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## URANIUM CONTAMINATION

### Overall Scope, Time Frame, and Cost Information Is Needed for Contamination Cleanup on the Navajo Reservation

#### Why GAO Did This Study

Four million tons of uranium ore were extracted from mines on the Navajo reservation primarily for developing the U.S. nuclear weapons stockpile. For over 30 years, the Navajo people have lived with the environmental and health effects of uranium contamination from this mining. In 2008, five federal agencies adopted a 5-year plan that identified targets for addressing contaminated abandoned mines, structures, water sources, former processing sites, and other sites. Federal agencies also provide funding to Navajo Nation agencies to assist with the cleanup work.

GAO was asked to examine the agencies' cleanup efforts. This report examines (1) the extent to which the agencies achieved the targets set in the 5-year plan and reasons why or why not; (2) what is known about the future scope of work, time frames, and costs; and (3) any key challenges faced by the agencies in completing this work and any opportunities to overcome them. GAO examined agency documents; interviewed agency officials, tribal leaders, and stakeholders; and visited sites on the Navajo and Hopi reservations.

#### What GAO Recommends

Congress should consider requiring federal agencies to develop an overall estimate of the remaining scope of work, time frames, and costs to fully address uranium contamination. GAO also recommends that BIA address its project management challenges, and agencies incorporate key practices into their coordinated outreach strategy. In commenting on a draft of this report, the agencies generally agreed with GAO's recommendations.

View [GAO-14-323](#). For more information, contact J. Alfredo Gómez at (202) 512-3841 or [gomezj@gao.gov](mailto:gomezj@gao.gov).

#### What GAO Found

Federal agencies implementing the 2008 5-year plan, including the Environmental Protection Agency (EPA), the Department of Energy, the Bureau of Indian Affairs (BIA), and the Indian Health Service, met the targets in six of the plan's eight objectives, working in cooperation with tribal agencies, including the Navajo Nation Environmental Protection Agency. Reasons agencies met the targets were primarily because additional federal and other resources were dedicated to these efforts compared with prior years. For example, from 2008 through 2012, EPA spent \$22 million to test and replace contaminated houses, compared with \$1.5 million spent in the preceding 5 years. In contrast, targets for two objectives—cleanup of the Northeast Church Rock mine and Tuba City Dump—were not met primarily because EPA's and BIA's estimated schedules were optimistic, and EPA added additional work that extended the time frames. BIA experienced project and contract management challenges in conducting work at Tuba City Dump and did not always follow best practices when estimating the schedule for assessment work at the site. These challenges, if not addressed, could affect BIA's ability to meet future targets for cleanup at the site and successfully plan for project resources.

Federal agencies have not identified the full scope of remaining work, time frames, or costs to fully address uranium contamination on or near the Navajo reservation, although they recognize that significant work remains. In 2008, congressional decision makers requested the agencies provide an overall estimate of the full scope of work needed to address the contamination. The 5-year plan the agencies developed in response to this request does not provide a comprehensive estimate; instead, it focuses on the highest priorities over 5 years. EPA officials said that they typically do not provide cost or schedule estimates until a specific cleanup action is selected and that a number of current uncertainties make developing such an estimate difficult. Even with significant uncertainties, GAO has reported that agencies can create high-level estimates of costs and time frames that can be useful for decision makers and stakeholders. The agencies have collected important information that could provide a starting point for such an estimate. However, absent a statutory requirement to develop such a comprehensive estimate, it appears unlikely that the agencies will undertake such an effort. As a result, decision makers and stakeholders will not have the information they need to assess the overall pace of the cleanup efforts or make resource allocation decisions.

Federal agencies face a variety of challenges in continuing to address uranium contamination on or near the Navajo reservation. For example, according to EPA officials, funding for EPA's efforts at the Navajo abandoned uranium mines is expected to decrease from funding levels available during the 2008 5-year plan because of overall declining federal resources for cleanup. Further, agencies face challenges in effectively engaging tribal communities, in part, because agencies have not always collaborated on their outreach efforts. These agencies identified opportunities to enhance their collaboration by creating a coordinated outreach strategy for the next 5-year plan. Creating such a strategy is consistent with one of the several key practices that GAO has reported can enhance and sustain interagency collaboration and help ensure that agencies make efficient use of limited resources.