Specification
For Asbestos Abatement

Rath Building

300 Sycamore Street
Waterloo, Iowa

August 2008

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SECTION

1

Request for Bids

The City of Waterloo will be accepting sealed bids for an Asbestos Abatement Project at the Rath Administration Building project starting approximately September 2008. A mandatory walk through is required at the Rath Administration Building, 300 Sycamore Street in Waterloo Iowa, **at 11:00 a.m, August 14, 2008.** Contractors will gather in the North Parking Lot prior to walking the building. Bids accepted to and **until 2:00 p.m. August 22, 2008.** Sealed bids will be opened at the convenience of the City of Waterloo's City Council meeting. Bidding instructions and specifications may be picked up from City of Waterloo's representative; no fee is required for the CD. If the bidder requests a hard copy a copy charge will be required through Alloy Specialty. The City of Waterloo reserves the right to reject any and all bids and to waive informalities or irregularities in the bidding.

Address to send sealed bids:

Mr. Louis Starks
City of Waterloo
Community Development
620 Mulberry Street, Carnegie Annex
Waterloo, IA 50703

Bids must be received no later then August 22, 2008 at 2:00 P.M. (local time)

Scope of Work

The work in this contract includes the following quantities of asbestos materials identified for removal, and disposal. The asbestos containing materials and locations originated from the AMI Environmental survey/report. The survey/quantities are provided as a reference. All asbestos containing materials in the identified areas are part of this contract and are the responsibility of the contractor. No schedule changes or compensation will be made for additional removal and disposal of asbestos containing materials not in this document.

Asbestos Containing Materials Scheduled for Removal

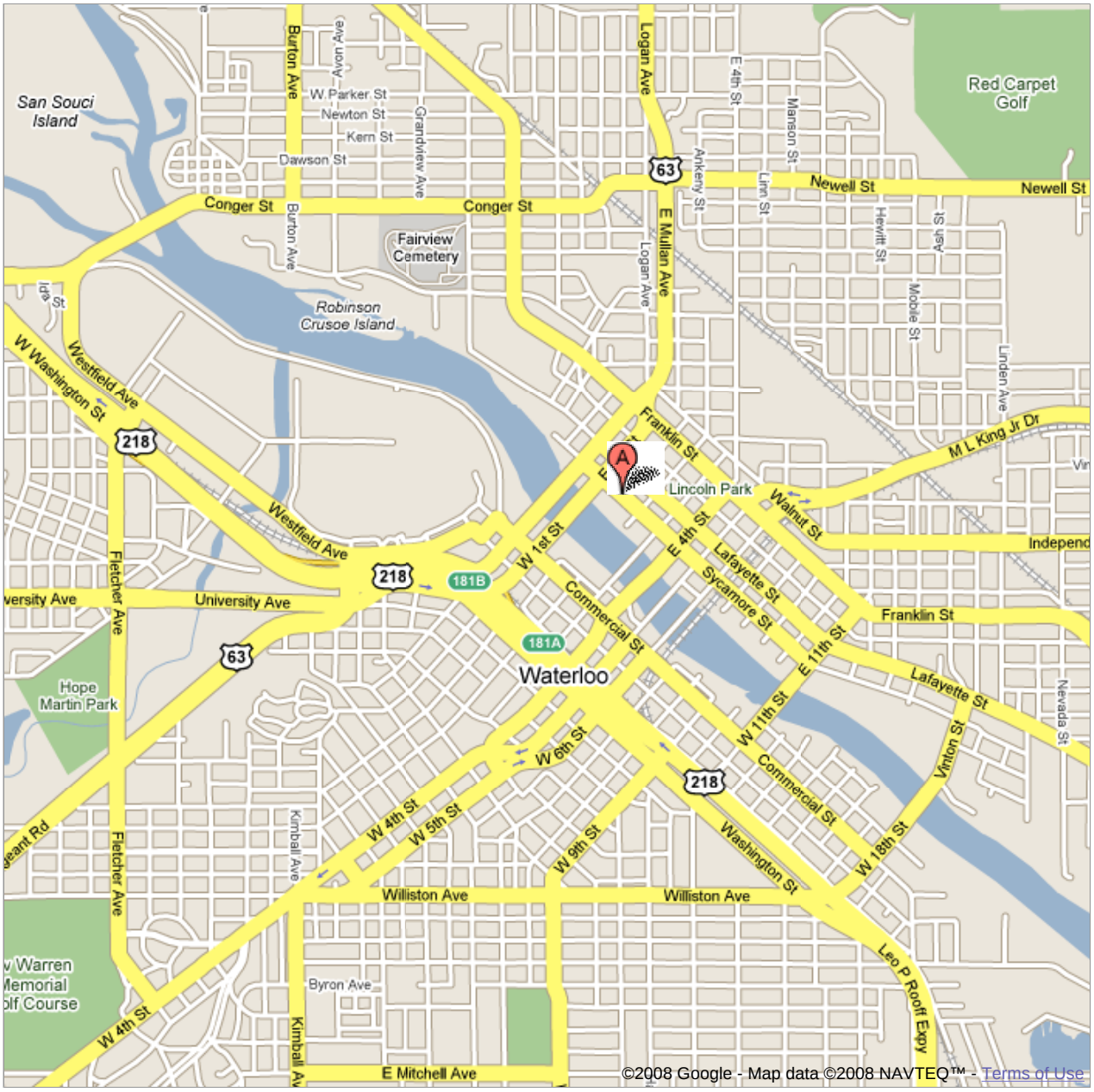
Scope of Work for Rath Administration Building's Asbestos Removal Project

Note: Any and all questions in relation to this document or any information pertaining to this project should be directed to the City of Waterloo. The point of contact for the City will be Louis Starks City of Waterloo.

Rath Building Project Estimate Worksheet Based Upon Prior Surveys

		Quantities																			
		(SQ.FT)	(SQ.FT)	(SQ.FT)	(SQ.FT) Cement	(SQ.FT) Cement	(SQ.FT)	(SQ.FT)	(SQ.FT)	(SQ.FT)	(Lin. Ft.)	(SQ.FT)	(SQ.FT)	(SQ.FT)	Thermal System Insulation				(SQ.FT)	(SQ.FT)	(SQ.FT)
															<4" OD	4-6" OD	>6"-10" OD	>10" OD			
Room Name	Room No.	9" x 9" VFT w/Mastic	12" x 12" VFT w/Mastic	Mastic Covering Cork	1/8" Asbestos Board	Asbestos Ceiling Tiles	Block Insulation over Cork	Sheetrock and Joint Compound	Roof Flashing Tars & Sealants	Roofing Felts	Sealant Around Doors/Windows	Glue/Mastic for Walls	Cement Board Conductors	12" x 12" Ceiling Tiles & Adhesive	Lineal Feet (including mechanical fittings)	Lineal Feet (including mechanical fittings)	Lineal Feet (including mechanical fittings)	Lineal Feet (including mechanical fittings)	Tank Insulation	Spray-on	Duct Cloth
Roof	Original Building								560	2880	4780		45								
Attic	Original Building			4850	2809		150								220		169	32			10
3rd Floor	Original Building	5704														104	66				
2nd Floor	Original Building	4795						920								171	54				
1st Floor	Original Building				200			1200				160			280	1072	503				
Basement	Original Building	11680	4886	1528			130								915	797	1536	139	175	238	25
Roof	1950's Addition								949		1725										
1st Floor	1950's Addition							1028													
Basement	1950's Addition							660						400			120				
Roof	Adams Bldg.								798	3057	270										
3rd Floor	Adams Bldg.				480																
2nd Floor	Adams Bldg.				1722																
1st Floor	Adams Bldg.				1005																
Basement	Adams Bldg.			92	815	1773															
Totals		**22,179**	**4,886**	**6,470**	**7,031**	**1,773**	**280**	**3,808**	**2,307**	**5,937**	**6,775**	**160**	**45**	**400**	**1,415**	**2,144**	**2,448**	**171**	**175**	**238**	**35**

Address **300 Sycamore St**
Waterloo, IA 50703



Rath Building

Contractor Walkthrough
August 14, 2008
11:00 a.m.

Contractors will meet with City of Waterloo officials in North Parking Lot. Following a brief introduction/instruction period, contractors will be allowed to walkthrough the facility to familiarize themselves with the project.

SECTION

2

GUIDE SPECIFICATION FOR RATH BUILDING WORK

ENVIRONMENTALLY CONTROLLED REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS

August 2008

This guide specification covers the requirements for controlled demolition, removal and disposal of asbestos materials and is to be used in accordance with EPA 40 CFR 763 and OSHA 29 CFR Part 1910 & Part 1926

PART 1 GENERAL

1.1 REFERENCES

NOTE: The listed designations for publications are those that were in effect when this guide specification was being prepared.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATIONS:

ANSI Z9.2-79 Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2-80 Practices for Respiratory Protection

CODE OF FEDERAL REGULATIONS (CFR) PUBLICATIONS:

29 CRF Part 1910	Occupational Safety and Health Standards
29 CFR Part 1926	Safety and Health Regulations for Construction
40 CFR 61, Subpart A	General Provisions
40 CFR 61, Subpart M	National Emission Standard for Asbestos
40 CFR 241	Guidelines for the Land Disposal of Solid Wastes
40 CFR 257	Criteria for Classification of Solid Waste Disposal Facilities and Practices
40 CFR 763	Subpart E Asbestos Containing Materials in Citys

FEDERAL STANDARD (FED. STD.)

Fed. Std. 595A	Colors & Notices 2, 3, 4, 5, 7 & Errata, 8
	Asbestos Standards Iowa DNR Air Quality Bureau
	Contractor Licenses, Project Notifications, Work Practice Inspection, and Training Course Accreditation, Audit and Approval
	NESHAP/Iowa/DNR Asbestos Project Notification and Inspection

ANALYTICAL METHODS

Manual of Analytical Methods, 3rd Ed., Vol. 1, Physical and Chemical Analysis Method (P&CAM)

Method 7400	Fibers
Method 7402	Asbestos Fibers

UNDERWRITERS LABORATORIES, INC. (UL) PUBLICATIONS

UL 586	1986 High Efficiency Particulate, Air Filter

1.2 DESCRIPTION OF WORK

The work covered by this section includes the handling of friable and nonfriable materials containing asbestos which is encountered during removal and environmentally controlled demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos-containing materials. Perform work in accordance with 29 CFR 1926.1101; 40 CFR 61, Subpart A; 40 CFR 61, Subpart M; and the requirements specified herein. The asbestos work includes the demolition and removal of the following:

Scope of Work for Rath Building Asbestos Removal Project

Base Bid for Rath Building

Rath Building Project Estimate Worksheet Based Upon Prior Surveys

		Quantities																			
		(SQ.FT)	(SQ.FT)	(SQ.FT)	(SQ.FT) Cement	(SQ.FT) Cement	(SQ.FT)	(SQ.FT)	(SQ.FT)	(SQ.FT)	(Lin. Ft.)	(SQ.FT)	(SQ.FT)	(SQ.FT)	Thermal System Insulation				(SQ.FT)	(SQ.FT)	(SQ.FT)
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The building owner has requested the following sequence of events to occur.

1. Environmental Remediation Contractor (ERC) will stage the areas in the following sequence directed by the owner's representative.
2. ERC will work in conjunction with both the owner and project designer. Both have expressed a desire to see work go smoothly and work with representatives in identifying areas of required abatement.
3. Each respective area will have a sequence of activities, competing one floor/level at a time. Each level must be competed before starting the next level.

1.2.1 Asbestos Survey

An asbestos survey was conducted in the contract work area(s) by AMI Environmental office location in Omaha, Nebraska, to identify the presence of asbestos containing materials as described in 1.2 above. The survey was initiated by the City of Waterloo and is provided by the City of Waterloo in Section 3 of this specification.

1.2.2 Unidentified ACM

If ACM not covered by the ASBESTOS REPORT, the drawings or the specifications is encountered, the Contractor shall stop work and immediately notify the City's Project Representative. Upon direction from the City's Representative, the City's Representative may be required to conduct sampling and testing of these suspect materials in accordance with regulatory procedures.

If material/materials are found to be positive asbestos >1% the contractor must stop work. Contractor shall not remove any of the identified materials until a signed change order has been approved and signed by the City and its project Representative.

Any change order materials removed without a **Signed Change Order** by the City and its Representative will be at the contractor's own risk and considered included in the original bid of the contractor.

Payment for this additional work will be handled under the SECTION CHANGE Orders.

1.3 DEFINITIONS

1.3.1 Action level

An airborne concentration of asbestos of 0.1 fiber (longer than 5 micrometers) per cubic centimeter (f/cc) of air calculated as an eight-(8)-hour time weighted-average (TWA).

1.3.2 Aggressive method

Removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact Asbestos Containing Material (ACM).

1.3.3 Amended Water

Water containing a wetting agent or surfactant.

1.3.4 Area Monitoring

Sampling of asbestos fiber concentrations within the regulated area and outside the regulated area, which is representative of the airborne concentrations of asbestos fibers, which may reach the breathing zone. To be ran at the cost of the contractor per OSHA regulations.

1.3.5 Asbestos

Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered. For purposes of this standard, "asbestos" includes PACM, as defined below.

1.3.6 Asbestos Abatement Contractor

A business entity certified, licensed, or accredited by the state in which a response action involving asbestos-containing building material that is friable, or expected to become friable during the response action, is undertaken.

1.3.7 Asbestos Containing Material (ACM)

Material composed of asbestos of any type and in an amount greater than 1 percent by weight, either alone or mixed with other fibrous or non-fibrous materials.

1.3.8 Asbestos Fibers

Asbestos fibers having length-to-diameter ratio of at least 3 to 1 and 5 micrometers or longer as counted in the NIOSH **Method 7400** or **Method 7402** procedure using either phase contrast light microscopy (PCM) or transmission electronic microscopy (TEM).

1.3.9 Asbestos Permissible Exposure Limit (PEL)

Exposure to an airborne concentration of asbestos fibers not to exceed 0.1 fiber per cubic centimeter of air as an eight-(8)-hour time weighted average (TWA).

1.3.10 Authorized Person

Any person authorized and required by work duties to be present in regulated areas.

1.3.11 Breathing Zone

A hemisphere forward of the shoulders with a radius of approximately 6 inches to 9 inches.

1.3.12 Category I Nonfriable ACM

Category I Nonfriable ACM includes asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products.

1.3.13 Category II Nonfriable ACM

Category II Nonfriable ACM includes any asbestos-containing material not included in Category I that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.14 Certified Asbestos Supervisor

One certified by the State of Iowa, Division of Labor and shows certification that one has satisfactorily passed an examination concerning "Supervision of Asbestos Abatement Contracts" or similar title training. The State of Iowa and/or the Environmental Protection Agency (EPA) must have approved this training.

1.3.15 Certified Asbestos Worker

One certified by the State of Iowa and hold current cards illustrating the number.

1.3.16 Certified Licensed Contractor

A Contractor who has been certified by the State of Iowa.

1.3.17 Certified Industrial Hygienist (CIH)

One certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene.

1.3.18 Class I Asbestos Work

Activities involving the removal of Thermal System Insulation (TSI) and surfacing ACM and PACM.

1.3.19 Class II Asbestos Work

Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but it not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

1.3.20 Class III Asbestos Work

Repair and maintenance operations, where "ACM", including thermal system insulation and surfacing material, is likely to be disturbed.

1.3.21 Clean Room

An uncontaminated room having facilities for storage of employee’s street clothing and uncontaminated materials and equipment.

1.3.22 Competent Person

In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32 (f); in addition, for Class I and Class II work, one who is specially trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent and, for Class II who is trained in an operations and maintenance (O&M) course developed by EPA (40 CFR 763.92 (a)(2)).

1.3.23 Critical Barrier

One or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in work area from migrating to an adjacent area (per State regulations).

1.3.24 Decontamination Area

An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room which is used for the decontamination of workers, materials and equipment contaminated with asbestos.

1.3.25 Demolition

The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

1.3.26 Disturbances

Contact which releases fibers from ACM or PACM or debris containing ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

1.3.27 Employee Exposure

Exposure to airborne asbestos that would occur if the employee's were not using respiratory protective equipment.

1.3.28 Encapsulate

A liquid material which can be applied to ACM which controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant) per State/Federal code.

1.3.29 Encapsulate

The process whereby an encapsulant is applied to ACM to control the release of asbestos fibers into the air.

1.3.30 Equipment Room (Change Room)

A contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

1.3.31 Fiber

A particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

1.3.32 Friable Asbestos Material

Material that contains more than 1 percent asbestos by weight which can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

1.3.33 Glovebag Technique

A method with limited applications for removing small sections of asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contained regulated area. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the removal process. All workers who are permitted to use the glovebag technique must be highly trained, experienced and skilled in this method (per OSHA regulations).

1.3.34 Glovebag

An impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled. Shall be made of 6 mil thick plastic and shall be seamless at the bottom.

1.3.35 HEPA Filter Equipment

High-efficiency particulate air (HEPA) filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometer diameter particles or larger.

1.3.36 Homogeneous Area

An area of surfacing material or thermal system insulation that is uniform in color and texture.

1.3.37 Intact

ACM which has not been crumbled, pulverized, or otherwise deteriorated so that it is no longer likely to be bound with its matrix.

1.3.38 Negative Initial Exposure Assessment

A demonstration which complies with the criteria in this section, that employee exposure during an operation is expected to be consistently below the PEL's.

1.3.39 Nonfriable Asbestos Material

Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and may not release fibers in excess of the action level during any appropriate use, handling, storage, transportation, or processing. Nonfriable asbestos material is considered hazardous during removal and disposal procedures.

1.3.40 (PACM) Presumed Asbestos Containing Material

Thermal system insulation and surfacing material found in buildings constructed no later than 1980.

1.3.41 Personal Monitoring

Sampling of airborne asbestos fiber concentrations within the breathing zone of an employee.

1.3.42 Prior Experience

Experience required of the Contractor, his employees, and his Industrial Hygienist on asbestos projects of similar nature and scope to insure capability of performing the asbestos removal in a satisfactory manner. Similarities shall be in areas related to material composition, project size, number of employees and the engineering work practice and personal protection controls required.

1.3.43 Regulated Areas

An area established to demarcate areas where Class I, II and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

1.3.43.1 Enclosed Regulated Area

A regulated area which has been isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris. A local exhaust system is required.

1.3.44 Regulated Asbestos-Containing Material (RACM)

a. Friable asbestos material
b. Category I nonfriable ACM that has become friable
c. Category I nonfriable ACM that will become or has been subjected to sanding, grinding, cutting, or abrading; and
d. Category II nonfriable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the forces acting on the material in the course of the demolition or renovation operation.

1.3.45 Thermal System Insulation (TSI)

ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

1.3.46 Thermal System Insulation ACM

Thermal system insulation which contains more than 1% asbestos.

1.3.47 Time Weighted Average (TWA)

The TWA is an 8-hour time weighted average of airborne concentration of fibers per cubic centimeter of air.

1.4 SUBMITTALS

NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required. Submittals are due within 21 calendar days of award of bid.

The following shall be submitted and approved by the **Rath Building's Representative** prior to commencing work involving asbestos materials:

Local Exhaust Equipment; HEPA Vacuum Equipment

Respirators Pressure Differential Monitor

Training Data

Submit signed and dated certificates by each employee that the employee has received training for a minimum of 32 hours in the proper handling of materials that contain asbestos; understands the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of the respiratory equipment to be used; understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment; and understands engineering and other hazard control techniques and procedures. (See end of this Section for example certificates.)

Testing Laboratory

Submit the name, address, and telephone number of the testing laboratory selected to perform and report airborne concentrations of asbestos fibers along with certification of any other persons counting the samples have been judged proficient by successful participation within the last year in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing (PAT) Program.

Industrial Hygienist

Submit the name, address, and telephone number of the Industrial Hygienist selected to prepare the asbestos plan, direct monitoring and perform training, and a certification that the Industrial Hygienist is certified by the American Board of Industrial Hygiene, including certification number and date and is experienced in asbestos removal activities.

Prior Experience

As evidence that the asbestos removal effort will be accomplished by trained and competent personnel totally familiar with safe and legal asbestos working practices, the Contractor shall furnish for the Rath Building's Representative approval (for himself or for his selected asbestos removal subcontractor) written demonstration of successfully completed asbestos abatement projects of similar nature and scope. A short summary of three (3) asbestos abatement projects performed shall include:

a. The name, address, and telephone number of the contact person (someone specifically familiar with the Contractor's work). If available, include copies of letters of reference from previous users of service.

b. A short description of the type of removal (e.g. pipe lagging, sprayed girders and/or ceilings, transite siding, etc.), its extent (square feet, linear feet), and days to complete (scheduled and actual),

c. Documentation of any licenses or certifications as an asbestos abatement Contractor in the jurisdiction covered. If none, a negative response is required.

d. The Contractor shall certify that the firm and its employees are familiar with regulations of the Occupational Safety and Health Administration (OSHA) and the U.S. Environmental Protection Agency (EPA) cited in the project specification and related to asbestos abatement. Individuals who conduct a response action involving ACM in this contract shall be required to take the appropriate initial and annual refresher training courses and acquire annual accreditation from the Iowa Division of Labor. The Contractor shall submit proof of licensure and accreditation by the Iowa Division of Labor and **40 CFR** Part 763-E, Appendix C (Asbestos Model Accreditation Plan).

e. The Contractor shall further document that at least one on-site representative, such as a foreman or management-level person or other authorized representative (Supervisor), trained in the provisions of this regulation and the means of complying with them, is present. Every year, the trained on-site individual shall receive refresher training in the provisions of State regulations. The required training shall include as a minimum: applicability; notifications; material identification; control procedures for removals including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove-bag procedures, and High Efficiency Particulate Air (HEPA) filters; waste disposal work practices; reporting and recordkeeping; and asbestos hazards and worker protection. Evidence that the required training has been completed shall be posted and made available for inspection by the NESHAPS-administering agency at the demolition or renovation site.

f. A notarized statement, signed by an officer of the asbestos abatement company, containing the following information: (If none, a negative reply is required.)

g. A record of any citations issued by Federal, State or local regulatory agencies relating to asbestos abatement activity. Include projects, dates and resolutions. From current standing company or ownership/management’s prior citations in former companies dated within the past 5 years.

h. A list of penalties incurred through noncompliance with asbestos abatement project specifications including liquidated damages, overruns in scheduled time limitations and resolutions. From current standing company or ownership/management’s prior citations in former companies dated within the past 5 years.

i. Situations in which an asbestos related contract has been terminated including projects, dates and reasons for terminations.

j. A listing of any asbestos-related legal proceedings/claims in which the Contractor (or employees scheduled to participate in this project) have participated or are currently involved. Include descriptions of role, issue and resolution to date.

Failure or inability to comply with Paragraph: a., b., c., d., e., or f. may result in rejection of Contractor's bid.

Poor performance as reflected by Para. b. (scheduled versus actual completion times), or f. may result in rejection of Contractor's bid.

Asbestos Plan

Submit a detailed Plan of the work procedures to be used in the removal and disposal of materials containing asbestos and include an explanation of the Initial Exposure Assessment. The Plan shall be prepared, signed, and sealed, including certification number and date, by the Contractor's Industrial Hygienist. Such Plan shall include a sketch showing the location, size, and details of regulated areas, location and details of the decontamination area, layout of decontamination area, and locations of local exhaust equipment. The Plan shall also include interface of trades involved in the construction, sequencing of asbestos-related work, disposal plan, type of wetting agent to be used, air monitoring, respirators, protective equipment, pressure differential monitoring device, and a detailed description of the method employed in order to control pollution. The Rath Building's Representative prior to the start of any asbestos work shall approve the Plan. Prior to beginning work, the Contractor shall meet with the Rath Building's Representative to discuss in detail the Asbestos Plan, including work procedures and safety precautions.

Notification Requirements

1. Initial Notification

The Contractor shall:

a. Provide the U.S. Environmental Protection Agency (EPA) Regional NESHAPS-administering agency with the notice of intention to demolish or renovate. The address is as shown on the "ASBESTOS Notification FORM", attached to this specification section. Notify the State of Iowa of its intent to remove asbestos using the attached "ASBESTOS REMOVAL REPORT FORM". Notification shall be in accordance with State of Iowa Regulations and Code of Federal Regulations 40 CFR 61, Subpart M.] Copies of this form and any re-notification forms shall be furnished to the Rath Building's Representative. Work shall not commence on any dates other than those stated in the notification without re-notification of all parties. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. If needed, notify the local fire department 3 days prior to removing fireproofing material from the building. Also notify the local fire department when the new fireproofing material has been applied.
b. Update notice, as necessary, including when the amount of asbestos affected changes by at least 20 percent.
c. Postmark or deliver the notice as follows:
   At least 10 working days before asbestos stripping or removal work or any other activity begins such as site preparation that would break up, dislodge or similarly disturb asbestos material.

2. Re-notification

For asbestos stripping or removal work in a demolition or renovation operation that will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the NESHAPS-administering agency as follows:

1. When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin after the date contained in the notice,

   a. Notify the NESHAPS-administering agency of the new start date by telephone as soon as possible before the original start date, and

   b. Provide the NESHAPS-administering agency with a written notice of the new start date as soon as possible before, and no later than, the original start date. Delivery of the updated notice by the U.S. Postal Service commercial delivery service, or hand delivery is acceptable.

2. When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin on a date earlier than the original start date, provide the NESHPAS-administering agency with a written notice of the new start date at least 10 working days before asbestos stripping or removal work begins.

3. In no event shall an operation covered by this paragraph begin on a date other than the date contained in the written notice of the new start date.

3. Notification Information

The following shall be included in the notice:

a. An indication of whether the notice is the original or a revised notification.

b. Name, address, and telephone number of both the facility owner and operator and the asbestos removal contractor.

c. Type of operation: demolition or renovation.

d. Description of the facility or affected part of the facility including the size (square meters [square feet] and number of floors), age, and present and prior use of the facility.

e. Procedure, including analytical methods, employed to detect the presence of RACM and Category I and Category II nonfriable ACM.

f. Estimate of the approximate amount of RACM to be removed from the facility in terms of length of pipe in linear meters (linear feet), surface area in square meters (square feet) on other facility components, or volume in cubic meters (cubic feet) if off the facility components. Also, estimate the approximate amount of Category I and Category II nonfriable ACM in the affected part of the facility that will not be removed before demolition.

g. Location and street address (including building number or name and floor or room number, if appropriate), city, county, and state, of the facility being demolished or renovated.

h. Scheduled start and completion dates of demolition or renovation.

i. Description of planned demolition or renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components.

j. Description of work practices and engineering controls to be used to comply with the requirements of this subpart, including asbestos removal and waste-handling emission control procedures.

k. Name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

l. A certification that at least one person trained as required by paragraph (c) (8) of this section will supervise the stripping and removal described by this notification.

m. Description of procedures to be followed in the event that unexpected RACM is found or Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder.

n. Name, address, and telephone number of the waste transporter.

Reports

Monitoring Results

Fiber counting shall be completed and results reviewed by the contractor within 24 hours. The Contractor shall notify the Rath Building's Representative immediately of any exposures to fibers in excess of the acceptable limits. Submit monitoring results to the Rath Building's Representative within 30 working days, signed by the testing laboratory employee performing air monitoring, the employee that tested the sample, and the contractor. At monthly construction meetings, a submittal for the previous months air monitoring results shall be submitted to Rath Building's Representative.

Local Exhaust System

NOTE: When an enclosed regulated area is not required, delete the requirements for the local exhaust system and pressure differential recording.

Local exhaust systems must be installed and operated in accordance with ANSI Z9.2-79. The local exhaust system shall be operated continuously, 24 hours a day, until the enclosure of the regulated area is removed. Pressure differential recordings for each workday shall be reviewed by the contractor and submitted to the Rath Building's Representative within 24 hours from the end of each workday. The Contractor shall notify the Rath Building's Representative immediately of any variance in the pressure differential which could cause exposure of adjacent unsealed areas to asbestos fiber concentrations in excess of the Action Level.

Job Progress Report

During abatement activities, the contractor shall submit a weekly job progress report to the Rath Building's Representative detailing abatement activities. Include review of progress with respect to Asbestos Plan, milestones and schedules, major problems and actions taken, injury reports, equipment breakdown and a compilation of the monthly air sampling results conducted by the Contractor or air sampling professional. Submission of monitoring results will be as dictated by the abatement contractor. The General Contractor and the asbestos abatement subcontractor shall sign the progress report.

Certificates

Local exhaust and HEPA vacuum filters Respirators

Landfill Delivery Records

Submit written evidence that the landfill for disposal is approved for asbestos disposal, by the EPA, state, and/or local regulatory agencies. In accordance with Paragraph 3.6.2.15.e., submit copies of all waste shipment records and resulting correspondence.

1.5 TITLE TO MATERIALS

Materials resulting from demolition work, except as specified otherwise, shall become the responsibility of the Contractor and shall be disposed of as specified herein.

1.6 PROTECTION OF EXISTING WORK TO REMAIN

Perform demolition work without damage or contamination of adjacent work. Where such work is damaged or contaminated, restore work to the original condition.

1.7 SEQUENCE OF WORK

No other work shall be performed in the asbestos regulated area prior to completion and certification of the asbestos abatement work.

1.8 PERMISSIBLE EXPOSURE LIMITS (PELS)

i. Time-weighted average limit (TWA). Ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight (8) hour time-weighted average (TWA).

ii. Excursion limit. Ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

1.9 MEDICAL SURVEILLANCE 29 CFR 1926.1101(m)

1.9.1 Medical examinations

Institute a medical surveillance program for all employees who for a combined total of 30 or more days per year are engaged in Class I, II and III work or are exposed at or above the permissible exposure limit or excursion limit, and for employees who wear negative pressure respirators. The content of the examination shall be consistent with 29 CFR 1926.1101 (m). This examination is not required if adequate records show the employee has been examined as required by 29 CFR 1926.1101 (m) within the past year. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within 30 calendars days before or after the termination of employment in such occupation.

1.9.2 Medical Records

NOTE: OSHA 29 CFR 1926.1101 required that medical records be retained at least 30 years

Maintain complete and accurate records as required by 29 CFR 1926.1101(n) employees' medical examinations for a period of at least 30 years after termination of employment and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health, The Director of the National Institute for Occupational Safety and Health (NIOSH), authorized representatives of either, and an employee's physician upon the request of the employee or former employee.

1.10 TRAINING

Each employee must have received an equivalent level of training within 3 months prior to assignment to asbestos work and shall be instructed for a minimum of 32 hours by a State/Federal approved trainer with regard to the methods of recognizing asbestos; the health effects associated with asbestos; the relationship between smoking and asbestos in producing lung cancer; its purposes, proper use, fitting instructions, and limitations of respirators; the nature of operations that could result in exposure to asbestos, the importance of necessary protective controls to minimize exposure and any necessary instructions in the use of these controls and procedures; the appropriate work practices for performing the asbestos removal job; medical surveillance program requirements; and a review of 29 CFR 1926.1101 safety and health precautions and the use and requirements for protective clothing and equipment including respirators. Fully cover engineering and other hazard control techniques and procedures. Maintain complete and accurate records of training for each employee. Records shall be maintained for one year beyond the last date of employment.

1.11 ACCREDITATION OF ASBESTOS REMOVAL PERSONNEL

Persons who inspect, design, supervise, implement (workers), and manage disposal of asbestos containing removal projects in Iowa must be "accredited" by the Iowa Division of Labor.

a. In order to qualify for initial accreditation as an asbestos project supervisor, a person shall meet the following requirements:

b. Have a minimum of six (6) months experience as an asbestos project supervisor or as an asbestos worker.

c. Have attend an approved training course for asbestos project supervision and received a passing score on the written examination for such course during the twelve (12) months prior to submitting an application.

d. In order to qualify for initial accreditation as an asbestos worker, a person shall have attended an approved training course for asbestos workers or an approved training course for asbestos project supervisors and received a passing score on the written examination for such course during the twelve (12) months prior to submitting an application.

1.11 PERMITS

Obtain necessary permits in conjunction with this project for the transportation and disposition of asbestos containing materials, and provide timely notification of such actions as may be required by Federal, State, regional, and local authorities.

1.12 SAFETY AND HEALTH COMPLIANCE

In addition to detailed requirements of this specifications, comply with laws, ordinances, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.1101 and 40 CFR 61, Subpart A and 40 CFR 61, Subpart M. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where specification requirements and referenced documents vary, the most stringent requirement shall apply.

PART 2 PRODUCTS

2.1 EQUIPMENT AND MATERIAL USED IN REMOVAL OPERATIONS

Furnish the Rath Building's Representative with one complete set of personal protective equipment, as required herein, for each entry into and inspection of the regulated area.

2.2 RESPIRATORS

NOTE: Air-purifying respirators must be approved for use with dust fumes, and mists having permissible exposure limits less than 0.05 milligrams per cubic meter (i.e., have high efficiency particulate air filters).

Select respirators approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing asbestos fibers. Provide personnel engaged in the removal or demolition of pipes, structures, or equipment covered or insulated with asbestos, or in the removal or demolition of asbestos insulation or covering, with Type C supplied air respirators. During the performance of work when removal or demolition of asbestos materials is not underway and after the TWA and ceiling limit has been established, the Contractor shall provide respirators as required in 29 CFR 1926.1101(h)

RESPIRATOR PROTECTION FOR ASBESTOS FIBERS

Airborne concentration of asbestos or condition of use	**Required respirator**
Not in excess of 1 f/cc (10XPEL), or otherwise as required independent of exposure	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50XPEL)	Full face-piece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100XPEL).	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow.
Not in excess of 100 f/cc (1,000 x PEL), or unknown concentration.	Full face-piece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

**A high efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.*
**Air purifying respirators must be equipped with high-efficiency particulate air (HEPA) filters. The HEPA filters are not reusable.*

Note: Respirator program. Establish a respirator program as required by ANSI Z88.2-80 and 29 CFR 1910.134.

2.3 SPECIAL CLOTHING

2.3.1 Protective Clothing

Protective clothing shall be coveralls or similar whole-body clothing, headcoverings, gloves, and foot coverings.

2.3.2 Work Clothing

Provide cloth work clothes to wear under the protective coveralls and foot covering.

2.4 HYGIENE FACILITIES

NOTE: Decontamination areas, in most cases, should be adjacent and connected to the regulated area to prevent asbestos workers from contaminating adjacent areas when leaving the regulated area.

A decontamination area shall consist of an equipment room, shower area, and clean room in series. The equipment room shall be supplied with impermeable, labeled bags and containers for the containment and disposal of contaminated protective equipment. Shower facilities shall be provided which comply with 29 CFR 1910.14(d)(3). The clean change room shall be equipped with a locker or appropriate storage container for each employee's use.

2.5 EYE PROTECTION

Provide goggles for personnel engaged in asbestos operations when the use of a full face respirator is not required.

2.6 WARNING SIGNS AND LABELS

2.6.1 Warning Signs

Warning signs must be of sufficient size to be clearly legible and display the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

2.6.2 Warning Labels

Labels must be of sufficient size to be clearly legible, printed in large, bold letters on a contrasting background, and displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2.7 LOCAL EXHAUST SYSTEM

Provide a local exhaust system in the enclosed regulated areas. Filters on vacuums and exhaust equipment shall be UL 586-labeled HEPA filters. Local exhaust equipment shall be sufficient to maintain a minimum pressure differential of minus 0.02 inches of water column relative to adjacent, unsealed areas. The local exhaust system must be equipped with a manometer-type

negative pressure differential monitor with minor scale division of 0.02 inch of water and accuracy within plus or minus 1.0 percent. The manometer must be calibrated daily as recommended by the manufacturer. Provide manually recorded manometer readings of the pressure differential between the enclosed regulated area and adjacent unsealed areas at the beginning of each workday and every 2 working hours thereafter. The local exhaust system shall be operated continuously, 24 hours per day, until the regulated area enclosure is removed. Replace filters as required to maintain the efficiency of the system. The building heating, ventilating, and air-conditioning (HVAC) system shall not be used as the local exhaust system for the enclosed regulated area.

2.8 TOOLS AND MISCELLANEOUS EQUIPMENT

2.8.1 Airless Sprayer

An airless sprayer, suitable for application of sealing material, shall be used.

2.8.2 Scaffolding

Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.

2.8.3 Transportation Equipment

Transportation equipment, as required, shall be suitable for loading, temporary storage, transporting, and unloading of contaminated waste without exposure to persons or property.

2.8.4 Vacuum Equipment

All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.

2.8.5 Water Sprayer

The water sprayer shall be an airless or other low pressure sprayer for amended water application.

2.8.6 Other Tools and Equipment

The Contractor shall provide other suitable tools for the stripping, removal, encapsulation and disposal activities including but not limited to: knives, stiff nylon brushes, sponges, rounded edge shovels, brooms, and carts.

2.9 MATERIALS

2.9.1 Lockdown Sealant

The sealing agent shall be penetrating sealants and shall meet the following criteria:

a. They shall withstand most impact or abrasion and protect the surface.

b. Sealants selected for use by the Contractor shall be one of those demonstrating probable effective performance under the tests conducted by an independent testing laboratory and are approved by the Rath Building's Representative.

c. They shall have high flame retardant characteristics, and a low toxic fume and smoke emission rating.

d. They shall not be noxious or toxic to application workers, or subsequent workers in the area.

e. They shall have some permeability to water vapor to prevent condensation accumulation, and resist solution by common cleaning agents. They shall be water insolvable when cured.

f. They shall be acceptable weathering and aging characteristics.

g. They shall be acceptable by architectural standards.

h. They shall be compatible with all insulating material likely to be applied to the stripped surfaces.

i. They shall be demonstrably capable of adhering to the surfaces of the substrate.

j. They must contain a color tint.

PART 3 EXECUTION

3.1 GENERAL

3.1.2 Respirator Program.

Establish a respirator program as required by ANSI Z88.2 and 20 CFR 1910.135.

3.1.3 Protective Clothing

Provide and require the use of protective clothing for any employee exposed to airborne concentrations of asbestos that exceed the TWA and/or excursion limit, or for which a required negative exposure assessment is not produced, and for any employee performing Class I operations which involve the removal of over 25 linear or 10 square feet of TSI or surfacing ACM and PACM.

3.1.4 Hygiene Facilities

For employees performing Class I work involving over 25 linear or 10 square feet of TSI or surfacing ACM and PACM, establish a decontamination area that consists of an equipment room, shower area, and clean room in series. Ensure that employees enter and exit the regulated area through the decontamination area. Where it is demonstrated that it is not feasible to locate the shower between the equipment room and the clean room, or where work is performed outdoors, ensure that employees remove asbestos contamination from their worksuits in the equipment room using a HEPA vacuum before proceeding to a shower.

For employees performing Class I work involving less than 25 linear or 10 square feet of TSI or surfacing ACM and PACM, and for Class II and Class III work where exposures exceed a PEL, establish a equipment room or area that is adjacent to the regulated area which is covered by a impermeable drop cloth on the floor or horizontal working surface. The area must be of sufficient size as to accommodate cleaning of equipment and removing personal protective equipment. Ensure that employees enter and exit the regulated area through the equipment room or area.

3.1.5 Warning Signs and Labels

Provide warning signs at approaches to regulated areas containing airborne asbestos fibers. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

3.1.6 Accessibility of Work Areas

The Rath Building’s Representative will rearrange areas to the extent of providing a reasonable, direct, and unobstructed path to the work sites. During asbestos removal, the Contractor shall confine his equipment and employee pattern to these designated areas. Where the building is still occupied during the removal operations, interference with the functional operation of the building occupants outside these areas will not be permitted. Where conflicts arise due to Contractor's operations, the decision of the Rath Building’s Representative or his authorized representative shall be final.

3.1.7 Preparation for Removal

3.1.7.1 Movable Furnishings

Movable furnishings, equipment and fixtures in the work area will be pre-cleaned and removed from the area of work by the Rath Building's Representative before asbestos work begins.

OR

Furnishings, equipment and fixtures will remain in the building. Cover furnishings with 6-mil plastic sheet, or remove from the work area and store in a location in the building designated by the Rath Building's Representative which is not subject to contamination with asbestos fibers. The items shall not be returned to the work area by the Contractor or the Rath Building's Representative, until final room cleanup has been completed and visual inspection and final clearance air monitoring has successfully documented such.

3.1.7.2 Pre-Cleaning

All wall and floor surface areas, other than those from which surface areas, other than those from which asbestos is to be removed, and all non-movable asbestos is to be removed, and all non-movable furnishings, equipment, and fixtures remaining in the work area shall be pre-cleaned with a HEPA filter equipped vacuuming device or wet cleaning methods prior to sealing with plastic sheeting. Do not use any methods which would raise dust such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. After pre-cleaning, enclose fixed objects in 6-mil polyethylene sheeting, label, and seal securely with tape. Objects which must remain in the work area and that require special ventilation or enclosure requirements shall be suitably protected as approved by the Rath Building's Representative. Items in the work area which may require access by User during abatement shall be designated during the pre-abatement walkthrough and enclosures constructed with access flops sealed with waterproof tape.

3.1.8 Regulated Areas

All Class I, II, and III asbestos work shall be conducted within regulated areas. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos. Where critical barriers or negative pressure enclosures are used, demarcate the regulated area. Signs shall be provided and displayed pursuant to 29 CFR 1026.1101(k)(6). Access to regulated areas shall be limited to authorized persons. All persons entering a regulated area where employees are required to wear respirators, shall be supplied with a respirator. All asbestos work performed within regulated areas shall be supervised by a competent person.

3.1.8.1 Enclosed (Critical Barrier) Regulated Area Requirements

Seal openings in areas where the release of airborne asbestos fibers is expected. Establish a regulated area with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated area. The established

regulated area shall be provided with protective covering of walls and ceilings with a continuous membrane of two layers of minimum 6-mil plastic sheet sealed with tape to prevent water or other damage and two layers of 6-mil plastic sheet over floors extending a minimum of 24 inches up walls. All penetrations of the floor, walls, and ceiling shall be sealed with 6-mil polyethylene plastic and duct tape. Seal joints using spray adhesive and duct tape. Openings will be allowed in enclosures of regulated areas for the supply and exhaust of air for the local exhaust system.

3.1.8.2 Non-Enclosed Regulated Area Requirements

The construction of an enclosed regulated area is impractical for the removal of non-friables or glovebagging, provide a [25-foot] roped off perimeter around the area where asbestos handling procedures are performed and maintain other requirements for regulated areas. Also, where an enclosure is not provided, the contractor is to conduct personal and area monitoring of airborne fibers (Per OSHA regulations) during the work shift at the designated areas. If the concentration of airborne asbestos fibers monitored at the designated areas at any time exceeds the lesser of two times the background or the action level, evacuate personnel in adjacent areas. If adjacent areas are contaminated, clean the contaminated areas, monitor, and visually inspect the area as specified herein.

3.2 ASBESTOS ABATEMENT PROCEDURES

NOTE: This section covers procedures to protect workers and adjacent personnel during the abatement, collection, storage, loading, transportation and off loading of ACM and PACM. Disposal requirement are covered in Paragraph 3.3.

3.2.1 Initial Exposure Assessment

Ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly.

An Initial Exposure Assessment shall be conducted in accordance with 29 CFR 1926.1101

For Class I asbestos work, until exposure monitoring is conducted, and is documented that employees on the job will not be exposed in excess of the PELs, or otherwise makes a negative exposure assessment, it is presumed that employees are exposed in excess of the TWA and excursion limit. A negative exposure assessment can only be obtained by demonstrating requirements contained in 29 CFR 1926.1101.

3.2.2 Monitoring Requirements

Perform exposure monitoring as required to determine accurately the airborne concentrations of asbestos to which employees are exposed. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee. Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in

each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30 minute exposures associated with operations that are most likely to produce exposures above the excursion limit for employees in each work area.

3.2.2.1 Monitoring Prior to Asbestos Work

Provide area monitoring and establish the reference TWA l day prior to the masking and sealing operations for each asbestos removal site. The reference TWA is determined by taking at least three general area air samples in each asbestos regulated area.

3.2.2.2 Periodic monitoring

The contractor is to conduct daily monitoring (per OSHA regulations) that is representative of the exposure of each employee who is assigned to work within a regulated area who is performing Class I or II work unless a negative exposure assessment for the entire operation has been made. Conduct periodic monitoring of all work where exposures are expected to exceed a PEL at intervals sufficient to document the validity of the exposure prediction. When all employees required to be monitored daily are equipped with supplied-air respirators operated in the positive-pressure mode, daily monitoring is not required. However, employees performing Class I work using a control method which is not listed in Class I Requirements paragraph, shall continue to be monitored daily even if they are equipped with supplied-air respirators.

3.2.2.3 Monitoring Adjacent Areas Prior to Asbestos Work

Provide area monitoring and establish the reference TWA inside the building outside the enclosed regulated area l day prior to beginning asbestos work.

3.2.2.4 Monitoring Adjacent Areas During Asbestos Work

Provide area monitoring pursuant to OSHA 29 CFR 1926:1101. The contractor shall conduct perimeter area monitoring showing that clearance levels contained in 40 CFR Part 763, Subpt. E, or the EPA Asbestos in School Rule are met, or that perimeter area levels, measured by PCM, are no more than background levels representing the same area before the asbestos work began.

3.2.2.5 Termination of Monitoring

If the periodic monitoring reveals that employee exposures, as indicated by statistically reliable measurement, are below the PEL and excursion limit, monitoring may be discontinued if (approved by the Rath Building's Representative) for those employee whose exposures are represented by such monitoring. However, perimeter area monitoring should continue for the duration of this project, per OSHA contractor standards. Institute additional monitoring whenever there has been a change in process, control, equipment, personnel or work practices that may result in new or additional exposures above the PEL and/or excursion limit.

3.2.3 Respiratory Protection

Respirators shall be used during all Class I work, during all Class II work where the ACM is not removed in a substantially intact state, during all Class II and III work which is not performed using wet methods, during all Class II and III work where a negative exposure assessment is not produced, and during all Class III jobs where TSI or surfacing ACM or PACM is being disturbed. Provide the appropriate respirator as specified in paragraph 2.2.

3.2.4 Controls and Work Practices

The following controls and work practices shall be used in all classes of work regardless of levels of exposure:

a. Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM or PACM;
b. Wet methods, or wetting agents, to control employee exposures during asbestos sanding, mixing, removal, cutting, application, and cleanup, except where demonstrated that the use of wet methods are infeasible;
c. Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight container;
d. Local exhaust ventilation equipped with HEPA filter dust collection systems;
e. Enclosure or isolation of processes producing asbestos dust;
f. Ventilation of the regulated area to move contaminated air away from the breathing zone and toward a filtration or collection device equipped with a HEPA filter.

The following work practices and controls **shall not be used for work related to asbestos** or the work which disturbs ACM or PACM, regardless of measured levels of asbestos exposure or results of the initial exposure assessments:

a. High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filters exhaust air;
b. Compressed air used to remove asbestos, or ACM, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air;

c. Dry sweeping, shoveling or other dry clean-up and debris containing ACM and PACM;
d. Employee rotation as a means of reducing employee exposure to asbestos.

3.2.5 Class I Abatement Requirements

In addition to all provisions required in control and work methods above, the following controls and work practices shall be used for all Class I work.

a. Installation and operation of the control systems, shall be supervised by a competent person.

b. Work involving the removal of more than 25 linear or 10 square feet of thermal system insulation or surfacing material; for all other Class I jobs, where a negative exposure assessment, or where employees are working in areas adjacent to the regulated area, while the Class I work is being performed, use one of the following methods to ensure that airborne asbestos does not migrate from the regulated areas:

i. Critical barriers shall be placed over all openings to the regulated area;

ii. Use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area surveillance during each work shift at each boundary of the regulated area, showing no visible asbestos dust; and perimeter area monitoring showing that clearance levels contained in 40 CFR Part 763, Subpt. 3, or that perimeter area levels are no more than background levels representing the same area before the asbestos work began.

c. HVAC systems shall be isolated in the regulated area by sealing with a double layer of 6 mil plastic or the equivalent;

d. Impermeable drop-cloths shall be placed on surfaces beneath all removal activity;

e. All objects within the regulated area shall be covered with impermeable drop-cloths or plastic sheeting which is secured by duct tape or an equivalent.

f. Where a negative exposure assessment cannot be produced, or where exposure monitoring shows that a PEL is exceeded, ventilate the regulated area to move contaminated air away from the breathing zone of employees toward a HEPA filtration or collection device.

3.2.5.1 Negative Pressure Enclosure (NPE) Systems

A Negative Pressure Enclosure (NPE) System shall be used where the configuration of the work area does not make the erection of the enclosure infeasible. Specifications and work practices shall be as required in 29 CFR 1926.1101(g)(5).

3.2.5.2 Glovebag Systems

Glovebag systems shall be used to remove PACM and/or ACM from straight runs of piping with the following specifications and work practices. Each glovebag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be done. Shall be smoke-tested for leaks and any leaks sealed prior to use and may be used only once and may not be moved. Shall not be used on surfaces whose temperature exceeds 150 degrees. Prior to disposal, they shall be collapsed by removing air within them using a HEPA vacuum. Before beginning the operation, loose and friable material adjacent to the glovebag/box operation shall be wrapped and sealed in two layers of six mil plastic or otherwise rendered intact.

Where system uses attached waste bag, such bag shall be connected to collection bag using hose or other material which shall withstand pressure of ACM waste and water without losing its integrity. Sliding valve or other device shall separate waste bag from hose to ensure no exposure when waste bag is disconnected.

At least two persons shall be required to perform Class I glovebag removals, refer to the OSHA standard.

3.2.5.3 Negative Pressure Glove Bag Systems

A Negative Pressure Glove Bag System shall be used to remove ACM or PACM from piping. Attach HEPA vacuum systems or other devices to bag to prevent collapse during removal and run continually during the operation. Where a separate waste bag is used along with a collection bag and discarded after one use.

3.2.5.4 Negative Pressure Glove Box Systems

A Negative Pressure Glove Box System shall be used to remove ACM or PACM from pipe runs. Box shall be constructed with rigid sides and made from metal or other material which can withstand the weight of the ACM and PACM and water used during removal. A negative pressure generator shall be used to create negative pressure in system. An air filtration unit shall be attached to the box. The box shall be fitted with gloved apertures. An aperture at the base of the box shall serve as a bagging outlet for waste ACM and water. A back-up generator shall be present on site. The box shall be smoke tested prior to each use. At least two persons shall perform the removal.

3.2.5.5 Water Spray Process System

N/A

3.2.5.6 Intact Asbestos Insulated Pipe Removal

When both piping and insulation are to be removed intact, wet the insulation, then, using glovebag technique, remove 10-inch to 12-inch section of the pipe insulation and encapsulate exposed edges of the asbestos insulation to remain, remove the glovebag, cut and remove the intact insulated pipe. Long components removed intact may be wrapped in 2 layers of 6-mil polyethylene sheeting secured with tape at the ends, prior to or after cutting the pipe, for transport to the landfill. Intact insulated pipe shall be removed in manageable sections.

3.2.5.7 Exposed Pipe Insulation Edges

Encapsulate exposed edges of asbestos insulation to remain. Wet and cut the rough ends true and square with sharp tools and encapsulate the edges with a l/4-inch thick layer of insulating cement trowelled to a smooth, hard finish. When cement is dry, lag the end with a layer of fiberglass cloth and thermal insulation adhesive, overlapping the existing ends by 4 inches. When insulating cement and cloth are an impractical method of sealing raw edges of asbestos, take appropriate steps to seal the raw edges as approved by the Rath Building's Representative. Remove existing asbestos insulation for new piping connections during the asbestos handling and disposal procedures as specified herein.

3.2.5.8 Asbestos Contaminated Soil

The area of contaminated soil is to be removed of by the following procedures:

a. Before the soil removal commences, mark the wall in the area(s).
b. Using small shovels, the soil shall be removed to a minimum depth of 3 inches.
c. Verification of the depth will be made by measurement from the floor surface to the bottom of the wall mark.
d. As an option to the above procedure, the Contractor may encapsulate the soil area with American Coating's "Earth Coat" process or equivalent approved soil encapsulant.

3.2.6 Class II Abatement Requirements

Class II asbestos work shall be performed by complying with work practices and controls designated for each type of asbestos work to be performed set out in 29 CFR1926.1101 ((g)(7)). Class II work also may be performed using a method allowed for Class I work, except that glove bags and glove boxes are allowed if they fully enclose the Class II material to be removed.

3.2.6.1 Vinyl and Asphalt Flooring Materials

For removing vinyl and asphalt flooring materials which contain ACM:

a. Flooring or its backing shall not be sanded.
b. Vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) shall be used to clean floors.
c. Resilient sheeting shall be removed by cutting with wetting of the snippoint and wetting during delamination. Rip-up of resilient sheet floor material is prohibited. Sheet flooring is considered a friable material once it is disturbed and must be removed as a friable material using full containment procedures.
d. All scraping of residual adhesive and/or backing shall be performed using wet methods.
e. Dry sweeping is prohibited.
f. Mechanical chipping is prohibited unless performed in a negative pressure enclosure which meets the requirement of this section.
g. Tiles shall be removed intact, unless it is demonstrated that intact removal is not possible.
h. When tiles are heated and can be removed intact, wetting may be omitted.
i. Resilient flooring material including associated mastic and backing shall be assumed to be asbestos containing unless a Rath Building's Representative determines that it is asbestos-free using recognized analytical techniques and a licensed State inspector.

3.2.6.2 Roofing Material Removal

a. Roofing material shall be removed in an intact state to the extent feasible.
b. Wet methods shall be used where feasible.
c. Cutting machines shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety.
d. All loose dust left by the sawing operation must be HEPA vacuumed immediately.
e. Unwrapped or unbagged roofing material shall be immediately lowered to the ground via covered dust-tight container, crane or hoist, or placed in an impermeable waste bag or wrapped in plastic sheeting and lowered to ground no later than the end of the work shift.
f. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust.
g. Roof level heating and ventilation air intake sources shall be isolated or the ventilation system shall be shut off.

3.2.6.3 Cementitious Asbestos-Containing Siding and Shingles or Transite Panels

a. Cutting, abrading or breaking siding, shingles, or transite panels, shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release cannot be used.
b. Each panel or shingle shall be sprayed with amended water prior to removal.
c. Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.
d. Nails shall be cut with flat, sharp instruments.

3.2.6.4 Gaskets Containing ACM

a. If visibly deteriorated and unlikely to be removed intact, removal shall be undertaken within a glovebag.
b. The gasket shall be thoroughly wetted with amended water prior to it's removal.
c. The wet gasket shall be immediately placed in a disposal container.
d. Any scraping to remove residue must be performed wet.

3.2.6.5 Transite Board Removal Method

The wallboard material shall be sprayed with a lockdown sealant in order to reduce the potential of fiber release and the fasteners and board shall be removed. After removal, the wallboard shall be wrapped in two layers of 6-mil plastic and sealed with tape. If the size of the wallboard permits, the wrapped material shall be placed in drums for disposal. The wallboard shall not be sawed, crushed or abraded at any time during removal. Clean up shall consist of HEPA vacuuming any accumulated asbestos debris and spraying of lockdown sealant on the framing to which the wallboard material was fastened.

3.2.6.6 Trowelled-On Wall Plaster Removal Method

The material is sprayed with amended water and saturated sufficiently to wet it to the substrate without causing excess dripping. Remove the saturated material in small sections. The asbestos material is sprayed repeatedly during the work process to maintain wet conditions and to minimize asbestos fiber dispersion. As it is removed, the material is placed in 6-mil plastic bags and appropriate containers for disposal.

3.2.6.7 Any other Class II Removal of ACM

a. The material shall be thoroughly wetted with amended water prior and during its removal.
b. The material shall be removed in an intact state unless the employer demonstrates that intact removal is not possible.
c. Cutting, abrading, or breaking the material shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release are not feasible.
d. ACM removed shall be immediately bagged or wrapped, or kept wetted until transferred to a closed receptacle, no later than the end of the work shift.

3.2.7 Class III Asbestos Work

Class III work shall be performed using wet methods. To the extent feasible, work shall be performed using local exhaust ventilation. Where disturbance involves drilling, cutting, etc., use impermeable drop-cloths, and shall isolate the operation using mini-enclosures or glovebag systems. Any work which involves the disturbance of TSI requires the use of respirators.

3.3 COLLECTION

3.3.1 Non-friable Non-Regulated Asbestos Containing Material (Non-RACM)

The following types of non-friable ACM found in this project will be considered RACM and do require special collection action:

Vinyl Asbestos Flooring
Sealants Mastics

The notification requirements of Para. 1.4.2 are still applicable, however, to Non-RACM.

3.3.2 Regulated Asbestos Containing Material (RACM)

Asbestos containing material shall be removed in manageable sections. Removed material should be containerized before moving to a new location for continuance of work. Surrounding areas within the 25-foot perimeter shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up.

Maintain surfaces of the regulated area free of accumulations of asbestos fibers. Restrict the spread of dust and debris; keep waste from being distributed over the general area. Do not dry sweep or blow down the space with compressed air. Clean all surfaces in the work area and other contaminated areas with water and/or HEPA vacuum equipment. After cleaning the work area, allow 24 hours for settlement of dust and wet clean or clean with HEPA vacuum equipment all surfaces in the work area. When asbestos removal, disposal, and cleanup are complete, the Contractor shall certify, in writing, that the concentration of airborne fibers in the regulated area is less than 0.0l fibers (longer than 5 micrometers) per cubic centimeters of air. Do not remove the regulated area enclosure [or roped-off perimeter] and caution signs prior to the Rath Building’s Representative's receipt of the certification. After final cleanup, remove filters on the building HVAC system and provide new filters. Dispose of filters as asbestos-contaminated waste. Reestablish HVAC, mechanical, and electrical systems in proper working order. The Rath Building’s Representative will visually inspect the affected surfaces for residual asbestos material and accumulated dust; the Contractor shall re-clean areas showing dust or residual asbestos materials. If re-cleaning is required, monitor the airborne fiber concentration after re-cleaning. Notify the Rath Building’s Representative before unrestricted entry is permitted. The Rath Building’s Representative shall have the option to perform independent monitoring to certify the areas are safe before entry is permitted.

Collect asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing which may produce airborne concentrations of asbestos fibers; place in sealed impermeable bags imprinted with a caution label (Para. 2.6.2) and shall also be labeled with the name of the Contractor and the location at which the waste was generated. The sealed bags shall then be placed in a second sealed impermeable bag also imprinted with the warning label. Place bags in disposable asbestos-waste drums.

Label wrapped materials that will not fit in drums in the same manner as described in para. 1. above.

3.3.2.1 Removing Material Intact

Asbestos containing material removed from the building shall not be dropped or thrown to the ground. Material should be removed as intact sections whenever possible and carefully lowered to the ground. Materials between 15 and 50 feet above the ground may be containerized at elevated levels or placed into inclined chutes or scaffolding for subsequent collection and containerization. Asbestos materials in open containers shall be kept wet at all times.

3.3.2.2 Containers

Containers (drums or 6-mil polyethylene bags) shall be sealed when full. Wet material will be heavy and double bagging of waste material is usually necessary. A determination of need for single or double bags must be made early in the abatement process and approved by the Rath Building's Representative. Bags, if used, shall not be overfilled. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhand knot or by taping in gooseneck fashion. Do not seal bags with wire or cord. Bags may be placed in drums for staging and transportation to the landfill. Bags shall be decontaminated on exterior surfaces by wet cleaning before being placed in clean drums and sealed with locking ring tops. Where unusual circumstances prohibit use of plastic disposal bags or drums, the Contractor shall submit, in the asbestos plan, an alternate proposal for removal, containerizing, and disposal of the asbestos materials and fibers.

3.3.2.3 Sharp-Edged Components

Asbestos containing or contaminated waste with sharp edged components (e.g. nails, screws, metal lath, tin sheeting) that could otherwise tear polyethylene bags shall be placed into drums for disposal.

3.3.2.4 Asbestos Contaminated Soil

The removed soil shall be placed in 6-mil plastic bags, sealed and then placed in asbestos waste drums for disposal. Do not overfill plastic bags.

3.3.2.5 Wastewater

b. Pre-filtering. Any water produced by the decontamination of either equipment or persons shall be (1) collected, (2) filtered through a system capable of trapping particles 5 microns and larger, specifically designed to remove asbestos fibers, and (3) filtrate disposed into a local sanitary sewer system.

c. Filter System. The filtration system shall contain a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system by large particles. Disposable filters shall be treated as asbestos waste.

3.4 DISPOSAL OF ACM

3.4.1 Nonfriable Non-Regulated Asbestos Containing Material (Non-RACM)

The following types of non-friable ACM found in this project are considered RACM and do require special disposal action:

None – All materials shall be disposed of as Asbestos Containing Waste

The notification requirements of Para. 1.4.2 are still applicable, however, to Non-RACM.

3.4.2 Regulated Asbestos Containing Material (RACM)

a. Once drums, bags and otherwise containerized asbestos containing materials have been removed from the work area, they shall be loaded into an enclosed truck for transportation to the designated landfill. Asbestos waste shall not be allowed to be placed in trucks with non-asbestos waste.

b. The enclosed cargo area of the truck shall be free of debris and lined with 6-mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapped and taped into place so that no materials may escape to the environment. All local/State and Federal regulation must be followed.

c. Drums shall be placed on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Do not throw containers into the cargo area.

d. Personnel loading asbestos containing waste shall be protected by disposable clothing including head, body and foot protection and at a minimum, half-facepiece, air purifying, dual cartridge respirators equipped with high efficiently particulate air (HEPA) filters.

e. Large steel dumpsters (roll-off type) may be used for asbestos waste disposal. These should be lined with polyethylene and should have doors, tops or covers that can be closed to prevent vandalism or other disturbance of the containerized asbestos debris and wind dispersion of asbestos fibers. Uncontainerized asbestos materials shall not be placed in these type dumpsters, nor shall they be used for non-asbestos waste. Bags shall be placed, not thrown, into these containers to avoid splitting.

f. Dispose of waste asbestos material at an Environmental Protection Agency (EPA) [at a State] permitted sanitary landfill [off **City** property].

Note: Iowa law mandates that all asbestos waste taken from a county must be disposed of in that counties designated landfill.

g. For temporary storage, store sealed impermeable bags in asbestos waste drums. An area for interim storage of asbestos waste-containing drums will be assigned by the Rath Building's Representative or by an authorized representative. This area must be secure. No ACM wastes, except those properly labeled and properly containerized and physically located in the assigned holding area shall be allowed to remain at the site overnight.

h. Procedure for hauling and disposal shall comply with 40 CFR 6l, Subpart M, 40 CFR 241, 40 CFR 257, and State, regional and local standards. Vehicles used to transport asbestos-containing waste material must be marked as follows:

Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible. The markings must:

1. Be displayed in such a manner and location that a person can easily read the legend.
2. Conform to the requirements for 51 cm x 36 cm (20 in. x 14 in.) upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
3. Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend

DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only

Notation
2.5 cm (1 inch) Sans Serif, Gothic or Block
2.5 cm (1 inch) Sans Serif, Gothic or Block
1.9 cm (3/4 inch) Sans Serif, Gothic or Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

i. Upon reaching the landfill, trucks are to approach the dump location as closely as possible for unloading of the asbestos containing waste.

j. Bags, drums and components shall be inspected as they are offloaded at the disposal site. Material in damaged containers shall be repacked in empty drums or bags as necessary.

k. Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of trucks since the weight of wet material could rupture containers.

l. Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body and foot protection and, at a minimum, half-facepiece, air-purifying, dual cartridge respirators equipped with high efficiency particulate air (HEPA) filters. Following the removal of all containerized waste, the truck cargo area shall be decontaminated to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site. If landfill personnel have not been provided with personal protective equipment for the compaction operation by the landfill operator, Contractor shall supply protective clothing and respiratory protection for the duration of this operation.

13. Shipment Records

d. Maintain waste shipment records, using a form similar to that shown at the end of this section and include the following information:

1. The name, address, and telephone number of the waste generator.
2. The name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.
3. The approximate quantity in cubic meters (cubic years).
4. The name and telephone number of the disposal site operator.
5. The name and physical site location of the disposal site.
6. The date transported.
7. The name, address, and telephone number of the transporter(s).
8. A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

ii. Provide a copy of the waste shipment record, described above to the disposal site owners or operators at the same time as the asbestos-containing waste material is delivered to the disposal site.

iii. For waste shipments where a copy of the waste shipment record, signed by the owner or operator of the designated disposal site, is not received by the Contractor within 35 days of the date the waste was transported, contact the owner or operator of the designated disposal site to determine the status of the waste shipment. The Contractor shall report in writing to the NESHAP-administering agency if a copy of the waste shipment record, signed by the owner or operator of the designated waste disposal site, is not received by the Contractor within 45 days of the date the waste was transported. Include in the report the following information:

1. A copy of the waste shipment record for which a confirmation of delivery was not received, and
2. A cover letter explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.

e. Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site, for at least 2 years.

f. Provide to the Rath Building’s Representative within 3 working days following delivery of asbestos containing waste material (ACWM), copies of all waste shipment records. Also within 3 working days of initiation, provide to the Rath Building’s Representative copies of any correspondence with the NESHAP-administering agency.

Furnish upon request, and make available for inspection by the NESHAP- administering agency, all records under this section.

3.4.3 Wastewater

It is the Contractor's responsibility to comply with any local wastewater systems' regulations or policy regarding the disposal of wastewater from asbestos abatement activities.

3.5 CLEANUP AND FINAL CLEARANCE

3.5.1 Visual Inspection After Cleanup

Prior to the performance of final air monitoring, the Contractor and the Rath Building's Representative or his representative shall perform a visual inspection for asbestos dust/residue. The final inspection will be conducted per the American Society for Testing and Materials (ASTM) Designation E1368-90 – Standard Practice for Visual Inspection of Asbestos Abatement projects. The contractor will contact the Rath Building's Representative (**City**) who will contact the third party inspection company 24 hours prior to the inspection time.

If residue is found, additional wipe-down/vacuuming shall be performed to satisfaction of the Rath Building's Representative. The Contractor will be assessed a penalty for the cost of any additional consulting services incurred by the Rath Buildings or their Representative. The monetary sum will be based on a cost of $95.00 per hour. For each hour necessary to satisfactorily complete the project in excess of the number of work shifts/hours identified by the Rath Building's Representative/consultant.

i. Monitoring After Final Cleanup

Contractor shall meet the current OSHA standards.

3.5.3 Clearance Monitoring After Final Cleanup

After the asbestos removal area has passed the visual inspection, perform clearance air monitoring as specified in State of Iowa and the EPA, using aggressive air sampling methods. Aggressive air monitoring shall be performed at all regulated areas involving a negative pressure enclosure involving 10 or more linear feet or 15 or more square feet of friable asbestos materials. Aggressive air monitoring shall be performed as described in 40 CFR 763, Subpart E, Appendix A, Unit III paragraphs B, 7, and d. Sampling operations shall be performed by qualified individuals completely independent of the abatement contractor and pre-selected by the Rath Buildings. Provide area monitoring and establish the Clearance sampling will also be ran after final cleanup when an enclosure is not required. The fiber counts from the samples shall be less than 0.0l fibers (longer than 5 micrometers) per cubic centimeter of air. Results shall be reported to the Rath Buildings Administration or representative within 48 hours of sampling. Should any of the final samplings indicate a higher value, the Contractor shall take appropriate actions to re-clean the area and shall repeat the monitoring. The clearance air sampling shall be submitted to the Rath Building's Representative as proof of completion and acceptance. The Contractor will be assessed a penalty for the cost of additional Consulting services incurred by the Rath Buildings if the clearance samples fail and additional sets are ran. The monetary sum will be based on a cost of $95.00 per hour and $35 per analyzed PCM cassette or $150.00 per analyzed TEM cassette, with a lab turnaround of 24 hours (plus shipping costs).

3.5.4.1 Sampling

Sampling under aggressive conditions shall include the following procedures:

a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as l horsepower leaf blower) against all walls, ceiling, floors, ledges and other surfaces in the room. This should take at least 5 minutes per 1000 sq. ft. of floor.
b. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.
c. Start the sampling pumps and sample for the required time.
d. Turn off the pump and then the fan(s) when sampling is complete.

3.5.4.2 Air Clearance Failure

Should clearance sampling results fail to meet the final cleanup requirements, the Contractor shall take appropriate action at no additional cost to the Rath Buildings, the Contractor will be assessed a penalty for the cost of additional Consulting services incurred by the Rath Buildings, to re-clean, resample, and analyze data until final cleanup requirements are met. The monetary sum will be based on a cost of $95.00 per hour and $35.00 per analyzed PCM sample or $150.00 per analyzed TEM cassette (plus shipping costs).

3.5.5 Site Inspection

While performing asbestos removal work, the Contractor shall be subject to onsite inspection by the Rath Building's Representative who may be assisted by safety or health personnel. If the work is in violation of specification requirements, OSHA regulations, or EPA regulations the Rath Building's Representative will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

3.5.6 Sealing Permanent Exposed Surfaces (RACM)

After the asbestos material has been removed and HEPA vacuumed to the greatest extent possible, all permanent asbestos exposed interior surfaces shall be coated with an approved lockdown sealant to permanently bind any remaining fibers in place. Sealant shall be applied by airless sprayers and in accordance with the sealant manufacturers recommendations.

3.5.7 Sealant Tint

The sealant shall have an adequate tint to easily distinguish between sections sealed and sections not sealed.

3.5.8 Reestablishment of the Work Area and Systems

Areas will be inspected by the Rath Building's Representative who will determine the need's of the facility owner to replace or deem areas damaged.

3.5.9 Reestablishment of the Work Area

Reestablishment of the work area shall only occur following the completion of clean-up procedures and after clearance air monitoring has been performed and documented to the satisfaction of the Rath Building's Representative.

3.5.10 Visual Inspection

The Contractor and Rath Building's Representative shall visually inspect the work area for any remaining visible residue. Evidence of asbestos materials will necessitate additional cleaning requirements.

3.5.11 Clearance of Work Area

Following satisfactory clearance of the work area, remaining barriers may be removed and disposed of as asbestos contaminated waste.

PART 4 CHANGE ORDERS AND CONSTRUCTION CHANGE DIRECTIVES SPECIFIC AUTHORITY

4.1 OBJECTIVE

To establish guidelines for change order and construction change directive approval for construction projects.

4.2 OVERVIEW

This document describes the issues which must be addressed in approving change orders and construction change directives.

4.3 APPROVALS

All change orders and construction change directives (CCDs) must be approved by the Owner or designee., in writing.

4.4 TIME EXTENSIONS

All change orders must address required time extensions. If no increase in time is necessitated by the change, the change order must contain a statement to that effect.

4.5 FUNDING OF CHANGE ORDERS

No change order can be approved which is funded from funds other than those in the approved project. If a change order is requested which requires the use of non-project funds, those funds must be added to the budget and released prior to the execution of the change order.

4.6. PROGRAM COMPLIANCE

The work required by the change order or CCD must be within the scope of the approved owner or designee.

4.7 CONSTRUCTION CHANGE DIRECTIVES

Only changes for which the contractor is in absolute agreement with the terms on the face of the change order and for which the backup to the change order contains no qualifying language from the contractor, may be issued as change orders. Changes for which the terms are unresolved must be issued as construction change directives. Prior to execution of a construction change directive, the owner must set aside adequate budget to cover the entire contractor's request. CCDs are numbered separately from change orders. When a CCD is agreed upon, a change order should be issued.

4.8 All change order requests are reviewed by the designee who will ensure that the following information is included:

- 4.8.1 A description and justification for the requested change(s) in relation to the original bid specifications
- 4.8.2 Documentation, as required, of the subcontractors' itemized costs and/or credits
- 4.8.3 The general contractor's summary of total costs and/or credits to effect the change order

4.8.4 The basis for any requested change in the contract completion date

4.9 The project designee examines the requested change order to determine that the request is justified and reasonable and that the information provided is accurate and submits his recommendation to the owner.

4.10 Approving a Change Order

The owner and/or designee is responsible for ensuring that change orders are approved by the appropriate official or agency as required below and for discussing with the owner's management for any unusual change order recommendations before final action is taken.

4.10.1 The basis for any requested change in the contract completion date
4.10.2 Provides facilities not included in the standards for facilities as approved by the owner
4.10.3 Authorizes bid alternatives specifically excluded in the award of the original contract
4.10.4 Extends the contract completion date
4.10.5 Significantly alters the design or extent of facilities provided for in the original contract documents
4.10.6 Is judged to be higher than the fair market value of the change
4.10.7 Is not acceptable to both the owner and/or designee
4.10.8 Results in the number of change orders for a project being determined as excessive

4.11 Deleting Work, Substituting or Replacing Equal Value of Work

Where the Owner desires to make a substitution and/or where the designee desires to delete a requirement for Work described in the Contract Documents, or where the scope of work requires a direction provided by the owner or designee constitutes a change in the Work required by the Contract Documents, the project designee shall prepare a price proposal for same and request that the owner acknowledge a Change Order. This process may be for addition or deletion to the original contract value and per the itemized listings of price offerings in the bid proposal. The contractor acknowledges, by submitting a signed bid proposal, that the owner may delete quantities of materials to be removed, or delete sections of the work without compensation to the contractor or pro-rate a reduction of contract value per deletion of original scope of work based upon the pricing for alternative service sheet in the bid proposal.

SECTION

3

07/28/2008

CITY OF WATERLOO, IOWA

COMMUNITY DEVELOPMENT
620 Mulberry St., Carnegie Annex • Waterloo, IA 50703 • (319) 291-4429 Fax (319) 291-4431

July 28, 2008

Via FAX (402) 571-7900
Darwin D. Rohde, President
Alloy Specialty
5850 Weininghoff Road
Omaha, NE 68134

RE: Authorization to Copy, Reproduce and Distribute
Asbestos Survey/Report for Rath Administration Building

Dear Mr. Rohde:

The CITY OF WATERLOO authorizes Alloy Specialty to copy, reproduce and distribute the Asbestos Survey Report prepared by AMI Environmental on behalf of the City. Alloy Specialty has been retained to prepared Plans and Specifications for the removal of asbestos based upon the AMI Environmental Survey/Report as well as provide other consultative services.

Sincerely,

Louis Starks
Contracts and Grants Coordinator

Cc: Noel Anderson, C P & D Director
Rudy D. Jones, Community Development Director
Tim Andera, Associate Planner

J:\LOUIS-S\Rath Administration Building\Authorization to utilize AMI Survey.doc

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:
AMI Environmental
8802 S. 135th Street, Suite 100
Omaha, Nebraska 68138

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 7ME091378031023 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 1/5000th 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 4b 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 11b 11c	--	--	--	--	--	--
Sheet flooring	Brown	--	Throughout first floor	48-01	--	--	--	--	--	Previously sampled
Plaster/Skim coat	White	--	Throughout building	48-02 48-06 48-09 48-37	--	--	--	--	--	Previously sampled

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

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 48-18**	**2%**	**Chry**	**F**	**Poor**	**2,500 SF**	**Previously sampled Drywall negative**
2" pipe insulation	**White**	**5**	**Throughout building**	**48-08 48-12 48-20**	**25% 2%**	**Chry Croc**	**F**	**Poor**	**1,800 LF**	**Previously sampled**
4" pipe insulation	**White**	**6**	**Throughout building**	**48-08 48-12 48-20**	**25% 2%**	**Chry Croc**	**F**	**Poor**	**6,000 LF**	**Previously sampled**
6" pipe insulation	**White**	**7**	**Throughout building**	**48-08 48-12 48-20**	**25% 2%**	**Chry Croc**	**F**	**Poor**	**2,000 LF**	**Previously sampled**
8" pipe insulation	**White**	**8**	**Throughout building**	**48-08 48-12 48-20**	**25% 2%**	**Chry Croc**	**F**	**Poor**	**500 LF**	**Previously sampled**
10" pipe insulation	**White**	**9**	**Throughout building**	**48-08 48-12 48-20**	**25% 2%**	**Chry Croc**	**F**	**Poor**	**200 LF**	**Previously sampled**
Tank Insulation	**White**	**10,11**	**Basement, Mechanical room near tunnel and South wall in Kitchen**	**48-21 48-33**	**25% 10%**	**Chry 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

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

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

Description	Color	Photo #	Material Location	Sample #	%	Type	F/ NF	Cond	Est. Qty.	Comment
9"x 9" VFT checkerboard pattern and mastic	**Brown/ Red**	**16**	**Throughout basement 2nd floor, N. Central bathroom**	**48-13 48-23**	**15%**	**Chry**	**NF**	**Poor**	**17,000 SF**	**Previously sampled**
	Black			**48-27**	**2%**	**Chry**	**NF**	**--**		
Plaster on Beam	White	--	Basement, Mail room	48-14	--	--	--	--	--	Previously sampled
Insulation between cork layers	**White**	**19**	**Basement, A/C room Attic, East air handler**	**48-15**	**30% 3%**	**Chry Amos**	**F**	**Poor**	**200 SF**	**Previously sampled**
9"x 9" VFT checkerboard pattern and mastic	**Black/ Red**	**17**	**Basement, West office area 3rd floor, West room**	**48-16 48-17 48-36**	**10% 10%**	**Chry Chry**	**NF**	**Poor**	**3,800 SF**	**Previously sampled**
	Black			**48-39**	**--**	**--**	**NF**	**--**		
9"x 9" VFT and mastic	**White Black**	**18**	**3rd floor, North Central Room Basement, A/C room**	**48-19 10A 11A**	**15% 2%**	**Chry Chry**	**NF NF**	**Poor**	**1,400 SF**	**Previously sampled**
Mastic on cork insulation	**Black**	**20**	**Basement, Tunnel and freezers Attic, NE air handler Adams building, vault room**	**48-22 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**	**15**	**Basement, Cafeteria**	**48-26 48-30 48-31**	**10%**	**Chry**	**NF**	**Poor**	**5,000 SF**	**Previously sampled**
	Black				**2%**	**Chry**	**NF**			
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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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
Air duct seam mastic	**White**	**21**	**Throughout attic**	**48-47** **48-49**	**50%** **60%**	**Chry** **Chry**	**F**	**Poor**	**2,000 SF**	**Along cork seams**
Air Duct Insulation	**White**	**12,13**	**Attic, SW mech. room, NE duct and central duct** **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** **48-60**	**5%**	**Chry**	**NF**	**Poor**	**320 EA**	**Previously sampled 18 LF ea.**
Roof Flashing	**Black**	**27**	**Throughout roof**	**02A** **07A** **07B**	**10%**	**Chry** **Chry**	**NF** **NF**	**Poor** **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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****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
79	Radiator	Painted	White	1st Floor, Adams Building and Women's Restroom 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

BDL – Below Detection Limit
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LP – Lead Paint
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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
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

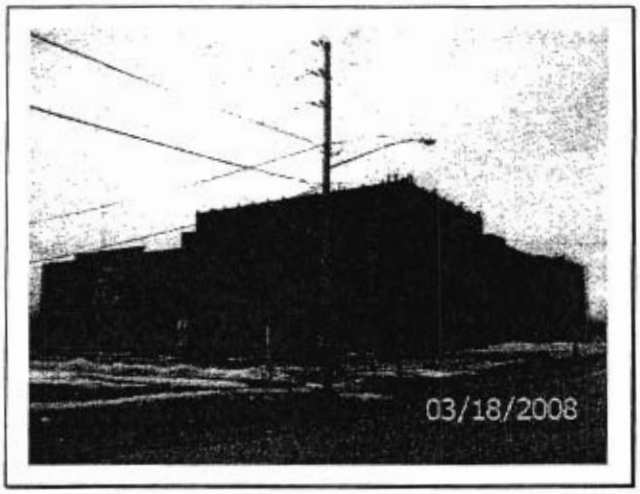


PHOTO 1	Viewing exterior of Rath Administration Building, looking Northeast.

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

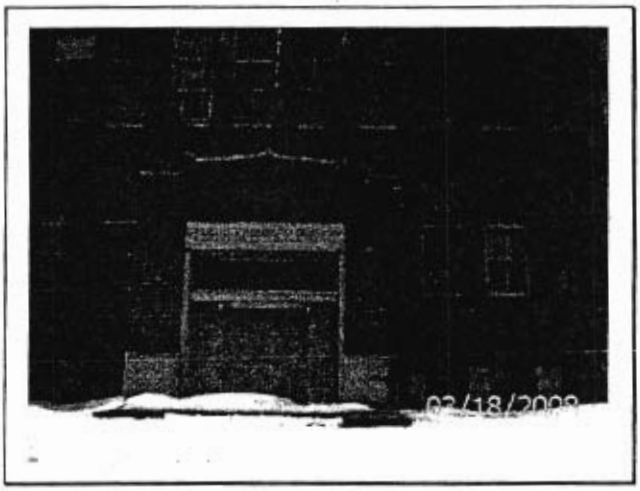


PHOTO 3	Viewing exterior of Rath Administration Building, North entrance.

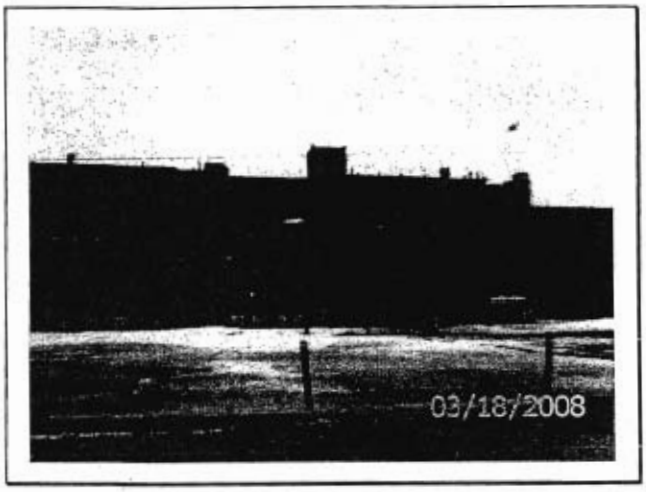


PHOTO 4	Viewing exterior of Rath Administration Building, looking North.

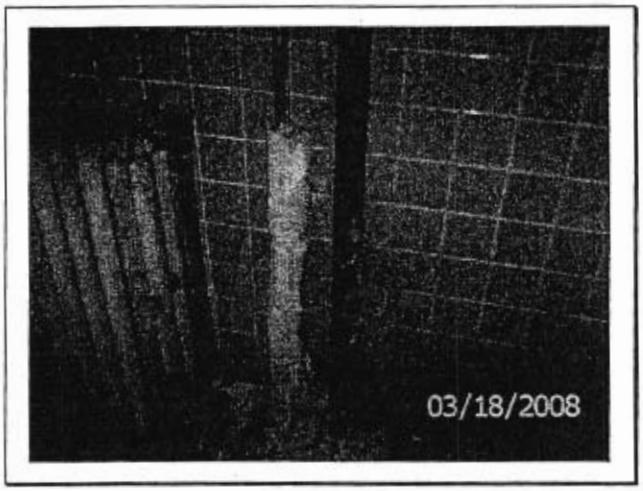


PHOTO 5 ACM Sample #48-08	Viewing 2" pipe insulation, women's restroom.

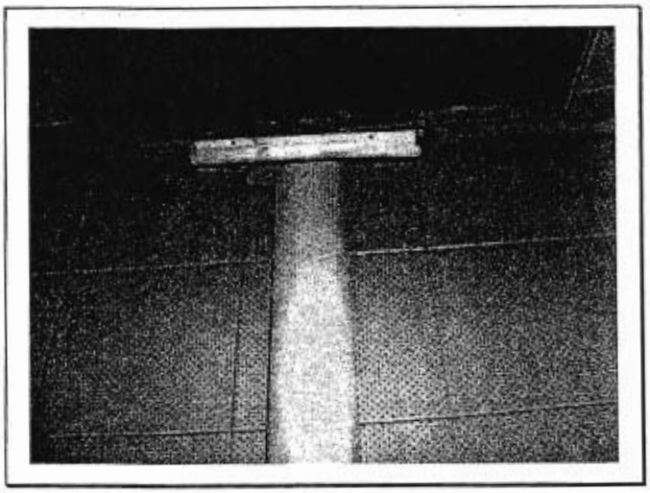


PHOTO 6 ACM Sample #48-12	Viewing 4" pipe insulation, 3rd floor.

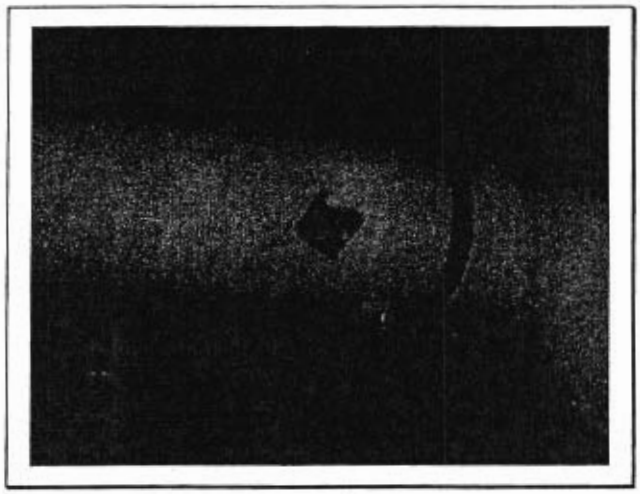


PHOTO 7 ACM Sample #48-20	Viewing 6" pipe insulation, Attic.

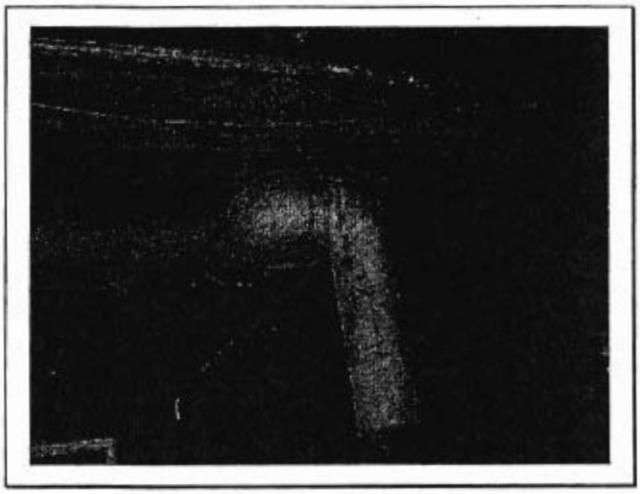


PHOTO 8 ACM Sample #48-20	Viewing 8" pipe insulation, Attic mechanical room.

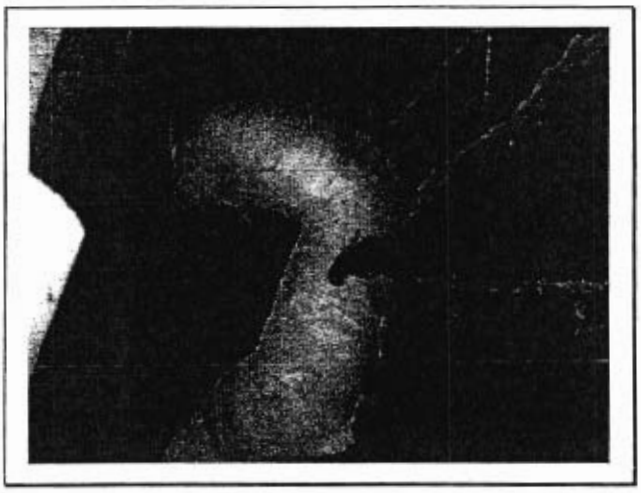


PHOTO 9 ACM Sample # 48-20	Viewing 10" pipe insulation, Basement near tunnel.

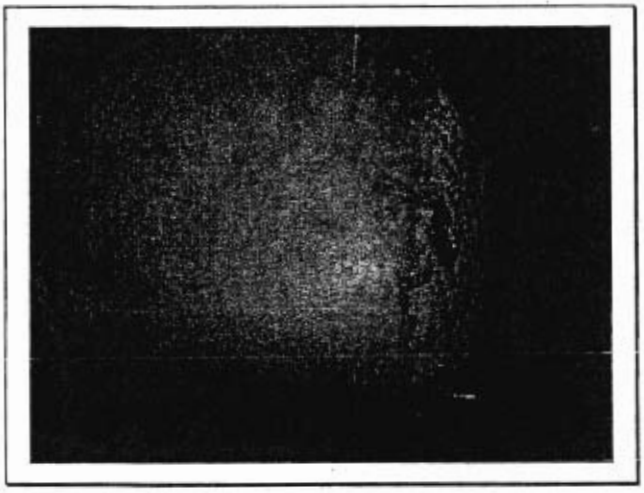


PHOTO 10 ACM Sample #48-21	Viewing white tank insulation, Basement, South wall in Kitchen.

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

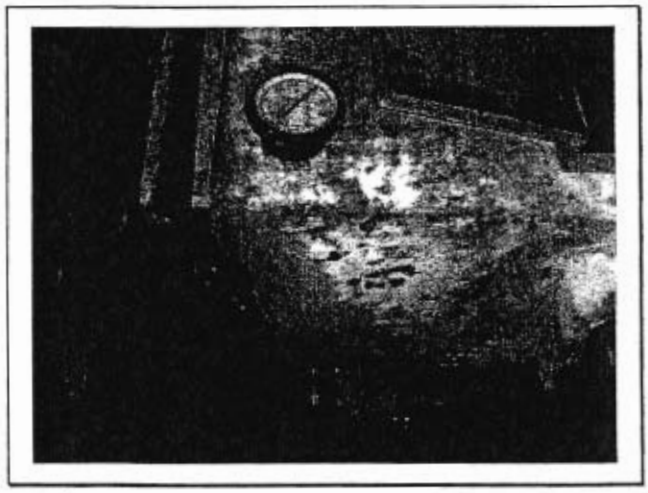


PHOTO 12 ACM Sample #48-50	Viewing white air duct insulation, Attic.

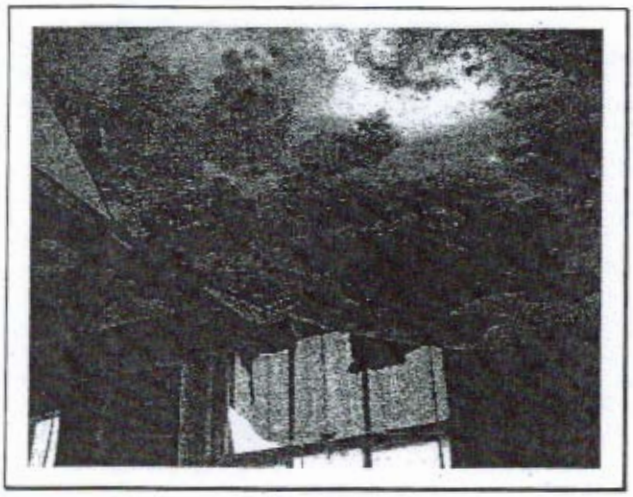


PHOTO 13 ACM Sample #48-50	Viewing white air duct insulation, Basement.

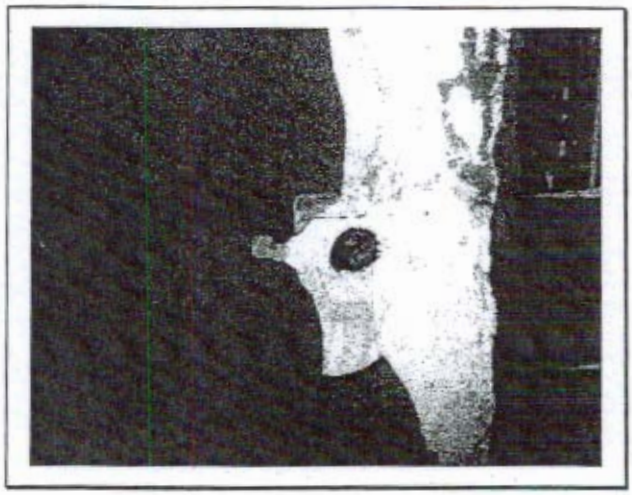


PHOTO 14 ACM Sample #48-10	Viewing 12"x 12" brown ceiling tile puck, Basement, telephone equipment room.

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

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

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

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

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

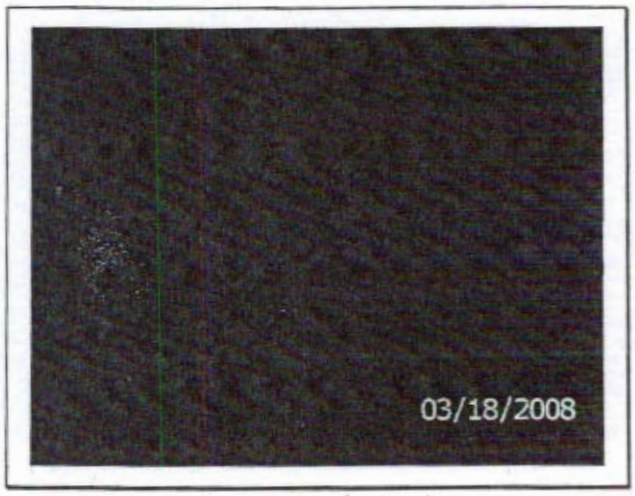


PHOTO 20 ACM Sample #48-22	Viewing black mastic on cork insulation, Attic Northeast air handler.

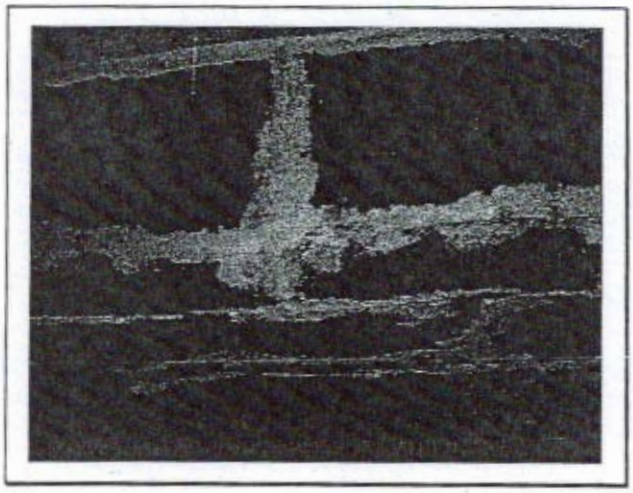


PHOTO 21 ACM Sample #48-47	Viewing white mastic on cork air ducts, Attic.

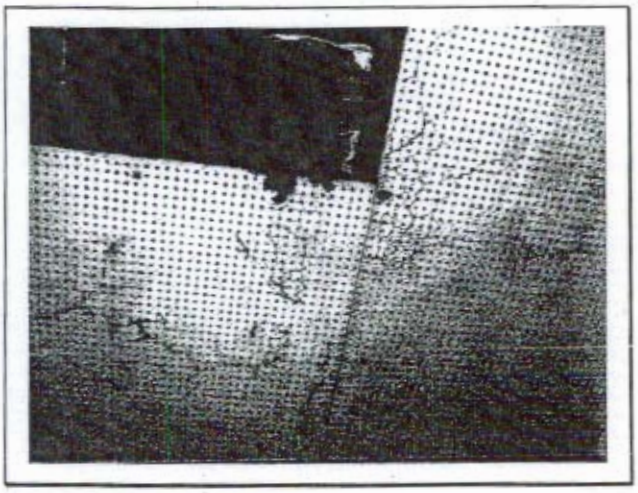


PHOTO 22 ACM Sample #48-25	Viewing transite ceiling tiles, Basement – Berner rooms.

PHOTO 23 ACM PACM	Viewing transite wall panels, Basement.

PHOTO 24 ACM PACM	Viewing transite wall panels, Attic.

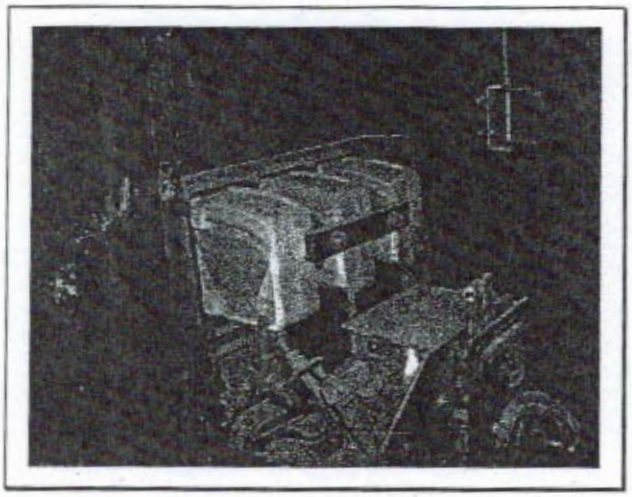


PHOTO 25 ACM PACM	Viewing transite conductors, East roof equipment room.

PHOTO 26 ACM Sample #48-29	Viewing acoustical spray-on ceiling, Basement home economics dining.

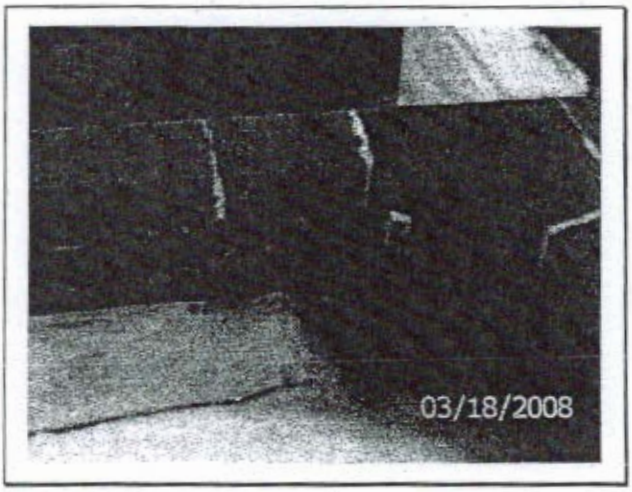


PHOTO 27 ACM Sample #02A	Viewing asbestos-containing roof flashing, Throughout roof.

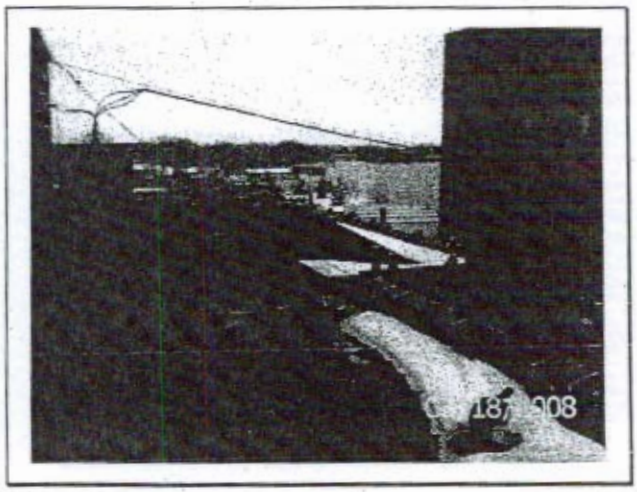


PHOTO 28 ACM Sample#08B-08I	Viewing asbestos-containing roofing felt, East side of building.

PHOTO 29 ACM Sample #48-59	Viewing asbestos-containing white window caulking, Exterior.

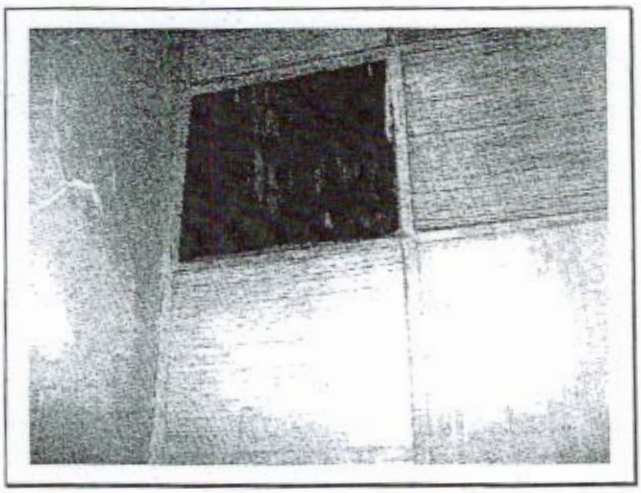


PHOTO 30 ACM Sample #8	Viewing asbestos-containing 12"x 12" black wall tile puck, 1st floor.

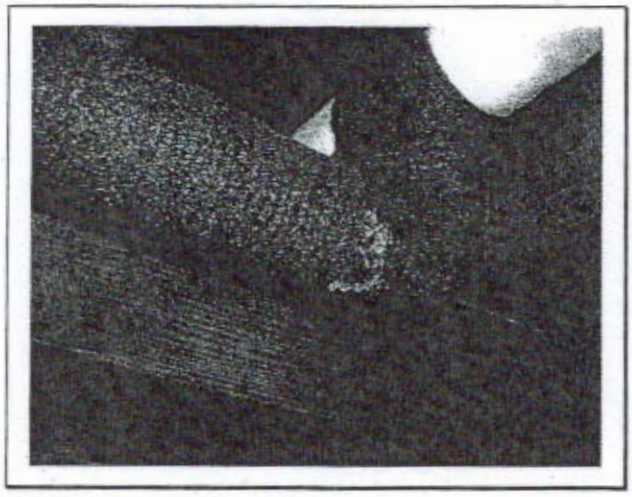


PHOTO 31 ACM Sample #10	Viewing asbestos-containing black pipe tar wrap, Basement NW storage area.

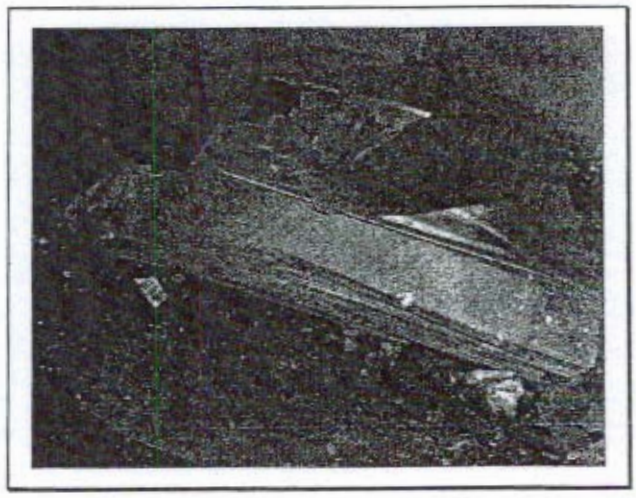


PHOTO 32 ACM PACM	Viewing transite panels, 1st floor North entrance.

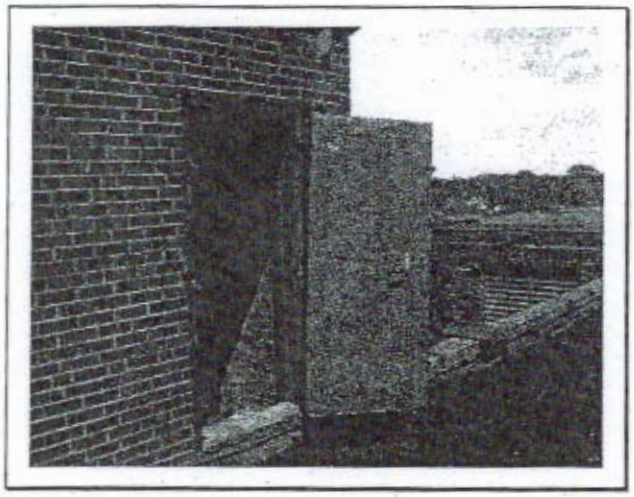


PHOTO 1	Viewing green roof entry door, Exterior – East side.
Sample #7	

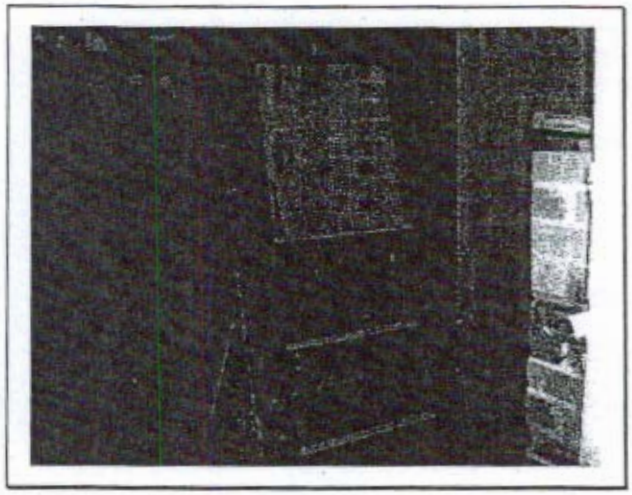


PHOTO 2	Viewing black roof access door, Attic.
Sample #8	

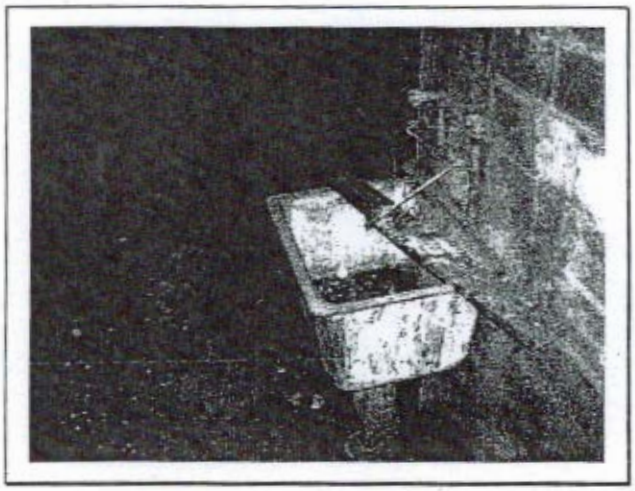


PHOTO 3	Viewing white sink, Attic.
Sample #13	

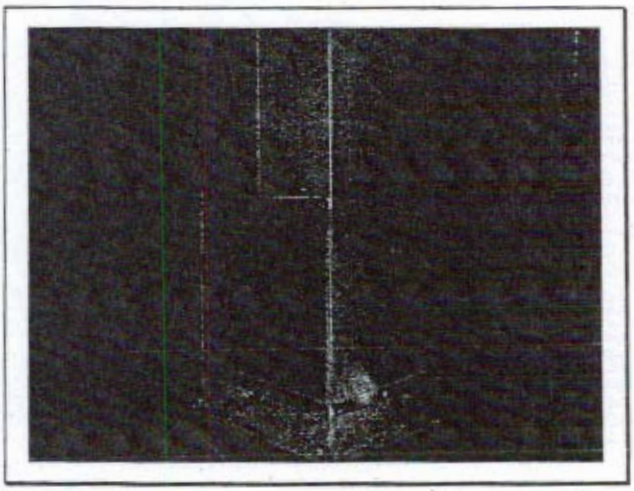


PHOTO 4	Viewing gold exhaust vent, Attic.
Sample #28	

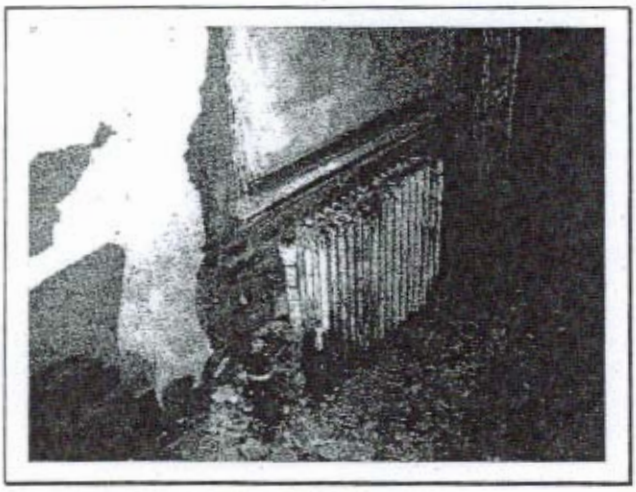


PHOTO 5	Viewing white radiator, 2nd floor.
Sample #38	

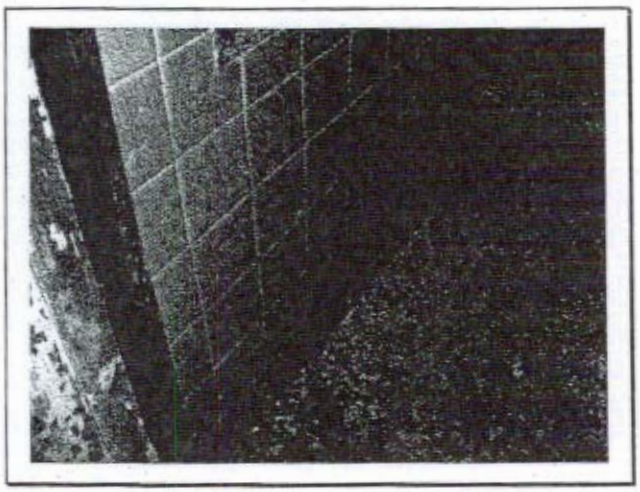


PHOTO 6	Viewing peach 4" wall tile and black tile trim, Throughout building.
Sample #39,41	

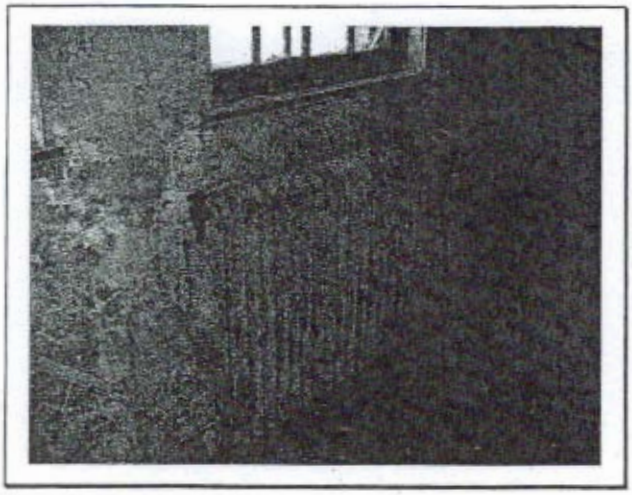


PHOTO 7	Viewing green radiator, 2nd floor.
Sample #63	

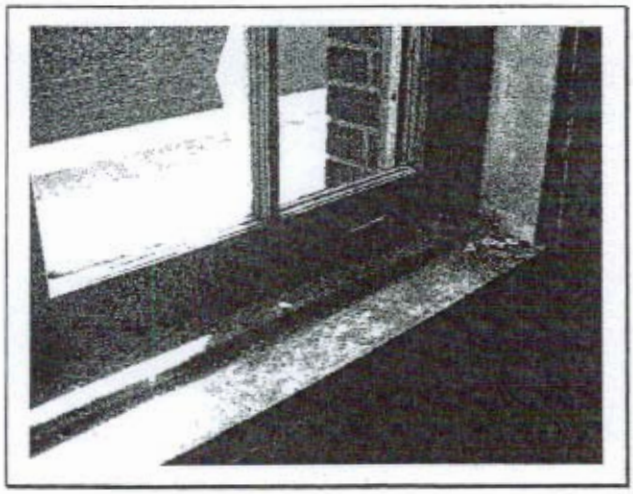


PHOTO 8	Viewing light gray window sash and sill, Throughout building
Sample #66,67	

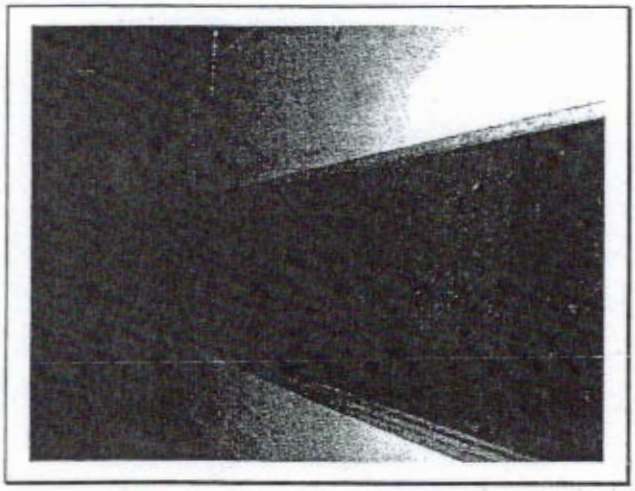


PHOTO 9	Viewing green chalkboard trim, 2nd floor – Sale Conference Room.
Sample #71	

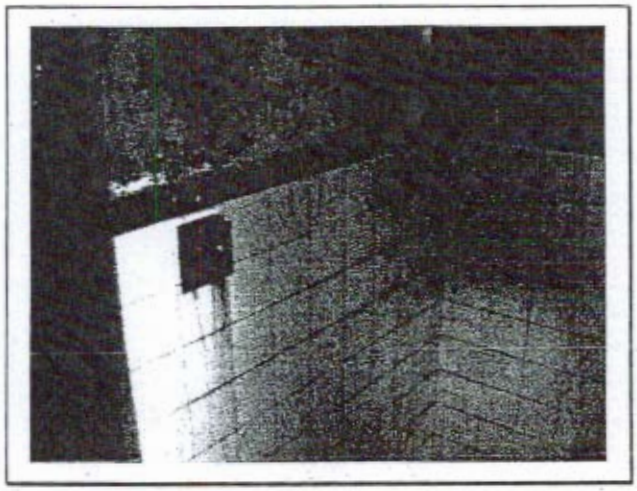


PHOTO 10	Viewing yellow 4" wall tile and black tile trim, 1st and 2nd floor – Men's restroom.
Sample #73,74	

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

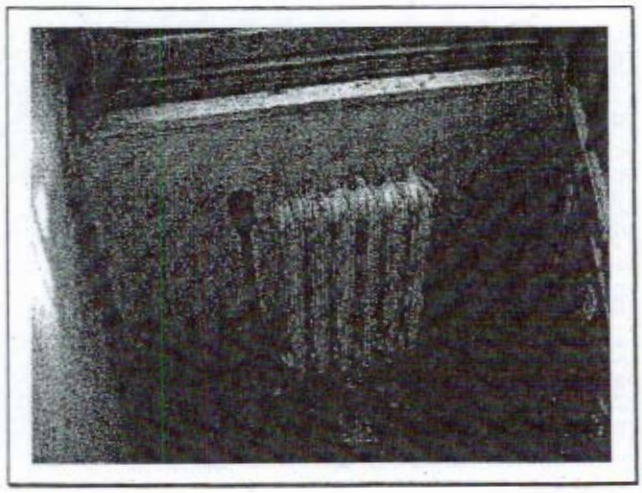


PHOTO 12	Viewing white radiator, 1st floor – Adam's building and Women's restroom, Basement – NW offices.
Sample #79	

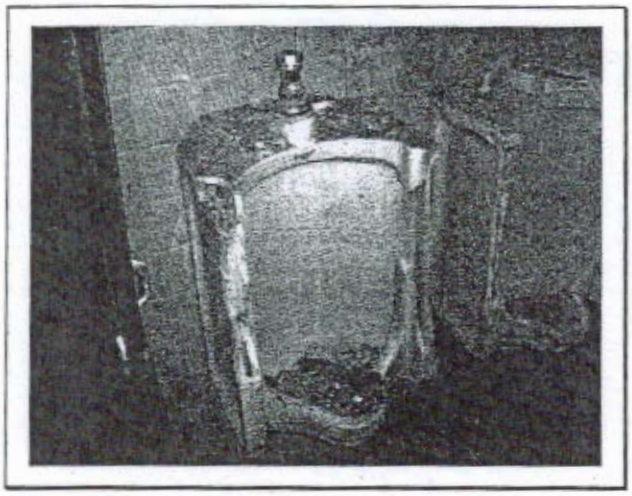


PHOTO 13	Viewing white urinal, Throughout restrooms.
Sample #80	

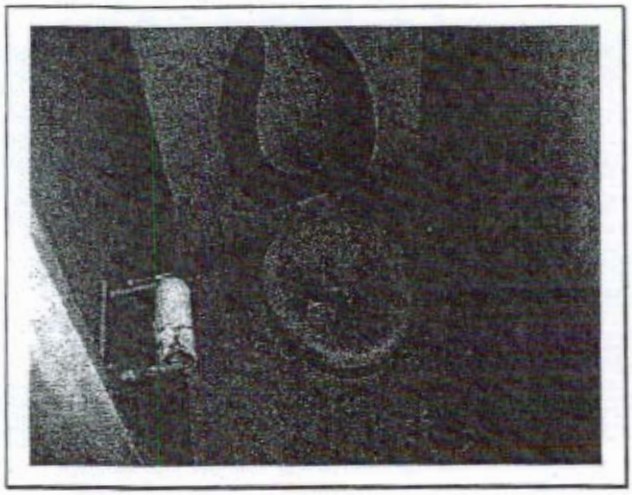


PHOTO 14	Viewing white toilet, Throughout restrooms.
Sample #81	

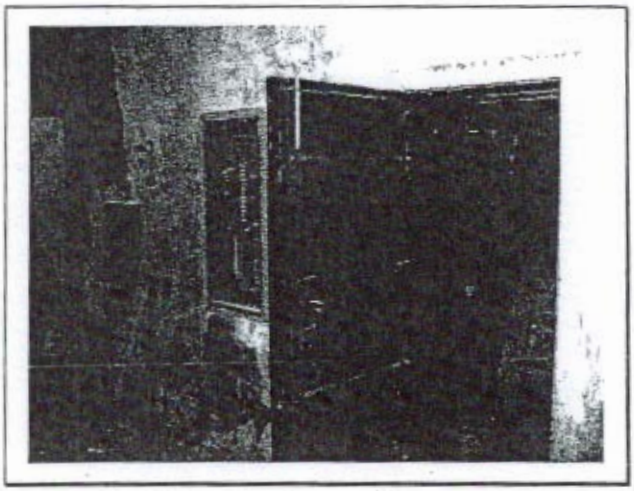


PHOTO 15	Viewing black vault door, 1st and 2nd floor.
Sample #84,107	

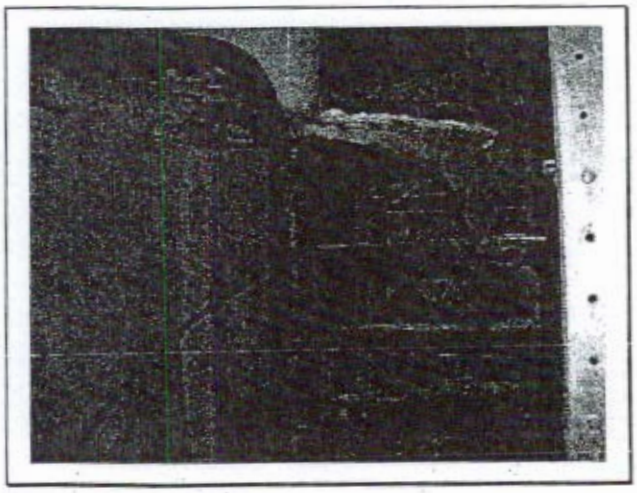


PHOTO 16	Viewing gray spiral staircase, 2nd floor – Vault.
Sample #85	

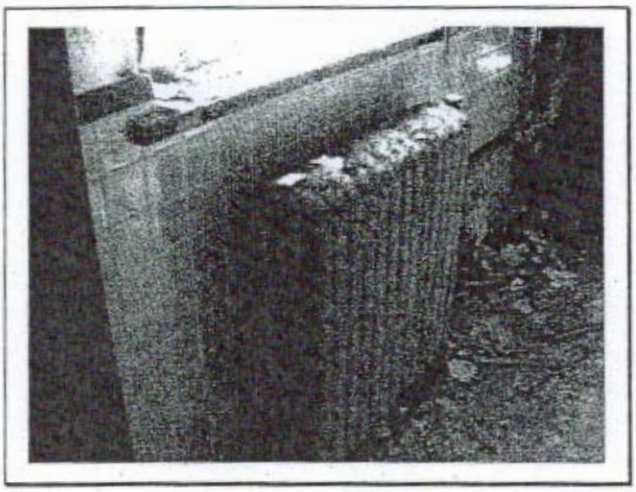


PHOTO 17	Viewing green radiator, 1st floor – Throughout.
Sample #86	

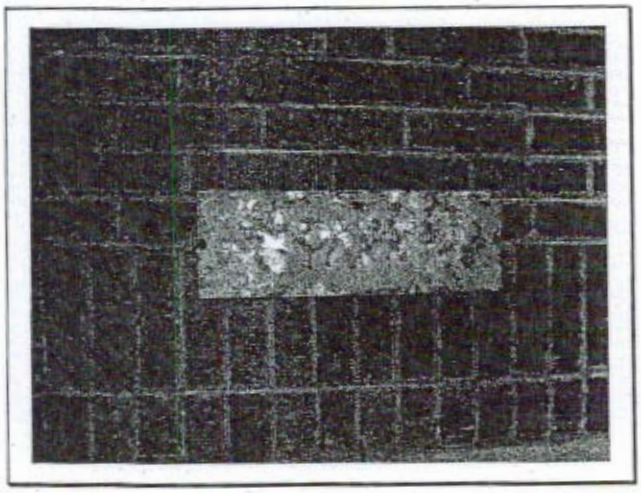


PHOTO 18	Viewing yellow "No Parking" sign, Exterior.
Sample #93,94	

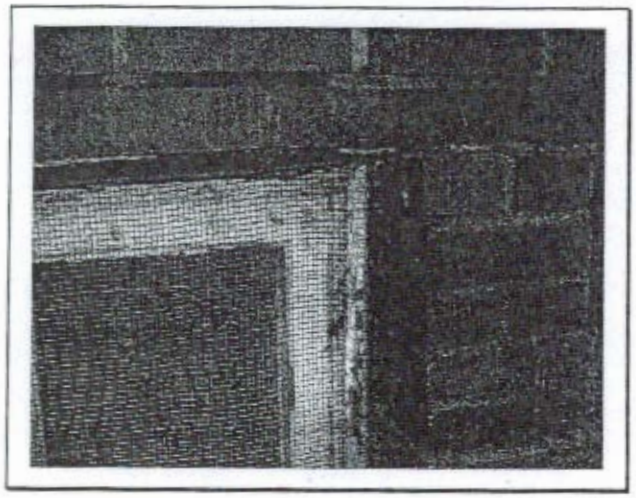


PHOTO 19	Viewing white storm window, Exterior – NW side.
Sample #95	

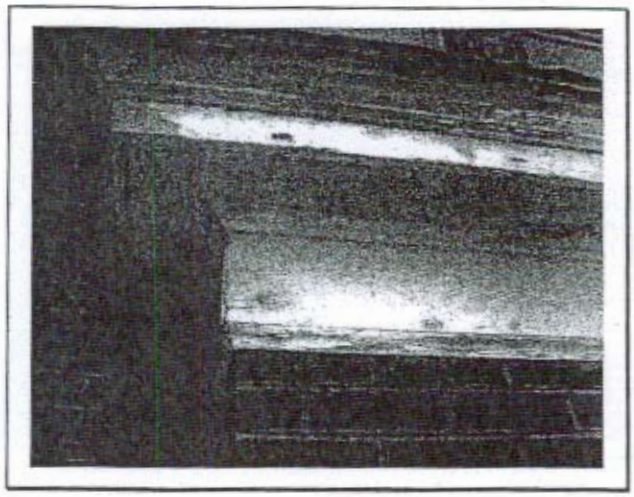


PHOTO 20	Viewing light yellow soffit/fascia board, Exterior.
Sample #96	

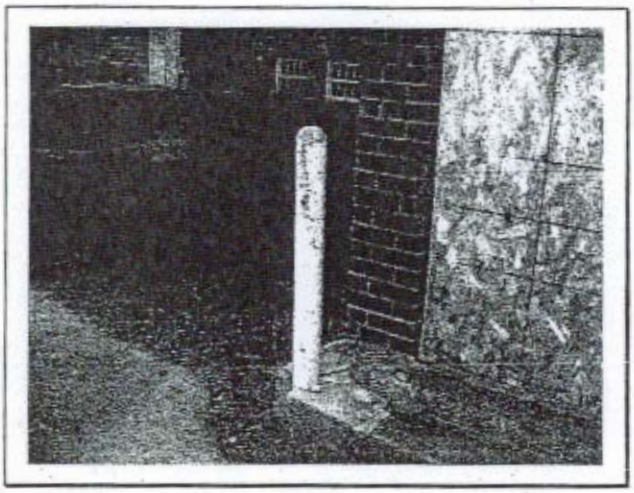


PHOTO 21	Viewing peach parking guard post, Exterior.
Sample #97	

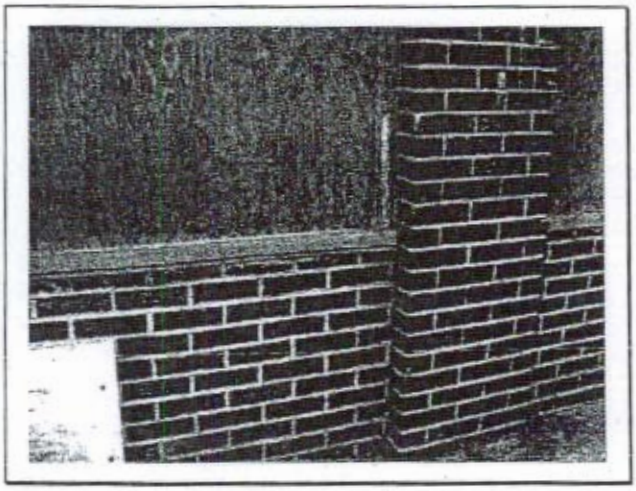


PHOTO 22	Viewing green window sill wrap, Exterior.
Sample #98	

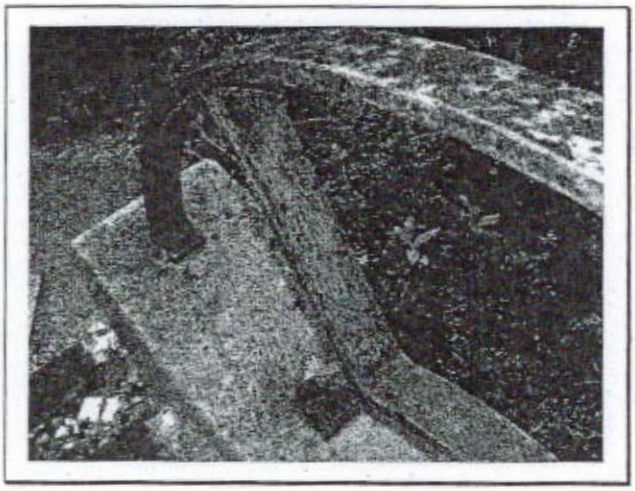


PHOTO 23	Viewing green handrail, Exterior.
Sample #101	

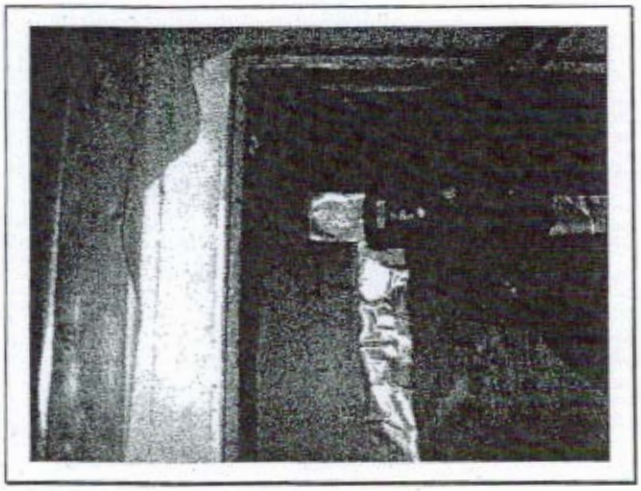


PHOTO 24	Viewing slate gray exit door, Adams building.
Sample #117	

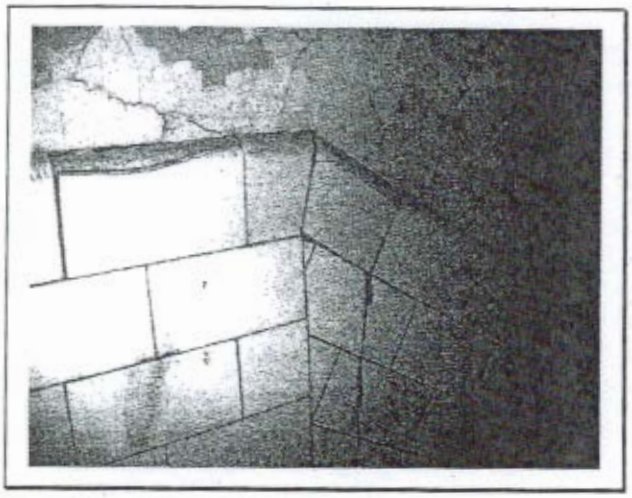


PHOTO 25	Viewing white ceramic wall, South entrance of Main building.
Sample #124	

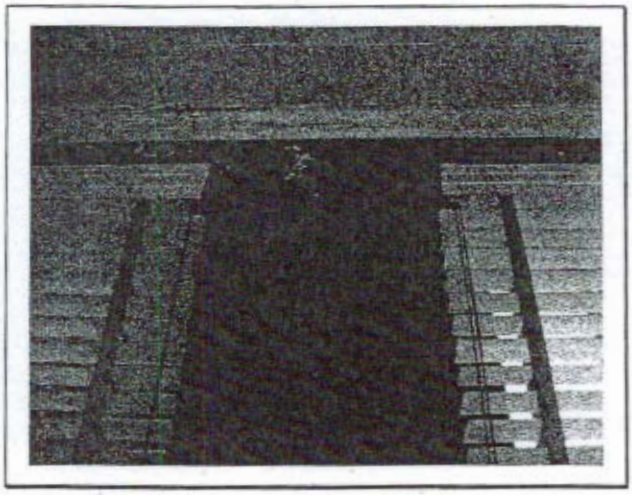


PHOTO 26	Viewing deep red wall, Nelson office.
Sample #125	

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

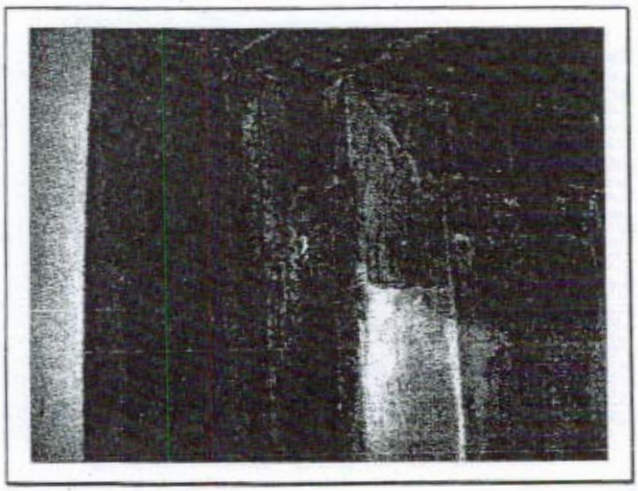


PHOTO 28	Viewing black door and door frame, Basement – Incinerator room.
Sample#129,130	

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

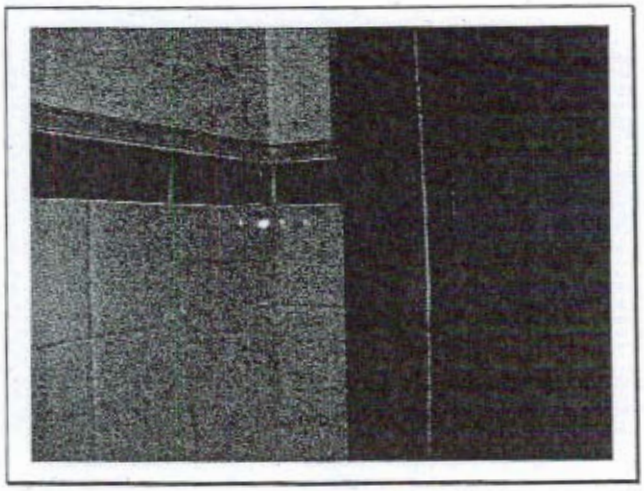


PHOTO 30	Viewing white 4" wall tile, Basement – SE room.
Sample #136	

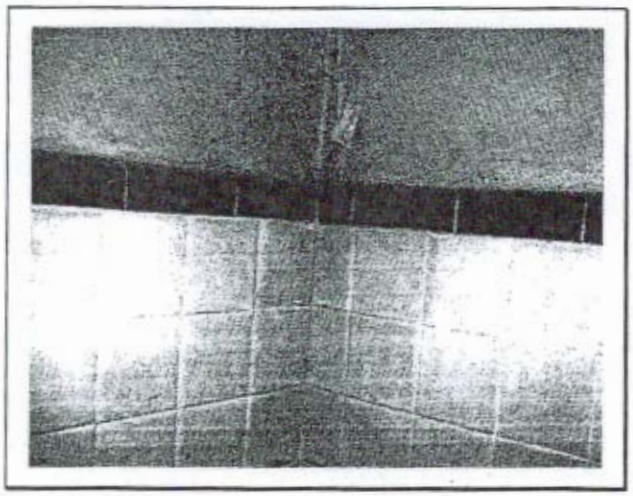


PHOTO 29	Viewing green 4" wall tile, Basement – SE room.
Sample #137	

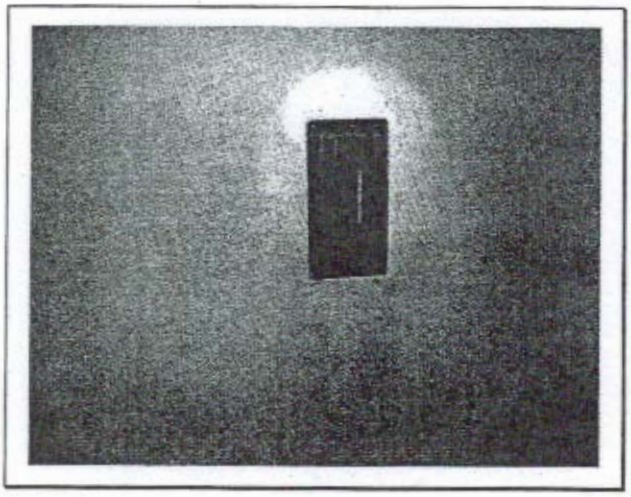


PHOTO 1	Viewing suspect mercury-containing thermostat.
HM# MER-01	

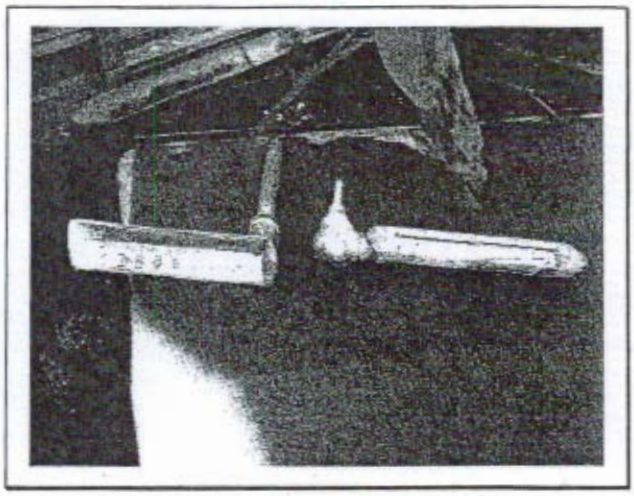


PHOTO 2	Viewing mercury-containing thermometers on roof.
HM# MER-02	

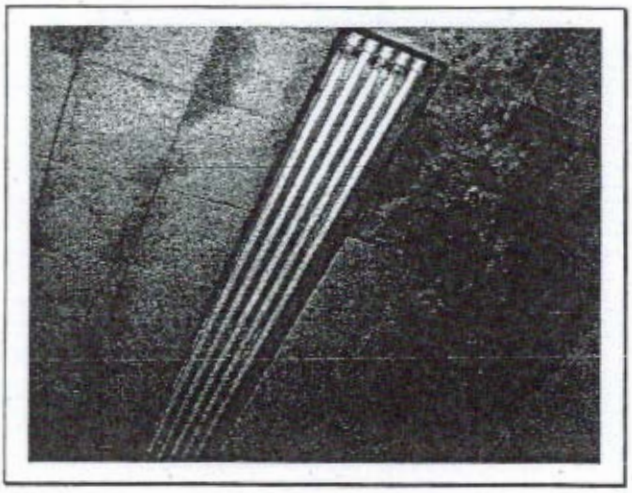


PHOTO 3	Viewing 8' fluorescent light bulbs and ballast's.
HM# MER-03	

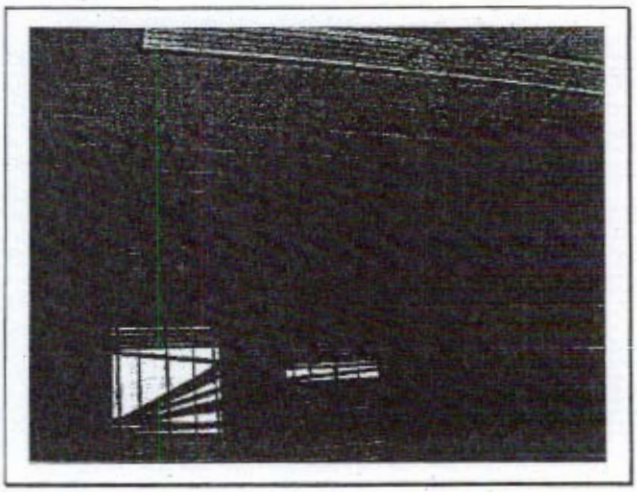


PHOTO 4	Viewing 6' fluorescent light bulbs and ballast's.
HM# MER-04	

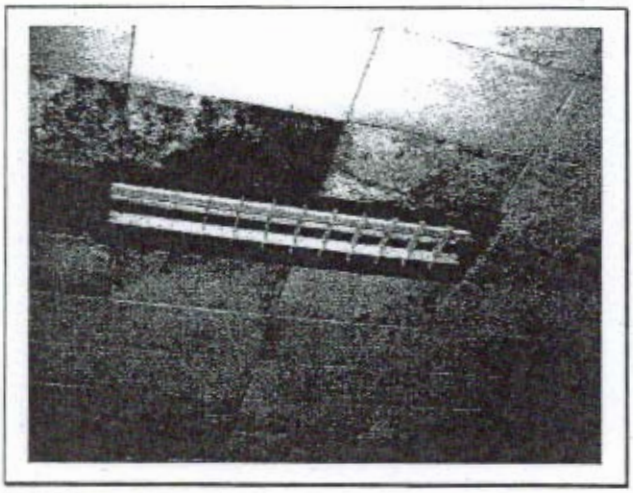
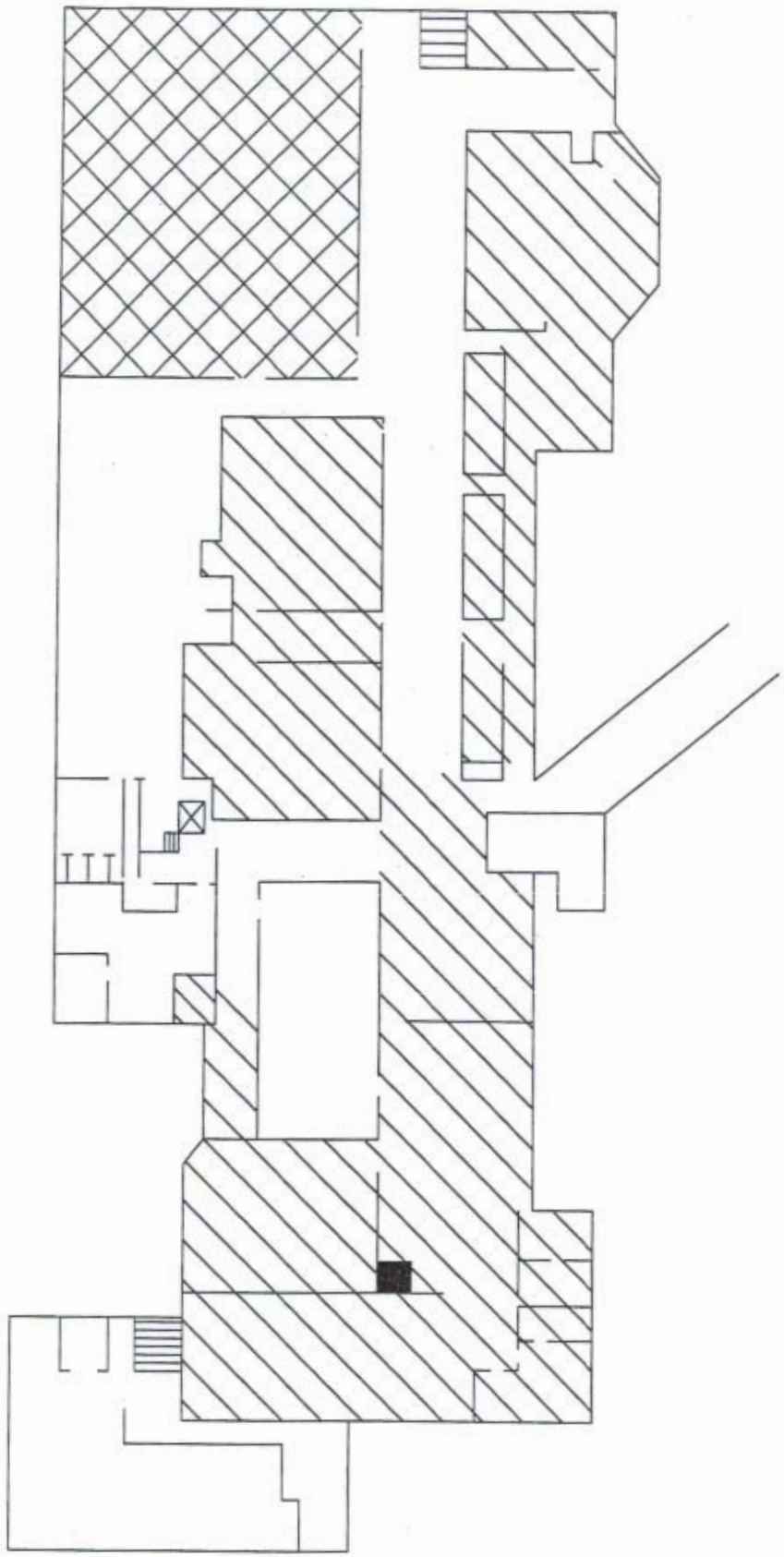


PHOTO 5	Viewing 4' fluorescent light bulbs and ballast's.
HM# MER-05	

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

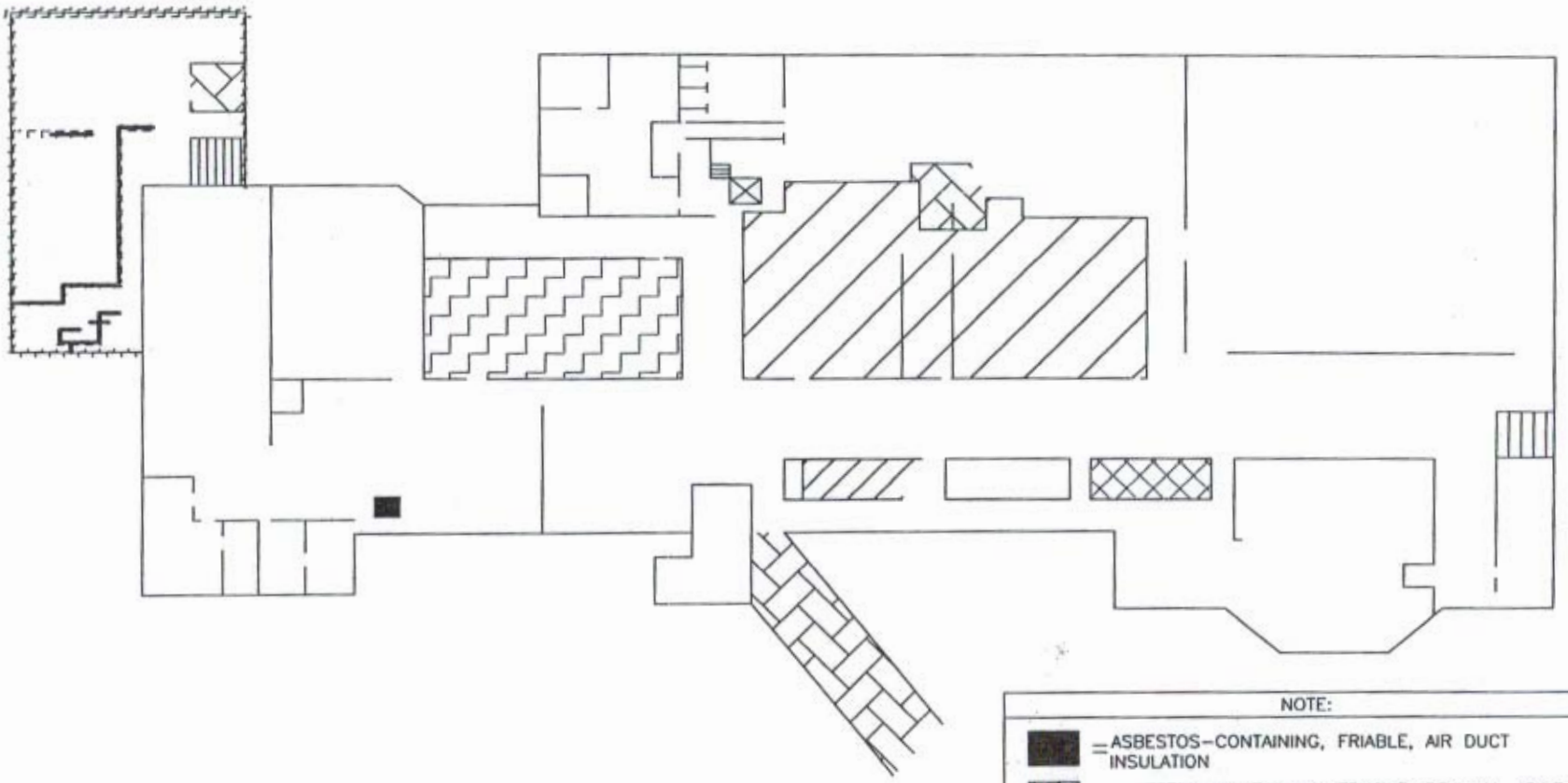
SIZE	SCALE	SHEET
	NOT TO SCALE	1

AMI
Environmental
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

DRWN 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

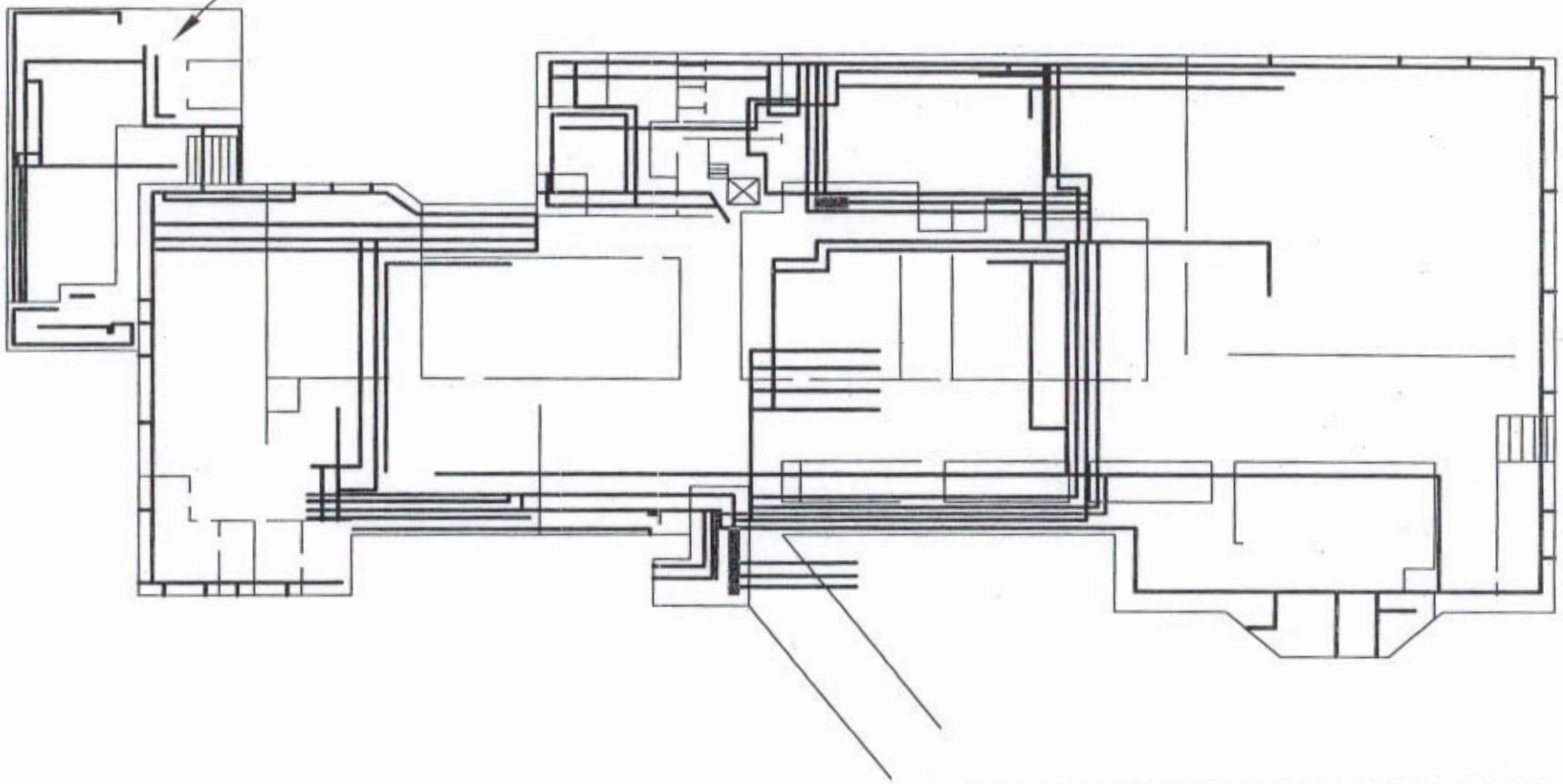
C08203 MISCELLANEOUS MATERIAL LOCATIONS
RATH BUILDING – BASEMENT

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
MICHAEL HAYES	C08203
SIZE	DATE
SCALE: NOT TO SCALE	06-05-2008
	SHEET: 3

BLACK TAR PIPE WRAP
THROUGHOUT (20 LF)



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)

NORTH

C08203 THERMAL SYSYTEM INSULATION LOCATIONS
RATH BUILDING – BASEMENT

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	4

NORTH

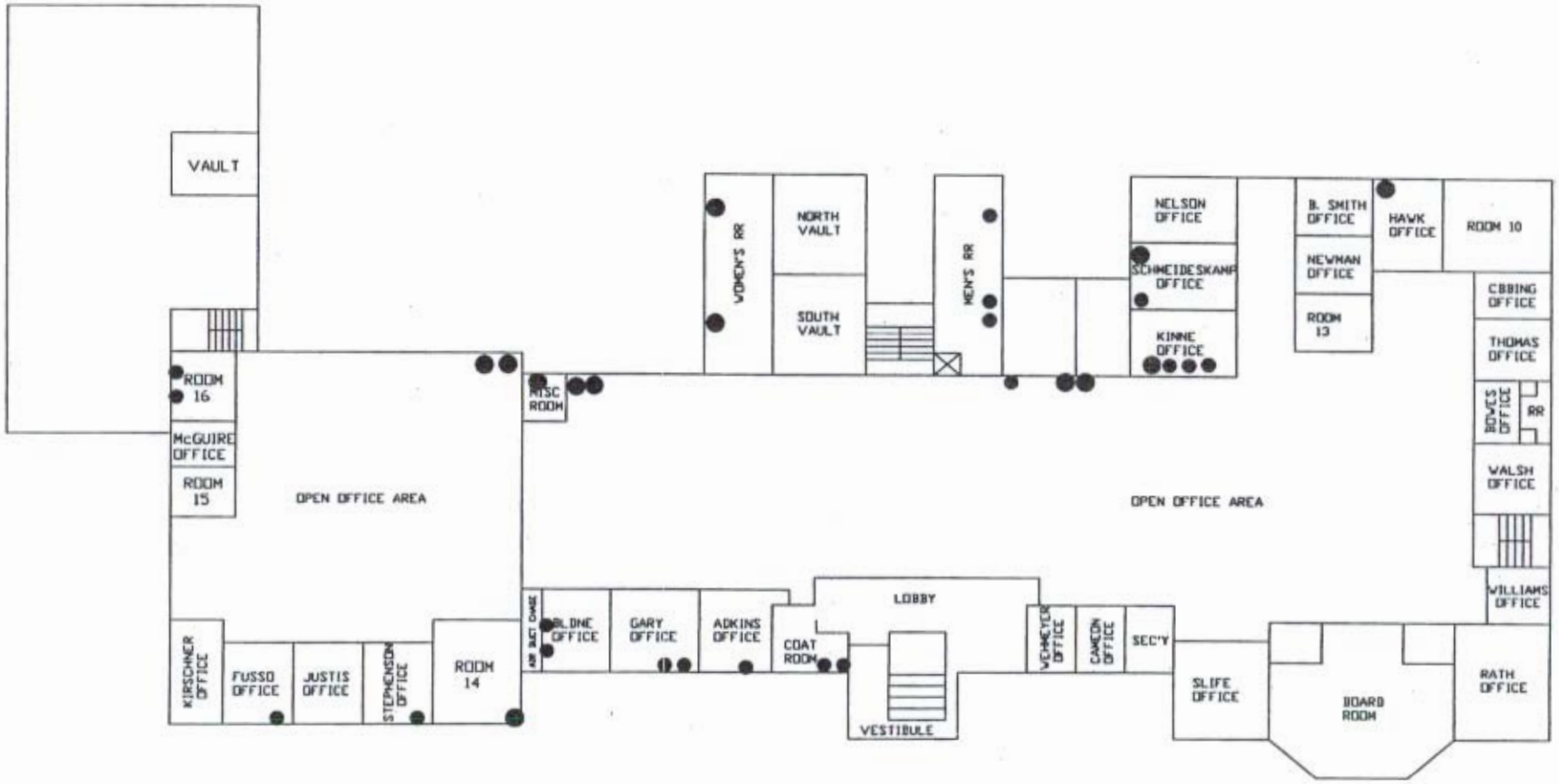
NOTE:
- = ASBESTOS-CONTAINING, FRIABLE, DRYWALL JOINT COMPOUND
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, BLACK MASTIC ON CORK INSULATION
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 1, WALL PANEL GLUE
- = ASBESTOS-CONTAINING, NON-FRIABLE, CATEGORY 2, TRANSITE WALL PANELS

C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING – 1ST FLOOR

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: 5



NORTH

NOTE:
- =2" THERMAL SYSTEM INSULATION
- =4" THERMAL SYSTEM INSULATION
- =6" THERMAL SYSTEM INSULATION
- =8" THERMAL SYSTEM INSULATION

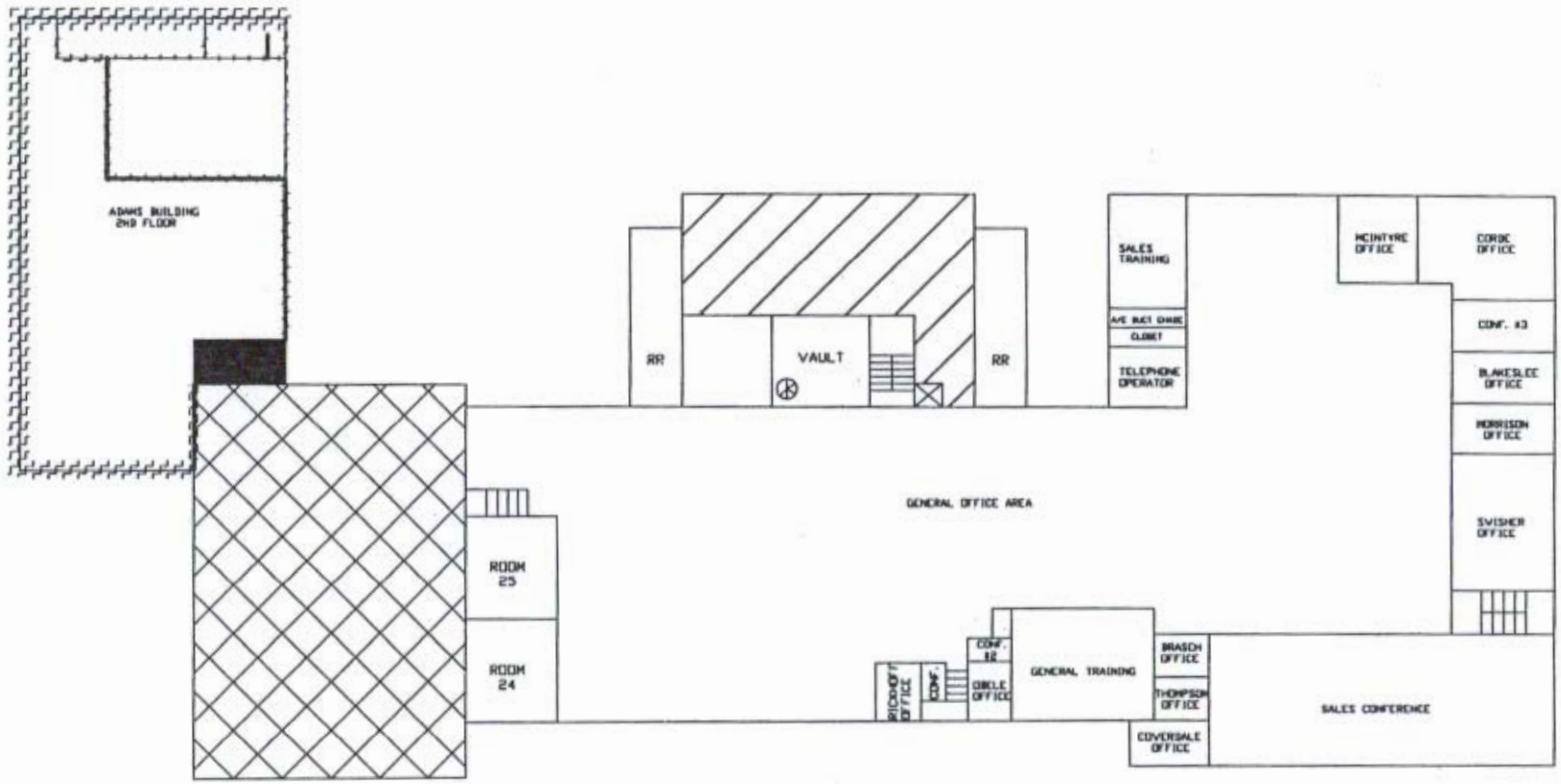
C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING – 1ST FLOOR

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

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

SIZE	SCALE	SHEET
	NOT TO SCALE	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

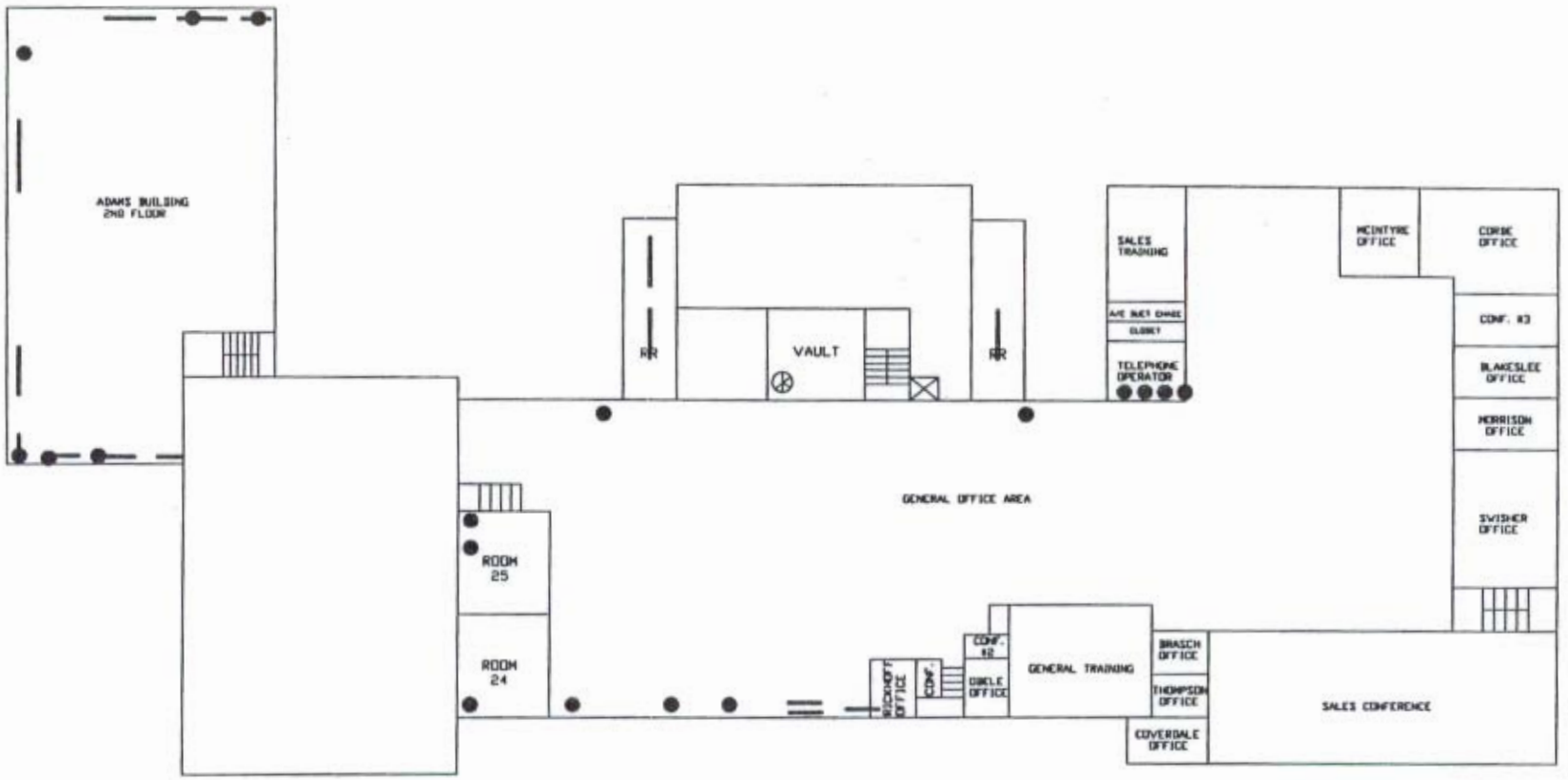
C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING – 2ND FLOOR

AMI
Environmental
6802 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

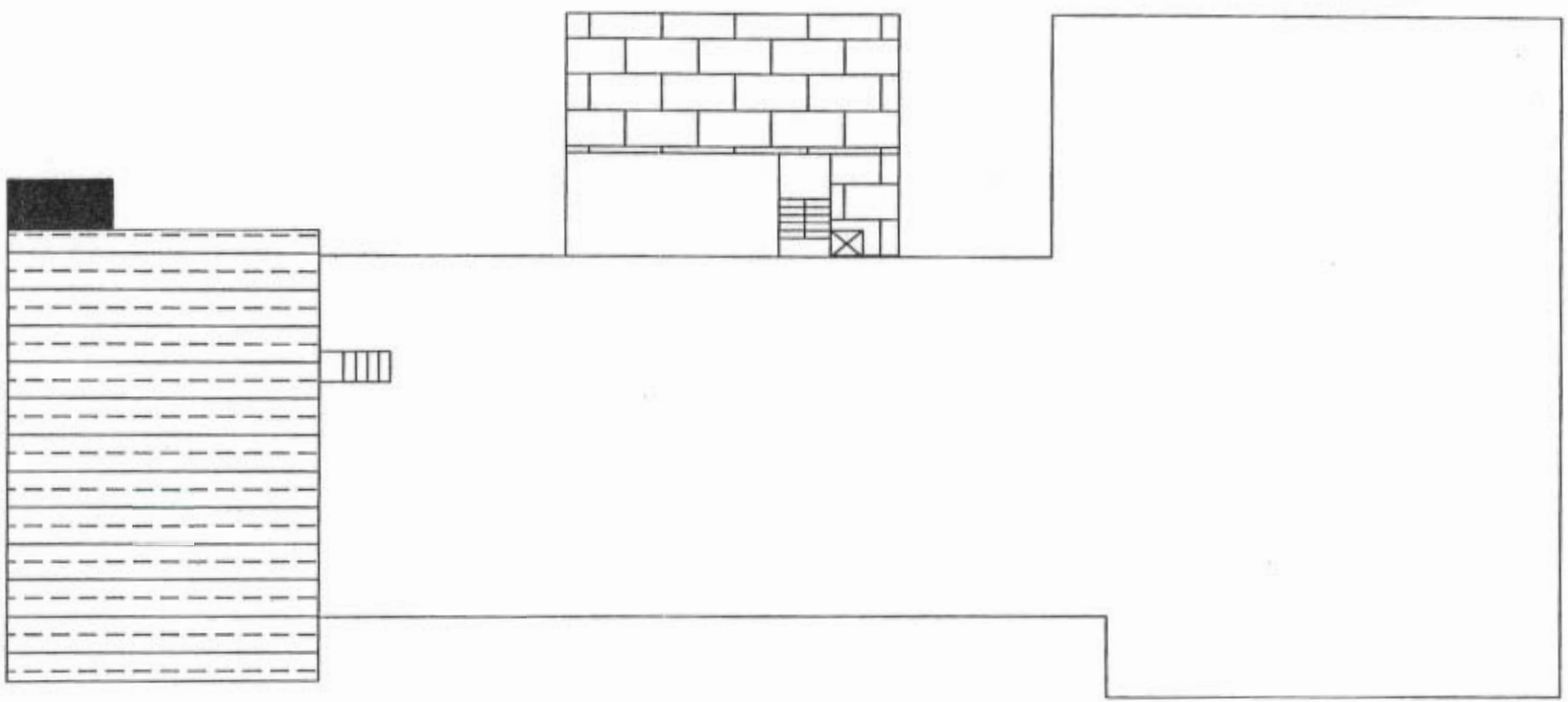
C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING – 2ND FLOOR

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	8



NORTH

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

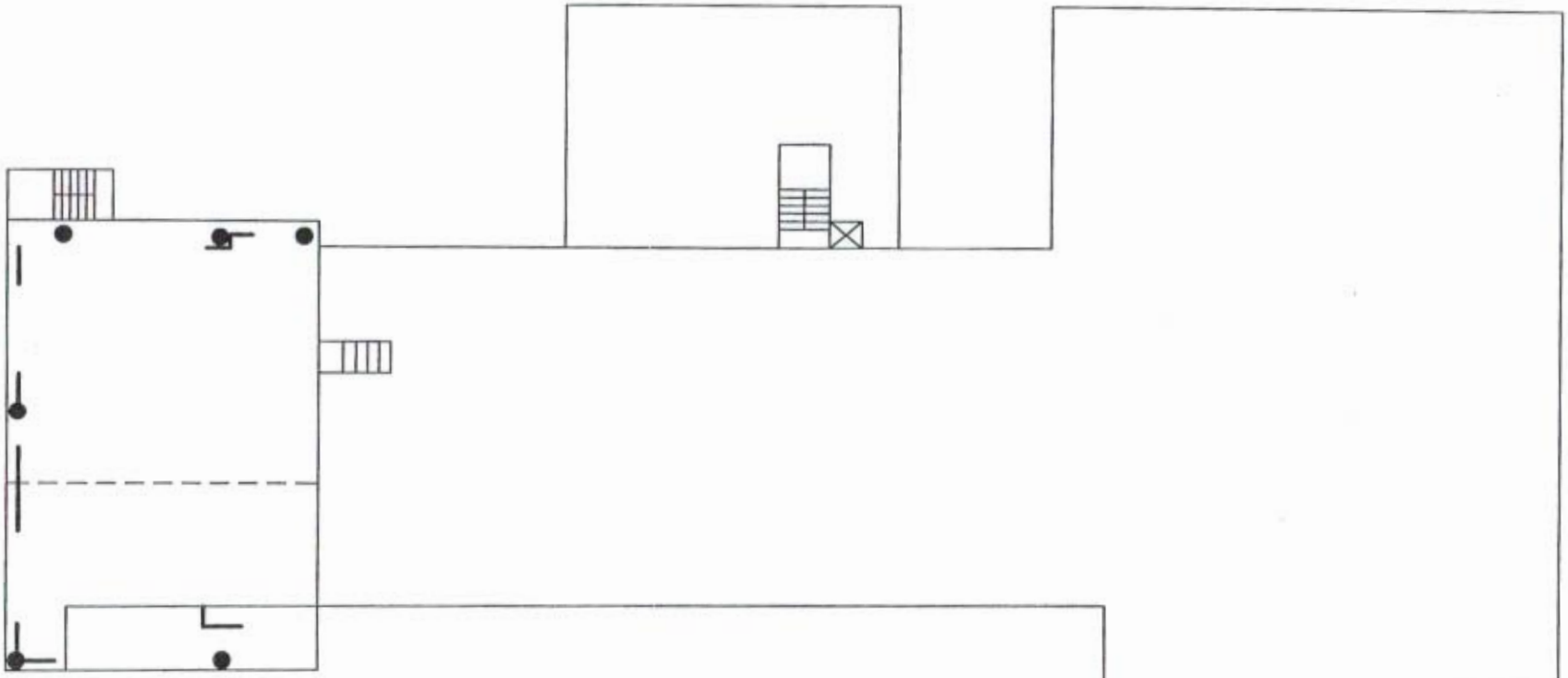
C08203 ASBESTOS MATERIAL LOCATIONS
RATH BUILDING – 3RD FLOOR

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

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

SIZE	SCALE	SHEET
	NOT TO SCALE	9



NORTH

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

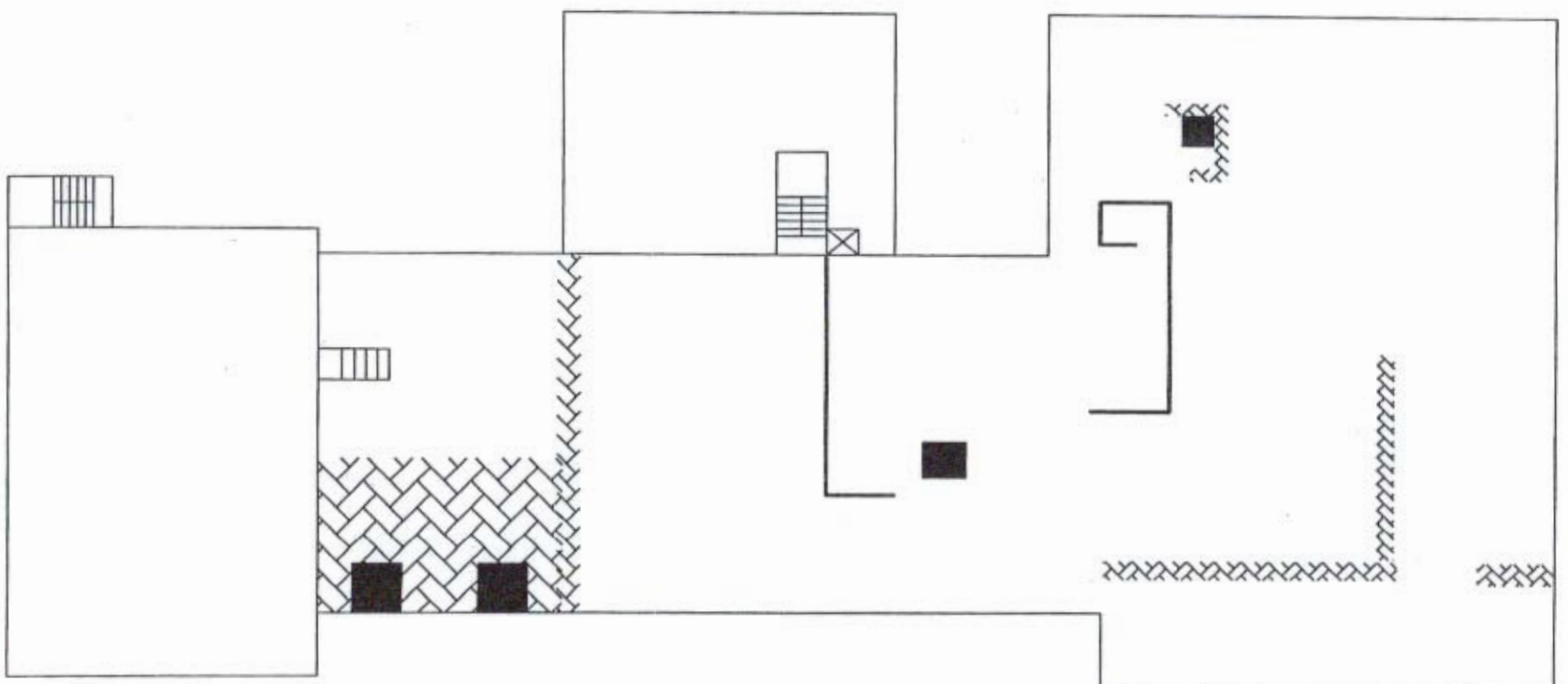
C08203 THERMAL SYSTEM INSULATION LOCATIONS
RATH BUILDING – 3RD FLOOR

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

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

SIZE	SCALE	SHEET
	NOT TO SCALE	10

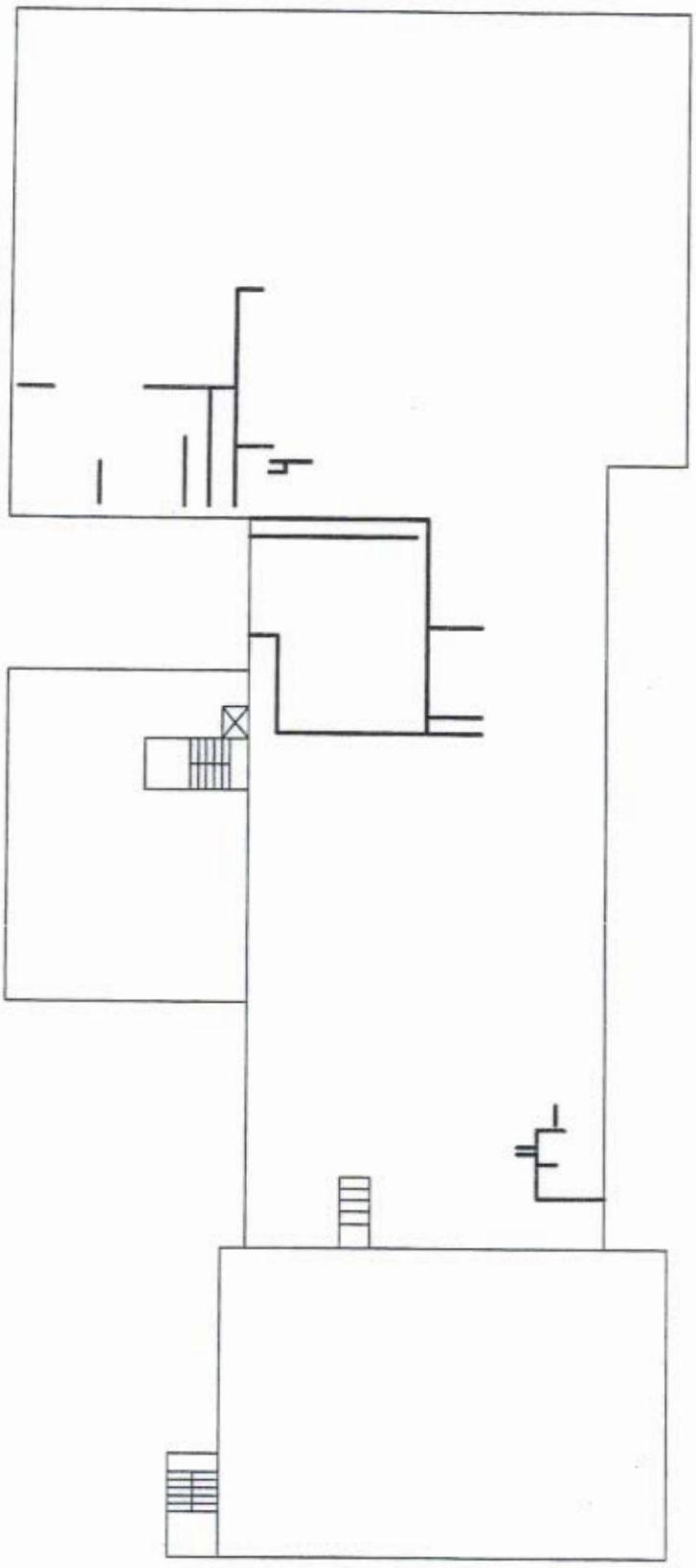


NORTH

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

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

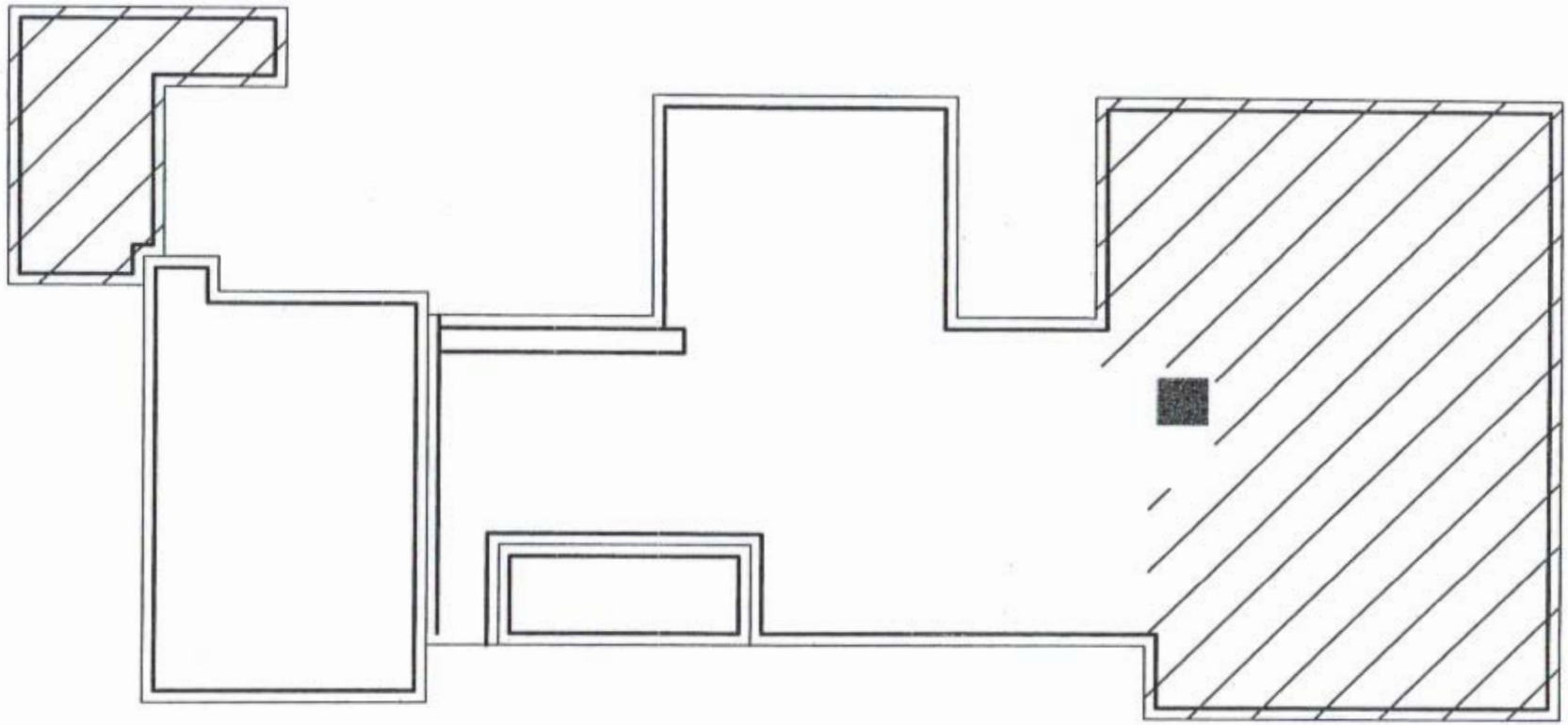
SIZE	SCALE	SHEET
	NOT TO SCALE	11

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	05-30-2008

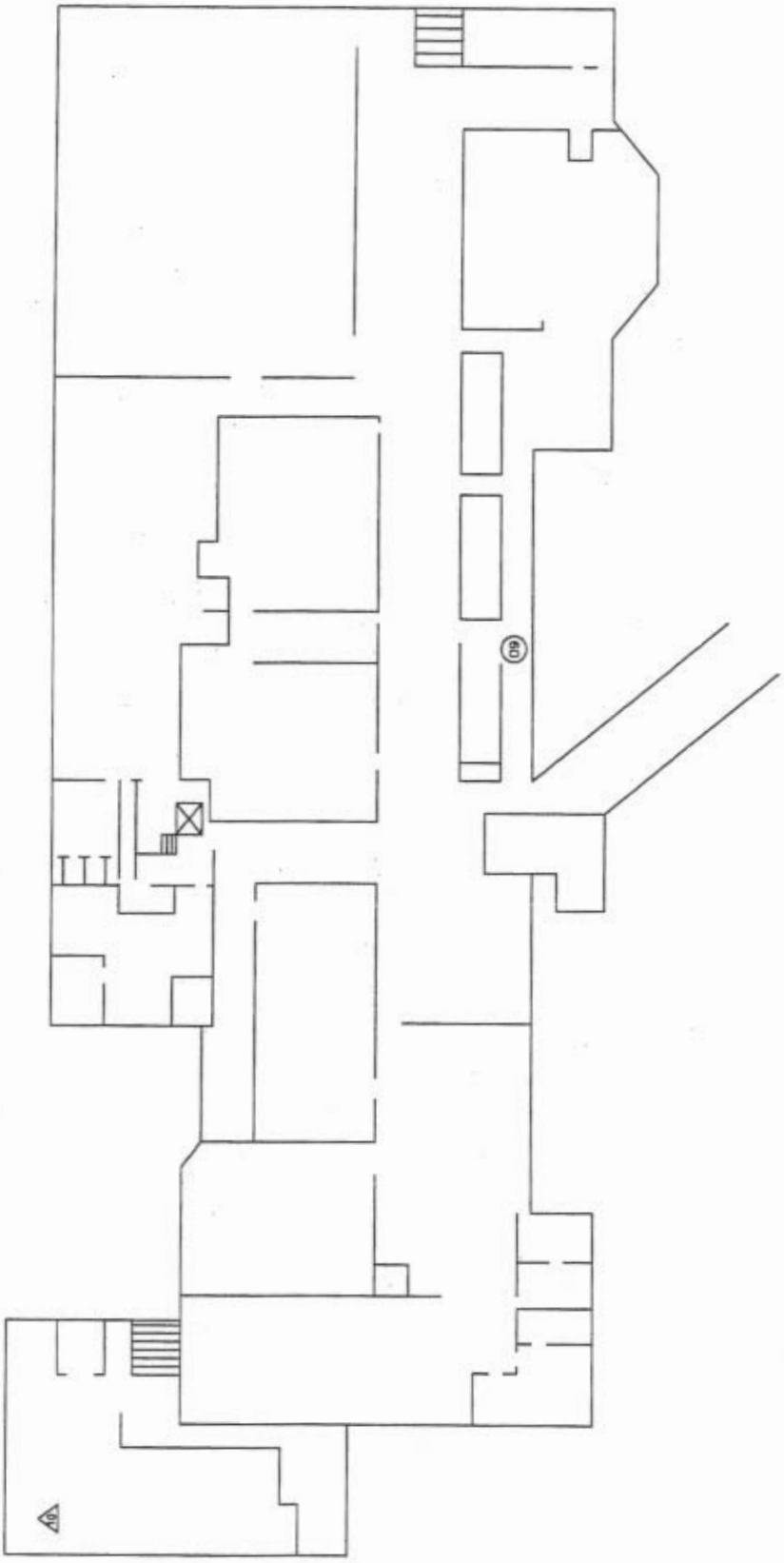
SIZE	SCALE	SHEET
	NOT TO SCALE	12



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

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

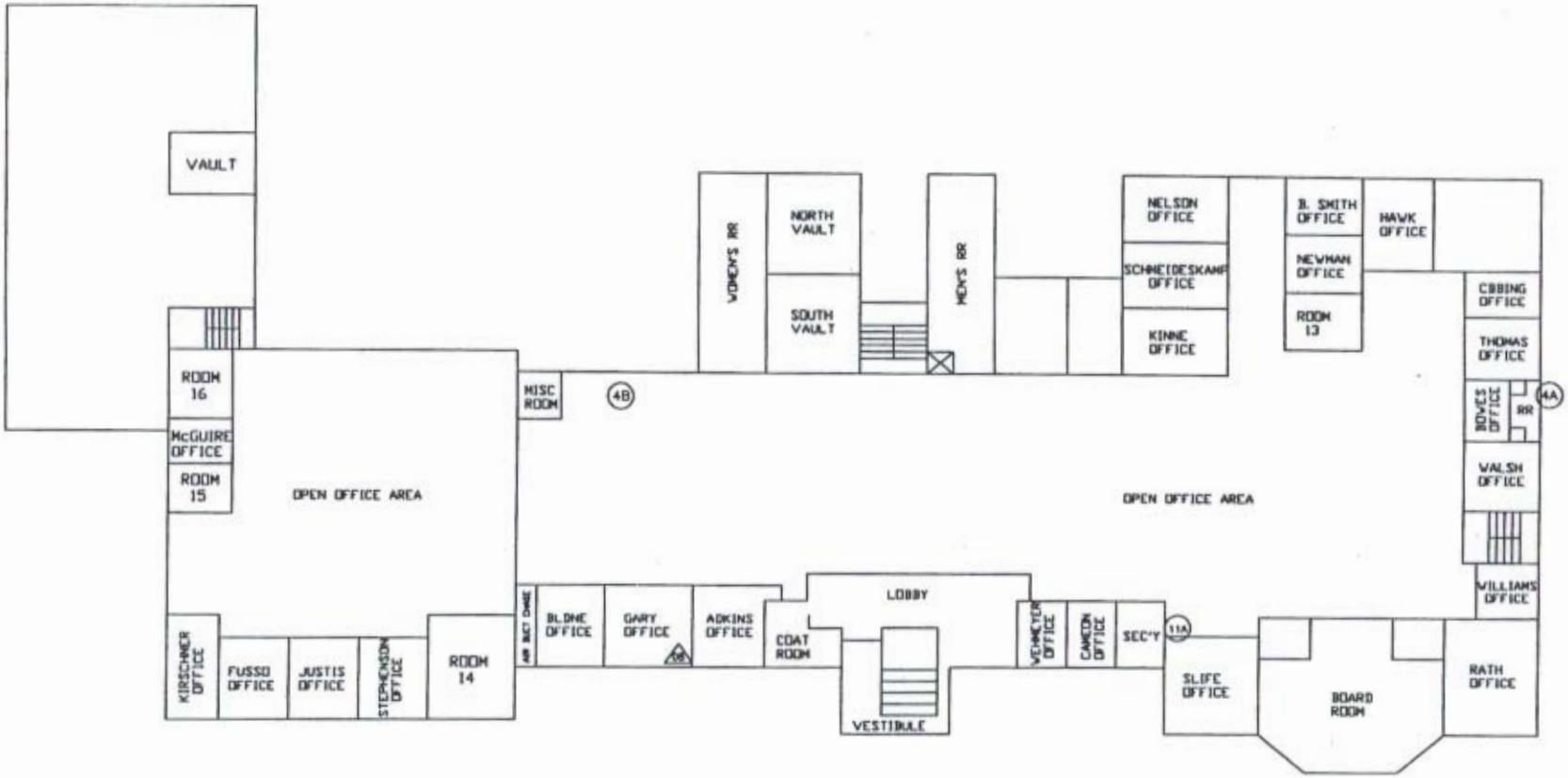
DWN BY	DRAWING NUMBER	DATE
MICHAEL HAYES	C08203	06-05-2008

SIZE	SCALE	SHEET
	NOT TO SCALE	13

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: 14



NORTH

NOTE:
△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%
○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

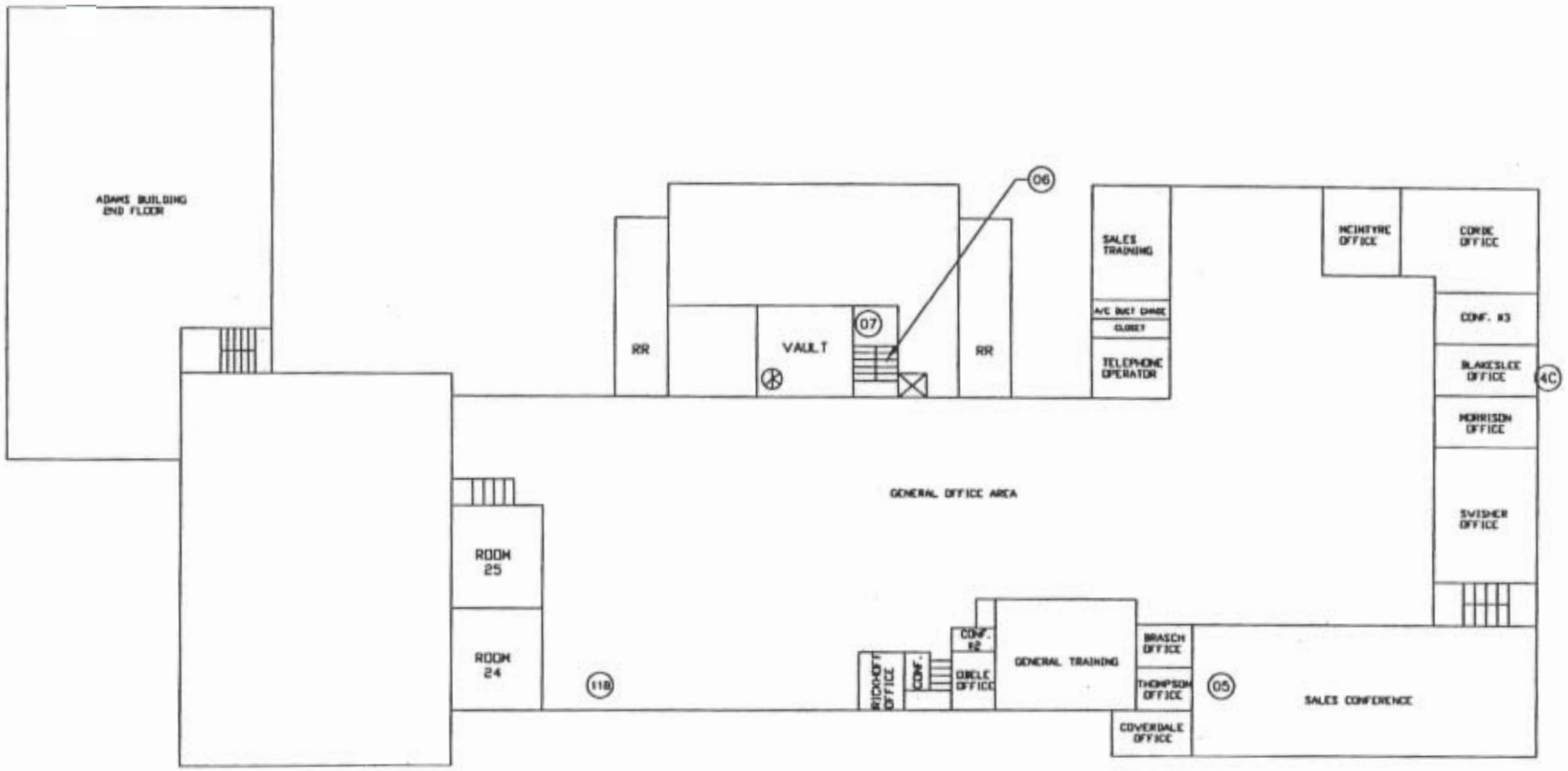
C08203 ASBESTOS SAMPLE LOCATIONS
RATH BUILDING – 1ST FLOOR

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

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

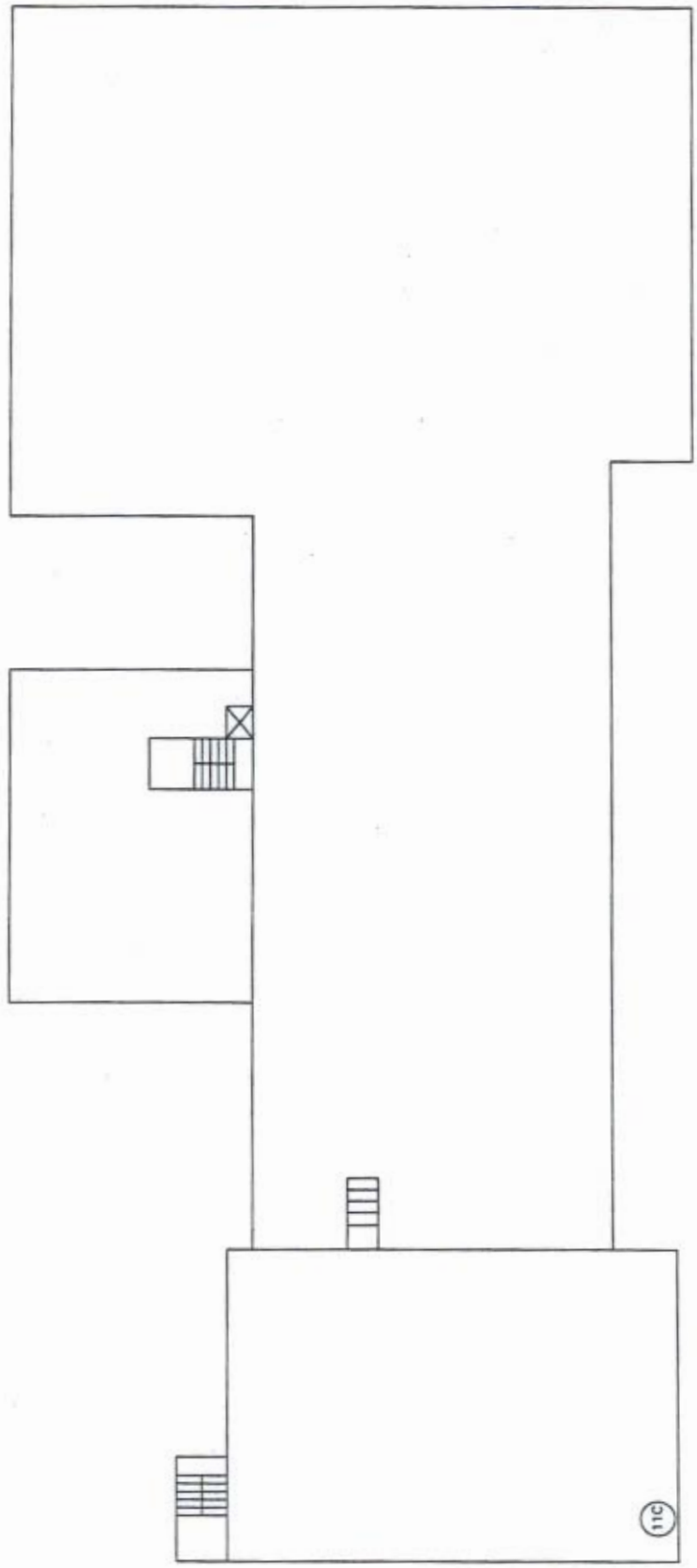
SIZE	SCALE	SHEET
	NOT TO SCALE	15



NORTH

NOTE:
△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%
○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS
RATH BUILDING – 2ND FLOOR



NOTE:

△ = SAMPLE POSITIVE FOR ASBESTOS, > 1%

○ = SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING – 3RD FLOOR

NORTH

AMI Environmental

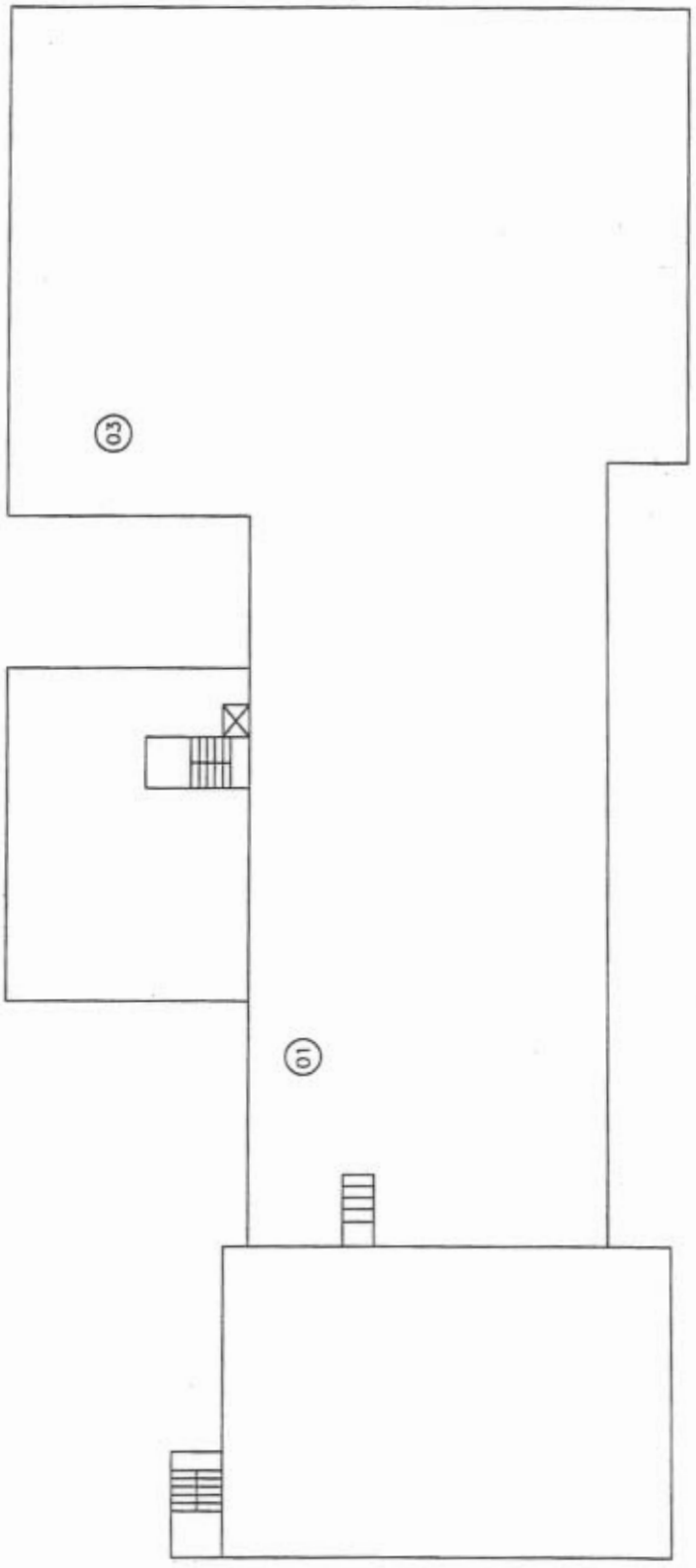
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138

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	16



NOTE:

= SAMPLE POSITIVE FOR ASBESTOS, > 1%

= SAMPLE NEGATIVE FOR ASBESTOS, < 1%

C08203 ASBESTOS SAMPLE LOCATIONS

RATH BUILDING – ATTIC

NORTH

AMI Environmental

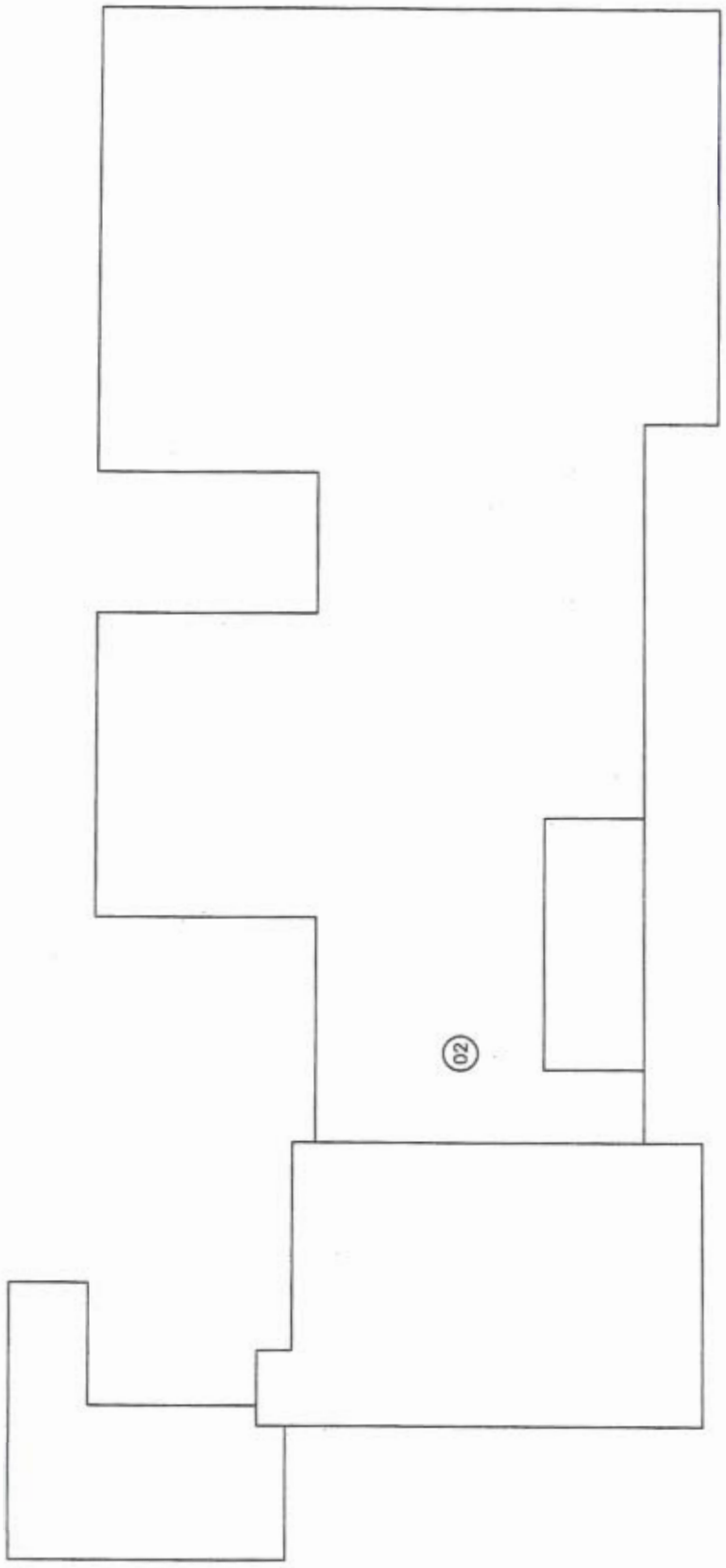
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138

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

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

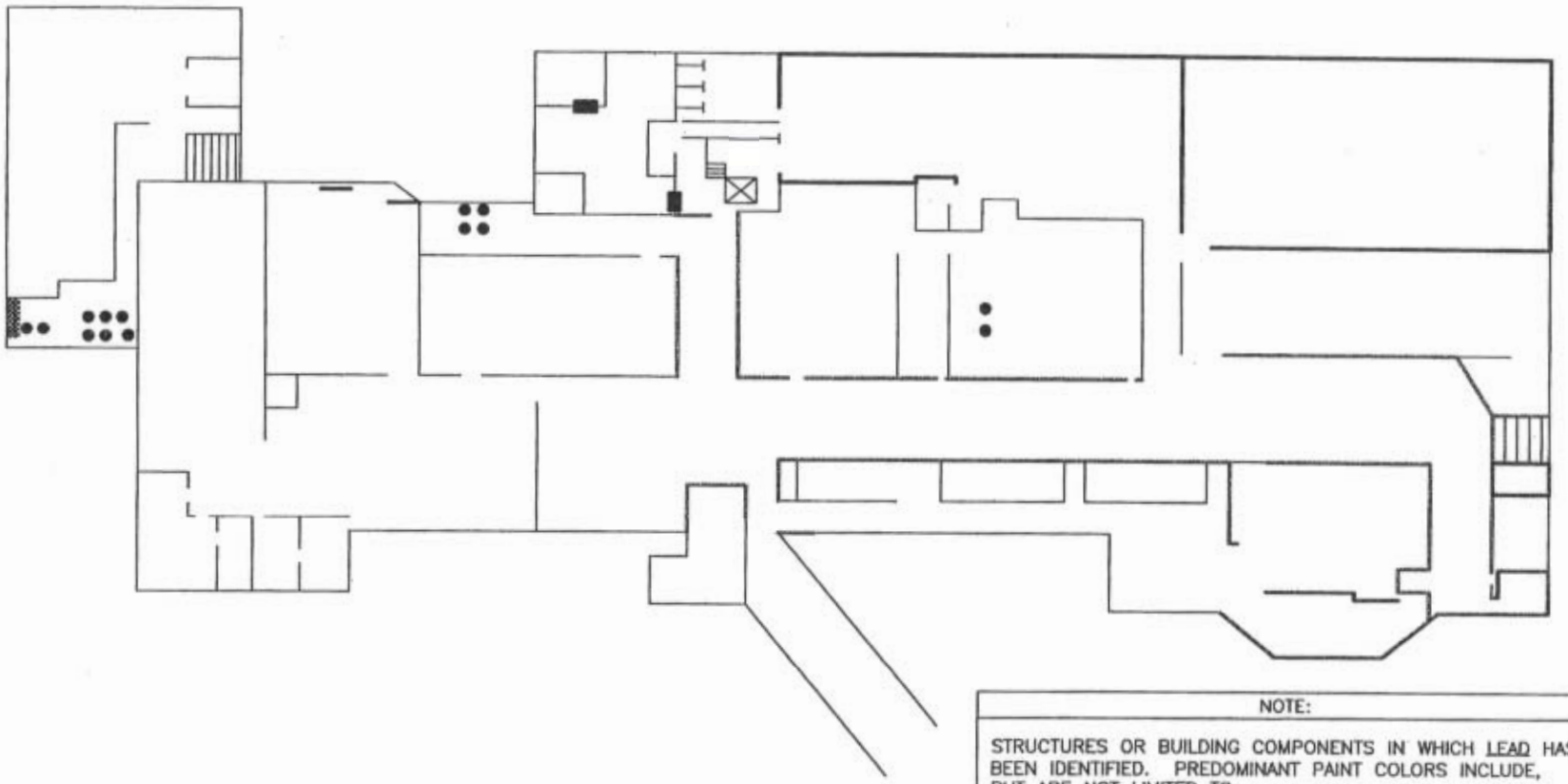
SIZE	SCALE	SHEET
	NOT TO SCALE	18

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	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

AMI
Environmental
8802 S. 133rd 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	20

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

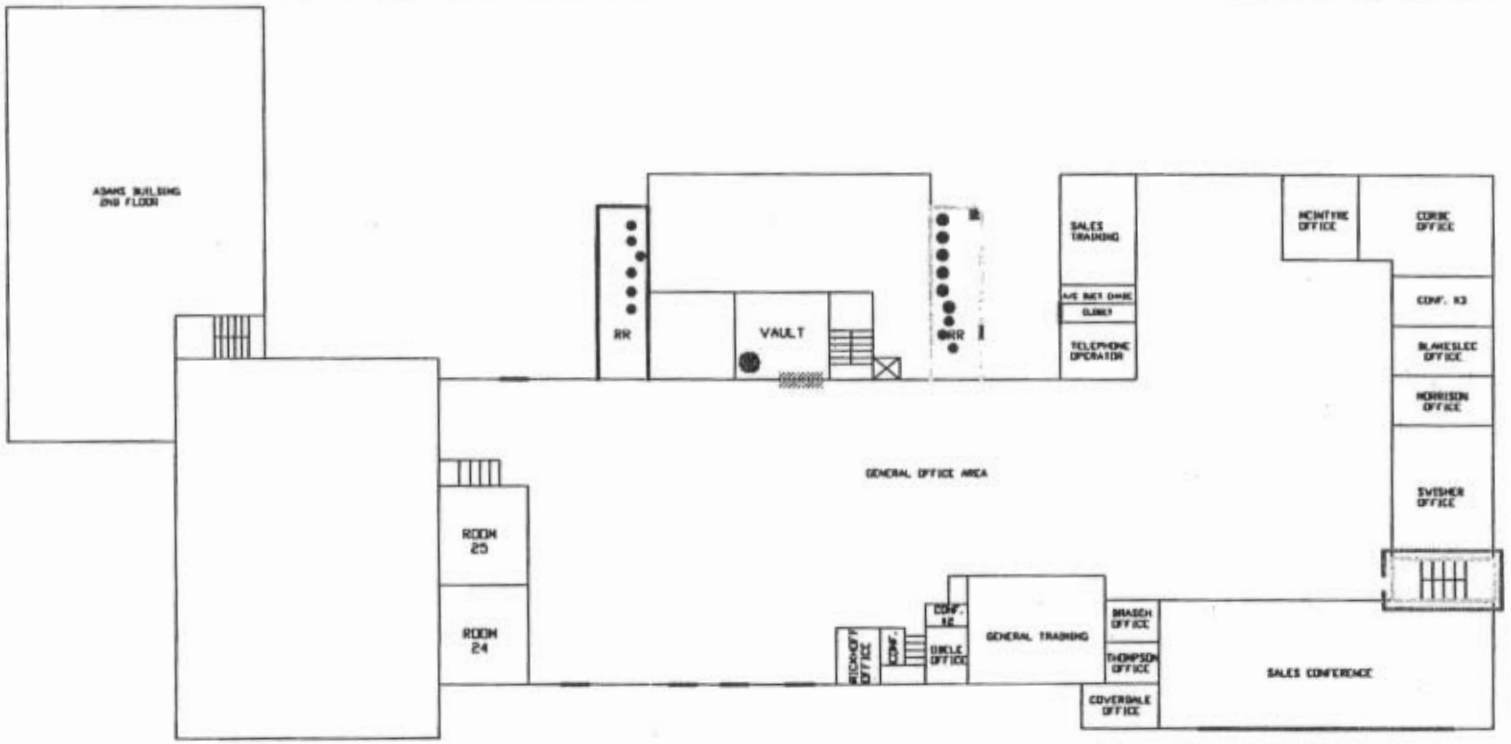
C08203 LEAD LOCATIONS
RATH BUILDING – 1ST FLOOR

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	DRAWING NUMBER	DATE
MICHAEL HAYES	C08203	06-05-2008

SIZE	SCALE	SHEET
	NOT TO SCALE	21



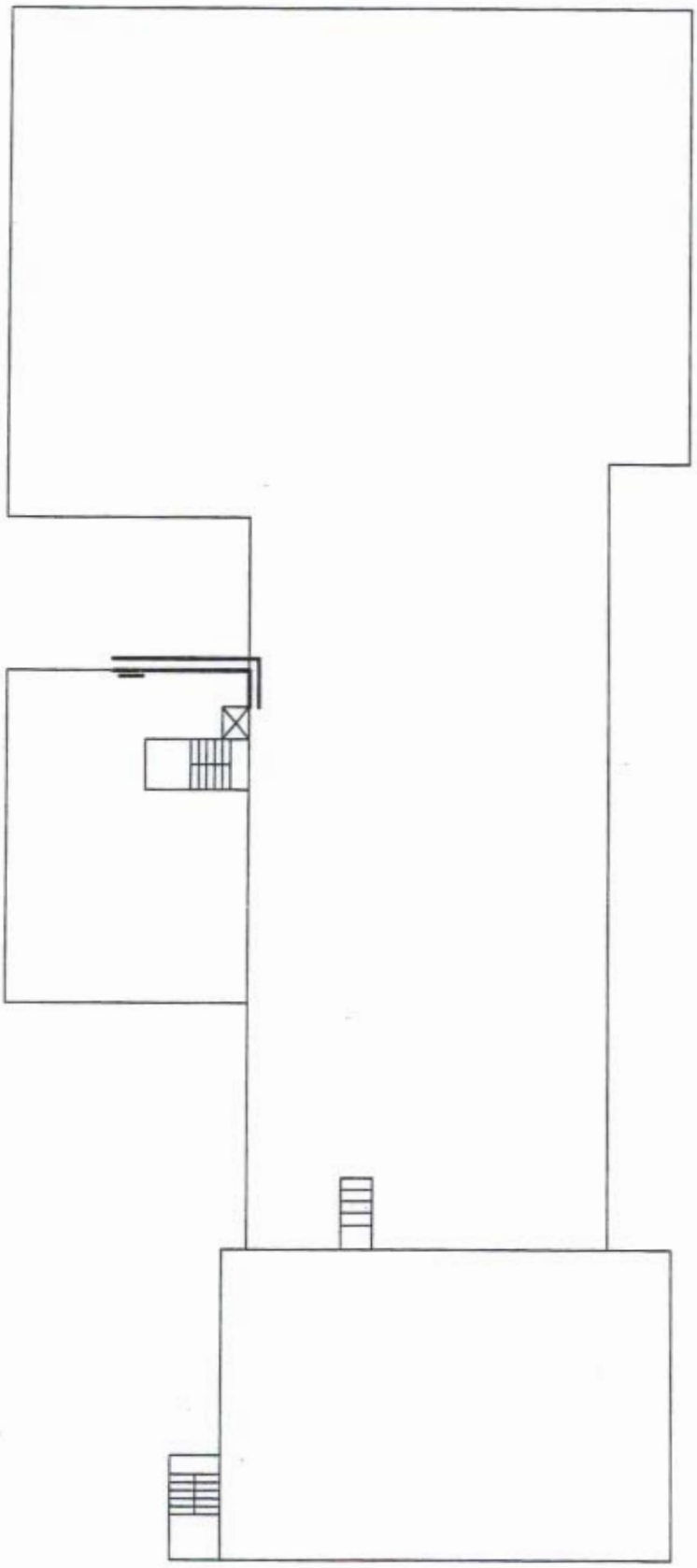
NOTE:

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



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

NORTH

C08203 LEAD LOCATIONS

RATH BUILDING - 3RD FLOOR

AMI Environmental

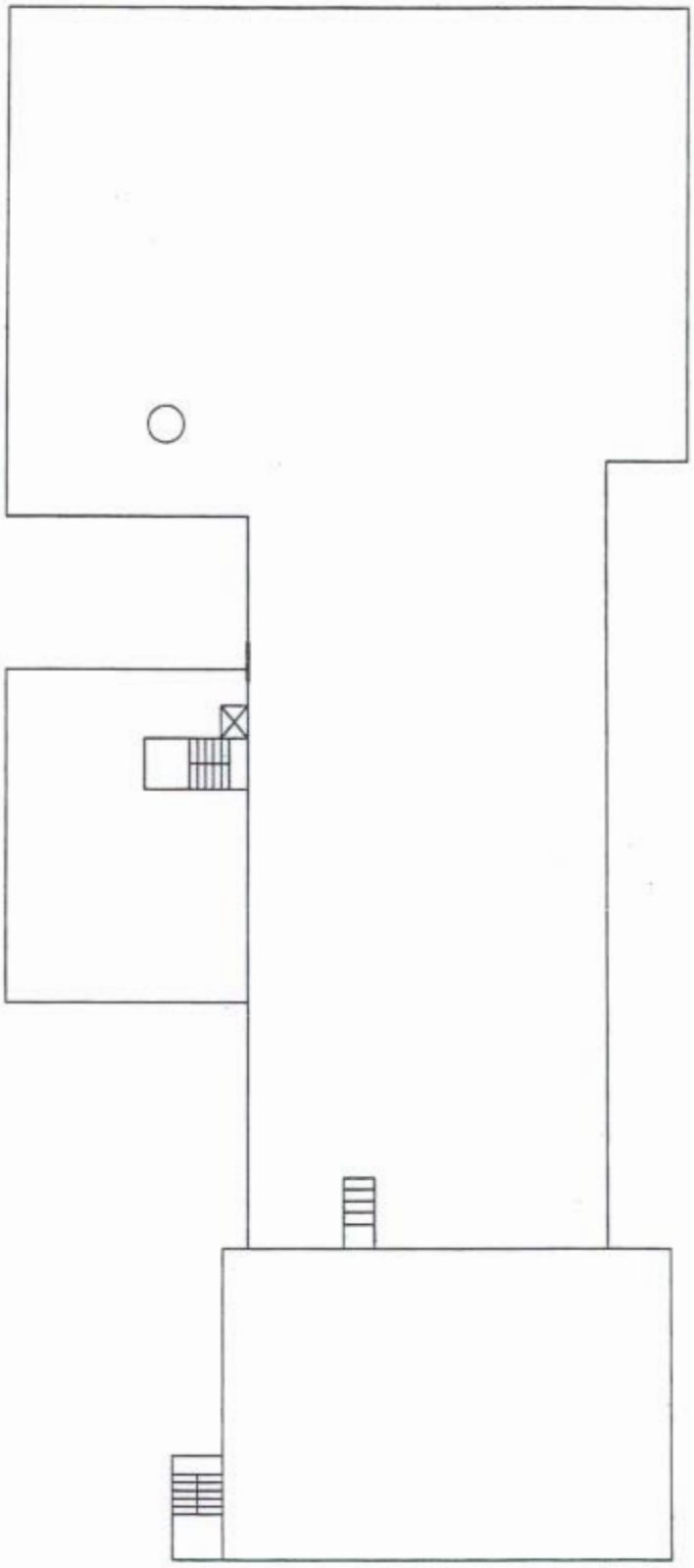
8802 S. 135th St.
SUITE 100
OMAHA NE, 68138

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

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

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

SIZE	SCALE	SHEET
	NOT TO SCALE	22



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

NORTH

C08203 LEAD LOCATIONS

RATH BUILDING - ATTIC

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

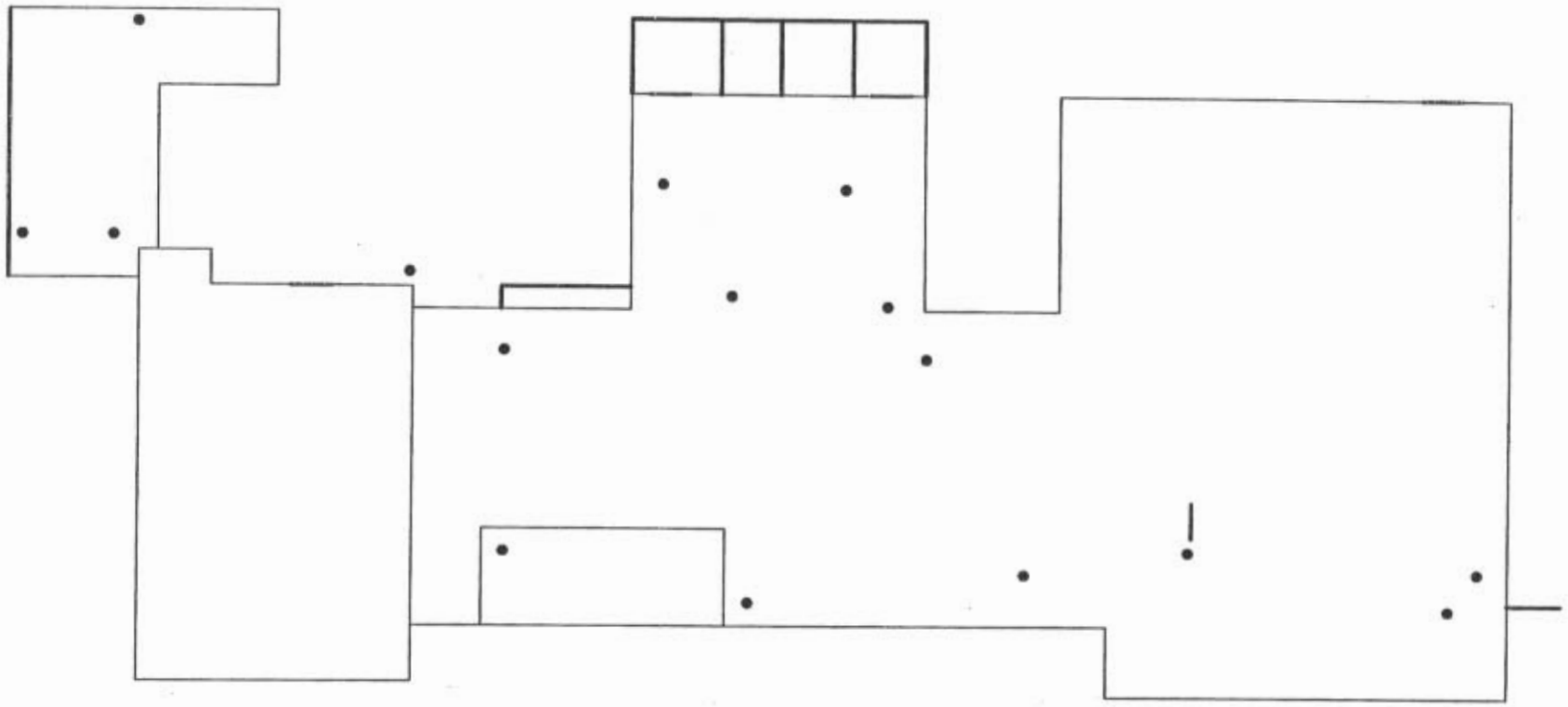
SIZE	SCALE	SHEET
	NOT TO SCALE	23

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	24



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

NORTH

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 98% binder
5	1	**Chalkboard** Gray chalkboard	Y	**None Detected**		10% quartz 90% carbonates
6	1	**Attic Insulation** Gray insulation	Y	**None Detected**	100% fiberglass	
7	1	**Vib. Joint Cloth** White wrap	Y	**None Detected**	80% cellulose	20% binder
8	1	**12'x12' Wood Panel Puck** Black panel	Y	**3% Chrysotile**		20% carbonates 77% binder
9	1	**Sink V.C.** Black mastic	Y	**None Detected**		3% quartz 97% binder
10	1	**Pipe tar wrap** Black tar	Y	**4% Chrysotile**		3% quartz 93% binder
11a	1	**Plaster System** White plaster	Y	**None Detected**		8% quartz 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.

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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 attening / 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

BULK MATERIAL REPORT

PORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
ported to: MICHAEL LLEWELLYN
mpled 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

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

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

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

Analyst: Octavio Gavarretesyestas By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
7 2 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2069 FAX: (602) 990-8468

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

Analyst: Octavio Gavarreteayestas By: Kurt Kettler

VLAP 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

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

Analyst: Octavio Gavarreteayestas By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
4042 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (602) 990-2089 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
04	48-12 air cell, insulation gray, beige BSMT HALLWAY	Asbestos	Positive. This sample contains approx. 75% Chrysotile, 5% Cellulose, 20% Quartz , Binder
05A	48-13 9"x9" floor tile brown BSMT HALL W OF STAIRS	Asbestos	Positive. This sample contains approx. 15% Chrysotile, 85% Quartz , Binder
05B	48-13 mastic black BSMT HALL W OF STAIRS	Asbestos	Positive. This sample contains approx. 2% Chrysotile, 1% Cellulose, 97% Quartz , CaCO , Binder
06	48-14 plaster, skim coat off white, beige BSMT MAIL RM	Asbestos	None detected. This sample contains approx. trace Cellulose, 99% Quartz , CaCO , Binder
07A	48-15 cork, wrap dk. brown BSMT AC RM BY MAIL RM	Asbestos	None detected. This sample contains approx. 100% Quartz , Binder , Cork

A lyst: Octavio Gavarreteayestas By: Kurt Kettler

/L P Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
42 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
07B	48-15 insulation white BSMT AC RM BY MAIL RM	Asbestos	Positive. This sample contains approx. 30% Chrysotile, 3% Amosite, 67% Quartz , CaCO
08A	48-16 9"x9" floor tile black BSMT W. RM	Asbestos	Positive. This sample contains approx. 10% Chrysotile, 90% Quartz , CaCO , Binder
08B	48-16 mastic black BSMT W. RM	Asbestos	None detected. This sample contains approx. 100% Quartz , CaCO , Binder
09A	48-17 9"x9" floor tile red, brown BSMT W. RM	Asbestos	Positive. This sample contains approx. 10% Chrysotile, 90% Quartz , CaCO , Binder
09B	48-17 mastic black BSMT W. RM	Asbestos	None detected. This sample contains approx. 100% Quartz , CaCO , Binder

Analyst: Octavio Gavarreteayestas By: Kurt Kettler

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

LAB: 54278

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

lient: ADVANCED TECHNOLOGIES CORP. **P/O#:**

Reported to: MICHAEL LLEWELLYN **Proj:** H11720

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

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

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

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

A lyst: Octavio Gavarreteayestas By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0084
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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
15B	48-23 mastic black BSMT PURCHASING DEPT	Asbestos	None detected. This sample contains approx. trace Cellulose, 99% Quartz , CaCO , CaSO , Binder
16A	48-24 cardboard, pipe insulation, 1st layer beige, gray BSMT VERNER RM	Asbestos	None detected. This sample contains approx. 70% Cellulose, 20% Synthetics, 10% Quartz , Binder
16B	48-24 cardboard, pipe insulation, 2nd laye black BSMT VERNER RM	Asbestos	None detected. This sample contains approx. 50% Cellulose, 5% Synthetics, 45% Quartz , Binder
17	48-25 transite, ceiling gray, white BSMT PURCHASING DEPT	Asbestos	Positive. This sample contains approx. 20% Chrysotile, 80% Quartz , CaCO , Binder
18A	48-26 12"x12" floor tile black BSMT HOME ECONOMICS	Asbestos	Positive. This sample contains approx. 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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2/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

LAB: 54278

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

Client: ADVANCED TECHNOLOGIES CORP.
P/O#:

Reported to: MICHAEL LLEWELLYN
Proj: H11720

Sampled from: RATH ADMINISTRATIVE BLDG
By: Client

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

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

Analyst: Octavio Gavarreteayestas By: Kurt Kettler

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

LAB: 54278
REPORT Laboratory Analysis: BULK MATERIAL Methodology: EPA 600/M4-82-020
Client: ADVANCED TECHNOLOGIES CORP. P/O#:
Reported to: MICHAEL LLEWELLYN Proj: H11720
Sampled from: RATH ADMINISTRATIVE BLDG By: Client
Shipped via: FEDERAL EXPRESS Received: 2/12/99 Reported: 2/15/99

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

Analyst: Octavio Gavarreteayestas By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

LAB: 54278

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

Client: ADVANCED TECHNOLOGIES CORP. **P/O#:**

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

nalyst: Octavio Gavarreteayestas By: Kurt Kettler

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BULK MATERIAL REPORT

LAB: 54277

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

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

Reported to: MICHAEL LLEWELLYN **Proj:** H11720

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

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

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

Analyst: Jason W. Sutter By: Kurt Kettler

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

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BULK MATERIAL REPORT

LAB: 54277

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

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

Reported to: MICHAEL LLEWELLYN
Proj: H11720

Sampled from: RATH ADMINISTRATIVE BLDG
By: Client

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

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

Analyst: Jason W. Sutter By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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2/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 3 of 6

BULK MATERIAL REPORT

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

REPORT Laboratory Analysis: BULK MATERIAL
Client: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
Sampled from: RATH ADMINISTRATIVE BLDG
Shipped via: FEDERAL EXPRESS
Received: 2/12/99 Reported: 2/15/99

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

Analyst: Jason W. Sutter By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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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: 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 9"x9" floor tile white, blue	Asbestos	Positive. This sample contains approx. 15% Chrysotile, 85% Quartz , CaCO , Mica , Binder
10B	48-46 mastic black	Asbestos	None detected. This sample contains approx. 100% Quartz , CaCO , Mica , Binder
11A	48-46 9"x9" floor tile blue, white	Asbestos	Positive. This sample contains approx. 10% Chrysotile, trace Cellulose, 89% Quartz , CaCO , Mica , Binder
11B	48-46 mastic black	Asbestos	Positive. This sample contains approx. 2% Chrysotile, 3% Cellulose, 95% Quartz , CaCO , Mica , Binder
12A	48-47 cork dk. brown ATTIC	Asbestos	None detected. This sample contains approx. 1% Cellulose, 99% Quartz , CaCO , Mica , Binder

Analyst: Jason W. Sutter By: Kurt Kettler

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2/15/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 5 of 6

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

Analyst: Jason W. Sutter By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

LAB: 54356

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

lient: ADVANCED TECHNOLOGIES CORP. **P/O#:**

Reported to: MICHAEL LLEWELLYN **Proj:** H11720

ampled from: RATH ADMIN BLDG-ROOFS & EXT **By:** Client

hipped via: FEDERAL EXPRESS **Received:** 2/16/99 **Reported:** 2/17/99

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

Analyst: Jason W. Sutter

By: Kurt Kettler

LAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094
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15/99

ENVIRONMENTAL MANAGEMENT CONSULTANTS

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:** 2/16/99

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

Analyst: Jason W. Sutter

By: Kurt Kettler

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

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

LAB: 54356
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client

EPORT Laboratory Analysis: BULK MATERIAL
lient: ADVANCED TECHNOLOGIES CORP.
Reported to: MICHAEL LLEWELLYN
ampled from: RATH ADMIN BLDG-ROOFS & EXT
hipped via: FEDERAL EXPRESS
Received: 2/16/99 **Reported:** 2/17/99

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

Analyst: Jason W. Sutter

By: Kurt Kettler

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

LAB: 54356
EPORT Laboratory Analysis: BULK MATERIAL **Methodology:** EPA 600/M4-82-020
lient: ADVANCED TECHNOLOGIES CORP. **P/O#:**
Reported to: MICHAEL LLEWELLYN **Proj:** H11720
mpled from: RATH ADMIN BLDG-ROOFS & EXT **By:** Client
ipped via: FEDERAL EXPRESS **Received:** 2/16/99 **Reported:** 2/17/99

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

Jason Sutter Kurt Kettler

nalyst: Jason W. Sutter By: Kurt Kettler

NVLAP 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

LAB: 54356
Methodology: EPA 600/M4-82-020
P/O#:
Proj: H11720
By: Client

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

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

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

Analyst: Jason W. Sutter

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
lient: ADVANCED TECHNOLOGIES CORP.
eported 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
07A	48-57 roof flashing green, black ORIGINAL BLDG-E. END	Asbestos	Positive. This sample contains approx. 3% Chrysotile, 15% Cellulose, 82% Quartz , CaCO , CaSO , Mica , Binder
07B	48-57 roof flashing, 2nd layer black ORIGINAL BLDG-E. END	Asbestos	Positive. This sample contains approx. 2% Chrysotile, 25% Cellulose, 73% Quartz , CaCO , Mica , Binder
07C	48-57 roof flashing, 3rd layer black ORIGINAL BLDG-E. END	Asbestos	None detected. This sample contains approx. 50% Cellulose, 10% Synthetics, 40% Quartz , CaCO , Mica , Binder , Opaques
07D	48-57 roof flashing, 4th layer black ORIGINAL BLDG-E. END	Asbestos	None detected. This sample contains approx. 55% Cellulose, 5% Synthetics, 40% Quartz , CaCO , Mica , Binder , Opaques
07E	48-57 roof flashing, 5th layer black ORIGINAL BLDG-E. END	Asbestos	None detected. This sample contains approx. 50% Cellulose, 50% Quartz , CaCO , Binder

Analyst: Jason W. Sutter

By: Kurt Kettler

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hipped via: FEDERAL EXPRESS
Received: 2/16/99 **Reported:** 2/17/99

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

Analyst: Jason W. Sutter

By: Kurt Kettler

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

BULK MATERIAL REPORT

LAB: 54356

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

Client: ADVANCED TECHNOLOGIES CORP. **P/O#:**

Reported to: MICHAEL LLEWELLYN **Proj:** H11720

Sampled from: RATH ADMIN BLDG-ROOFS & EXT **By:** Client

Shipped via: FEDERAL EXPRESS **Received:** 2/16/99 **Reported:** 2/17/99

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

Analyst: Jason W. Sutter By: Kurt Kettler

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

2/17/99 ENVIRONMENTAL MANAGEMENT CONSULTANTS Page 8 of 8

BULK MATERIAL REPORT

LAB: 54356

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

ent: ADVANCED TECHNOLOGIES CORP.
P/O#:

Reported to: MICHAEL LLEWELLYN
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mpled from: RATH ADMIN BLDG-ROOFS & EXT
By: Client

pped via: FEDERAL EXPRESS
Received: 2/16/99 Reported: 2/17/99

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

Jason Sutter — Kurt Kettler

Analyst: Jason W. Sutter 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

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

ENVIRONMENTAL MANAGEMENT CONSULTANTS

BULK MATERIAL REPORT

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

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

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mpled from: ADAMS BLDG
nipped via: FEDERAL EXPRESS

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

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

Analyst: Ken Scheske

By: Kurt Kettler

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ENVIRONMENTAL MANAGEMENT CONSULTANTS

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

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

Robert J Bach
Instructor

R Bruff Mgr
President

[redacted]
Accreditation Expires: 11/29/09

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

Robert J Baer

Instructor
Robert Baer

President
Thomas Bradford Mayhew

[redacted]
Accreditation Expires: 3/30/09

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

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 = .

KANSAS MAYHEW INC. 1981 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IS GOD ALONE

Instructor
Robert Baer

[redacted]
Accreditation Expires: 8/21/08

President
Thomas Bradford Mayhew

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

SECTION

4

Requisition of Instructions to Bidders

Scope of Work

Work of this contract includes removal and disposal of asbestos containing/contaminated materials within the associated work areas of the Rath Administration Building projects, located in Waterloo, Iowa. The abatement contractor is responsible for all asbestos containing materials within the associated defined work areas of this project. It is suggested the contractor perform an in-depth site investigation to determine the extent of asbestos containing material and include in the proposal the cost of all resources necessary to complete the work.

Required Notifications

Notification to all required regulatory agencies.

Proposals

The proposals should be legibly written and printed on the form provided in this bound contract document. Alteration in the proposal form will not be permitted. No alteration in any part of the proposal shall be made after the proposal has been submitted. The bidder must bid on each item. If an item is bid at no cost, the words, "No Charge" shall be written in the appropriate space. All addenda to the contact shall be acknowledged in the proposal when submitted. Contractor cannot withdraw bid proposal for 60 business days after bid date submittal.

Proposals must be upon the specifications for the work bid.

Signature of Bidder

Each bidder shall sign his/her proposal using their usual signature and giving the bidders full business name and address. Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or authorized representatives. Bids by corporations shall be signed with the name of the corporation, signature and designation of the president, or other person authorized to bid for the corporation. Anyone signing a proposal must be legally authorized to do so by his or her company/companies.

Acceptance and Rejection of Bids

The City of Waterloo reserves the right to accept the lowest bid, and or consider alternatives, and to reject any and all bids. They also have to right to waive irregularities or informalities in any of the proposals and/or bids.

Award of Contract

The City of Waterloo will award the contract, and notify the bidder of award after review and approval from the Board. Only at the time appointed by the City of Waterloo will the bids be opened and reviewed.

Time of Completion

The time of completion is essential part of this contract. It will be necessary for each bidder to satisfy the City of Waterloo's time frame for the renovation/demolition.

Site Walk Through

Bidders must attend a pre-bid conference tour **on August 14, 2008 @ 11:00 AM**. Bidders will meet at the Rath Administration Building, 300 Sycamore Street Waterloo Iowa each bidder should familiarize themselves with the project and scope of work at this time/date.

Interpretation of Bidding Information

If any person who contemplates submitting a bid is in doubt as to the true meaning of the specifications or other proposal documents they may submit to the City of Waterloo Representative a written request for an interpretation. This must be done within the bidding proposal time frame, and be in writing.

Abatement Project Drawings

All drawings with in this document are to be used as a reference. The contractor shall check and verify all dimensions, and shall assume full responsibility for the accuracy thereof. Alloy Specialty has included drawings in this document **from the AMI Environmental inspection report (**authorized for use by the City of Waterloo) to clarify the asbestos abatement design for the Rath Administration Building project.

Bid Security

Each bid must be accompanied by a bid bond executed by the bidder as principal and as surety thereon a surety company approved by the City of Waterloo in the amount of Five percent (5%) of the bid. Bid bonds will be returned promptly after the City of Waterloo and the accepted bidder have executed the contract, or if no award has been make within ninety (90) days after the date of the opening of the bids, upon demand of the bidder as long as they have not been notified of the acceptance of their bid by the City of Waterloo.

Performance Bond

The successful bidder shall furnish, within ten (10) days of the award, a Performance Payment and Guarantee Bond on forms required by the City of Waterloo, in the full amount of the contract as security for the faithful performance of the contract and the payment of all persons performing labor or furnishing materials in connection with the contract. This security shall also cover the guarantee required by the contract for the period of guarantee stated in the proposal.

Surety

The surety on the Bid Bond, Contract and the performance, Payment and Guarantee Bond shall be a dully-authorized Treasury Listed Surety Company, Licensed to do business in the State of Iowa and satisfactory to the City of Waterloo, the performance bond will be based on 100% of project value.

Guarantees, Warranties and Bonds

The Contractor shall guarantee all work under this contract for a period of one (1) year from the date of completion. The Contractor shall leave the work/site in perfect order at completion and the final certificate of payment order at completion. The final certificate of payment shall not relieve him of the responsibility for negligence, faulty materials or workmanship, and upon written notice he shall remedy any defects or workmanship that may appear during the time mentioned and pay all expense due.

Insurance and "Asbestos Hazard Insurance Occurrence"

The successful Contractor shall secure and keep in force during the life of the contract Insurance in the kinds and amounts as outlined in the Insurance Requirements of this document. This shall be delivered to the City of Waterloo within ten (10) days after notice to proceed has been granted.

Competency of Bidders

The City of Waterloo will not award a contract to a bidder who does not furnish upon request satisfactory evidence that they have necessary ability and experience in work of this nature, and necessary financial resources, facilities and plan to enable him to execute and complete the work within the time required by the contract. Only bids from contractors who have satisfied the City of Waterloo's pre-qualification requirements will be considered.

Subcontractors

The City of Waterloo reserves the right to approve all subcontractors used under this contract arrangement. Upon request, the subcontractor may be asked to furnish satisfactory evidence as to his ability, experience, and financial resources.

Utilities

Connection to any water and electricity shall be coordinated with and approved by the City of Waterloo's Representative. The hookup of any item of equipment either for test purposes or for use in construction shall be borne by the contractor. **The cost of the water and electricity shall be borne by the City of Waterloo. At the time of the issuance of this specification, no water or electricity was identified as active (on) in the Rath Building. It will be the City of Waterloo's responsibility to call for electrical hook up to a pole next to the building (temporary power hookup) and to call the water department to hook up to a water hydrant near the building or re-connect the water main to the building.**

Site Clean up

Once the contractor is completed with the site work, he shall remove all asbestos containing building materials, construction materials and rubbish resulting from work on the site.

Inspection

The City of Waterloo's Representative shall be authorized to call to the attention of the contractor, any failure of the work or materials to conform to the provisions of this contract. The City of Waterloo's Representative/Consultant shall have the authority to call a Stop Work Order, till the issue is resolved. Any/all time and expense will be the responsibility of the contractor.

The contractor must provide continuing access to various parts of the building by authorized individuals. All scheduling is to be worked out with the City of Waterloo's Representative.

Damages Incurred

Liquated Damages

The contractor will be assessed a penalty through the City of Waterloo for the cost of lost days of occupancy be it either the City of Waterloo or the General Contractor. This penalty will be based on the "over-run" days after the proposed work shifts have been exhausted based on each area.

Project

Damages at $500.00 per day

The Contractor will be assessed a penalty through the City of Waterloo for the cost of additional consulting services incurred by the City of Waterloo. The monetary sum will be based on a cost of $95.00 per hour, minimum charge of 4 hours per day.

1. For each hour necessary to satisfactorily complete the project in excess of the number of work shifts identified by the City of Waterloo and the consulting contract thereof
2. For all expensed incurred by the City of Waterloo if the contractor fails to begin the project beyond the scheduled start date, and any over run per the City of Waterloo contract with the consultant.
3. For all expenses incurred by the City of Waterloo if the work is suspended do to the contractor's actions and the City of Waterloo's consultant is on site.

Form of Proposal

Request for Bid: Asbestos Removal for Renovation Project

Location: Rath Administration Building
300 Sycamore Street
Waterloo, IA 50703

Bid Mailing: City of Waterloo
Attn. Louis Starks
Community Development
620 Mulberry Street, Carnegie Annex
Waterloo, IA 50703

Request for Bid covering the work described in the specifications as follows:

- Provide all labor, materials, transportation and equipment necessary for the Removal
- Disposal of Asbestos-Containing Materials within and/or associated with project.

Bids will be received by City of Waterloo, Attn. Mr. Louis Starks, 620 Mulberry Street, Carnegie Annex Waterloo, Iowa 50703 until 2:00 P.M. (local time), on August 22, 2008.

Questions regarding this project should be directed to City of Waterloo, Mr. Louis Starks

Official Bid Section

Date Bid Submitted _____

The undersigned bidder proposes and agrees to:

1. Execute a contract of the form enclosed,
2. Furnish and pay for surety bond in the full amount of bid acceptable to and approved by the City of Waterloo, and
3. Accept in full payment for the work as covered by the plans and specifications.

The undersigned agrees, if this bid is accepted within the allotted timeframe (including notices from the City of Waterloo) from the date bid is submitted, to complete all work specified in strict accordance with the Specifications and all applicable regulations as follows:

Base Bid:

Removal and disposal of asbestos containing/contaminated material as outlined in the Scope of Work and/or Drawings:

$ _____

_____

(Written. In case of discrepancy, the written amount will preside over the numerical value.)

Proposed Work Schedule:

	Total Number of Shifts/Days Per Section				
Work Area	Prepping Work Area	Abatement Or Removal Days	Final Clean, Visual & Air Testing	Remove Decon	Total Days in Phase
Rath Administration Building Original Building, Attic Phase 1					
Rath Administration Building Original Building, 3rd Floor Phase 2					
Rath Administration Building Original Building, 2nd Floor Phase 3					
Rath Administration Building Original Building, 1st Floor Phase 4					
Rath Administration Building Original Building, Basement Phase 5					
Rath Administration Building Adams Building 1st, 2nd, 3rd Stairwell Phase6					
Rath Administration Building Adams Building Basement Phase 7					
Rath Administration Building 1950 Building 1 Floor Phase 8					
Rath Administration Building 1950 Building, Basement Phase 9					
Rath Administration Building Exterior Building Phase 10					
Rath Administration Building Exterior Roofing (Work to be conducted between **March 15 to April 30th 2009**) Phase 11					
Total					

Bidder's Understandings for Submitting Bids:

1. In submitting this bid, it is understood that the low bid for the complete project, as per the Specifications and Insurance Requirements, will be considered as the low bid.

2. It is also understood that the right is reserved by City of Waterloo to accept any or all bids, or reject any or all bids, whichever may be in the best interest of the Property.

3. The Bidder states that he/she has visited the site of the project and has familiarized himself/herself with the conditions that may affect the work.

4. All bids shall be enclosed and sealed in an envelope with the BIDDER'S NAME AND ADDRESS, NAME OF PROJECT, AND DATE AND THE TIME OF OPENING, IN THE LOWER LEFT CORNER OF THE ENVELOPE. Bids shall be deposited at the location designated for the opening, prior to the time and date indicated in the Request for Bid or any extension thereof made by Addendum.

Addendas:

Bidder in signing this document has received Addenda No.(s)_____ thru _____ . Bidders have received addendas and their provisions are included in this Proposal.

NAME AND ADDRESS OF BIDDER

SIGNATURE OF PERSON AUTHORIZED TO SIGN BID

_____

_____
Signature

_____

_____
Printed Name

_____

_____
Title

Addition/Deduction Unit-Based Bid Form

Bidder's Understandings for Submitting Bids for Alternatives:

1. In submitting this bid, it is understood that the low bid for the complete project, as per the Specifications and Insurance Requirements, will be considered as the low bid for the potential alteration in the original scope of work.

2. It is also understood that the right is reserved by the City of Waterloo to accept any or all bids, or reject any or all bids, whichever may be in the best interest of the Property.

3. The Bidder states that he/she has visited the site of the project and has familiarized himself/herself with the conditions that may affect the work.

4. Reduction/Deduction will be taken into account if the owner determines the need based upon error in the original survey's quantification and/or alteration in scope of work.

5. All bids shall be enclosed and sealed in an envelope with the BIDDER'S NAME AND ADDRESS, NAME OF PROJECT, AND DATE AND THE TIME OF OPENING, IN THE LOWER LEFT CORNER OF THE ENVELOPE. Bids shall be deposited at the location designated for the opening, prior to the time and date indicated in the Request for Bid or any extension thereof made by Addendum.

Pricing for Additional/Reduction/Alternative Services:

Contractor Mobilization Rate: $_____
List mobilization charge for each phased activity
Pricing will be used incase of additional mobilizations caused by additional work, delays of the owner, owner's representatives, or general contractor, etc.

Resilient Floor Coverings and/or Mastics $_____ sq. ft.
Pricing based on square foot removal in addition to original scope of work, regardless of layers or coverings.

Mastics/Surfacing Coating Tars or Sealants (non-roof) $_____sq. ft.
Pricing based on square foot removal in addition to original scope of work, regardless of layers or coverings.

Thermal System Insulation

Pricing based on unit removal in addition to original scope of work, regardless of location.

<4" OD$_____Mechanical Fittings Straight Pipe $_____

4-6" OD$_____Mechanical Fittings Straight Pipe $_____

≥6" OD$_____Mechanical Fittings Straight Pipe $_____

Roofing Material Removal/Bituminous, Felts or Flashings $_____ sq. ft.
(includes bituminous, vent flashing, building roof flashings)

Cork/Mastics $_____ sq ft
(includes all applications such as coolers with cement covering the cork and mastic etc.)

Tank Insulation $_____ sq ft
(includes but not limited to water tanks, auxiliary etc.)

Duct Cloth/Isolation Joints $_____ sq ft

Sheetrock/Joint Compound $_____ sq ft
(includes but not limited to panels, sheets, overhangs, boards, etc.)

Cement Asbestos Board $_____ sq ft
(includes but not limited to panels, sheets, overhangs, boards, etc.)

Sealants and Caulking of any kind $_____ln ft
(includes but not limited to windows, chalkboards, baseboards, and exterior applications, etc.)

Spray-on or Surfacing Materials (fireproofing, etc.) $_____ sq ft

Underground Piping $_____ sq ft
(includes but not limited to unearthing, removal, disposal, replacement of trenched soil, etc..)

Any and All Change Order Items will be based off this Services Pricing per lineal feet or square feet for items found in addition to the original bid regardless of the application. It will be the contractor's responsibility to base pricing for any change orders off the above listed pricing.

NAME AND ADDRESS OF BIDDER

SIGNATURE OF PERSON AUTHORIZED TO SIGN BID

_____
Signature

_____
Printed Name

_____
Title

Contractor Agreement

This Agreement made this day _____of August 2008, by and between,

_____ hereinafter called the Contractor, and,

City of Waterloo hereinafter called the Owner.

WITNESSETH, that the Contractor and the Owner for the considerations named agree as follows:

Article 1. SCOPE OF THE WORK

The Contractor shall furnish all of the materials and perform all of the work shown on the drawings and/or described throughout the asbestos abatement specification. Hereto, as it pertains to work to be performed on the property of the City of Waterloo (Rath Building), located at 300 Sycamore Street, Waterloo, Iowa. The project encompasses 1 building and materials as outlined in the Scope of Work, as listed in the specification, for the asbestos abatement project, inclusive.

Article 2. TIME OF COMPLETION

The work to be performed under this Contract shall be commenced on each start date and shall be substantially completed on the end date given within the specification. All phases are bid with set time frames and are of the essence to be completed within the time frame/dates given by the Contractor.

Article 3. THE CONTRACT PRICE

The Owner shall pay the contractor for the material and labor to be performed under the contract

sum of _____.

Article 4.PROGRESS PAYMENTS

Payments under this contract must be approved and paid by the school. Partial payments may be submitted to the **City of Waterloo** upon satisfactorily completing each phase of this project. Each partial payment cannot be more the ten (10) percent of the total bid. Each phase must be approved and signed off by the **City of Waterloo's** Representative.

Article 5.GENERAL PROVISIONS

1. All work shall be completed in a workman like manner and in compliance with all asbestos abatement regulations and other applicable laws.

2. The Contractor shall furnish a work plan and drawings showing how the work will be scheduled, the areas/shape/size and dimensions of the containment or regulated area.
3. To the extent of the law all work shall be performed by individuals duly licensed and authorized by law to perform said work in the State of Iowa.
4. Contractor may hire pre-approved subcontractors to perform work hereunder, provided contractor shall fully pay said subcontractor and in all instances remain responsible for the proper completion of the contract.
5. Contractor shall furnish Owner appropriate releases or waivers of lien for all work performed or materials provided at the time the next periodic payment shall be due.
6. All change orders shall be in writing and signed both by the Owner and Contractor and shall be incorporated in and become part of the contract.
7. Contractor warrants it is adequately insured per the specifications for injury to its employees and others incurring loss or injury as a result of the acts of Contractor or its employees/subcontractor.
8. Contractor shall at its own expense obtain all permits necessary for the work to be performed.
9. Contractor agrees to remove all debris and leave the premises in clean condition.
10. To the fullest extent of the law, the Contractor will indemnify, defend and hold City of Waterloo/Owner, their employees, officers, directors and representatives harmless, from and against all liability, claims, losses, costs expenses, and fees arising out of the project or this agreement that are in any way caused by errors, omissions, negligent acts of Contractor, Subcontractor, employees, agents, or suppliers.

_____	_____
Witness	***Witness***
_____	_____
Name of Owner	***Name of Contractor***
_____	_____
Owner or Representative Signature	***Contractor Signature***
_____	_____
Printed Name	***Printed Name***
_____	_____
Title	***Title***
_____	_____
Date	***Date***
	_____
	Street Address
	_____
	City, State, Zip Code
	_____
	Contractor's State License No.

INSURANCE REQUIREMENTS

The Contractor shall, at its own sole cost and expense, procure the following kinds of insurance and promptly pay when due all premiums for that insurance. If it so elects, the City of Waterloo shall have the right to obtain such insurance and the Contractor shall promptly reimburse the City of Waterloo that expense. This insurance shall be written on an occurrence basis and kept in force during the life of this agreement:

Commercial or Comprehensive General Public Liability insurance providing bodily injury, including death, personal injury, and property damage coverage with a combined single limit of at least $2,000,000 each occurrence or claim and an aggregate limit of at least $2,000,000. This insurance shall contain broad form contractual liability covering the indemnity provisions contained in this Agreement, underground hazard, and name the City of Waterloo and the their consultant as an additional insured, with respect to liability arising out of the work being performed by the Contractor on behalf of City of Waterloo.

Automobile Public Liability insurance providing bodily injury and property damage coverage with a combined single limit of at least $500,000 each occurrence or claim, or as required by statutory limits. This insurance shall cover all motor vehicles including hired and non- owned and mobile equipment to the extent it may be excluded from the general liability insurance.

Workers' Compensation insurance covering the statutory liability as determined by the compensation laws of the state(s) affected by this Agreement and Employers' Liability. Also compliance with all laws of States that require participation in their state workers' compensation fund.

Contractor WARRANTS that this agreement has been thoroughly reviewed with its insurance agent(s)/broker(s) and the agent(s)/broker(s) has been instructed to procure the insurance coverage required herein including the following type of endorsement:

The City of Waterloo and their Consultant is named as additional insured with respect to all liabilities arising out of Insured's, as Contractor, performance of the work on behalf of the City of Waterloo.

The Contractor shall furnish to the City of Waterloo certificates of insurance evidencing the required coverage, endorsements and a certified duplicate original of any of those policies. The insurance company/(ies) issuing such policy/(ies) shall notify the City of Waterloos in writing of any material alteration including any change in the retroactive date in any "claims-made" policies or substantial reduction of aggregate limits, if such limits apply, or cancellation thereof at least thirty (30) days prior thereto.

The insurance policy (ies) shall be written by a reputable insurance company or companies acceptable to the City of Waterloo or with a current Best's Insurance Guide Rating of B or better. Such insurance company shall be authorized to transact business in the State of Iowa.

ASBESTOS HAZARD INSURANCE--OCCURRENCE

Insurance coverage's required in these Contract Documents may have exclusions for asbestos-related hazards. If such exclusions apply, the asbestos hazard liability must be addressed by supplementary coverage provided by additional policies. This coverage shall be provided on an "occurrence" basis, covering claims for damage incurred during the policy's effective dates, regardless of claim filing date. The minimum amounts of such insurance shall be as follows:

$2,000,000 for a general aggregate limit of general comprehensive liability, including products and completed operations.

Bodily injury insurance (including death) in an amount of not less than $2,000.000 for all damages arising out bodily injuries to or death of one person and subject to the same limit for each person in a total amount of not less than $2,000,000 on account of any one accident.

Property damage insurance in an amount of not less than $ 2,000,000 for all damages to or destruction of property in any one accident and subject to that limit per accident; further subject to a total of not less than $2,000,000 for all damages to or destruction of property during the policy period.

The asbestos hazard insurance policy or policies as required above shall name the City of Waterloo and the City of Waterloo's Representative (consultant) as joint insureds and using a cross-liability endorsement, protect the City of Waterloo's, Representative (consultant), and the Contractor from all asbestos hazard claims whether resulting from the operations of the Contractor or by the Subcontractor or by anyone directly or indirectly employed by either of them.

SECTION

5

ASBESTOS REMOVAL REPORT FORM

Contractor: _____

Address: _____

City: _____State: _____Zip: _____

Phone: (____)_____

Building Owner or Operator: _____

Address: _____

City: _____ State: _____Zip: _____

Phone: (____)_____

Building Information: _____

Age of Building: _____

Use of Building: _____

Address: _____

City: _____ State: _____ Zip: _____

Amount of Asbestos (ft): _____Abatement Technique: _____

Amount of Asbestos (ft): _____Abatement Technique: _____

Contract Dates: Start: _____ Finish: _____

Disposal Site: _____

Site Name: _____Owner-Operator Name: _____

Address: _____Address: _____

City, State: _____City, State: _____

Phone: (____)_____Phone: (____)_____

TEN-DAY REPORT FORM

This form is to be filled in and filed with both state and regional EPA officials a minimum of ten (10) days before start of the asbestos abatement contract.

Contractor: _____

Address: _____

City: _____State: _____Zip: _____

Phone: (____)_____

Building Owner or Operator: _____

Address: _____

City: _____ State: _____Zip: _____

Phone: (____)_____

Building Information: _____

Age of Building: _____

Use of Building: _____

Address: _____

City: _____ State: _____ Zip: _____

Amount of Asbestos (ft): _____Abatement Technique: _____

Amount of Asbestos (ft): _____Abatement Technique: _____

Contract Dates: Start: _____ Finish: _____

Disposal Site: _____

Site Name: _____Owner-Operator Name: _____

Address: _____Address: _____

City, State: _____City, State: _____

Phone: (____)_____Phone: (____)_____

FRIABLE ASBESTOS
DEMOLITION/RENOVATION PROJECT NOTIFICATION

The following information on asbestos demolition/renovation projects.

l. Contractor _____

2. Contact _____Phone (____) _____

3. Address_____
Street City State Zip

4. Building Owner/Operator _____

5. Contact _____Phone (____) _____

6. Address _____
Street City State Zip

7. Is Project Demolition or Renovation: (Circle One)

8. Has facility been condemned: Yes_____ No_____

9. If yes, by what agency?_____

10. Location of Project_____
Street City

ll. Description of Facility-Size _____

12. Present use of Facility: _____

13. Prior use of Facility: _____

14. Estimated amount of asbestos to be removed:
Pipes (linear ft.) _____Other Components (sq ft)_____

15. Describe method of estimation, nature of material, and method of removal. (Use separate sheet)

16. What additional steps will be taken to prevent asbestos emission into surrounding areas and outside air? (Use separate sheet)

17. Work is scheduled between the dates of _____ and _____

18. Disposal site _____
Name Address

19. Has approval for disposal been received from Land Pollution Control Division? Yes _____ No _____ In Process _____

20. Date(s) of disposal _____

2l. Signature _____ Date _____

DEMOLITION/RENOVATION NOTICE OF ASBESTOS REMOVAL

This form is to be completed in full and filed by the Contractor with both State and Federal EPA Officials as early as possible, but in no case less than ten (10) working days, before the start of a demolition/renovation involving the stripping or removal of at least 260 linear feet of asbestos materials on pipes or at least 160 square feet of asbestos materials on ducts, boilers, tanks, reactors, turbines, furnaces, load-supporting members (such as beams and load-supporting walls), or nonload-supporting members (such as ceilings and nonload-supporting walls).

CONTRACTOR
NAME: _____
Address: _____
City: _____State: _____Zip: _____
Phone: (____)_____

Building Owner or Operator
Name: _____
Address: _____
City: _____State: _____Zip: _____

Building Information
Size of Building (number of floors, approximate square footage): _____
_____
Age of Building: _____
Immediate Prior Use of Building: _____
Address of Building: _____
City: _____ County: _____Zip: _____
Nature and Method of Removal: _____

Abatement Information
Description of Asbestos-Containing Material: _____
_____
Approximate Amount of Asbestos Material on Pipes (linear feet; if none, so state): _____
Approximate Amount of Asbestos Material on other Facility Components (square feet; if none, so state): _____
Abatement Technique (Example: "wetting and sealing in leak-tight containers") : _____
Abatement Dates: Start _____Finish: _____

Disposal Site
Landfill Name: _____
Address: _____
City: _____State: _____Zip: _____
Phone: (____)_____

Environmental Protection Agency
Demolition and Asbestos Renovation Notification

l. Check one only:

/_____/ Planned renovation (10 days prior notice required)
/_____/ Emergency renovation (phone approval followed in writing in 24 hours)
/_____/ Demolition (10 days prior notice if asbestos will be removed))
/_____/ Emergency Demolition (attach engineer's statement building is in imminent danger of collapse with condemnation order including name, title, authority and phone of issuing government official.

2. Name and Address of Owner: Name and Address of Contractor:

Phone: (___) Phone: (____)

3. Facility Name & Address: (attached map for Smith Elementary structures of location

County, State (zip) _____

4. Facility Description: Size: _____Square Feet, Age:_____ Years,
The prior use of the facility was_____
The current use of this facility is_____

5. Estimate of Friable Asbestos: _____Linear feet on pipes:
_____square feet on other components; _____s.f. of non-friable
Estimation Technique:

6. Asbestos removal starting date: _____ Completion date: _____
Demolition starting date (if applicable): _____
Will removal be conducted on weekends, or on weekdays after 5:00 p.m.,
And prior to 7:00 a.m.? (Circle one) Yes/No. If yes, specify:

7. General method and purpose of demolition or renovation:

8. Procedures to be used to comply with regulations: (check as appropriate:
_____adequate wetting, _____ amended water, _____keep material wet until collected, _____ carefully lower materials, _____complete cleaning and lockdown, _____ seal materials into leak-tight container, _____ double 6 mil bags, _____sing 6 mil bag and drum, _____ alternative approved container, _____ dispose in approved landfill, _____other:

9. Name, address and phone of approved landfill for asbestos disposal:

10. CERTIFICATION: I certify the information submitted was collected under my direction or supervision, and is to the best of my knowledge true, accurate and complete

signature title lic. no. date

CERTIFICATE OF WORKER'S RELEASE

DATE: _____

TO: _____
(Insert Owner's Name and Address)

RE: _____
(Insert Project Name and Address)

In consideration of my employment by _____(Contractor) in connection with the removal and disposal of asbestos, or other work in asbestos-contaminated work areas, and in consideration of the sum of ONE AND NO/100 ($1.00) DOLLAR and other good and valuable consideration in hand paid, at and before the sealing and delivery of these presents, the receipt, sufficiency, and adequacy of which are hereby acknowledged, the undersigned does hereby acknowledge, warrant, represent, covenant, and agree as follows:

1. I acknowledge and understand that I have been or will be employed in connection with the removal of, disposal of, or other treatment to, asbestos, or other work in asbestos-contaminated work areas, and I acknowledge that in handling asbestos and breathing asbestos dust, including, but not limited to, THE FACT THAT ASBESTOS CAN CAUSE ASBESTOSIS AND IS A KNOWN CARCINOGEN, AND CAN THEREFORE CAUSE VARIOUS TYPES OF CANCER.

2. I acknowledge and understand that ANY CONTACT WITH ASBESTOS, WHETHER IT CAN BE SEEN OR NOT, MAY CAUSE ASBESTOSIS AND VARIOUS FORMS OF CANCER, WHICH MAY NOT SHOW UP FOR MANY YEARS, AND I covenant and agree faithfully to take all precautions required of me.

3. I knowingly assume all risks in connection with potential exposure to asbestos and I do hereby release and forever discharge Owner, Architect, independent laboratory or engineers employed by the Owner or Architect, and all of their directors, officers, employees, nominees, personal representatives, affiliates, successors, and assigns from and against any and all liability whatsoever, at common law or otherwise, except any rights which the undersigned may have under the provisions of the applicable Workmen's Compensation Laws. Expect as specifically set forth herein, I hereby waive and relinquish any and all claims of every nature which I now have or may have or claim to have which are in any way, directly or indirectly related to exposure of asbestos and asbestos-containing materials.

_____ _____
Name of Worker (Must be typed) — Signature of Worker (As acknowledgement of reading this page of this two-page Certificate.)

4. I hereby warrant and represent that I have not been disabled, laid-off, or compensated in damages or otherwise, because of the disease of asbestosis.

SIGNATURE_____ SOCIAL SECURITY NUMBER_____

SIGNED IN PRESENCE OF:

_____
Notary No. and Seal

(Submit one copy for each employee prior to employee staring work.)

SPECIAL ENDORSEMENT (INSURANCE)

Attached to and forming a part of Policy No. _____ of the _____ issued at is _____ Agency.
(Name of Insurance Company) (City) (State)

Date of endorsement _____ for

_____
(Name of Project)

In consideration of the premium for which the policy is written and proper rate adjustment when applicable, the insurance company agrees as follows:

The insurance company agrees that this policy shall not be cancelled, changed, allowed to lapse, or expire until 30 days after the Owner has received written notice thereof as evidenced by return receipt of registered letter or until such time as other valid and effective insurance coverage acceptable in every respect to the Owner and providing protection equal to protection called for in the policy shown below shall have been received, accepted, and acknowledged by the Owner.

The insurance company acknowledges and agrees that this policy is applicable for Contractor or Subcontractor whose business is asbestos removal or asbestos abatement.

Any other provisions to the contrary notwithstanding, coverage under this policy shall specifically include all operations of asbestos abatement required by the project named above.

The forgoing insurance provisions have been incorporated into the reference and are hereby made a part of Insurance Policy No. _____, this _____ day of _____, 20__.

_____
(Name of Company)

_____
(Signature of Authorized Representative)

EMPLOYEE SAFETY INSTRUCTION FORM

Employee Name: _____

Employee Address: _____

Employee Telephone No.: _____

Union Card Number: _____

Classification of Worker: _____

Have you had in the past, or present, any respiratory problems?

Yes_____No _____

Have you worked in the past with asbestos or fiberglass type materials?

Yes _____No _____

The project you will be working on involves the use of asbestos and the removal of the asbestos from the building. Asbestos is considered a health hazard.

The company is supplying all necessary safety clothing and working conditions required and necessary for your protection from asbestos hazard.

You shall be instructed at commencement of the job on the required use of safety equipment, clothing, working conditions and procedures. These must be rigidly adhered to. Smoking is not permitted in the work areas. Disregarding of safety instructions shall result in instant dismissal.

I acknowledge that safety instructions have been given to my by the company at my work commencement and I am thoroughly conversant with them and have answered the above questions truthfully.

Signed _____
Employee

Date _____

(Submit one copy for each employee prior to employee starting work.)

RESPIRATOR TRAINING CERTIFICATION

PROJECT NAME: _____

I hereby certify that I have been trained in the use of each type of respiratory protection equipment required for use on this Project. The training included the following:

1. Explanation of dangers related to misuse.
2. Instruction on putting on, fitting, testing and wearing the respirator.
3. Instruction on inspection, cleaning and maintaining the respirator.
4. Instruction on emergency situations.

I further certify that I understand the use, care and inspection of the respirator and have tested and work the unit.

Signed: _____

Date: _____

Superintendent's Signature: _____

(Submit one copy for each employee prior to employee starting work)

CERTIFICATE OF VISITOR'S RELEASE

DATE: _____

TO: _____
(Insert Project Name and Address)

In consideration of my visit(s) to the above named project in connection with the removal and disposal of asbestos, or other work in asbestos-contaminated work areas, the undersigned does hereby acknowledge, warrant, represent, covenant, and agree as follows:

1. I acknowledge and understand that I have been or will be employed in connection with the removal of, disposal of, or other treatment to, asbestos, or other work in asbestos contaminated work areas, and I acknowledge that I have been advised of and I understand the dangers inherent in handling asbestos and breathing asbestos dust, including, but not limited to, THE FACT THAT ASBESTOS CAN CAUSE ASBESTOSIS AND IS A KNOWN CARCINOGEN AND CAN, THEREFORE, CAUSE VARIOUS TYPES OF CANCER.

2. I acknowledge and understand that ANY CONTACT WITH ASBESTOS, WHETHER IT CAN BE SEEN OR NOT, MAY CAUSE ASBESTOSIS AND VARIOUS FORMS OR CANCER, WHICH MAY NOT SHOW UP FOR MANY YEARS, and I covenant and agree faithfully to take all precautions required of me.

3. I knowingly assume all risks in connection with potential exposure to asbestos and I do hereby, for myself and my heirs at law, release and forever discharge Owner, Owner's Representative, Architect, independent testing laboratory or engineers employed by the Owner, Owner's Representative, Architect, and all of their directors, officers, employees, nominees, personal representatives, affiliates, successor, and assigns from and against any and all liability whatsoever, at common law or otherwise, except any rights the applicable workmen's compensation laws. Except as specifically set forth herein I hereby waive and relinquish any and all claims of every nature which I now have or may have or claim to have which are in any way, directly or indirectly, related to exposure to asbestos and asbestos-containing materials.

4. I hereby warrant and represent that I have not been disabled, laid-off, or compensated in damages or otherwise, because of the disease of asbestosis.

Signature_____

Social Security Number_____

Signed in presence of:

_____
(General Superintendent)

(Submit one copy for each visitor.)