Project Manual for: Building 4

Oscar G. Johnson VA Medical Center
Iron Mountain, Michigan
Asbestos Management Plan

VA Project 585-14-111

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100% Documents

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Compiled By:

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INTRODUCTION

Northern Design Works of Negaunee, MI, retained BDN Industrial Hygiene Consultants, Inc. to conduct a building inspection to determine the presence, quantities, and locations of asbestos-containing building materials (ACBM) in Building 4 at the Oscar G. Johnson VA Medical Center, Iron Mountain, Michigan.

Scope of Work

BDN identified building materials suspected of containing asbestos in Building 4. These materials were surveyed in a manner compliant with the sampling protocols of the Asbestos Hazard Emergency Response Act (AHERA) by inspecting the materials for damage, measuring the amount of material and obtaining sample(s) for laboratory analysis. The survey was completed by BDN industrial hygienists Travis Noa, asbestos inspector accreditation number A38262 and David Steger, asbestos inspector accreditation number A1788, both are Michigan-accredited asbestos building inspectors. This Asbestos Survey was conducted to identify the types, quantities, locations, and conditions of the asbestos-containing materials within Building 4.

Building Description

Building 4 of the Oscar G. Johnson VA Medical Center is located at 325 East H Street, Iron Mountain, Michigan. Building 4 is a two story building with a basement. The exterior of building 4 is brick with a flat roof. The interior of building 4 has wood-framed walls with plaster and drywall. The floors are a mix of hard wood, ceramic tile, floor tile and concrete. The ceilings varied from drop ceilings, plaster, and drywall. The total square footage for Building 4 is approximately 4,795 square feet.

METHODOLOGY

Asbestos Survey

BDN industrial hygienists Travis Noa, asbestos inspector accreditation number A38262 and David Steger, asbestos inspector accreditation number A1788 conducted the asbestos survey of Building 4 in December of 2014.

Field inspection alone is not conclusive to identify asbestos-containing materials. Therefore, bulk samples of suspected asbestos-containing materials (ACMs) were obtained using U.S. EPA/OSHA protocols by a State-accredited inspector and analyzed to determine if asbestos fibers were present, and if found, the types and percentages of asbestos were reported.

BDN recommends that when suspect ACMs not identified within the report are encountered for which no analytical data exists, the materials remain undisturbed until the asbestos content of the materials(s) is determined in accordance with U.S. EPA and OSHA regulations. BDN's quantities are intended to be "Order of Magnitude" estimates and the estimated quantities and other information in this report should not be used as an exclusive source of information for bid formulation or for notification to regulatory agencies.

Bulk samples of friable suspected ACMs were obtained using U.S. EPA/OSHA protocols by a State of Michigan accredited inspectors. An area the approximate size of a half-dollar was thoroughly wetted with water and a wetting agent applied from a handheld spray bottle to reduce fiber release during sample collection. A knife or boring tool was used to cut the outer protective covering to expose the suspected ACM underneath. The knife or boring tool was then employed to remove a small amount of the material for the sample. Bulk samples of non-friable suspected ACMs were collected using hand tools to obtain a sample approximately the size of a postage stamp. The sample was placed in a resealable plastic bag, labeled, and secured. Wood and Metal fire-rated doors are assumed to be asbestos-containing due to the damaging effects to obtain samples which would compromise the fire rating of the door. BDN followed U.S. EPA and OSHA protocols for determining sampling locations and total number of samples taken.

Sample Analysis

Laboratory descriptions of materials analyzed by Polarized Light Microscopy (PLM) method for asbestos content were based upon the microscopist's perceptions of bulk samples that were pulverized and prepared with dispersion oils for PLM analysis. Due to the preparation of the sampled materials and the minute level of observation by the laboratory personnel, the descriptions on the Certificates of Analysis may not match the sample descriptions recorded by BDN in the field. BDN's sample descriptions and locations should be used to identify materials that were sampled and BDN's sample numbers should be used to correlate analytical results for the sampled materials.

Building material samples collected from Building 4 at the Oscar G. Johnson VA Medical Center were submitted to the asbestos laboratory at BDN in Portage, Michigan. Laboratory descriptions of materials analyzed by Polarized Light Microscopy (PLM) method for asbestos content were based upon the microscopists' visual observations of bulk samples that were homogenized and prepared for analysis. The analytical data from the asbestos-containing materials is presented in the tables below.

ASBESTOS SURVEY RESULTS

As detailed in Table 1, the following material was identified as asbestos-containing material:

Table 1

DESCRIPTION OF ASBESTOS CONTAINING MATERIAL	LOCATION	QUANTITY
Corrugated Paper Pipe Insulation (Aircell)	Basement, 1st Floor, 2nd Floor	262 ln. ft.

A summary of the functional space names, descriptions of materials, observed quantities, hazard rankings, and analytical results are presented in Appendix A. The laboratory analytical report is presented as Appendix B. Photos of these materials are provided in Appendix C. Asbestos was not detected in the other sampled materials.

HAZARD RANKINGS

DEPARTMENT OF VETERANS AFFAIRS VA MEDICAL CENTER
IRON MOUNTAIN, MICHIGAN

Hazard Rank	Removal Priority	AHERA Categories	Response Action Required by AHERA
1	**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.
2	**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.
3	**3**	Damaged + Potential for Damaged	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM.
4	**4**	Damaged	Same as hazard rank 5.
5	**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.
6	**6**	Potential for Damage	O&M required for all friable ACBM and TSI.
7	**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 AND 6). THE RESPONSE ACTIONS SHOWN ARE COMBINATIONS OF THOSE REQUIRED FOR EACH CONDITION.

Potential for Disturbance

Asbestos-containing materials are rated for Potential for Disturbance. The ratings are located on the spreadsheet. The ratings are as follows:

L = Low, no direct contact with employees, patients, and/or visitors

M = Medium, minimal contact with employees only

H = High, direct contact by employees, patients, and or visitors

CONCLUSIONS AND RECOMMENDATIONS

General Materials

BDN identified one asbestos-containing material and recommends that this material be removed by a licensed asbestos abatement contractor prior to renovation or demolition activities that would disturb this material in any way. Personal and clearance air samples should be collected to demonstrate that asbestos fibers are not released through the abatement process.

Notification

A “Notification of Intent to Renovate/ Demolish” form required by the U.S. EPA NESHAP regulations must be submitted to the MDEQ-AQD 10-working days prior to removal of the asbestos quantities of 260 lineal feet, 160 square feet or 35 cubic feet.

Regulatory Information Regarding Asbestos Removal, Renovation, and Demolition

A licensed asbestos removal contractor, utilizing workers accredited under the requirements of Michigan, must perform asbestos removal work. BDN recommends asbestos abatement project design by a Project Designer accredited under the requirements of Michigan Act 440 and monitoring asbestos removal work with air sampling, visual verification and clearance air monitoring performed by an independent third party. All ACM waste generated should be placed in doubled, labeled waste bags, affixed with a waste generator location label and disposed in a Type II landfill. All ACM waste removed from the site should be inventoried on a Waste Shipment Record that complies with NESHAP regulations, 40 CFR Part 61.

Once an asbestos building survey has confirmed or assumed the presence of ACMs, all employees who work around and may contact, but not disturb ACMs (i.e., persons conducting janitorial, building maintenance, security and/or housekeeping activities) must receive, at minimum, two-hour asbestos awareness training. Additionally, employees who may disturb ACMs (i.e., persons working with any of the mechanical systems that have asbestos-containing materials) must have additional asbestos-related training that satisfies the class of work activity that they are involved with (i.e., Class I, II or III).

Before allowing a contractor to work on their building, building owners should also ascertain if the contractor has acquired asbestos awareness training. Such training is required when the contractor works in the proximity of ACMs and may contact, but not disturb the material.

Building owners removing asbestos-containing materials from their own structure are not required to be a Michigan-licensed asbestos abatement contractor, however, the building owner’s employees performing the work must comply with the requirements of Part 602,

the MIOSHA Asbestos Standards for Construction and hold a current Contractor/Supervisor card. No notifications are required for properly trained employees removing ACM in the employer owned facility.

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX A

Functional Space Summary

Sorted by Space

Sorted by Material

BDN JOB NO. 16297

NDW NO. 1416

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	Basement	1	Basement	Concrete Block Walls	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Concrete Slab Floor	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Concrete Walls	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Corrugated Paper Pipe Insulation (Aircell)	6	ln. ft.	—	—	16297-4-6.1	70% Chrysotile	3	M	O & M	Open end remnants in ceiling for heating
4	Basement	1	Basement	Fiberglass Insulated Lines	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Open Floor Joist Wood Ceiling	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Plaster	192	sq. ft.	—	—	16297-4-4.3	None Detected	—	—	None	
4	Basement	1	Basement	Stair Tread - Black	36	sq. ft.	—	—	16297-4-8.1	None Detected	—	—	None	south stairs
4	Basement	1	Basement	Stair Tread - Brown	36	sq. ft.	—	—	16297-4-9.1	None Detected	—	—	None	North stairs
4	Basement	1	Basement	Tar Paper - Black	900	sq. ft.	—	—	16297-4-20.1	None Detected	—	—	None	Under first floor hardwood floors. Visible from basement
4	1	2	Garage Room 1008	Brick Wall	—	—	—	—	—	—	—	—	None	
4	1	2	Garage Room 1008	Concrete Ceiling	—	—	—	—	—	—	—	—	None	
4	1	2	Garage Room 1008	Concrete Slab Floor	—	—	—	—	—	—	—	—	None	
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Corrugated Paper Pipe Insulation (Aircell)	40	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Floor Tile - 16"x16" Beige Stone Pattern	187	sq. ft.	—	—	16297-4-12.1	None Detected	—	—	None	
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Plaster	878	sq. ft.	—	—	16297-4-4.4	None Detected	—	—	None	
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Wood Door - No Tag	4	door (s)	—	—	—	—	—	—	None	
4	1	4	Room 1003	Corrugated Paper Pipe Insulation (Aircell)	20	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	4	Room 1003	Floor Tile - 16"x16" Beige Stone Pattern	112	sq. ft.	—	—	—	Negative	—	—	None	
4	1	4	Room 1003	Plaster	400	sq. ft.	—	—	—	Negative	—	—	None	
4	1	5	Room 1001	Corrugated Paper Pipe Insulation (Aircell)	60	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	5	Room 1001	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	5	Room 1001	Plaster	699	sq. ft.	—	—	—	Negative	—	—	None	Walls and ceiling

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Corrugated Paper Pipe Insulation (Aircell)	40	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Plaster	640	sq. ft.	—	—	16297-4-4.5	None Detected	—	—	None	Walls and Ceiling
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	
4	1	7	Restroom Room 1000C	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	7	Restroom Room 1000C	Corrugated Paper Pipe Insulation (Aircell)	20	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	7	Restroom Room 1000C	Drop Ceiling Tile - 2'x2' White Drywall	25	sq. ft.	—	—	16297-4-16.1	None Detected	—	—	None	Open wood joists above drop ceiling tiles
4	1	7	Restroom Room 1000C	Plaster	160	sq. ft.	—	—	16297-4-4.1	None Detected	—	—	None	
4	1	8	Room 1002	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	8	Room 1002	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	8	Room 1002	Plaster	1,181	sq. ft.	—	—	—	Negative	—	—	None	
4	1	9	Room 1004 Porch	Brick Wall	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Concrete Ceiling	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Drywall	128	sq. ft.	—	—	16297-4-17.1	None Detected	—	—	None	
4	1	9	Room 1004 Porch	Drywall Joint Compound	128	sq. ft.	—	—	16297-4-18.1	None Detected	—	—	None	
4	1	9	Room 1004 Porch	Metal Door - No Tag	1	door (s)	—	—	—	Negative	—	—	None	
4	1	9	Room 1004 Porch	Wood Door - No Tag	2	door (s)	—	—	—	—	—	—	None	

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	1	10	Room 1006 and 1006A & B	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	10	Room 1006 and 1006A & B	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	1	10	Room 1006 and 1006A & B	Drop Ceiling Tile - 2'x2' White Drywall	36	sq. ft.	—	—	—	Negative	—	—	None	
4	1	10	Room 1006 and 1006A & B	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	10	Room 1006 and 1006A & B	Plaster	616	sq. ft.	—	—	—	Negative	—	—	None	
4	1	10	Room 1006 and 1006A & B	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	
4	1	11	Room 2001	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	11	Room 2001	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	1	11	Room 2001	Drop Ceiling Tile - 2'x2' White Drywall	54	sq. ft.	—	—	—	Negative	—	—	None	
4	1	11	Room 2001	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	11	Room 2001	Plaster	630	sq. ft.	—	—	16297-4-4.6 16297-4-4.7	None Detected	—	—	None	
4	1	11	Room 2001	Wood Door - No Tag	4	door (s)	—	—	—	—	—	—	None	
4	2	12	Room 2002	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	12	Room 2002	Plaster	530	sq. ft.	—	—	16297-4-4.2	None Detected	—	—	None	
4	2	12	Room 2002	Wood Door - No Tag	2	door (s)	—	—	—	—	—	—	None	
4	2	13	Room 2004	Fiberglass Insulated Lines	—	—	—	—	—	—	—	—	None	
4	2	13	Room 2004	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	13	Room 2004	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	
4	2	14	Room 2006 Bathroom	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	2	14	Room 2006 Bathroom	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	2	14	Room 2006 Bathroom	Drop Ceiling Tile - 2'x2' White Drywall	42	sq. ft.	—	—	—	Negative	—	—	None	
4	2	14	Room 2006 Bathroom	Plaster	160	sq. ft.	—	—	—	Negative	—	—	None	
4	2	14	Room 2006 Bathroom	Wood Door - No Tag	1	door (s)	—	—	—	—	—	—	None	
4	2	15	Room 2003	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	15	Room 2003	Plaster	513	sq. ft.	—	—	—	Negative	—	—	None	
4	2	15	Room 2003	Wood Door - No Tag	2	door (s)	—	—	—	—	—	—	None	
4	2	16	Room 2000 Hallway	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	16	Room 2000 Hallway	Plaster	815	sq. ft.	—	—	—	Negative	—	—	None	

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	2	16	Room 2000 Hallway	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	1	2	Garage Room 1008	Brick Wall	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Brick Wall	—	—	—	—	—	—	—	—	None	
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	7	Restroom Room 1000C	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	8	Room 1002	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	10	Room 1006 and 1006A & B	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	1	11	Room 2001	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	2	14	Room 2006 Bathroom	Ceramic Tile	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Concrete Block Walls	—	—	—	—	—	—	—	—	None	
4	1	2	Garage Room 1008	Concrete Ceiling	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Concrete Ceiling	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Concrete Slab Floor	—	—	—	—	—	—	—	—	None	
4	1	2	Garage Room 1008	Concrete Slab Floor	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Concrete Walls	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Corrugated Paper Pipe Insulation (Aircell)	6	ln. ft.	—	—	16297-4-6.1	70% Chrysotile	3	M	O & M	Open end remnants in ceiling for heating
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Corrugated Paper Pipe Insulation (Aircell)	40	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	4	Room 1003	Corrugated Paper Pipe Insulation (Aircell)	20	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	5	Room 1001	Corrugated Paper Pipe Insulation (Aircell)	60	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Corrugated Paper Pipe Insulation (Aircell)	40	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat
4	1	7	Restroom Room 1000C	Corrugated Paper Pipe Insulation (Aircell)	20	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls to supply second floor heat

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	1	10	Room 1006 and 1006A & B	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	1	11	Room 2001	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	2	14	Room 2006 Bathroom	Corrugated Paper Pipe Insulation (Aircell)	10	ln. ft.	—	—	—	Positive	7	L	O & M	Assumed in walls for bathroom fixtures
4	1	7	Restroom Room 1000C	Drop Ceiling Tile - 2'x2' White Drywall	25	sq. ft.	—	—	16297-4-16.1	None Detected	—	—	None	Open wood joists above drop ceiling tiles
4	1	10	Room 1006 and 1006A & B	Drop Ceiling Tile - 2'x2' White Drywall	36	sq. ft.	—	—	—	Negative	—	—	None	
4	1	11	Room 2001	Drop Ceiling Tile - 2'x2' White Drywall	54	sq. ft.	—	—	—	Negative	—	—	None	
4	2	14	Room 2006 Bathroom	Drop Ceiling Tile - 2'x2' White Drywall	42	sq. ft.	—	—	—	Negative	—	—	None	
4	1	9	Room 1004 Porch	Drywall	128	sq. ft.	—	—	16297-4-17.1	None Detected	—	—	None	
4	1	9	Room 1004 Porch	Drywall Joint Compound	128	sq. ft.	—	—	16297-4-18.1	None Detected	—	—	None	
4	Basement	1	Basement	Fiberglass Insulated Lines	—	—	—	—	—	—	—	—	None	
4	2	13	Room 2004	Fiberglass Insulated Lines	—	—	—	—	—	—	—	—	None	
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Floor Tile - 16"x16" Beige Stone Pattern	187	sq. ft.	—	—	16297-4-12.1	None Detected	—	—	None	
4	1	4	Room 1003	Floor Tile - 16"x16" Beige Stone Pattern	112	sq. ft.	—	—	—	Negative	—	—	None	
4	1	5	Room 1001	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	8	Room 1002	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	10	Room 1006 and 1006A & B	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	11	Room 2001	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	12	Room 2002	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	13	Room 2004	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	15	Room 2003	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	2	16	Room 2000 Hallway	Hardwood Floor	—	—	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Metal Door - No Tag	1	door (s)	—	—	—	Negative	—	—	None	
4	Basement	1	Basement	Open Floor Joist Wood Ceiling	—	—	—	—	—	—	—	—	None	
4	Basement	1	Basement	Plaster	192	sq. ft.	—	—	16297-4-4.3	None Detected	—	—	None	

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space		Quantity Damaged		Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Plaster	878	sq. ft.	—	—	16297-4-4.4	None Detected	—	—	None	
4	1	4	Room 1003	Plaster	400	sq. ft.	—	—	—	Negative	—	—	None	
4	1	5	Room 1001	Plaster	699	sq. ft.	—	—	—	Negative	—	—	None	Walls and ceiling
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Plaster	640	sq. ft.	—	—	16297-4-4.5	None Detected	—	—	None	Walls and Ceiling
4	1	7	Restroom Room 1000C	Plaster	160	sq. ft.	—	—	16297-4-4.1	None Detected	—	—	None	
4	1	8	Room 1002	Plaster	1,181	sq. ft.	—	—	—	Negative	—	—	None	
4	1	10	Room 1006 and 1006A & B	Plaster	616	sq. ft.	—	—	—	Negative	—	—	None	
4	1	11	Room 2001	Plaster	630	sq. ft.	—	—	16297-4-4.6 16297-4-4.7	None Detected	—	—	None	
4	2	12	Room 2002	Plaster	530	sq. ft.	—	—	16297-4-4.2	None Detected	—	—	None	
4	2	14	Room 2006 Bathroom	Plaster	160	sq. ft.	—	—	—	Negative	—	—	None	
4	2	15	Room 2003	Plaster	513	sq. ft.	—	—	—	Negative	—	—	None	
4	2	16	Room 2000 Hallway	Plaster	815	sq. ft.	—	—	—	Negative	—	—	None	
4	Basement	1	Basement	Stair Tread - Black	36	sq. ft.	—	—	16297-4-8.1	None Detected	—	—	None	south stairs
4	Basement	1	Basement	Stair Tread - Brown	36	sq. ft.	—	—	16297-4-9.1	None Detected	—	—	None	North stairs
4	Basement	1	Basement	Tar Paper - Black	900	sq. ft.	—	—	16297-4-20.1	None Detected	—	—	None	Under first floor hardwood floors. Visible from basement
4	1	3	Kitchen and Hallway, Room 1005 and 1007	Wood Door - No Tag	4	door (s)	—	—	—	—	—	—	None	
4	1	6	Hallway and North Entrance Room 1000 and 1000A	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	
4	1	9	Room 1004 Porch	Wood Door - No Tag	2	door (s)	—	—	—	—	—	—	None	
4	1	10	Room 1006 and 1006A & B	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	
4	1	11	Room 2001	Wood Door - No Tag	4	door (s)	—	—	—	—	—	—	None	
4	2	12	Room 2002	Wood Door - No Tag	2	door (s)	—	—	—	—	—	—	None	
4	2	13	Room 2004	Wood Door - No Tag	3	door (s)	—	—	—	—	—	—	None	

Bldg Number	Floor	Space Code	Space Name	Description of Material	Quantity in Space	Quantity Damaged	Sample Number/ Photo Number	Sample Result	Hazard Ranking	Potential for Disturbance	Response	Notes
4	2	14	Room 2006 Bathroom	Wood Door - No Tag	1 door (s)	— —	—	—	—	—	None	
4	2	15	Room 2003	Wood Door - No Tag	2 door (s)	— —	—	—	—	—	None	
4	2	16	Room 2000 Hallway	Wood Door - No Tag	3 door (s)	— —	—	—	—	—	None	

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX B

Analytical Report

BDN JOB NO. 16297

NDW NO. 1416

Asbestos Analytical Laboratory Report
Laboratory ID # 101016

Northern Design Works
Attn: Richard Uren
420 Rail St.
Nagaunee, MI 49866

Laboratory Report No: 14-1750B
Date Received by Lab: December 15, 2014
Date Samples Analyzed: December 16, 2014

BDN Job Number: 16297

Project: VAMC, Iron Mountain, Building 4

The following samples have been analyzed for asbestos as requested. The results are compiled in the following table.

BDN Lab Number	Client Sample Number	Asbestos Identification (percent by weight)	Sample Description	Other Fibrous Materials	Binders or Fillers	Notes
14-4683	16297-4-4.1	None Detected	White Cement	Trace Cellulose	Calcite/Quartz	H
14-4684	16297-4-4.2	None Detected	White Cement	No Fibers Detected	Calcite/Quartz	H
14-4685	16297-4-4.3	None Detected	White Cement	No Fibers Detected	Calcite/Quartz	H
14-4686	16297-4-4.4	None Detected	White Cement	No Fibers Detected	Calcite/Quartz	H
14-4687	16297-4-4.5	None Detected	White Cement	Trace Cellulose	Calcite/Quartz	H
14-4688	16297-4-4.6	None Detected	White Cement	No Fibers Detected	Calcite/Quartz	H
14-4689	16297-4-4.7	None Detected	White Cement	Trace Cellulose	Calcite/Quartz	H
14-4690	16297-4-6.1	70% Chrysotile	Grey Fiber	20% Cellulose	Calcite/Silica	H
14-4691	16297-4-8.1	None Detected	Black Solid	No Fibers Detected	Synthetic Rubber	H
14-4692	16297-4-9.1	None Detected	Brown Solid	Trace Cellulose	Synthetic Rubber	H
14-4693	16297-4-12.1	None Detected	Floor Tile	70% Cellulose	Calcite/ Quartz	H
14-4694	16297-4-16.1	None Detected	White Cement	20% Cellulose	Calcite/Gypsum	H
14-4695	16297-4-17.1	None Detected	Tan Cement	20% Cellulose	Calcite/Gypsum	H
14-4696	16297-4-18.1	None Detected	White Cement	No Fibers Detected	Calcite/Silica	H
14-4697	16297-4-20.1	None Detected	Black Fiber	90% Cellulose	Calcite/Tar	H
Analytical Method: EPA 600 / R-93/116						

Notes: H: Sample was homogenized, W: Sample was received wet, L: Sample was analyzed in layers, A: Sample was ashed to remove interferences and some organics may not be reported. *: other

The samples received by this laboratory will be archived for 30 days and then destroyed. The client may request longer archival or sample return for a nominal fee. This laboratory is in compliance with the QC/QA requirements described in the method and participates in the AIHA PAT Bulk Asbestos Program. This laboratory is currently rated as Proficient. Please contact me at (269) 329-1237 if you have any questions. It has been a pleasure assisting you.

Brad Shook, Laboratory Director
BDN Industrial Hygiene Consultants, Inc.

BDN Industrial Hygiene Consultants, Inc.

Asbestos Bulk Chain of Custody

SEND TO: Attn: Brad Shook
BDN Industrial Hygiene Consultants, Inc.
8105 Valleywood Ln.
Portage, MI 49024
Phone 269.329.1237 Fax 269.329.7446

Client Job Number: 16297

Client Name: Northern Design Works
Address: 420 Rail Street, Negaunee, MI 49866
Phone:
Fax:
Project Site: VAMC Iron Mountain
Contact Person: Richard Ruen
Email: ruenr@ndw.us

Sample #	Sample Description	Location Sampled
16297-4-4.1	Plaster	BLDG 4 - 1st Floor - Bathroom
16297-4-4.2	Plaster	BLDG 4 - 2nd Floor
16297-4-4.3	Plaster	BLDG 4 - Basement
16297-4-4.4	Plaster	BLDG 4 - Kitchen
16297-4-4.5	Plaster	BLDG 4 - N. Entrance
16297-4-4.6	Plaster	BLDG 4 - Room 2001
16297-4-4.7	Plaster	BLDG 4 - Room 2001
16297-4-6.1	Asph Roll Pipe Insul.	BLDG 4 - Basement
16297-4-8.1	BLK Stair Tread	BLDG 4 - Basement
16297-4-9.1	Brown Stair Tread	BLDG-4 - Basement

Date to Lab: 12/15/14
☐ 1 BUSINESS DAY (*24 Hours*) ☒ ~~*Up to*~~ 5 BUSINESS DAYS
Total # Samples: 15
Relinquished by: DJS — Date: 12/15/14 — Time: 16:00
Received by: — Date: — Time:
Relinquished by: — Date: — Time:
Received by: — Date: — Time:
Comments:

How do you want to receive results? ☐ **Call** ☐ **Fax** ☐ **Mail** ☐ **Email**

BDN Use Only ☐ Cash ☐ Check ☐ Credit Card ☐ P.O. # _____

Total Amount $ _____

BDN Industrial Hygiene Consultants, Inc.

Asbestos Bulk Chain of Custody

SEND TO: Attn: Brad Shook
BDN Industrial Hygiene Consultants, Inc.
8105 Valleywood Ln.
Portage, MI 49024
Phone 269.329.1237 Fax 269.329.7446

Client Job Number: 16297

Client Name: Northern Design Works
Address: 420 Rail Street
Negaunee, MI 49866

Phone:
Fax:
Project Site: VAMC Iron Mountain
Contact Person: Richard Ureen
Email: rureen@ndw.us

Sample #	Sample Description	Location Sampled
16297-4-12.1	16"x16" Floor Tile	Bldg Apt 4 - Kitchen
16297-4-16.1	2'x2' DCT Drywall	Bldg Apt 4 - 1st Floor Bathroom
16297-4-17.1	Drywall	Bldg Apt 4 - Porch
16297-4-18.1	Joint Compound	Bldg Apt 4 - Porch
16297-4-20.1	Tan Paper	Bldg Apt 4 - Basement
~~16297-~~		
~~16297-~~		
~~16297-~~		
~~16297-~~		
~~16297-~~		

Date to Lab: 12-15-14
☐ 1 BUSINESS DAY (*24 Hours*) ☒ *Up to* 5 BUSINESS DAYS
Total # Samples: 15
Relinquished by: DJS — Date: 12/15/14 — Time: 16:00
Received by: — Date: — Time:
Relinquished by: — Date: — Time:
Received by: — Date: — Time:
Comments:

How do you want to receive results? ☐ **Call** ☐ **Fax** ☐ **Mail** ☐ **Email**

BDN Use Only ☐ Cash ☐ Check ☐ Credit Card ☐ P.O. # _____

Total Amount $ _____

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX C

Photographs

BDN JOB NO. 16297

NDW NO. 1416

Building 4

16297-4-6.1 - Corrugated Paper Pipe Insulation

Oscar G. Johnson VA Medical Center
Iron Mountain, MI
Project # 585-14-111

Building 4
Asbestos Survey

BDN

BDN No.
16297
Appendix
C

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX D

Floor Plans

BDN JOB NO. 16297

NDW NO. 1416

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX E

Operations and Maintenance Plan

BDN JOB NO. 16297

NDW NO. 1416

OPERATIONS AND MAINTENANCE PLAN

The Veterans Administration Medical Center (VAMC) has elected to implement a continual Operations and Maintenance (O&M) Program in any building under its authority which contains friable ACBM. It shall be this Veterans Administration Medical Center's policy to comply with at least the minimum requirements of Federal and State asbestos regulations as they apply to public buildings.

The presence of friable asbestos-containing material in VAMC buildings has been confirmed. If allowed to enter the body, asbestos fibers may cause serious harm often after a long latency period (typically 20-30 years). Since the welfare of VAMC staff and patients is of paramount concern, it is the desire of the VAMC administration to eliminate the potential health risks caused by the presence of asbestos. Although complete removal of all asbestos containing material is a long-range goal, it is impractical to accomplish this in the near future. Therefore, to enable the VAMC to coexist with the materials, a program is needed to safely and properly manage the risks. Consequently, the Iron Mountain VAMC has allocated sufficient resources and has initiated an asbestos Operations and Maintenance (O&M) Program effective May 9, 1990.

The objective of the O&M Program is to implement the Veterans Administration Medical Center's policy in a uniform, cost-effective manner for the purpose of protecting human health and the environment. Specifically, the Veterans Administration Medical Center will ensure clean up of any existing asbestos debris, repair or removal of any damaged ACBM and maintenance of the remaining ACBM in a safe condition. Standard operating procedures will be strictly followed if contact must be made with the ACBM or if subsequent damage occurs.

The Veterans Administration Medical Center is aware of the requirements to provide protection to all personnel exposed to ACBM in the daily course of their work . The Veterans Administration Medical Center policy is to comply with all EPA/OSHA rules designed to provide this protection. Only those persons receiving adequate training as directed by the Model Accreditation Program (MAP) are permitted to work with ACM.

The Management Planner has provided initial advice and assistance to key staff in the development of the cleaning program. The additional cleaning recommended by the Management Planner is set forth in the table attached to the section containing building-specific information. In addition, the Veterans Administration Medical Center has determined that in the event of a minor or major fiber release episode occurring in a return air plenum or in any other situation: which will allow the possibility of the fibers becoming widely distributed throughout the building spaces, an asbestos cleaning of those spaces will be conducted. Iron Mountain VAMC has elected to procure the services of outside consultants and contractors (Project Designers, abatement workers

and supervisors, etc.) to deal with all projects other than emergency situations such as in fiber release episodes and where pipes are leaking. The Veterans Administration Medical Center employs persons on its maintenance staff with abatement training provided by an accredited Contractor/Supervisor, however, when abatement of ACBM is required for completion of a given project, contracted abatement services will be preferred. The Veterans Administration Medical Center acknowledges the important role of the accredited Project Designer in the abatement process. While every project may not require project design, the project design is especially crucial in complicated situations and when abatement must be performed adjacent to occupied spaces. As the Veterans Administration Medical Center must operate round-the-clock, areas may not be able to be totally vacated during abatement actions. Therefore, the Designated Person will carefully consider each project prior to commencement to determine if the use of a Project Designer is appropriate. In addition, those firms with at least two (2) years of asbestos work experience will be used preferentially to perform the required work. Appropriate personal protection, work practices, restrictions and warning notices have been made a part of this Veterans Administration Medical Center's policy in dealing with such projects. Please refer to the standard operating procedures for each type of activity. Clearance monitoring will be required for all projects to protect both human health and the assets of Iron Mountain VAMC.

The Designated Person is provided the authority to close any building or part thereof in which a fiber release episode may result in the endangerment of human health or the environment. The Veterans Administration Medical Center has determined that only individuals trained to conduct surveillance and qualified and equipped to wear respirators shall conduct annual surveys. The results of these surveys shall be transmitted to the Designated Person who shall be responsible for the maintenance of the records of the surveys and the evaluations of the survey results and shall implement any actions required by a change in the condition of the ACBM. Annually an accredited Inspector shall inspect the entire building(s). The Inspection Report resulting from this inspection shall form a new starting basis for the Management Plan and the records of the previous year of activities shall then be archived in a permanent storage location.

Questions concerning this program should be directed to the Designated Person. The Designated Person will be responsible for maintaining an adequate supply of special equipment and materials needed by the special O & M crew and will provide direction and supervision of the crew for purposes of asbestos hazard management.

The Designated Person will give notification of planned response actions to staff of the affected building as deemed appropriate. The Veterans Administration Medical Center recognizes the importance of communicating this information as good public relations and influential in the successful completion of the planned action.

Records of all response actions will be maintained in accordance with the Record Keeping section of this plan.

MANAGEMENT PLAN SUBMITTAL DATA

Submission Update:	February 3, 2015
Management Plan Updated By:	Brent Bassett (A1776) Asbestos Management Planner BDN Industrial Hygiene Consultants, Inc. 8105 Valleywood Lane Portage, MI 49024 (269) 329-1237
Designated Person:	Greg Haslow Industrial Hygienist Department of Veteran Affairs 325 East “H” Street Iron Mountain, MI 49801 (906) 774-3300, Ext. 32045

Signature of Designated Person:_____

MANAGEMENT PLAN SUBMITTAL DATA

Submission Date:	February 3, 2015
Management Plan Updated By:	Brent Bassett (A1776) Asbestos Management Planner BDN Industrial Hygiene Consultants, Inc. 8105 Valleywood Lane Portage, MI 49024 (269) 329-1237
Designated Person:	Greg Haslow Industrial Hygienist Department of Veteran Affairs East “H” Street Iron Mountain, MI 49801 (906) 774-3300, Ext. 32045

Signature of Designated Person:_____

ASBESTOS MANAGEMENT PLANNER'S STATEMENT

I, Brent Bassett, an EPA and Michigan Accredited asbestos management plan developer do here by certify that the management plan developed for the Iron Mountain Veterans Administration (VA) Medical Center has been prepared under the guidelines set forth under the Asbestos Hazard Emergency Response Act (AHERA).

SIGNATURE OF MANAGEMENT PLANNER

A1776

ACCREDITATION NUMBER

ACCEPTANCE OF RESPONSE ACTIONS

The Iron Mountain Veterans Administration Medical Center hereby accepts the response actions outlined by the Management Planner as justified and practical.

Signature of Designated Person

RECORD KEEPING

Record keeping is an integral part of any Management Plan. Adequate record keeping is extremely important to the health and safety of all employees, patients, and hospital guests. Therefore, proper record keeping practices MUST be followed when any activity dealing with Asbestos Containing Material is undertaken.

The following is a minimum list of documents and records that MUST be included in any record keeping system:

Preventative Measure and Response Action

- Detailed written description of preventative measure or response action
- Methods utilized during preventative measure or response action
- Location (Building #, Floor #, Room #, etc.) of preventative measure or response action
- Reasons for selecting preventative measure or response action performed
- Start and Completion dates of all work related activities
- Name, Address, and Accreditation Certificates of all Contractors involved
- Name and location of the storage or disposal site of removed asbestos

Air Sampling Information

- Name and Signature of person(s) collecting air samples
- Date and Time air samples were collected
- Location (Building #, Floor #, Room #, etc.) where air samples were Collected
- Name and address of Sample Analysis Laboratory
- Method of Analysis
- Date of Analysis
- Results of Analysis
- Name and Signature of Analyst
- Statement of Laboratory Qualifications

Training

- Employee name and job title
- Description of Title of training completed
- Date(s) training was completed
- Name of training organization
- Location of training
- Number of hours of training

Periodic Surveillance

- Name of person performing the Periodic Surveillance
- Date of the Periodic Surveillance
- Changes in the condition of the Asbestos Containing Material

Cleaning

- Name of person performing the cleaning
- Date(s) of cleaning
- Location (Building #, Floor #, Room #, etc.) of cleaning
- Methods used to complete cleaning

Operation and Maintenance

- Name of person performing the operation and maintenance Activity
- Start and completion date of the activity
- Location (Building #, Floor #, Room #, etc.) of activity
- Description of the activity including preventative measures used
- Name and location of the storage or disposal site of removed asbestos

Major Asbestos Activity

- Name, Signature, Accreditation number, and agency of each person performing the activity
- Start and completion date(s) of activity
- Location (Building #, Floor #, Room #, etc.) of activity
- Description of the activity, including preventative measures taken
- Name and location of the storage or disposal site of removed asbestos

Fiber Release Episode:

- Date of Release
- Location (Building #, Floor #, Room #, etc.) of Release
- Method of Repair
- Name of each person performing the Repair
- Preventative Measure or response action taken
- Name and location of the storage or disposal site of removed asbestos

All records pertaining to Asbestos Containing Materials should be kept in one central location. Records older than 10 years may be archived; however, the archive location should be kept with the current asbestos records.

BUILDING INSPECTION PROCEDURES

Functions: the basic function of the accredited building inspector is:

(1) Determining whether ACBM is present in a building.
(2) Assessing the physical characteristics of the ACBM in the building, if required.

The management planner then uses this information to estimate the degree of current potential hazard posed by the ACBM, and to develop a plan for managing the ACBM.

EPA's, NESHAP's and AHERA ; and the OSHA Construction Standard for asbestos currently have requirements for asbestos inspections. ASHERA was added to include ALL public buildings.

Qualifications: The EPA AHERA Model Accreditation Plan (MAP) issued April 4, 1994 details the minimum qualification for Building Inspectors. In addition, each state has the authority to add requirements. The requirements for the State of Michigan are:

1. High school diploma
2. 1 year of work experience in a related field
3. Complete a 3-day EPA accredited training course with a minimum exam score of 70%.
4. Building inspectors must attend an annual refresher course of one-half day in length to maintain their accreditation.

Inspection Process: A building inspection typically would consist of the following steps, depending on the type of building being inspected:

1. Review architectural and as-built plans, work change orders and other records for the specification of any materials, which might contain asbestos.
2. Inspect building for suspect ACBM.
3. Delineate homogeneous areas of suspect ACBM and follow EPA yellow book on sampling strategy.
4. Collect enough samples and have them analyzed for asbestos type and % by NIST-NVLAP or AIHA accredited laboratory.
5. Assessment; for each inspection and re-inspection, the facility shall have an accredited inspector provide a written assessment of all friable known or assumed ACBM in the building. The accredited inspector providing a written

assessment shall sign and date the assessment, provide his or her State accreditation number for inclusion in the management plan within 30 days of the assessment.

Inspection: The inspector conducts a building survey by beginning with the boiler room and inspecting each room from the basement to the roof. All suspect material covered by AHERA is evaluated. If the product cannot he identified in the field and assumed, a bulk sample is taken and analyzed to determine its asbestos content. Those materials for which no samples were analyzed but professional judgment was made based on product familiarity, must be treated as though analysis was performed and the results were positive. All materials for which samples are taken are treated as asbestos containing until verification from the laboratory is obtained. The suspect material is identified as to type, location, quantity and condition. A new bulk sample is taken where the suspect material changes in appearance and/or facts lead the inspector to believe that the material may, in fact be different than previously sampled. It is likely that not all asbestos containing material will be found. Material within enclosed areas or inaccessible areas may contain asbestos and must be evaluated at such time as those areas are made accessible. When remodeling or demolition activities are planned, it is essential that all areas affected be thoroughly evaluated to determine if any ACBM will be disturbed or previously hidden ACBM uncovered to meet NESHAP requirements and public health.

Note: Environmental Audit Requirements may include document of suspect materials. Anyone doing environmental audits and inspecting suspect ACM in their audit protocol must be an accredited Building Inspector, even though they may not take samples or actually contact any suspect material. The definition of inspection includes any visual examination as well as sample collection.

Re-inspection and Periodic Surveillance: A visual re-inspection of all asbestos containing materials should be conducted at regular intervals as part of the O&M program. Combined with ongoing changes in conditions of ACM made by service workers, the re-inspections should help ensure that any ACM damage or deterioration will be detected and corrective action taken.

EPA regulations require an accredited inspector to inspect a public building that contains asbestos every three years and the VA recommends every year with a six-month update. EPA recommends that this inspection be a visual and physical evaluation of ACM's current condition and physical characteristics. Air monitoring can be used as a supplement but not replace physical and visual inspection.

PERSONAL PROTECTION AND WARNING LABELS

The Veterans Administration Medical Center is aware of the requirements to provide protection to all personnel exposed to asbestos-containing material in the daily course of their work. The Veterans Administration Medical Center policy is to comply with all EPA/OSHA/State rules designed to provide this protection.

Effective December 1989, all maintenance employees engaged in O&M activities which may disturb ACBM are required to wear a respirator and, where appropriate, disposable clothing and shoe covers, while engaged in those activities. The Veterans Administration Medical Center has developed a formal written respiratory protection program in compliance with 29 CFR 1910.134.

Those persons required to wear a respirator will be required to participate in an annual medical monitoring program which may consist of a chest x-ray, a pulmonary function test and a general medical physical as the employee health physician deems appropriate. If an employee wears a respirator for more than one hour a day for thirty days the full physical (chest x-ray, pulmonary function and general physical) is mandatory.

Warning labels shall be affixed or painted on asbestos materials where accessible. The designated color is fluorescent orange and or the words asbestos or the letter A. The OSHA standard label information is given in employee training. This is done to minimize any stress to patients at this medical center. All contractors are to be notified of this marking system prior to start of any construction or repair as part of hazard communication for asbestos.

EQUIPMENT REQUIRED FOR OPERATION AND MAINTENANCE PROGRAM

The Designated Person will coordinate the purchase of the following as needed:

Description
HEPA filtered vacuum kit
Replacement HEPA filters
Half face respirators with HEPA filters
Cases of pre-labeled asbestos disposal bags
5 gal. pails of penetrating encapsulate
5 gal. pails of bridging encapsulate - palm grade
Cases of Tyvek coveralls with zipper front (XL)
Boxes of disposable shoe covers -boot height
Boxes of disposable hoods
Cases of glove bags
Garden hand sprayers - 1 to 3 gal.
Rolls of 2" high quality duct tape
Retractable razor knives, heavy duty Putty knives - 3"
Scrub pails and floor mops
Roll of elasto cloth - 4"
Warning signs

The Veterans Administration Medical Center will attach a warning label, as prescribed by AHERA, on or adjacent to any ACBM located in routine maintenance areas (such as Boiler or Mechanical Rooms) at each building. These warning labels shall remain in place until the ACBM in those areas are removed.

INITIAL CLEANING AND ADDITIONAL CLEANING

Standard Operating Procedure for Asbestos Risk Management Program

1. Put on appropriate personal protective equipment as necessary.
2. HEPA vacuum all surfaces in the functional space beginning with highest surfaces first. Pay particular attention to horizontal surfaces. Be careful not to disturb other surface dust while vacuuming.
3. If the area has carpeting, HEPA vacuum several times and/or steam clean. Note: A severely contaminated carpet cannot be adequately cleaned. Dispose of as contaminated material.
4. If an area contains woven or other porous objects, evaluate their level of contamination by asking an accredited laboratory to perform a wipe test on representative objects.
5. Decontaminate or dispose of those objects found to be contaminated.

FLOOR TILE AND ROOFING MATERIAL MAINTENANCE

I. Floor Tile:

1. Undamaged floor tile will be maintained as part of the established maintenance and housekeeping activities and scheduling.

2. Sufficient wax will be maintained on the floor tile surface to minimize the likelihood of fiber release from abrasion associated with normal wear.

3. Buffing tile in areas where wax cannot be adequately maintained on the surface will be discouraged.

4. Stripping and buffing activities are known to cause fiber releases from floor tile. If it is necessary to perform these operations, use of highly abrasive pads will be avoided. Wet methods should be used whenever possible.

5. Individual tiles, which have become loose or damaged, will be replaced as necessary. Breaking of tiles will be avoided.

6. These O&M procedures will be reviewed and updated as necessary. At such a time as the EPA issues the guidance document on floor tile maintenance.

II. Roofing Material:

1. Notify and contractor that there is a layer of non-friable materials as a base layer of the roofing material.

2. Any employee or contractor working on the roof is required to have completed 2-hour awareness training.

3. Respiratory protection is required when the roofing material is being disturbed.

4. Removal of roofing material shall be methods that will not make the nonfriable material friable.

5. After material is removed from the building the material shall be sent to a type II landfill for disposal.

DECONTAMINATING AN AREA

Standard Operating Procedure for Asbestos Risk Management Program

1. If damaged asbestos materials contaminate an area, the Designated Person responding must first determine the extent of the contamination.
2. Place warning signs on all entrances to the area.
3. If disturbance of the insulation is necessary or has already occurred, isolate the work area from the other parts of the room, or isolate the entire room.
4. Use plastic sheets and duct tape or a glove bag to construct sufficient barriers to prevent fibers from escaping.
5. Seal all air vents within the isolated work area and put plastic on floor.
6. Put on appropriate personal protective equipment.
7. Wet the insulation using amended water.
8. While removing the insulation, apply a fine mist of amended water to thoroughly wet the material and eliminate fiber release.
9. Put the removed material into an asbestos disposal bag. As soon as all of the material is removed or the bag is full, seal the bag.
10. Wipe the mechanical equipment thoroughly with water to remove all residues.
11. If adjoining insulation is to remain, apply encapsulate to the exposed ends of the insulation to seal in all asbestos.
12. Pick up visible debris from floor plastic and place in disposal bag.
13. Lightly spray the inside of the plastic barriers with amended water. Wet wipe all surfaces with the work area not covered with plastic.
14. Roll plastic inward carefully to avoid knocking remaining debris from the plastic.
15. Place plastic in asbestos disposal bags and seal.
16. Wet wipe or HEPA vacuum surfaces in and immediately around the work area.
17. Place disposal protective clothing in asbestos disposal bag.
18. Be sure outside of bags are clean.
19. Remove and clean respirator.
20. Thoroughly wash hands and face.

*This list of steps is only a brief outline of those actions, which may be necessary to protect human health in each specific case. We provide this outline as a reminder of some of the major steps necessary. The user should also rely on his/her training, other printed material and common sense.

BUILDING RENOVATION OR DEMOLITION

Standard Operating Procedure for Asbestos Risk Management Program

1. The Designated Person shall review the proposed work and, using the Inspection Report, determine if any identified ACBM will be disturbed.

2. If ACBM is present which may be disturbed, the Designated Person shall procure the services of an accredited Project Designer to design the appropriate action to avoid fiber release. The Veterans Administration Medical Center will avoid use of an Abatement Contractor or employee thereof to design the project.

3. Careful consideration must be given to any ACBM which may have been hidden and therefore not identified but which will become exposed and/or damaged during the proposed renovation.

4. Clearance monitoring is required after asbestos removal to assure effective completion of the action prior to removing any containment or other scheduled construction activities. Conflict of interest should be considered prior to choosing the clearance monitor.

   *This list of steps is only a brief outline of those actions, which may be necessary to protect human health in each specific case. We provide this outline as only a reminder of some of the major steps necessary. The user should also rely on his/her training, other printed material and common sense.

RESPONDING TO A MAJOR FIBER RELEASE

Standard Operating Procedure for Asbestos Risk Management Program

1. Contact the facility industrial hygienist, safety officer and AFGE safety representative.

2. Immediately isolate the area by restricting access and turning off all air-handling units.

3. Control air movement by erecting plastic barriers as needed.

4. Place warning signs at all entrances to the area.

*This list of steps is only a brief outline of those actions, which may be necessary to protect human health in each specific case. We provide this outline as only a reminder of some of the major steps necessary. The user should also rely on his/her training, other printed material and common sense.

CONTROLLING OUTSIDE CONTRACTOR ACTIVITIES

Standard Operating Procedure for Asbestos Risk Management Program

1. All contractors must register with the Designated Person before beginning any work in Veterans Administration Medical Center buildings.
2. The Designated Person will issue a signed work permit before any maintenance, repair, and/or renovation work commences.
3. Authorization (permit) to perform work shall denote date and time of work, location and nature of work, name of individual and whether or not the work area contains asbestos. Both the Designated Person and the contractor should sign it. One (1) copy goes to the contractor and one (1) copy goes to the Management Plan file.
4. 4. If the work area contains asbestos, ask the contractor not to disturb the material.
5. If the contractor must disturb the material to perform work the Designated Person will direct the special O&M crew to remove or otherwise stabilize the asbestos before the contractor begins work to eliminate a potential fiber release. If the ACBM is larger than three (3) square feet or three (3) linear feet, appropriately accredited personnel should design and conduct the project.
6. Inform all contractors that if, in the course of their work, they inadvertently disturb mechanical equipment insulation which is not fiberglass, any acoustical piaster, or structural insulation, they must immediately vacate and secure the area and notify the Designated Person.
7. After the contractor finishes the work, special O&M crewmembers should inspect the area to verify that asbestos- containing material was not damaged.

*This list of steps is only a brief outline of those actions, which may be necessary to protect human health in each specific case. We provide this outline as only a reminder of some of the major steps necessary. The user should also rely on his/her training, other printed material and common sense.

FACILITY SURVEY

Consultants updated the previous survey of Buildings: 1thru 6. The survey was Data pertaining to asbestos containing material (ACM) at the Iron Mountain VA Medical Center facility was provided by the Department of Veterans Affairs. Random sampling was conducted only to verify positive sample results of asbestos containing material. Only accessible areas were observed/verified during this investigation. Therefore, as areas become accessible, ACBM may also become accessible. When areas become accessible, testing of suspect ACBM should be conducted. This Asbestos Management Plan only documents asbestos reported in the Asbestos Management Plan completed in 2004 by Victor M. Cocco, Industrial Hygienist, Department of Veterans Affairs. A complete list of ACBM observed is detailed in Table 3 – Summary of Asbestos Containing Material. Building floor plans are also included detailing observed locations of ACBM.

In November and December 2014, BDN Industrial Hygiene Consultants, Inc. updated a previous survey. BDN industrial hygienists Travis Noa, asbestos inspector accreditation number A38262 and David Steger, asbestos inspector accreditation number A1788, both are Michigan-accredited asbestos building inspectors, completed the updated survey. Brent Bassett, asbestos accreditation number A1776 of BDN Industrial Hygiene Consultants, Inc., an accredited Asbestos Management Planner, updated the asbestos management plan for the Oscar G. Johnson VA Medical center in February 2015.

TERMS/GLOSSARY

Accessibility - The ability of the maintenance/housekeeping personnel to access or disturb asbestos containing material.

Action Level - The level of airborne fibers specified by OSHA as an alert or warning level. Currently, the level is 0.1 fibers per cubic centimeter of air, on an 8-hour time- weighted average.

AHERA - Asbestos Hazard Emergency Response Act.

Amosite - One form of asbestos which is also one of the more popular forms of asbestos used in the United States.

Asbestos - The general term given to one of six naturally occurring minerals. Common forms include: actinolite, amosite, anthohyllite, chrysotile, crocidolite , and tremolite .

Asbestos Containing Material (ACM) - Any material or product that contains more than 1 percent asbestos (AHERA definition).

Asbestos Containing Building Material (ACBM) - According to AHERA the definition is: Surfacing material, thermal system insulation, or miscellaneous material that contains asbestos and is found on interior structural members or other parts of a building.

Bridging Encapsulant - Material used to prevent the release of asbestos fibers by surrounding and sealing the asbestos fibers.

Competent Person - An individual qualified to identify asbestos containing material and the potential hazards associated with such materials, and an individual capable of selecting the proper control mechanisms for potential asbestos exposure.

Chrysotile - One of six naturally occurring forms of asbestos. Chrysotile is typically white in color, and was the most commonly used form of asbestos in building materials.

Crocidolite - One of six naturally occurring forms of asbestos. Crocidolite is typically blue in color, and was one of the least commonly used forms of asbestos in building materials.

Class I Asbestos Work - refers to all work associated with the removal of Thermal System Insulation (TSI) and surfacing ACBM.

Class II Asbestos Work – refers to removal of materials that don’t fall under Class I, including roofing and flooring material.

Damaged Friable Surfacing (miscellaneous) Material - Friable surfacing (miscellaneous) ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of

the material is inadequate or, if applicable, which has delaminated such that the bond to the substrate (adhesion) is in adequate or which for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers separation of ACM from the substrate; flaking, blistering, or crumbling of ACM surface; water damage; significant or repeated water stains, scrape, gauges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage (AHERA definition).

Damaged or Significantly Damaged Thermal System Insulation - thermal system insulation on pipes, boilers, tanks, ducts, and other thermal system insulation equipment which the insulation has lost its structural integrity, or its covering , in whole or in part, is crushed water-stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures gouges, or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris, originating from the ACBM in question may also indicate damage (AHERA definition).

Decontamination - cleaning of contaminating areas. Decontamination stages (chambers) are used in ACM abatement projects.

Designated Person - a person appointed by a local education agency to be in charge of the asbestos management program (AHERA definition).

Encapsulation - the use of a product to seal the surface (bridging encapsulation) or bulk (penetrating encapsulant) of ACM.

Enclosure - a resilient airtight structure, built (or sprayed) around ACM designed to prevent disturbance and contain released fibers.

Friable - Material that can be crumbled or reduced to powder by hand pressure.

Functional Space - Spatially distinct units within a building which contain identifiable populations of building occupants.

Glove Bag - a device used to remove sections of pipe insulation without isolating the entire room or space.

Hazard Assessment - the evaluation and interpretation of physical assessment data in order to set abatement priorities and rank areas for response actions.

Heating, Ventilation , and Air-Conditioning (HVAC) Systems - the system of pipes, ducts, and equipment (air conditioners , chillers, heaters, boilers, pumps, fans, etc.) used to cool, heat, move, and filter air in a building. Also known as mechanical system.

High Efficiency Particulate Air (HEPA) - Air that has passed through a filter, which is 99.93 percent efficient at filtering particles of 0.3 micrometers in diameter.

Homogeneous Area - An area (interior or external), which appears to be similar throughout in terms of color, texture, and date of material application.

Management Plan - A plan for each LEA to control and manage ACBM (AHERA definition) .

Mechanical Systems - see HVAC systems.

Medical Surveillance - periodically examining all employees exposed above the OSHA permissible exposure limit or who wears a respirator during work activities.

Miscellaneous Material - Interior building material or structural components, structural members or fixtures, such as floor and ceiling tiles , and does not include surfacing material or thermal system insulation (AHERA definition) .

Operations & Maintenance (O&M) Plan - a plan for an Operation & Maintenance program, which is designed to clean up asbestos contamination, minimize future fiber release, and maintain ACM in good condition.

Permissible Exposure Level (PEL) - a level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. It is 0.01 fibers per cubic centimeter of air, 8-hour time weighted average, as measured by phase contrast microscopy.

Phase Contrast Microscopy (PCM) - one method of analyzing air samples for fibers utilizing a light microscope.

Physical Assessment - assessing suspect material to determine the current condition of the material and the potential for future disturbance.

Polarized Light Microscopy (PLM) - one method of analyzing bulk samples for asbestos utilizing polarized light under a light microscope.

Preventative Measures - response actions taken to reduce the potential for ACM disturbance, usually within the context of the O&M program.

Removal - scraping, vacuuming, or otherwise taking ACM out of a building and disposing it.

Repair - restoration of damaged or deteriorated ACM to intact condition.

Respiratory Protection Program - a set of procedures and equipment required by OSHA if employees wear negative pressure respirators r if fiber levels are above the PEL.

Response Actions - actions specified in the management plan to control ACM; including repair, O&M, and the various methods of abatement.

Significantly Damaged Friable Surfacing (miscellaneous) Material - friable surfacing (miscellaneous) ACM in a functional space where damage is extensive and severe (AHERA definition).

Small-Scale, Short-Duration Activities - maintenance or abatement activities which may contact ACBM but do not represent a major ACBM disturbance.

Surfacing Material - a material that is sprayed-on, troweled-on, or otherwise applied to surfaces (i.e. fireproofing materials on structural members).

Surfactant - an agent added to water to decrease surface tension and thus increase water's ability to "wet" or penetrate bulk material.

Transmission Electron Microscopy (TEM) - one method of analyzing air samples for asbestos fibers utilizing a transmission electron microscope, and possible, associated instruments for further identifying asbestos.

Tremolite - One of six naturally occurring forms of asbestos. Tremolite is not commonly used in building materials.

Thermal System Insulation (TSI) - Material applied to boilers, ducts, fittings, pipes, tanks, etc. to prevent heat loss or gain.

Visual Inspection - an inspection of ACM to detect damage, or an inspection of a regulated area to detect incomplete work, inadequate clean-up, or violations of regulations on an abatement project.

ASBESTOS MANAGEMENT PLAN

Oscar G. Johnson VA Medical Center

325 East H Street

Iron Mountain, MI

APPENDIX F

Asbestos Abatement Estimates

BDN JOB NO. 16297

NDW NO. 1416

VAMC Building 4 **Asbestos Abatement Costs**

Data Release : Year 2015 **Unit Cost Estimate**

Quantity	LineNumber	Source		Description	Crew	Daily Output	Labor Hours	Unit	Material	Labor	Total	Ext. Mat.	Ext. Labor	Ext. Total	Mat. O&P	Labor O&P	Total O&P	Ext. Mat. O&P	Ext. Labor O&P	Ext. Total O&P	Labor Type	Data Release	CCI Location	Notes
262	028213430700			Bulk asbestos removal, pipe insulation, air cell type, with glove bag, up to 3" diameter pipe, includes disposable tools & 2 suits & 1 respirator filter/day/worker	A9	200	0.32	L.F.	$ 9.15	$ 16.75	$ 25.90	$ 2,397.30	$ 4,388.50	$ 6,785.80	$ 10.05	$ 27.00	$ 37.05	$ 2,633.10	$ 7,074.00	$ 9,707.10	RR	Year 2015	National Average	
44	028213471000			Asbestos waste packaging, handling & disposal, double bag and decontaminate	A9	960	0.07	Ea.	$ 0.82	$ 3.49	$ 4.31	$ 36.08	$ 153.56	$ 189.64	$ 0.90	$ 5.60	$ 6.50	$ 39.60	$ 246.40	$ 286.00	RR	Year 2015	National Average	
262	220719106900			Insulation, pipe covering (price copper tube one size less than I.P.S.), fiberglass with all service jacket, 1" wall, 2" iron pipe size	Q14	200	0.08	L.F.	$ 1.22	$ 3.77	$ 4.99	$ 319.64	$ 987.74	$ 1,307.38	$ 1.34	$ 6.05	$ 7.39	$ 351.08	$ 1,585.10	$ 1,936.18	RR	Year 2015	National Average	
Total											**$ 35.20**	**$ 2,753.02**	**$ 5,529.80**	**$ 8,282.82**			**$ 50.94**	**$ 3,023.78**	**$ 8,905.50**	**$ 11,929.28**				