Approaches & Resources for Managing Asbestos Containing Building Materials

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Asbestos Overview & Federal Requirements

• What is asbestos?
• How is it regulated?
• Requirements for Owners & Contractors
• Brownfield Program Resources
What is Asbestos?

• A naturally occurring mineral.
• Used in many building materials.
• Breaks up into very fine, needle-like fibers.
• A known human carcinogen.
Asbestos-Containing Building Materials

- About 3,500 materials are known to contain asbestos.
- Some products may still contain asbestos (most uses are not banned).
- Common examples: pipe insulation, ceiling texture, roofing asphalt, floor tile, cement pipes...
Asbestos Examples
Can be found in places you don’t expect
Asbestos Examples

Molded Pipe Insulation
Asbestos Examples

Coating on Drywall

Ceiling Texture
Asbestos Examples

Mortar and Concrete Mix

Textured Paint
Asbestos Examples

Roofing Shingles

Asphalt Paper
EPA’s Regulations

National Emission Standard for Hazardous Air Pollutants “NESHAP”

40 CFR, Part 61, Subpart M (Asbestos)
EPA’s Asbestos Regulations

- Clean Air Act
- Air Toxics Regulations
  - Section 112 of CAA
- Asbestos NESHAP
  - 40 CFR Part 61, Subpart M
EPA Regulates

- Facilities undergoing:
  - All Demolitions
  - Only Renovations that
    - Exceed regulatory thresholds
    - Disturb “friable” materials
Facility means

any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site.
Facility Examples
Secondary Aluminum Plant Oven Repair
Facility Examples
Hotels
Facility Examples

Schools
Facility Examples
Landfill Disposal Sites
EPA Regulates: All Demolitions
Unplanned events bring on asbestos demolitions
10/02/14
EPA Regulates: Renovations w/ Friable Asbestos
EPA’s Regulations - The Way It Should Work

For **Renovations and Demolitions:**

- Preparation
  - Survey
  - Notification
- Abatement
  - Keeping It Wet
  - Handling It Carefully
  - Storing It
- Waste Handling and Disposal
  - Transporting It
  - Disposing It
  - Confirming Disposal
Asbestos Surveys

• An inspection must be conducted by the facility owner or operator before a demolition or renovation begins.

• Inspector certification required
  • AHERA “Asbestos Building Inspector”
  • 24 Hour Course, Annual Refresher
Thorough Survey for Asbestos

- Examines all areas “disturbed” by the demo/reno project, or more.
- Identifies suspect asbestos-containing materials (ACM)
- Measures amounts (linear feet, square feet)
Q: How Big Does a Job Have to be for EPA Regulations to Apply?

Some Jobs Are Too Small...
Regulated Amounts
(3 Ways to Measure)

- 160 Square Feet
- 260 Linear Feet
- 35 Cubic Feet
Notifications

- Advance Notice is Required
Notice Due 10 Days in Advance (Unless it’s an Emergency)
Notification to EPA... must include

- Project Location
- Building Description
- How Much Asbestos is There?
- Starting/Ending Dates?
- Contractor Name
- Waste Hauler
- Landfill Location
Abatement Work Practices
-- Please Be Careful!
Keeping It Wet
The waste must be kept wet at all times.
Abatement workers apply water before, during and after removing asbestos.

They must wear personal protective equipment.
Contingency plans
You may have to bring your own water.
Careful Handling
Do not let asbestos fall to the ground.
Barriers and signs prevent public access. Visible Emissions Can’t Escape the Area
Waste Disposal

Asbestos waste must be properly
- Contained,
- Stored,
- Brought to a landfill operated in accordance with the asbestos NESHAP.
What is Asbestos Waste?

- *Asbestos-containing waste materials* means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart.
  - filters from control devices
  - friable asbestos waste material
  - bags/packaging contaminated with commercial asbestos
  - disposable equipment and clothing.
Seal waste bags before bringing them outside the work area.
Bulk Wastes should be placed in lined, secure containers.
“Glove bags” are Leak Tight Containers for Removing Pipe Insulation
These “super sack” containers are common.
Storing Waste
Storage containers must be secure. This truck can be locked.
Improper Storage

Open Dumpster at Shopping Mall

Air Filters not contained
Transporting Asbestos Wastes

• No dust should be visible.
• Wastes should be kept wet at all times.
Disposal
Asbestos must go to a licensed landfill
Landfill Management - Restricted Access & Signs
Waste Disposal Owner/Operator/Hauler

- Discharge no visible emissions
- Adequately wet asbestos containing waste material (ACWM)
- Seal it
- Label it
- Transport in bulk if the building was unsound, in danger of collapse.
Waste Disposal Requirements for Owner/Contractor/Hauler

Asbestos NESHAP 40 CFR Part 61

§ 61.150 Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations.
Waste Disposal Requirements for Owner/Operator/Hauler

• Deposit ACWM as soon as practical at a waste disposal site operated in accordance with the provisions of 61.154.

• Mark waste hauling vehicles with asbestos warning signs during loading/unloading.

• Maintain Waste Shipment Records, and provide copy to landfill manager.
**Waste Shipment Records**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description of material</th>
<th>No. of Containers</th>
<th>Type</th>
<th>Total quantity (gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Special handling instructions and additional information**

- **Certificate of Disposal**: The certificate of disposal must be signed by the responsible official at the disposal site.
- **Transporter**: The transporter must sign the certificate of disposal.

**Operator information**

- **Operator name & address**: [Operator Name]
- **Operator phone**: [Operator Phone]

**Waste Disposal Site (WDS) site data**

- **WDS number**: [WDS Number]
- **WDS name & title**: [WDS Name & Title]
- **WDS address**: [WDS Address]
- **WDS phone**: [WDS Phone]

**Shipper information**

- **Shipper name & address**: [Shipper Name & Address]
- **Shipper phone**: [Shipper Phone]

**Transporter information**

- **Transporter name & address**: [Transporter Name & Address]
- **Transporter phone**: [Transporter Phone]

**Marking information**

- **Marking**: [Marking]
- **Marking phone**: [Marking Phone]

**Additional remarks**

- **Remarks**: [Remarks]
## Waste Shipment Record

### (Discrepancy)

<table>
<thead>
<tr>
<th>Description of materials</th>
<th>Containers</th>
<th>Total quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACM Contaminated Transite Pipe</td>
<td>No. Type</td>
<td>m³ (yd³)</td>
</tr>
</tbody>
</table>

### Special handling instructions and additional information

**OPERATOR’S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulation.

**Printed/typed name & title**

**Signature**

**Month Day Year**

**Transporter 1 (Acknowledgement of receipt of materials)**

**Printed/typed name & title**

**Signature**

**Month Day Year**

**Mailing address**

**03037 County Rd 2 Dove Creek, CO 81324**

**Phone**

**970-677-2797**

### # of Containers?

### Quantity of Asbestos Waste?

### Signature(s)?
Inspection Photos

• What does each photo tell us about compliance?
Visible Emissions (Dust) Prohibited
Demo Next Door to Senior Center - public exposure concern
EPA R10 Inspection Samples Had 40 - 80 % Asbestos
Condo Ceiling Texture Fell to Floor, Left Behind by Contractor
Waste Container Not “Leak Tight”
Air Monitors Detect if Asbestos Dust Is Present
Demo Contractor Believed Building was Asbestos Free
Oops! - There still is some asbestos in here.
Hotel Demolition
- Asbestos Not Removed Prior to Demo
-- Public Exposure Concern
Thrift Store Flooring Renovation Gone Wrong

And threw the debris in the parking lot where it was broken up, creating RACM.
Compliance and Enforcement

- Enforcement authority under the Clean Air Act.
- Violations subject to penalties of up to $37,500 per day, per violation.
- Administrative Actions
- Civil Actions
- Criminal Prosecution
Brownfields
Can Asbestos be addressed under EPA Brownfields?

• CERCLA legislation includes a definition of brownfield that includes properties contaminated with:
  “Hazardous Substances, Pollutants, & Contaminants”
  ✴ Hazardous Substances
  ✴ Petroleum Contamination
  ✴ Asbestos & Lead Paint
  ✴ Controlled Substances (e.g., Meth labs)
  ✴ Mine-Scarred Lands
  ✴ Other environmental contaminants
Brownfields

Asbestos can be addressed under EPA Brownfields except when...

• It is friable
Brownfields
What about demolition to remove threat of asbestos?

• In instances where asbestos can not be solely abated, demolition may be eligible under cleanup grants.
• Then it’s removal of hazardous wastes
Types of Activities Supporting Brownfield Projects

- Inventory of brownfield sites
- Phase I Environmental Site Assessments
  - Site background research/past uses
- Phase II Environmental Site Assessments
  - On site sampling and lab analysis
- Cleanup Planning (including cost estimates)
- Confirmation Sampling
- NHPA/Cultural Resources Assessments
- ESA review
- Visioning
- Project finance planning
Brownfield Grants & Technical Assistance

**Grant Types:**
- Assessment – Environmental Investigations
- Revolving Loan Fund (RLF)
- Cleanup
- Environmental Workforce Development and Job Training (EWDJT)
- State and Tribal Response – offers Brownfield site assistance
- Multi-Purpose Grants – Planning, Assessment, and Cleanup
- Research, training, and technical assistance
  - Technical Assistance to Brownfields Communities (TAB)

**Technical Assistance:**
- EPA Targeted Brownfields Assessment (TBA)
- Other Technical Assistance Support - EPA Technology Support Center & Innovation Programs, Technical Assistance to Brownfields
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