MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M41599 - 003 **Analyst** Paul Hess **Date** 12/27/2006

ClientName State of Tennessee Dept. of Air Pollution Control **ClientSpl#** 121806A

Location Liberty Fibers-Pulp Storage

Type_Mat cardboard ins.

Gross Visual Silver paint on tarry mesh with tarry felt on beige layered felts

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/10545		
Sign^	positive		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	EST. VOL. %
Chrysotile	5
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -rib&woody	65
Hair -medulla/scales	3

NON FIBROUS COMPONENTS	
Opaques	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected. Chrysotile asbestos appears to confined to the silver paint and tarry mesh and felt.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M41599 - 004 **Analyst** Paul Hess **Date** 12/27/2006

ClientName State of Tennessee Dept. of Air Pollution Control **ClientSpl#** 121806B

Location Liberty Fibers-Pulp Storage

Type_Mat white chalky TSI

Gross Visual White fibrous chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy	straight	
Pleochroism	none	none	
Refract Index	1.550/10545	1.690/1.680	
Sign^	positive	positive	
Extinction	parallel	parallel	
Birefringence	low	medium	
Melt	no	no	
Fiber Name	Chrysotile	Amosite	

ASBESTOS MINERALS	EST. VOL. %
Chrysotile	5
Amosite	12
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M41599 - 005	**Analyst**	Paul Hess	**Date**	12/27/2006
ClientName	State of Tennessee Dept. of Air Pollution Control			**ClientSpl#**	121806C
Location	Liberty Fibers-Rayon Staple-Demo				
Type_Mat	white chalky TSI				

Gross Visual White fibrous chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy	straight	
Pleochroism	none	none	
Refract Index	1.550/10545	1.690/1.680	
Sign^	positive	positive	
Extinction	parallel	parallel	
Birefringence	low	medium	
Melt	no	no	
Fiber Name	Chrysotile	Amosite	

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile	5
Amosite	12
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M41599 - 006 **Analyst** Paul Hess **Date** 12/27/2006

ClientName State of Tennessee Dept. of Air Pollution Control **ClientSpl#** 121806D

Location Liberty Fibers-Caprolactam Bldg.

Type_Mat white TSI

Gross Visual White fibrous chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy	straight	
Pleochroism	none	none	
Refract Index	1.550/1.0545	1.690/1.680	
Sign^	positive	positive	
Extinction	parallel	parallel	
Birefringence	low	medium	
Melt	no	no	
Fiber Name	Chrysotile	Amosite	

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile	5
Amosite	12
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

Asbestos Demolition and Renovation Field Data Collection Checklist

A. GENERAL INFORMATION

Site name: LIBERTY FIBERS

Address: HWY 160

LOWLAND

Site code: TN07052 Date of inspection: 4-16-07

Inspection time in: _____ Inspection time out: _____

Weather conditions: WARM

Inspector(s): RTH

Reason for inspection:

Routine compliance ✓ Citizen complaint ✓ Suspected non-notifier ____

Other (explain) ____

Notification received? Yes (date): _____ No: ____

Start/completion dates:

Notification: ____

Actual: ____

Facility description:

Number of floors: 1 Dimensions: ____ Age (if known): ____

Type of construction: ____

Present use: ____

Prior use: INDUSTRIAL

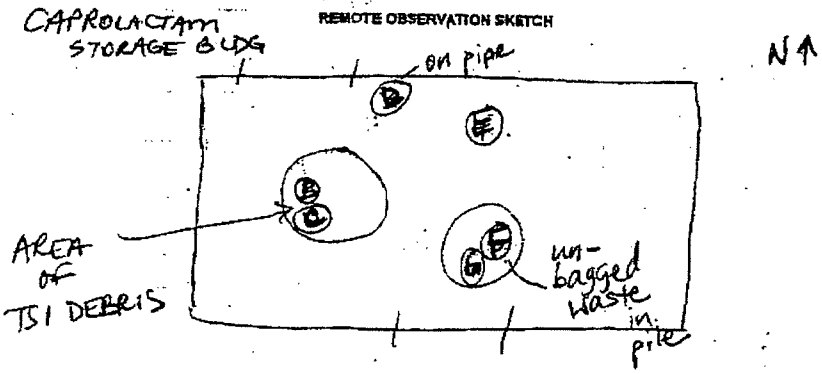
Project status:

	Yes	No
Contractor onsite?	✓	
Work in progress?		✓
Project complete?		✓

B. REMOTE OBSERVATIONS

1. If necessary, draw a sketch of the suspected abatement area. Draw the building or other source of suspect ACM, waste storage area(s), location(s) of debris, land use surrounding site, vehicles of importance, visible emissions, etc. Estimate and indicate dimensions and distances as accurately as possible on the drawing. Note wind direction, site orientation, and locations of photographs/samples.

REMOTE OBSERVATION SKETCH



Comments: See attached description of samples
WORK NOT IN PROGRESS DURING INSPECTION

	Yes	No
2. Is an ACWM transport vehicle present?	✓	
If "yes", is it being loaded?		✓
If "yes", is it properly marked during loading?		

C. PRE-INSPECTION PROCEDURES

1. Entry:

Agency identification shown?		✓
Authorization and reason for inspection explained?		✓
Medical monitoring/fit-test certification shown?		✓
Entry gained?	✓	

Entry authorized by: MARK SAWYER

Comments: ____

2. Opening conference participants (name, title, company, onsite responsibility):

3. Name, address, contact name, telephone number, onsite responsibility and accreditation number for any entity not noted above (or in the notification) which controls or supervises the demolition/renovation project:

Business card attachment site:

4. Describe any changes/modifications/discrepancies to the information provided in the notification:

5. Onsite representative

a. Name/title/company of onsite representative who has had required NESHAP training:
MARK SAWYER & ERIC GRUENBERG

b. Is evidence regarding such training:

	Yes	No
posted?		
available for inspection?	✓	

Comments: It is evident that they haven't been supervising the workers.

6. Is the project subject to the MAP? (Complete MAP compliance chart if necessary.) Yes ___ No ___
If "yes":
initial certifications onsite? ___ ___
current certifications onsite? ___ ___

Comments: ___

7. Site activity (if more than one project is occuring at this facility, complete a separate checklist for each or differentiate accordingly)

Planned renovation ✓
Emergency renovation* ___
Demolition ___
Ordered demolition** ___
Nonscheduled operation ___

*If the activity is an emergency renovation, does notification contain: Yes No

date/hour emergency occurred? ___ ___
description of emergency? ___ ___
explanation re: unsafe condition/equipment damage/financial burden? ___ ___

**If the activity is an ordered demolition, was order submitted with notification? ___ ___
If yes, does order list:
name, title, authority of government representative? ___ ___
date demolition was ordered to begin? ___ ___

8. Was the facility inspected? Yes ___ No ✓ ? ___
If "yes", is a copy of the building inspection at the site? ___ ___
If "yes"
Building inspector name: ___
Company: ___
Accreditation/State license number(s): ___

9. Describe the current phase of the project:
ASSUMED ACM

D. SITE INSPECTION

1. Is the site a "facility"? Yes ✓ No ___

2. Quantification of suspect RACM observed:

Insulation: Total

Felt___ Air cell___ Premolded ✓ Asbestos cement___
Block insulation ✓ unk

Surfacing Materials

Plaster___ Spackling compound___ Stucco___ Joint compound___
Sprayed-on (acoustic, decorative insulative)___ 0

Miscellaneous

Ceiling tiles___ Acoustical tiles___ 0

Category I Nonfriable ACM Total

Floor coverings (VAT, asphalt/asbestos tile, linoleum)___ Mastic___
Packings___ Gaskets___ Asphalt roofing products___ 0

Category II Nonfriable ACM

Lab benchtops___ Transite siding___ Vinyl wallpaper___ Putties___
Pegboard___ Sealants___ Adhesives___ Paints/coatings___
Extrusion panels___ Clapboards/shingles___ Millboard___
Concrete/asbestos board or siding (transite)___ Concrete/asbestos pipe___
Textiles (fire blankets, lab aprons, theater/welding curtains, gloves)___ 0

Other (specify): ___

Description/amount of ACM off facility components (components no longer present): ___

Quantification summary:

Pipes ___ LF
Other facility components ___ SF
Off facility components ___ CF

3. Method of measuring amounts of suspect ACM (e.g., visual estimation, pacing, tape measure or other device):

Yes No

4. Are regulated amounts of suspect ACM being handled? ✓ ___
5. Is the material friable? ✓ ___
6. Is the material likely to become friable during demolition or renovation? ✓ ___

Comments: ___

7. How was friability determined? ___

E. DEMOLITION N/A

Yes No

1. Facility ordered demolished? (removal not required) ___ ___
Is demolition in progress? ___ ___
If "yes":
Portion of facility containing RACM adequately wet during wrecking? ___ ___
Visible emissions during wrecking? ___ ___

2. Cat. I nonfriable not in poor condition & not friable? (removal not required) ___ ___

3. ACM encased in concrete? (removal not required) ___ ___
If "yes":
Demolition in progress? ___ ___
If "yes":
Adequately wetted whenever exposed during demolition? ___ ___

4. ACM not discovered until after demolition began and cannot be safely removed? (removal not required) ___ ___
If "yes":
Exposed RACM and contaminated debris maintained adequately wet at all times? ___ ___

5. Category II nonfriable ACM with low probability of becoming crumbled, pulverized or reduced to a powder during demolition? (removal not required) ___ ___

6. Facility being demolished by intentional burning? ___ ___
If "yes":
Demolition in progress? ___ ___
all ACM (including Cat. I and II) removed before burning? ___ ___

7. Is ACWM being generated during an ordered demolition or demolition where ACM is not required to be removed? ___ ___
If "yes":
ACWM kept adequately wet after demolition? ___ ___
ACWM kept wet during handling/loading for transport to disposal site? (leak-tight containers or wrapping not required - may be transported and disposed of in bulk) ___ ___

F. RENOVATION

	Yes	No	NA
1. Unidirection removal?		✓	
If "yes":			
Renovation in progress?			
If "yes":			
Adequately wet whenever exposed?			
Lowered to floor and ground level?			
After removal from facility, RACM will be:			
stripped			
wrapped leak-tight			
Stripping of RACM from removed units or sections in progress?			
If yes,			
Adequately wet?			
LEV & collection system in use?			
2. Are large facility components being removed without the RACM being stripped?		✓	
If "yes":			
RACM being disturbed or damaged during removal, transport, storage, disposal, reuse?			
component encased in leak-tight wrapping?			
labeled during loading, unloading, storage?			
3. Stripping in place?	✓		
If "yes":			
Stripping work in progress?		✓	
If "yes":			
Adequately wet while being stripped?		✓	
Kept wet until collected and contained or treated in preparation for disposal?		✓	
Carefully lowered to floor or ground?			✓
4. Is ACM being removed or stripped >50 feet above ground and not being removed as units or sections?			
If "yes":			
Transported to ground via leak-tight chutes or containers?			
5. Are glovebags in use?		✓	
If "yes":			
Seamless on bottom?			
2 individuals conducting work?			
Proper size glovebags?			
Appropriately shaped glovebags?			
Reduced pressure technique in use?			
6. Is Category I nonfriable ACM being sanded, ground, cut, or abraded?		✓	
If "yes":			
ACM adequately wet?			
LEV and collection system in use?			
7. Any visible emissions to the outside air during renovation?		✓	

Comments: _____

H. EVALUATION OF WETTING

	Yes	No
1. Is wetting required during activities observed?	✓	
If "no", check off or describe reason below:		
RACM not being disturbed		
wetting exemption		
freezing temperatures		
other _____		
2. Has owner/operator been granted wetting exemption?		✓
If "yes":		
Copy of written approval at worksite?		
One of the following in use?		
LEV and collection system		
glove-bag system		
leak-tight wrapping		
equivalent approved method		
copy of written approval for equivalent method at site?		

Who granted exception? _____

	Yes	No
3. Is the temperature at point of wetting below 32°F?		✓
If "yes":		
Facility components removed as units or sections?		
Area temperature recorded beginning, middle, end of each workday?		
Records available at site? (required)		
Records retained 2 years?		
4. Is removed ACM awaiting containerization present?	✓	
If "yes":		
Material adequately wetted?		✓
If "no", adequately wet the material and describe how it changes upon wetting (e.g., color, texture, weight, etc.):		
light → dark color when wetted		
5. Is containerized RACM present?	✓	
If "yes":		
Adequately wetted?		
Open or ripped containers?		
If "yes":		
How many?		
Contents of containers adequately wet?		
If "no", adequately wet the material and describe how it changes upon wetting (e.g., color, texture, weight, etc.):		
DIDN'T OPEN BAGS		

H. WASTE DISPOSAL (61.150)

1. Check which of the following waste disposal options has been selected:

Discharge no visible emissions	___
Adequately wet ACWM	___
Process ACWM into nonfriable form	___
Use Administrator-approved alternative emission control/waste treatment method*	___

	Yes	No
*Is approval available for review? (need not be onsite)	✓	___
2. Will ACWM be transported off the facility site?	✓	___
If "yes": Generator label on containers?	✓	___
If "yes", does label contain: name of waste generator?	✓	___
location where waste generated?	✓	___
3. Is all ACWM (excluding Category I nonfriable in good condition) disposed of properly as soon as practical?	✓	___
4. Is there a waste disposal operation in progress?	___	✓
If "yes": Visible emissions to the outside air?	___	___

I. WASTE SHIPMENT RECORDS (WSRs)

	Yes	No
1. Has ACWM been shipped from the site?	✓	___
If "yes": Completed WSRs available for review onsite?	✓	___

If "yes", describe any deficiencies seen:

	Yes	No	?
Has it been >35 days since waste shipped from facility?	___	___	
If "yes": Signed copy of the WSR received by generator from waste disposal facility?	___	___	___
If "no": Has generator determined status of ACWM?	___	___	
If "no": Has it been 45 days since shipment?	___	___	
If "yes": Has generator notified EPA in writing that signed copy of WSR not received from disposal facility?	___	___	
2. Are copies of all WSRs (including the signed copy sent by the disposal facility) maintained for 2 years?	✓	___	

J. CLOSING CONFERENCE

1. Was a closing conference held?	✓	___

If "yes", list names of attendees:

MARK SAWYER

2. Summary of recommendations/discussion:

Instructed to clean debris, keep wet, finish work that has been started before ending the day. Keep waste contained. Supervise workers more closely

K. ADDITIONAL COMMENTS

L. ATTACHMENTS

Sample Collection Log	___	Photo Log Sheet	___
Field Notes	___	Chain of Custody Form	___
Generator Label	___	Waste Shipment Record	___
Notification	___	Photographs	___
ASHARA (MAP) Checklist	___	AHERA Checklist	___
WPR Checklist	___		

Others:

R. Harrison — Inspector signature

4-16-07 — Date

ALSO ERIC G. — DISCUSSED PUTTING PLASTIC ON GROUND & CUTTING HIGH PIPE RUNS + THEN ABATEMENT

I EXPLAINED HE NEEDED TO WRAP THE PIPES BEFORE CUTTING TO PREVENT FIBER RELEASE IF PIPES WERE DAMAGED IN THE PROCESS.