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TESTIMONY OF MATTHEW HALE  
DIRECTOR, OFFICE OF SOLID WASTE  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE  
COMMITTEE ON ENVIRONMENTAL CONSERVATION  
NEW YORK STATE ASSEMBLY  
NOVEMBER 15, 2004

Dear Mr. Chairman and members of the committee, I am Matthew Hale, Director of EPA's Office of Solid Waste. I am accompanied today by Mr. Henry Schuver, who works on vapor intrusion issues in the Office of Solid Waste. I am appearing today to discuss EPA's efforts to address vapor intrusion issues, particularly at sites being cleaned up under the Resource Conservation and Recovery Act (RCRA) and other programs.

Let me begin by emphasizing that EPA considers vapor intrusion from contaminated soils or groundwater into homes and other buildings to be a significant environmental concern and one where the science is still evolving. We have long recognized that volatile organics contaminating soils or groundwater can migrate into nearby buildings, resulting in indoor air levels that may present a human health threat. Within recent years, however, we have come to recognize that the occurrence of vapor intrusion into buildings is more widespread than we previously thought. For example, in some cases, volatile organics have migrated further from their source than was expected; in others, vapor intrusion was not originally identified as an exposure pathway of concern, but later proved to be one.

Because we now recognize the potential for vapor intrusion to be a significant exposure pathway at certain remediation sites, EPA and state environmental agencies have paid increased attention to indoor air concerns at cleanup sites where soils or groundwater is contaminated with volatile organics. For example, in the RCRA corrective action cleanup program, we routinely screen sites for potential vapor intrusion

where there's a possible concern. Where concerns are identified, EPA (or more frequently under RCRA, the authorized state agency) requires corrective action -- for example, the installation of vapor removal systems beneath a building.

Perhaps the most difficult challenge relating to vapor intrusion is determining with reasonable certainty whether there is likely to be a problem or not when buildings are in the vicinity of soil or groundwater contaminated with volatile organics. A complicating factor in evaluating vapor intrusion and the risks it may pose is the potential presence of some of the same chemicals at or above background concentrations from the ambient (outdoor) air and/or emission sources in the building e.g., household solvents gasoline, cleaners. Because of the large number of sites where vapor intrusion could potentially be a concern, because the science is still evolving in this area, and because of the technical difficulties in determining whether there actually is a problem at a given location, the EPA Office of Solid Waste and Emergency Response developed draft screening guidance, which it published for comment on November 29, 2002 (Federal Register: November 29, 2002 (67 FR 71169-71172)).

In this draft guidance, EPA recommends a tiered approach to screening sites for vapor intrusion potential -- that is, to determine whether vapor from volatile organics is likely to be entering buildings, and if so whether it would likely be a health concern. The guidance recommends that regulators and responsible parties use a conservative modeling approach in determining whether there is a likely concern at a given location, and that they conduct sub-slab and indoor air sampling when the possibility of vapor intrusion at levels of concern can't be ruled out. The guidance also notes that when indoor air sampling is conducted, that it be conducted more than once and the sampling

program be designed to identify ambient (outdoor) and indoor air emission sources of contaminants.

EPA received numerous comments on this guidance, which it is now reviewing. We have held technical working sessions with the states, academia, and external stakeholders to discuss the guidance in San Diego, California, and Amherst, Massachusetts, and will be returning to San Diego next March for our third technical working session. After that meeting, we will determine how best and over what time period to finalize the guidance.

When it published this draft guidance, EPA recommended its use at RCRA, Superfund, and Brownfields cleanup sites. However, we emphasize that it is only guidance and that it is in draft, and that other approaches may also be appropriate. Furthermore, the state of New York is authorized to run the RCRA cleanup program in lieu of EPA, and therefore the New York State Department of Environmental Conservation is generally responsible for overseeing and regulating RCRA cleanups within the state. The state – like any authorized state under RCRA – may choose to follow this guidance, or may adopt other approaches that achieve protective results.

Thank you for providing me the opportunity to provide this testimony. We will be happy to respond to any questions you have.