U.S. Environmental Protection Agency
Office of Inspector General

11-P-0048
January 5, 2011

At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The U.S. General Services Administration (GSA) Office of Inspector General asked for our assistance in responding to a congressional inquiry. We evaluated EPA Region 7's actions to (1) assess and address the potential vapor intrusion risk at Bannister Federal Complex buildings 50 and 52, and (2) characterize the public health risk at Bannister Federal Complex.

Background

Bannister Federal Complex is a 310-acre federal property located in Kansas City, Missouri. Several contaminated ground water plumes exist beneath the complex. Both GSA and the U.S. Department of Energy National Nuclear Security Administration control the site. The GSA Office of Inspector General is responding to allegations that employees may have become sick due to chemical exposures potentially occurring at the site.

For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.

To view the full report, click on the following link:
www.epa.gov/oig/reports/2011/20110105-11-P-0048.pdf

Vapor Intrusion Health Risks at Bannister Federal Complex Not a Concern for Buildings 50 and 52, Unknown for Other Buildings

What We Found

Testing at Bannister Federal Complex in February 2010 revealed elevated levels of volatile organic compounds (VOCs) in the soil vapor beneath the foundations of buildings 50 and 52. EPA Region 7 assisted GSA in evaluating the vapor intrusion risk for these buildings. Only trichloroethylene vapors were observed to be intruding into building 50 from the contaminated ground water. Building 50 contains office space and building 52 has a child care facility.

Region 7 assessed the health risk from inhaling indoor air in the two buildings in accordance with EPA risk assessment procedures. The indoor air chemical concentrations were below acceptable risk levels for both short- and long-term exposure for the 14 VOCs measured and, therefore, are not a health concern. As a precaution, Region 7 recommended and reviewed the installation of soil vapor removal systems in both buildings in February 2010. Subsequent testing in March 2010 showed that contaminant levels in the soil vapors beneath both buildings were reduced. Trichloroethylene levels in the indoor air of building 50 were also reduced.

Although Region 7 conducted its assessment in accordance with EPA-approved procedures, additional actions would provide a more comprehensive picture of the chemical hazards in the indoor air and ground. These actions include testing for additional VOCs and assessing total VOC exposure levels in the buildings.

Not all of the other Bannister Federal Complex buildings with underlying or nearby contaminant plumes have been assessed for soil vapor intrusion. As a result, the public health risks in those buildings have not been determined.

What We Recommend

We recommend that Region 7 test for additional VOCs for all future air, soil vapor, soil, and ground water samples in and around buildings 50 and 52. After discussions with Region 7, we revised our second recommendation to continue oversight work by assessing the responsible parties' efforts to evaluate inhalation health risks at all other Bannister buildings over or near contaminated ground water plumes. Region 7 staff concurred with our recommendations and committed to completing actions that would meet the intent of both recommendations. In its final response to this report, Region 7 should provide a corrective actions plan for both recommendations, including estimated or actual milestone completion dates.