



CASE STUDY: DEMOLITION OF FIRE DAMAGED PROPERTY

Scope of Services: AET was contracted by a local government borough manager to provide environmental consulting and engineering services to demolish a three story (previously condemned) hotel partially damaged by fire.

AET's services included:

1. **Hazardous Material Survey:** EPA NESHAP regulations require an asbestos survey to be performed in a portion of the building remaining standing (structurally sound for entry). Miscellaneous hazardous materials such as stored chemicals and PCB and Mercury containing items must also be identified and removed.
2. **Technical Specifications for Environmental Remediation/Demolition:** AET's design team prepares written documentation to obtain competitive bids from qualified contractors to perform required work.
3. **Bid Coordination:** AET's licensed building inspector conducts a site walkthrough with prospective contractors to detail the required work activities within the Technical Specifications and to prepare a written agenda to address any questions from the bidders. The building inspector will also attend the bid opening and prepare a bid tabulation and will make a written recommendation as to the successful bidder.
4. **Periodic Jobsite Inspections:** AET's project monitor reviews and evaluates the contractors performance in compliance with the Technical Specifications and federal, state and local health and safety regulations. Proper remedies will be enacted or a stop work order will be issued.
5. **Final visual inspection:** AET's project monitor will ensure all asbestos containing materials have been removed, and the building demolished to a relatively flat graded/seeded property for future redevelopment.
6. **Project Closeout:** AET's CIH will prepare a written report detailing work activities at the site in compliance with the contract and approve all contractor invoicing for final payment.

AET Experience: EPA NESHAP applies to all non-residential buildings (commercial and public) and residential buildings with 5 or more dwelling units at a single demolition site under the control of the same owner. Buildings which have been totally destroyed by fire or natural disaster are exempt from NESHAP. Buildings constructed before 1975 can be reasonably assumed to contain asbestos. This hotel was found to contain pipe insulation and fireplace insulation (i.e., RACM) and floor tile/linoleum (Category I non-friable ACM). EPA requires RACM to be removed prior to demolition; Category I non-friable must be removed if the materials become friable during demolition.

In fire damaged or structurally unsound buildings, removal of all ACM is almost impossible. ACM will remain which will be impacted/disturbed (made friable) by the heavy equipment used during demolition.



Specific Removal, Handling, Transportation, Disposal requirements

1. **Notification** in the form of an Asbestos Abatement and Demolition/Renovation Form must be submitted to the State DEP and the EPA.
2. **Asbestos Warning Signs** must be posted at the entry to the building.
3. **RACM** must be removed by a licensed asbestos contractor, kept wet during removal and double bagged for landfill disposal. Specific considerations must be in place for no electricity, lighting and worker safety.
4. **Category I Non-friable** must also be removed (if rendered friable). Wet materials should be bagged, drummed or placed in a lined dumpster. Category I NF can remain in buildings during demolition (check your specific states regulations) and the demolition waste stream (bricks, lumber, drywall, etc.) will be all treated as Category I NF by the landfill.
5. **Demolition** of a structure is performed wall-by-wall folding it onto itself to minimize excess breakage of ACM. The structure and demolition waste is kept wet to minimize visual emissions.
6. **Personal Protective Equipment;** the demolition workers using heavy equipment and handling debris are required to wear disposable protective suits and respiratory protection. Exposure assessment monitoring is performed to document worker exposures in compliance with OSHA's Asbestos Construction Standard.
7. **Waste Segregation;** the demolition crew are notified of the presence, location and appearance of ACM in the building. Where previously concealed or ACM in unsound locations is exposed, demolition work will be halted and licensed asbestos worker(s) will remove/containerize said materials.
8. **Transportation** waste at the site will be separated into individual covered dumpsters based on ACM content and friability.
9. **Landfill** is notified of the site waste stream profile consisting of RACM, Category I NF ACM and construction and demolition solid waste.

CAUTION: This case study and the services/requirements detailed herein are based on Federal (EPA and OSHA) regulations. Be sure to check with the state regulations where the project is located. State regulations can be much more stringent.

When you need professional mold advice email Alan Sutherland, CIH, CHMM at a.sutherland@aetinc.biz or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website www.aetinc.biz.

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