

**MICHIGAN STATE UNIVERSITY**

**ASBESTOS INSPECTION REPORT  
FOR  
SHAW LANE POWER PLANT**

**OCTOBER 2006**



**NOVA ENVIRONMENTAL, INC.**  
5340 Plymouth Rd., Suite 210  
Ann Arbor, MI 48105  
(734) 930-0995



**ENVIRONMENTAL, INC.**  
5340 PLYMOUTH RD. SUITE 210  
ANN ARBOR, MICHIGAN 48105  
734-930-0995

October 13, 2006

Mr. Andrew D. Smith  
Environmental Technician  
Office of Environmental & Occupational Safety  
Michigan State University  
150 Giltner Hall  
East Lansing, MI 48824-1101

Dear Mr. Smith:

The following is the asbestos-containing material (ACM) Survey Report for Michigan State University's Shaw Lane Power Plant, Building #61.

This ACM Survey Report, prepared by Nova Environmental, Inc., is separated into the following sections:

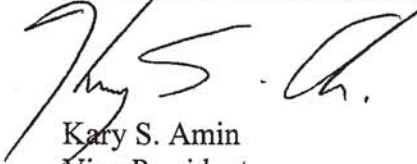
Section I	Background/Survey Information
Section II	Inspection Results
Section III	Laboratory Results
Section IV	Facility Information/Diagrams
Section V	Qualifications/Certifications & General Disclaimer Statement
Section VI	Photo Documentation

If you have any questions or concerns regarding the information presented within this report, please feel free to contact me at (734) 390-0995.

Thank you for choosing Nova Environmental, Inc.

Sincerely,

NOVA ENVIRONMENTAL, INC.



Kary S. Amin  
Vice President

KSA/ij



**Michigan State University  
Shaw Lane Power Plant  
Building #61**

**Section I  
Background/Inspection Information**

**Background:**

On Monday, October 9, 2006, representatives of Nova Environmental, Inc. conducted an Asbestos-Containing Materials (ACM) Building Survey within the Shaw Lane Power Plant. The intent of this Survey was to determine potential asbestos content within interior accessible building materials/components.

During the on-site inspection phase, Nova collected a total of 37 bulk samples. Each of these samples was analyzed under Polarizing Light Microscopy (PLM) by EMSL Analytical, Inc., an accredited laboratory, utilizing EPA 600/R-93/116 Method. Bulk samples analyzed <1% asbestos were subsequently analyzed using the point count method. All laboratory result sheets are located in Section III of this report.

It should be noted that the following factors were realized during the inspection phase:

- Nova Environmental, Inc. only collected bulk samples of accessible suspect ACM building components. Nova conducted no destructive sampling, therefore, no inaccessible materials are included as part of this report.
- In accordance with the Request for Quotation (RFQ) 73316, no roofing materials were bulk sampled or included as part of this report.
- In accordance with instruction provided during the bidding process, no exterior materials, concrete, cinderblock, brick, mortar, ceramic or non-building components were bulk sampled or included as part of this report. Further inspection of these materials and inaccessible areas may be necessary prior to any renovation or demolition in order to comply with the EPA NESHAP and OSHA Asbestos Construction Industry Standards.
- All quantities listing within this report are approximates only.

A General Disclaimer Statement regarding this ACM Survey is located in Section V of this report.

**Inspection Information:**

All bulk samples were collected by Michigan Accredited Asbestos Inspectors in accordance with 40 CFR Part 763 of the EPA's AHERA regulation. This sampling strategy is required according to 29 CFR Part 1910.1001 and 1926.1101 of the OSHA Asbestos General Industry and Construction Standards for public and commercial buildings.



There are several terms/phrases that are identified in the various EPA and OSHA asbestos regulations, which are used within this ACM Survey report. They are as follows:

- ***Asbestos-Containing Material (ACM):***  
Refers to a material, which contains more than 1% asbestos. If a given material contains over 1% asbestos, it is considered asbestos by all federal and state government agencies. If the material contains less than or equal to 1 % asbestos, it is legally non-asbestos.
- ***Friable:***  
Refers to the ability of the material to crumble or pulverize under hand pressure when dry.
- ***Functional Space (FS):***  
Means a room, group of rooms or separate independent area, such as hallways, restrooms, etc.
- ***Functional Space Number:***  
A number, assigned to each functional space by either the building owner or Nova.
- ***Homogeneous Area (HA):***  
Refers to a material that is uniform in color and texture.
- ***Homogeneous Area Number:***  
A number, assigned to each homogeneous area by the Nova Inspector(s).
- ***Miscellaneous Material:***  
Any material, which is not classified as thermal system insulation or surfacing material.
- ***Surfacing Material:***  
Means material that is sprayed trowelled-on or otherwise applied to surfaces, (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).
- ***Thermal System Insulation (TSI):***  
Means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.
- ***Units:***  
Units of measurement in either square feet, linear feet or totals, such as a total count of a given material or component.



**Michigan State University  
Shaw Lane Power Plant  
Building #61**

**Section II  
Inspection Results**

This section is delineated into three separate sub-sections. Included in each sub-section are FS# or functional space numbers, FS Description, Material Description, amount of material present, whether the material is positive, negative or assumed asbestos and its present status. Please note that within the sub-sections all materials tested **positive** or **assumed** to be asbestos are in bold, while all materials tested negative for asbestos are in regular type.

A listing and description of each sub-section follows:

➤ ***Homogeneous Area Listing***

This listing provides a complete material listing with total building quantities as well as whether the material contains asbestos, is assumed or is negative for asbestos-containing material.

➤ ***List by Functional Space Number***

This listing provides all inspection information organized by functional space.

➤ ***List by Positive, Assumed, Negative Homogeneous Areas***

This listing provides all homogeneous areas, or material description, that are positive for asbestos or assumed to be asbestos first, organized by functional space. The homogeneous areas that were tested negative for asbestos and corresponding functional spaces follow.

➤ ***List by Homogeneous Areas***

This listing provides all inspection information organized by homogeneous area, or material description.

The laboratory results are located in Section III of this Report.

**Michigan State University  
Shaw Lane Power Plant  
Homogeneous Area Listing**

ACM Description	HA#	Total Quantities	Units	Asbestos
<b>Straigh Pipe Insulation</b>	<b>1</b>	<b>5427</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Mud Fittings</b>	<b>2</b>	<b>849</b>	<b>Total</b>	<b>Positive</b>
<b>Tank Insualtion</b>	<b>3</b>	<b>1150</b>	<b>Sq. Ft.</b>	<b>Positive</b>
<b>Boiler Skin</b>	<b>4</b>	<b>10800</b>	<b>Sq. Ft.</b>	<b>Positive</b>
Fire Brick	6	4850	Sq. Ft.	Negative
Door Window Glaze	7	193	Ln. Ft.	Negative
<b>Window Glaze 1</b>	<b>8</b>	<b>5400</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Window Caulk 1</b>	<b>9</b>	<b>1730</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Electrical Wrap</b>	<b>10</b>	<b>600</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>HVAC Fabric</b>	<b>11</b>	<b>120</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Exhaust Insulation</b>	<b>12</b>	<b>240</b>	<b>Sq. Ft.</b>	<b>Positive</b>
<b>Canvas Wrap</b>	<b>13</b>	<b>60</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Gaskets</b>	<b>14</b>	<b>460</b>	<b>Total</b>	<b>Positive</b>
<b>Expansion Caulk</b>	<b>15</b>	<b>600</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Hopper Caulk</b>	<b>16</b>	<b>24</b>	<b>Ln. Ft.</b>	<b>Positive</b>
Black Foam Insulation	17			Negative
Window Caulk 2	18	364	Ln. Ft.	Negative
<b>Window Glaze 2</b>	<b>19</b>	<b>462</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Electrical Wrap 2</b>	<b>20</b>	<b>350</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Electrical Transite</b>	<b>21</b>	<b>50</b>	<b>Sq. Ft.</b>	<b>Positive</b>
<b>Electriacl Insulators</b>	<b>22</b>	<b>100</b>	<b>Sq. Ft.</b>	<b>Positive</b>
<b>Door Caulk</b>	<b>23</b>	<b>114</b>	<b>Ln. Ft.</b>	<b>Positive</b>
<b>Bushing Caulk</b>	<b>24</b>	<b>75</b>	<b>Total</b>	<b>Positive</b>
<b>9" x 9" Floor Tile Tan and Brown</b>	<b>25</b>	<b>202</b>	<b>Sq. Ft.</b>	<b>Positive</b>
Mastic of 9" x 9" Floor Tile Tan and Brown	26	202	Sq. Ft.	Negative
6" Black Covebase	27	52	Ln. Ft.	Negative
Mastic of 6" Black Covebase	28	52	Ln. Ft.	Negative
1' x 1' Ceiling Panel	29	202	Sq. Ft.	Negative
<b>Gluepod of 1' x 1' Ceiling Panel</b>	<b>30</b>	<b>202</b>	<b>Sq. Ft.</b>	<b>Positive</b>
<b>Threshold</b>	<b>31</b>	<b>3</b>	<b>Ln. Ft.</b>	<b>Positive</b>
Drywall Ceiling	32	202	Sq. Ft.	Negative
Heater Expansion Joint	33	4	Ln. Ft.	Negative
Counter Top	34	30	Sq. Ft.	Negative
Plastic Expansion Joints	35	16	Ln. Ft.	Negative
<b>Tagged Fire Door</b>	<b>36</b>	<b>2</b>	<b>Total</b>	<b>Positive</b>
<b>Window Glaze 3</b>	<b>37</b>	<b>4000</b>	<b>Ln. Ft.</b>	<b>Positive</b>
Window Caulk 3	38	420	Ln. Ft.	Negative