PHOTO #4 - 12"x24" BLACK FLOOR PLANK (F4.1)
AND MASTIC (F5.2)

PHOTO #5 - UNDERCOATING ON SINK (M10.1)

SECTION F

REMOVAL COST ESTIMATE

SECTION F.1. SECTION SUMMARY

Section F.1, the reader will find the removal data organized by cost, category and quantity. Other abatement options are to be considered within the O & M Plan. Section F.2. is to guide the decision between removal or O & M Plan implementation.

UNIT
This identifies how the removal action will be charged.

ea:	each
day:	day
est:	per estimate
sf:	square foot
lf:	linear foot
/w:	per week
/d:	per day
/m:	per month
cu:	cubic yard

QUANTITY
This describes the amount of material to be removed.

TOTAL
Identifies the individual cost for each removal action.

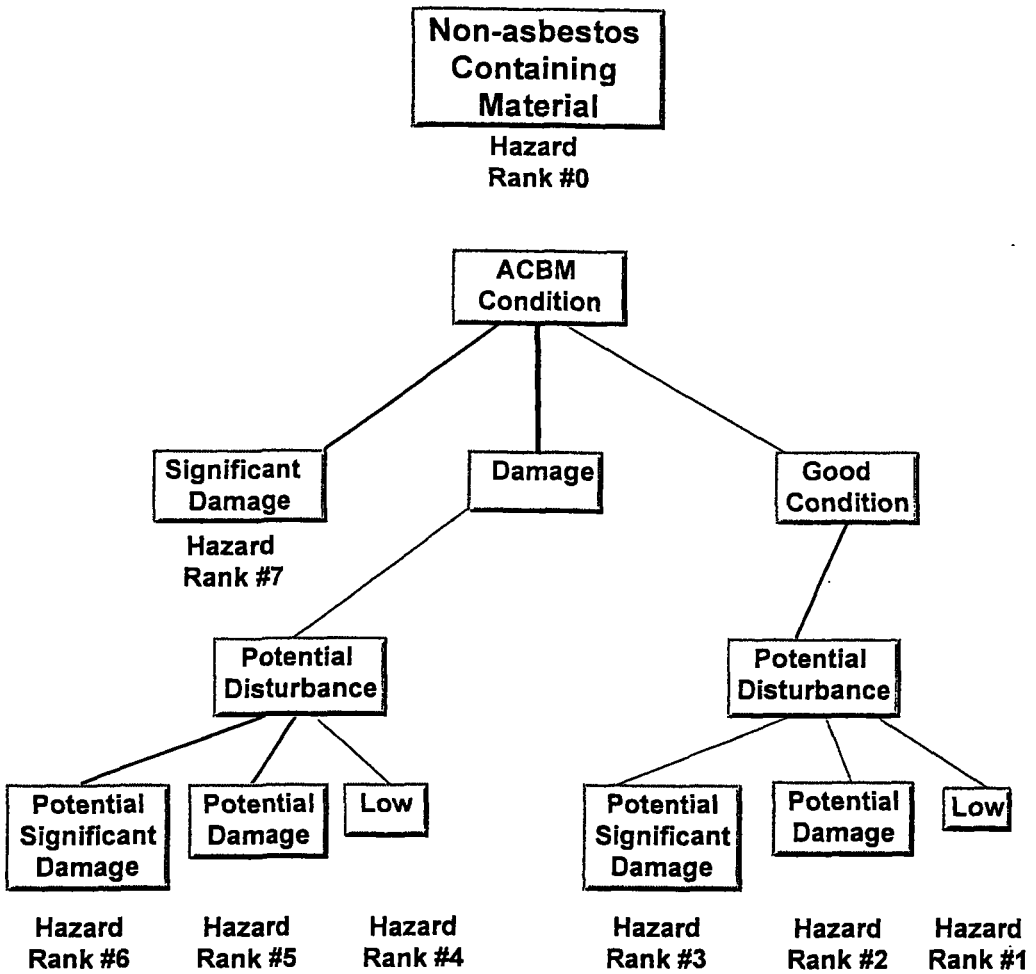
LIMITATIONS: All costs are estimates only and should be confirmed by a certified asbestos abatement contractor. The costs do not include any costs for reinstallation of any surfacing, insulation, or miscellaneous materials. Project design, project management, and construction inspection fees are included in the estimate. The budgetary estimate presented assumes there will be no relocation costs.

The cost estimate fees for consulting include predesign, design, construction/abatement and air monitoring services. The estimates identified are based on the assumption that the interior ACBM will be removed concurrently, as one project.

F.2. REMOVAL COST ESTIMATE

Room:	Description:	Unit:	Quantity:	Total Cost:
102	12" x 12" Floor Tile	Square Feet	426	$1,065.00
102	Mastic under Floor Tile/etc.	Square Feet	426	$1,065.00
103	12" x 24" Floor Tile	Square Feet	10700	$26,750.00
103	Mastic under Floor Tile/etc.	Square Feet	10700	$26,750.00
104	12" x 12" Floor Tile	Square Feet	194	$485.00
104	Mastic under Floor Tile/etc.	Square Feet	194	$485.00
105	12" x 12" Floor Tile	Square Feet	137	$343.00
105	Mastic under Floor Tile/etc.	Square Feet	137	$342.00
106	12" x 12" Floor Tile	Square Feet	385	$963.00
106	Mastic under Floor Tile/etc.	Square Feet	385	$962.00
107	12" x 12" Floor Tile	Square Feet	228	$570.00
107	Mastic under Floor Tile/etc.	Square Feet	228	$570.00
108	12" x 24" Floor Tile	Square Feet	390	$975.00
108	Mastic under Floor Tile/etc.	Square Feet	390	$975.00
109	12" x 12" Floor Tile	Square Feet	104	$260.00
109	Mastic under Floor Tile/etc.	Square Feet	104	$260.00
110	12" x 12" Floor Tile	Square Feet	572	$1,430.00
110	Mastic under Floor Tile/etc.	Square Feet	572	$1,430.00
110	Undercoating-S.S.Sinks-etc.	Square Feet	14.6	$102.00
111	12" x 12" Floor Tile	Square Feet	481	$1,203.00
111	Mastic under Floor Tile/etc.	Square Feet	481	$1,202.00
113	12" x 12" Floor Tile	Square Feet	332	$830.00
113	Mastic under Floor Tile/etc.	Square Feet	332	$830.00
115	12" x 24" Floor Tile	Square Feet	139	$348.00
115	Mastic under Floor Tile/etc.	Square Feet	139	$347.00
119	Stucco	Square Feet	2432	$9,728.00
200	Roofing Materials	Square Feet	24000	$72,000.00
COST	Consultant's Cost			$15,300.00
			Grand Total:	$167,570.00

CLASSIFICATION FOR HAZARD POTENTIAL
(DECISION TREE DISPLAY)



Note: A Hazard Ranking of Zero (0) within this Survey Report means the associated material is not asbestos (i.e. less than or equal to one percent - not regulated asbestos).

CLASSIFICATIONS FOR HAZARD POTENTIAL (TABULAR DISPLAY)

Hazard Rank	ACBM Condition	ACBM Disturbance Potential
7	Significantly damaged	Any
6	Damaged with potential for signifcant damage	Potential for Significant Damage
5	Damaged with potential for damage	Potential for Damage
4	Damaged	Low
3	Good condition with potential for damage	Potential for Significant Damage
2	Good condition with potential for damage	Potential for Damage
1a	Good condition	Low
1b	Non-friable asbestos	Low
1c	Non-regulated Asbestos Containing	Low
0	Non-asbestos Containing Material	

Note: A Hazard Ranking of Zero (0) within this Survey Report means the associated material is not asbestos (i.e. less than or equal to one percent - not regulated asbestos).

RESPONSE ACTIONS BASED ON HAZARD RANKING

Hazard Rank	Removal Priority	AHERA Categories	Response Actions Required by AHERA
7	1	Significantly Damaged	Evacuate or isolate the area if needed. Remove the ACBM (or enclose or encapsulate if sufficient to contain fibers.) Repair of thermal system insulation is allowed if feasible and safe, O&M required for all friable ACBM.
6	2	Damaged + Potential for Significant Damage	Evacuate or isolate the area if needed. Remove, enclose, encapsulate, or repair to correct damage. Take steps to reduce potential for disturbance. O&M required for all friable ACBM.*
5	3	Damaged+ Potential for Damage	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM and TSI.*
4	4	Damaged	Same as hazard rank 5.
3	5	Potential for Significant Damage	Evacuate or isolate the area if needed. Take steps to reduce potential for disturbance. O&M required for all friable ACBM and TSI.
2	6	Potential for Damage	O&M required for all friable ACBM and TSI.
1	7	All Remaining ACBM	O&M required for all friable ACBM, but measures need not be as extensive as above.

* Note: AHERA does not account for combinations of current and potential damage (i.e., hazard ranks #5 & 6). The response actions shown are combinations of those required for each condition.

Note: A Hazard Ranking of Zero (0) within this Survey Report means the associated material is not asbestos (i.e. less than or equal to one percent - not regulated asbestos).

SUSPECTED MATERIALS LIST

TSI

T1 Gasket Materials
T2 Pipe Joint Insulation
T3 Straight Pipe Insulation
T4 HVAC Connector Material (adjoining air ducts)
T5 Tank Insulation
T6 Boiler Insulation
T7 Boiler Breaching / Ductwork / Firebrick
T8 Duct Insulation
T9 Patching Material

Surfacing Materials (Spray-On)

S1 Surface-Sprayed, Applied or Troweled-on Materials, Ceilings and Beams
S2 Spray-on Fireproofing

Miscellaneous Materials

M1 Roofing Materials (only sample without damage to the roofing material)
M2 Exterior Siding Material
M3 Wallboard / Taping Material
M4 Transite (cooling tower on roof, soffits, pipes, etc.)

Miscellaneous Materials

M5 Ceiling Panels (Special attention to dock areas)
M6 Ceiling Tiles
M7 Plaster
M8 Caulking
M9 Fire Door Insulation (assumed to be ACM if fire doors are present)
M10 Undercoating / Stainless Steel Sinks / etc.
M11 Electrical Insulation
M12 Baseboard
M13Tile Debris
M14 Metalbestos Chimney
M15 Stucco
M16 Other

Floor Covering

F1 Linoleum (seamless floor covering)
F2 12" x 12" Floor Tile
F3 9" x 9" Floor Tile
F4 12" x 24" Floor Plank
F5 Mastic under Floor Tile / Seamless / Ceiling Tiles / Carpet / Plank-Tile

GENERAL CATEGORIES OF FUNCTIONAL AREAS

1. MECHANICAL AREAS

A1 Basement / Sublevel Service Areas
A2 Boiler / Chiller Rooms
A3 Generator Rooms
A4 Elevator Equipment Room / Hoistways
A5 Telephone / Electrical Rooms
A6 Mechanical Rooms
A7 Fan Rooms
A8 Janitor Closets
A9 Furnace Rooms
A10 Tunnels and Crawl-Spaces
A11 Mechanical Floors including Penthouses
A12 Attics
A13 Air Duct Shafts
A14 Pipe Chases
A15 Air Plenums

2. COMMON AREAS

B1 Entrances and Exit Areas
B2 Lobbies
B3 Hallways
B4 Stairwells
B5 Meeting Rooms (e.g. auditoriums, conference rooms)
B6 Garages / Parking Areas
B7 Restrooms
B8 Locker Rooms
B9 Kitchen Area

3. WORKING AREAS

C1 Work-Room / Mail Processing Floors
C2 Loading Dock / Storage Areas
C3 Offices / Computer Rooms

4. SPECIAL USE ROOMS/AREAS

D1 Vaults / Accountable Papers
D2 Inspector Galleries (L.O.G.)

5. EXTERIOR MATERIALS

E1 Roofs, Siding and Paneling
E2 Metalbestos Sheeting

GLOSSARY

ASBESTOS

A generic name given to a number of naturally occurring silicates that poses a unique crystalline structure. Incombustible in air, and separable into fibers. Asbestos includes the asbestiform varieties of chrysotile, crocidolite, amosite, anthophyllite, actinolite and tremolite.

ACBM

Asbestos Containing Building Material. A term that encompasses surfacing, thermal system, and miscellaneous asbestos-containing material in or on interior/exterior parts of a building. This definition also includes exterior hallways, connecting buildings, porticos, and mechanical system insulation.

ACM

Asbestos-Containing Material. Any material with more than one percent (1%) asbestos content.

BULK SAMPLE

A piece of suspected asbestos-containing building material.

FIBER RELEASE

Process by which dust is given off from asbestos materials and becomes airborne.

FRIABLE

Material which can be crumbled, pulverized, or reduced to powder when dry, by moderate hand pressure.

FUNCTIONAL SPACE/AREA

Specially distinct units within a building such as a room, a group of rooms, or a homogeneous area - this includes crawl spaces and areas above a drop ceiling.

HVAC

Heating, Ventilating, and Air Conditioning Systems. The system of pipes, ducts, and equipment (air conditioners, chillers, heaters, boilers, pumps, fans) used to heat, cool, move, and filter air in a building.

HOMOGENEOUS AREA

An area which appears similar throughout in terms of color, texture, and date of material application.

INACCESSIBLE AREA

Inaccessible areas are those which cannot be inspected due to physical barriers. Buildings may contain areas that are intrinsically inaccessible. These include gaps and spaces in walls, areas above fixed ceilings and below floors, enclosed boiler breechings, and ducts. Some buildings contain other inaccessible areas, such as very small pipe tunnels, sealed crawlspaces, unsafe attics, encased boilers, etc.

NON-FRIABLE

Material which cannot be crumbled or pulverized by hand pressure.

PACBM

Presumed Asbestos Containing Building Material

PIPE JOINT

The elbow, valve, connector, reduction or pipe hanger.

PLENUM

A space designed to transport air in a building. Commonly found below ground level and in the space between a dropped ceiling and the floor above it.

PLM

Polarized Light Microscopy. An accepted method for analyzing bulk ACBM samples.

SACBM

Suspected Asbestos-Containing Building Materials (SACBM) are materials identified for sampling which may or may not be regulated ACBM.

USEPA

United States Environmental Protection Agency. The Federal agency governing general population and environmental problems. In the case of ACM in buildings, the USEPA deals with regulations and their quidelines for applicaion, renovation, removal and disposal of ACBM in building structures.

SECTION G

REFERENCES

Hazard Potential Classification Decision Tree
Classifications for Hazard Potential
Response Actions Based on Hazard Ranking
Suspected Materials List
General Categories of Functional Areas
Glossary