

Asbestos & Other Hazardous Materials Surveys & Abatement Monitoring

Northeast State Department of Youth Services Facility

HRP Associates, Inc. (HRP) was retained by this northeastern state's division of capital asset management to perform asbestos and other hazardous materials surveys of its department of youth services facility. The purpose of the surveys was to determine the locations and quantities of asbestos-containing materials (ACM) in preparation for the demolition of certain sections of the facility prior to construction of a new dormitory building.

During the survey, the inspector classified each suspect ACM as one of three types: (1) surfacing material applied by spray or trowel, (2) thermal system insulation (TSI) on pipes, tanks, boilers, and related features, or (3) miscellaneous material not classified as surfacing material or thermal system insulation. The inspector touched all assumed or suspected materials on all accessible surfaces including walls, floors, ceilings, structural members, and mechanical equipment to determine their friability or the extent to which the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. In addition, the general condition of each material was noted and categorized as good, damaged, or significantly damaged, in accordance with AHERA regulations.

Building materials identified during the survey were generally inventoried by room/area on data inventory sheets, and the sampling locations were photographed. Limited destructive sampling techniques were employed, and did not create a safety hazard or affect the overall integrity of the structure. To avoid disturbing the material any more than necessary, and to minimize any unnecessary release of asbestos fibers during collection, the HRP inspectors performed bulk sampling of suspect ACM in accordance with generally accepted procedures outlined in the EPA document "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA-560/5-85-024, June 1985). Each sample was collected using appropriate methods and placed in clean, sealable plastic bags and labeled with a unique sample identification number. The sampling locations were plotted on building floor plan drawings.

Bulk samples of suspected ACM were submitted to EMSL Analytical, Inc. (EMSL), a Massachusetts-certified laboratory, for analysis of asbestos content using Polarizing Light Microscopy (PLM). Point counting analysis was conducted on selected PLM samples in which asbestos was initially detected at levels from 1% to 10%. Transmission Electron Microscopy (TEM) analysis was conducted on non-friable organically bound (NOB) PLM samples (i.e. mastics, tars, caulks) in which asbestos was initially detected at trace levels (<1%). Homogenous building materials identified during the survey were documented in tables that included material descriptions, locations, conditions, sample number, and asbestos content and estimated quantities. The tables were included in the final comprehensive report.

HRP asbestos inspectors also conducted a hazardous material survey in conjunction with the asbestos survey. The inspection consisted of identifying and inventorying fluorescent lamps and other mercury-containing equipment, potential polychlorinated biphenyl (PCB) containing equipment and transformers, including ballasts, air conditioning and refrigeration equipment, equipment containing petroleum products, and other hazardous or regulated materials including paints, solvents, and petroleum products. The types of and quantities of hazardous materials identified in the building were tabulated in the final report.

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VALUE

\$250,000

- *The purpose of the surveys was to determine the locations and quantities of asbestos-containing materials in preparation for the demolition of certain sections of the facility prior to construction of a new dormitory building*
- *Limited destructive sampling techniques were employed, and did not create a safety hazard or affect the overall integrity of the structure*
- *HRP also performed asbestos and other hazardous materials abatement monitoring including final visual clearance inspections and reporting on the completed abatement activities*

continued

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Department of Youth Services Facility, Springfield, MA

continued

The project also included a lead paint survey. X-ray fluorescence (XRF) testing was conducted on representative painted surfaces for the interior and exterior of the subject building to determine the presence of lead. The XRF testing was conducted with a RMD LPA-1 lead paint analyzer instrument in accordance with Massachusetts DOS lead regulation, 105 CMR 460.000. This methodology requires testing of representative components in each room/space (i.e. walls, ceilings, windows, doors, baseboards, etc.). The results of the survey were included in an XRF Survey Report that identified the locations and types of materials that contained regulated levels of lead.

HRP also performed asbestos and other hazardous materials abatement monitoring including final visual clearance inspections and reporting on the completed abatement activities at the facility. At the beginning of the project, the HRP Project Monitor checked asbestos contractor records, licenses, credentials, and other paperwork to verify compliance with applicable state and federal regulations.

During all abatement monitoring events, the HRP Project Monitor conducted the necessary background air sampling, observed contractor's work practices, and conducted periodic visual inspections to assess the integrity of the work area containment and the thoroughness of the contractor's work area cleaning process. HRP's Project Monitor was also responsible for determining that each abatement work area had passed a visual "clearance" inspection. Once a work area or section of the building was visually cleared by the Project Monitor, final Phase Contrast Microscopy (PCM) air clearance sampling was then performed by the Project Monitor to satisfy re-occupancy criteria prior to demolition operations. Daily project monitoring reports were prepared by the Project Monitor summarizing completed activities and documenting the abatement progress.

A final closeout report was prepared documenting the abatement activity. The report included all contractor supplied records, all notifications, the asbestos monitoring records, and all clearance letters and analytical results.