

in-house custodial staff is likely to implement it.* If asbestos removal, enclosure, or encapsulation is chosen as a control measure, it is extremely important to employ persons trained or experienced in handling asbestos. Any effort to reduce asbestos exposure levels by treating asbestos-containing material entails a hazard to abatement workers and building occupants alike. Removal, enclosure, or encapsulation of this material may involve large-scale release of fibers. Properly conducted by trained workers, these control activities can be highly successful. But if these activities are undertaken by workers having no asbestos experience, and without strict adherence to recommended operating procedures, the airborne asbestos concentration levels experienced after abatement may rise above preabatement levels.

When an abatement contractor is to be employed, the program manager (or the technical expert) should consider taking the following steps to increase the likelihood of successful asbestos abatement:

- Establish contract specifications tailored to individual projects;
- Conduct a thorough evaluation of contractors prior to contract award;
- Require persistent on-site surveillance of contractor performance during abatement activities; and
- Establish criteria prior to the start of abatement work for determining successful project completion.

EPA's guidance for treating asbestos in schools, published in 1979 (USEPA 1979, Sawyer and Spooner 1979), provides a starting point for preparing project specifications. EPA and OSHA regulations and recommended work practices for asbestos removal, enclosure, and encapsulation are described briefly in those publications.

EPA's experience since 1979, primarily with school districts, has raised concerns about adequate contractor performance. In several cases, an apparently competent contractor prepared a responsive and price-attractive bid only to prove incapable of following or unwilling to follow contract specifications after being awarded the contract. The following suggestions are offered to help building owners avoid these situations and to increase the likelihood of a successful project.

- Contractors should be required to show evidence of experience and/or training in asbestos abatement. Check references and ask for names of other building owners for whom contract bidders have worked.
- Rather than simply noting that the contractor is responsible for complying with all EPA, OSHA, and state/local regulations, require prospective bidders to describe their worker protection and site containment plans in detail. Ask for their standard operating procedures and employee protection plans, with specific reference to their OSHA medical monitoring and respirator training program. The information obtained is extremely useful in distinguishing truly competent firms. An oral discussion is recommended to further demonstrate the contractor's capabilities and understanding of the problem.
- Insist on proof of adequate liability and property (builder's risk) insurance from all prospective bidders. A performance bond should also be required of the contractor before work begins.
- Ask for detailed written descriptions of how bidders will satisfy the project specifications. Use these to judge the competence of bidders and, subsequently,

* Some school systems have trained a centralized cleanup team for periodic deployment in individual school buildings.