

LDEQ Protocol to Comply with the LESHAP Regulations
03/16/2006

Background

On August 29, 2005, Hurricane Katrina struck southeast Louisiana as a strong Category 4 Hurricane, on a north heading at 15 mph, with maximum sustained winds of approximately 143 mph with gusts up to 165 mph¹. The storm brought with it a storm surge of 20-30 feet. Although Katrina weakened before landfall, the Category 4 hurricane's fierce winds and near-record storm surge were still able to cause widespread destruction and loss of life.² In Southeast Louisiana, the Parishes of Orleans, St. Bernard and Plaquemines were flooded by the excessive rain and a storm surge of 20-30 ft, overtopping levees, and ultimately causing the breach of certain levees that separate New Orleans from surrounding lakes.³ Along the shore of Lake Pontchartrain, severe storm surge damage was experienced along the lake shore from Mandeville to Slidell with storm surge water moving north into Slidell, up to 6 ft deep in some locations.⁴ At least 80% of New Orleans was under flood water on August 31st, largely as a result of levee failures from Lake Pontchartrain. The combination of strong winds, heavy rainfall and storm surge led to breaks in the earthen levees after the storm passed, leaving some parts of New Orleans under 20 feet of water.⁵

Subsequent flooding occurred in Orleans, Plaquemines, and St. Bernard parishes as a result of rain and storm surges as Hurricane Rita moved through the Gulf of Mexico to strike southwest Louisiana and southeast Texas on September 24, 2005.⁶

Based on the US Census data from 2000, there are a total of 440,269 homes in Orleans, Jefferson, St. Bernard and Plaquemines Parishes. Of these homes, an estimated 360,398 were constructed prior to 1980.⁷

The purpose of this protocol is to provide guidance for compliance with the standards for the demolition and renovation activity pursuant to the Louisiana Emission Standard for Hazardous Air Pollutants (LESHAP) for asbestos (LAC 33:III.Chapter 51.Subchapter M). Subchapter M has been deemed to be at least as stringent as the federal regulation and the Louisiana Department of Environmental Quality has received delegation of the NESHAP program from the US EPA. The LDEQ has used EPA guidance to provide this assistance in the determination of compliance with Chapter 51 (and through delegation, the NESHAP). The LDEQ has also received letters from EPA providing targeted flexibility regarding compliance with certain aspects of the NESHAP. Attached to this protocol is a matrix developed by EPA dated February 24, 2006, that summarizes the LESHAP and NESHAP requirements and the flexibility afforded by EPA.

¹ See <http://www.srh.noaa.gov/hgx/gifs/Katrina.jpg>.

² See http://www.srh.noaa.gov/lix/Katrina_overview.html

³ See http://www.srh.noaa.gov/lix/html/psh_katrina.htm

⁴ See http://www.srh.noaa.gov/lix/html/psh_katrina.htm

⁵ See <http://lwf.ncdc.noaa.gov/oa/climate/research/2005/katrina.html#impacts>

⁶ See http://www.srh.noaa.gov/lix/html/psh_rita.htm

⁷ See date from US Census website, "Profile of Selected Housing Characteristics: 2000" for Geographic Area of Orleans Parish, Jefferson Parish, St. Bernard Parish and Plaquemines Parish and accompanying summary sheet.

A. Structures demolished by the Hurricanes and Debris on the ground

If a house or structure has been effectively demolished by the hurricane, collection, treatment and disposal of the debris is not covered by LAC 33:III.5151.F. Additionally, this debris is not subject to the asbestos LESHAP, in accordance with EPA guidance.⁸

B. General guidelines for demolition and related activities

1. **Best Management Practices** – Conduct all asbestos demolition, grinding, transportation, and disposal activities using best management practices and engineering controls to control emissions. These include, but are not limited to wetting structures/materials before, during and after demolition or grinding, controlled collapse of walls, and taking all reasonable steps to avoid running over asbestos containing material with heavy equipment.
2. **Site Security** – For all demolition, grinding and disposal sites handling asbestos containing material establish and implement procedures to restrict public access.
3. **Air Monitoring** – Conduct air monitoring for the presence of asbestos fibers at enhanced construction and demolition debris landfills and grinding facilities.

C. Structures that remain standing after the Hurricanes

1. Demolition/Renovation conducted by homeowner or homeowner's contractor

Renovation or Demolition by the individual homeowner of residential buildings with four or fewer dwelling units is not covered by the asbestos LESHAP⁹. Additionally, the resultant debris is not subject to the asbestos LESHAP.

2. Demolition of residential structures conducted as a result of a government order

The EPA has indicated that multiple buildings being demolished as a result of the hurricane in accordance with a government order are considered an “installation” as defined in the asbestos LESHAP^{10, 11, 12}. Assuming the demolition of multiple residential

⁸ Letter dated November 9, 2005, EPA (Coleman) to US Army Corps of Engineers (Smithers), which states: “If a building or other structure was totally destroyed by a hurricane, then the National Emission Standard for Asbestos, 40 C.F.R. Part 61, Subpart M (Asbestos NESHAP) does not apply to any subsequent activities. For such destroyed structures, you may immediately begin removal and proper disposal of the resulting debris.”

⁹ NESHAP Clarification of Intent, Federal Register, July 28, 1995, Volume 60, Number 145, pages 38725-38726 which states: “EPA believes that individual small residential buildings that are demolished or renovated are not covered by the asbestos NESHAP. This is true whether the demolition or renovation is performed by agents of the owner of the property or whether the demolition or renovation is performed by agents of the municipality. EPA believes that the residential building exemption applies equally to an individual small residential building regardless of whether municipality is the “owner or operator” for the purposes of demolition or renovation.”

¹⁰ NESHAP Clarification of Intent, Federal Register, July 28, 1995, Volume 60, Number 145, pages 38725-38726 which states: “However, EPA believes that the residential building exemption does not apply where multiple (more than one) small residential buildings on the same site are demolished or renovated by the same owner or operator as

buildings with four dwelling units or less by a single entity are covered by the asbestos LESHAP, the department will consider compliance with this protocol as compliance with the asbestos LESHAP. It will be the responsibility of the local government or its contractors to determine the boundaries of the installation site. EPA's guidance with respect to "site" states that the site should be a "relatively compact area", but "the local government should use common sense when applying this guide."¹³ EPA also states that "EPA believes that if a demolition project involves the demolition of several contiguous city blocks, the entire area could be considered a site."¹⁴

Notification of demolition and wetting requirements apply in all instances of demolition using the AAC-2 form. The AAC-2 form may be located on the Department's Asbestos and Lead web page at <http://www.deq.louisiana.gov/portal/Default.aspx?tabid=2251>.

a. Facilities that are structurally unsound or uninhabitable

It is the responsibility of local governments and their contractors to determine which houses should be demolished because they are unsound or otherwise uninhabitable, and to prepare a list of the houses to be demolished. In No Action Assurance letters dated February 3, 2006, and February 24, 2006, EPA provides for flexibility for houses that are determined to be unsound or otherwise uninhabitable. Local governments and their contractors should be aware of this flexibility when making determinations. The following structures are the subject of EPA's No Action Assurance letters:

- Residences that are subject to a government issued demolition order based on the residence being structurally unsound but not necessarily in danger of imminent collapse,
- Residences that are subject to a government issued demolition order because the structure has been moved off of its foundation, and
- Residences that are subject to government issued demolition orders because they are uninhabitable for other environmental reasons (e.g., from excessive flood damage rendering the home uninhabitable).

These residences may be treated as though the demolition order is based on a determination that the house is structurally unsound and in danger of imminent collapse. As a result, these residences may be demolished in accordance with more streamlined demolition requirements

part of the same project or where a single residential building is demolished or renovated as part of a larger project that includes demolition or renovation of non-residential buildings." The notice further states: "EPA does not believe the residential building exemption was designed to exempt larger demolitions or renovations on a particular site, even where smaller residential buildings are involved."

¹¹ EPA has also issued subsequent Applicability Determinations which support this position. See Determination Detail, Control #A960033, dated 11/01/1995 and Control #A970008, dated 09/04/1997.

¹² Letter dated November 9, 2005, EPA (Coleman) to US Army Corps of Engineers (Smithers), which states: "Please note that demolition and disposal of "partially-damaged" or "standing-but-unsafe-to enter" structures are subject to Asbestos NESHAP requirements."

¹³ NESHAP Clarification of Intent, Federal Register, July 28, 1995, Volume 60, Number 145, pages 38725-38726.

¹⁴ Ibid.

Since no inspections are performed, the entire waste stream must be disposed of in a permitted Type I or II landfill or other LDEQ approved landfill that meets federal NESHAP disposal standards (such as an enhanced C & D landfill which are required to have additional controls to meet or exceed the federal standards under NESHAP (see 40 CFR § 61.154).).

b. Structurally Sound Homes

For the installations consisting of sound residential structures, the LDEQ requires a thorough inspection of such residential structures by an asbestos inspector accredited by the LDEQ. See attached “LDEQ Inspection Protocol for “thorough inspections,” which is considered compliant with LESHAP.

D. Thorough Asbestos Inspections

Thorough asbestos inspections must be conducted by asbestos inspectors accredited by LDEQ. The LDEQ Inspection Protocol for “thorough inspections”, which is considered compliant with LESHAP, must be followed when conducting a “thorough inspection” for the purposes of compliance with LESHAP.

E. Disposal of Waste Streams resulting from inspections and demolition activities

- Debris from residences that are being treated as structurally unsound and in danger of imminent collapse must be disposed of in LDEQ permitted Type I or II landfills authorized to accept asbestos or other LDEQ approved landfill that meets federal NESHAP disposal standards (such as an enhanced C & D landfill).
- Non-friable Category I and II ACM (Non-RACM) may be disposed of at designated areas within permitted Type III landfills that are LDEQ approved for Non-friable Category I and II disposition.
- RACM that has been removed from residences for which a thorough inspection has been conducted must be disposed of in permitted Type I or II landfills authorized to accept asbestos.
- C&D waste may be disposed of at LDEQ approved Construction and Debris waste sites.

F. Handling of Debris and Waste Materials from Demolition Activity

1. For installations where residences are being thoroughly inspected prior to demolition and RACM is identified, or where residences are being treated as structurally unsound and in danger of imminent collapse, appropriate procedures for asbestos emission control provided by LAC 33:III.5151.F.3 shall be employed. The wet method (fogging/misting) should be used prior to demolition, during demolition, and during loading of the material. Mist the houses, including

asbestos-containing roofing shingles and siding, remove, segregate, and transport in an appropriate manner to a permitted asbestos Type I or II landfill, enhanced C&D landfill or regular C&D landfill as appropriate. The removal and segregation of material suspected to contain asbestos, including asbestos containing roofing and siding is recommended.

2. Each structure should be knocked down in a controlled manner to minimize excess breakage of asbestos containing material. Debris should be wetted during demolition, interim staging, and loading activities.
3. It may not be necessary that Category I asbestos containing material (vinyl tile, mastic, etc.) be removed and segregated from the construction and debris waste if it does not have a high probability of becoming friable. If this material does not become friable by the forces expected to act on the material in the course of demolition, it may be disposed at a designated area in an approved C&D disposal site. Regarding Category I asbestos containing material, follow the LDEQ Inspection Protocol for “thorough inspections.”
4. Removal of RACM from Inside Sound Structures

For structurally sound structures, shut windows and doors. If they cannot be shut, install critical barriers (e.g. polyethylene sheeting). However, sufficient wetting is required to manage emissions during removal.

- a. Negative air is not required;
- b. The wet method must be employed to remove the regulated ACM;
- c. Regulated ACM waste must be bagged and labeled;
- d. Bulk material left behind must be visually inspected and cleaned appropriately;
- e. No air monitoring clearance is necessary;
- f. Walls, ceilings, floors, etc. must be encapsulated to ensure ACM fibers are not being released during demolition and loading;
- g. Follow demolition procedures as noted in this Guidance, and use OSHA worker protection guidelines.

Summary

The Department has determined that compliance with the above procedures is compliant with LESHAP requirements. Entities conducting activities in accordance with this document will be considered in compliance with LESHAP requirements.