



September 17, 2008

Mr. Nick Smith  
A & E Salvage, Inc.  
2001 Vantage View Drive  
Morristown, Tennessee 37814

**Subject: Debris Field Asbestos Survey Report**  
Former Liberty Fibers Site; Lowland, Tennessee  
**A.C.T. Services Proposal No. 08.17.002**

Dear Mr. Smith,

A.C.T. Services, LLC. (ACT) has completed the site investigation and analysis of suspect asbestos-containing building materials collected from the demolished structures debris field within the Former Liberty Fibers site located in Lowland, Tennessee as per your acceptance of our proposal number 08-025 dated May 9, 2008 and amended by proposal number 08-025-02 dated August 28, 2008.

The limited survey was performed to determine the presence of asbestos-containing building material debris in accordance with the U.S. Environmental Protection Agency (EPA), Region 4 Consent Agreement. The suspect building material debris sampled include thermal system insulation, fire door insulation, cementitious panel and piping, refractory materials, gaskets, packing, resilient floor covering, drywall construction, acoustical ceiling tile, window glazing, roofing membranes, deck board insulation, window glazing and various other miscellaneous building material debris that may be affected by the site cleanup activities.

The attached report presents descriptions and results of the material sampling procedures and laboratory analysis methodology. Relevant general project information is also provided, followed by our findings and recommendations. Sample analysis results are provided in the enclosed Appendices. Representative samples of suspect asbestos-containing materials that may be affected by the planned demolition were collected in general accordance with U.S. Environmental Protection Agency (EPA) guidelines.

We appreciate this opportunity to provide environmental consulting services to A&E Salvage, Inc. If you have any questions or require further information, please do not hesitate to call.

Sincerely,

A.C.T. Services, LLC.

Michael J. Robarts  
Executive Vice President  
Inspector Management Planner Certification No. 10566



763 North Clayton Street  
Lawrenceville, GA 30045  
Phone 770-682-4343  
Fax 770-682-4986

**THIS REPORT HAS BEEN PREPARED ON BEHALF OF AND EXCLUSIVELY FOR THE USE OF A&E SALVAGE, INC., AND ITS DEVELOPING AGENT. THIS REPORT AND THE FINDINGS CONTAINED HEREIN SHALL NOT, IN WHOLE OR PART, BE DISSEMINATED OR CONVEYED TO ANY OTHER PARTY OTHER THAN OFFICERS, AGENTS AND TENANTS OR RELIED UPON BY ANY OTHER PARTY OTHER THAN OFFICERS, AGENTS AND TENANTS, IN WHOLE OR PART, WITHOUT A.C.T. SERVICES, LLC'S PRIOR WRITTEN CONSENT.**

# TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY .....	1
2.0	PROJECT INFORMATION .....	3
3.0	ASBESTOS PROCEDURES AND RESULTS .....	3
3.1	Field Grid Delineation .....	4
3.2	Visual Survey .....	4
3.3	Material Sample Analysis and Summary of Results .....	4
3.4	Material Assessment.....	16
4.0	ASBESTOS EXPOSURE ASSESSMENT AND RECOMMENDATIONS .....	17
4.1	Thermal System Pipe Insulation Debris .....	18
4.2	Roofing Material Debris.....	18
4.2.1	Friable Roof Felt Debris.....	18
4.2.2	Non-Friable Built-Up Roofing Debris.....	19
4.2.3	Roof Flashing & Mastic Debris .....	19
4.3	Resilient Flooring Debris .....	19
4.4	Miscellaneous Material Debris .....	20
4.5	Cementitious Panel & Pipe Debris .....	20
4.5.1	Friable Cementitious Debris .....	21
4.3.2	Non-Friable Cementitious Debris.....	21
4.6	Stripped Electrical Wire Insulation Debris .....	21
5.0	QUALIFICATIONS OF REPORT .....	22

## APPENDICES:

### **Volume Number 1**

Appendix A – ASBESTOS-CONTAINING MATERIAL SUMMARY REPORT

Appendix B – SITE LAYOUT DIAGRAMS & MAPS

Appendix C – ASBESTOS BULK SAMPLE ANALYSIS SHEETS

Appendix D – BULK SAMPLE CHAIN OF CUSTODY FORMS

Appendix E – SITE PHOTOGRAPHS

Appendix F – ASBESTOS CERTIFICATIONS

Appendix G – VISUAL OBSERVATION & SAMPLE LOGS

### **Volume Number 2**

Appendix H – BULK SAMPLE LOCATION DIAGRAMS

Appendix I – GLOBAL POSITIONING SATELITE POINT MAPS

## 1.0 EXECUTIVE SUMMARY

The limited survey for asbestos-containing building material (ACBM) debris within previously demolished facility structures (debris fields) of the former Liberty Fibers Site located in Lowland, Tennessee, included visual observations, material sampling and laboratory analysis of friable and non-friable debris materials suspected of containing regulated asbestiform minerals.

The fieldwork and sample collection was completed during our extended site visit performed between July 28, 2008 through September 12, 2008. The complete inspection process was managed by Michael J. Robarts (Asbestos Inspector Certification No. 10566) with the additional professional support of six (6) accredited asbestos inspectors. The ACBM investigation was a surface-by-surface inspection of accessible debris mounds. Subsurface investigations and areas such as unstable basements, tanks or otherwise structurally inaccessible locations were excluded from this debris field sampling effort. Limited attempts were made to bore and/or dig into the debris mounds or demolish finishes to access suspect ACBM's.

The debris field inspection process began with a complete assessment of the debris field scope of work and other potential hazards that may affect our staff. Once all safety issues were defined and appropriate policies initiated, ACT's field staff began a tedious effort to completely delineate the debris field site with one-hundred foot by one-hundred foot (100'x100') grids. Three hundred eighteen (318) grids were delineated to encompass all debris fields at the site. All grids containing debris fields were then subdivided into sixteen (16) twenty-five foot by twenty-five foot (25'x25') subgrids. During this process all corner points were plotted via global positioning system (GPS) devices and surveyors flags placed to visually identify each grid. GPS grid point maps were developed for all grids.

A total of seven hundred eighteen (718) suspect asbestos-containing building material debris samples were obtained during ACT's site visit. Each of the debris samples were collected within the grid system and locations noted on individual sample location diagrams for future use. The grid system allowed our inspectors to meticulously identify, assess and sample where necessary all observed suspect regulated asbestos-containing materials throughout the debris fields within each subgrid coordinate. The suspect building material debris sampled include thermal system insulation, fire door insulation, cementitious panel and piping, refractory materials, gaskets, packing, resilient floor covering, drywall construction, acoustical ceiling tile, window glazing, roofing membranes, deck board insulation, window glazing and various other miscellaneous building material debris that may be affected by the site cleanup activities.

The US Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) consider asbestos-containing building materials, which are or have not become friable during the course of demolition activities, regulated asbestos-containing materials and must be properly disposed of as asbestos-containing waste materials in accordance with the following regulatory guidelines.

Friable asbestos material means any material containing greater than one percent (>1%) asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Category I non-friable asbestos-containing material (ACM) means asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy. Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Of the suspect asbestos-containing building material debris sampled, various thermal system insulations, cementitious panels, cementitious pipes resilient floor covering, electrical wire insulation, fire door packing, roofing membranes, roof mastics, vapor barrier mastic wrap, and other various miscellaneous building material debris were found to contain greater than one percent (>1%) regulated asbestiform minerals using polarized light microscopy coupled with dispersion staining (PLM/DS) in accordance with EPA 600/R-93/116 Method. Due to the large number of homogeneous asbestos-containing building material debris identified at the facility we have compiled a summary list of these materials and their general locations in Section 3.2 of this report. A complete copy of the laboratory analysis is included in the appendices.

When the planned debris field cleanup is performed, the friable regulated asbestos-containing thermal system insulation, vessel skim coat material, exposed fire door packing material debris; and category I rayon filament plant felt roofing material and stripped electrical wire insulation material debris; and category II cementitious panels and cementitious pipe material debris must be removed by a qualified asbestos abatement contractor. Each of these materials have been assessed by ACT's accredited asbestos inspectors as debris materials that have or will become friable during the course of future cleanup activities.

The remaining category I non-friable acm debris such as resilient flooring, asphalt roofing, mastics, gaskets and packing which have not or will not be subject to sanding, cutting grinding or abrading during the demolition and cleanup process are not subject to National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations 40 CFR Part 61 Subpart M National Emission Standard for asbestos waste disposal requirements. Moreover, compaction for the purpose of waste reduction of Category I and/or Category II non-friable asbestos-containing debris by demolition equipment (e.g. track loaders, excavators, etc.) is considered rendering these materials friable and RACM waste disposal regulations will be enforceable by federal and state regulators.

It is EPA's interpretation that acm waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I non-friable asbestos-containing material is not subject to the NESHAP regulation and can be disposed of as non-asbestos waste. EPA further construes the NESHAP regulation to provide that if Category II materials (such as asbestos cement type products) are removed and disposed of without crumbling, pulverizing, or reducing to powder, the waste from the removal is not subject to the NESHAP waste disposal requirements.

EPA also interprets the NESHAP regulation to be inapplicable to waste resulting from roof removal operations that do not meet or exceed the coverage thresholds described in the regulation. Other Federal, State or local regulations may still be applicable in this situation.

All cleanup work involving acm must comply with NEHSAP and Occupational Safety and Health Administration regulations stipulated in the Code of Federal Regulations (CFR) 29 1926.1101 titled "Asbestos". Other regulations may also apply and are cross-referenced in both NESHAP and OSHA standards, which are presented to promote compliance with the cited regulations

## 2.0 PROJECT INFORMATION

The Liberty Fibers Site, located in Lowland, Tennessee, has undergone various demolition activities by A&E Salvage and others in conjunction with a proposing site redevelopment. During the course of demolition and salvage activities it appears that several asbestos-containing building materials were not removed prior to the aforementioned activities and are now intermingled with general demolition debris. EPA Region 4 has provided A&E Salvage with a written directive to assess the extent of acm contamination within the demolition debris fields.

ACT's initial assessment of the debris fields identified an assortment of suspect asbestos-containing building material debris intermingled with demolition debris throughout the estimated seventy-three (73) acre demolition site. Although several complete and partial structures remained, the majority of the affected site was generally organized into debris fields within footprints of pre-existing structures. Buildings demolished included portions of the Rayon Staple Plant, Pulp Storage Building, Rayon Filament Plant, Raw Water Treatment Plant, Cooling Towers, Clarifier Tanks, south end of the Powerhouse Structure and many unidentified smaller office, storage tank and operational structures. ACT has developed site layout diagrams (ASB-01 and ASB-02) included in the appendices to generally identify those structures remaining.

Upon our initial site visit ACT's accredited inspectors observed various homogeneous building materials, including but not limited to, thermal system insulation, fire door insulation, cementitious panel and piping, refractory materials, gaskets, packing, resilient floor covering, drywall construction, acoustical ceiling tile, window glazing, roofing membranes, deck board insulation, window glazing and various other miscellaneous building material debris which were suspected to contain regulated asbestiform minerals.

The scope of investigative services addressed in this report are limited to the building material demolition debris fields identified within the scope of work boundary of drawing ASB-01 included in Appendix B. Specific areas, such as the Powerhouse debris field (included in a previous report) and buildings integrally sound were specifically excluded from this scope of work. The assessment of other potential sources of environmental hazards was not included in this scope of work. The scope of this report was defined in ACT's secondary proposal for the Debris Fields Asbestos Inspection and Design Proposal dated August 28, 2008. A pre-existing asbestos survey report was not available at the time of our site investigation.

## 3.0 ASBESTOS PROCEDURES AND RESULTS

The services provided in this phase of the work included a visual survey of the designated debris field area scheduled for future cleanup activities, suspect building material debris sampling and laboratory analysis for asbestiform minerals. The following paragraphs discuss the general procedures employed for each of these tasks.

### **3.1 Field Grid Delineation**

The debris field inspection process began with a complete assessment of the debris field scope of work and other potential hazards that may affect our staff. Site hazards and safety concerns associated with this task included potential unintentional disturbance of acm, hazardous areas containing other potential contaminants and/or hidden dangers, slips, trips and falls. ACT performed an extensive pre-job safety training class with all staff, which included but not limited to a site-specific 2-hour asbestos awareness training course, potential chemical hazards, venomous snake and wasp dangers, unstable work/walking surfaces and heat exposure. All training of the grid delineating field technicians was performed and documented by Mr. Roberts.

Once all safety issues were defined and appropriate policies initiated, ACT's field staff began a tedious effort to completely delineate the debris field site with one-hundred foot by one-hundred foot (100'x100') grids. Three hundred eighteen (318) grids were delineated to encompass all debris fields at the site. All grids containing demolition debris or other unknown stock piled materials were then subdivided into sixteen (16) twenty-five foot by twenty-five foot (25'x25') subgrids. During this process all corner points were plotted via global positioning system (GPS) devices and surveyors flags placed to visually identify each grid. GPS grid point maps were developed for all grids and are included in the appendices for review.

### **3.2 Visual Survey**

The visual survey by ACT's accredited asbestos inspectors for suspected asbestos-containing materials included observation of thermal system insulation, fire door insulation, cementitious panel and piping, refractory materials, gaskets, packing, resilient floor covering, drywall construction, acoustical ceiling tile, window glazing, roofing membranes, deck board insulation, window glazing and various other miscellaneous building material debris. The primary purpose of the visual survey was to locate and identify friable and non-friable building material debris suspected of containing regulated asbestiform minerals that may require additional cleanup efforts during the site clearing activities. "Friable materials" are those that can be crumbled, pulverized or reduced to powder by hand pressure, releasing fibers into the air.

The next phase of the survey involved identification of suspect materials associated with the proposed site cleanup project and sample collection. Suspect materials sampled included thermal system insulation, fire door insulation, cementitious panel and piping, refractory materials, gaskets, packing, resilient floor covering, drywall construction, acoustical ceiling tile, window glazing, roofing membranes, deck board insulation, window glazing and various other miscellaneous building material debris which were suspected to contain regulated asbestiform minerals.

### **3.3 Material Sample Analysis and Summary of Results**

A total of seven hundred eighteen (718) material samples were collected and delivered to our accredited laboratory (NVLAP Lab Code 101048-1) for visual observation and analysis. The samples were analyzed using Polarized Light Microscopy (PLM) coupled with Dispersion Staining as detailed in the United States Environmental Protection Agency's (EPA) "Method for the Determination of Asbestos in Bulk Building Materials" (EPA-600/R-93/116, July 1993).

A complete list describing the materials sampled, their general location, and the laboratory results are presented in the Appendix A.

The EPA considers a material to be asbestos containing only if it contains greater than one percent (>1%) asbestos as appropriately determined by PLM, which may include point count analysis. The following is an abbreviated overview of general building materials found to contain regulated asbestiform minerals within the debris fields specified for investigation.

<b>Grid Location</b>	<b>Sub-Grid Sample Location</b>	<b>Debris Material Sample Description</b>	<b>Asbestos Percent and Type</b>
A5	3	Black w/Grey Flashing Material	25% Chrysotile
A5	9	Silver Coated Roofing Material	3% Chrysotile
A5	9	Black Roof Flashing Material	25% Chysotile
A5	9	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile
A5	9	Grey Flashing on Brick	25% Chrysotile
A5	12	Black Flashing Material	25% Chrysotile
A5	12	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile
A6	6	Black Mastic & Felt On Brick	25% Chrysotile
A6	12	Black Non-Fibrous Layers	3% Chrysotile
A7	6	Thermal System Insulation Wrap, White Over Grey	30% Chrysotile
A7	6	Black Flashing Material	25% Chrysotile
A7	9	Black Flashing Material	25% Chrysotile
A8	3	Black Flashing Material	25% Chrysotile
A8	3	Black Mastic & Felt On Concrete	25% Chrysotile
B4	14	Grey Thermal System Insulation - Crumbly	30% Amosite 5% Chrysotile
B5	2	Silver Coated Flashing Material on Wood	25% Chrysotile
B5	8	Glass Rock Insulation w/Black Mastic	8% Chrysotile

B5	9	Grey Thermal System Insulation Wrap	15% Chrysotile
B5	9	White Thermal System Insulation - Crumbly	45% Amosite
B5	9	Grey Thermal System Insulation Wrap	45% Amosite
B5	9	White Thermal System Insulation	50% Amosite
B6	10	Floor Tile w/Black Mastic	3% Chrysotile Mastic
B6	11	White Thermal System Insulation - Crumbly	30% Chrysotile
B6	15	Grey Thermal System Insulation - Crumbly	45% Chrysotile
B6	15	Floor Tile w/Black Mastic	3% Chrysotile Mastic
B6	16	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile
B7	2	White Thermal System Insulation	40% Amosite
B7	3	White Thermal System Insulation	40% Chrysotile
B7	7	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile
B8	2	White Thermal System Insulation - Crumbly	40% Amosite
B8	3	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile
B8	12	White Thermal System Insulation - Crumbly	40% Amosite 5% Chrysotile
C1	11	Pipe Wrap Over Green Thermal System Insulation	10% Chrysotile
C1	11	Pipe Wrap Over Green Thermal System Insulation	10% Chrysotile
C1	11	Pipe Wrap Over Green Thermal System Insulation	15% Chrysotile
C7	1	White Thermal System Insulation - Crumbly	25% Chrysotile
C7	5	White Thermal System Insulation - Crumbly	20% Chrysotile

C7	6	Floor Tile w/Black Mastic	3% Chrysotile Mastic
C7	10	Floor Tile w/Black Mastic	2% Chrysotile Mastic
F1	10	White Thermal System Insulation	15% Amosite 5% Chrysotile
G3	11	Thermal System Insulation On Lath	30% Chrysotile
G3	11	Canvas Wrap w/Skim Coat	5% Chrysotile
G3	11	Black Mastic Thermal System Insulation Vapor Barrier	10% Chrysotile
G9	8	Pink Thermal System Insulation	20% Amosite
H1	13	Black Felt Wrap	30% Chrysotile
H3	7	Grey Thermal System Insulation	10% Chrysotile
I10	10	White Thermal System Insulation	15% Amosite 5% Chrysotile
I2	4	White Thermal System Insulation w/Silver Wrap	10% Amosite 5% Chrysotile
I2	6	White Thermal System Insulation	10% Amosite 5% Chrysotile
I2	12	Silver Coated Roofing material	15% Chrysotile
I3	5	File Door Packing	25% Chrysotile
J10	8	White Thermal System Insulation	15% Amosite 5% Chrysotile
J10	11	White Thermal System Insulation	15% Amosite 5% Chrysotile
J2	2	Skim Coat and Wrap	15% Chrysotile
J2	2	Vessel Thermal System Insulation	40% Chrysotile
J2	6	Vessel Thermal System Insulation	40% Chrysotile
J2	6	Skim Coat and Wrap	40% Chrysotile

J7	14	White Thermal System Insulation	40% Amosite
J7	15	White Thermal System Insulation	40% Amosite
K10	5	White Thermal System Insulation	20% Amosite 20% Chrysotile
K10	9	Floor Tile - Black	10% Chrysotile <i>Tile</i>
K10	9	Floor Tile - Black	2% Chrysotile <i>Mastic</i>
K10	13	Floor Tile - Black	10% Chrysotile <i>Tile</i>
K10	13	Floor Tile - Black	2% Chrysotile <i>Mastic</i>
K11	1	Floor Tile - Grey	5% Chrysotile
K11	1	White Thermal System Insulation	20% Amosite 20% Chrysotile
K11	5	Floor Tile - Grey	5% Chrysotile <i>Tile</i>
K11	7	Black Roofing Material	3% Chrysotile
K11	8	Black Roofing Material	<1% Chrysotile
K6	1	White Thermal System Insulation	40% Amosite 5% Chrysotile
K8	2	White Thermal System Insulation	30% Amosite 10% Chrysotile
K9	5	White Thermal System Insulation	20% Amosite 30% Chrysotile
K9	9	White Thermal System Insulation	30% Amosite
L10	5	White Thermal System Insulation	35% Amosite 20% Chrysotile
L10	7	Floor Tile	40% Chrysotile
L10	13	Green Floor Tile	40% Chrysotile

L11	3	White Thermal System Insulation	20% Amosite 20% Chrysotile
L11	5	Black Roofing Material	<1% Chrysotile
L11	6	Cementitious Panel	20% Chrysotile
L11	7	Dark Grey Cementitious Material	10% Anthophyllite
L5	11	White Thermal System Insulation	35% Amosite 10% Chrysotile
L6	4	White Thermal System Insulation	35% Amosite 10% Chrysotile
L7	13	Black Cementitious Material	30% Actinolite
L8	5	White Thermal System Insulation	40% Amosite 25% Chrysotile
L8	15	White Thermal System Insulation	20% Amosite 35% Chrysotile
L9	13	White Thermal System Insulation	35% Amosite 5% Chrysotile
M5	15	White Thermal System Insulation	30% Amosite 30% Chrysotile
M5	16	White Thermal System Insulation	30% Amosite 30% Chrysotile
M6	1	White Thermal System Insulation	30% Amosite 30% Chrysotile
M6	1	Pink Thermal System Insulation	40% Amosite 40% Chrysotile
M6	5	White Thermal System Insulation	30% Amosite 30% Chrysotile
M6	5	Pink Thermal System Insulation	40% Amosite 20% Chrysotile
M6	8	White Thermal System Insulation	30% Amosite 30% Chrysotile
M8	9	White Thermal System Insulation	30% Amosite 20% Chrysotile

Q6	8	White Thermal System Insulation	15% Amosite 5% Chrysotile
Q6	12	White Thermal System Insulation	30% Amosite 5% Chrysotile
R10	6	Tan Thermal System Insulation	<1% Chrysotile
R11	1	Grey Layered Roof material	35% Chrysotile
R12	1	Dark Grey Cementitious Pipe Material	25% Chrysotile
R12	3	Grey Roof Material	5% Chrysotile
R12	11	Grey Cementitious Panel (Dimpled)	40% Chrysotile
R12	13	Grey Cementitious Waffled Material	8% Chrysotile
R5	7	White Thermal System Insulation	20% Amosite 5% Chrysotile
R5	11	White Thermal System Insulation	20% Amosite 3% Chrysotile
R5	15	White Thermal System Insulation	20% Amosite 5% Chrysotile
R6	3	White Thermal System Insulation	30% Amosite 5% Chrysotile
S4	16	Silver Coated Black Mastic on Brick	3% Chrysotile
S4	16	Silver Coated Black Mastic on Brick	35% Chrysotile
T12	2	Red Cementitious pipe w/Black Mastic	30% Anthophyllite Pipe
T12	3	Red Cementitious Pipe Material	30% Anthophyllite Pipe
T12	3	Grey Cementitious pipe Material	35% Anthophyllite Pipe
T5	4	Grey Thermal System Insulation	30% Amosite 10% Chrysotile
T5	14	White Thermal System Insulation	50% Amosite 10% Chrysotile

M8	15	Pink Thermal System Insulation	40% Amosite 40% Chrysotile
N5	13	White Thermal System Insulation	40% Amosite 40% Chrysotile
N5	15	White Thermal System Insulation	30% Amosite 30% Chrysotile
N6	2	White Thermal System Insulation	20% Amosite 20% Chrysotile
N6	2	Pink Thermal System Insulation	40% Amosite 40% Chrysotile
N6	6	Pink Thermal System Insulation	40% Amosite 40% Chrysotile
N7	1	White Thermal System Insulation	20% Amosite 20% Chrysotile
N7	5	White Thermal System Insulation	30% Amosite 30% Chrysotile
N8	10	White Thermal System Insulation	30% Amosite 30% Chrysotile
O6	1	White Thermal System Insulation	40% Amosite 20% Chrysotile
O6	6	White Thermal System Insulation	40% Amosite 15% Chrysotile
P2	13	Pink Thermal System Insulation	40% Amosite 25% Chrysotile
P6	1	White Thermal System Insulation	40% Amosite 20% Chrysotile
P6	10	White Thermal System Insulation	40% Amosite 20% Chrysotile
P6	53	White Thermal System Insulation	40% Amosite 20% Chrysotile
Q10	4	Old Layer Thermal System Insulation Wrap	5% Chrysotile
Q10	8	White Canvas	10% Chrysotile
Q12	8	Grey Cementitious Pipe	30% Actinolite

T7	16	Silver Coated Black Roofing Material	2% Chrysotile
U10	7	Black Roofing Material	40% Chrysotile
U12	2	White Thermal System Insulation	15% Amosite 30% Chrysotile
U13	1	Black Roofing Material	40% Chrysotile
U13	1	Grey Roofing Material	35% Chrysotile
U13	8	Ridge Cap Felt	50% Chrysotile
U14	11	Grey Cementitious Material	20% Chrysotile
U14	13	White Thermal System Insulation	15% Amosite 30% Chrysotile
U14	16	Black Roofing Material	40% Chrysotile
U14	16	Gray Layered Thermal System Insulation Wrap	10% Chrysotile
U5	1	White Thermal System Insulation	30% Amosite 5% Chrysotile
U5	14	Red & Black Cementitious pipe Covering	25% Anthophyllite
U5	15	White Thermal System Insulation	30% Amosite 10% Chrysotile
U5	15	Pink Thermal System Insulation	15% Amosite
U5	15	White Thermal System Insulation	35% Chrysotile
U6	2	White Thermal System Insulation	5% Amosite 20% Chrysotile
U6	3	Pink Thermal System Insulation	10% Amosite 20% Chrysotile
U6	11	Grey Layered Thermal System Insulation	10% Chrysotile
U6	11	Grey Layered Thermal System Insulation	40% Chrysotile
U6	11	Grey Layered Thermal System Insulation	10% Chrysotile
U7	001	Grey Layered Thermal System Insulation	5% Chrysotile

V10	8	Black Cementitious Material	25% Anthophyllite
V10	14	Roofing Material	5% Chrysotile
V11	5	Red Cementitious Material	25% Anthophyllite
V11	9	Black Roofing Material	15% Chrysotile
V12	5	Black Roofing Material	25% Chrysotile
V12	5	Black Roofing Material	15% Chrysotile
V12	5	Roofing Material	25% Chrysotile
V12	5	Roofing Material	30% Chrysotile
V13	15	White Thermal System Insulation	20% Amosite
V14	6	White Thermal System Insulation	25% Amosite
V15	2	Grey Cementitious Material	25% Anthophyllite
V7	1	Grey & Black Layered Thermal System Insulation	15% Chrysotile
V8	2	Dark Grey Cementitious Material	40% Anthophyllite
V8	6	Dark Grey Cementitious Material	35% Anthophyllite
V8	14	White Thermal System Insulation	35% Amosite
V8	15	White Thermal System Insulation	40% Amosite
V9	1	Black Roofing Material	5% Chrysotile
V9	1	White Thermal System Insulation	35% Amosite
V9	2	White Thermal System Insulation	25% Amosite 10% Chrysotile
V9	2	Roofing Material	5% Chrysotile
W11	5	Red Cementitious Pipe Material	20% Anthophyllite
W7	5	Black Thermal System Wrap	40% Chrysotile

W7	8	Sparkled Glass Rock Insulation Mastic	<1% Chrysotile
W9	14	Grey & Black Layered Thermal System Insulation	10% Chrysotile
X10	4	Grey Thermal System Insulation	25% Amosite 15% Chrysotile
X10	16	Grey & Black Layered Thermal System Insulation	15% Chrysotile
X12	12	Black Layered Roof Material	30% Chrysotile
X7	10	Black Pipe Wrap	15% Chrysotile
X7	15	Black Layered Roofing Material	35% Chrysotile
X9	14	Grey Thermal System Insulation	35% Amosite
Y10	1	Grey Thermal System Insulation	10% Chrysotile
Y11	1	White Thermal System Insulation Pipe Rack Debris	15% Amosite 25% Chrysotile
Y13	16	Black Roofing Material	15% Amosite 25% Chrysotile
Y14	6	Black Layered Roofing Material	30% Chrysotile
Z10	3	Black Roofing Material/DI	15% Chrysotile
Z13	6	White Thermal System Insulation	15% Amosite 5% Chrysotile
Z13	6	White Thermal System Insulation	25% Amosite 5% Chrysotile
AA11	5	Tan & Dark Grey Cementitious Material	35% Chrysotile
AA11	7	Tan & Dark Grey Cementitious Material	35% Chrysotile
AA12	2	Tan & Grey Cementitious Material	30% Chrysotile
AA13	1	Dark Grey Cementitious Material	30% Chrysotile
AA13	9	White Thermal System Insulation	25% Amosite

AB7	9	White Cementitious Unknown	20% Chrysotile
Z14	6	30" Pipe White Thermal System Insulation w/Paper Wrap	40% Amosite <1% Chrysotile
Z14	6	30" Fitting Grey Thermal System Insulation w/Canvas Wrap	3% Chrysotile
Z14	6	30" Fitting Thermal System Insulation w/Canvas Wrap	3% Chrysotile
Z14	6	18" Pipe White Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	2" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	6" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	8" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	14" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	12" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile
Z14	6	6" Fitting Green Thermal System Insulation w/Canvas Wrap	2% Chrysotile
U17	1	Roof Felt (Top) First Layer	30% Chrysotile
U17	1	Roof Felt Second Layer	60% Chrysotile
U17	4	Roof Felt (Top) First Layer	12% Chrysotile
U17	4	Roof Felt Second Layer	45% Chrysotile
U17	4	Roof Felt Third Layer	40% Chrysotile
U17	4	White Felt Top Layer - Under Metal Ridge Cap	60% Chrysotile
U17	1	White Felt Top Layer - Under Metal Ridge Cap	50% Chrysotile
M2	16	Electrical Wire Insulation Debris	20% Chrysotile

M2	16	Electrical Wire Insulation Debris	20% Chrysotile
N3	1	Electrical Wire Insulation Debris	25% Chrysotile
N2	13	Electrical Wire Insulation Debris	25% Chrysotile
N2	13	Electrical Wire Insulation Debris	25% Chrysotile
N3	1	Electrical Wire Insulation Debris	35% Chrysotile
M3	4	Electrical Wire Insulation Debris	35% Chrysotile
M3	4	Electrical Wire Insulation Debris	20% Chrysotile
M3	3	Electrical Wire Insulation Debris	10% Chrysotile

### 3.4 Material Assessment

The EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations (40 CFR 61 (M)) require that regulated asbestos-containing materials (RACM) be properly removed prior to any demolition or renovation activity, which may disturb them. The EPA NESHAP regulations define RACM as:

- (a) Friable ACM;
- (b) Category I non-friable ACM that has become friable;
- (c) Category I non-friable ACM that will be or has been subject to sanding, grinding, cutting or abrading, or;
- (d) Category II non-friable ACM that has a high probability of becoming, or has become, crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Building materials that contain less than one (1) percent asbestos are not currently subject to EPA regulations. However, it should be noted that the disturbance of these materials may be subject to regulations issued by the U.S. Occupational Safety and Health Administration (OSHA). Such a disturbance may elevate the concentration of airborne fibers above the permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter (f/cc) of air, measured as an eight (8) hour time weighted average (TWA), or the 30-minute short term excursion limit (STEL) of 1.0 f/cc. Recent revisions to the OSHA regulations require that all surfacing materials, thermal system insulation materials, and resilient flooring installed "no later than 1980" be considered as presumed asbestos-containing materials (PACM) and treated accordingly.

Furthermore, OSHA has implemented the final rule for occupational exposure to asbestos to include regular building maintenance operations and custodial activities that may disturb identified or presumed asbestos-containing materials. In order to rebut the designation of installed materials as PACM, OSHA requires the sampling of suspect material be performed in accordance with 40 CFR 763 (E) issued by the EPA under the Asbestos Hazard Emergency Response Act of 1986 (AHERA). The AHERA regulations establish asbestos identification and management

requirements for schools, grades K through 12. The recent OSHA revisions also include specific notification and engineering control procedures.

#### 4.0 ASBESTOS EXPOSURE ASSESSMENT AND RECOMMENDATIONS

Asbestos is an airborne hazard. An assessment of potential exposure to harmful asbestos fibers from asbestos-containing materials should evaluate the material's potential to release fibers into the air. Fiber release may occur spontaneously due to the normal aging and subsequent deterioration of the materials. Fiber release may also occur suddenly due to disturbance of the materials by maintenance, renovations, demolition, accidents, excessive vibrations, or water damage. As a part of the survey, a visual assessment was performed in order to ascertain the potential for asbestos fiber release from the identified building material debris.

The assessment focused upon specific criteria which include asbestos content (percentage and type); friability; evidence of deterioration, physical damage or water damage; proximity to an air stream; and accessibility. The effects of future cleanup activities were considered separately for each affected material found to contain asbestos. Such an exposure assessment is qualitative in nature. The surveyor, based upon facility characteristics, prior experience, and an understanding of abatement alternatives and known cleanup plans evaluates these criteria qualitatively. This method of evaluation is outlined in the EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 560/5-85-024).

The results of the evaluations are reported in the following relative terms describing the potential for asbestos fiber release.

- Materials that are in good physical condition and exhibit little chance for disturbance are considered to have a "low" potential for fiber release.
- Materials that are in poor condition with some deterioration or damage, or exhibit some risk for disturbance present a "medium" potential for fiber emission.
- Materials that are in generally poor condition and exhibit the affinity for further deterioration, damage, or disturbance are considered to present a "high" potential to generate airborne fibers.
- Materials assessed as an "imminent hazard" are typically damaged, openly exposed, likely to be disturbed and display a very high possibility of releasing fibers into the air.

From the exposure assessments, recommendations for control alternatives are determined and prioritized. Understanding that this survey has been performed for cleanup purposes and for the development of asbestos abatement work procedure design, ACT Services has utilized the NESHAP evaluation criteria and OSHA referenced regulations for this assessment.

The following assessments have been determined based on the understanding that this development site will be properly cleared as planned. Due to the potential site personnel hazards associated with leaving this material in place, ACT recommends the immediate initialization of an asbestos operations and maintenance (O&M) program for controlling potential airborne dust until such time as the acm is properly removed.

#### **4.1 Thermal System Insulation Debris**

The asbestos-containing thermal system insulation debris, in place and in poor condition, is considered as RACM by NESHAP definition, and should be promptly abated as part of the site cleanup activities. The friable asbestos-containing thermal system pipe insulation debris, in its present condition and location, pose a medium potential for airborne asbestos fiber exposure.

Removal operations, waste packaging and disposal of friable asbestos-containing thermal system insulation debris must be performed in accordance with NESHAP regulations that include notification, personnel training, no visible emissions, adequately wetting waste materials and properly packaging and labeling waste throughout the process. OSHA regulations consider asbestos-containing thermal system insulation debris cleanup operations as Class I removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of friable asbestos-containing thermal system insulation debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.2 Roofing Material Debris**

ACT has categorized several different roofing material debris associated with this debris field cleanup effort. The following descriptions define both friable and non-friable roofing material debris observed at the site.

##### **4.2.1 Friable Roof Felt Debris**

Friable roof felt material was observed within the Rayon Filament Plant sloped roof section which included grids R-10 through U-17 and V10 through W-12. This particular situation was determined after a detailed investigation of the sloped roof felt materials that appeared to be weathered and fibrous. Analytical results indicated that the roof felt top layer and subsequent layers contained greater than one percent (>1%) regulated asbestiform minerals.

Friable asbestos-containing roof felt debris, in place and in poor condition, is considered as RACM by NESHAP definition, and should be promptly abated as part of the site cleanup activities. The friable asbestos-containing roof felt debris, in its present condition and location, pose a medium potential for airborne asbestos fiber exposure.

Removal operations, waste packaging and disposal of friable asbestos-containing roof felt debris must be performed in accordance with NESHAP regulations that include notification, personnel training, no visible emissions, adequately wetting waste materials and properly packaging and labeling waste throughout the process. OSHA regulations would consider the non-intact asbestos-containing roof felt debris cleanup operations as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of friable asbestos-containing roof felt debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.2.2 Non-Friable Built-Up Roofing Debris**

The non-friable asbestos-containing built-up roofing and flashing debris, in place and in a normal demolition condition that has not been subject to sanding, cutting, grinding or abrading, is considered a Category I non-friable ACM by NESHAP definition. This condition exists throughout the footprint of the Rayon Staple Plant, Pulp Storage Building, Raw Water Treatment Plant, Cooling Towers, Powerhouse Structure and many smaller unidentified office, storage tank and operational structures. The non-friable bitumens and/or resinously bound asbestos-containing roof debris material, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

TDEC's interpretation of built-up roofing waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I non-friable asbestos-containing roofing material is not subject to the NESHAP rule and can be disposed of as non-asbestos waste. OSHA regulations consider the cleanup operations of asbestos-containing roof debris bound by their matrix as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of non-friable asbestos-containing built-up roofing debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.2.3 Roof Flashing & Mastic Debris**

The non-friable asbestos-containing roof flashing and mastic debris, in place and in a normal demolition condition that has not been subject to sanding, cutting, grinding or abrading, is considered a Category I non-friable ACM by NESHAP definition. This condition exists throughout the Rayon Staple Plant, Pulp Storage Building, Raw Water Treatment Plant, Cooling Towers, Powerhouse Structure and many smaller unidentified office, storage tank and operational structures. The non-friable bitumens and/or resinously bound asbestos-containing roof flashing and mastic debris material, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

TDEC's interpretation of roof flashing and mastic waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I non-friable asbestos-containing roofing material is not subject to the NESHAP rule and can be disposed of as non-asbestos waste. OSHA regulations consider the cleanup operations of asbestos-containing roof debris bound by their matrix as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of non-friable asbestos-containing roof flashings and mastic debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.3 Resilient Flooring Debris**

Several types of asbestos-containing resilient floor tile and mastic material debris were identified during the survey. The flooring materials include non-friable floor tile debris and also non-friable flooring mastic applied to concrete flooring.

The non-friable asbestos-containing flooring debris, in place and in place and in a normal demolition condition that has not been subject to sanding, cutting, grinding or abrading, is considered a Category I non-friable ACM by NESHAP definition. The non-friable bitumens and/or resinously bound asbestos-containing flooring debris material, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

TDEC's interpretation of flooring material waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I non-friable asbestos-containing flooring material is not subject to the NESHAP rule and can be disposed of as non-asbestos waste. OSHA regulations consider the cleanup operations of asbestos-containing flooring debris bound by their matrix as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of non-friable asbestos-containing flooring debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.4 Miscellaneous Material Debris**

Various types of miscellaneous non-friable asbestos-containing applications were observed during the survey. These applications include weather seals on windows, vapor barriers, glass rock insulation mastic, bitumens pipe wraps and various adhesive materials. Non-friable mastics applied to friable asbestos-containing substrates such as asbestos-containing thermal system insulation have been considered as homogeneous to the friable substrate material and should be handled accordingly.

All other non-friable asbestos-containing mastic materials, in place and in a normal demolition condition that have not been subject to sanding, cutting, grinding or abrading, are considered Category I non-friable ACM's by NESHAP definition. The non-friable bitumens and/or resinously bound asbestos-containing mastic debris material, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

TDEC's interpretation of miscellaneous mastic waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I non-friable asbestos-containing mastic material is not subject to the NESHAP rule and can be disposed of as non-asbestos waste. OSHA regulations consider the cleanup operations of asbestos-containing mastic debris bound by their matrix as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of non-friable asbestos-containing miscellaneous mastic debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.5 Cementitious Panels & Piping Debris**

Various asbestos-containing cementitious debris materials were observed in both damaged and non-friable forms during our investigation of the designated debris fields. The damaged cementitious panel and pipe debris are considered as crumbled, pulverized, and/or reduced to powder and would be subject to the NESHAP waste disposal requirements.

#### **4.5.1 Friable Cementitious Debris**

Friable asbestos-containing cementitious debris, in place and in poor condition, is considered as RACM by NESHAP definition, and should be promptly abated as part of the site cleanup activities. The friable asbestos-containing cementitious debris, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

Removal operations, waste packaging and disposal of friable asbestos-containing cementitious debris must be performed in accordance with NESHAP regulations that include notification, personnel training, no visible emissions, adequately wetting waste materials and properly packaging and labeling waste throughout the process. OSHA regulations would consider the non-intact asbestos-containing roof felt debris cleanup operations as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of friable asbestos-containing cementitious debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.5.2 Non-Friable Cementitious Materials**

Non-friable asbestos-containing cementitious pipe sections were also observed within the debris fields in good condition. These materials would be considered as Category II non-friable ACM by NESHAP definition. Category II non-friable materials (such as asbestos cement type pipe and panel products) removed and disposed of without crumbling, pulverizing, or reducing to powder are not subject to the NESHAP waste disposal requirements.

Removal operations, waste packaging and disposal of non-friable asbestos-containing cementitious materials must be performed in accordance with NESHAP regulations that include notification, personnel training, no visible emissions, adequately wetting waste materials and properly packaging and labeling waste throughout the process. OSHA regulations would consider the intact asbestos-containing cementitious material cleanup operations as Class II removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of non-friable asbestos-containing cementitious materials debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

#### **4.6 Stripped Electrical Wire Insulation Debris**

Various forms of woven electrical wire insulation were found stripped from the metal wiring and piled in a small debris field. The stripped asbestos-containing electrical wire insulation debris, in place and in poor condition, is considered as RACM by NESHAP definition, and should be promptly abated as part of the site cleanup activities. The friable asbestos-containing stripped electrical wire insulation debris, in its present condition and location, pose a low potential for airborne asbestos fiber exposure.

Removal operations, waste packaging and disposal of friable asbestos-containing stripped electrical wire insulation debris must be performed in accordance with NESHAP regulations that include notification, personnel training, no visible emissions, adequately wetting waste materials and properly packaging and labeling waste throughout the process. OSHA regulations consider asbestos-containing thermal system insulation debris cleanup operations as Class I removal activities and require the use of reasonable engineering controls and work practices to reduce exposures. All work must be assessed by a competent person and designed to prevent the migration of airborne asbestos from a designated regulated area.

The removal of friable asbestos-containing stripped electrical wire insulation debris should be performed by a qualified asbestos abatement contractor under properly controlled conditions in accordance with EPA, TDEC and OSHA removal and disposal regulations.

## 5.0 QUALIFICATIONS OF REPORT

A.C.T. Services, LLC., has endeavored to investigate the existing conditions of the demolition debris fields at the Former Liberty Fibers site located in Lowland, Tennessee using generally accepted procedures. Regardless of the thoroughness of our survey, it is possible that some areas concealing asbestos-containing building materials were overlooked or inaccessible.

This report presents general descriptions of various construction materials and the general locations where these materials were encountered. Determination of specific or exact quantities and locations of all hazardous materials within the site was beyond the scope of this work. If questions arise during the planning for demolition or other construction, ACT should be notified to allow our staff the opportunity to review the situation and present recommendations.

\*\*\* End of Section \*\*\*

**Volume Number 1**

**APPENDIX A**

**ASBESTOS-CONTAINING MATERIAL SUMMARY REPORT**

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
A5 - 3 - 005	A5	3	Black w/Grey Flashing Material	25% Chrysotile	CAT-1	No
A5 - 9 - 024	A5	9	Silver Coated Roofing Material	3% Chrysotile	CAT-1	No
A5 - 9 - 025	A5	9	Black Roof Flashing Material	25% Chrysotile	CAT-1	No
A5 - 9 - 026	A5	9	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile	RACM	Yes
A5 - 9 - 027	A5	9	Grey Flashing on Brick	25% Chrysotile	CAT-1	No
A5 - 12 - 036	A5	12	Black Flashing Material	25% Chrysotile	CAT-1	No
A5 - 12 - 037	A5	12	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile	RACM	Yes
A6 - 6 - 005	A6	6	Black Mastic & Felt On Brick	25% Chrysotile	CAT-1	No
A6 - 12 - 034	A6	12	Black Non-Fibrous Layers	3% Chrysotile	CAT-1	No
A7 - 6 - 005	A7	6	Thermal System Insulation Wrap, White Over Grey	30% Chrysotile	RACM	Yes
A7 - 6 - 006	A7	6	Black Flashing Material	25% Chrysotile	CAT-1	No
A7 - 9 - 013	A7	9	Black Flashing Material	25% Chrysotile	CAT-1	No
A8 - 3 - 002	A8	3	Black Flashing Material	25% Chrysotile	CAT-1	No
A8 - 3 - 005	A8	3	Black Mastic & Felt On Concrete	25% Chrysotile	CAT-1	No
B4 - 14 - 010	B4	14	Grey Thermal System Insulation - Crumbly	30% Amosite 5% Chrysotile	RACM	Yes
B5 - 2 - 011	B5	2	Silver Coated Flashing Material on Wood	25% Chrysotile	CAT-1	No
B5 - 8 - 024	B5	8	Glass Rock Insulation w/Black Mastic	8% Chrysotile	CAT-1	No
B5 - 9 - 030	B5	9	Grey Thermal System Insulation Wrap	15% Chrysotile	RACM	Yes
B5 - 9 - 031	B5	9	White Thermal System Insulation - Crumbly	45% Amosite	RACM	Yes
B5 - 9 - 032	B5	9	Grey Thermal System Insulation Wrap	45% Amosite	RACM	Yes
B5 - 9 - 033	B5	9	White Thermal System Insulation	50% Amosite	RACM	Yes
B6 - 10 - 003	B6	10	Floor Tile w/Black Mastic	3% Chrysotile Mastic	CAT-1	No
B6 - 11 - 004	B6	11	White Thermal System Insulation - Crumbly	30% Chrysotile	RACM	Yes
B6 - 15 - 005	B6	15	Grey Thermal System Insulation - Crumbly	45% Chrysotile	RACM	Yes
B6 - 15 - 006	B6	15	Floor Tile w/Black Mastic	3% Chrysotile Mastic	CAT-1	No
B6 - 16 - 007	B6	16	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile	RACM	Yes
B7 - 2 - 003	B7	2	White Thermal System Insulation	40% Amosite	RACM	Yes
B7 - 3 - 002	B7	3	White Thermal System Insulation	40% Chrysotile	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
B7 - 7 - 001	B7	7	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile	RACM	Yes
B8 - 2 - 002	B8	2	White Thermal System Insulation - Crumbly	40% Amosite	RACM	Yes
B8 - 3 - 001	B8	3	White Thermal System Insulation - Crumbly	45% Amosite 5% Chrysotile	RACM	Yes
B8 - 12 - 003	B8	12	White Thermal System Insulation - Crumbly	40% Amosite 5% Chrysotile	RACM	Yes
C1 - 11 - 005	C1	11	Pipe Wrap Over Green Thermal System Insulation	10% Chrysotile	CAT-I	No
C1 - 11 - 006	C1	11	Pipe Wrap Over Green Thermal System Insulation	10% Chrysotile	CAT-I	No
C1 - 11 - 007	C1	11	Pipe Wrap Over Green Thermal System Insulation	15% Chrysotile	CAT-I	No
C7 - 1 - 001	C7	1	White Thermal System Insulation - Crumbly	25% Chrysotile	RACM	Yes
C7 - 5 - 005	C7	5	White Thermal System Insulation - Crumbly	20% Chrysotile	RACM	Yes
C7 - 6 - 004	C7	6	Floor Tile w/Black Mastic	3% Chrysotile <i>Mastic</i>	CAT-1	No
C7 - 10 - 006	C7	10	Floor Tile w/Black Mastic	2% Chrysotile <i>Mastic</i>	CAT-1	No
F1 - 10 - 002	F1	10	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
G3 - 11 - 001	G3	11	Thermal System Insulation On Lath	30% Chrysotile	RACM	Yes
G3 - 11 - 002	G3	11	Canvas Wrap w/Skim Coat	5% Chrysotile	RACM	Yes
G3 - 11 - 003	G3	11	Black Mastic Thermal System Insulation Vapor Barrier	10% Chrysotile	CAT-1	No
G9 - 8 - 004	G9	8	Pink Thermal System Insulation	20% Amosite	RACM	Yes
H1 - 13 - 003	H1	13	Black Felt Wrap	30% Chrysotile	RACM	Yes
H3 - 7 - 005	H3	7	Grey Thermal System Insulation	10% Chrysotile	RACM	Yes
I10 - 10 - 004	I10	10	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
I2 - 4 - 005	I2	4	White Thermal System Insulation w/Silver Wrap	10% Amosite 5% Chrysotile	RACM	Yes
I2 - 6 - 007	I2	6	White Thermal System Insulation	10% Amosite 5% Chrysotile	RACM	Yes
I2 - 12 - 002	I2	12	Silver Coated Roofing material	15% Chrysotile	CAT-1	No
I3 - 5 - 001	I3	5	File Door Packing	25% Chrysotile	RACM	Yes
J10 - 8 - 005	J10	8	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
J10 - 11 - 006	J10	11	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
J2 - 2 - 001	J2	2	Skim Coat and Wrap	15% Chrysotile	RACM	Yes
J2 - 2 - 002	J2	2	Vessel Thermal System Insulation	40% Chrysotile	RACM	Yes
J2 - 6 - 003	J2	6	Vessel Thermal System Insulation	40% Chrysotile	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
J2 - 6 - 004	J2	6	Skim Coat and Wrap	40% Chrysotile	RACM	Yes
J7 - 14 - 001	J7	14	White Thermal System Insulation	40% Amosite	RACM	Yes
J7 - 15 - 002	J7	15	White Thermal System Insulation	40% Amosite	RACM	Yes
K10 - 5 - 009	K10	5	White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
K10 - 9 - 006	K10	9	Floor Tile - Black	10% Chrysotile Tile	CAT-I	No
K10 - 9 - 006	K10	9	Floor Tile - Black	2% Chrysotile Mastic	CAT-I	No
K10 - 13 - 001	K10	13	Floor Tile - Black	10% Chrysotile Tile	CAT-I	No
K10 - 13 - 001	K10	13	Floor Tile - Black	2% Chrysotile Mastic	CAT-I	No
K11 - 1 - 001	K11	1	Floor Tile - Grey	5% Chrysotile	CAT-I	No
K11 - 1 - 002	K11	1	White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
K11 - 5 - 004	K11	5	Floor Tile - Grey	5% Chrysotile Tile	CAT-I	No
K11 - 7 - 006	K11	7	Black Roofing Material	3% Chrysotile	CAT-I	No
K11 - 8 - 007	K11	8	Black Roofing Material	<1% Chrysotile	CAT-I	No
K6 - 1 - 001	K6	1	White Thermal System Insulation	40% Amosite 5% Chrysotile	RACM	Yes
K8 - 2 - 004	K8	2	White Thermal System Insulation	30% Amosite 10% Chrysotile	RACM	Yes
K9 - 5 - 001	K9	5	White Thermal System Insulation	20% Amosite 30% Chrysotile	RACM	Yes
K9 - 9 - 005	K9	9	White Thermal System Insulation	30% Amosite	RACM	Yes
L10 - 5 - 001	L10	5	White Thermal System Insulation	35% Amosite 20% Chrysotile	RACM	Yes
L10 - 7 - 004	L10	7	Floor Tile	40% Chrysotile	CAT-1	No
L10 - 13 - 006	L10	13	Green Floor Tile	40% Chrysotile	CAT-1	No
L11 - 3 - 004	L11	3	White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
L11 - 5 - 001	L11	5	Black Roofing Material	<1% Chrysotile	CAT-I	No
L11 - 6 - 002	L11	6	Cementitious Panel	20% Chrysotile	CAT-II	No
L11 - 7 - 003	L11	7	Dark Grey Cementitious Material	10% Anthophyllite	CAT-II	No
L5 - 11 - 003	L5	11	White Thermal System Insulation	35% Amosite 10% Chrysotile	RACM	Yes
L6 - 4 - 001	L6	4	White Thermal System Insulation	35% Amosite 10% Chrysotile	RACM	Yes
L7 - 13 - 004	L7	13	Black Cementitious Material	30% Actinolite	CAT-II	No
L8 - 5 - 014	L8	5	White Thermal System Insulation	40% Amosite 25% Chrysotile	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
L8 - 15 - 002	L8	15	White Thermal System Insulation	20% Amosite 35% Chrysotile	RACM	Yes
L9 - 13 - 002	L9	13	White Thermal System Insulation	35% Amosite 5% Chrysotile	RACM	Yes
M5 - 15 - 001	M5	15	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
M5 - 16 - 002	M5	16	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
M6 - 1 - 003	M6	1	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
M6 - 1 - 004	M6	1	Pink Thermal System Insulation	40% Amosite 40% Chrysotile	RACM	Yes
M6 - 5 - 001	M6	5	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
M6 - 5 - 002	M6	5	Pink Thermal System Insulation	40% Amosite 20% Chrysotile	RACM	Yes
M6 - 8 - 005	M6	8	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
M8 - 9 - 001	M8	9	White Thermal System Insulation	30% Amosite 20% Chrysotile	RACM	Yes
M8 - 15 - 003	M8	15	Pink Thermal System Insulation	40% Amosite 40% Chrysotile	RACM	Yes
N5 - 13 - 001	N5	13	White Thermal System Insulation	40% Amosite 40% Chrysotile	RACM	Yes
N5 - 15 - 003	N5	15	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
N6 - 2 - 002	N6	2	White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
N6 - 2 - 003	N6	2	Pink Thermal System Insulation	40% Amosite 40% Chrysotile	RACM	Yes
N6 - 6 - 001	N6	6	Pink Thermal System Insulation	40% Amosite 40% Chrysotile	RACM	Yes
N7 - 1 - 001	N7	1	White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
N7 - 5 - 002	N7	5	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
N8 - 10 - 001	N8	10	White Thermal System Insulation	30% Amosite 30% Chrysotile	RACM	Yes
O6 - 1 - 001	O6	1	White Thermal System Insulation	40% Amosite 20% Chrysotile	RACM	Yes
O6 - 6 - 002	O6	6	White Thermal System Insulation	40% Amosite 15% Chrysotile	RACM	Yes
P2 - 13 - 003	P2	13	Pink Thermal System Insulation	40% Amosite 25% Chrysotile	RACM	Yes
P6 - 1 - 001	P6	1	White Thermal System Insulation	40% Amosite 20% Chrysotile	RACM	Yes
P6 - 10 - 004	P6	10	White Thermal System Insulation	40% Amosite 20% Chrysotile	RACM	Yes
P6 - 53 - 002	P6	53	White Thermal System Insulation	40% Amosite 20% Chrysotile	RACM	Yes
Q10 - 4 - 003	Q10	4	Old Layer Thermal System Insulation Wrap	5% Chrysotile	RACM	Yes
Q10 - 8 - 004	Q10	8	White Canvas	10% Chrysotile	RACM	Yes
Q12 - 8 - 001	Q12	8	Grey Cementitious Pipe	30% Actinolite	CAT-II	No

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
Q6 - 8 - 007	Q6	8	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
Q6 - 12 - 008	Q6	12	White Thermal System Insulation	30% Amosite 5% Chrysotile	RACM	Yes
R10 - 6 - 002	R10	6	Tan Thermal System Insulation	<1% Chrysotile	RACM	Yes
R11 - 1 - 001	R11	1	Grey Layered Roof material	35% Chrysotile	RACM	Yes
R12 - 1 - 001	R12	1	Dark Grey Cementitious Pipe Material	25% Chrysotile	CAT-II	No
R12 - 3 - 003	R12	3	Grey Roof Material	5% Chrysotile	RACM	Yes
R12 11 - 005	R12	11	Grey Cementitious Panel (Dimpled)	40% Chrysotile	CAT-II	No
R12 - 13 - 004	R12	13	Grey Cementitious Waffled Material	8% Chrysotile	CAT-II	No
R5 - 7 - 004	R5	7	White Thermal System Insulation	20% Amosite 5% Chrysotile	RACM	Yes
R5 - 11 - 003	R5	11	White Thermal System Insulation	20% Amosite 3% Chrysotile	RACM	Yes
R5 - 15 - 001	R5	15	White Thermal System Insulation	20% Amosite 5% Chrysotile	RACM	Yes
R6 - 3 - 001	R6	3	White Thermal System Insulation	30% Amosite 5% Chrysotile	RACM	Yes
S4 - 16 - 002	S4	16	Silver Coated Black Mastic on Brick	3% Chrysotile	CAT-1	No
S4 - 16 - 002	S4	16	Silver Coated Black Mastic on Brick	35% Chrysotile	CAT-1	No
T12 - 2 - 001	T12	2	Red Cementitious pipe w/Black Mastic	30% Anthophyllite Pipe	CAT-II	No
T12 - 3 - 002	T12	3	Red Cementitious Pipe Material	30% Anthophyllite Pipe	CAT-II	No
T12 - 3 - 003	T12	3	Grey Cementitious pipe Material	35% Anthophyllite Pipe	CAT-II	No
T5 - 4 - 002	T5	4	Grey Thermal System Insulation	30% Amosite 10% Chrysotile	RACM	Yes
T5 - 14 - 003	T5	14	White Thermal System Insulation	50% Amosite 10% Chrysotile	RACM	Yes
T7 - 16 - 001	T7	16	Silver Coated Black Roofing Material	2% Chrysotile	RACM	Yes
U10 - 7 - 001	U10	7	Black Roofing Material	40% Chrysotile	RACM	Yes
U12 - 2 - 001	U12	2	White Thermal System Insulation	15% Amosite 30% Chrysotile	RACM	Yes
U13 - 1 - 001	U13	1	Black Roofing Material	40% Chrysotile	RACM	Yes
U13 - 1 - 002	U13	1	Grey Roofing Material	35% Chrysotile	RACM	Yes
U13 - 8 - 003	U13	8	Ridge Cap Felt	50% Chrysotile	RACM	Yes
U14 - 11 - 002	U14	11	Grey Cementitious Material	20% Chrysotile	CAT-II	No
U14 13 - 003	U14	13	White Thermal System Insulation	15% Amosite 30% Chrysotile	RACM	Yes
U4 - 16 - 004	U14	16	Black Roofing Material	40% Chrysotile	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
U4 - 16 - 005	U14	16	Gray Layered Thermal System Insulation Wrap	10% Chrysotile	RACM	Yes
U5 - 1 - 001	U5	1	White Thermal System Insulation	30% Amosite 5% Chrysotile	RACM	Yes
U5 - 14 - 006	U5	14	Red & Black Cementitious pipe Covering	25% Anthophyllite	CAT-II	No
U5 - 15 - 003	U5	15	White Thermal System Insulation	30% Amosite 10% Chrysotile	RACM	Yes
U5 - 15 - 004	U5	15	Pink Thermal System Insulation	15% Amosite	RACM	Yes
U5 - 15 - 005	U5	15	White Thermal System Insulation	35% Chrysotile	RACM	Yes
U6 - 2 - 001	U6	2	White Thermal System Insulation	5% Amosite 20% Chrysotile	RACM	Yes
U6 - 3 - 003	U6	3	Pink Thermal System Insulation	10% Amosite 20% Chrysotile	RACM	Yes
U6 - 11 - 005	U6	11	Grey Layered Thermal System Insulation	10% Chrysotile	RACM	Yes
U6 - 11 - 005	U6	11	Grey Layered Thermal System Insulation	40% Chrysotile	RACM	Yes
U6 - 11 - 006	U6	11	Grey Layered Thermal System Insulation	10% Chrysotile	RACM	Yes
U7 - 003	U7	001	Grey Layered Thermal System Insulation	5% Chrysotile	RACM	Yes
V10 - 8 - 001	V10	8	Black Cementitious Material	25% Anthophyllite	CAT-II	No
V10 - 14 - 002	V10	14	Roofing Material	5% Chrysotile	CAT-1	No
V11 - 5 - 002	V11	5	Red Cementitious Material	25% Anthophyllite	CAT-II	No
V11 - 9 - 003	V11	9	Black Roofing Material	15% Chrysotile	CAT-1	No
V12 - 5 - 001	V12	5	Black Roofing Material	25% Chrysotile	RACM	Yes
V12 - 5 - 002	V12	5	Black Roofing Material	15% Chrysotile	CAT-1	No
V12 - 5 - 003	V12	5	Roofing Material	25% Chrysotile	RACM	Yes
V12 - 5 - 003	V12	5	Roofing Material	30% Chrysotile	RACM	Yes
V13 - 15 - 004	V13	15	White Thermal System Insulation	20% Amosite	RACM	Yes
V14 - 6 - 002	V14	6	White Thermal System Insulation	25% Amosite	RACM	Yes
V15 - 2 - 001	V15	2	Grey Cementitious Material	25% Anthophyllite	CAT-II	No
V7 - 1 - 004	V7	1	Grey & Black Layered Thermal System Insulation	15% Chrysotile	RACM	Yes
V8 - 2 - 001	V8	2	Dark Grey Cementitious Material	40% Anthophyllite	CAT-II	No
V8 - 6 - 002	V8	6	Dark Grey Cementitious Material	35% Anthophyllite	CAT-II	No
V8 - 14 - 006	V8	14	White Thermal System Insulation	35% Amosite	RACM	Yes
V8 - 15 - 007	V8	15	White Thermal System Insulation	40% Amosite	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
V9 - 1 - 001	V9	1	Black Roofing Material	5% Chrysotile	CAT-1	No
V9 - 1 - 003	V9	1	White Thermal System Insulation	35% Amosite	RACM	Yes
V9 - 2 - 004	V9	2	White Thermal System Insulation	25% Amosite 10% Chrysotile	RACM	Yes
V9 - 2 - 006	V9	2	Roofing Material	5% Chrysotile	CAT-1	No
W11 - 5 - 002	W11	5	Red Cementitious Pipe Material	20% Anthophyllite	CAT-II	No
W7 - 5 - 002	W7	5	Black Thermal System Wrap	40% Chrysotile	RACM	Yes
W7 - 8 - 001	W7	8	Sparkled Glass Rock Insulation Mastic	<1% Chrysotile	CAT-1	No
W9 - 14 - 005	W9	14	Grey & Black Layered Thermal System Insulation	10% Chrysotile	RACM	Yes
X10 - 4 - 003	X10	4	Grey Thermal System Insulation	25% Amosite 15% Chrysotile	RACM	Yes
X10 - 16 - 004	X10	16	Grey & Black Layered Thermal System Insulation	15% Chrysotile	RACM	Yes
X12 - 12 - 001	X12	12	Black Layered Roof Material	30% Chrysotile	CAT-1	No
X7 - 10 - 001	X7	10	Black Pipe Wrap	15% Chrysotile	CAT-1	No
X7 - 15 - 002	X7	15	Black Layered Roofing Material	35% Chrysotile	CAT-1	No
X9 - 14 - 001	X9	14	Grey Thermal System Insulation	35% Amosite	RACM	Yes
Y10 - 1 - 001	Y10	1	Grey Thermal System Insulation	10% Chrysotile	RACM	Yes
Y11 - 1 - 002	Y11	1	White Thermal System Insulation Pipe Rack Debris	15% Amosite 25% Chrysotile	RACM	Yes
Y13 - 16 - 001	Y13	16	Black Roofing Material	15% Amosite 25% Chrysotile	CAT-1	No
Y14 - 6 - 001	Y14	6	Black Layered Roofing Material	30% Chrysotile	CAT-1	No
Z10 - 3 - 003	Z10	3	Black Roofing Material/DI	15% Chrysotile	CAT-1	No
Z13 - 6 - 001	Z13	6	White Thermal System Insulation	15% Amosite 5% Chrysotile	RACM	Yes
Z13 - 6 - 003	Z13	6	White Thermal System Insulation	25% Amosite 5% Chrysotile	RACM	Yes
AA11 - 5 - 002	AA11	5	Tan & Dark Grey Cementitious Material	35% Chrysotile	CAT-II	No
AA11 - 7 - 001	AA11	7	Tan & Dark Grey Cementitious Material	35% Chrysotile	CAT-II	No
AA12 - 2 - 001	AA12	2	Tan & Grey Cementitious Material	30% Chrysotile	CAT-II	No
AA13 - 1 - 001	AA13	1	Dark Grey Cementitious Material	30% Chrysotile	CAT-II	No
AA13 - 9 - 004	AA13	9	White Thermal System Insulation	25% Amosite	RACM	Yes
AB7 - 9 - 002	AB7	9	White Cementitious Unknown	20% Chrysotile	CAT-II	No
PHPR - 1	Z14	6	30" Pipe White Thermal System Insulation w/Paper Wrap	40% Amosite <1% Chrysotile	RACM	Yes

Sample Number	Grid Location	Sub-Grid Sample Location	Sample Description	Asbestos % and Type	NESHAP Designation	Friable (Yes or No)
PHPR - 2	Z14	6	30" Fitting Grey Thermal System Insulation w/Canvas Wrap	3% Chrysotile	RACM	Yes
PHPR - 3	Z14	6	30" Fitting Thermal System Insulation w/Canvas Wrap	3% Chrysotile	RACM	Yes
PHPR - 7	Z14	6	18" Pipe White Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 9	Z14	6	2" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 10	Z14	6	6" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 11	Z14	6	8" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 12	Z14	6	14" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 13	Z14	6	12" Pipe Grey Thermal System Insulation	20% Amosite 20% Chrysotile	RACM	Yes
PHPR - 14	Z14	6	6" Fitting Green Thermal System Insulation w/Canvas Wrap	2% Chrysotile	RACM	Yes
RFB - R - 001	U17	1	Roof Felt (Top) First Layer	30% Chrysotile	RACM	Yes
RFB - R - 002	U17	1	Roof Felt Second Layer	60% Chrysotile	RACM	Yes
RFB - R - 005	U17	4	Roof Felt (Top) First Layer	12% Chrysotile	RACM	Yes
RFB - R - 006	U17	4	Roof Felt Second Layer	45% Chrysotile	RACM	Yes
RFB - R - 007	U17	4	Roof Felt Third Layer	40% Chrysotile	CAT-1	No
RFB - R - 011	U17	4	White Felt Top Layer - Under Metal Ridge Cap	60% Chrysotile	RACM	Yes
RFB - R - 012	U17	1	White Felt Top Layer - Under Metal Ridge Cap	50% Chrysotile	RACM	Yes
WC - 001	M2	16	Electrical Wire Insulation Debris	20% Chrysotile	RACM	Yes
WC - 002	M2	16	Electrical Wire Insulation Debris	20% Chrysotile	RACM	Yes
WC - 003	N3	1	Electrical Wire Insulation Debris	25% Chrysotile	RACM	Yes
WC - 004	N2	13	Electrical Wire Insulation Debris	25% Chrysotile	RACM	Yes
WC - 005	N2	13	Electrical Wire Insulation Debris	25% Chrysotile	RACM	Yes
WC - 006	N3	1	Electrical Wire Insulation Debris	35% Chrysotile	RACM	Yes
WC - 007	M3	4	Electrical Wire Insulation Debris	35% Chrysotile	RACM	Yes
WC - 008	M3	4	Electrical Wire Insulation Debris	20% Chrysotile	RACM	Yes
WC - 009	M3	3	Electrical Wire Insulation Debris	10% Chrysotile	RACM	Yes

***Volume Number 1***

**APPENDIX B**

**SITE LAYOUT DIAGRAMS & MAPS**

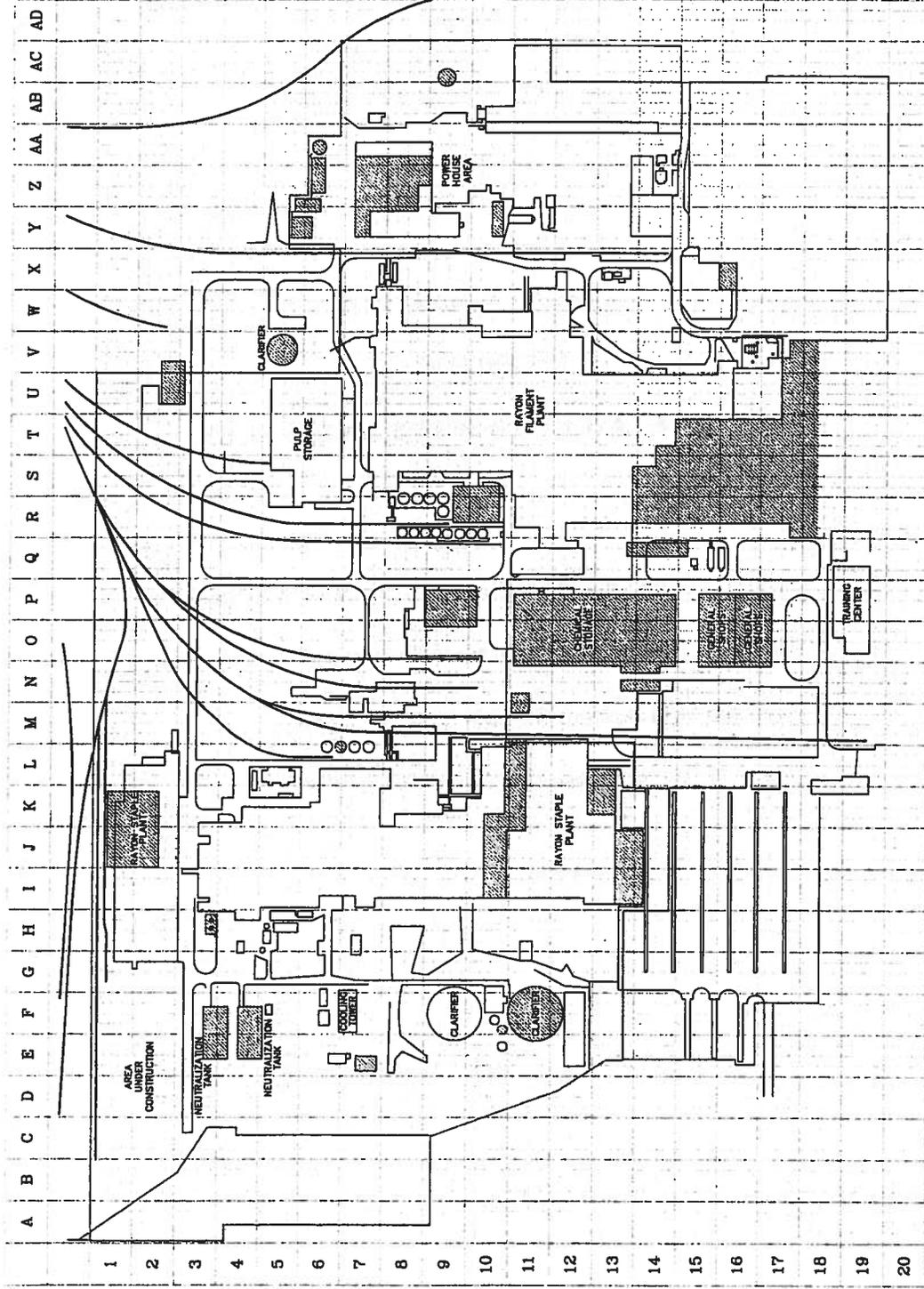
**ASB-01 – Site Layout Diagram With Main Grid System**

**ASB-02 – Site Layout Diagram With Subgrid System**

**Example Grid System Sample Location Sheet**

**Example Global Positioning Satellite Point Map**

1 2 3 4



□ SCOPE BOUNDARY  
 ▨ STRUCTURES REMAINING

ZONE	REV	DESCRIPTION	DATE	APPROVED

WARNING: DO NOT SCALE DRAWING  
 DIMENSIONS ARE APPROXIMATE AND  
 NOT TO BE USED FOR CONSTRUCTION  
 OF ANY STRUCTURE OR EQUIPMENT  
 WITHOUT THE WRITTEN CONSENT OF  
 A.C.T. SERVICES, LLC AND STAFF OF THE  
 PORTLAND FIRE & A.C.T. SERVICES, LLC

**A.C.T. Services, LLC**  
 FORMER LIBERTY FIBERS RAYON PLANT  
 SITE LAYOUT

SIZE	PROJ. NO.	DWG. NO.	REV
C	08.17.002	ASB-02	A

SCALE: Approx. 1"=200' SHEET 1 OF 1

1 2 3 4

1

2

3

4

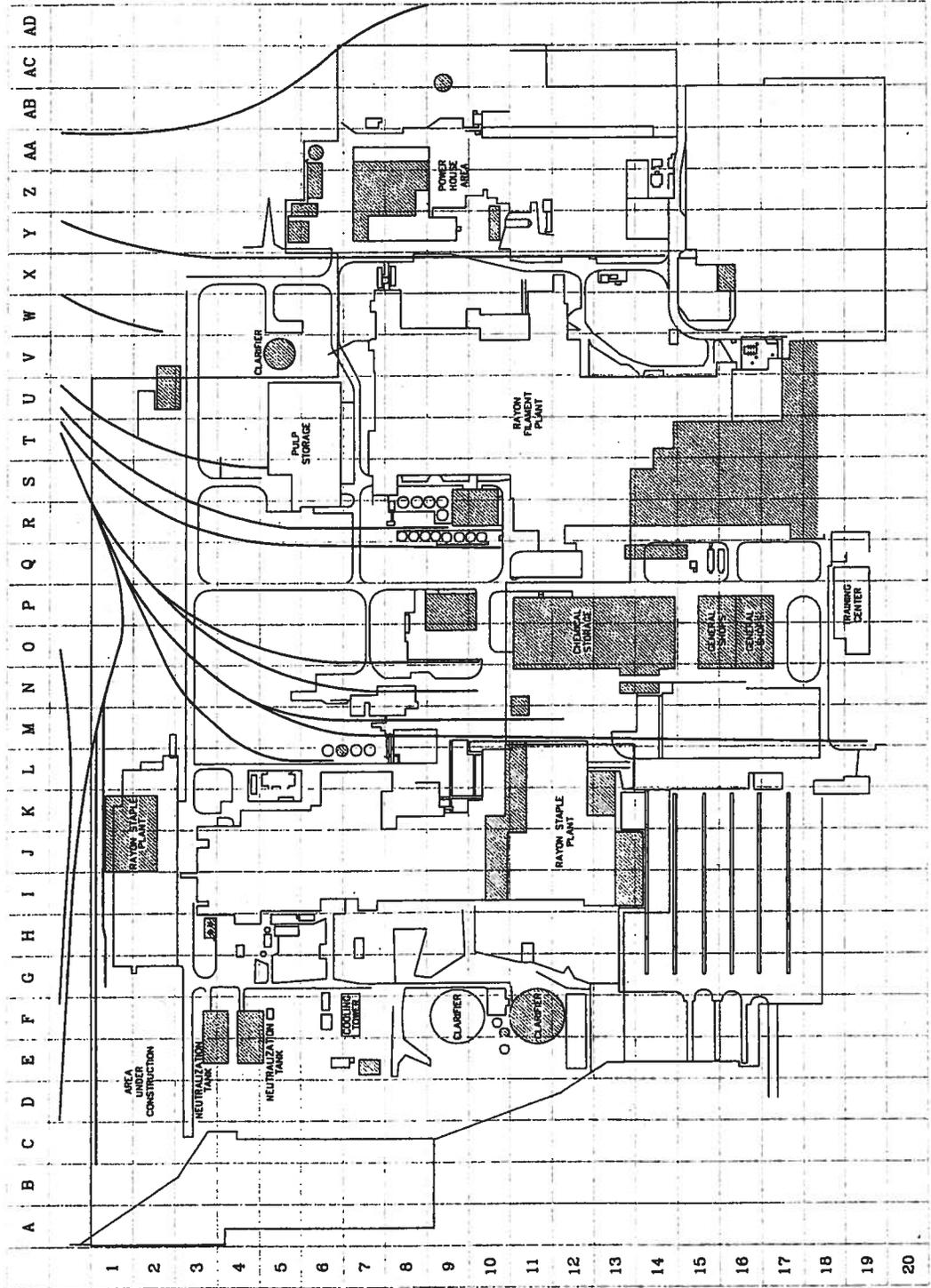
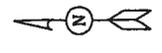
D

C

B

A

ZONE	REV	DESCRIPTION	DATE	APPROVED



□ SCOPE BOUNDARY  
 ▨ STRUCTURES REMAINING

**A.C.T. Services, LLC**  
 FORMER LIBERTY FIBERS RAYON PLANT  
 SITE LAYOUT

SIZE	PROD. NO.	DWG. NO.	REV.
C	08.17.002	ASB-01	A
SCALE	Approx. 1"=200'		SHEET 1 OF 1

WARNING: DO NOT SCALE DRAWING  
 ALL DIMENSIONS SHALL BE TAKEN AS  
 SHOWN UNLESS OTHERWISE NOTED  
 A.C.T. SERVICES, LLC AND RAYON PART OF  
 THE LIBERTY FIBERS COMPANY ARE  
 POSSESSION FROM A.C.T. SERVICES, LLC

1

2

3

4

D

C

B

A