Demolition and Disposal
Issues re: Mobile Homes

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Georgia Association of Code Enforcement (GACE) Conference
DEMOLITION AND DISPOSAL ISSUES

Seminar Outline

Introduction
The Rules – An Overview of Government Regulations
  Federal Asbestos & Demolition
  Georgia Asbestos
  Georgia Solid Waste
Identifying Asbestos
Common Types of Asbestos-Containing Materials
Asbestos Health Effects
Federal Asbestos Bans
Other Rules
Summary
Lead-Based Paint Issues
Summary
Sources of Information
SEMINAR OBJECTIVE

Provide Technical Assistance
• Government Regulations
• Environmental & Health Concerns
Encourage Voluntary Compliance
Assist in Enforcement Efforts
Know Where to Get More Information

THE RULES REGARDING DEMOLITION & DISPOSAL

• EPA/ NESHAP
  National Emission Standards for
  Hazardous Air Pollutants (Asbestos)
  40 CFR Part 61 .140 - .155

• EPD/ ASBESTOS
  Asbestos Removal and Encapsulation
  Chapter 391-3-14

• EPD/ SOLID WASTE
  Solid Waste Management
  Chapter 391-3-4.

• OTHERS
THE RULES – WHO DO THEY AFFECT?

- EPA/ NESHAP: OWNERS/OPERATORS
- EPD/ ASPBESTOS: CONTRACTORS
- EPD/ SOLID WASTE: EVERYONE

THE RULES – FEDERAL NESHAP

40 CFR Subpart M Part 61. 141 Definitions

40 CFR Subpart M Part 61. 145 Standard for Demolition and Renovation

40 CFR Subpart M Part 61. 150 Standard for Waste Disposal for manufacturing; fabricating; demolition; renovation; and spraying operations

FEDERAL NESHAP DEFINITIONS
Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Asbestos-Containing Material means any material containing more than 1 percent asbestos by dry weight.

Friable asbestos material means any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
Category I nonfriable asbestos-containing material (ACM) means:
- Ceiling Tiles
- Resilient Floor Coverings
- Gaskets
- Packings
- Roofing Products
- Other Materials

Category II nonfriable ACM means asbestos cement products containing more than 1 percent asbestos (e.g., Transite and other trade names)

RACM: Regulated asbestos-containing material
- Friable asbestos material,
- Category I nonfriable ACM that has become friable,
- Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or
- Category II Friable ACM
FEDERAL NESHAP

40 CFR Subpart M Part 61. 141 Definitions

Waste generator means any owner or operator of a source covered by this subpart whose act or process produces asbestos-containing waste material.

FEDERAL NESHAP

40 CFR Subpart M Part 61. 141 Definitions

Leak-tight means packaging that solids or liquids cannot escape or spill out of. It also means dust-tight.

FEDERAL NESHAP

40 CFR Subpart M Part 61. 141 Definitions

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.
Federal NESHAP

STANDARD FOR DEMOLITION AND RENOVATION

NESHAP APPLIES TO:

- Industrial, Commercial, & Public Buildings
- Single Family House That Has EVER Been Used for Commercial Purposes
- Any Residence Part of An Industrial, Commercial, or Public Project
- More Than 1 House in a Single Project
- Multi-Family Housing with 5 or More Units

FEDERAL NESHAP

40 CFR Subpart M Part 61.145
Standard for Demolition and Renovation

(a) Applicability. To determine which requirements of paragraphs (a), (b), and (c) of this section apply to the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation...
FEDERAL NESHAP

40 CFR Subpart M Part 61. 145
Standard for Demolition and Renovation

Applicability, Continued

... *thoroughly inspect* the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM.

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FEDERAL NESHAP

40 CFR Subpart M Part 61. 145
Standard for Demolition and Renovation

(b) Notification requirements. Each owner or operator of a demolition or renovation activity to which this section applies shall:

1. Provide the Administrator with written notice of intention to demolish or renovate
2. Update notice, as necessary
3. Postmark the notice 10-work days in advance
4. Certify a trained person will be on-site during renovation activities

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FEDERAL NESHAP

40 CFR Subpart M Part 61. 145
Standard for Demolition and Renovation

(c) Procedures for Asbestos Emission Control. Each owner or operator of a demolition or renovation activity... shall comply with the following procedures:

1. Remove all RACM from a facility being demolished or renovated
2. Adequately wet the RACM during removal packaging
3. No RACM will be removed or disturbed without a trained person supervising
The required training shall include at a minimum:

- applicability
- notifications
- material identification
- wetting
- local exhaust ventilation
- negative pressure enclosures
- glove-bag procedures
- High Efficiency Particulate Air (HEPA) filters
- waste disposal
- work practices
- reporting
- recordkeeping
- asbestos hazards
- worker protection

If a facility is demolished by intentional burning, all ACM including Category I and Category II nonfriable ACM must be removed in accordance with the NESHAP before burning.
FEDERAL NESHAP

40 CFR Subpart M Part 61 .150

Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations.

(a) Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, or transporting of any asbestos-containing waste material generated by the source . . .

1) Adequately wet asbestos-containing waste materials

(c) Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that the signs are visible.

WHETHER NESHAP APPLIES OR NOT:

GA Asbestos Safety Act Rules Apply To All Buildings When A Contractor Is Doing The Work

GA Asbestos Solid Waste Rules Apply Regardless of Building Type or Who Does The Work

OSHA Asbestos Rule or EPA Asbestos Worker Protection Rule Applies If Work Performed By Employees

CANNOT BE IN COMPLIANCE WITH ANY OF THESE RULES WITHOUT AN ASBESTOS INSPECTION

ASBESTOS RULES AND REGULATIONS

GEORGIA RULES

♦ Chapter 391-3-1 Rules for Air Quality Control

♦ Chapter 391-3-14 Rules for Removal and Encapsulation

♦ Chapter 391-3-4 Rules for Solid Waste Management

♦ Interpretations of the Above
Asbestos Removal
and
Encapsulation

391-3-14-.02 (2)      Project Notification
391-3-14-.03           Schedule of Project Fees
391-3-14-.04           Contractor Licensing
391-3-14-.05           Asbestos Supervisor Training
391-3-14-.09           "Reportable Quantities"
There is NO FEE for demolition project notifications

- A minimum of $25 for friable asbestos removal project
- Not to exceed $50 for any small project or residential dwelling
- Not to exceed $1,000 for any other project

Fees = $.10 per square foot/linear foot of RACM being removed, subject to minimum/maximum trigger quantity

Solid Waste Rules

The following excerpts of the Georgia Rules for Solid Waste Management provides the Environmental Protection Division Authority for regulating Asbestos Containing Waste in Georgia:
RULES FOR SOLID WASTE MANAGEMENT
CHAPTER 391-3-4.04(8)
(REVISED AUGUST 1997, EXCERPTED MAY 2004)
(8) Asbestos Containing Waste (a) Collection.

1. Vehicles used for the transportation of containerized asbestos waste shall have an enclosed carrying compartment or utilize a covering sufficient to contain the transported waste, prevent damage to containers, and prevent release or spillage from the vehicle.

2. Vehicles used to reduce waste volume by compaction shall not be used.

3. Vacuum trucks used to transport waste slurry must be constructed and operated to ensure that liquids do not leak from the truck.

RULES FOR SOLID WASTE MANAGEMENT
CHAPTER 391-3-4.08
(REVISED AUGUST 1997, EXCERPTED MAY 2004)
(8) Asbestos Containing Waste (b) Disposal

1. Asbestos containing waste is to be disposed of only in a permitted landfill or other facility authorized by the Division for acceptance of asbestos containing waste.

2. Asbestos containing waste shall be sealed in leak-proof containers labeled with: "Caution - Contains Asbestos Fibers - Avoid Opening or Breaking Container - Breathing Asbestos is Hazardous to Your Health."

3. Asbestos containing waste shall be disposed of in such a manner as not to destroy the integrity of the ACM containers prior to the placement of cover material. This was shall be completely covered immediately after deposition with a minimum of six (6) inches of non-asbestos material.
PERMITTED DISPOSAL SITE CATEGORIES FOR DEMOLITION DEBRIS

Commercial-Public
- Municipal Solid Waste Landfill (MSWL)
- Construction and Demolition Landfill (C&D)

WASTE DISPOSAL – PERMITTED LANDFILL?

WASTE DISPOSAL
391-3-4.04 General. Amended.

(1) No person shall engage in solid waste handling in a manner which will be conducive to insect and rodent infestation or the bar boring and feeding of wild dogs or other animals; impair the air quality; impair the quality of ground or surface waters; impair the quality of the environment; or likely create other hazards to the public health, safety, or well-being as may be determined by the Director.

391-3-4.04 Prohibited Acts: Open Dump: no solid waste may be disposed of by any person in an open dump, nor may any person cause, suffer, allow or permit open dumping on his property.

Waste Definitions – Open Dump

Means a disposal facility at which solid waste from one or more sources is left to decompose, burn or to otherwise create a threat to human health or the environment.
IDENTIFYING ASBESTOS

POLARIZED LIGHT MICROSCOPE

The Three Most Commonly Found Forms of Asbestos

Chrysotile

Amosite

Crocidolite
ASBESTOS FIBERS ARE SO SMALL THEY CAN REMAIN SUSPENDED IN THE AIR FOR HOURS OR EVEN DAYS AFTER THEY ARE RELEASED

- **SURFACING MATERIAL**
- **THERMAL SYSTEM INSULATION (TSI)**
- **MISCELLANEOUS**

**Types of Asbestos-Containing Material (ACM)**

Surfacing Materials
WHERE ASBESTOS MIGHT BE FOUND

COMMON ACM’s IN HOMES

HEALTH EFFECTS
ASBESTOS EXPOSURE CAN CAUSE

- ASBESTOSIS
- LUNG CANCER
- MESOTHELIOMA
- OTHER TYPES OF CANCER

ASBESTOS & DISEASE

- Delay between Exposure and Onset of Disease is Approximately 10-60 Years
- All Types of Asbestos Can Be Dangerous If Inhaled
- Risks of Some Diseases are Increased By Smoking
- The More Fibers Breathed in, The Greater the Odds for Disease
- There is No Cure for Some Asbestos Related Diseases

LIMITED FEDERAL BANS ON ACM

Consumer Product Safety Commission
1978 Wallboard Joint Compound (if added as an intentional ingredient)
1978 Patching Compound (if added as an intentional ingredient)
1978 Artificial Ash and Embers for Fireplaces
LIMITED FEDERAL BANS ON ACM

EPA (NESHAP)
1973  Spray Applied Fireproofing
1975  Pipe/Tank/Boiler Insulation
1976  Acoustical Material
1978  Spray Applied Decorative Materials (Popcorn Ceilings, etc.)

LIMITED FEDERAL BANS ON ACM

TSCA Asbestos Ban & Phase-Out Rule/Court Decision
           Commercial Paper  Rollboard
           Specialty Paper  New Uses of Asbestos

ACM’S NOT BANNED UNDER CURRENT FEDERAL RULE

<table>
<thead>
<tr>
<th>Asbestos Cement Corrugated Sheet</th>
<th>Milboard</th>
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<tbody>
<tr>
<td>Asbestos Cement Flat Sheet</td>
<td>Clutch Facings</td>
</tr>
<tr>
<td>Textiles (yarn, fabric, belts, clothing)</td>
<td>Pipeline Wrap</td>
</tr>
<tr>
<td>Automatic Transmission Parts</td>
<td>Gaskets</td>
</tr>
<tr>
<td>Roofing Felt</td>
<td>Friction Materials</td>
</tr>
<tr>
<td>Disc Brake Pads</td>
<td>Electrical Tape</td>
</tr>
<tr>
<td>Vinyl-Asbestos Floor Tile</td>
<td>Drum Brake Linings</td>
</tr>
<tr>
<td>Asbestos-Cement Shingles</td>
<td>Brake Blocks</td>
</tr>
<tr>
<td>Asbestos Cement Pipe</td>
<td>Catalytic Filters</td>
</tr>
<tr>
<td>Valve Packing Materials</td>
<td>Certain Coatings</td>
</tr>
</tbody>
</table>
OTHER RULES MAY APPLY

- OSHA
- EPA Worker Protection
- Hazardous Waste Rules
- Hazardous Site Response Inventory Rules (HSRI)
- Local (county, municipal) Ordinances

OSHA ASBESTOS STANDARDS
29 CFR 1926.1101 CONSTRUCTION

Building Owners and Managers 1926.1101 (k) (2)
Employers 1926.1101(k) (3)
- Inspect (AHERA Accredited if ACBM)
- Locate
- Quantify
- Notify
- Comply (1926.1101(g) and Many Other Sections)
EPA ASBESTOS WORKER PROTECTION RULE
40 CFR PART 763

Georgia EPD Rules - Chapter 391-3-11.
Hazardous Waste Rules
Waste Definitions - Hazardous

Any solid waste defined as hazardous waste in regulations promulgated by the Board of Natural Resources, Chapter 391-3-11.

(Lead is one of eight metals classified as hazardous waste)

IN SUMMARY - ASBESTOS

- Contractor performing demolition activities – NOTIFICATION required
- Homeowner performing demolition – NO Notification
- Mobile Home Park Owner moving or demolishing mobile home(s) – Notify
- City/County Officials demolishing under Blight Codes - Notify
IN SUMMARY - ASBESTOS

Mobile homes being moved MAY BE considered demolition

- If on wheels and can be driven off site, NOT demo
- All asbestos-containing materials must be secured to prevent falling off during transport
- If on foundation, IS Demolition
- All ACM must be properly removed & disposed of

In Summary - Asbestos

Friable ACM Removal > 10 sf/lf

- GA Licensed Asbestos Abatement Contractor Required
- Notification Required
- Project Fees Required

In Summary - Asbestos

Non-Friable ACM Removal

- Anyone Can Remove
- No Notification or Project Fee Required
- Must Comply with Waste Disposal Rules
In Summary - Asbestos

Asbestos Removal By Home Owners

• Not Recommended, But Allowed
• No Notification or Project Fee Required
• Must Comply with Waste Disposal Rules

In Summary - Asbestos

Asbestos Waste Disposal Requirements

• Leak-Tight Packaging
• Asbestos Warning Language on Packaging
• Waste Generator Labeling on Packaging
• Transportation in a Covered Vehicle
• Disposal in a Permitted Landfill

IN SUMMARY - ASBESTOS

To Comply With “The Rules,” A Thorough Asbestos Inspection Must Be Perform Before Demolition and/or Renovation Activities
LEAD-BASED PAINT ISSUES

WHAT IS LEAD-BASED PAINT?

**Lead-based paint is**

- Any paint or surface coating (shellacs, varnishes, stains, etc.) that contains ≥ 0.5% or 5,000 ppm by dry weight or 1.0 mg/cm²
- OSHA and some states regulate paint with lower concentrations of lead

LEAD WAS A MAJOR INGREDIENT IN MOST INTERIOR AND EXTERIOR OIL HOUSE PAINTS PRIOR TO 1950, WITH SOME PAINTS CONTAINING AS MUCH AS 50 PERCENT LEAD BY DRY WEIGHT
Why Was Lead Used in Paint?

- Primary pigment
- Added color
- Durability
- Drying agent
- Mildew inhibitor
- Corrosion Inhibitor

HOW WIDESPREAD IS LEAD IN HOUSING?

<table>
<thead>
<tr>
<th>Year House Was Built</th>
<th>Percent of Houses with Lead-Based Paint</th>
</tr>
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<tbody>
<tr>
<td>Before 1940</td>
<td>87 percent</td>
</tr>
<tr>
<td>1940-1959</td>
<td>69 percent</td>
</tr>
<tr>
<td>1960-1978</td>
<td>24 percent</td>
</tr>
<tr>
<td>All Housing</td>
<td>40 percent</td>
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</tbody>
</table>

Where Lead is Often Found
COMMON AREAS OF LBP IN MOBILE HOMES

Decks, Railings, Fences, Awnings, and other painted areas
The likelihood, extent, and concentration of lead-based paint all increase with the age of the building.

LEAD HARMS ALL OF THE BODY’S MAJOR SYSTEMS

LEAD IS PARTICULARLY DEVASTATING TO PROPER DEVELOPMENT IN CHILDREN 6 YEARS OF AGE AND UNDER

STATE & FEDERAL RULES

Georgia Lead Act & Rules
Federal EPA
Consumer Product Safety Commission
HUD
OSHA
Solid Waste
WHERE DOES THIS RULE APPLY?
391-3-24

. In target housing and child-occupied facilities

“Target Housing”
- Any residential dwelling constructed prior to 1978
  Except
  - Residential dwellings for the elderly or persons with disabilities
    (unless any child who is six years or under resides or is expected to
    reside in such facility)
  - Any zero-bedroom dwelling

“Child-Occupied Facility”
- A building, or portion of a building constructed prior to 1978.
- Visited by the same child, six years of age or under
- On at least two different days within the same week, and
- Each day’s visit lasts at least three hours and,
- Combined weekly visits last at least six hours
- Day care centers, schools, after-school facilities, tutors, etc.
Don’t Leave Lead-Based Paint Chips, Splinters of Painted Wood or Other Coated Materials on Demolition or Renovation Site Post Work Activities – GA SOLID WASTE VIOLATION

**Non-Residential Projects:**

- Painted Architectural Components - MSWL or C&D
- Chips/Dust/Sludge/Soil – MSWL With Leachate Liner

**Residential Projects:**

- Painted Architectural Components - MSWL or C&D
- Chips/Dust/Sludge/Soil – MSWL With Leachate Liner

Hazardous Waste Requirements

**Non-Residential Projects:**

Leachable TCLP (Toxicity Characteristic Leaching Procedure)

- >5ppm waste stream:
  - Call Hazardous Waste Program
  - Generator Compliance 404-657-8831
HAZARDOUS SITE RESPONSE INVENTORY (HSRI)

- State Super-Fund Inventory List
- Permanent Property Record Despite Remediation
- Must Disclose When Selling/Leasing Property
- Affects Property Value

LOCAL (COUNTY, MUNICIPAL) ORDINANCES

Cities, counties, and municipalities can adopt regulations that are more stringent than state and federal rule (they cannot be less restrictive). Check with local authorities (for example: building codes officials, health department, zoning department, etc.) for more information.

SOURCE INFORMATION

Internet/Phone Book:
Asbestos Inspectors
Georgia Licensed Asbestos Abatement Contractors
Demolition Contractors

Program Duty Officers: 404-363-7026
INFORMATIVE WEBSITES

EPA’s Indoor Air Quality Site
http://www.epa.gov/iaq/asbestos.html

The EWG Action Fund Website
http://www.epa.gov/iaq/asbestos.html

Georgia EPD Website
http://www.epd.georgia.gov
Navigating the EPD Website

New EPD Certification Web-Database: GEOS Public
https://geos.epd.georgia.gov/GA/GEOS/public/GovEnt/Shared/Pages/Main/Login.aspx

Welcome to Georgia EPD Online System (GEOS) for Permitting, Compliance and Facility Information

Online services offer the convenience of obtaining environmental permits and submitting compliance reports online. It supports the following functions:

- Establish a user account and manage all your submittals online.
- Apply for permits, certificates, licenses and other environmental issuances online.
- Submit payment for your online submittals.
- Receive a small credit for permitting activities.
- Submit reports to revise permits or update the issued permits.
- Track compliance and issues with all submittals.

Public Inquiry Portal: Search for Applications and Permits Submitted in GEOS

"That's all Folks!"
Cartoon Song: Melodies & Looney Tunes