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Florida Housing Project Confronts Incompetent Lead Testing

By David Rasmussen

After reports that the portable X-Ray Fluorescence (XRF) machines used to conduct initial lead tests at Higgins Terrace apartments in Sanford, Fla., did not function properly and that the operators using the machines were incompetent, the Department of Housing and Urban Development (HUD) has placed the original testing company under investigation.

After initial lead testing was performed by a local firm more than a year ago, GSC Environmental Laboratories, based in Augusta, Ga., was brought in to provide lead abatement consulting/lead testing and prepare a risk assessment strategy for the exterior walls of the Higgins Terrace units. GSC specializes in risk-based cost design systems.

David Mederer, district manager for GSC, said that "our job at Higgins Terrace was to go back and review the original specifications. On this particular project, there were 85 units scheduled for a complete exterior abatement of lead-based paint using a caustic remover. But, Mederer said, "as we looked through the test results we determined that, based on the percentage of positive results for the exterior walls, 22 percent of the units came back positive for lead [at one-half percent by weight].

"There was also about a 5 percent inconclusive range. Typically, with the inconclusives, confirmatory lab testing is done. When we reviewed the confirmatory data, we deter-

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mined that there wasn't enough statistical information to verify that all the exterior walls had to be potentially abated. The data actually showed that the level of lead was below HUD's standard [one-half percent by weight]. In fact, most were under the 5,000 ppm [parts per million] standard — like 80 or 90 ppm."

Mederer then informed the housing authority that additional testing should be done because "there were clearly problems with the data that was collected. We [GSC] then contacted HUD's regional office and worked out a program to go back and do confirmatory sampling of the exterior walls and we had reason to believe that abatement of all the walls was not necessary. HUD informed our company that, in fact, they were now concerned, because HUD has had experiences where walls were abated that did not actually require abatement. We then ordered additional XRF testing of every unit and completed a plan to address where we actually found elevated levels of lead throughout the complex."

GSC advised the authority that complete exterior encapsulation of only 10 buildings was required, and that the rest of the buildings contained very low levels of lead and did not require any additional treatment.

Work in Progress

The Higgins Terrace Apartment complex recently encapsulated the exterior of seven apartment buildings and is in the process of finishing another three with an elastomeric encapsulant to prevent exposure to previous layers of lead paint.

Timothy Hudson, acting executive director of the housing authority, said that the laboratory risk assessment that was completed earlier this year indicated that several of the buildings in the Higgins Terrace complex had elevated levels of lead.

"None of the actual readings from the risk assessment was actually dangerous," he said, "but any [buildings] that came back which indicated elevated or borderline lead levels were encapsulated."

Hudson said the outer surface of the buildings was masonry, and that after careful study it was determined that the most cost effective method of addressing the problem was encapsulation.

"We wanted to avoid the hazardous waste cleanup, which might have stirred up more dust, and we wanted to provide effective results that we could afford," he said, "so that is why we decided on encapsulation."

The original cost of full abatement was $450,000; the cost of encapsulation, which included all testing and preliminary research, was $125,000.

Extensive Review

GSC reviewed a variety of encapsulants based on the data from the testing and specifications of the encapsulants provided from the encapsulant manufacturers. GSC put the encapsulation work out for public bid and required the contractors to "meet the HUD lead-based paint interim guidelines that the encapsulant be UL listed and classified and also independently certified as meeting HUD and OSHA standards," Mederer said.

He also said the encapsulant had to be non-toxic, anti-flammable, provide UV [ultraviolet] protection, be fungus and mildew resistant, be impact resistant to at least 100 inch-pounds, and that it pass a leach test. It should also have a dry time of no longer than 4 hours, because of the humid weather present in Florida, and, most importantly, provide good adhesion characteristics.

"We married the specifications of the product to the requirements and made the contractor who applied the encapsulant responsible and also required that the product be compatible to the existing surfaces and that it met minimum specifications and come with a 20-year warranty," he said.

Mederer said the contractor then came out to the housing project and conducted additional tests to ensure the encapsulant selected was "compatible and effective."

He added that these rigid requirements narrowed the field, and six respondents bid for the encapsulation work. The product chosen was Fiberlock's LBC. Mederer then said that GSC talked to Fiberlock and confirmed with Fiberlock's laboratory staff that LBC was suitable for the application in Florida.

Mederer also said that other encapsulant manufacturers have contacted him since news of the project was released and GSC is now considering using other encapsulant products to conduct "ongoing studies of how well the products hold up over time."

Residents of the encapsulated buildings were relocated by the housing authority while the encapsulant was applied. Mederer said that the entire process of preparation, cleaning, and application takes approximately two days, after which time the residents were allowed to return to the apartments.

Mederer said that "GSC was proud to have the opportunity to work on this project," and that "most importantly, we were able to save the housing authority several hundred thousand dollars and complete the work without full abatement which often creates more problems than originally existed."