

Remediation and Redevelopment Program

Issues & Trends 2017

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Remediation and Redevelopment Program

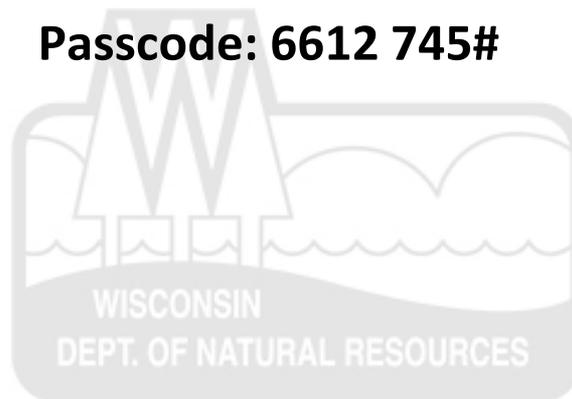
Issues & Trends 2017

February 8, 2017

12:00 p.m. – 1:00 p.m.

Dial: 1-855-947-8255

Passcode: 6612 745#



Asbestos Issues During Building Demolitions

Mark Davis

Asbestos Coordinator

&

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Air Management Specialist

TOPICS

- Background.
- Requirements.
- What causes the most problems?
- Proper planning.
- References.

BACKGROUND

- NR 447.
 - Parallels Federal NESHAPS.
 - Delegated to DNR to implement and enforce
 - In place since 1992
- Referral of complaints
 - OSHA
 - WDHS

REQUIREMENTS

- Pre-Inspection.
- Notification.
- Abatement prior to Demo/Reno.
- Disposal/Record Keeping

PRE-INSPECTION

- Covers affected facility/facility components
- Thorough
- Conducted by Certified Inspector
- Follows ASTM E2356-14 “Standard Practice for Comprehensive Building Asbestos Surveys”*

* EPA Interpretation Letter dated Aug-7-2015 Edward J. Messina, Director Monitoring Assistance and Media Programs Division, Office of Compliance



Designation: E2356 – 14

Standard Practice for Comprehensive Building Asbestos Surveys¹

This standard is issued under the fixed designation E2356; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice describes procedures for conducting comprehensive surveys of buildings and facilities for the purpose of locating, identifying, quantifying, and assessing asbestos-containing materials.

1.2 The results of a Comprehensive Building Asbestos Survey are intended to be used for ongoing management of asbestos-containing materials, including Operations and Maintenance (O&M), removal, and other response actions. This

required by a party to the transaction is minimal, a Limited Asbestos Screen (see Practice E2308) may suffice in place of the Comprehensive Building Asbestos Survey.

1.6 This practice does not include air sampling or surface (dust) sampling for purposes of evaluating a potential exposure hazard from airborne asbestos fibers.

1.7 **Warning**—Asbestos fibers are acknowledged carcinogens. Breathing asbestos fibers can result in disease of the lungs including asbestosis, lung cancer, and mesothelioma.



09/23/2014 13:04



20% Amosite

FACILITY

- Commercial/Industrial Buildings
- Agricultural Operations
- Residential Structures*
 - Normally exempt
 - Urban Renewal/Commercial Development
- No Age Cut-Off

* 40 CFR Part 61 [FRL-5266-2] Asbestos NESHAP Clarification of Intent November 20, 1990





buckstaff
Industrial & Commercial Real Estate





DEMOLITION

- Wrecking or taking out load-supporting structural member.
- Moving of a Structure from its foundation.
- Intentional Burning of a Structure.





I'M OFF
TO PINECREST!



NOTIFICATION

- Form 4500-113
- Submit 10 Working Days Prior to:
 - Asbestos Abatement
 - Demo/Reno/Fire Burn Training/Moving Structure
 - All demolitions regardless of ACM present
- Reporting Amounts
 - 160 FT²
 - 260 Lineal feet (pipe wrap)

Notification for Demolition and/or Renovation and Application for Permit Exemption

Form 4500-113 (R 8/11)

Page 1 of 4

Notice: Completion of this information is mandatory under ch. NR 406.04, 410.05 and 447.07, Wis. Adm. Code. Penalties for failure to provide complete information requested include forfeitures of \$10 to \$25,000, fines of up to \$25,000 and imprisonment for up to six months [s. 285.87, Wis. Stats.]. This form may be used to meet the notification requirements for the Department of Health Services, ch. DHS 159, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

Instructions: Notification to the Department of Natural Resources (DNR) or the Department of Health Services (DHS) may be submitted using Form 4500-113, online system (<http://dnr.wi.gov/topic/demo/asbestos.html>) or this paper version. Return completed form to the appropriate office listed on page 4. The DNR does not accept FAXed copies of original or revised notifications.

1. Project Information

Notification Type <input type="radio"/> After-the-Fact <input type="radio"/> Cancellation <input type="radio"/> On Hold <input type="radio"/> Original <input type="radio"/> Revised	Contractor Project No.	Date Received
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Project Type

- Abatement/Demolition Enclosure, Encapsulation or Repair (DHS) Planned Renovation/Abatement (Annual-DNR)
 Abatement/Renovation Fire Training Burn Planned Renovation Project (DHS)
 Demolition Ordered Demolition (See page 2, 4b) Planned Renovation Subproject (DHS)
 Emergency Renovation/Abatement (See page 2, 4a)

2. Date of DNR Required Pre-Project Asbestos Inspection

Inspector Certification Information

Start (mm/dd/yyyy)	End (mm/dd/yyyy)	Name	WI Inspector No.
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Asbestos present? Yes No

3. Dates of Asbestos Abatement and Renovation/Demolition

a. Abatement Start (mm/dd/yyyy)	Abatement End (mm/dd/yyyy)	b. Reno/Demo Start (mm/dd/yyyy)	Reno/Demo End (mm/dd/yyyy)
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Work Days Mon. Tues. Wed. Thurs. Fri. Sat. Sun. Work Hours: Start _____ : _____ End _____ : _____

Describe the project location (building or room), project schedule or other site specific information.

PROBLEM AREAS

- Failure to conduct Pre-Inspection.
- Failure to conduct “Thorough” Pre-Inspection.
- Failure to File Notification.
- No Trained Onsite Representative.
- Failure to Stop Demolition When Asbestos Discovered.

PROPER PLANNING

- Checklist
 - Pre-Inspection
 - Accurately Completed Form 4500-113 Submitted
 - Onsite Trained Representative
- Onsite Job Book
 - Inspection
 - Form 4500-113

REFERENCES

- DNR Asbestos Coordinator
 - Mark Davis (608-219-4251)
 - mark.davis@wisconsin.gov
- DNR Asbestos Home Page
 - <http://dnr.wi.gov/topic/Demo/Asbestos.html>
- DHS Certified Asbestos Company Homepage
 - <https://www.dhs.wisconsin.gov/asbestos/contractors.htm>

How to handle...

UNIVERSAL WASTE

[As per NR 673 W.A.C. Refer to code for details.]



LAMPS

Labels must read:
 "Universal Waste - Lamps"
 or "Used Lamps"
 or "Waste Lamps"

NOTE: "BULBS" IS NOT A PROPER LABEL.

TRAIN
 Employees who handle universal waste require training.
 Keep training records.

KEEP CLOSED
 All containers of used lamps, antifreeze, pesticides and mercury-containing equipment must be kept closed.

LABEL
 All containers or individual items must be correctly labelled.

DATE
 Containers or individual items must be labelled with the date when the item was first placed in the container or the date when the item became waste.



BATTERIES

Labels must read:
 "Universal Waste - Batteries"
 or "Used Batteries"
 or "Waste Batteries"



RECALLED OR UNUSED PESTICIDES

Labels must read:
 "Universal Waste - Pesticides"
 or "Waste Pesticides"
 and have original product label

REMOVE
 Waste must be picked up or taken for recycling within one year of the date on the container.



ANTIFREEZE

Label must read:
 "Used Antifreeze"



MERCURY-CONTAINING EQUIP.

Labels must read:
 "Used Mercury-Containing Equipment"
 or "Waste Mercury-Containing Equipment"

EQUIPMENT: THERMOSTATS, SWITCHES, THERMOMETERS, BAROMETERS

GOT A LEAK?
 Any items that are leaking or damaged must be contained in closed, leakproof containers.

IMPORTANT REMINDER...
 If not managed as universal waste, these items **must** be managed as hazardous waste.

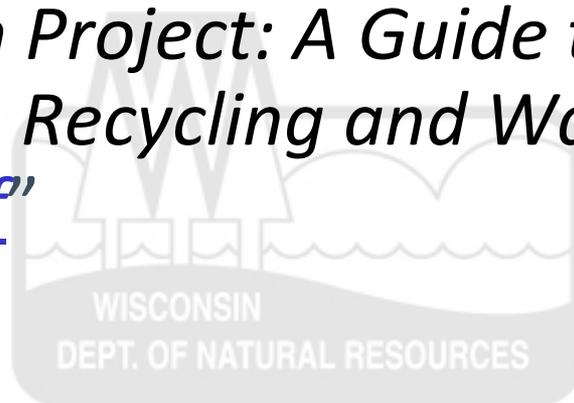
Demolition Debris Management

Edward Lynch, PE, Chief
Hazardous Waste Management Section
Waste & Materials Management
Program



Redevelopment Demolition Debris Management

- Planning - A key to a successful demolition project is planning so a developer knows what materials, wastes and contaminants are onsite and can prepare a good waste and materials management plan.
- Please review: *“Planning Your Demolition or Renovation Project: A Guide to Hazard Evaluation, Recycling and Waste Disposal - [WA651.pdf](#)”*



WA-651



WA-651 (Revised 2013)

PLANNING YOUR DEMOLITION OR RENOVATION PROJECT:

A Guide to Hazard Evaluation, Recycling and Waste Disposal
(Formerly called Pre-Demolition Environmental Checklist)

INFORMATION ON IDENTIFYING, HANDLING AND PROPERLY DISPOSING OF HAZARDOUS MATERIALS

PLANNING YOUR PROJECT

- 1 Conduct a walk-through of the project building(s) and grounds to **identify items that contain harmful**

Before beginning any demolition or renovation project, it is important to know about harmful materials that may be present on your project site.

This guide walks contractors and building owners through the steps to identify harmful materials commonly found at

What does WA-651 Say?

- The guidance discusses assessment and identification steps necessary for a site that is to be demolished or renovated.
- The guidance covers management of specific contaminants such as hazardous waste, mercury, PCBs, asbestos and lead.
- The guidance recommends:
 - Assessing a facility / site for harmful materials or situations.
 - Inspecting the inside and around the structure.
 - Identifying & quantifying waste and recyclable materials.
 - When needed, hiring specialized contractors – Firms that manage hazardous waste, used oil, universal wastes, PCB waste, asbestos or lead abatement contractors, etc.

WA – 651 (cont'd)

- When demolishing a structure, determine what hazardous materials or hazardous waste are within the building such as:
 - potentially toxic chemicals, such as used oil, PCBs, solvents, certain paints, cleaning products and pesticides;
 - mercury switches, thermostats, electronics, fluorescent lamps (light bulbs) and other equipment;
 - items with lead-based paint;
 - asbestos; and
 - chlorofluorocarbons (CFCs) or other harmful chemicals in old refrigerators, air conditioners and aerosol cans.
- Develop a plan to properly manage wastes and materials found on-site

Benefits to preparing a plan to properly managing waste materials:

- Hazardous materials and hazardous waste can be removed and properly managed.
- Reduces the likelihood of HW, PCBs, lead paint, asbestos, etc. being mixed with solid waste debris during demolition and potentially with air, soil and GW.
- Means “cleaner debris” allowing for the material (such as concrete) to be re-used or managed on site.
- Provide a source of Information on demo waste management that can be shared with neighbors.³¹

Do developers have to follow WA-651?

- **No** – This is not a rule. However, this approach or one similar can identify potential issues so they do not become a problem in the future. A developer may discover problems that can be easily or quickly addressed thereby avoiding delays in demolition or contaminated demolition debris. DNR encourages the use of WA-651.
- DNR recommend a developer begin facility assessment early in the re-development process especially for large demo / renovation projects or projects with a short timeframe.
- DNR believes this approach provides for good data collection that can be used to make informed decisions.

While no system is perfect, this approach lends itself to informing neighbors & good communication.

So what is required?

- Proper classification and management of materials as hazardous waste, solid waste for landfill disposal or disposal requiring a low hazard waste exemption, solid waste that can be used as clean fill, and materials required to be recycled.
- Completion of form 4500-113 “[Notification for Demolition and/or Renovation and Application for Permit Exemption](#)” for asbestos projects. This was previously covered under the asbestos presentation.

Want to avoid this (Unknown or hazardous waste).



...and this (Hg spill with PCB wastes)



Other items to be aware of:

- Secure your site.
 - Prevent vandalism and unauthorized site visitors.
 - Know who is on-site.
- Current HW rules don't specify closure requirements or owner financial responsibility (OFR) for generators, however generators are responsible for their waste.
- WMM practice is asbestos containing material (ACM) be disposed in an NR 500 licensed landfill. Cat 1 non-friable asbestos can be disposed of at a C&D landfill if they have written approval to accept the waste. WMM does not allow excavated ACM to be relocated or consolidated on a property.
- Hauling over 20 tons of solid waste / recyclable requires a [C&T license](#).

More other items (cont'd)

- There is no WMM requirement to remove lead-based paint prior to disposal of demolition waste, but the paint will limit recycling options and prevent management as clean fill (note: lead can make debris hazardous waste)
- Do NOT mix waste oil with other wastes such as solvents, waste liquids, paint, etc.
- Do NOT mix hazardous wastes without knowing 1) the waste, 2) whether a HW license is needed, and 3) what you are doing.

Concrete Recycling and Disposal - [WA605.pdf](#)

- This fact sheet explains when painted concrete can be used as clean fill vs. when painted concrete is not clean and where a specific exemption is required by the DNR.
- “Clean” concrete is exempt by rule from most regulations. With certain location limitations, **clean concrete** may be crushed and used as fill, aggregate in road beds or concrete to concrete recycling.

Concrete (cont'd)

- The generator or owner of painted concrete is responsible to determine if the paint on the concrete is lead-bearing paint.
- Concrete coated with lead-bearing paint that is used as a fill, etc. requires a written exemption from DNR under s. NR 500.08(5)(a) and s. 289.43(8). The application form is available [here](#).

Concrete (cont'd)

- Contractor should be sure concrete is not lead paint - must provide a convincing rationale
- Questions for Contractors
 - Are you reasonably sure each layer of paint on the concrete was applied after 1978?
 - If you're not reasonably sure that concrete was only painted after 1978, what type of testing is required to identify lead-bearing paint?
- If the contractor isn't sure, options available include:
 - Take the painted concrete to a MSW landfill (Lead bearing determination is not required),
 - If you want to use the concrete as clean fill or under a low hazard exemption:
 - Carefully remove the paint by scraping or sandblasting, collect the material that's been removed and properly dispose of it. (Note that removing the paint concentrated the lead as a ratio of the total material, potentially making the removed material / sandblast media hazardous)
 - Have all layers of the paint tested for lead

Concrete cont'd

- The definition of “lead bearing” changed slightly in 2016.
- The current definition of “lead bearing” can be found in s. 254.11(8), Stats.,
 - “Lead-bearing paint” means any paint or other surface coating material containing more than 0.06 percent lead by weight, calculated as lead metal, in the total nonvolatile content of liquid paint, more than 0.5 percent lead by weight in the dried film of applied paint, or more than 1 milligram of lead per square centimeter in the dried film of applied paint.

PCBs

- PCB bulk product waste is waste derived from products manufactured to contain PCBs in a non-liquid state at 50 ppm or greater. Typical examples are caulk, paint, and sealants. The cleanup and disposal requirements for PCB remediation waste and bulk product waste are different.
- A recent EPA reinterpretation allows for disposal of building material (i.e., substrate) with PCB bulk product waste (e.g., caulk, paint,) to be managed as a PCB bulk product. <https://www.epa.gov/pcbs/polychlorinated-biphenyl-pcb-guidance-reinterpretation> (instead of PCB remediation waste)

PCB bulk product waste

- PCB bulk product waste means waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was ≥ 50 ppm PCBs. PCB bulk product waste includes... :
- 1) Non-liquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs.
... ..
- 2) PCB-containing wastes from the shredding of automobiles, household appliances, or industrial appliances.
- 3) Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; adhesives; paper; Galbestos; sound deadening or other types of insulation; and felt or fabric products such as gaskets.
- 4) Fluorescent light ballasts containing PCBs in the potting material.

PCBs in non-TSCA landfills?

- EPA has determined PCB bulk product waste can be safely disposed of in certain non-TSCA approved landfills (those that have been permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill).
- DNR memo on Wisconsin landfills that can accept PCB waste > 50 ppm PCB or meeting EPA definition of bulk product waste -

<http://dnr.wi.gov/topic/Demo/documents/PCBDisposal.pdf>

Building demolition with neighbors



Communicate

The building on the previous slide was adjacent to a residential neighborhood in Madison. Concerns were raised regarding PCBs, lead paint, universal wastes, PCBs, etc. Communicating with the neighbors is a good idea.

Be aware of the neighborhood around your project. Neighbors will likely ask questions about demolition debris & waste management such as:

- What were historical uses of the building?
- What chemicals were managed and wastes generated?
- What waste was identified and removed prior to actual demolition?
- How will demolition be managed and dust be controlled?
- Etc

Resources

- Concrete Recycling and Disposal Fact Sheet-
<http://dnr.wi.gov/files/PDF/pubs/wa/WA605.pdf>
- Used Oil Management - <http://dnr.wi.gov/files/pdf/pubs/wa/wa233.pdf>
- EPA PCB Guidance -
<http://www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm>
- EPA PCBs in Building Materials -
http://www3.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/pcb_bd_g_mat_qa.pdf
- EPA PCB home page:
<http://www3.epa.gov/epawaste/hazard/tsd/pcbs/index.htm>
- EPA Interpretive Guidance page:
<http://www3.epa.gov/epawaste/hazard/tsd/pcbs/pubs/guidance.htm>
- CONTRACTORS Handling PCBs in Caulk During Renovation:
<https://www.epa.gov/sites/production/files/2016-01/documents/contrctrs.pdf>

Issues & Trends 2017

March 1, 2017
12:00 p.m.

Managing Contaminated Soil and Waste

Judy Fassbender & Paul Grittner

Audio and information from today's presentation and future Issues & Trends events can be found on the RR Program Training webpage at <http://dnr.wi.gov/topic/Brownfields/Training.html>

Questions or comments regarding the Issues & Trends series can be submitted to DNRRRComments@wisconsin.gov