# Hazardous Materials
# Site Investigation Report

## Rath Administration Building
## 1515 Sycamore Street
## Waterloo, Iowa 50703

**Prepared For:**
**City of Waterloo**
**Louis Starks**
**715 Mulberry Street**
**Waterloo, Iowa 50703**

**Prepared By:**
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**AMIE # C08203**

**May 12, 2008**

AMI ENVIRONMENTAL

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# 1.0 SURVEY OVERVIEW

On May 7, 8 and 9, 2008, the Rath Administration Building, located at 1515 Sycamore Street in Waterloo, Iowa, was inspected for asbestos-containing materials (ACMs), lead-based painted building components, lead-containing materials and other hazardous materials. The survey was initiated by Mr. Louis Starks with the City of Waterloo, Iowa.

Mr. James Koehler of AMI Environmental conducted the asbestos inspection. Mr. Koehler has completed the requisite training for asbestos accreditation as an inspector at a state-approved training provider, as required by the Toxic Substances Control Act (TSCA Title II). Mr. Koehler's United States Environmental Protection Agency (EPA) and State of Iowa building inspector numbers are 7ME09137803I023 and 07-3514I, respectively.

Mr. James Koehler of AMI Environmental conducted the lead-based painted building components and lead-containing materials inspection. Mr. Koehler has completed the requisite EPA training for accreditation as a lead inspector/risk assessor. Mr. Koehler has also completed the XRF (X-Ray Fluorescence) manufacturer's training course for lead-based paint inspection

Mr. Jeremy Poell of AMI Environmental conducted the miscellaneous hazardous materials inspection. There are no formal licensing requirements for performance of such an inspection.

# 2.0 SURVEY METHODOLOGY

## 2.1 Asbestos-Containing Materials

### *2.1.1 Applicable Definitions*

The EPA and the Occupational Safety and Health Administration (OSHA) define ACMs as any material that contains greater than one percent asbestos, as determined by visual area estimation (microscopic analysis).

By definition, friable ACMs contain more than one percent asbestos, release fibers more readily and, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. In contrast, non-friable ACMs contain more than one percent asbestos but, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

### *2.1.2 Bulk Sampling*

The asbestos inspection was performed in accordance with EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61. The survey included a pre-renovation inspection of the structure to identify suspect ACMs that may be impacted by future renovation.

A total of 15 bulk samples were taken from suspect ACMs. Polarized Light Microscopy (PLM) analysis, utilizing dispersion staining techniques (ref: EPA Method 600/R-93/116), was performed on 18 heterogeneous applications to determine asbestos content. Suspect ACMs were classified as either friable or non-friable ACMs, based on touching and/or sampling the material.

Crisp Analytical Labs, LLC, located at 2081 Hutton Drive, Suite 301, Carrollton, Texas, analyzed the samples of suspect ACMs. Crisp Analytical Labs, LLC is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and is assigned laboratory number 30-0235.

Analytical results from a pre-existing asbestos survey report, dated October 16, 1999, were used as part of this report.

Please refer to the laboratory reports, Appendix C, for a listing of all materials analyzed.

*2.1.3 Quantification Method Analysis*

EPA regulations allow materials determined to contain less than 10 percent asbestos utilizing a visual estimate quantification method, such as PLM analysis, to be treated as non-asbestos containing if the material is re-analyzed using one of two quantification methods and determined to contain one percent or less of asbestos. The two acceptable quantification methods are point count analysis and TEM Chatfield analysis.

Quantification methods are more time-consuming and more expensive analytical procedures that are occasionally used to more accurately determine the amount of asbestos in certain samples. Because of their higher cost and the acceptable accuracy of the less expensive visual estimation method, laboratories do not typically perform quantification analyses unless specifically requested.

The quantification method known as point counting analysis is used for most ACM types, except floor tile. The organic matrix composition of floor tile precludes the use of point count analysis to more accurately determine asbestos amounts within a sample. Therefore, TEM Chatfield analysis—which effectively removes all organic materials, leaving only asbestos behind—is necessary to provide a more precise percentage of asbestos content in floor tile.

Experience shows that unless the amount of asbestos in certain materials analyzed by PLM visual estimation is sufficiently low, analysis by point counting or TEM Chatfield analyses seldom changes the material classification to non-asbestos-containing. Therefore, point count and TEM Chatfield analyses are not often recommended.

### *2.1.4 Survey Limitations*

At the discretion of the inspector, samples were not collected from materials that are not accessible and/or require dismantling or damage to the finished surfaces (such as walls and ridged ceilings). Suspect ACMs that are not accessible may include thermal system insulation on mechanical lines inside finished interior walls and ceilings. These applications should be identified at the time of renovation or demolition. Sampling of these materials may not be necessary if these materials are presumed to be asbestos-containing or if the materials discovered within the concealed spaces are determined, by a licensed asbestos inspector, to be homogenous to other materials that were sampled.

## 2.2 Lead-Based Painted Building Components and Lead-Containing Materials

### *2.2.1 X-Ray Fluorescence Testing*

A portable X-ray fluorescence (XRF) instrument was used for determining the presence and concentration of lead in the facility.

Portable XRF instruments expose painted surfaces, porcelain, glazed block, vinyl and other possible lead-containing materials to X-rays or other high energy radiation—such as gamma rays—which causes lead to emit X-rays with a characteristic frequency. The intensity of this radiation is measured by the instrument's detector, and is then converted into a number that represents the amount of lead in the paint per unit area, usually milligrams per square centimeter ($mg/cm^2$).

A total of 152 readings, including 18 calibration readings, were collected from suspect paints, coatings and materials to determine the concentration of lead present.

### *2.2.2 Classification of XRF Results*

XRF results are classified as positive, negative or inconclusive. A positive classification indicates lead is present at or above the standard (determined by the EPA to be 1.0 $mg/cm^2$ or higher using XRF). A negative classification indicates lead at or above the standard is not present on the sample.

Please refer to Section 3.2 for a complete listing of components identified to contain lead levels exceeding the EPA's action level of 1.0 $mg/cm^2$.

## 2.3 Miscellaneous Hazardous Materials

### *2.3.1 Polychlorinated Biphenyls*

Polychlorinated biphenyls (PCBs) vary widely in appearance, from mobile, oily liquids to white, crystalline solids and hard, noncrystalline resins. PCBs are thermally stable, resistant to oxidation, acids, bases and other chemical agents, and have excellent dielectric properties.

Lighting ballasts, transformers, circuit breakers, transistors, capacitors, heat transfer equipment, and switchgear, which were manufactured prior to 1978 and/or do not contain a label stating "No PCBs" are assumed as PCB-containing.

PCB content varies, depending on the item, but can range from 30 grams in lighting ballasts to multiple gallons in transformers.

Please refer to Section 3.3 for a listing of PCB-containing materials identified through visual analysis.

### *2.3.2 Mercury*

Mercury has unique characteristics that make it the easiest material to use in various medical and industrial devices. It is the only metal that exists as a liquid at room temperature, and it expands and contracts according to temperature changes, combines easily with other metals, and conducts electricity.

Gas discharge bulbs, such as fluorescent light bulbs and high intensity discharge (HID) lamps, contain mercury vapor. Most of the mercury associated with a fluorescent bulb and HID is encountered in the phosphor coating on the inside of the bulb or lamp as divalent mercury.

Fluorescent bulbs come in various shapes and sizes (straight, u-bent, compact and circular); the mercury content in fluorescent bulbs averages 30 milligrams.

HID lamps come in three major types—mercury vapor, metal halide and high-pressure sodium—with a mercury content ranging from 20 to 250 milligrams.

Thermostats, temperature and blood pressure gauges, displacement relays, and contacts and silent switches contain mercury in liquid form. Mercury is located in a glass vial, tube or hermetically sealed container within the item. Mercury content in thermostats, temperature and blood pressure gauges, displacement relays and contacts average 1.5 to 2 grams. In silent switches, the mercury content averages two to three drops.

Please refer to Section 3.3 for a listing of mercury-containing materials identified through visual analysis.

### *2.3.3 Batteries*

Batteries, such as nickel-cadmium (Ni-Cd) and small sealed lead-acid batteries, are found in many common items, including electronic equipment, mobile telephones, portable computers, security systems, exit signs and emergency backup lighting. Batteries may also contain alkalines, mercury, silver and electrolytes.

The cadmium content of nickel-cadmium batteries averages 13 to 15 percent by weight; lead content of lead acid batteries averages 70 percent by weight.

Please refer to Section 3.3 for a listing of battery-containing materials identified through visual analysis.

### *2.3.4 Ozone-Depleting Substances*

The EPA classifies a variety of compounds as ozone-depleting substances (ODSs), including chlorofluorocarbons (CFCs). CFCs are highly effective refrigerants that were developed in response to the pressing need to eliminate toxic and flammable substances, such as sulfur dioxide and ammonia, in refrigeration units and air conditioners.

Commercial CFCs are nonflammable, noncorrosive, nontoxic and odorless, and their vapor pressures and heats of vaporization made them suitable for refrigeration applications. The most common commercial CFCs were marketed under the name Freon®.

Please refer to Section 3.3 for a listing of ODSs identified through visual analysis.

### *2.3.5 Low-Level Radioactive Sources*

Low-level radioactive sources (LLRSs) include ionizing smoke detectors, which use an ionizing chamber and a source of ionizing radiation to detect smoke. This type of smoke detector is common because it is inexpensive and better at detecting smaller amounts of smoke produced by flaming fires. Inside the ionizing detector is a low-level source (perhaps 1/5000$^{th}$ of a gram) of americium-241. This radioactive element has a half-life of 432 years.

Please refer to Section 3.3 for a listing of LLRSs identified through visual analysis.

# 3.0 SURVEY RESULTS

## 3.1 Asbestos-Containing Materials

*Amo – Amosite*
*Chry – Chrysotile*
*F – Friable*
*LF – Linear Feet*
*MF – Mechanical Fittings*
*MM – Miscellaneous Material*
*NA – Not Available*
*ND – None Detected*
*NF – Non-Friable*
*NS – Not Sampled*
*PACM – Presumed ACM*
*SF – Square Feet*
*SFP – Stop at First Positive*
*SM – Surfacing Material*
*TSI – Thermal System Insulation*

****Asbestos-containing materials are in bold.****

| Description | Color | Photo # | Material Location | Sample # | % | Type | F/ NF | Cond | Est. Qty. | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling panel | White | -- | Attic – Ceilings and walls | 1 | -- | -- | -- | -- | -- | -- |
| Asphalt shingle siding | Red/ Black | -- | Roof – West side | 2 | -- | -- | -- | -- | -- | -- |
| Vibration joint cloth | Black | -- | Attic – AHU Room | 3 | -- | -- | -- | -- | -- | -- |
| Sheet flooring | Brown | -- | Throughout building | 4a<br>4b<br>4c | -- | -- | -- | -- | -- | -- |
| Chalkboard | Black | -- | 2nd floor, Sale conference room | 5 | -- | -- | -- | -- | -- | -- |
| AHU insulation | Black | -- | 2nd floor, Attic landing | 6 | -- | -- | -- | -- | -- | -- |
| Vibration joint cloth | White | -- | 2nd floor, Attic landing | 7 | -- | -- | -- | -- | -- | -- |
| **12"x 12" wood panel glue** | **Black** | **30** | **1st floor, Gary office and Adkins office** | **8** | **3%** | **Chry** | **NF** | **Poor** | **160 SF** | -- |
| Sink undercoating | Black | -- | Basement, NW kitchen | 9 | -- | -- | -- | -- | -- | -- |
| **Pipe tar wrap** | **Black** | **31** | **Basement, NW storage area** | **10** | **4%** | **Chry** | **NF** | **Fair** | **25 LF** | -- |
| Plaster system | White | -- | Throughout building | 11a<br>11b<br>11c | -- | -- | -- | -- | -- | -- |
| Sheet flooring | Brown | -- | Throughout first floor | 48-01 | -- | -- | -- | -- | -- | Previously sampled |
| Plaster/Skim coat | White | -- | Throughout building | 48-02<br>48-06<br>48-09<br>48-37 | -- | -- | -- | -- | -- | Previously sampled |

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| Description | Color | Photo # | Material Location | Sample # | % | Type | F/ NF | Cond | Est. Qty. | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| Parquet flooring and mastic | Black | -- | Slyfe Office | 48-03 | -- | -- | -- | -- | -- | Previously sampled |
| Suspended ceiling tile | White | -- | North Entry | 48-04 | -- | -- | -- | -- | -- | Previously sampled |
| Fiberglass ceiling tile insulation | Yellow | -- | Throughout building | 48-05 | -- | -- | -- | -- | -- | Previously sampled |
| **Drywall and joint compound** | **White** | **--** | **Throughout building** | **48-07<br>48-18** | **2%** | **Chry** | **F** | **Poor** | **2,500 SF** | **Previously sampled<br>Drywall negative** |
| **2" pipe insulation** | **White** | **5** | **Throughout building** | **48-08<br>48-12<br>48-20** | **25%<br>2%** | **Chry<br>Croc** | **F** | **Poor** | **1,800 LF** | **Previously sampled** |
| **4" pipe insulation** | **White** | **6** | **Throughout building** | **48-08<br>48-12<br>48-20** | **25%<br>2%** | **Chry<br>Croc** | **F** | **Poor** | **6,000 LF** | **Previously sampled** |
| **6" pipe insulation** | **White** | **7** | **Throughout building** | **48-08<br>48-12<br>48-20** | **25%<br>2%** | **Chry<br>Croc** | **F** | **Poor** | **2,000 LF** | **Previously sampled** |
| **8" pipe insulation** | **White** | **8** | **Throughout building** | **48-08<br>48-12<br>48-20** | **25%<br>2%** | **Chry<br>Croc** | **F** | **Poor** | **500 LF** | **Previously sampled** |
| **10" pipe insulation** | **White** | **9** | **Throughout building** | **48-08<br>48-12<br>48-20** | **25%<br>2%** | **Chry<br>Croc** | **F** | **Poor** | **200 LF** | **Previously sampled** |
| **Tank Insulation** | **White** | **10,11** | **Basement, Mechanical room near tunnel and South wall in Kitchen** | **48-21<br>48-33** | **25%<br>10%** | **Chry<br>Amos** | **F** | **Poor** | **175 SF** | **Previously sampled** |
| **12"x 12" ceiling tile glue** | **Brown** | **14** | **Basement, Telephone equipment room** | **48-10** | **5%** | **Chry** | **NF** | **Poor** | **400 SF** | **Previously sampled** |
| Sheet flooring | Brown | -- | Basement, Telephone equipment room | 48-11 | -- | -- | -- | -- | -- | Previously sampled |

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| Description | Color | Photo # | Material Location | Sample # | % | Type | F/ NF | Cond | Est. Qty. | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **9"x 9" VFT checkerboard pattern and mastic** | **Brown/ Red**<br>**Black** | **16** | **Throughout basement**<br>**2nd floor, N. Central bathroom** | **48-13**<br>**48-23**<br>**48-27** | **15%**<br>**2%** | **Chry**<br>**Chry** | **NF**<br>**NF** | **Poor**<br>**--** | **17,000 SF** | **Previously sampled** |
| Plaster on Beam | White | -- | Basement, Mail room | 48-14 | -- | -- | -- | -- | -- | Previously sampled |
| **Insulation between cork layers** | **White** | **19** | **Basement, A/C room**<br>**Attic, East air handler** | **48-15** | **30%**<br>**3%** | **Chry**<br>**Amos** | **F** | **Poor** | **200 SF** | **Previously sampled** |
| **9"x 9" VFT checkerboard pattern and mastic** | **Black/ Red**<br>**Black** | **17** | **Basement, West office area**<br>**3rd floor, West room** | **48-16**<br>**48-17**<br>**48-36**<br>**48-39** | **10%**<br>**10%**<br>**--** | **Chry**<br>**Chry**<br>**--** | **NF**<br>**NF** | **Poor**<br>**--** | **3,800 SF** | **Previously sampled** |
| **9"x 9" VFT and mastic** | **White**<br>**Black** | **18** | **3rd floor, North Central Room**<br>**Basement, A/C room** | **48-19**<br>**10A**<br>**11A** | **15%**<br>**2%** | **Chry**<br>**Chry** | **NF**<br>**NF** | **Poor** | **1,400 SF** | **Previously sampled** |
| **Mastic on cork insulation** | **Black** | **20** | **Basement, Tunnel and freezers**<br>**Attic, NE air handler**<br>**Adams building, vault room** | **48-22**<br>**48-28** | **5%** | **Chry** | **NF** | **Fair** | **4,000 SF** | **Previously sampled** |
| **Transite ceiling tile** | **White** | **22** | **Basement, Berner rooms** | **48-25** | **20%** | **Chry** | **NF** | **Fair** | **1,800 SF** | **Previously sampled** |
| **12"x 12" VFT checkerboard pattern and mastic** | **Black/ Red**<br>**Black** | **15** | **Basement, Cafeteria** | **48-26**<br>**48-30**<br>**48-31** | **10%**<br>**2%** | **Chry**<br>**Chry** | **NF**<br>**NF** | **Poor** | **5,000 SF** | **Previously sampled** |
| **Acoustical spray-on ceiling** | **White** | **26** | **Basement, Home Economics Dining Room** | **48-29** | **3%** | **Chry** | **F** | **Poor** | **250 SF** | **Previously sampled** |
| Plaster cement | Gray | -- | Basement, Kitchen freezers | 48-34 | -- | -- | -- | -- | -- | Previously sampled |
| Mastic on cork insulation | Black | -- | Basement, Kitchen freezers | 48-35 | -- | -- | -- | -- | -- | Previously sampled |
| Vibration joint cloth | Brown | -- | 1950 addition, 2nd floor | 48-38 | -- | -- | -- | -- | -- | Previously sampled |

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| Description | Color | Photo # | Material Location | Sample # | % | Type | F/ NF | Cond | Est. Qty. | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **Air duct seam mastic** | **White** | **21** | **Throughout attic** | **48-47**<br>**48-49** | **50%**<br>**60%** | **Chry**<br>**Chry** | **F** | **Poor** | **2,000 SF** | **Along cork seams** |
| **Air Duct Insulation** | **White** | **12,13** | **Attic, SW mech. room, NE duct and central duct**<br>**Basement, SW mech. area** | **48-50** | **50%** | **Chry** | **F** | **Poor** | **600 SF** | **MAG insulation around AHU** |
| **Window caulking** | **White** | **29** | **Throughout exterior windows and doors** | **48-59**<br>**48-60** | **5%** | **Chry** | **NF** | **Poor** | **320 EA** | **Previously sampled 18 LF ea.** |
| **Roof Flashing** | **Black** | **27** | **Throughout roof** | **02A**<br>**07A**<br>**07B** | **10%** | **Chry**<br>**Chry** | **NF**<br>**NF** | **Poor**<br>**Poor** | **1800 LF** | Previously sampled |
| **Roofing Felt** | **Black** | **28** | **Adams building and far east end of original building** | **08B-08I** | **50%** | **Chry** | **NF** | **Poor** | **6000 SF** | **All layers positive** |
| **Transite wall panels** | **Gray** | **8,23, 24** | **Throughout building** | **PACM** | **--** | **--** | **NF** | **Poor** | **7,500 SF** | **Very poor condition** |
| **Transite conductors** | **Gray** | **25** | **Exterior, East roof equipment room** | **PACM** | **--** | **--** | **NF** | **Poor** | **10 SF** | **--** |

## 3.2 Lead-Based Painted Building Components and Lead-Containing Materials

*BDL – Below Detection Limit*
*CT – Ceramic Tile*
*GB – Glazed Block*
*LP – Lead Paint*
*LS – Lead Shielding*
*ML – Miscellaneous Lead (panels, laminates, solders, oakum, bricks)*
*NA – Not Available*
*NS – Not Sampled*
*POR – Porcelain*
*VB – Vinyl Baseboard*
*VS – Vinyl Sheeting*
*VT – Vinyl Tile*

**Materials with lead content above 1.0 mg/cm2 and / or .5% are in bold

| Sample # | Description | Application | Color | Location | Substrate | Reading (mg/cm2) | Condition | Comment |
|---|---|---|---|---|---|---|---|---|
| 7 | Entry Door | Painted | Green | Roof, East Side | Metal | >9.9 | Poor | Pos |
| 8 | Roof Access Door | Painted | Black | Attic | Wood | 1.0 | Fair | Pos |
| 13 | Sink | Glazed | White | Attic (near stairs) | Porcelain | >9.9 | Fair | Pos |
| 28 | Exhaust Vent | Painted | Gold | Attic | Metal | 1.6 | Fair | Pos |
| 38 | Radiator | Painted | White | 2nd Floor | Metal | 1.4 | Poor | Pos |
| 39 | 4" Wall Tile | Glazed | Peach | 1st, 2nd and 3rd Floor, Restrooms | Ceramic | >9.9 | Fair | Pos |
| 41 | Tile Trim | Glazed | Black | Throughout building | Ceramic | >9.9 | Fair | Pos |
| 63 | Radiator | Painted | Green | 2nd Floor | Metal | 1.9 | Poor | Pos |
| 66 | Window Sash | Painted | Light Gray | Throughout building | Wood | >9.9 | Poor | Pos |
| 67 | Window Sill | Painted | Light Gray | Throughout building | Metal | 6.6 | Poor | Pos |
| 71 | Chalkboard Trim | Painted | Green | 2nd Floor, Sale Conference Room | Metal | 1.0 | Fair | Pos |
| 73 | 4" Wall Tile | Glazed | Yellow | 1st and 2nd Floor, Men's Restroom | Ceramic | >9.9 | Fair | Pos |
| 74 | Tile Trim | Glazed | Black | Throughout building | Ceramic | >9.9 | Fair | Pos |
| 77 | Window Sash | Painted | White | Throughout building | Wood | 2.0 | Poor | Pos |
| 78 | Window Frame | Painted | White | Throughout building | Wood | 1.6 | Poor | Pos |

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| Sample # | Description | Application | Color | Location | Substrate | Reading (mg/cm2) | Condition | Comment |
|---|---|---|---|---|---|---|---|---|
| 79 | Radiator | Painted | White | 1st Floor, Adams Building and Women's Restroom<br>Basement, NW offices | Metal | 1.0 | Poor | Pos |
| 80 | Urinal | Glazed | White | Throughout restrooms | Porcelain | 7.6 | Fair | Pos |
| 81 | Toilet | Glazed | White | Throughout restrooms | Porcelain | 9.5 | Poor | Pos |
| 84 | Vault Door | Painted | Black | 2nd Floor | Metal | >9.9 | Poor | Pos |
| 85 | Spiral Staircase | Painted | Gray | 2nd Floor, Vault | Metal | 5.6 | Fair | Pos |
| 86 | Radiator | Painted | Green | 1st Floor, Throughout | Metal | 1.7 | Poor | Pos |
| 93 | "No Parking" Sign | Painted | Yellow | Exterior | Metal | 2.8 | Poor | Pos |
| 94 | "No Parking" Sign (DUPLICATE) | Painted | Yellow | Exterior | Metal | 3.8 | Poor | Pos |
| 95 | Storm Window | Painted | White | Exterior, NW side | Wood | >9.9 | Poor | Pos |
| 96 | Soffit/Fascia Board | Painted | Light Yellow | Exterior, Throughout | Wood | 7.1 | Poor | Pos |
| 97 | Parking Guard Post | Painted | Peach | Exterior, NW side | Metal | 3.3 | Poor | Pos |
| 98 | Window Sill Wrap | Painted | Green | Exterior, Throughout | Metal | 1.6 | Poor | Pos |
| 101 | Handrail | Painted | Green | Exterior, Throughout | Metal | 7.6 | Poor | Pos |
| 107 | Vault Door | Painted | Black | 1st Floor | Metal | >9.9 | Poor | Pos |
| 117 | Exit Door | Painted | Slate Gray | Adams Building | Wood | 3.5 | Poor | Pos |

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| Sample # | Description | Application | Color | Location | Substrate | Reading (mg/cm2) | Condition | Comment |
|---|---|---|---|---|---|---|---|---|
| **124** | **Wall** | **Painted** | **White** | **Main Building, South Entrance** | **Ceramic** | **2.3** | **Fair** | **Pos** |
| **125** | **Wall** | **Painted** | **Deep Red** | **Main Building, Nelson Office** | **Plaster** | **1.0** | **Fair** | **Pos** |
| **126** | **Radiator** | **Painted** | **Yellow** | **1st Floor, Restroom** | **Metal** | **1.6** | **Poor** | **Pos** |
| **129** | **Door** | **Painted** | **Black** | **Basement, Incinerator Room** | **Metal** | **>9.9** | **Poor** | **Pos** |
| **130** | **Door Frame** | **Painted** | **Black** | **Basement, Incinerator Room** | **Metal** | **6.8** | **Poor** | **Pos** |
| **133** | **4"x 6" Wall Tile** | **Glazed** | **Cream** | **Basement, Kitchen** | **Ceramic** | **1.0** | **Fair** | **Pos** |
| **136** | **4" Wall Tile** | **Glazed** | **White** | **Basement, SE Room** | **Ceramic** | **>9.9** | **Fair** | **Pos** |
| **137** | **4" Wall Tile** | **Glazed** | **Green** | **Basement, SE Room** | **Ceramic** | **>9.9** | **Fair** | **Pos** |
| **--** | **Lead Vent Boots** | **Lead Sheeting** | **Gray** | **Roof** | **Metal** | **Assumed** | **Fair** | **Pos** |

## 3.3 Miscellaneous Hazardous Materials

PCB – Polychlorinated Biphenyls
ODS – Ozone-Depleting Substances
XDC – X-Ray Developing Chemicals
EA – Each
BT – Battery
MER – Mercury
PST – Pesticides
NS – Not Sampled
LLRS – Low-Level Radiation Source
PP – Petroleum Products
I – Interior
RCRA – Resource Recovery and Conservation Act Substances
NA – Not Available
E – Exterior

| I/E | HM # | Related HM # | Description | Location | Photo # | Sample # | Condition | Est. Qty. | Unit Measure | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| I | PCB-01 | -- | Fluorescent light ballast's | Throughout building | -- | NS | Fair | 1,400 | EA | Beneath light fixtures |
| I | MER-01 | -- | Thermostats | Throughout building | 1 | NS | Fair | 40 | EA | -- |
| I/E | MER-02 | -- | Thermometers | Throughout building | 2 | NS | Fair | 5 | EA | -- |
| I | BT-01 | -- | Exit signs | Throughout building | -- | NS | Poor | 5 | EA | Severely damaged |
| I | MER-03 | -- | 8' fluorescent light bulbs | Throughout building | 3 | NS | Fair | 75 | EA | -- |
| I | MER-04 | -- | 6' fluorescent light bulbs | Throughout building | 4 | NS | Fair | 250 | EA | -- |
| I | MER-05 | -- | 4' fluorescent light bulbs | Throughout building | 5 | NS | Fair | 2,800 | EA | -- |

## 4.0 RISKS AND HAZARDS

### 4.1 Asbestos-Containing Materials

To be a significant health concern, asbestos fibers must be inhaled. When asbestos fibers are inhaled, they become lodged in the lung tissue or alveoli. Here they clog and scar the tissues, causing the walls of the alveoli to lose their elasticity and useful function in respiration. Asbestosis (scarring of the lung), lung cancer and Mesothelioma (cancer of the lining of the chest or lining of the abdominal wall) are diseases associated with asbestos exposure.

### 4.2 Lead-Based Painted Building Components and Lead-Containing Materials

Exposure to lead can be caused by demolition, alteration, friction and deterioration of lead-based painted and lead-containing surfaces. Lead hazards could exist if proper work practices, monitoring, disposal and personal protective equipment are not implemented during disturbance of these surfaces.

Inhalation and ingestion are the major routes of lead exposure. Once in the body, lead is distributed via the bloodstream to red blood cells, soft tissue and bone. The kidneys and gastrointestinal tract eliminate lead in the body very slowly; smaller amounts are lost through perspiration.

Lead in the body can cause serious damage to the central and peripheral nervous system, the cardiovascular system and the kidneys. Exposure to high concentrations of lead can cause mental retardation, convulsions, coma and sometimes death.

### 4.3 Miscellaneous Hazardous Materials

#### *4.3.1 Polychlorinated Biphenyls*

Although the risk to personnel removing intact, non-leaking light ballasts and transformers is low, the potential for ballasts leaking is possible. Because PCBs can pass easily through the skin, personal protective equipment should be worn if there is any possibility of skin contact. Any cuts or abrasions should be covered with dressings before putting on the protective clothing.

Exposure to PCBs can cause chloracne, nausea, dizziness, eye irritation and bronchitis. Ingestion of PCBs can cause liver damage and digestive problems.

#### *4.3.2 Mercury*

Only a small fraction of mercury is found as a vapor inside the bulb; however, this fraction readily escapes when the bulb is broken. The risk of mercury exposure is low to moderate, due to the potential for light tubes, HID lamps and thermostat switches to break during handling.

Exposure to mercury can occur through inhalation, ingestion or absorption through the skin. The most common routes are inhalation and ingestion.

Exposure to mercury can cause coughing, bronchitis, pneumonia, tremors, insomnia, irritability, headaches, fatigue, weakness, somatitis, weight loss, gastrointestinal disorders, and skin and eye irritation.

### *4.3.3 Batteries*

The risk of exposure to personnel removing batteries containing hazardous substances is low, if properly handled. Improperly handling batteries during removal can lead to battery leakage or explosion of battery contents, causing internal and external burns and irritations.

Exposure to the hazardous substances in batteries can lead to severe skin burns, blindness, dermatitis and cancer, and can cause damage to the kidneys, lungs, brain and nervous system.

### *4.3.4 Ozone-Depleting Substances*

The risk of exposure to personnel recovering ODSs is extremely low.

The most serious side effect of Freon exposure would occur at the time of initial exposure. People who have a history of heart problems should be very concerned about Freon, because it can cause cardiac arrhythmia (irregular heartbeat) and palpitations at very high concentrations. For people who have a history of heart problems, being exposed to small amounts of Freon from leaking appliances should not pose any significant health risk.

Fortunately, Freon does not have serious, long-term health consequences. It is not a carcinogen, teratogen or mutagen, and it does not damage the liver. When it is inhaled, it is rapidly excreted by exhalation, and it is not significantly accumulated in the body. As a result, breathing low concentrations of Freon from a leaking refrigerator or air conditioner over a long period of time is unlikely to have a cumulative effect and thus, few, if any, long-term health effects.

### *4.3.5 Low-Level Radioactive Sources*

The risk of exposure to personnel removing smoke detectors is extremely low. The radioactive source is very small and well housed within the monitoring device. It is also predominantly alpha radiation, which cannot penetrate a sheet of paper and is blocked by several centimeters of air. The americium in the smoke detector could only pose a danger if it were inhaled.

Smoke detectors should be removed from their mounting bracket intact and sent to a certified recycler for proper source recovery.

# 5.0 RECOMMENDATIONS

## 5.1 Asbestos-Containing Materials

The purpose of this section is to interpret survey findings and provide preliminary recommendations that may be relevant and appropriate at this time. Because this document is a presentation of investigative findings, recommendations related to future construction activities are inherently general in nature. More specific determinations concerning ACMs impacted by construction that may require removal can be made during the abatement project design process.

### *5.1.1 General Recommendations*

State and/or federal regulations require that ACMs be removed prior to demolition or renovation activities that will impact the ACMs. Depending on the specific renovation work to be performed, certain ACMs may not require removal if they will not be disturbed and do not pose a risk to building occupants or construction trade workers. However, to ensure worker safety and to eliminate future asbestos-related maintenance and management costs and risks, AMI recommends removal of all identified ACMs in the areas to be renovated. While partial abatement may be technically possible, it is often impractical and not cost-effective.

### *5.1.2 Hazardous Conditions Recommendations*

Regardless of renovation plans, AMI recommends that the asbestos-containing thermal system insulation throughout the building be removed. A significant amount of these materials are in very poor condition and pose a health hazard to personnel working in the area. The asbestos debris and pigeon droppings throughout the building should be cleaned up as soon as possible and access to the building permitted only to individuals trained in the use of personal protective equipment.

### *5.1.3 Point Count Analysis / TEM Chatfield Analysis Recommendations*

Point count analysis and TEM Chatfield analysis are not recommended at this time.

## 5.2 Lead-Based Painted Building Components and Lead-Containing Materials

Ultimately, facilities are liable for their lead-containing hazardous waste from cradle to grave. EPA regulations provide two ways to make a determination whether the waste stream must be classified as hazardous waste. Waste generators can either test the waste

using an approved testing method (Toxicity Characteristic Leaching Procedure [TCLP]), or they can apply knowledge of the hazardous characteristic of the waste.

Based on the initial lead results, AMI recommends TCLP testing be conducted on the existing building materials, painted and unpainted, prior to the start of any renovation or demolition activity.

Any lead-based painted building components or lead-containing materials not removed during renovation should be considered for inclusion in a facility management plan that maintains potential exposure below OSHA action levels and ensures the material will be handled properly and in accordance with applicable regulations.

### 5.3 Miscellaneous Hazardous Materials

AMI recommends that, prior to any demolition, alteration or disturbance, all other hazardous materials (such as PCBs, ODSs, LLRSs and mercury) be identified, removed and disposed of and/or recycled (where allowable) by a licensed contractor, utilizing trained and certified personnel.

## 6.0 REGULATORY REQUIREMENTS

### 6.1 Asbestos-Containing Materials

#### *6.1.1 Notification Requirements*

EPA's NESHAP, 40 CFR, Subpart M, 61.145, *Standard for Demolition and Renovation*, stipulates that an owner of a facility submit proper notification with either the EPA's regional office and/or the state and local regulatory agency of intention to demolish or renovate.

Notifications must be received by the appropriate regulatory agencies 10 working days prior to commencement of asbestos stripping or removal, or other site work. If the demolition or renovation date changes, or the scope of work is increased by more than 20 percent, another notification must be made.

#### *6.1.2 Removal Requirements*

Asbestos removal should be performed by a licensed abatement contractor. The contractor should follow all work practices, worker protection and disposal requirements set forth in the contract specifications and by the Occupational Safety and Health Administration (OSHA) and the EPA. Relevant regulations include 29 CFR 1910.1001, 29 CFR 1926.1101 and 40 CFR 763.

### 6.2 Lead-Based Painted Building Components and Lead-Containing Materials

*6.2.1 Disposal Requirements*

The Resource Conservation and Recovery Act (RCRA) classifies lead-containing waste streams as hazardous materials if TCLP levels exceed five parts per million. If TCLP leachable lead levels exceed that threshold, EPA regulations (40 CFR 261) require the waste stream to be handled and disposed of as a hazardous material. Waste streams containing less the five parts per million of leachable lead are classified as non-hazardous waste and can be disposed of in a construction and demolition landfill.

*6.2.2 Construction Requirements*

OSHA's 29 CFR 1926.62 regulates worker exposure to lead during construction activities that include demolition or salvage of structures where lead or materials containing lead are present, as well as removal or encapsulation of lead-containing materials. The standard establishes maximum limits of exposure to lead, including a permissible exposure limit and action level, and should be adhered to during construction and demolition activities.

### 6.3 Miscellaneous Hazardous Materials

Hazardous materials removal should be conducted in accordance with all applicable federal, state and local requirements. Specifically, RCRA requirements for safely managing and disposing of generated waste should be adhered to.

## 7.0 BUDGETARY REMEDIATION ESTIMATE

The following budgetary estimates are provided to assist in planning and budgeting any hazardous material removal that you may be considering. Estimates are provided for the primary disciplines associated with asbestos abatement projects. These figures are estimates only; actual costs may vary and are highly dependent upon the abatement bids received.

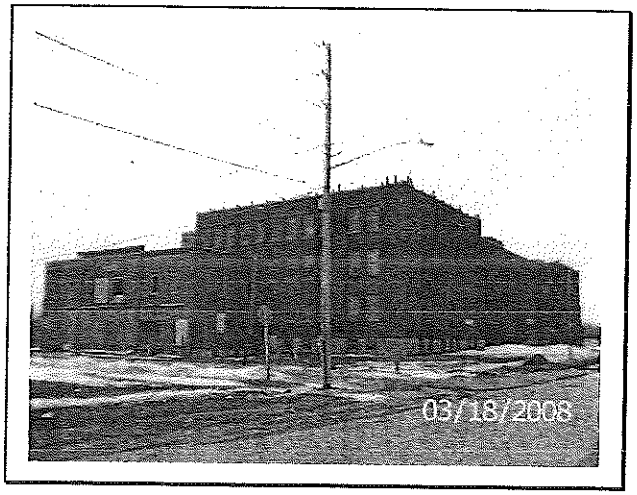
### 7.1 Asbestos Abatement

The budgetary estimate for asbestos abatement is based on the removal and disposal of all ACMs identified via the investigation. Estimates include labor, materials, equipment and project fees for a licensed company to perform the work in accordance with regulatory requirements and standard industry practices. Estimates do not reflect potential areas of savings that may be identified during the work plan development phase. Higher costs may result from multiple phasing of the project, which normally results in additional mobilization, labor and related costs. Actual costs are also influenced by project scope, the amount of demolition required to get to the ACMs, the time of year the project is bid, and project location.

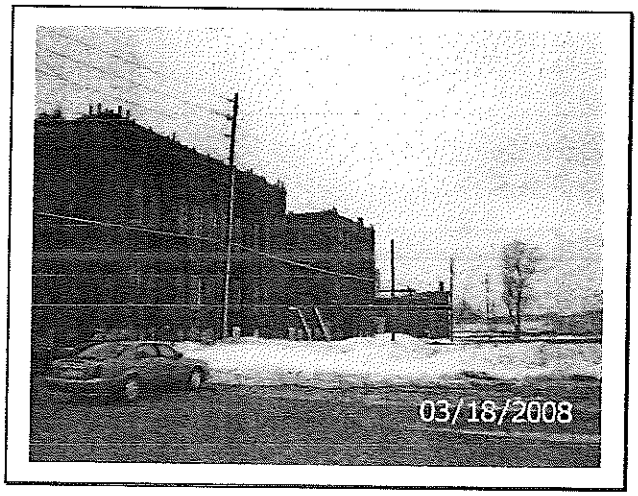
**Total Budgetary Estimate for Asbestos Abatement:** **$400,000.00**

# Appendix A

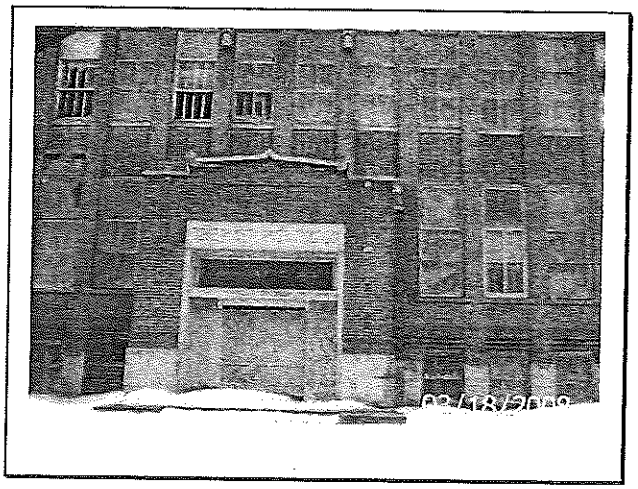
# Photo Logs



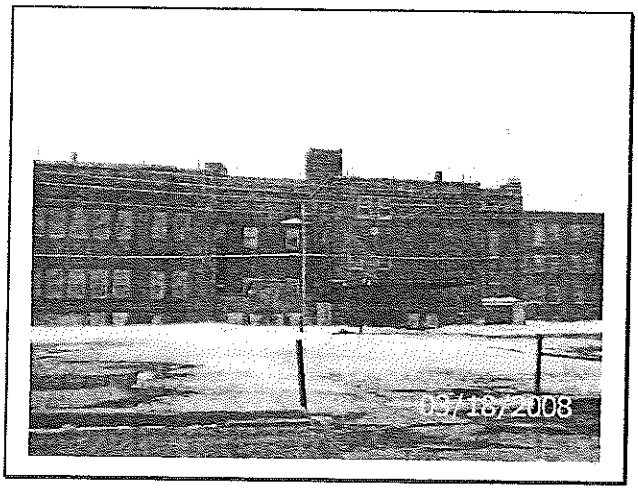

| PHOTO 1 | Viewing exterior of Rath Administration Building, looking Northeast. |
|---|---|




| PHOTO 2 | Viewing exterior of Rath Administration Building, looking Southwest. |
|---|---|

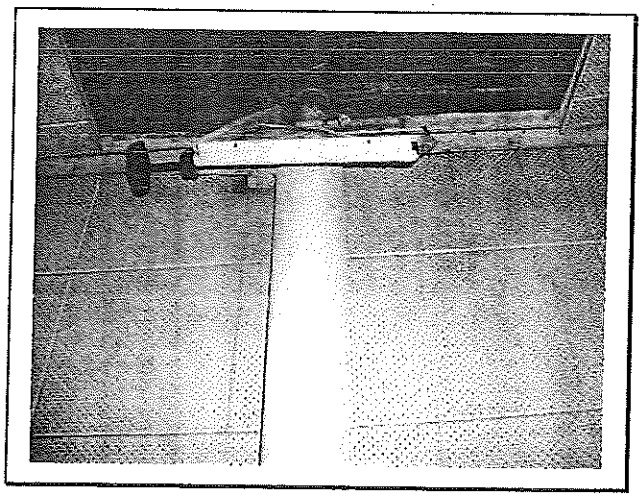


| PHOTO 3 | Viewing exterior of Rath Administration Building, North entrance. |
|---|---|

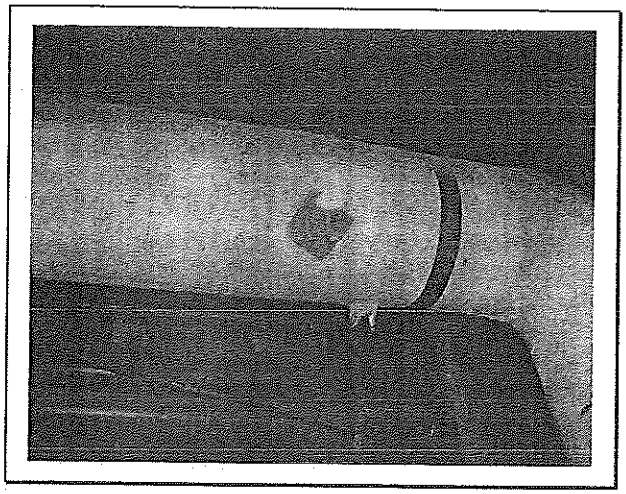



| PHOTO 4 | Viewing exterior of Rath Administration Building, looking North. |
|---|---|

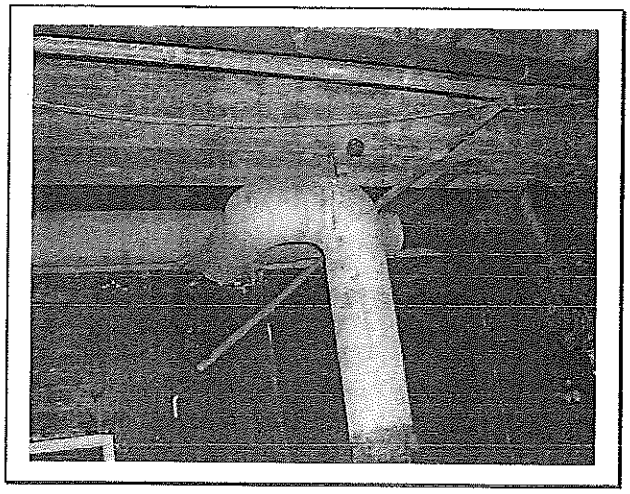

| PHOTO 5<br>ACM<br>Sample #48-08 | Viewing 2" pipe insulation, women's restroom. |
|---|---|



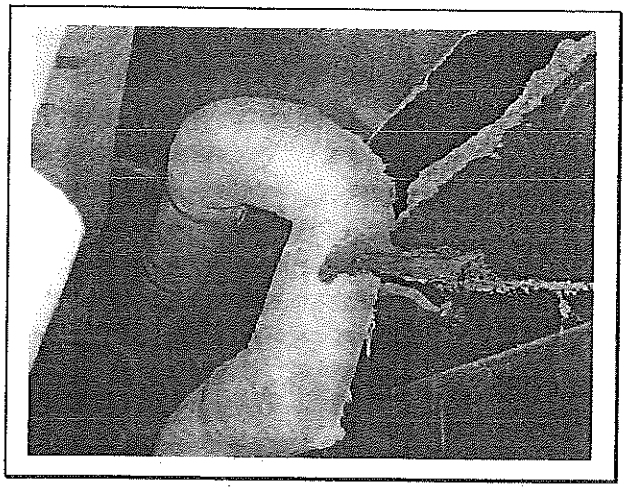
| PHOTO 6<br>ACM<br>Sample #48-12 | Viewing 4" pipe insulation, 3rd floor. |
|---|---|



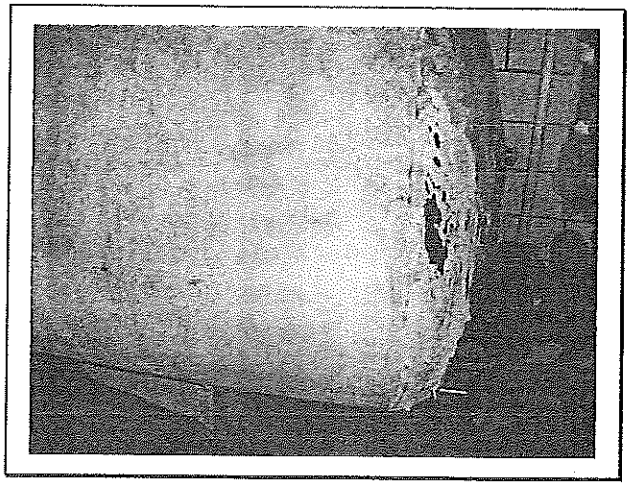
| PHOTO 7<br>ACM<br>Sample #48-20 | Viewing 6" pipe insulation, Attic. |
|---|---|



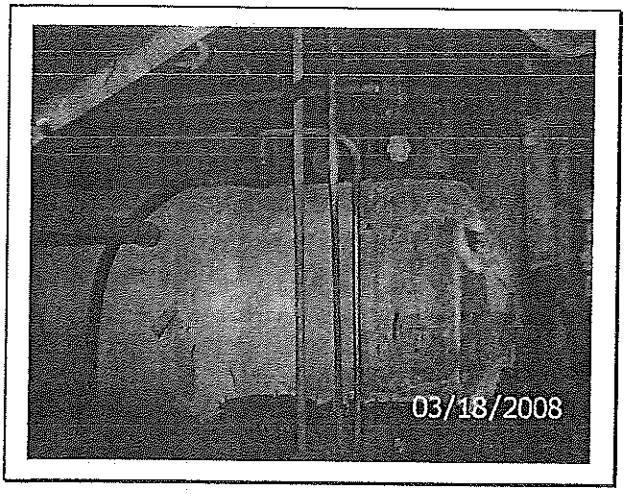
| PHOTO 8<br>ACM<br>Sample #48-20 | Viewing 8" pipe insulation, Attic mechanical room. |
|---|---|



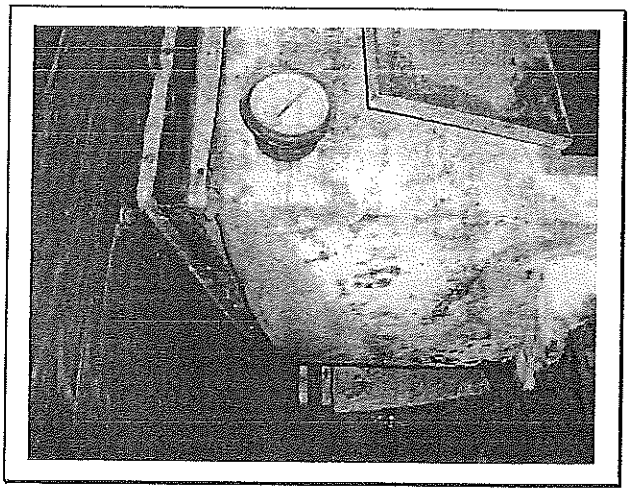
| PHOTO 9<br>ACM<br>Sample # 48-20 | Viewing 10" pipe insulation, Basement near tunnel. |
|---|---|



| PHOTO 10<br>ACM<br>Sample #48-21 | Viewing white tank insulation, Basement, South wall in Kitchen. |
|---|---|

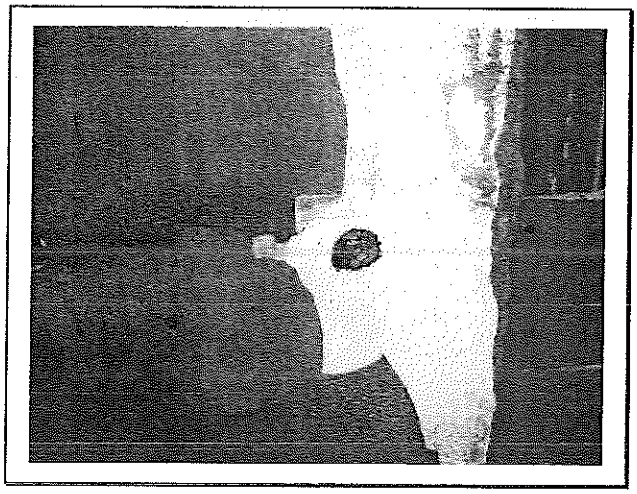



| PHOTO 11<br>ACM<br>Sample #48-33 | Viewing white tank insulation, Basement, mechanical room near tunnel. |
|---|---|

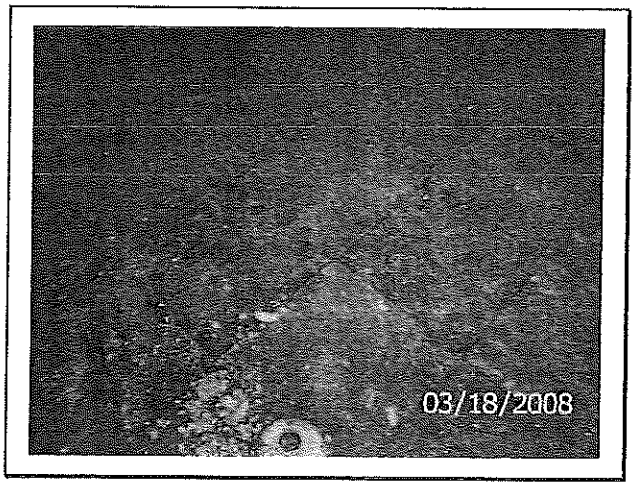


| PHOTO 12<br>ACM<br>Sample #48-50 | Viewing white air duct insulation, Attic. |
|---|---|

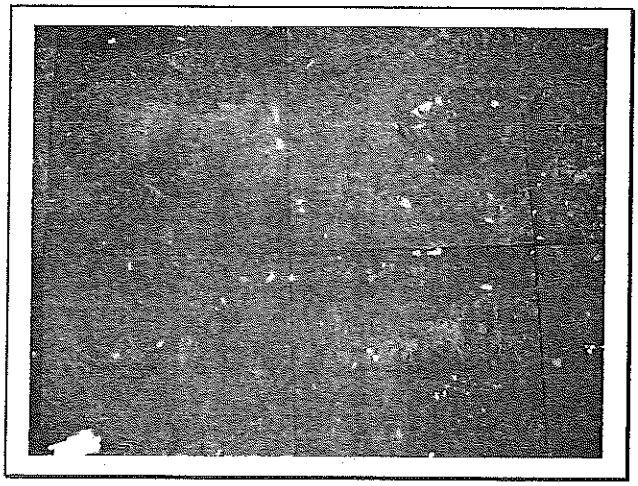
| | |
|---|---|
| **PHOTO 13**<br>ACM<br>**Sample #48-50** | Viewing white air duct insulation, Basement. |



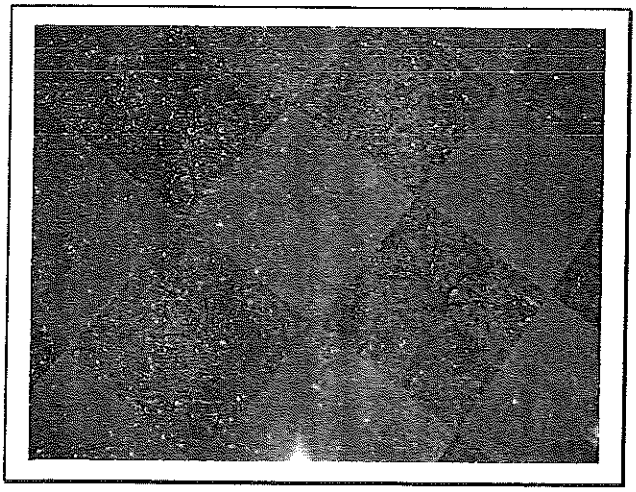
| | |
|---|---|
| **PHOTO 14**<br>ACM<br>**Sample #48-10** | Viewing 12"x 12" brown ceiling tile puck, Basement, telephone equipment room. |




| | |
|---|---|
| **PHOTO 15**<br>ACM<br>**Sample # 48-26** | Viewing 12"x 12" VFT black and red checkerboard pattern, Basement cafeteria. |

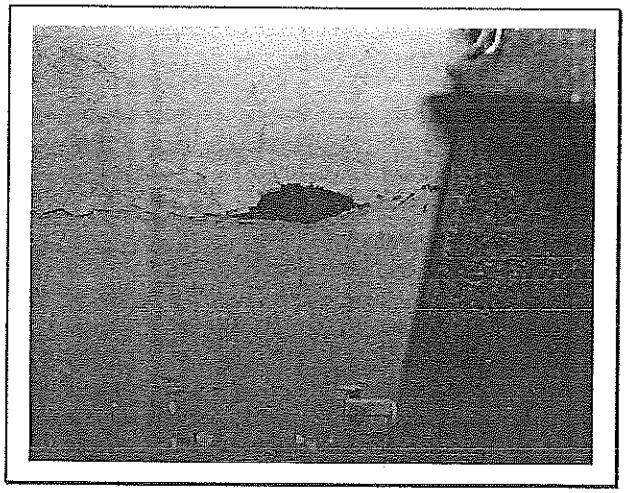


| | |
|---|---|
| **PHOTO 16**<br>ACM<br>**Sample #48-13** | Viewing 9"x 9" VFT brown and red checkerboard pattern, Basement throughout. |

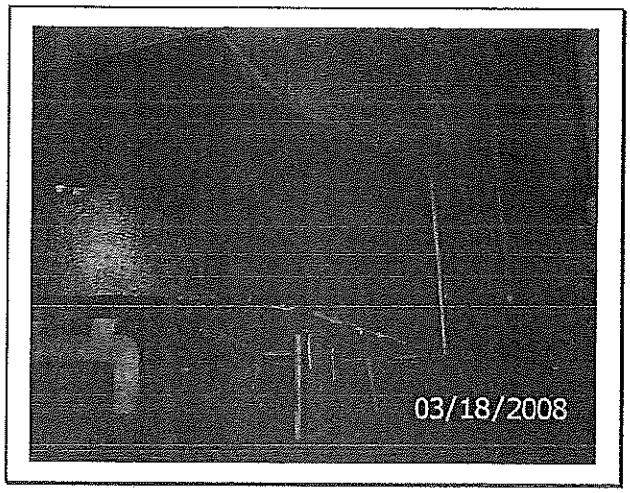


| | |
|---|---|
| **PHOTO 17**<br>ACM<br>**Sample #48-16** | Viewing 9"x 9" VFT black and red checkerboard pattern, 3rd floor – West room. |

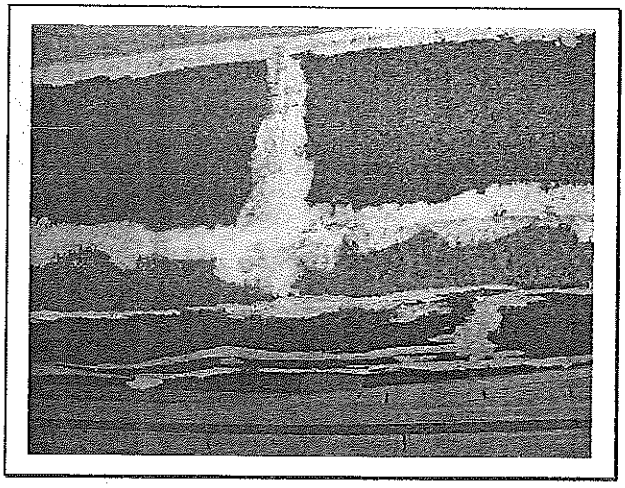
| | |
|---|---|
| **PHOTO 18**<br>ACM<br>**Sample #48-19** | Viewing 9"x 9" VFT white and blue checkerboard pattern, 3rd floor – North central room. |



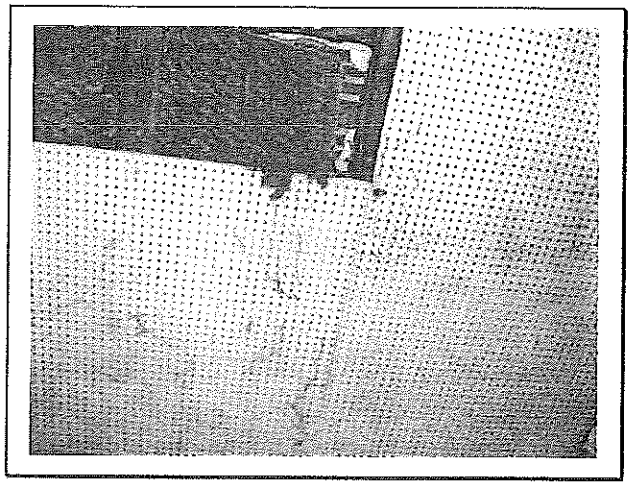
| PHOTO 19<br>ACM<br>Sample #48-15 | Viewing white insulation between cork layers, Basement A/C room. |
|---|---|



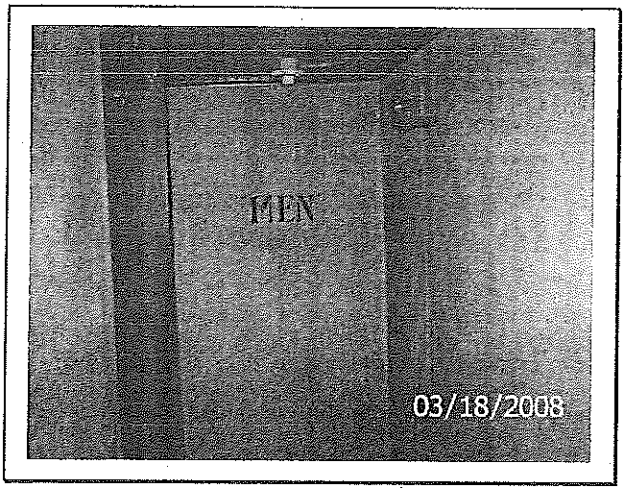

| PHOTO 20<br>ACM<br>Sample #48-22 | Viewing black mastic on cork insulation, Attic Northeast air handler. |
|---|---|



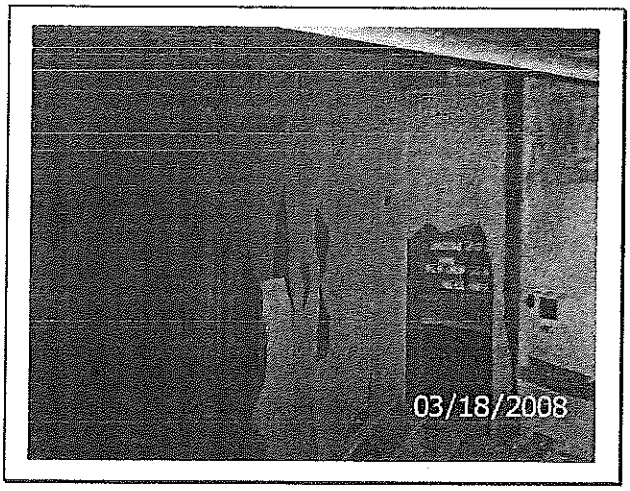
| PHOTO 21<br>ACM<br>Sample #48-47 | Viewing white mastic on cork air ducts, Attic. |
|---|---|



| PHOTO 22<br>ACM<br>Sample #48-25 | Viewing transite ceiling tiles, Basement – Berner rooms. |
|---|---|

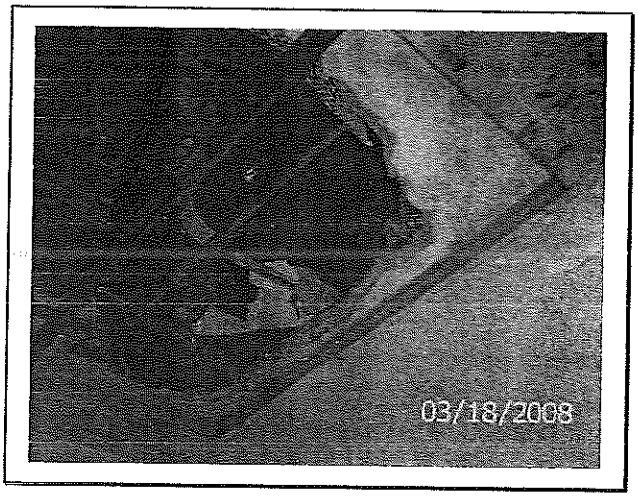



| PHOTO 23<br>ACM<br>PACM | Viewing transite wall panels, Basement. |
|---|---|



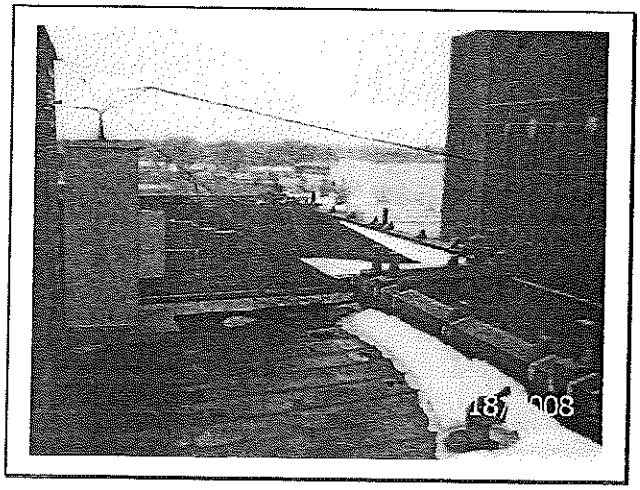

| PHOTO 24<br>ACM<br>PACM | Viewing transite wall panels, Attic. |
|---|---|

| | |
|---|---|
| **PHOTO 25**<br>ACM<br>**PACM** | Viewing transite conductors, East roof equipment room. |

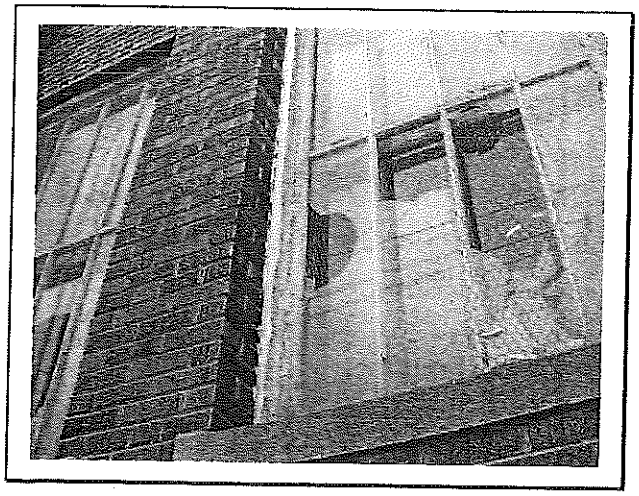



| | |
|---|---|
| **PHOTO 26**<br>ACM<br>**Sample #48-29** | Viewing acoustical spray-on ceiling, Basement home economics dining. |

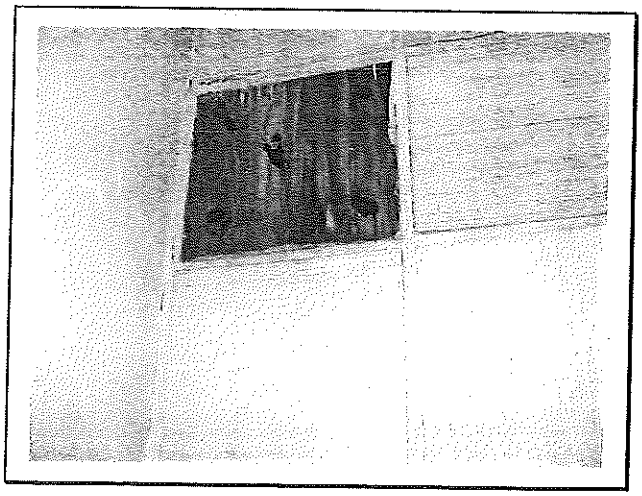

| | |
|---|---|
| **PHOTO 27**<br>ACM<br>**Sample #02A** | Viewing asbestos-containing roof flashing, Throughout roof. |



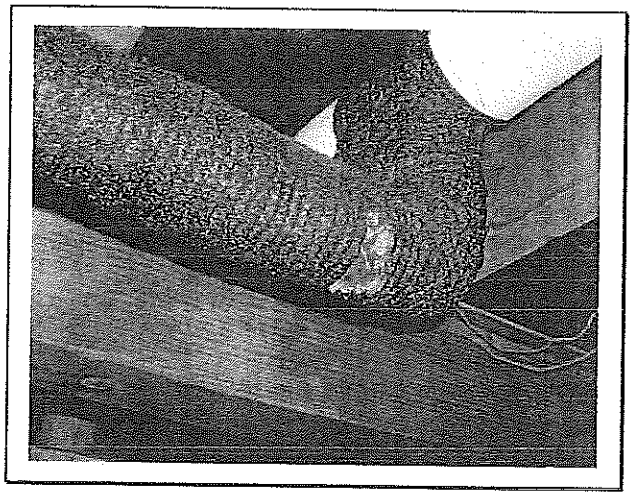
| | |
|---|---|
| **PHOTO 28**<br>ACM<br>**Sample#08B-08I** | Viewing asbestos-containing roofing felt, East side of building. |



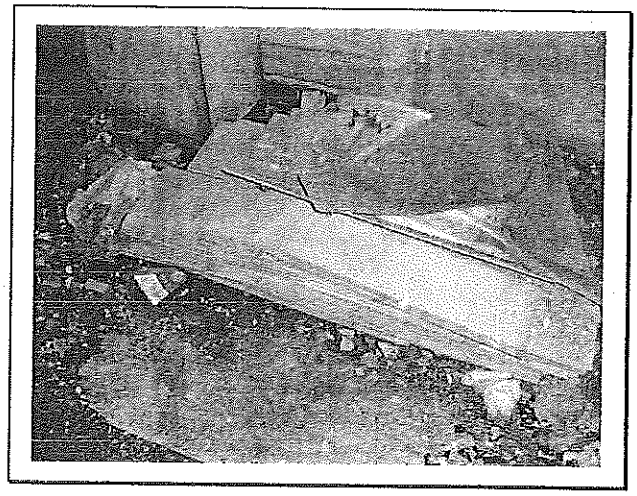
| | |
|---|---|
| **PHOTO 29**<br>ACM<br>**Sample #48-59** | Viewing asbestos-containing white window caulking, Exterior. |



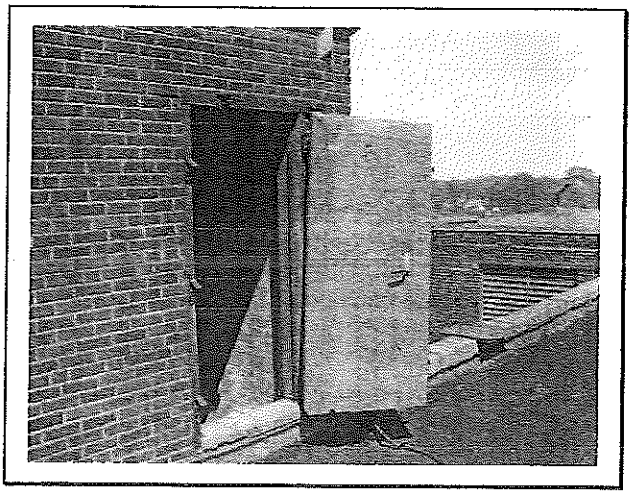
| | |
|---|---|
| **PHOTO 30**<br>ACM<br>**Sample #8** | Viewing asbestos-containing 12"x 12" black wall tile puck, 1st floor. |



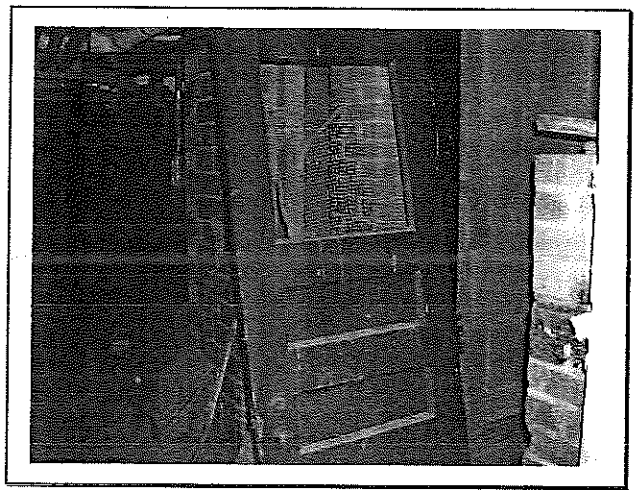
| | |
|---|---|
| **PHOTO 31**<br>ACM<br>**Sample #10** | Viewing asbestos-containing black pipe tar wrap, Basement NW storage area. |



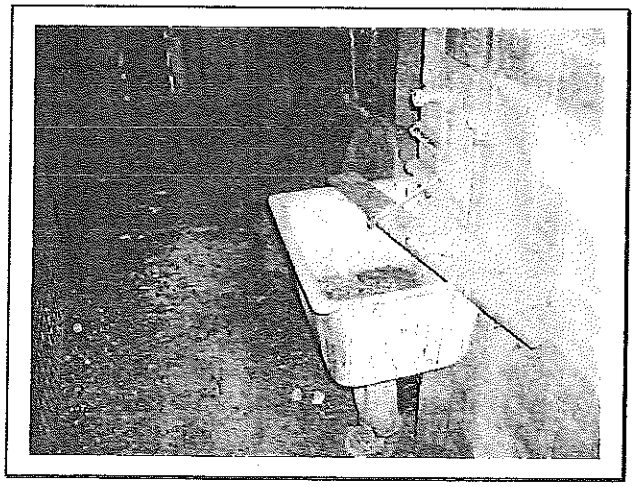
| | |
|---|---|
| **PHOTO 32**<br>ACM<br>**PACM** | Viewing transite panels, 1st floor North entrance. |



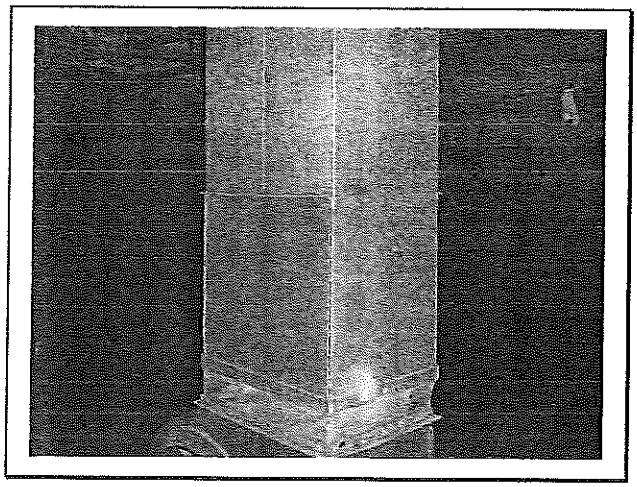
| PHOTO 1 | Viewing green roof entry door, Exterior – East side. |
|---|---|
| Sample #7 | |



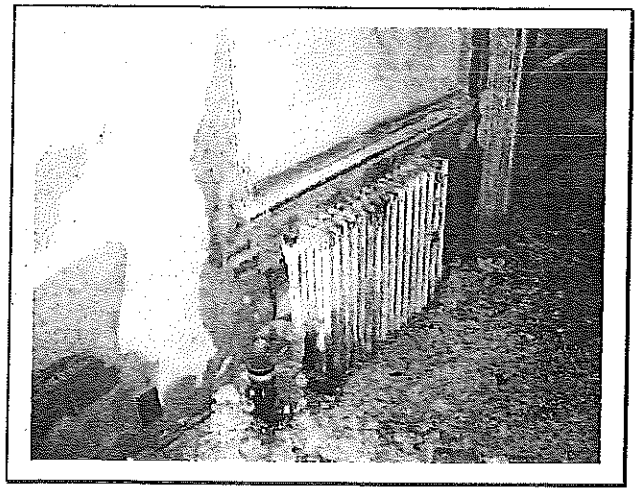
| PHOTO 2 | Viewing black roof access door, Attic. |
|---|---|
| Sample #8 | |



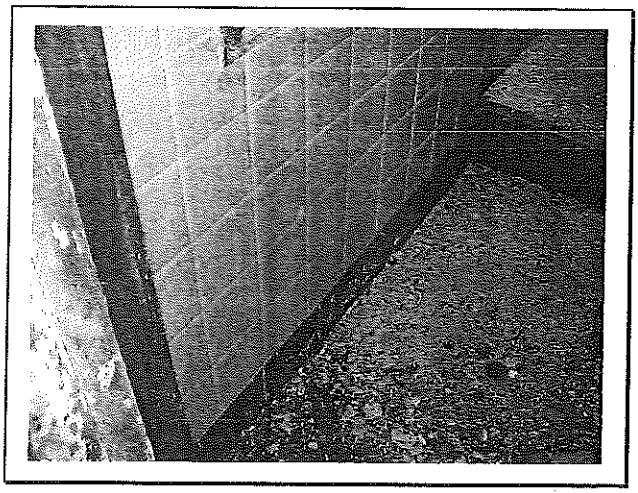
| PHOTO 3 | Viewing white sink, Attic. |
|---|---|
| Sample #13 | |



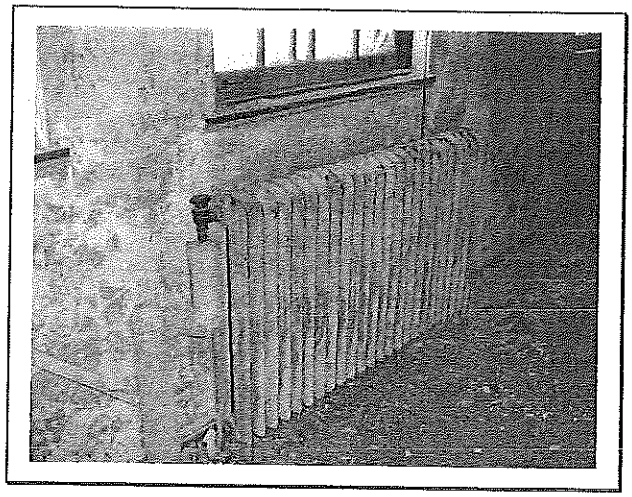
| PHOTO 4 | Viewing gold exhaust vent, Attic. |
|---|---|
| Sample #28 | |



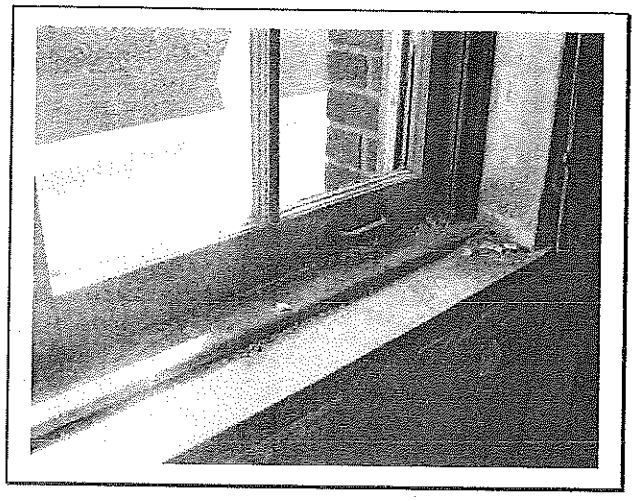
| PHOTO 5 | Viewing white radiator, 2nd floor. |
|---|---|
| Sample #38 | |



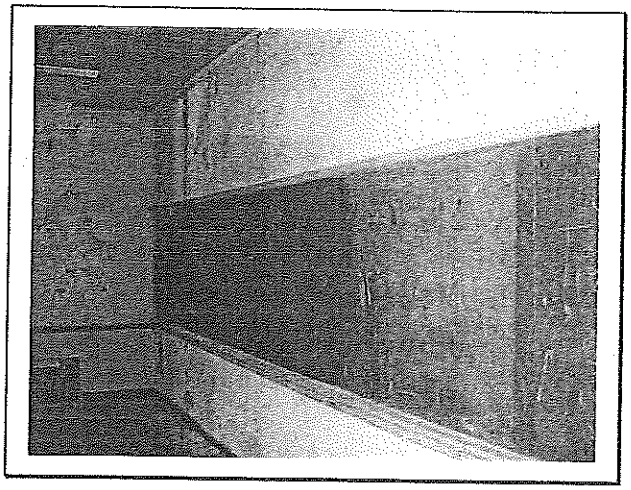
| PHOTO 6 | Viewing peach 4" wall tile and black tile trim, Throughout building. |
|---|---|
| Sample #39,41 | |



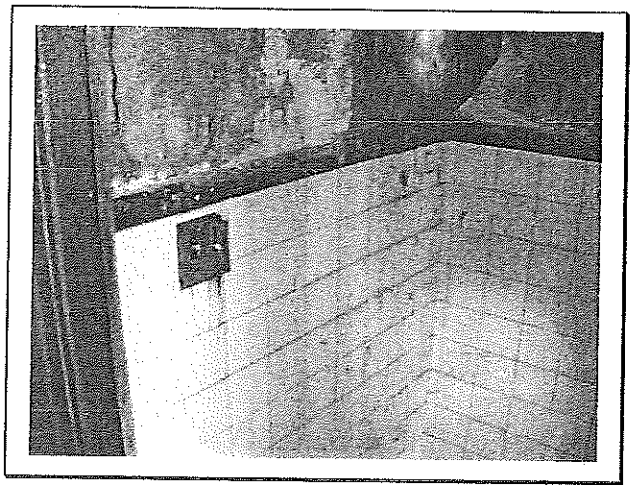
| PHOTO 7 | Viewing green radiator, 2nd floor. |
|---|---|
| Sample #63 | |



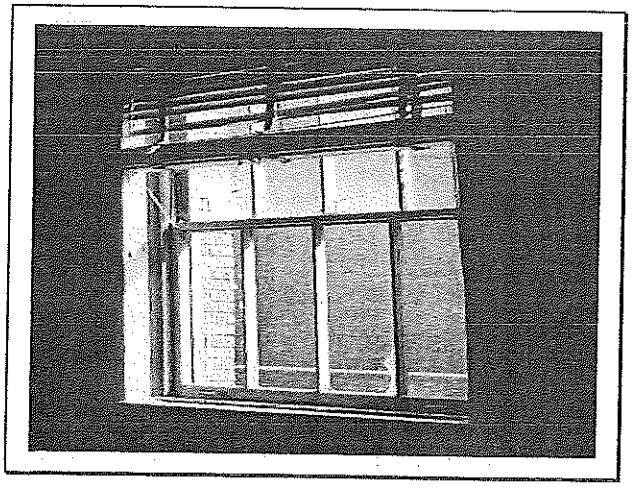
| PHOTO 8 | Viewing light gray window sash and sill, Throughout building |
|---|---|
| Sample #66,67 | |



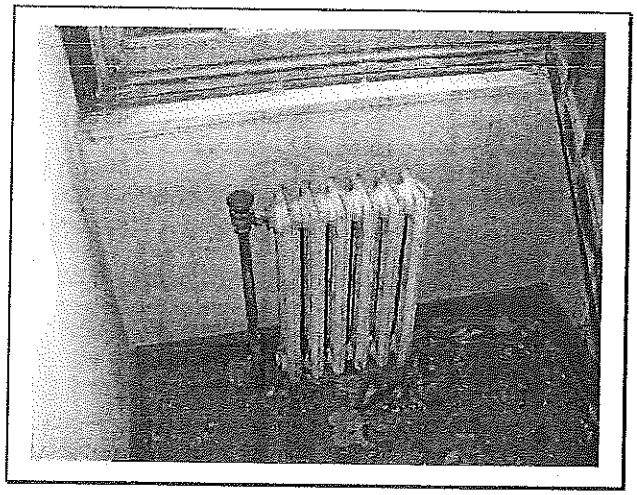
| PHOTO 9 | Viewing green chalkboard trim, 2nd floor – Sale Conference Room. |
|---|---|
| Sample #71 | |



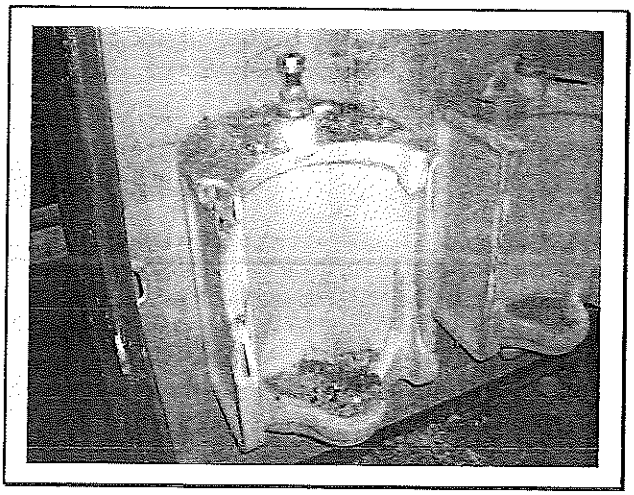
| PHOTO 10 | Viewing yellow 4" wall tile and black tile trim, 1st and 2nd floor – Men's restroom. |
|---|---|
| Sample #73,74 | |



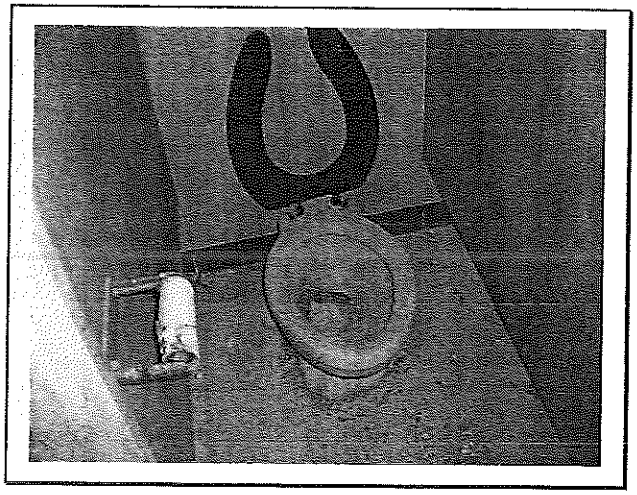
| PHOTO 11 | Viewing white window sash and frame, Throughout building. |
|---|---|
| Sample #77,78 | |



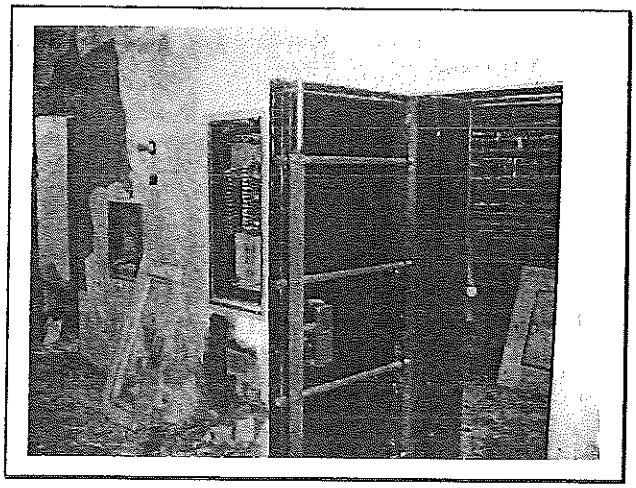
| PHOTO 12 | Viewing white radiator, 1st floor – Adam's building and Women's restroom, Basement – NW offices. |
|---|---|
| Sample #79 | |



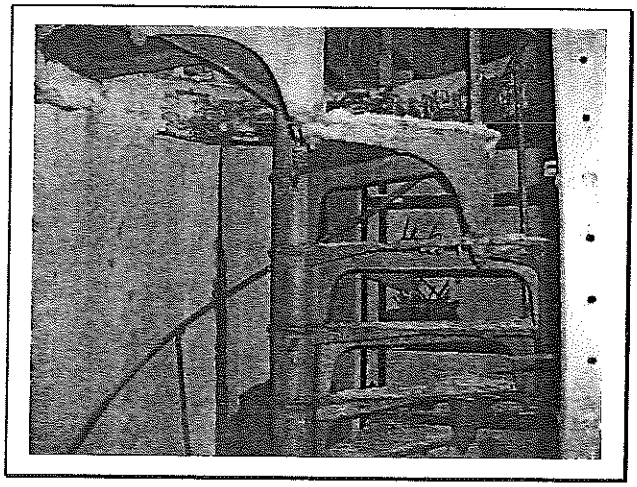
| PHOTO 13 | Viewing white urinal, Throughout restrooms. |
|---|---|
| Sample #80 | |



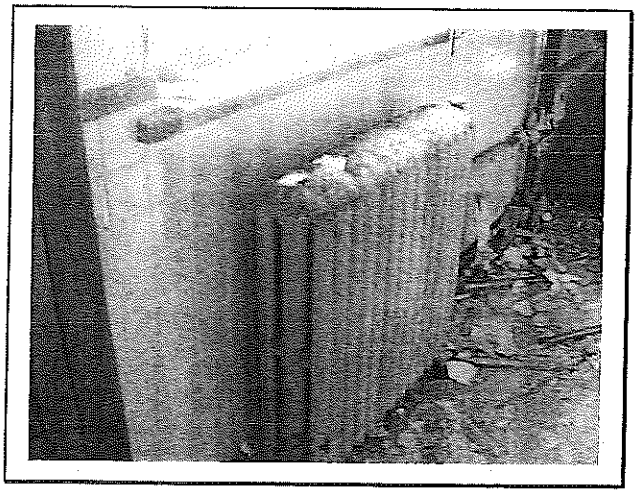
| PHOTO 14 | Viewing white toilet, Throughout restrooms. |
|---|---|
| Sample #81 | |



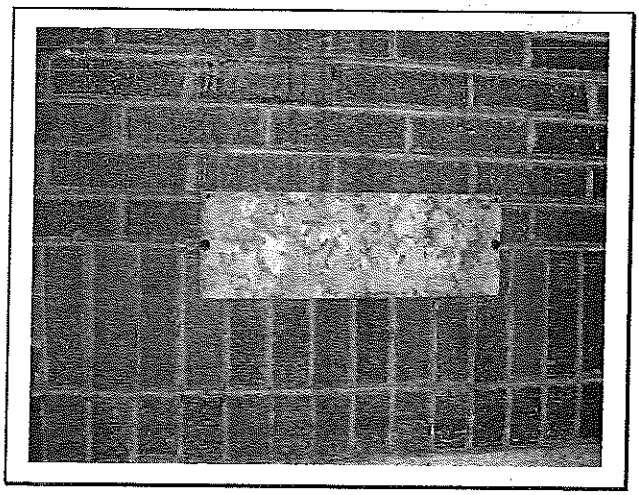
| PHOTO 15 | Viewing black vault door, 1st and 2nd floor. |
|---|---|
| Sample #84,107 | |



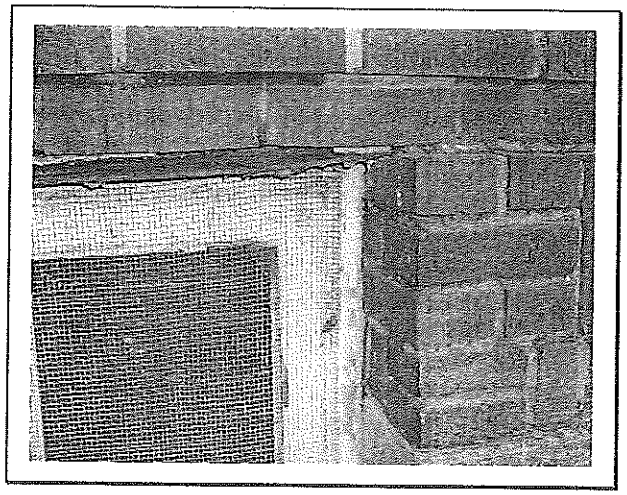
| PHOTO 16 | Viewing gray spiral staircase, 2nd floor – Vault. |
|---|---|
| Sample #85 | |



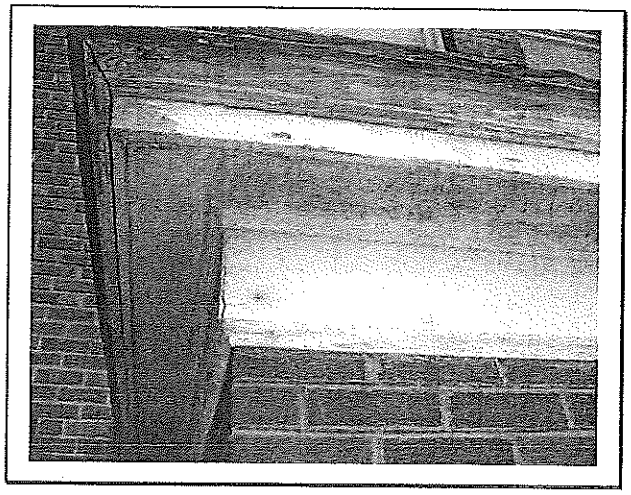
| PHOTO 17 | Viewing green radiator, 1st floor – Throughout. |
|---|---|
| Sample #86 | |



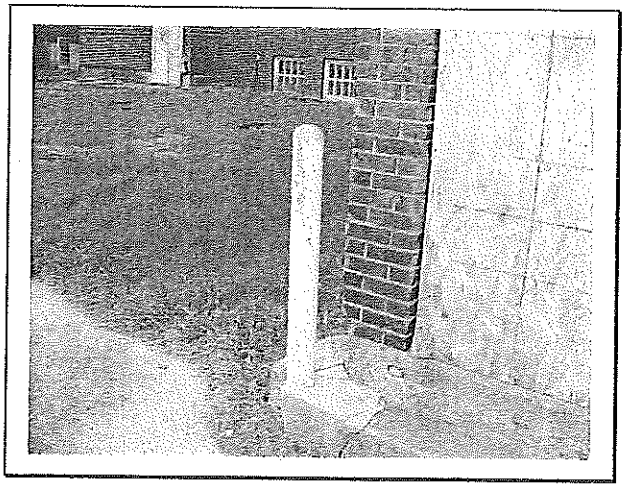
| PHOTO 18 | Viewing yellow "No Parking" sign, Exterior. |
|---|---|
| Sample #93,94 | |



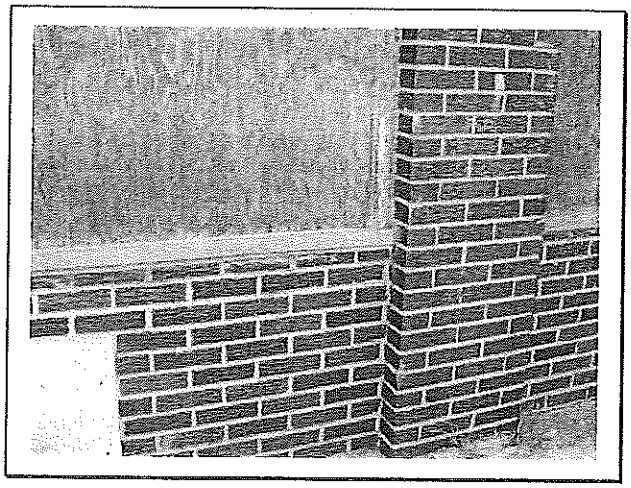
| PHOTO 19 | Viewing white storm window, Exterior – NW side. |
|---|---|
| Sample #95 | |



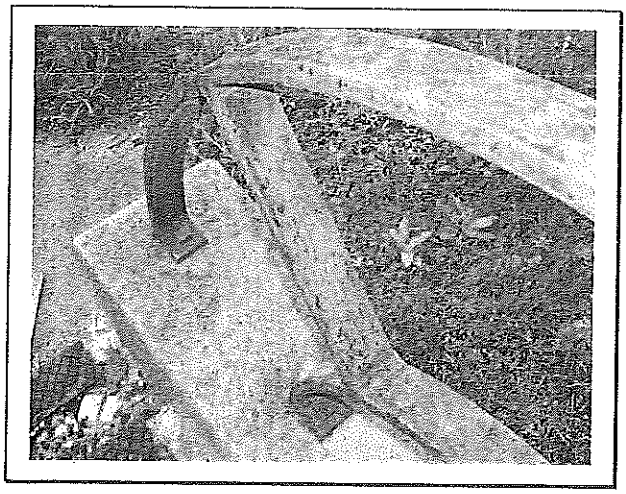
| PHOTO 20 | Viewing light yellow soffit/fascia board, Exterior. |
|---|---|
| Sample #96 | |



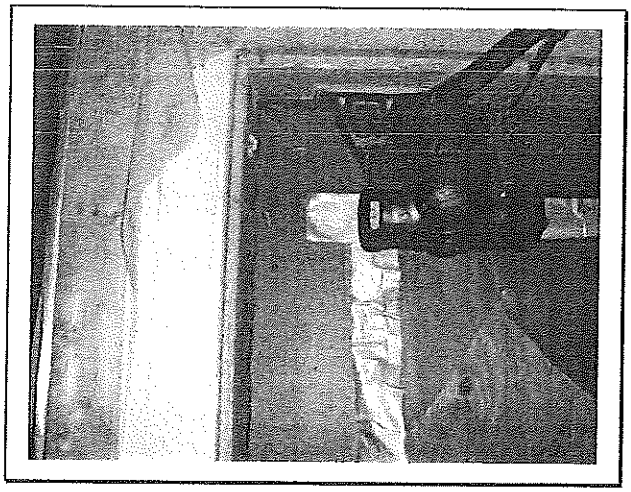
| PHOTO 21 | Viewing peach parking guard post, Exterior. |
|---|---|
| Sample #97 | |



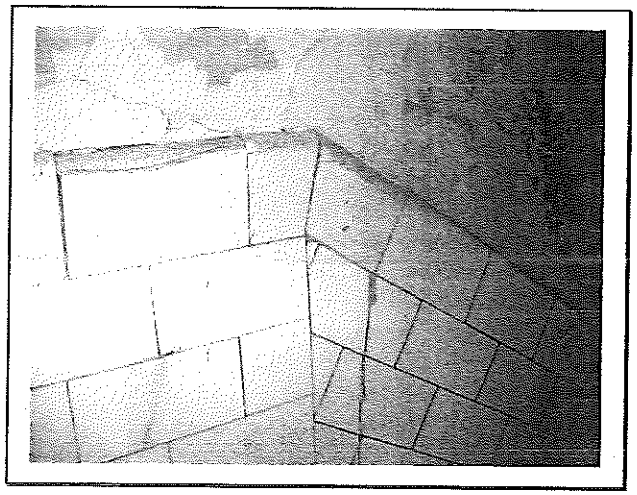
| PHOTO 22 | Viewing green window sill wrap, Exterior. |
|---|---|
| Sample #98 | |



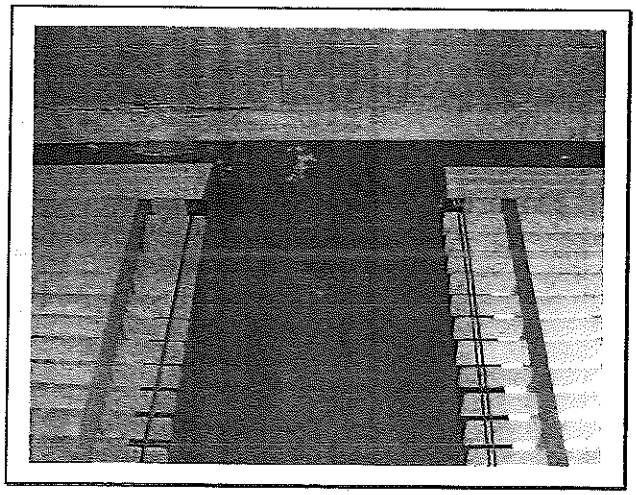
| PHOTO 23 | Viewing green handrail, Exterior. |
|---|---|
| Sample #101 | |



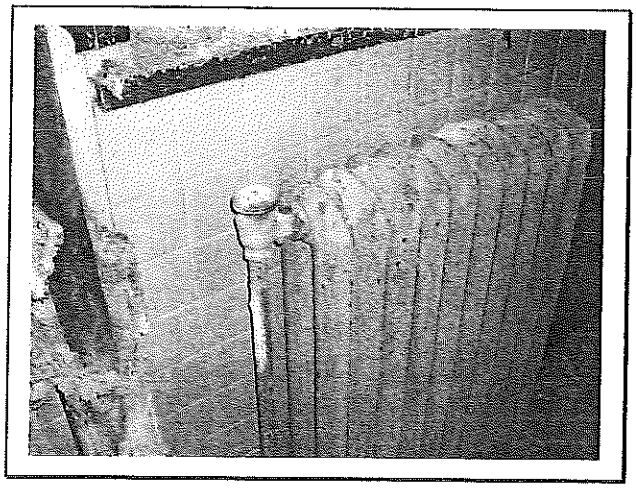
| PHOTO 24 | Viewing slate gray exit door, Adams building. |
|---|---|
| Sample #117 | |



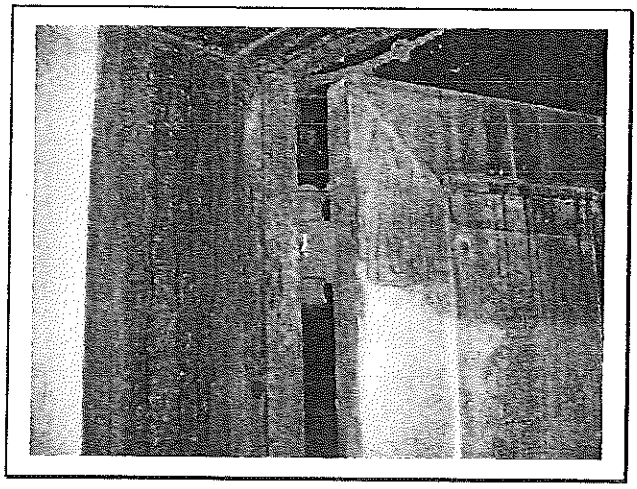
| PHOTO 25 | Viewing white ceramic wall, South entrance of Main building. |
|---|---|
| Sample #124 | |



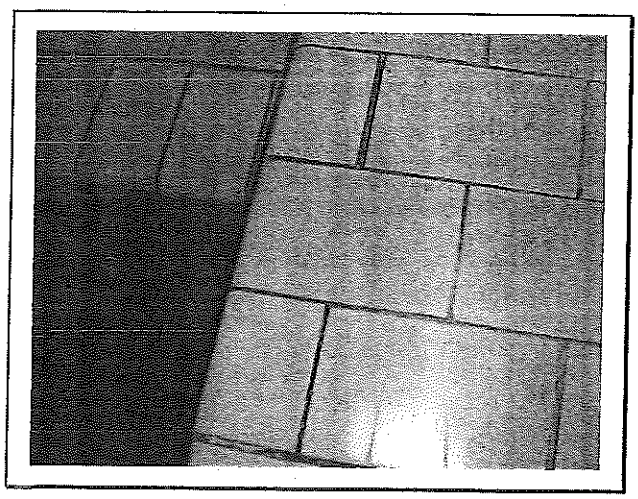
| PHOTO 26 | Viewing deep red wall, Nelson office. |
|---|---|
| Sample #125 | |



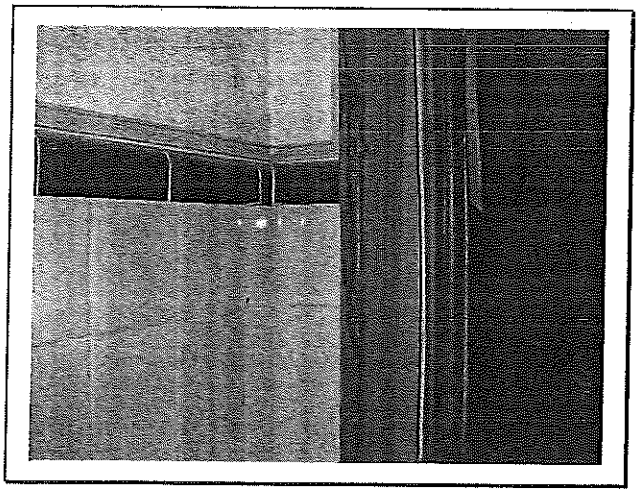
| PHOTO 27 | Viewing yellow radiator, 1st floor – Restrooms |
|---|---|
| Sample #126 | |



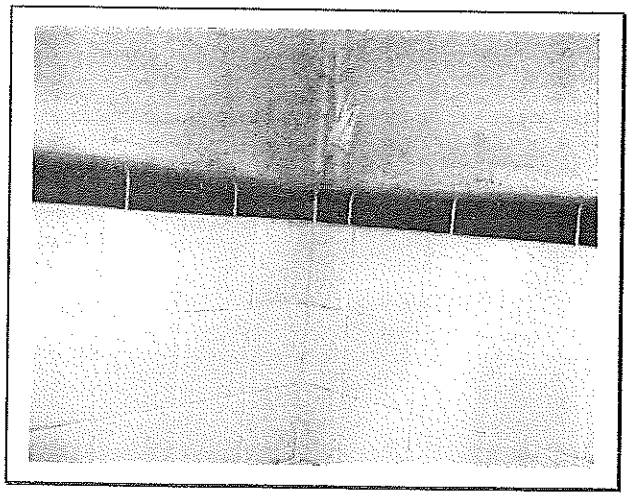
| PHOTO 28 | Viewing black door and door frame, Basement – Incinerator room. |
|---|---|
| Sample#129,130 | |



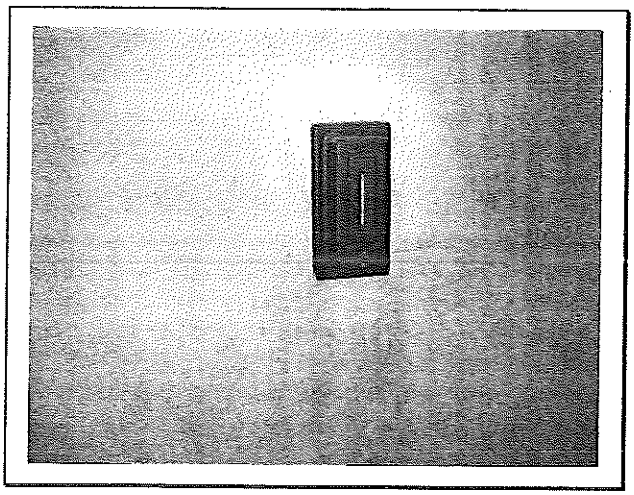
| PHOTO 29 | Viewing cream 4"x 6" ceramic wall tile, Basement – Kitchen. |
|---|---|
| Sample #133 | |



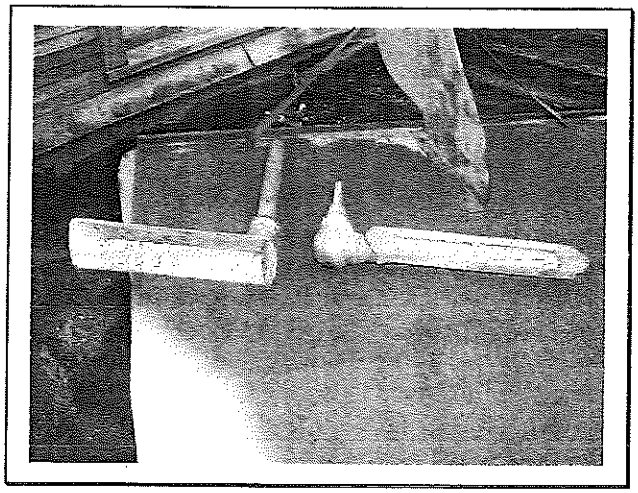
| PHOTO 30 | Viewing white 4" wall tile, Basement – SE room. |
|---|---|
| Sample #136 | |



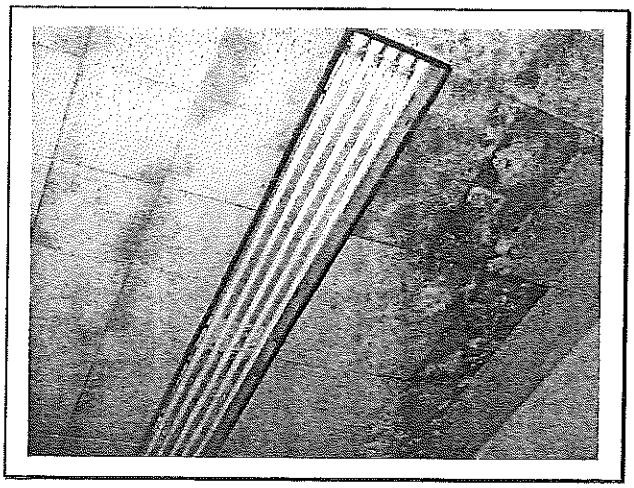
| | |
|---|---|
| **PHOTO 29** | Viewing green 4" wall tile, Basement – SE room. |
| **Sample #137** | |



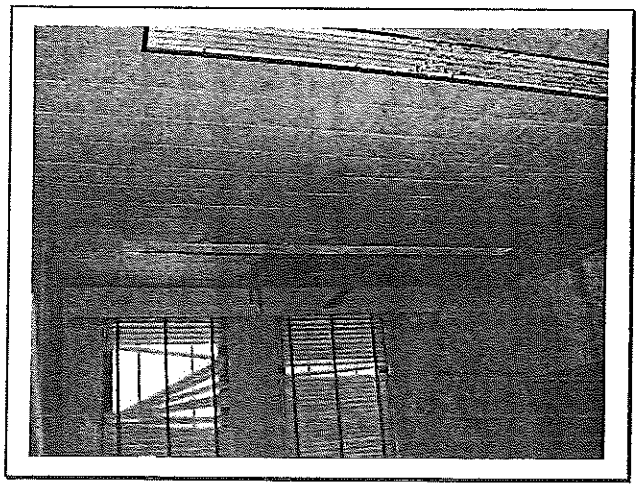
| PHOTO 1 | Viewing suspect mercury-containing thermostat. |
|---|---|
| HM# MER-01 | |



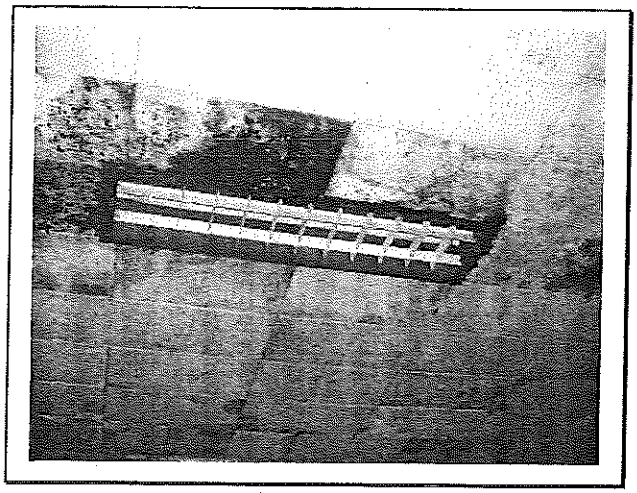
| PHOTO 2 | Viewing mercury-containing thermometers on roof. |
|---|---|
| HM# MER-02 | |



| PHOTO 3 | Viewing 8' fluorescent light bulbs and ballast's. |
|---|---|
| HM# MER-03 | |



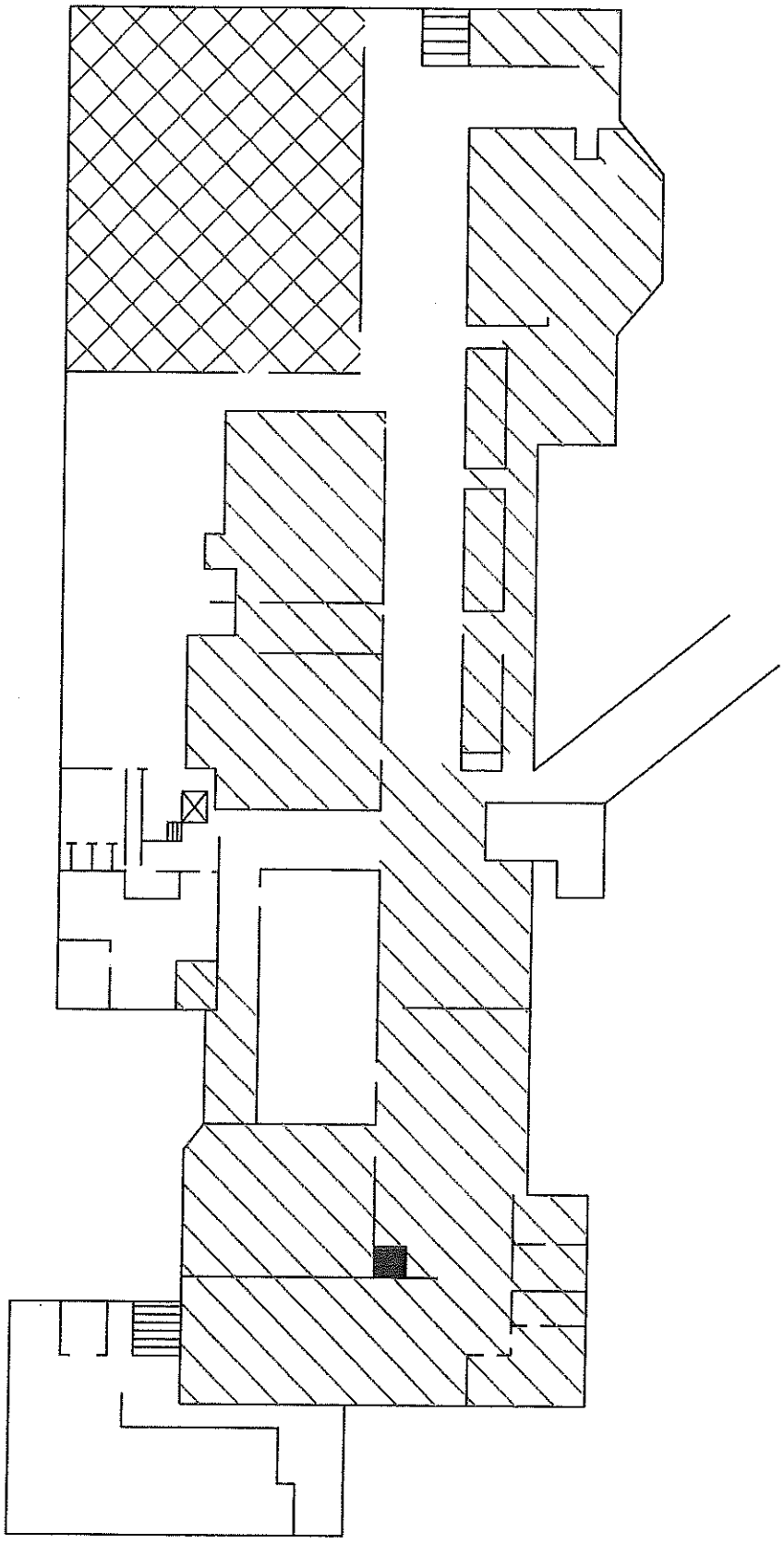
| PHOTO 4 | Viewing 6' fluorescent light bulbs and ballast's. |
|---|---|
| HM# MER-04 | |



| PHOTO 5 | Viewing 4' fluorescent light bulbs and ballast's. |
|---|---|
| HM# MER-05 | |

# Appendix B

# CAD Drawings



NOTE:

= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 12" x 12" VFT BLACK/RED CHECKERBOARD

= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" VFT BROWN/RED CHECKERBOARD

= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" VFT WHITE

C08203 ASBESTOS FLOORING LOCATIONS

RATH BUILDING - BASEMENT

NORTH

AMI Environmental
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

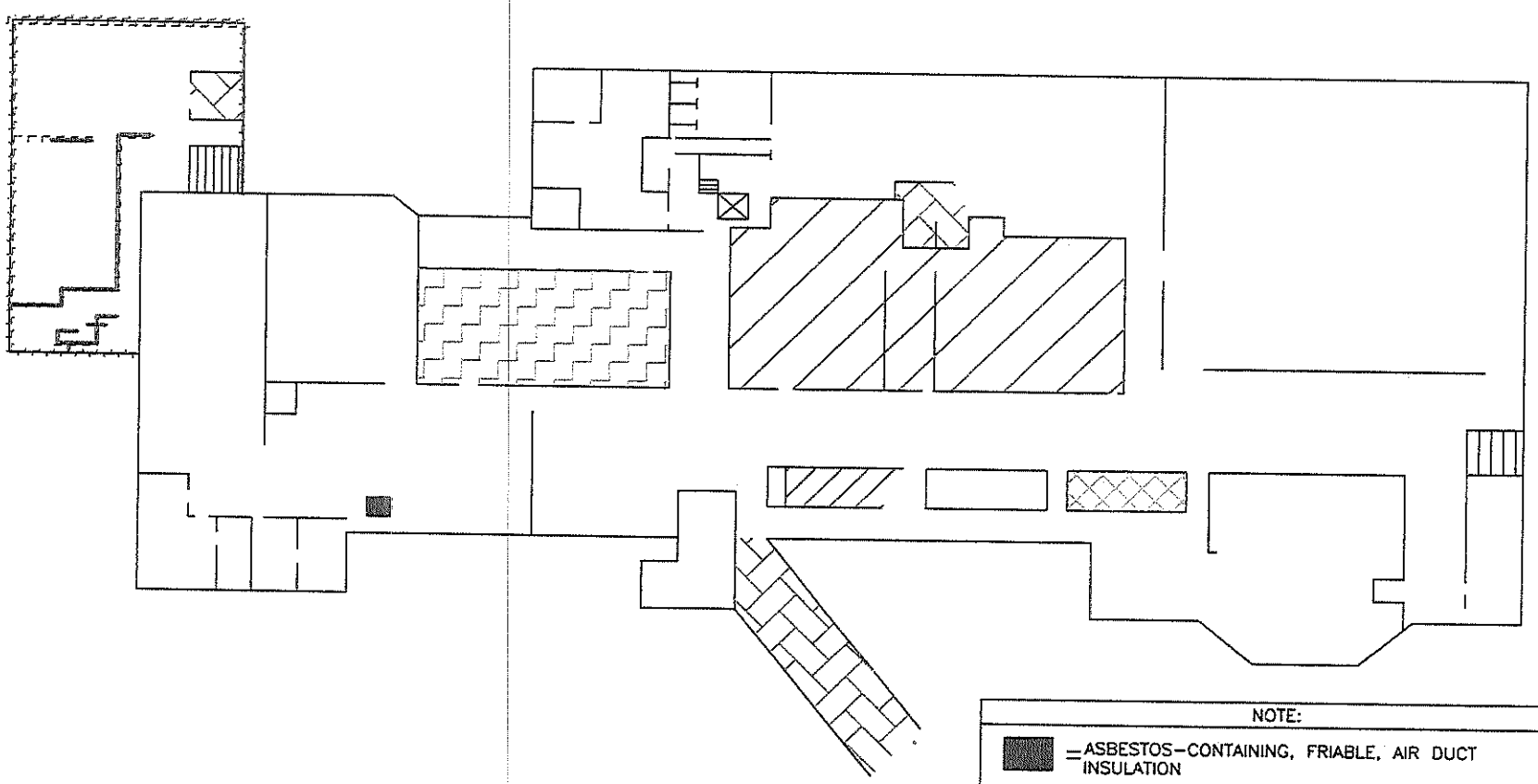
| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 1 |

AMI Environmental
8902 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402) 397-5001
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 2 |



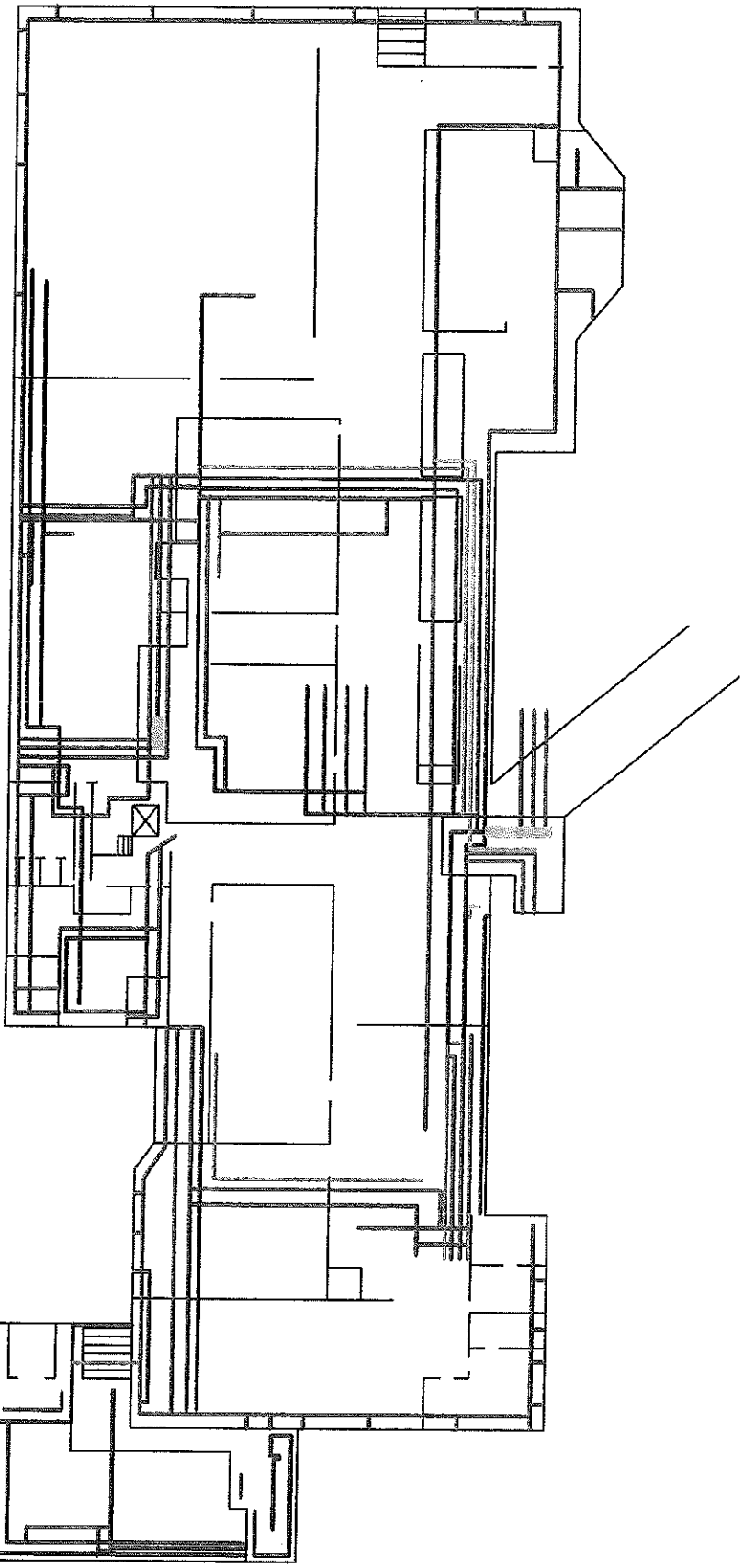
NOTE:

- = ASBESTOS-CONTAINING, FRIABLE, AIR DUCT INSULATION
- = ASBESTOS-CONTAINING, FRIABLE, DRYWALL JOINT COMPOUND
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE CEILING PANELS
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, CEILING TILE GLUE
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, BLACK MASTIC ON CORK
- = ASBESTOS-CONTAINING, FRIABLE, SPRAY-ON CEILING TEXTURE

NORTH

# C08203 MISCELLANEOUS MATERIAL LOCATIONS

## RATH BUILDING – BASEMENT




NOTE:

=1" THERMAL SYSTEM INSULATION

=2" THERMAL SYSTEM INSULATION

=4" THERMAL SYSTEM INSULATION

=6" THERMAL SYSTEM INSULATION

=8" THERMAL SYSTEM INSULATION

=TANK INSULATION (175 SF TOTAL)

C08203 THERMAL SYSTEM INSULATION LOCATIONS

RATH BUILDING - BASEMENT

NORTH

AMI Environmental
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

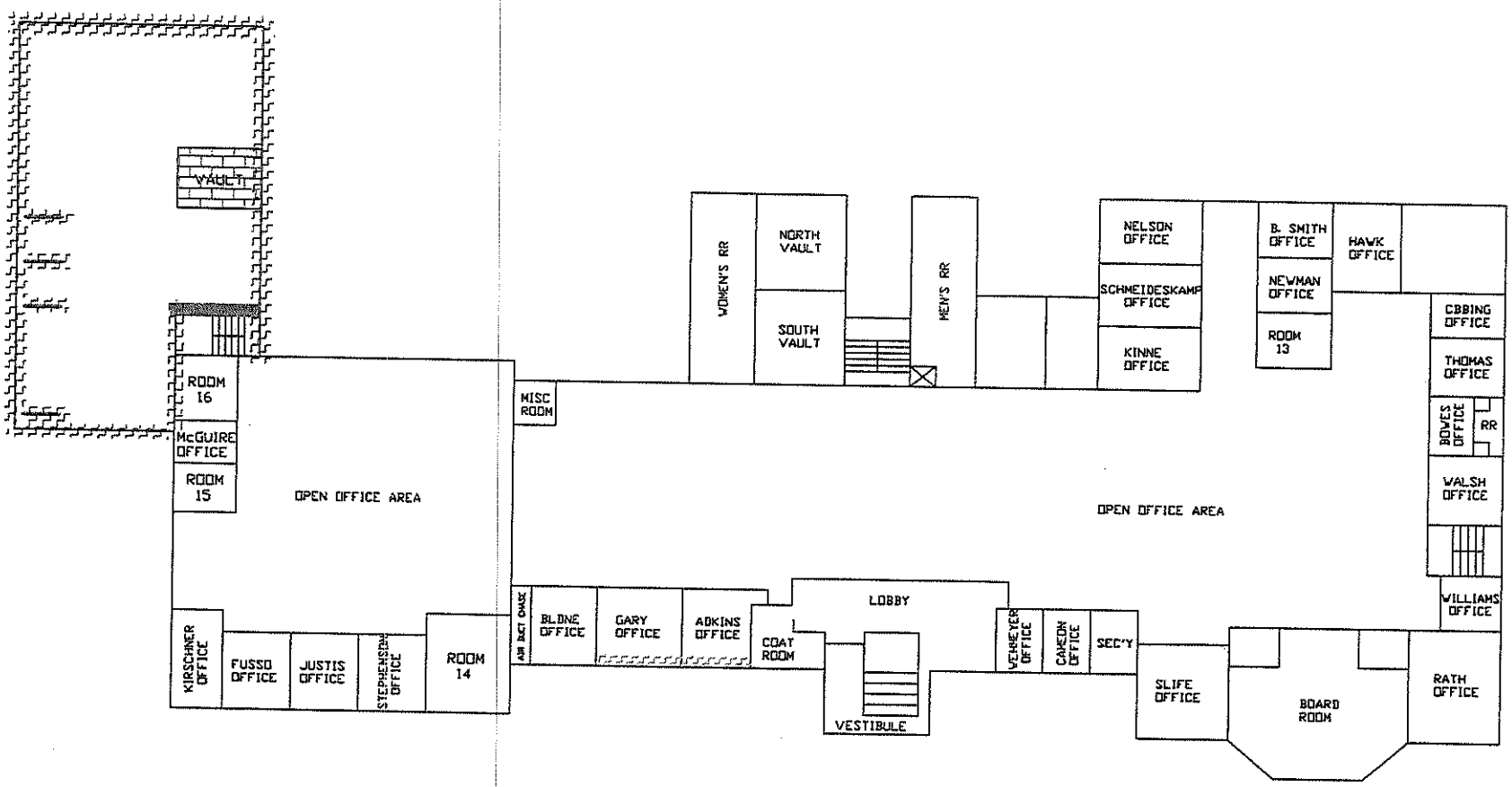
| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 3 |

AMI Environmental
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402) 397-5001
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

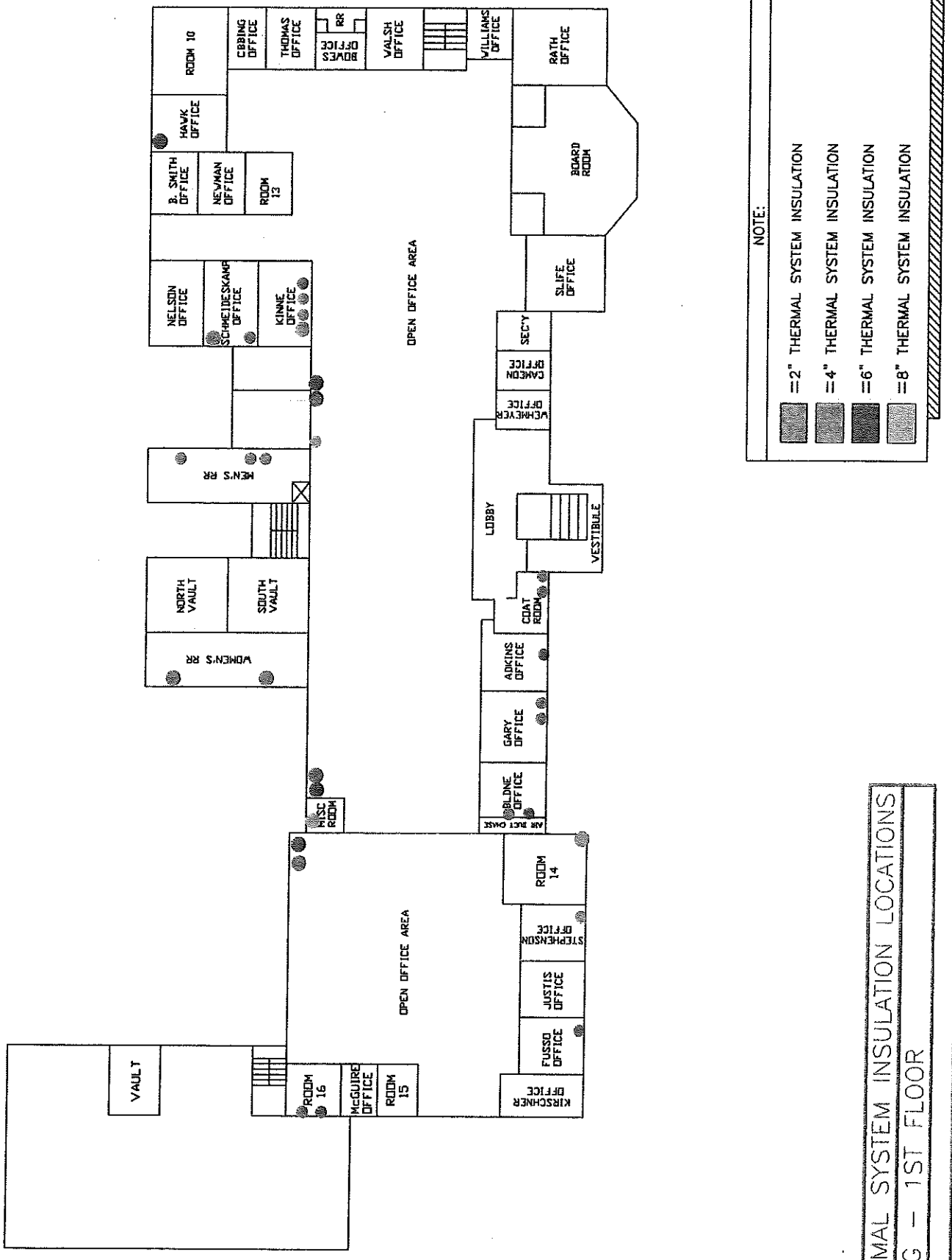
| OWN BY | SIZE |
|---|---|
| MICHAEL HAYES | |
| SCALE | DRAWING NUMBER |
| NOT TO SCALE | C08203 |
| SHEET | DATE |
| 4 | 06-05-2008 |




NORTH

NOTE:
- = ASBESTOS-CONTAINING, FRIABLE, DRYWALL JOINT COMPOUND
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, BLACK MASTIC ON CORK INSULATION
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, WALL PANEL GLUE
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS

# C08203 ASBESTOS MATERIAL LOCATIONS
## RATH BUILDING - 1ST FLOOR




C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING - 1ST FLOOR

NORTH

AMI Environmental

8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

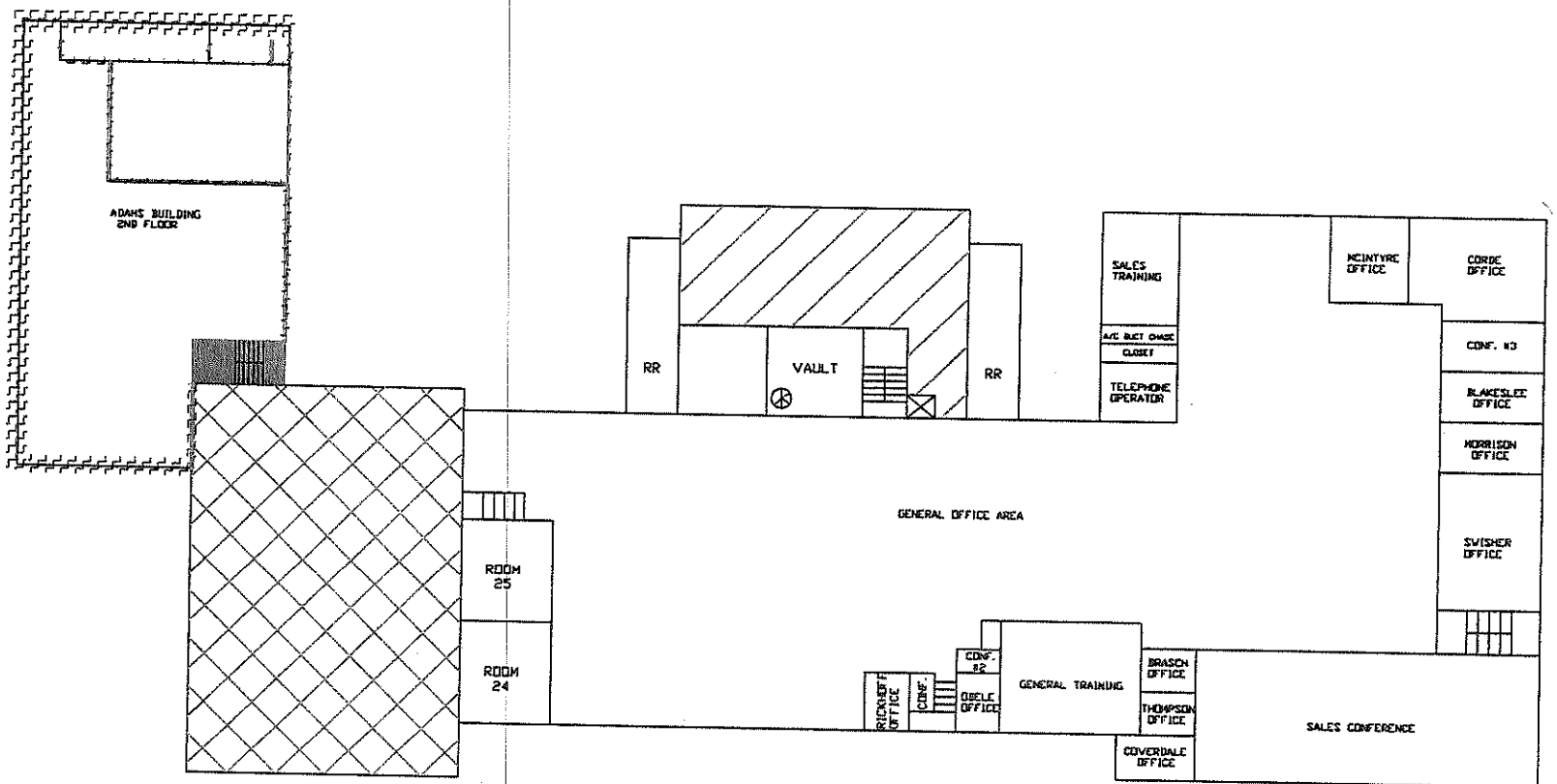
| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 5 |

AMI
Environmental
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402) 397-5001
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

DWN BY: MICHAEL HAYES
SIZE:
SCALE: NOT TO SCALE
DRAWING NUMBER: C08203
DATE: 06-05-2008
SHEET: 6




NORTH

NOTE:

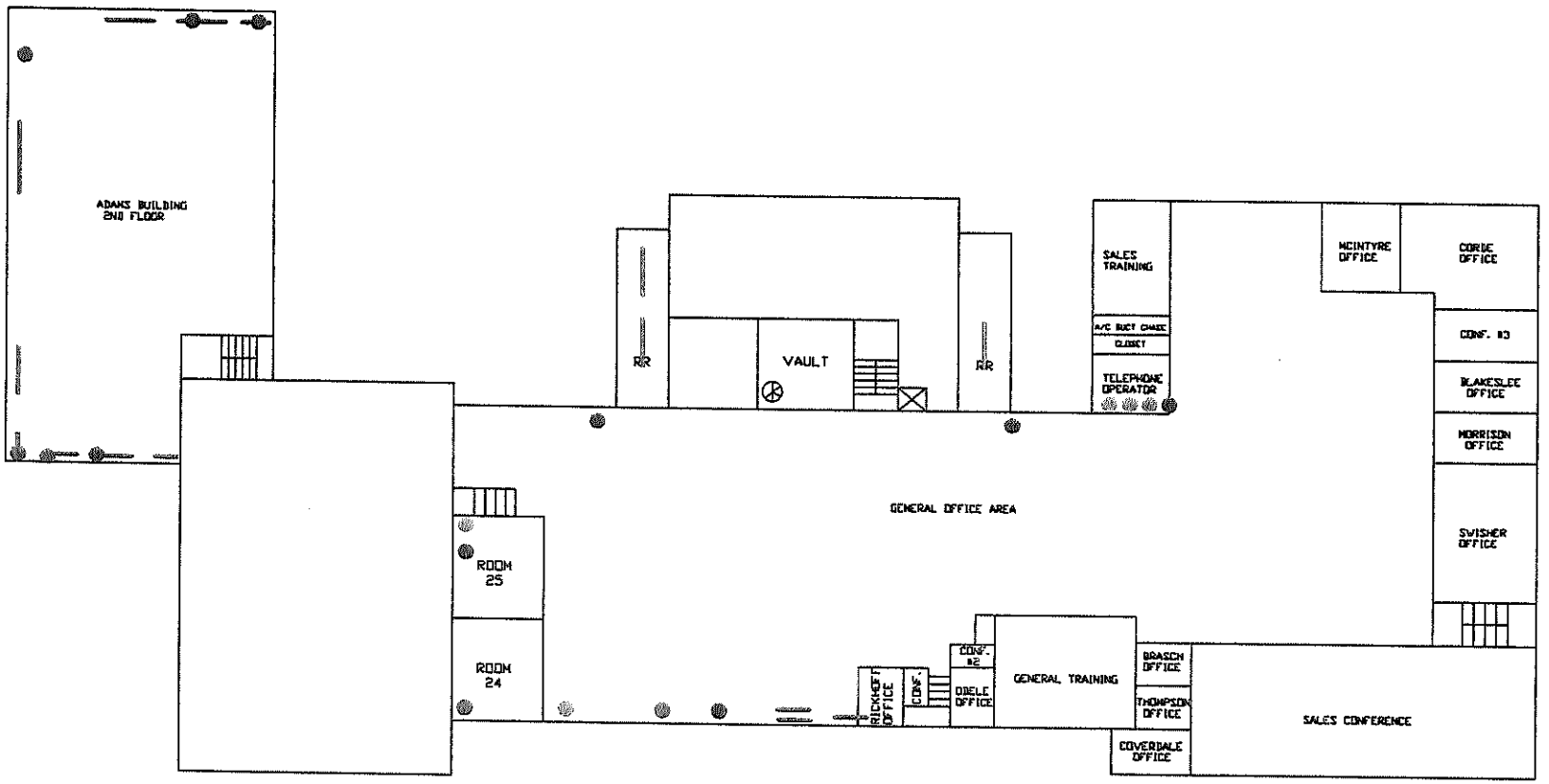
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" VFT BROWN/RED CHECKERBOARD
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" RED/BLACK VFT CHECKERBOARD
- = ASBESTOS-CONTAINING, FRIABLE, DRYWALL JOINT COMPOUND
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS

# C08203 ASBESTOS MATERIAL LOCATIONS
## RATH BUILDING – 2ND FLOOR

AMI
Environmental
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402) 397-5001
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

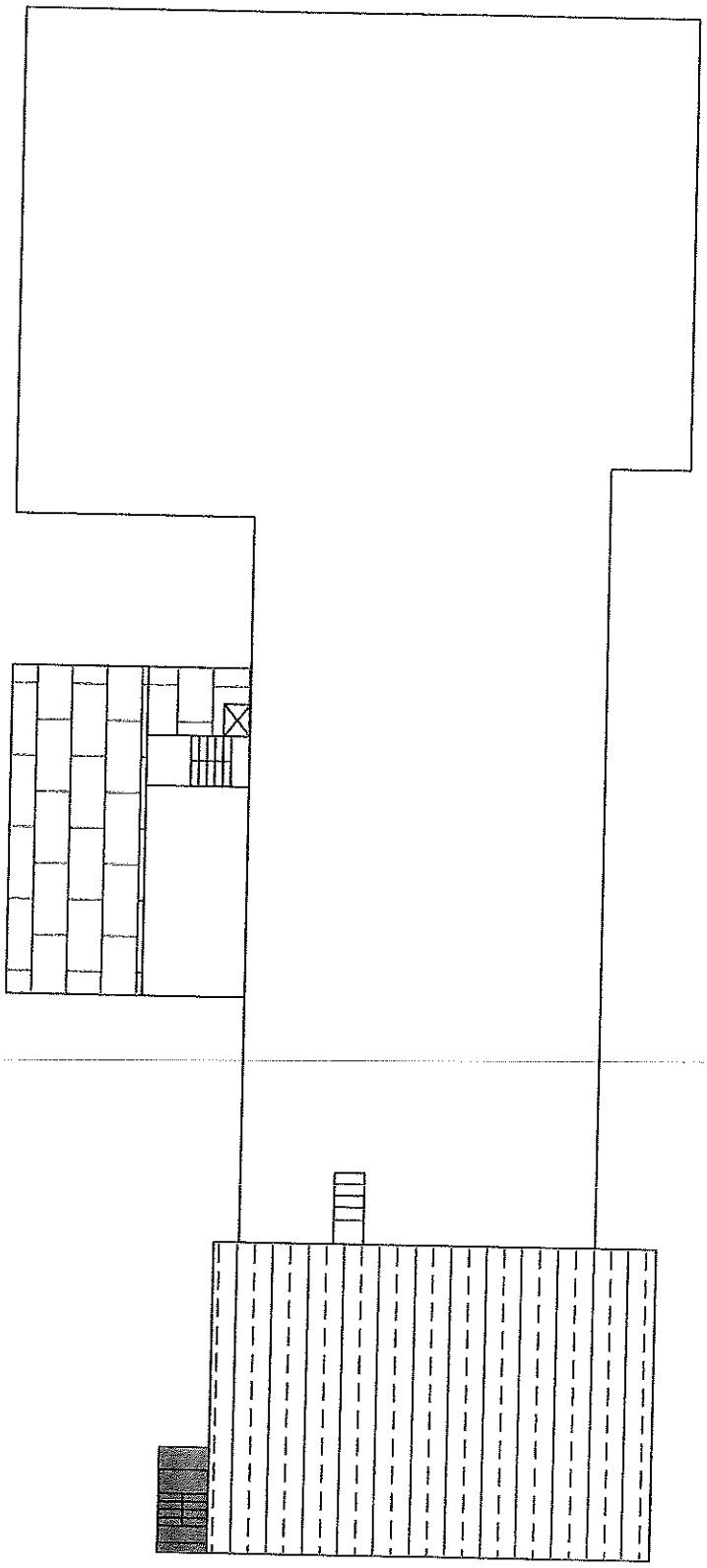
| DRAWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |
| SIZE | SCALE | SHEET |
| | NOT TO SCALE | 7 |




NORTH

NOTE:
=4" THERMAL SYSTEM INSULATION
=6" THERMAL SYSTEM INSULATION
=8" THERMAL SYSTEM INSULATION

C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING – 2ND FLOOR



NOTE:
= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS
= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" VFT RED/BLACK CHECKERBOARD
= ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, 9" x 9" VFT WHITE/BLUE CHECKERBOARD

NORTH

C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING - 3RD FLOOR

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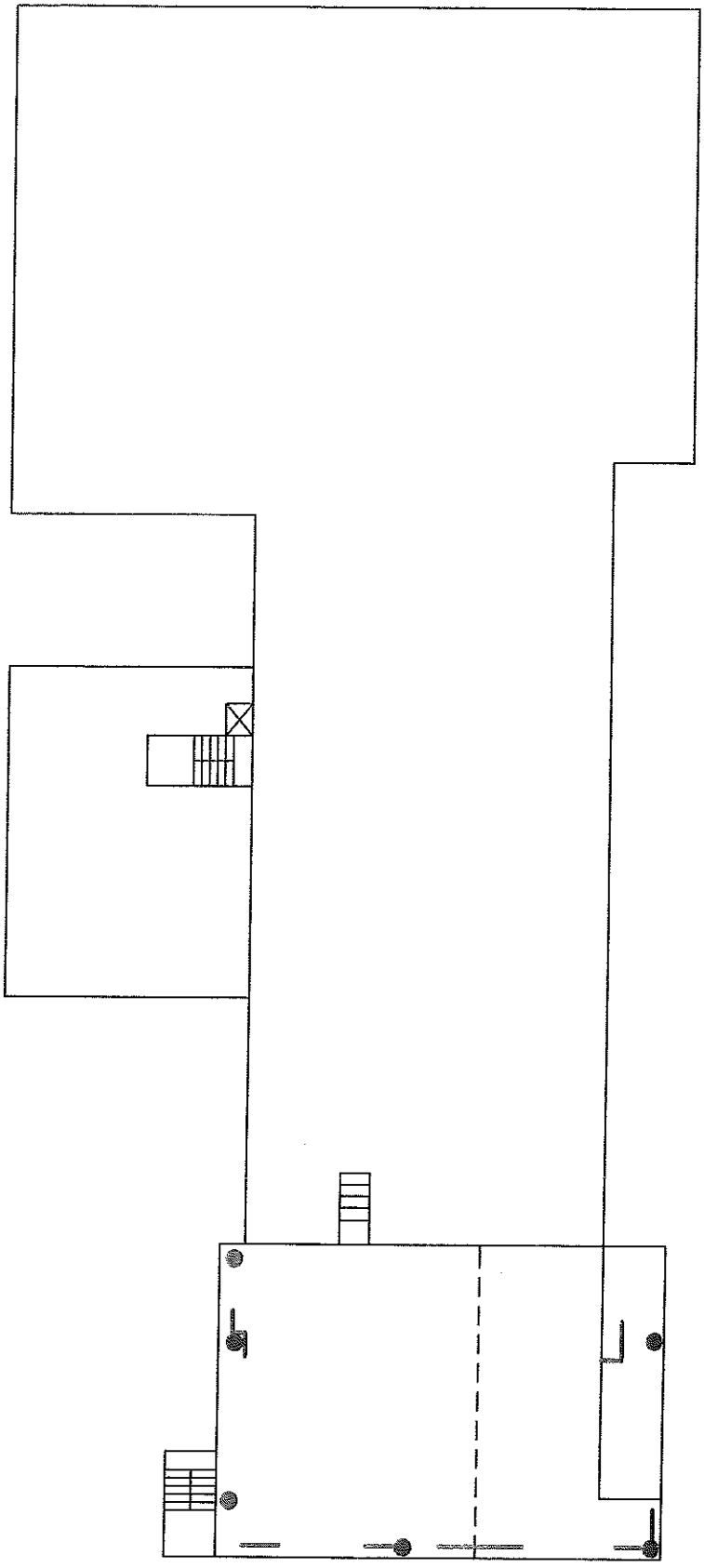
SUITE 100
OMAHA NE, 68138
PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 8 |



NOTE:

=4" THERMAL SYSTEM INSULATION

=6" THERMAL SYSTEM INSULATION

=8" THERMAL SYSTEM INSULATION

C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING - 3RD FLOOR

NORTH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DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 9 |

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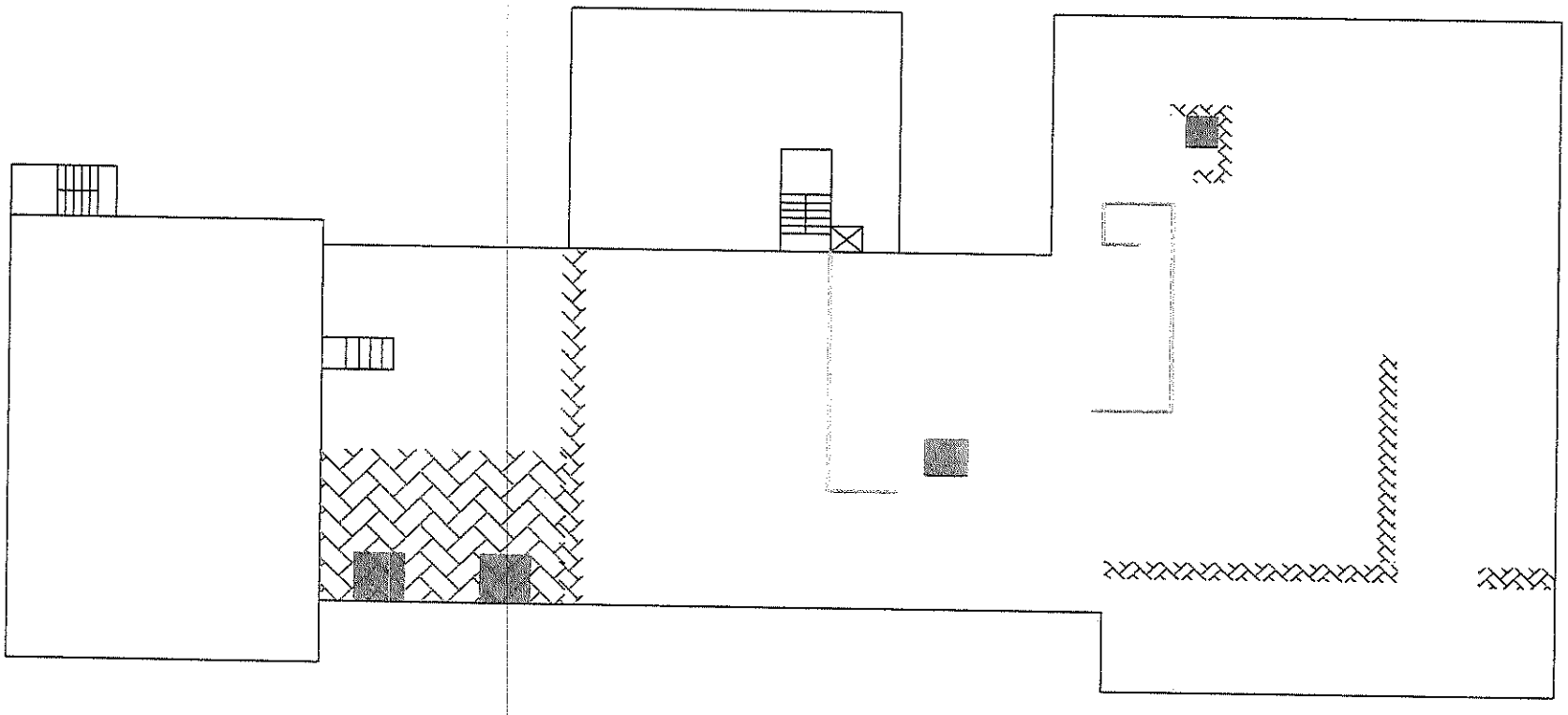
DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER |
|---|---|
| MICHAEL HAYES | C08203 |
| SIZE | DATE |
| SCALE: NOT TO SCALE | 06-05-2008 |
| | SHEET: 10 |

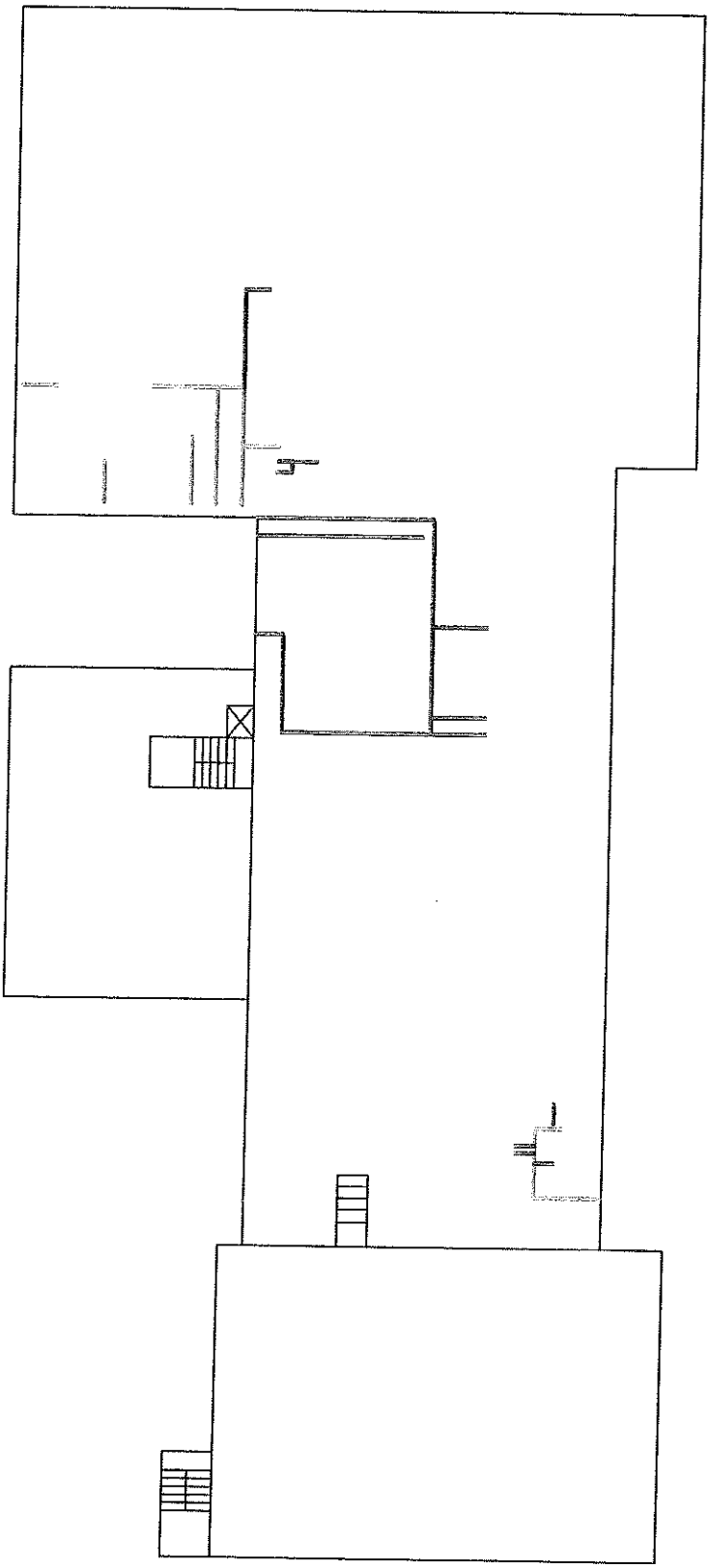


NORTH

NOTE:

- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, BLACK MASTIC ON CORK INSULATION
- = ASBESTOS-CONTAINING, FRIABLE, AIR DUCT SEAM MASTIC (WHITE)
- = ASBESTOS-CONTAINING, FRIABLE, AIR DUCT INSULATION (WHITE)

C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING - ATTIC



NOTE:
=6" THERMAL SYSTEM INSULATION
=8" THERMAL SYSTEM INSULATION

C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING - ATTIC

NORTH

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8802 S. 135th St, SUITE 100
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DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 11 |

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DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 05-30-2008 |
| SIZE / SCALE | | SHEET |
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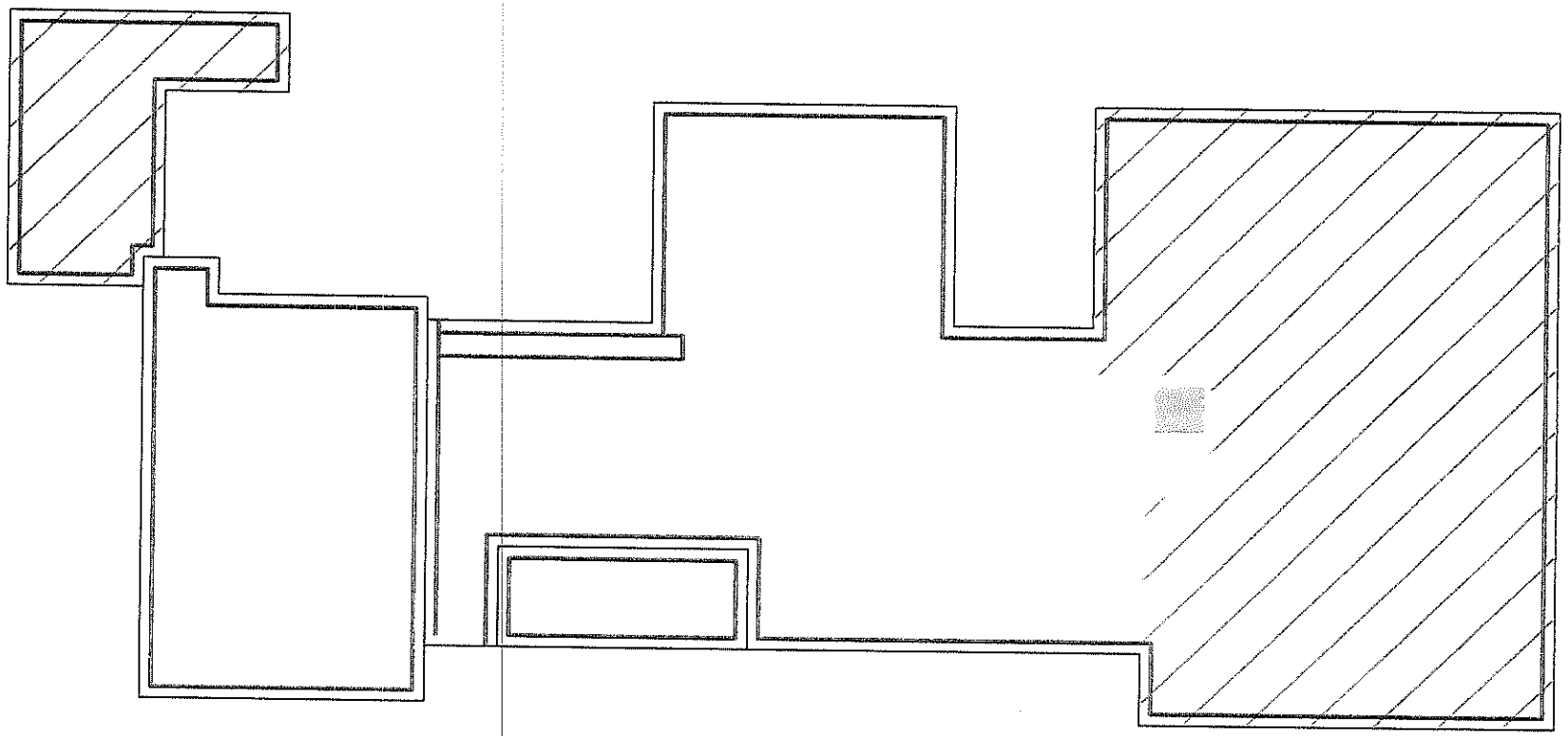
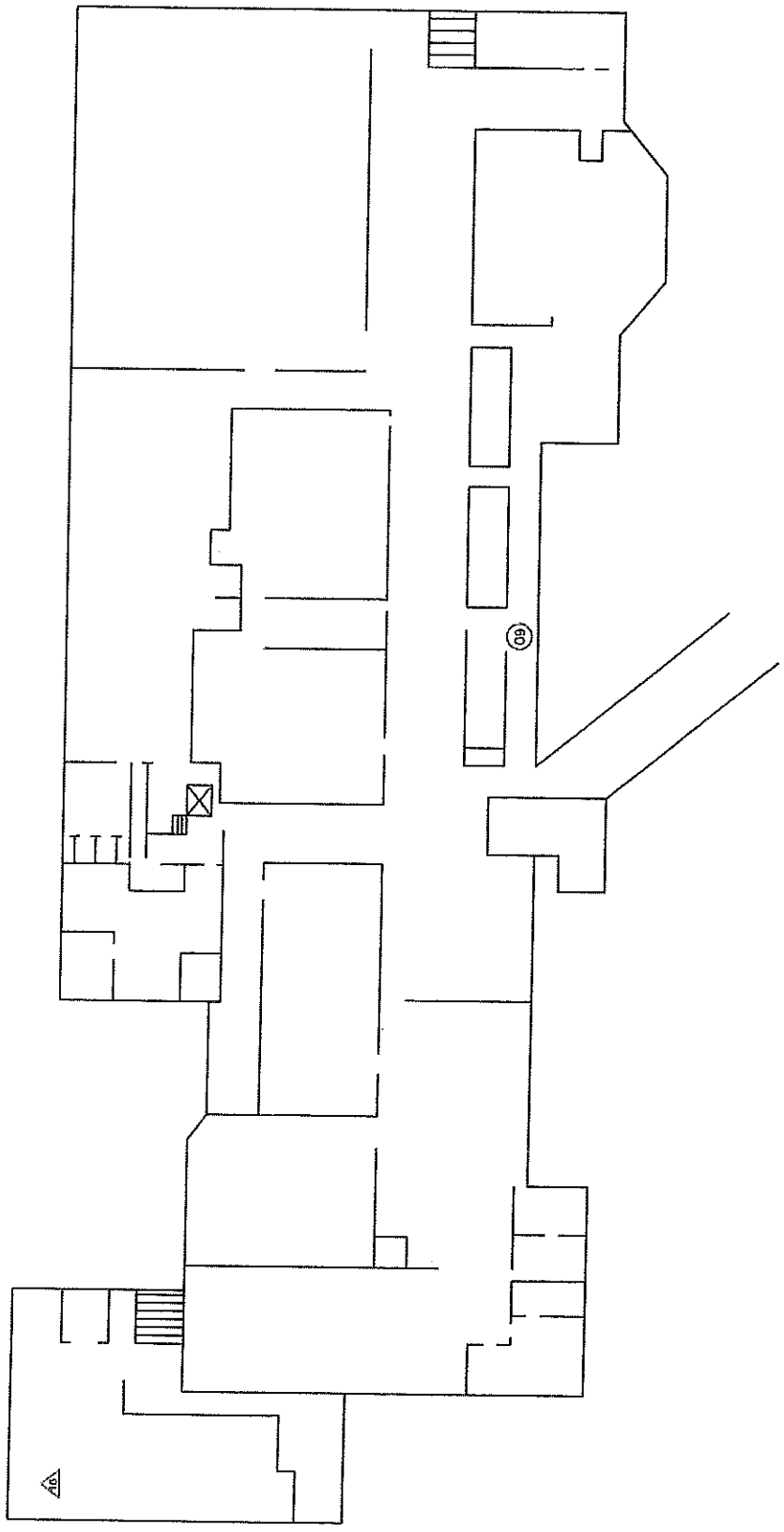


NORTH

NOTE:
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE CONDUCTORS
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, ROOFING FELT
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, ROOF FLASHING

C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING – ROOF




NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING - BASEMENT

NORTH

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8802 S. 135th St.
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OMAHA NE, 68138
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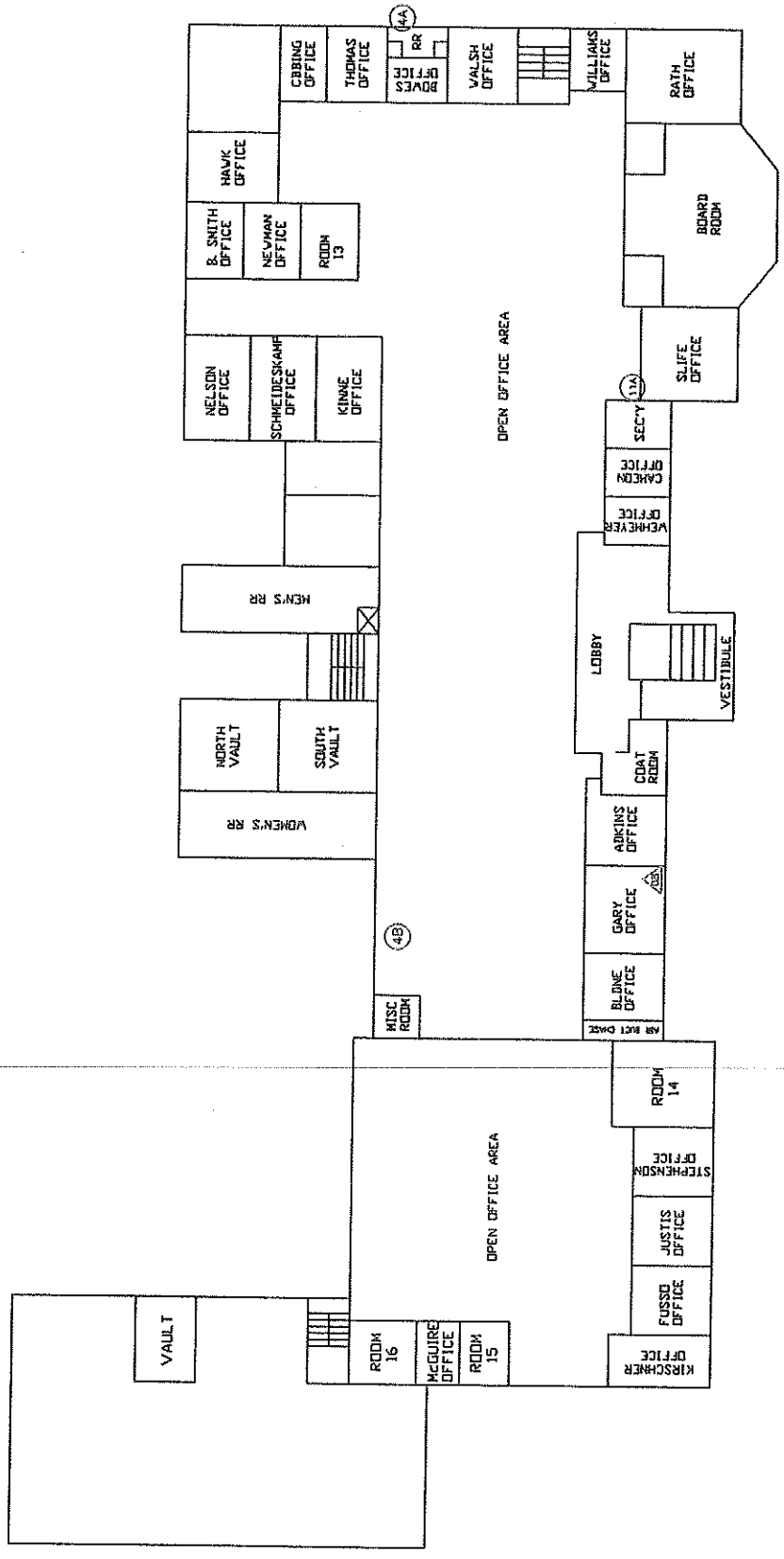
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 13 |




NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING - 1ST FLOOR

NORTH

AMI Environmental

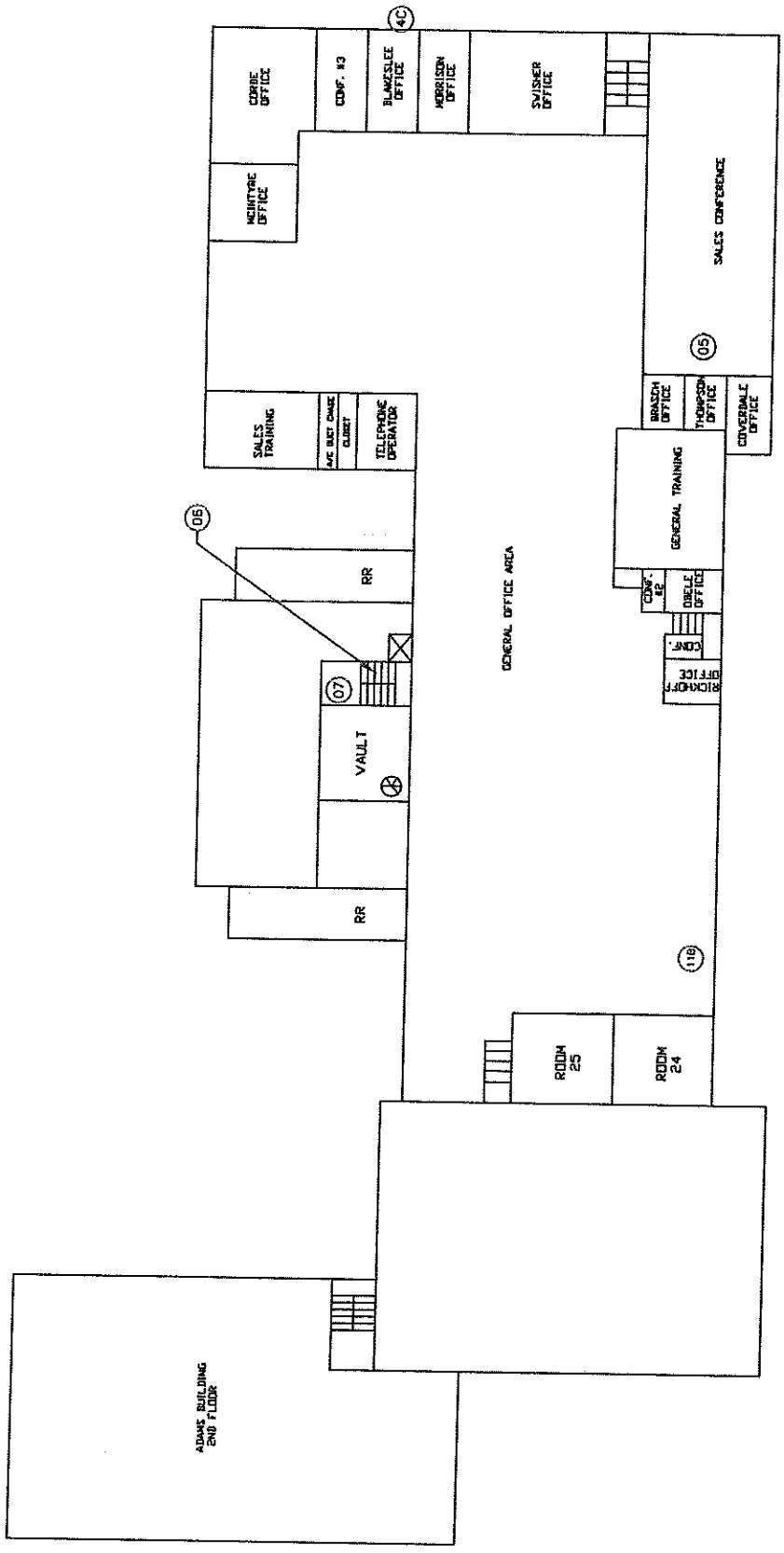
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138

PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DRAWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 14 |




NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS
RATH BUILDING - 2ND FLOOR

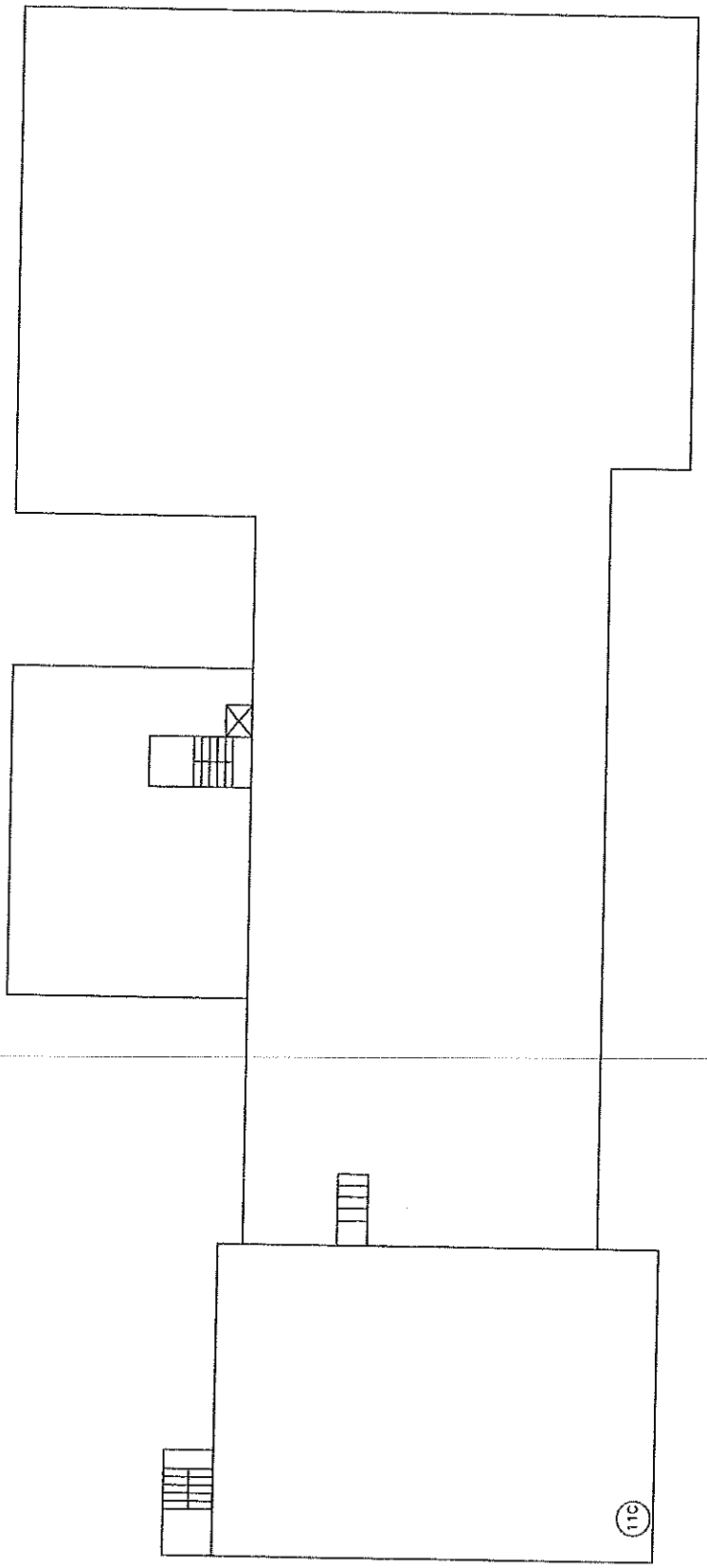
NORTH

AMI Environmental
9802 S. 135th St.
SUITE 100
OMAHA NE, 68138
PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 15 |




NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS
RATH BUILDING – 3RD FLOOR

NORTH

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DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 16 |

NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS. > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS. < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING - ATTIC

NORTH

AMI Environmental

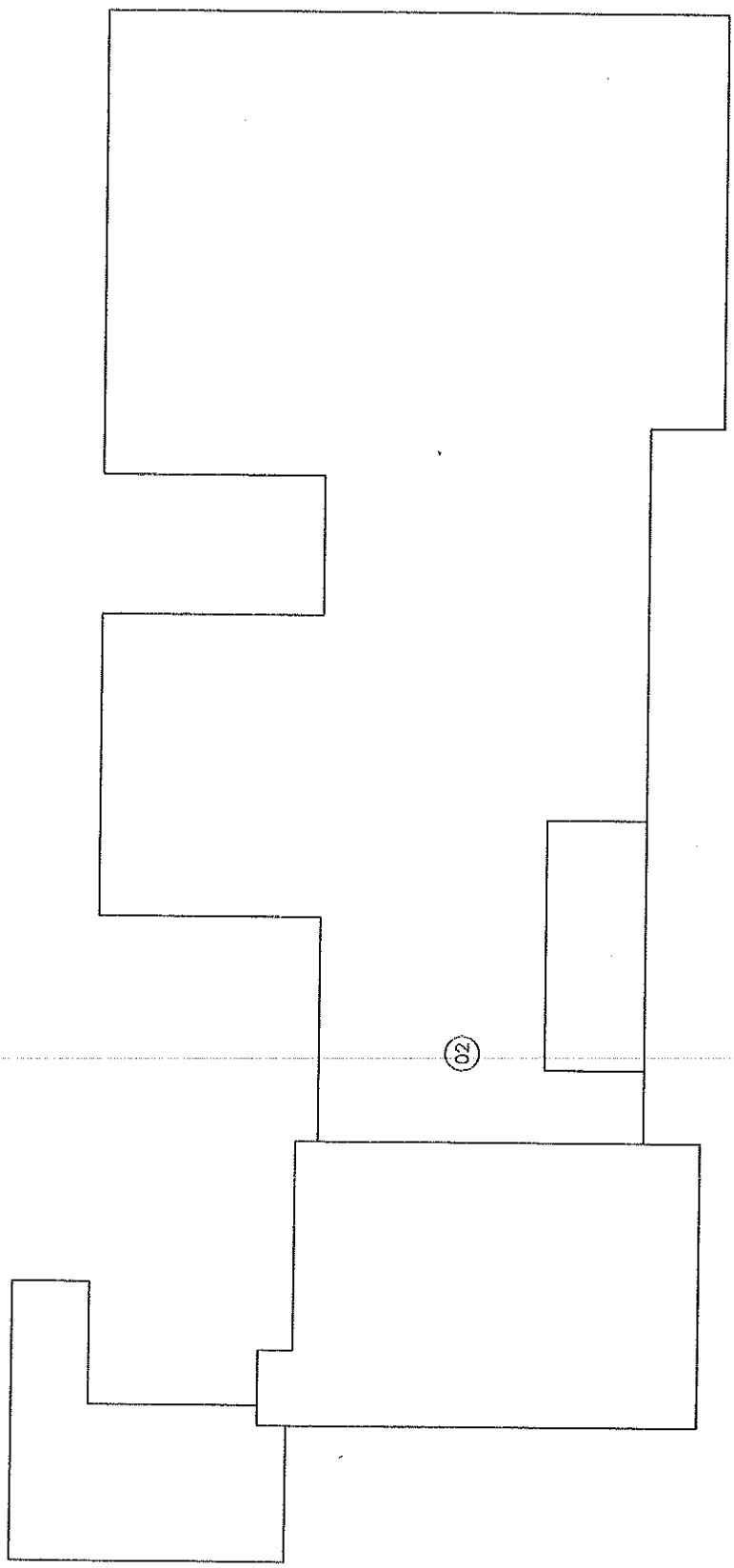
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138

PH (402)397-5001
FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 17 |




NOTE:

= SAMPLE POSITIVE FOR ASBESTOS, > 1%

= SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING - ROOF

NORTH

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SUITE 100
OMAHA NE, 68138

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FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |

| SIZE | SCALE | SHEET |
|---|---|---|
| | NOT TO SCALE | 18 |

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8802 S. 135th St. SUITE 100 OMAHA NE, 68138
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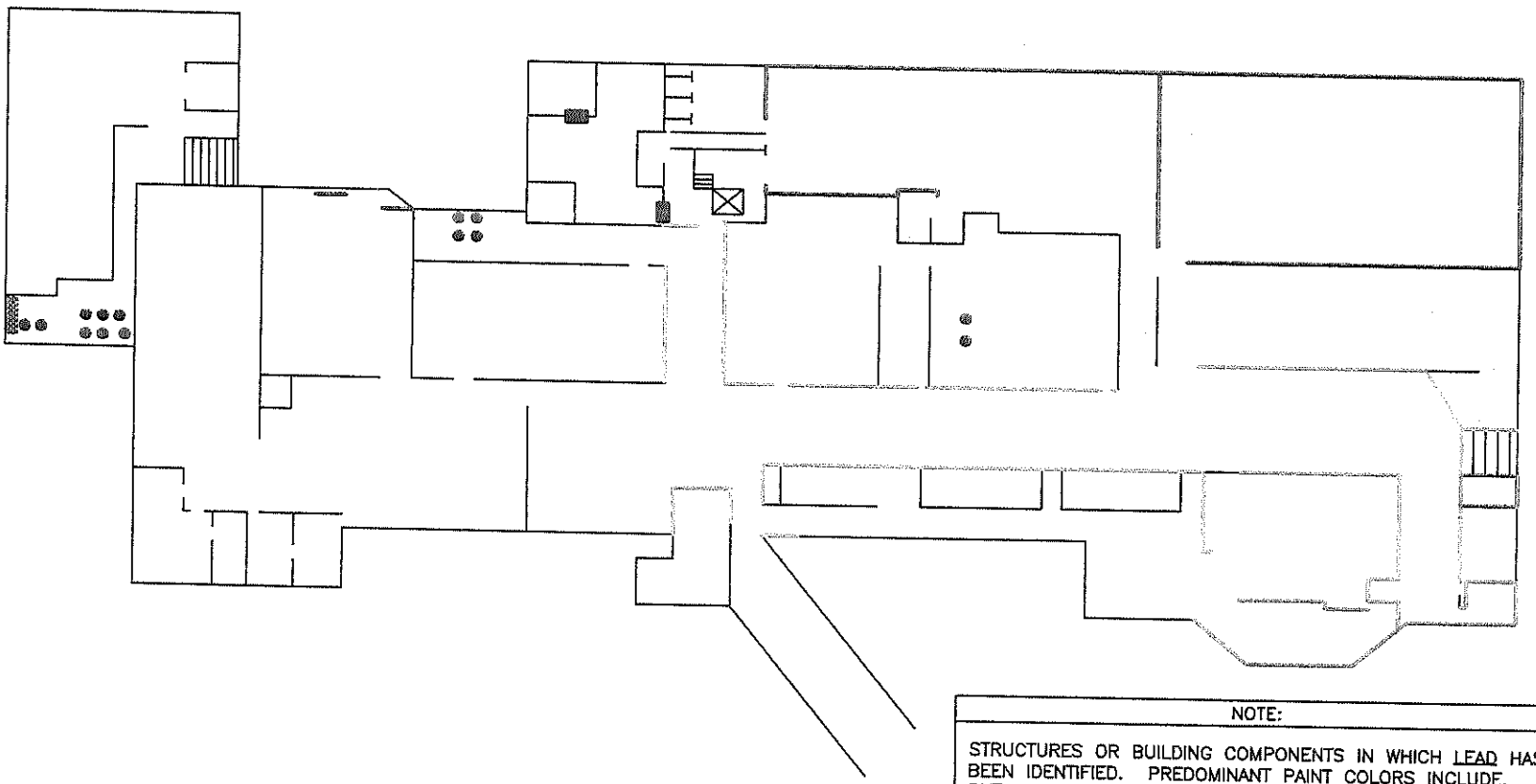
DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DRWN BY | SIZE | DRAWING NUMBER | DATE |
|---|---|---|---|
| MICHAEL HAYES | NOT TO SCALE | C08203 | 06-05-2008 |

SCALE | SHEET: 19



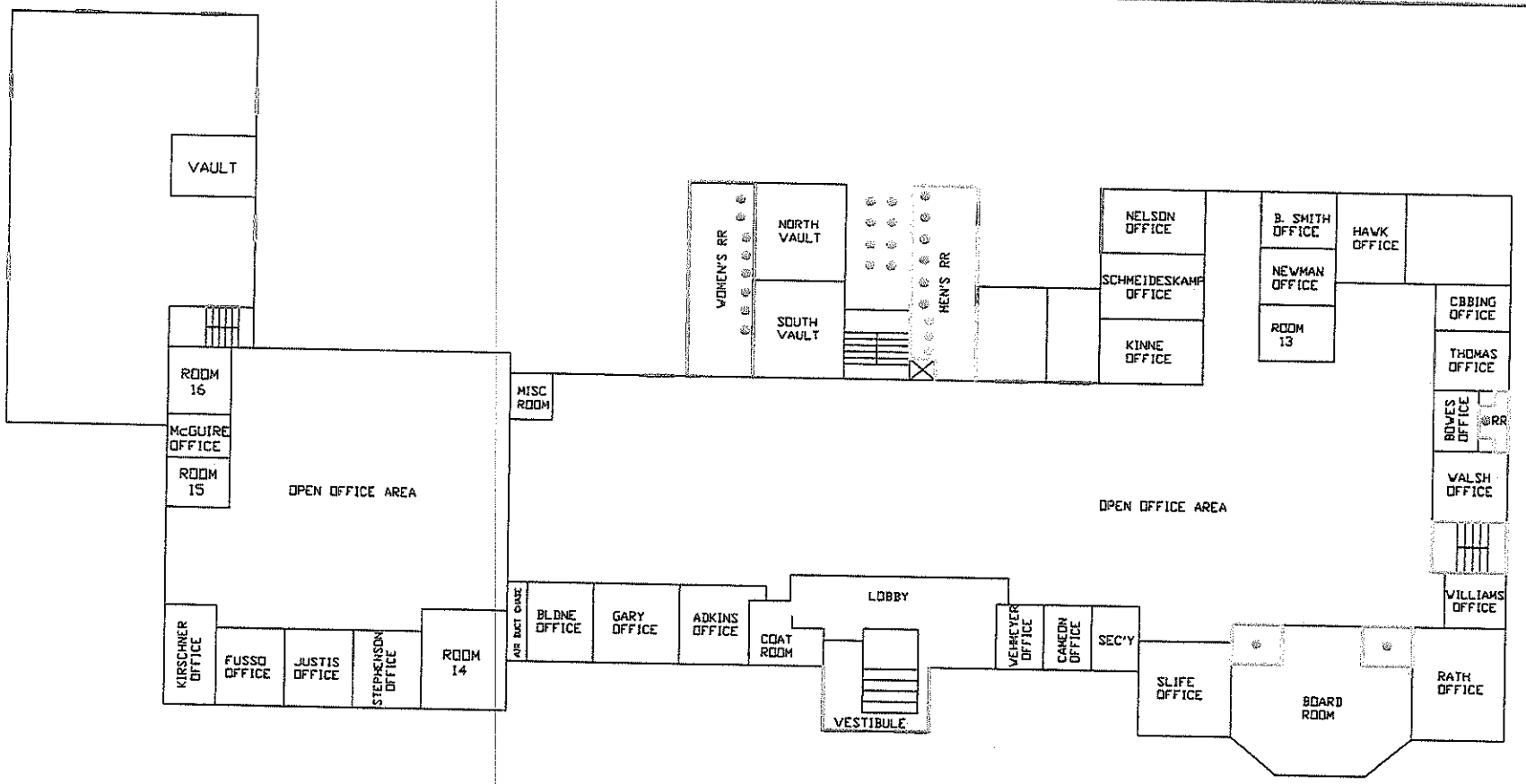
NOTE:

STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

- = LEAD CONTAINING – WHITE PAINT ON DOOR AND FRAME
- = LEAD CONTAINING – WHITE PAINT ON RADIATOR
- = LEAD CONTAINING – WHITE CERAMIC TILE
- = LEAD CONTAINING – GREEN CERAMIC TILE
- = LEAD CONTAINING – YELLOW CERAMIC TILE
- = LEAD CONTAINING – CREAM GLAZED BLOCK
- = LEAD CONTAINING – WHITE GLAZED TOILET
- = LEAD CONTAINING – WHITE GLAZED SINK
- = LEAD CONTAINING – WHITE GLAZED URINAL

NORTH

C08203 LEAD LOCATIONS
RATH BUILDING – BASEMENT




NOTE:

STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

- = LEAD CONTAINING – YELLOW PAINT ON RADIATOR
- = LEAD CONTAINING – WHITE PAINT ON RADIATOR
- = LEAD CONTAINING – GREEN PAINT ON RADIATOR
- = LEAD CONTAINING – RED PAINT ON WALL
- = LEAD CONTAINING – YELLOW GLAZED CERAMIC TILE
- = LEAD CONTAINING – PEACH GLAZED CERAMIC TILE
- = LEAD CONTAINING – WHITE GLAZED CERAMIC TILE
- = LEAD CONTAINING – WHITE GLAZED URINAL
- = LEAD CONTAINING – WHITE GLAZED TOILET

NORTH

# C08203 LEAD LOCATIONS
## RATH BUILDING – 1ST FLOOR

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DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

DWN BY: MICHAEL HAYES
SIZE:
SCALE: NOT TO SCALE
DRAWING NUMBER: C08203
DATE: 06-05-2008
SHEET: 20

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Environmental
8802 S. 135th St.
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OMAHA NE, 68138
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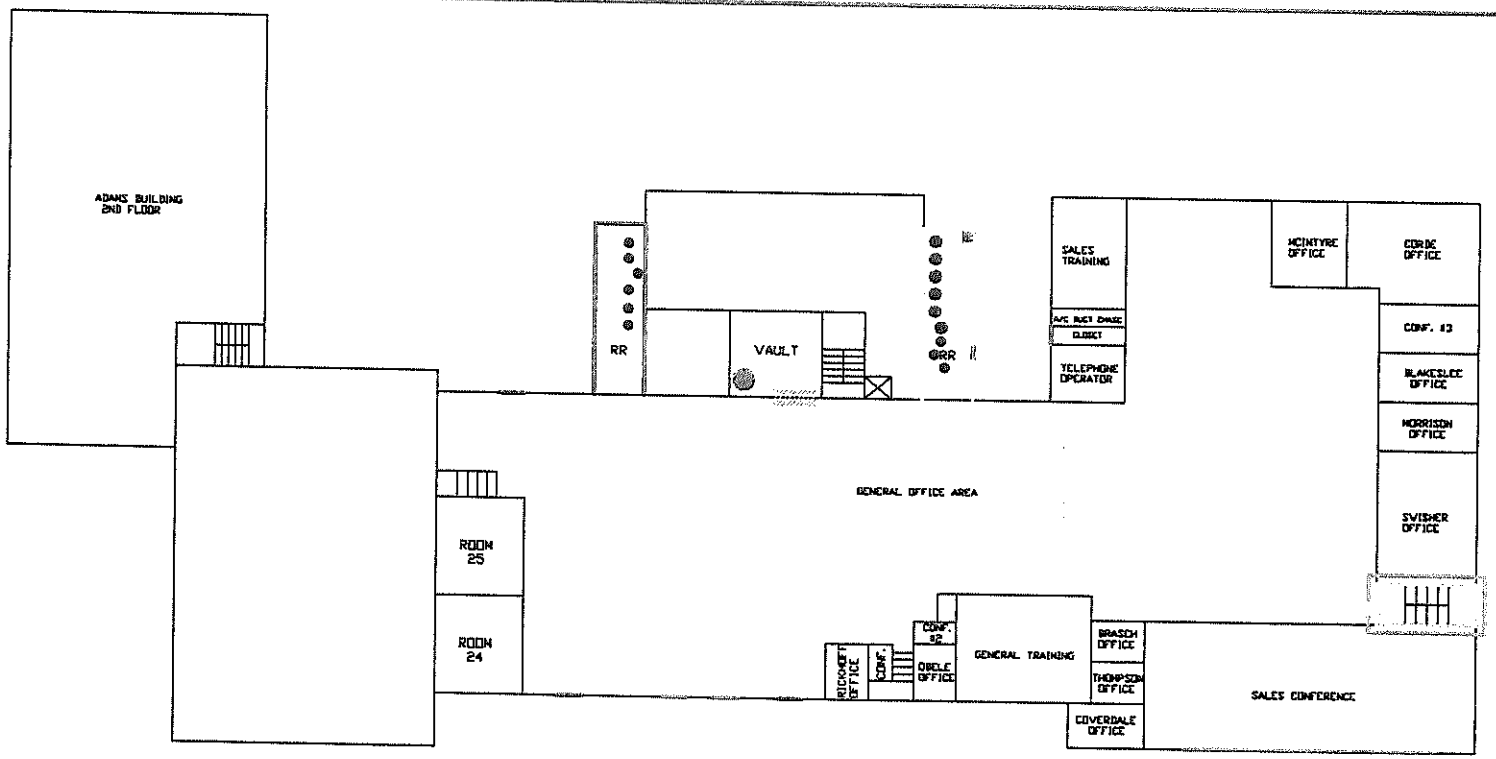
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER |
|---|---|
| MICHAEL HAYES | C08203 |
| SCALE | DATE |
| NOT TO SCALE | 06-05-2008 |
| SIZE | SHEET |
| | 21 |




NOTE:

STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

- = LEAD CONTAINING – WHITE PAINT ON RADIATOR
- = LEAD CONTAINING – GREEN PAINT ON RADIATOR
- = LEAD CONTAINING – GREEN PAINT ON CHALKBOARD TRIM
- = LEAD CONTAINING – YELLOW CERAMIC TILE
- = LEAD CONTAINING – PEACH CERAMIC TILE
- = LEAD CONTAINING – GRAY PAINT ON SPIRAL STAIRCASE
- = LEAD CONTAINING – LT. GRAY PAINT ON WINDOW SILL AND SASH
- = LEAD CONTAINING – BLACK GLAZED TILE TRIM
- = LEAD CONTAINING – WHITE GLAZED URINAL
- = LEAD CONTAINING – WHITE GLAZED TOILET
- = LEAD CONTAINING – WHITE GLAZED SINK
- = LEAD CONTAINING – BLACK PAINTED VAULT DOOR

NORTH

C08203 LEAD LOCATIONS
RATH BUILDING – 2ND FLOOR

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Environmental
8802 S. 135th St.
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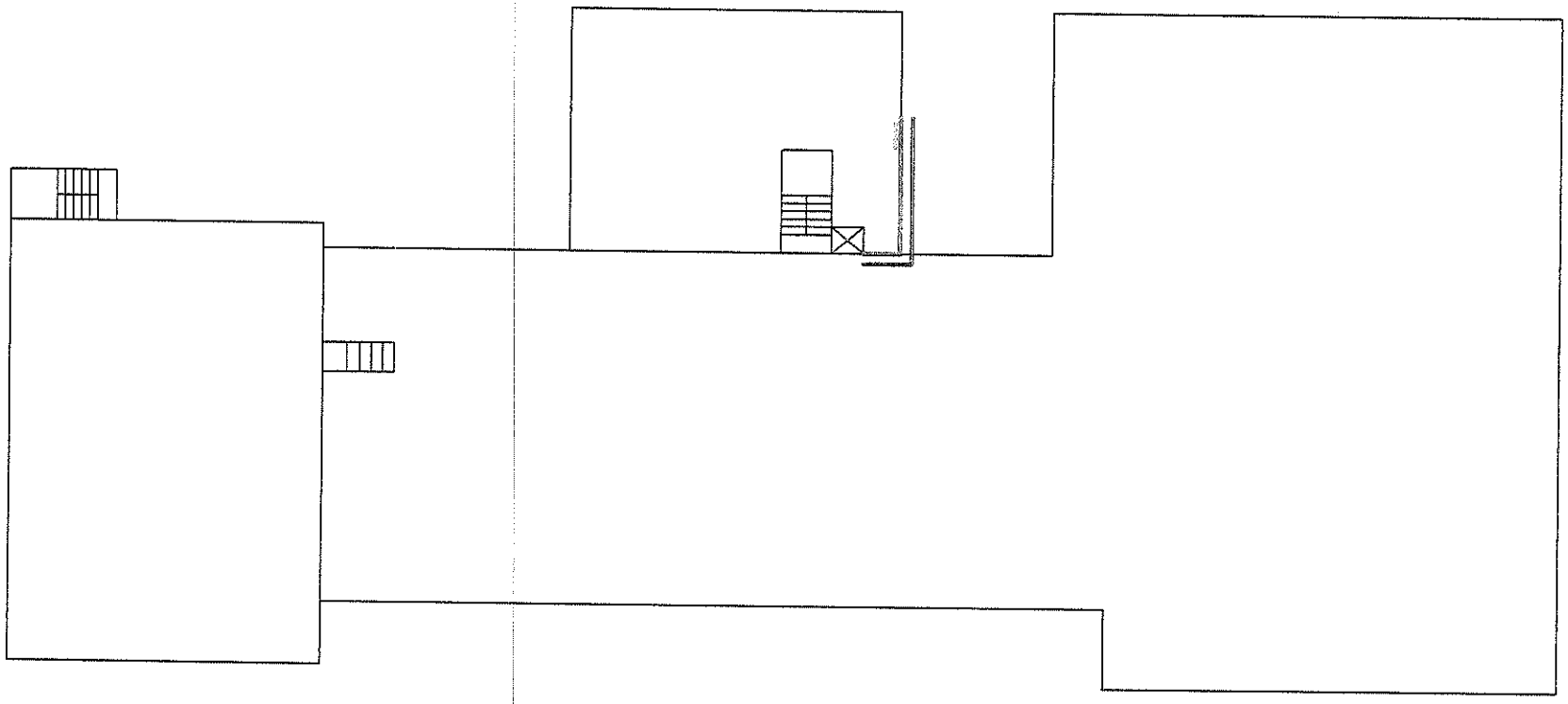
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER |
|---|---|
| MICHAEL HAYES | C08203 |
| SCALE: NOT TO SCALE | DATE: 06-05-2008 |
| SIZE | SHEET: 22 |



NORTH

NOTE:

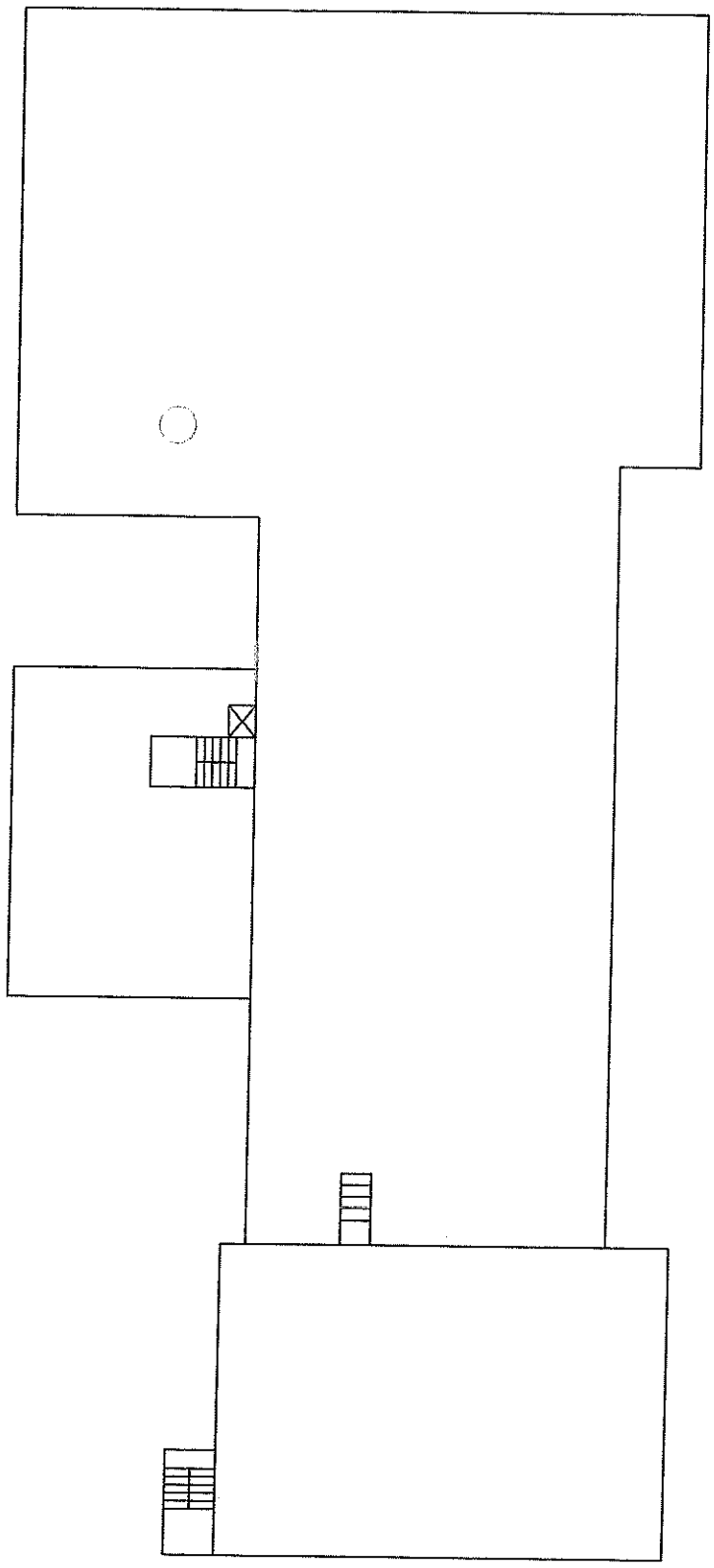
STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

= LEAD CONTAINING – PEACH GLAZED CERAMIC TILE

= LEAD CONTAINING – BLACK GLAZED TILE TRIM

= LEAD CONTAINING – WHITE PAINT ON RADIATOR

C08203 LEAD LOCATIONS
RATH BUILDING – 3RD FLOOR



NOTE:

STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

= LEAD CONTAINING - GOLD PAINT ON EXHAUST VENT

= LEAD CONTAINING - BLACK PAINT ON ROOF ACCESS DOOR

C08203 LEAD LOCATIONS
RATH BUILDING - ATTIC

NORTH

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FAX (402)397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |
| SIZE | SCALE: NOT TO SCALE | SHEET: 23 |

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SUITE 100
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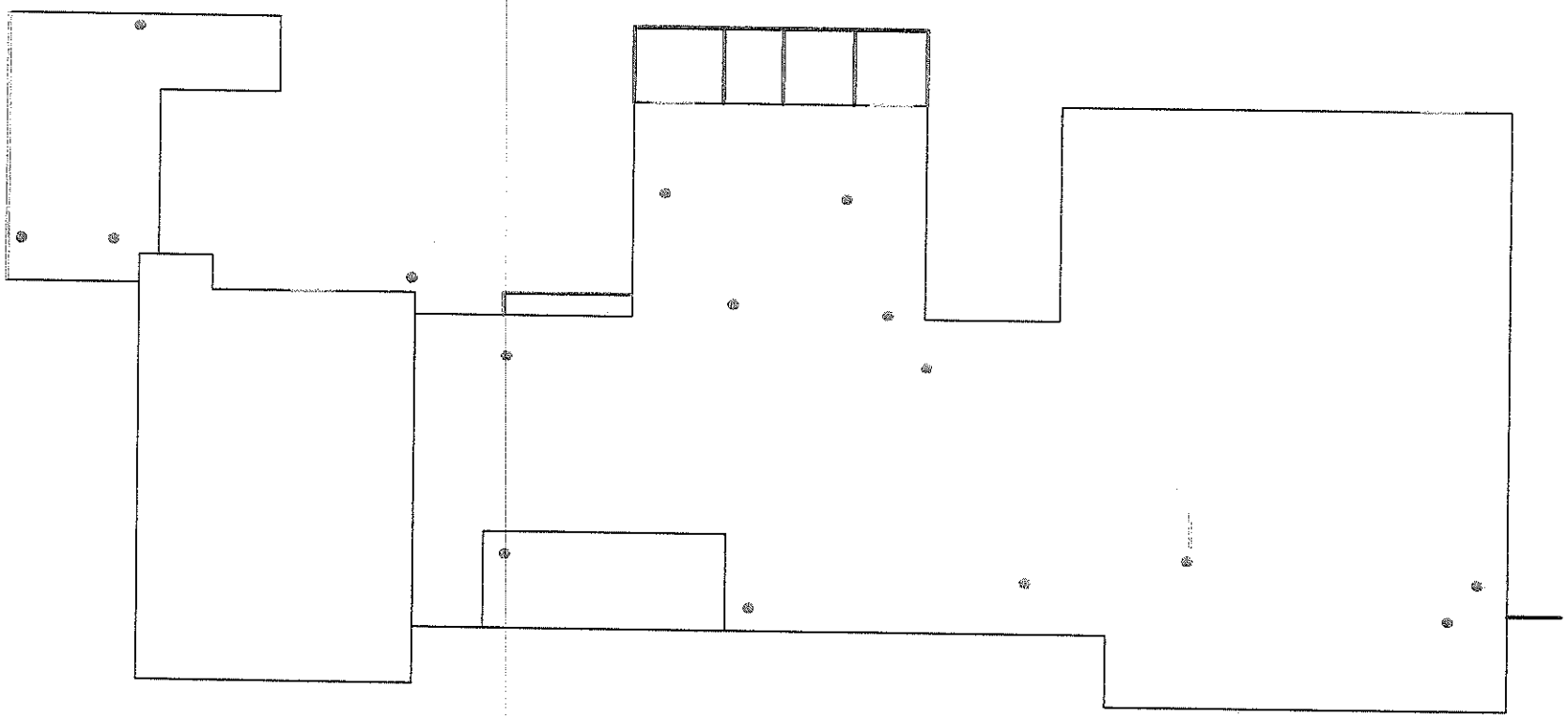
PH (402) 397-5001
FAX (402) 397-3313

DRAWING TITLE: ENVIRONMENTAL ASSESSMENT
RATH BUILDING
1515 SYCAMORE ST.
WATERLOO, IA

| DWN BY | DRAWING NUMBER | DATE |
|---|---|---|
| MICHAEL HAYES | C08203 | 06-05-2008 |
| SIZE | SCALE | SHEET |
| | NOT TO SCALE | 24 |



NORTH

NOTE:

STRUCTURES OR BUILDING COMPONENTS IN WHICH LEAD HAS BEEN IDENTIFIED. PREDOMINANT PAINT COLORS INCLUDE, BUT ARE NOT LIMITED TO:

- = LEAD CONTAINING – GREEN PAINT ON ROOF ENTRY DOOR
- = LEAD CONTAINING – GREEN PAINT ON HANDRAIL
- = LEAD CONTAINING – YELLOW PAINT ON "NO PARKING" SIGN
- = LEAD CONTAINING – LT. YELLOW PAINT ON SOFFIT/FASCIA BOARD
- = LEAD CONTAINING – GREEN PAINT ON WINDOW SILL WRAP
- = LEAD CONTAINING – PEACH PAINT ON PARKING GUARD POST
- = LEAD CONTAINING – GRAY LEAD BOOT VENTS

C08203 LEAD LOCATIONS
RATH BUILDING – ROOF + EXTERIOR

# Appendix C

# Analytical Results

# Polarized Light Microscopy Report

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

**Customer Information:**
AMI Environmental
8802 South 135th St. Suite 100
Omaha, NE 68138

**Phone:** 402-397-5001

**Fax:** 402-397-3313

**Customer Project:**
Rath Admin. Bldg.
C08203

**Turnaround Time:** 24 Hours

**Attn:**

**CA Labs Project #:**
CAL08053365

**Date:** 5/13/08 EK

**Samples Received:**
5/13/08 10AM

**Purchase Order #:**

| Sample# | Layer # | Analysts Physical Description of Subsample | Homo-geneous (Y/N) | Asbestos type / calibrated visual estimate percent (none detected = absent / asb.and visual% = present) | Non-asbestos fiber type / percent | Non-fibrous type / percent |
|---|---|---|---|---|---|---|
| 1 | 1 | **Ceiling Panel** Brown insulation | Y | **None Detected** | 80% cellulose | 20% binder |
| 2 | 1 | **Asphalt Shingle Siding** Black roofing shingle with red gravel | N | **None Detected** | | 16% quartz 84% binder |
| | 2 | Black felt | Y | **None Detected** | 42% cellulose | 58% binder |
| | 3 | Brown insulation | Y | **None Detected** | 80% cellulose | 20% binder |
| 3 | 1 | **Vib. Joint Cloth** Brown wrap | Y | **None Detected** | 80% cellulose | 20% binder |
| 4a | 1 | **Sheet Flooring** Brown vinyl floor tile | Y | **None Detected** | | 10% quartz 90% binder |
| 4b | 1 | **Sheet Flooring** Brown vinyl floor tile | Y | **None Detected** | | 8% quartz 92% binder |
| 4c | 1 | **Sheet Flooring** Brown vinyl floor tile | Y | **None Detected** | | 10% quartz 90% binder |

NVLAP Lab Code: 200349-0

Approved Signatories:

Trent Turner
Analyst

Leslie Crisp
General Manager

Chad Lytle
Laboratory Director



Notes:
Some samples (floor tiles, surfacing, etc.) may contain fibers too small too be detectable by PLM. TEM Chatfield analysis of bulk material is recommended in this case. All asbestos percentages are based on calibrated visual estimates traceable to NIST standards for regulated asbestos types. Analysts' percentages fall within a range of acceptable percentages, depending on the actual concentration of asbestos. CA Labs is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for selected test methods for bulk asbestos fiber analysis (PLM) and airborne fiber analysis (TEM). CA Labs is accredited by AIHA for fungi. This test report relates only to the items tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. This method is not covered by the scope of AIHA accreditation

These results are submitted pursuant to CA Labs' current terms and condition of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping and handling fee may be assessed for the return of any samples.

Analysis performed at Crisp Analytical Labs, LLC 2081 Hutton Dr. Suite 301 Carrollton, TX 75006; phone (972) 488-1414, fax (972) 488-8006.

# Polarized Light Microscopy Report

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

**Customer Information:**
AMI Environmental
8802 South 135th St. Suite 100
Omaha, NE 68138

**Phone:** 402-397-5001

**Fax:** 402-397-3313

**Customer Project:**
Rath Admin. Bldg.
C08203

**Turnaround Time:** 24 Hours

**Attn:**

**CA Labs Project #:**
CAL08053365

**Date:** 5/13/08 EK

**Samples Received:**
5/13/08 10AM

**Purchase Order #:**

| Sample# | Layer # | Analysts Physical Description of Subsample | Homo-geneous (Y/N) | Asbestos type / calibrated visual estimate percent (none detected = absent / asb.and visual% = present) | Non-asbestos fiber type / percent | Non-fibrous type / percent |
|---|---|---|---|---|---|---|
| 4c | 2 | Brown mastic | Y | None Detected | | 2% quartz<br>98% binder |
| 5 | 1 | **Chalkboard**<br>Gray chalkboard | Y | None Detected | | 10% quartz<br>90% carbonates |
| 6 | 1 | **Attic Insulation**<br>Gray insulation | Y | None Detected | 100% fiberglass | |
| 7 | 1 | **Vib. Joint Cloth**<br>White wrap | Y | None Detected | 80% cellulose | 20% binder |
| 8 | 1 | **12'x12' Wood Panel Puck**<br>Black panel | Y | 3% Chrysotile | | 20% carbonates<br>77% binder |
| 9 | 1 | **Sink V.C.**<br>Black mastic | Y | None Detected | | 3% quartz<br>97% binder |
| 10 | 1 | **Pipe tar wrap**<br>Black tar | Y | 4% Chrysotile | | 3% quartz<br>93% binder |
| 11a | 1 | **Plaster System**<br>White plaster | Y | None Detected | | 8% quartz<br>92% carbonates |

NVLAP Lab Code: 200349-0

Approved Signatories:

Trent Turner
Analyst

Leslie Crisp
General Manager

Chad Lytle
Laboratory Director



Notes:
Some samples (floor tiles, surfacing, etc.) may contain fibers too small too be detectable by PLM. TEM Chatfield analysis of bulk material is recommended in this case. All asbestos percentages are based on calibrated visual estimates traceable to NIST standards for regulated asbestos types. Analysts' percentages fall within a range of acceptable percentages, depending on the actual concentration of asbestos. CA Labs is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for selected test methods for bulk asbestos fiber analysis (PLM) and airborne fiber analysis (TEM). CA Labs is accredited by AIHA for fungi. This test report relates only to the items tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. This method is not covered by the scope of AIHA accreditation

These results are submitted pursuant to CA Labs' current terms and condition of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping and handling fee may be assessed for the return of any samples.

Analysis performed at Crisp Analytical Labs, LLC 2081 Hutton Dr. Suite 301 Carrollton, TX 75006; phone (972) 488-1414, fax (972) 488-8006.

# Polarized Light Microscopy Report

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

**Customer Information:**
AMI Environmental
8802 South 135th St. Suite 100
Omaha, NE 68138

**Phone:** 402-397-5001

**Fax:** 402-397-3313

**Customer Project:**
Rath Admin. Bldg.
C08203

**Turnaround Time:** 24 Hours

**Attn:**

**CA Labs Project #:**
CAL08053365

**Date:** 5/13/08 EK

**Samples Received:**
5/13/08 10AM

**Purchase Order #:**

| Sample# | Layer # | Analysts Physical Description of Subsample | Homo-geneous (Y/N) | Asbestos type / calibrated visual estimate percent (none detected = absent / asb.and visual% = present) | Non-asbestos fiber type / percent | Non-fibrous type / percent |
|---|---|---|---|---|---|---|
| 11b | 1 | **Plaster System** White plaster | Y | **None Detected** | | 10% quartz 90% carbonates |
| 11c | 1 | **Plaster System** White plaster | Y | **None Detected** | | 10% quartz 90% carbonates |

NVLAP Lab Code: 200349-0

Approved Signatories:

Trent Turner
Analyst

Leslie Crisp
General Manager

Chad Lytle
Laboratory Director



Notes:
Some samples (floor tiles, surfacing, etc.) may contain fibers too small too be detectable by PLM. TEM Chatfield analysis of bulk material is recommended in this case. All asbestos percentages are based on calibrated visual estimates traceable to NIST standards for regulated asbestos types. Analysts' percentages fall within a range of acceptable percentages, depending on the actual concentration of asbestos. CA Labs is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for selected test methods for bulk asbestos fiber analysis (PLM) and airborne fiber analysis (TEM). CA Labs is accredited by AIHA for fungi. This test report relates only to the items tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. This method is not covered by the scope of AIHA accreditation



Analysis performed at Crisp Analytical Labs, LLC 2081 Hutton Dr. Suite 301 Carrollton, TX 75006; phone (972) 488-1414, fax (972) 488-8006.

# Polarized Light Microscopy
# Bulk Asbestos Analysis
# Laboratory Analysis Report

**AMI Environmental**
**8802 South 135th St. Suite 100**
**Omaha, NE 68138**
reference number: CAL08053365

LABORATORY ANALYSIS METHOD:

Summary of polarizing light microscopy (PLM / stereomicroscopy bulk asbestos analysis)using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim) and EPA /600/R-93/116 (Improved). All analysts have received the necessary in-house and extramural training McCrone Research and/or University Degree in Geology, Biology, Environmental and Material Science) to perform analysis of bulk samples for the presence or absence of asbestos. Greater than one percent are re-examined by a second analyst for intralaboratory quality control. Greater than one percent are re-examined by the same analyst for quality control. All analysts are required to participate in quality control analysis rounds. Microscopic calibrations are performed on a daily, weekly and monthly basis. **CA Labs is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for selected test methods for bulk asbestos fiber analysis (PLM) and airborne fiber analysis (TEM).** Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured.

Some samples (floor tiles, surfacing, etc.) may contain fibers too small to be detectable by PLM. All asbestos qualification is traceable to NIST standards for regulated asbestos types. Analysts' calibrated visual estimated percentages are susceptible to variance. All quantifications fall within a range of acceptable percentages, depending on the actual concentration of asbestos:

| % Area Asbestos | Acceptable Mean Results | % Area Asbestos | Acceptable Mean Result |
|---|---|---|---|
| 1% | > 0-3% | 50% | 40-60% |
| 5% | > 1-9% | 60% | 50-70% |
| 10% | 5-15% | 70% | 60-80% |
| 20% | 10-30% | 80% | 70-90% |
| 30% | 20-40% | 90% | 80-100% |
| 40% | 30-50% | 100% | 90-100% |

These results are submitted pursuant to CA Labs' current terms and condition of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety days before discarding. A shipping and handling fee may be assessed for the return of any samples.

Analysis performed at Crisp Analytical Labs, LLC. 2081 Hutton Dr. Suite 301 Carrollton, TX 75006. We can be reached after hours by cellular at (214) 564-8366.

5/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 1 of 3

BULK MATERIAL REPORT

LAB: 54276

PORT Laboratory Analysis: BULK MATERIAL
Methodology: EPA 600/M4-82-020

Client: ADVANCED TECHNOLOGIES CORP.
P/O#: 1ST FLOOR

ported to: MICHAEL LLEWELLYN
Proj: H11720

mpled from: RATH ADMINISTRATIVE BLDG
By: Client

Shipped via: FEDERAL EXPRESS
Received: 2/12/99 Reported: 2/15/99

| MPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 01 | 48-1<br>linoleum<br>dk. brown<br>BATTLESHIP | Asbestos | None detected. This sample contains approx.<br>10% Cellulose, 90% Quartz , CaCO , Binder |
| 02A | 48-2<br>plaster - scratch coat<br>off white, brown, black<br>WOMAN'S RR | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaSO , Mica , Binder |
| 02B | 48-2<br>plaster, skim coat<br>white<br>WOMAN'S RR | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , CaSO , Mica , Binder |
| 03A | 48-3<br>parquet, flooring<br>black<br>SLYFE OFFICE | Asbestos | None detected. This sample contains approx.<br>40% Cellulose, 5% Synthetics, 55% Quartz , CaCO , Binder |
| 03B | 48-3<br>glue<br>black<br>SLYFE OFFICE | Asbestos | None detected. This sample contains approx.<br>10% Cellulose, 3% Synthetics, 87% Quartz , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
42 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS 

BULK MATERIAL REPORT

EPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
eported to: MICHAEL LLEWELLYN
ampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54276
Methodology: EPA 600/M4-82-020
P/O#: 1ST FLOOR
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 04 | 48-4<br>suspended, ceiling tile<br>beige, white<br>NORTH ENTRY | Asbestos | None detected. This sample contains approx.<br>45% Cellulose, 35% Mineral Wool, 20% Perlite , Quartz , Binder |
| 05 | 48-5<br>ceiling, insulation<br>yellow, brown | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 95% Fiberglass, 4% Quartz , Binder |
| 06A | 48-6<br>plaster - scratch coat<br>off white, brown, black<br>SOUTH ENTRY | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 1% Fiberglass, 98% Quartz , CaCO , CaSO , Mica , Binder |
| 06B | 48-6<br>plaster, skim coat<br>white<br>SOUTH ENTRY | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , CaSO , Binder |
| 07A | 48-7<br>drywall<br>white, tan<br>NE OFFICE AREA | Asbestos | None detected. This sample contains approx.<br>10% Cellulose, 90% Perlite , Quartz , CaCO , CaSO |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



EPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
eported to: MICHAEL LLEWELLYN
ampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54276
Methodology: EPA 600/M4-82-020
P/O#: 1ST FLOOR
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 07B | 48-7<br>joint compound<br>white, brown<br>NE OFFICE AREA | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 1% Cellulose, 97% Quartz , CaCO , Mica , Binder , Paint |
| 08A | 48-8<br>vertical, pipe, riser, wrap<br>off white, beige<br>(MAG BLACK) | Asbestos | None detected. This sample contains approx.<br>60% Cellulose, 40% Quartz , Binder |
| 08B | 48-8<br>vertical, pipe, riser, insulation<br>white<br>(MAG BLACK) | Asbestos | Positive. This sample contains approx.<br>25% Chrysotile, 2% Crocidolite, 5% Mineral Wool, 68% Quartz , CaCO , CaSO , Diatoms |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 01 | 48-9<br>plaster, skim coat<br>off white, brown, black<br>BSMT W. OF STAIRS | Asbestos | None detected. This sample contains approx. trace Cellulose, 99% Quartz , CaSO , Mica |
| 02A | 48-10<br>ceiling tile<br>tan, off white<br>BSMT PHONE & ADDRESSOG | Asbestos | None detected. This sample contains approx. 95% Cellulose, 5% Quartz , Binder , Paint |
| 02B | 48-10<br>glue<br>dk. brown<br>BSMT PHONE & ADDRESSOG | Asbestos | Positive. This sample contains approx. 5% Chrysotile, 2% Cellulose, 93% Quartz , CaCO , Binder , Diatoms |
| 03A | 48-11<br>linoleum<br>brown, black<br>BSMT PHONE RM | Asbestos | None detected. This sample contains approx. 20% Cellulose, 80% Quartz , CaCO , Binder |
| 03B | 48-11<br>mastic<br>brown<br>BSMT PHONE RM | Asbestos | None detected. This sample contains approx. 1% Cellulose, 99% Quartz , CaCO , CaSO , Mica , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

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2/15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS
BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 04 | 48-12<br>air cell, insulation<br>gray, beige<br>BSMT HALLWAY | Asbestos | Positive. This sample contains approx.<br>75% Chrysotile, 5% Cellulose, 20% Quartz , Binder |
| 05A | 48-13<br>9"x9" floor tile<br>brown<br>BSMT HALL W OF STAIRS | Asbestos | Positive. This sample contains approx.<br>15% Chrysotile, 85% Quartz , Binder |
| 05B | 48-13<br>mastic<br>black<br>BSMT HALL W OF STAIRS | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 1% Cellulose, 97% Quartz , CaCO , Binder |
| 06 | 48-14<br>plaster, skim coat<br>off white, beige<br>BSMT MAIL RM | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , Binder |
| 07A | 48-15<br>cork, wrap<br>dk. brown<br>BSMT AC RM BY MAIL RM | Asbestos | None detected. This sample contains approx.<br>100% Quartz , Binder , Cork |



Analyst: Octavio Gavarreteayestas

By: Kurt Kattler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 07B | 48-15<br>insulation<br>white<br>BSMT AC RM BY MAIL RM | Asbestos | Positive. This sample contains approx.<br>30% Chrysotile, 3% Amosite, 67% Quartz , CaCO |
| 08A | 48-16<br>9"x9" floor tile<br>black<br>BSMT W. RM | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , CaCO , Binder |
| 08B | 48-16<br>mastic<br>black<br>BSMT W. RM | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Binder |
| 09A | 48-17<br>9"x9" floor tile<br>red, brown<br>BSMT W. RM | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , CaCO , Binder |
| 09B | 48-17<br>mastic<br>black<br>BSMT W. RM | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Binder |



lyst: Octavio Gavarreteayestas

By: Kurt Kettler

P Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

2/15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



EPORT Laboratory Analysis: BULK MATERIAL
lient: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
ampled from: RATH ADMINISTRATIVE BLDG
hipped via: FEDERAL EXPRESS

LAB: 54278
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 10A | 48-18<br>sheetrock<br>white, tan<br>BSMT W. RM | Asbestos | None detected. This sample contains approx.<br>10% Cellulose, 90% Quartz , CaCO , CaSO , Mica |
| 10B | 48-18<br>joint compound<br>off white, green<br>BSMT W. RM | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 98% Quartz , CaCO , Mica , Binder |
| 11A | 48-19<br>9"x9" floor tile<br>white, brown<br>BSMT S. AC RM | Asbestos | Positive. This sample contains approx.<br>15% Chrysotile, 85% Quartz , Binder |
| 11B | 48-19<br>mastic, 1st layer<br>black<br>BSMT S. AC RM | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, trace Cellulose, 97% Quartz , Binder |
| 11C | 48-19<br>mastic, 2nd layer<br>brown<br>BSMT S. AC RM | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Binder |



alyst: Octavio Gaverreteayestas

By: Kurt Kettler

LAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
12 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

2/15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 12 | 48-20<br>cardboard, pipe insulation<br>tan, black<br>BSMT S. AC RM | Asbestos | Positive. This sample contains approx.<br>3% Chrysotile, 90% Cellulose, 7% Quartz , CaCO , Binder |
| 13 | 48-21<br>tank insulation<br>white, off white<br>BSMT TANK RM BY S. AC | Asbestos | Positive. This sample contains approx.<br>25% Chrysotile, 5% Amosite, 70% Quartz , CaCO , CaSO |
| 14A | 48-22<br>cork, ceiling, 1st layer<br>black<br>TUNNEL GOING SOUTH | Asbestos | Positive. This sample contains approx.<br>5% Chrysotile, 1% Cellulose, trace Fiberglass, 93% Quartz , Binder |
| 14B | 48-22<br>cork, ceiling, 2nd layer<br>dk. brown<br>TUNNEL GOING SOUTH | Asbestos | None detected. This sample contains approx.<br>2% Cellulose, 98% Quartz , Binder , Cork |
| 15A | 48-23<br>9"x9" floor tile<br>brown<br>BSMT PURCHASING DEPT | Asbestos | Positive. This sample contains approx.<br>15% Chrysotile, 85% Quartz , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

LAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
2 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

2/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 6 of 9

BULK MATERIAL REPORT

REPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
Sampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54278
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 15B | 48-23<br>mastic<br>black<br>BSMT PURCHASING DEPT | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , CaSO , Binder |
| 16A | 48-24<br>cardboard, pipe insulation, 1st layer<br>beige, gray<br>BSMT VERNER RM | Asbestos | None detected. This sample contains approx.<br>70% Cellulose, 20% Synthetics, 10% Quartz , Binder |
| 16B | 48-24<br>cardboard, pipe insulation, 2nd laye<br>black<br>BSMT VERNER RM | Asbestos | None detected. This sample contains approx.<br>50% Cellulose, 5% Synthetics, 45% Quartz , Binder |
| 17 | 48-25<br>transite, ceiling<br>gray, white<br>BSMT PURCHASING DEPT | Asbestos | Positive. This sample contains approx.<br>20% Chrysotile, 80% Quartz , CaCO , Binder |
| 18A | 48-26<br>12"x12" floor tile<br>black<br>BSMT HOME ECONOMICS | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
1342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

2/15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 64278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 18B | 48-26<br>mastic<br>black<br>BSMT HOME ECONOMICS | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, trace Cellulose, 97% Quartz , $CaCO_3$ , $CaSO_4$ , Binder |
| 19A | 48-27<br>9"x9" floor tile<br>red, white, brown<br>BSMT SAMPLE RM | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 2% Cellulose, 96% Quartz , $CaCO_3$ , Binder |
| 19B | 48-27<br>mastic<br>black<br>BSMT SAMPLE RM | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 1% Cellulose, 97% Quartz , $CaCO_3$ , Binder |
| 20A | 48-28<br>cork, ceiling, 1st layer<br>black, white<br>BSMT SAMPLE RM | Asbestos | Positive. This sample contains approx.<br>5% Chrysotile, trace Cellulose, 94% Quartz , Binder |
| 20B | 48-28<br>cork, ceiling, 2nd layer<br>dk. brown<br>BSMT SAMPLE RM | Asbestos | None detected. This sample contains approx.<br>3% Cellulose, 97% Quartz , $CaCO_3$ , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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2/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 8 of 9

BULK MATERIAL REPORT

REPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
Sampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54278
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 21A | 48-29<br>spray-on, ceiling<br>white, off white<br>BSMT HOME EC DINING RM | Asbestos | Positive. This sample contains approx.<br>3% Chrysotile, trace Cellulose, 96% Perlite , Quartz , CaCO , CaSO , Mica , Binder |
| 21B | 48-29<br>ceiling plaster<br>white, brown, black<br>BSMT HOME EC DINING RM | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , CaSO , Mica , Binder |
| 22A | 48-30<br>12"x12" floor tile<br>red, brown<br>BSMT CAFETERIA | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , Binder |
| 22B | 48-30<br>mastic<br>black<br>BSMT CAFETERIA | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 98% Quartz , CaCO , Binder |
| 23A | 48-31<br>12"x12" floor tile<br>black, brown<br>BSMT CAFATERIA | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , Binder |



Analyst: Octavio Gavarreteayestas

By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54278
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 23B | 48-31<br>mastic<br>black<br>BSMT CAFATERIA | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 98% Quartz , Binder |
| 24 | 48-33<br>tank insulation<br>white<br>BSMT KITCHEN | Asbestos | Positive. This sample contains approx.<br>20% Chrysotile, 10% Amosite, 70% Quartz , CaCO , CaSO |
| 25 | 48-34<br>exterior, wall, plaster<br>gray, brown, black, off white<br>BSMT KITCHEN FREEZER'S | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Mica , Binder |
| 26A | 48-35<br>interior, wall, cork<br>dk. brown<br>BSMT KITCHEN FREEZER'S | Asbestos | None detected. This sample contains approx.<br>1% Cellulose, 99% Quartz , CaCO , Binder |
| 26B | 48-35<br>interior, wall, sealant<br>black<br>BSMT KITCHEN FREEZER'S | Asbestos | None detected. This sample contains approx.<br>1% Cellulose, 99% Quartz , CaCO , CaSO , Binder |



nalyst: Octavio Gavarreteayestas

By: Kurt Kettler

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2/15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**EPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54277
**Methodology:** EPA 600/M4-82-020
**P/O#:** 2ND FLOOR
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 01A | 48-36<br>9"x9" floor tile<br>red, white<br>WOMAN'S RR | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, trace Cellulose, 89% Quartz , CaCO , Mica , Binder |
| 01B | 48-36<br>mastic<br>black<br>WOMAN'S RR | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Mica , Binder |
| 02A | 48-37<br>plaster<br>white, beige<br>WOMAN'S RR | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , CaSO , Mica , Binder |
| 02B | 48-37<br>skim coat<br>brown, black<br>WOMAN'S RR | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , CaSO , Mica , Binder |
| 03 | 48-38<br>vibration, cloth<br>white, dk. brown<br>WEST END | Asbestos | None detected. This sample contains approx.<br>90% Cellulose, 10% Quartz , CaCO , Binder |



alyst: Jason W. Sutter

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54277
**Methodology:** EPA 600/M4-82-020
**P/O#:** 2ND FLOOR
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 04A | 48-39<br>9"x9" floor tile<br>red<br>WEST END | Asbestos | Positive. This sample contains approx.<br>15% Chrysotile, 85% Quartz , CaCO , Mica , Binder |
| 04B | 48-39<br>mastic<br>black<br>WEST END | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, trace Fiberglass, 97% Quartz , CaCO , Mica , Binder |
| 05A | 48-40<br>9"x9" floor tile<br>black, white | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , CaCO , Mica , Binder |
| 05B | 48-40<br>mastic<br>black | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Mica , Binder |
| 06 | 48-41<br>drywall<br>beige, tan | Asbestos | None detected. This sample contains approx.<br>10% Cellulose, 90% Quartz , CaCO , CaSO , Mica , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



EPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
ampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54277
Methodology: EPA 600/M4-82-020
P/O#: 2ND FLOOR
Proj: H11720
By: Client
Received: 2/12/99 Reported: 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 07A | 48-42<br>plaster<br>brown, beige | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , CaSO , Mica , Binder |
| 07B | 48-42<br>skim coat<br>white, lt. beige | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , CaSO , Mica , Binder |
| 08 | 48-43<br>skim coat<br>lt. beige | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Binder |
| 09A | 48-44<br>linoleum<br>dk. brown, tan | Asbestos | None detected. This sample contains approx.<br>15% Cellulose, 85% Quartz , CaCO , Mica , Binder |
| 09B | 48-44<br>mastic<br>lt. brown | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , Mica , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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BULK MATERIAL REPORT

**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54277
**Methodology:** EPA 600/M4-82-020
**P/O#:** 2ND FLOOR
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 10A | 48-45<br>9"x9" floor tile<br>white, blue | Asbestos | Positive. This sample contains approx.<br>15% Chrysotile, 85% Quartz , CaCO , Mica , Binder |
| 10B | 48-46<br>mastic<br>black | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Mica , Binder |
| 11A | 48-46<br>9"x9" floor tile<br>blue, white | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, trace Cellulose, 89% Quartz , CaCO , Mica , Binder |
| 11B | 48-46<br>mastic<br>black | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 3% Cellulose, 95% Quartz , CaCO , Mica , Binder |
| 12A | 48-47<br>cork<br>dk. brown<br>ATTIC | Asbestos | None detected. This sample contains approx.<br>1% Cellulose, 99% Quartz , CaCO , Mica , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMINISTRATIVE BLDG
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54277
**Methodology:** EPA 600/M4-82-020
**P/O#:** 2ND FLOOR
**Proj:** H11720
**By:** Client
**Received:** 2/12/99 **Reported:** 2/15/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 12B | 48-47<br>mastic, seam<br>white<br>ATTIC | Asbestos | Positive. This sample contains approx.<br>50% Chrysotile, 50% Quartz , CaCO , Mica , Binder |
| 13A | 48-48<br>cork<br>dk. brown<br>ATTIC - WEST END | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , Mica , Binder |
| 13B | 48-48<br>mastic<br>black<br>ATTIC - WEST END | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , CaCO , Mica , Binder |
| 14A | 48-49<br>cork<br>dk. brown<br>ATTIC - EAST | Asbestos | None detected. This sample contains approx.<br>2% Cellulose, 98% Quartz , CaCO , Mica , Binder |
| 14B | 48-49<br>covering<br>white<br>ATTIC - EAST | Asbestos | Positive. This sample contains approx.<br>60% Chrysotile, 40% Quartz , CaCO , Mica , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**ient:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**ampled from:** RATH ADMIN BLDG-ROOFS & EXT
**hipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 01A | 48-51<br>roofing felt, 1st layer<br>black<br>1950 ADDITION ROOF | Asbestos | None detected. This sample contains approx.<br>30% Fiberglass, 70% Quartz , CaCO , Binder |
| 01B | 48-51<br>roofing felt, 2nd layer<br>black<br>1950 ADDITION ROOF | Asbestos | None detected. This sample contains approx.<br>10% Fiberglass, 90% Quartz , CaCO , Binder |
| 02A | 48-52<br>roof flashing, 1st layer<br>gray, black<br>1960 ADDITION ROOF | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% Quartz , CaCO , Mica , Binder |
| 02B | 48-52<br>roof flashing, 2nd layer<br>black<br>1960 ADDITION ROOF | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 25% Fiberglass, 74% Quartz , CaCO , Mica , Binder |
| 02C | 48-52<br>roof flashing, 3rd layer<br>black<br>1960 ADDITION ROOF | Asbestos | None detected. This sample contains approx.<br>15% Fiberglass, 85% Quartz , CaCO , Mica , Binder |



Analyst: *Jason W. Sutter*

By: *Kurt Kettler*

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BULK MATERIAL REPORT

LAB: 54277

**EPORT Laboratory Analysis: BULK MATERIAL** **Methodology:** EPA 600/M4-82-020

**Client:** ADVANCED TECHNOLOGIES CORP. **P/O#:** 2ND FLOOR

**eported to:** MICHAEL LLEWELLYN **Proj:** H11720

**ampled from:** RATH ADMINISTRATIVE BLDG **By:** Client

**Shipped via:** FEDERAL EXPRESS **Received:** 2/12/99 **Reported:** 2/15/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 15 | 48-50<br>paper<br>white, beige<br>ATTIC CENTRAL SOUTH | Asbestos | Positive. This sample contains approx.<br>50% Chrysotile, 30% Cellulose, 20% Quartz , CaCO<br>, Binder |



Analyst: Jason W. Sutter By: Kurt Kettler

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BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**lient:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**ampled from:** RATH ADMIN BLDG-ROOFS & EXT
**hipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 02D | 48-52<br>roof flashing, 4th layer<br>black<br>1960 ADDITION ROOF | Asbestos | None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaCO , Mica , Binder |
| 02E | 48-52<br>tar, seam<br>black<br>1960 ADDITION ROOF | Asbestos | None detected. This sample contains approx. 100% Quartz , CaCO , Binder |
| 03A | 48-53<br>roofing felt<br>black<br>ORIGINAL BLDG-N SIDE | Asbestos | None detected. This sample contains approx. trace Cellulose, 30% Fiberglass, 69% Binder |
| 03B | 48-53<br>insulation<br>beige<br>ORIGINAL BLDG-N SIDE | Asbestos | None detected. This sample contains approx. 80% Cellulose, 20% Perlite , Quartz , Mica , Binder |
| 04A | 48-54<br>roof mastic, 1st layer<br>black<br>ORIGINAL BLDG-S. SIDE | Asbestos | None detected. This sample contains approx. trace Fiberglass, 99% CaCO , Binder |



Analyst: *Jason W. Sutter*

By: *Kurt Kettler*

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BULK MATERIAL REPORT

**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMIN BLDG-ROOFS & EXT
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 04B | 48-54<br>roofing felt, 2nd layer<br>black<br>ORIGINAL BLDG-S. SIDE | Asbestos | None detected. This sample contains approx. trace Cellulose, 20% Fiberglass, 79% Binder |
| 04C | 48-54<br>roofing felt, 3rd layer<br>black<br>ORIGINAL BLDG-S. SIDE | Asbestos | None detected. This sample contains approx. 5% Cellulose, 5% Fiberglass, 90% CaCO , Binder |
| 05A | 48-55<br>roof flashing, 1st layer<br>black<br>ORIGINAL BLDG-N EDGE | Asbestos | None detected. This sample contains approx. 10% Fiberglass, 90% Quartz , CaCO , Mica , Binder |
| 05B | 48-55<br>roof flashing, 2nd layer<br>black<br>ORIGINAL BLDG-N EDGE | Asbestos | None detected. This sample contains approx. trace Cellulose, 5% Fiberglass, 94% Quartz , CaCO , Binder |
| 05C | 48-55<br>roof flashing<br>black<br>ORIGINAL BLDG-N EDGE | Asbestos | None detected. This sample contains approx. trace Cellulose, 20% Fiberglass, 79% Quartz , CaCO , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL** **LAB:** 54356

**ient:** ADVANCED TECHNOLOGIES CORP. **Methodology:** EPA 600/M4-82-020

**Reported to:** MICHAEL LLEWELLYN **P/O#:**

**mpled from:** RATH ADMIN BLDG-ROOFS & EXT **Proj:** H11720

**.ipped via:** FEDERAL EXPRESS **By:** Client

**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 06A | 48-56<br>roofing felt, 1st layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaCO , Mica , Binder |
| 06B | 48-56<br>roofing felt, 2nd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaCO , Binder |
| 06C | 48-56<br>roofing felt, 3rd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaCO , Binder |
| 06D | 48-56<br>roofing felt, 4th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx. 35% Cellulose, 5% Synthetics, 60% Quartz , CaCO , Binder |
| 06E | 48-56<br>roofing felt, 5th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaCO , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**lient:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** RATH ADMIN BLDG-ROOFS & EXT
**hipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 07A | 48-57<br>roof flashing<br>green, black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>3% Chrysotile, 15% Cellulose, 82% Quartz , CaCO , CaSO , Mica , Binder |
| 07B | 48-57<br>roof flashing, 2nd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>2% Chrysotile, 25% Cellulose, 73% Quartz , CaCO , Mica , Binder |
| 07C | 48-57<br>roof flashing, 3rd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx.<br>50% Cellulose, 10% Synthetics, 40% Quartz , CaCO , Mica , Binder , Opaques |
| 07D | 48-57<br>roof flashing, 4th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx.<br>55% Cellulose, 5% Synthetics, 40% Quartz , CaCO , Mica , Binder , Opaques |
| 07E | 48-57<br>roof flashing, 5th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx.<br>50% Cellulose, 50% Quartz , CaCO , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

LAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**ient:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** RATH ADMIN BLDG-ROOFS & EXT
**ipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 08A | 48-58<br>roofing felt<br>black<br>ORIGINAL BLDG-E. END | Asbestos | None detected. This sample contains approx:<br>30% Fiberglass, 70% Quartz , CaCO , Mica , Binder |
| 08B | 48-58<br>roofing felt, 2nd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>40% Chrysotile, 15% Cellulose, 45% Quartz , CaCO , Mica , Binder |
| 08C | 48-58<br>roofing felt, 3rd layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>50% Chrysotile, 5% Cellulose, 45% Quartz , CaCO , Binder |
| 08D | 48-58<br>roofing felt, 4th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>50% Chrysotile, 5% Cellulose, 45% Quartz , CaCO , Mica , Binder |
| 08E | 48-58<br>roofing felt, 5th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>50% Chrysotile, 5% Cellulose, 45% Quartz , CaCO , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



**REPORT Laboratory Analysis: BULK MATERIAL**
**Client:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**Sampled from:** RATH ADMIN BLDG-ROOFS & EXT
**Shipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| SAMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 08F | 48-58<br>roofing felt, 6th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>45% Chrysotile, 10% Cellulose, 45% Quartz , CaCO , Mica , Binder |
| 08G | 48-58<br>roofing felt, 7th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>5% Chrysotile, 20% Cellulose, 75% Quartz , CaCO , Mica , Binder |
| 08H | 48-58<br>roofing felt, 8th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>35% Chrysotile, 5% Cellulose, 60% Quartz , CaCO , Mica , Binder |
| 08I | 48-58<br>roofing felt, 9th layer<br>black<br>ORIGINAL BLDG-E. END | Asbestos | Positive. This sample contains approx.<br>30% Chrysotile, 5% Cellulose, 10% Fiberglass, 55% Quartz , CaCO , Mica , Binder |
| 09 | 48-59<br>exterior, window caulking<br>white<br>1950 ADDITION-EXT. WIN | Asbestos | Positive. This sample contains approx.<br>5% Chrysotile, 2% Cellulose, 93% Quartz , CaCO , Binder |



Analyst: Jason W. Sutter

By: Kurt Kettler

ELAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
3342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

**PORT Laboratory Analysis: BULK MATERIAL**
**ent:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** RATH ADMIN BLDG-ROOFS & EXT
**.ipped via:** FEDERAL EXPRESS

**LAB:** 54356
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| MPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 10 | 48-60<br>exterior, window caulking<br>white<br>ORIGINAL BLDG-EXT. WIN | Asbestos | Positive. This sample contains approx.<br>5% Chrysotile, 95% Quartz , CaCO , Mica , Binder |



nalyst: Jason W. Sutter

By: Kurt Kettler

VLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

2/17/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT



EPORT Laboratory Analysis: BULK MATERIAL
lient: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
ampled from: ADAMS BLDG
hipped via: FEDERAL EXPRESS

LAB: 54357
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client
Received: 2/16/99 Reported: 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 01 | A-1<br>drywall<br>beige<br>BSMT HALLWAY | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Mica , Binder |
| 02A | A-2<br>cork<br>dk. brown<br>BSMT FREEZER CEILING | Asbestos | None detected. This sample contains approx.<br>100% Binder , Cork |
| 02B | A-2<br>tar<br>black<br>BSMT FREEZER CEILING | Asbestos | Positive. This sample contains approx.<br>8% Chrysotile, 92% Quartz , CaCO , Binder |
| 03A | A-3<br>drywall, plaster - scratch coat<br>beige<br>1ST FL | Asbestos | None detected. This sample contains approx.<br>100% Perlite , Quartz , CaSO , Binder |
| 03B | A-3<br>drywall, plaster - finish coat<br>beige<br>1ST FL | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaCO , CaSO , Mica , Binder |



Analyst: Ken Scheske

By: Kurt Kettler

IVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**lient:** ADVANCED TECHNOLOGIES CORP.
**Reported to:** MICHAEL LLEWELLYN
**mpled from:** ADAMS BLDG
**ipped via:** FEDERAL EXPRESS

**LAB:** 54357
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 04A | A-4<br>drywall, plaster - scratch coat<br>beige<br>2ND FL | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaSO , Mica , Binder |
| 04B | A-4<br>drywall, plaster - finish coat<br>beige<br>2ND FL | Asbestos | None detected. This sample contains approx.<br>trace Cellulose, 99% Quartz , CaSO , Mica , Binder |
| 05 | A-5<br>felt, paper<br>black<br>STAIR COVERINGS | Asbestos | None detected. This sample contains approx.<br>30% Cellulose, 70% CaCO , Binder |
| 06A | A-6<br>roofing felt, 1st layer<br>black<br>ROOF | Asbestos | None detected. This sample contains approx.<br>25% Cellulose, 3% Synthetics, 72% CaCO , Binder |
| 06B | A-6<br>roofing felt, 2nd layer<br>black<br>ROOF | Asbestos | Positive. This sample contains approx.<br>20% Chrysotile, 80% CaCO , Binder |



nalyst: Ken Scheske

By: Kurt Kettler

V LAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

BULK MATERIAL REPORT

EPORT Laboratory Analysis: BULK MATERIAL
ient: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
mpled from: ADAMS BLDG
Shipped via: FEDERAL EXPRESS

LAB: 54357
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client
Received: 2/16/99 Reported: 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 06C | A-6<br>insulation<br>beige<br>ROOF | Asbestos | None detected. This sample contains approx.<br>75% Cellulose, 25% Perlite , CaCO , Binder |
| 07A | A-7<br>roof flashing, 1st layer<br>black<br>ROOF | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 90% CaCO , Binder |
| 07B | A-7<br>roof flashing, 2nd layer<br>black<br>ROOF | Asbestos | None detected. This sample contains approx.<br>100% Quartz , CaCO , Binder |
| 07C | A-7<br>roof flashing, 3rd layer<br>black<br>ROOF | Asbestos | None detected. This sample contains approx.<br>100% CaCO , Binder |
| 08A | A-8<br>roof flashing, 1st layer<br>gray<br>ROOF | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 2% Fiberglass, 88% CaCO , Binder |



Analyst: Ken Scheske

By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
7342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

BULK MATERIAL REPORT

**EPORT Laboratory Analysis: BULK MATERIAL**
**ient:** ADVANCED TECHNOLOGIES CORP.
**eported to:** MICHAEL LLEWELLYN
**ampled from:** ADAMS BLDG
**nipped via:** FEDERAL EXPRESS

**LAB:** 54357
**Methodology:** EPA 600/M4-82-020
**P/O#:**
**Proj:** H11720
**By:** Client
**Received:** 2/16/99 **Reported:** 2/17/99

| AMPLE | IDENTIFICATION | PARAMETER | TEST RESULTS |
|---|---|---|---|
| 08B | A-8<br>roof flashing, 2nd layer<br>black<br>ROOF | Asbestos | None detected. This sample contains approx.<br>20% Fiberglass, 80% CaCO , Binder |
| 08C | A-8<br>roof flashing, 3rd layer<br>black<br>ROOF | Asbestos | Positive. This sample contains approx.<br>10% Chrysotile, 25% Cellulose, 65% CaCO , Binder |



Analyst: Ken Scheske

By: Kurt Kettler

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7342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

# Appendix D

# Training Certificates

ASBESTOS LICENSE NO.: 07-3514I

EXPIRATION DATE: 8/21/2008

NAME: JAMES KOEHLER
ADDRESS: 242 SOUTH ELM
CITY STATE ZIP: WAHOO NE 68066

# M·E·T·A

*Mayhew Environmental Training Associates*

INCORPORATED

Certificate # 7ME11297801DI002

*This is to certify that*

## James J. Koehler

*242 South Elm*
*Wahoo, NE 68066*

*has on 11/29/06, in OMAHA, NE*
*completed an*

**EPA Model Lead Inspector Initial Course**

*as accredited by the Nebraska Department of Health and Human Services Regulation and Licensure*
*on 11/27/06 - 11/29/06 and passed the associated examination on 11/29/06*
*with a score of 70% or better*

*Instructor*

*President*

[redacted]
Accreditation Expires: 11/29/09

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

# M·E·T·A

*Mayhew Environmental Training Associates*

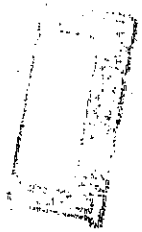
INCORPORATED

Certificate # 7ME03290701DE00002

*This is to certify that*

## James Koehler

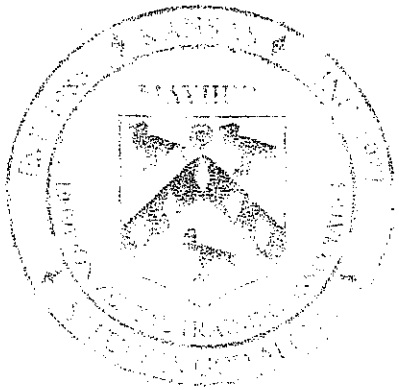
*8802 S 135TH ST. (suite 100)*
*OMAHA, NE 69138*



*has on 3/30/07, in Omaha, NE*
*completed a*

## EPA Model Lead Risk Assessor Initial Course

*as accredited by the Nebraska Department of Health and Human Services Regulation and Licensure*
*on 3/29/07 - 3/30/07 and passed the associated examination on 3/30/07*
*with a score of 70% or better*



*Instructor*
*Robert Baer*

*President*
*Thomas Bradford Mayhew*

[redacted]
Accreditation Expires: 3/30/09

# M·E·T·A

*Mayhew Environmental Training Associates*

INCORPORATED

Certificate # 7ME08210701ANIR008

*This is to certify that*

## James J. Koehler

*has on 08/21/2007, in Omaha, NE*
*completed the requisite training for asbestos accreditation under TSCA Title II*
*and the State of Nebraska Asbestos Regulations and Statutes*

## EPA/AHERA Nebraska Asbestos Building Inspector Refresher Course

*as approved by the State of Nebraska and the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)*
*on 08/21/2007 - 08/21/2007 and passed the associated examination on 08/21/2007*
*with a score of 70% or better*
CM = .

*Instructor*
*Robert Baer*

*President*
*Thomas Bradford Mayhew*

[redacted]
Accreditation Expires: 8/21/08

M E T A - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382