



Quantum Environmental & Engineering Services, LLC

EXAMPLE PROJECT

Former Tennessee State Prison Hazardous Materials Survey: Nashville, Tennessee

QE² conducted a pre-demolition survey to assess the presence of asbestos-containing materials (ACM), lead-based paint (LBP), and other hazardous materials in three buildings at the former Tennessee State Prison (TSP) located in Nashville, Tennessee. The survey was conducted in the abandoned buildings originally serving as the prison school (Building K), laundry (Building L), and prisoner receiving area (Building D2). QE² performed the work on behalf of the State of Tennessee Department of Finance and Administration, Division of Real Property Administration (TNF&A) at a total contract cost of \$35,000.

The principal objective of the work was to provide information on the nature and location of all hazardous materials in Buildings K, L, and D2, at the former TSP. The information will be used by abatement and demolition contractors to ensure the proper handling and disposal of all hazardous or special wastes before and during the demolition process, in accordance with all local, State, and Federal regulations regarding ACM, LBP, and other hazardous materials [i.e. mercury, polychlorinated biphenyl compounds (PCBs), ozone-depleting substances (ODSs)]. The scope of work included the on-site assessment of hazardous materials, sampling and laboratory analysis of ACM and LBP, and a Hazardous Materials Survey Report documenting the assessment findings and sampling results, with conclusions and general recommendations for handling and disposal of hazardous materials. The results of the hazardous materials survey will also support the development of contract specifications and drawings for the pre-demolition removal, handling, and disposal of ACM and other hazardous materials, and the overall demolition of Buildings K, L, and D2.

The TSP was originally constructed in 1893 and was used until 1991 when it was replaced by two new penitentiaries. Since that time the facility has been closed except for selected use of building space for storage and for intermittent cinematic production. Previous environmental work on the property has been associated primarily with maintenance and repair of existing structures, and the identification of potential health hazards to visitors or site workers (e.g. exposure to friable asbestos, mold, etc.).

The hazardous materials survey was conducted on September 21-23, 2004, and included a comprehensive appraisal of ACM, LBP, and other potential hazardous materials. Assessment fieldwork began with checking the available floor plans for Buildings K and



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L against the actual building layout and making corrections, as necessary. No floor plans were available for Building D2, so measuring wheels and tape measures were used to make a scaled floor plan for D2, which could be used to prepare drawings for demolition plans and specifications. The drawings were also needed to illustrate all sample locations for ACM and LBP, and to facilitate identifying quantities and locations of ACM and other materials before demolition. Letters were assigned to each room and hallway area. The room designation was used to log details regarding potential ACM and LBP and all sample locations.

A limited survey of LBP was conducted on March 10, 2005, to take advantage of a portable x-ray fluorescence (XRF) instrument. Results were integrated with those of the LBP chip sampling.

