

GAO Highlights

Highlights of [GAO-18-241](#), a report to the Committee on Armed Services, U.S. Senate

Why GAO Did This Study

DOE and its contractor are building the WTP—which consists of multiple facilities—to treat a large portion of nuclear waste at Hanford. The project has faced persistent challenges, including quality assurance problems that have delayed it by decades and more than tripled its costs, to nearly \$17 billion. DOE's quality assurance framework aims to ensure that all problems are identified and do not recur.

Senate Report 114-49 accompanying the National Defense Authorization Act for Fiscal Year 2016 included a provision for GAO to carry out an ongoing evaluation of the WTP. This first report examines (1) the actions DOE has taken to identify and address WTP quality assurance problems, (2) the extent to which DOE has ensured that quality assurance problems have been identified and do not recur, and (3) the extent to which DOE's organizational structure at ORP provides the Quality Assurance Division with independence to effectively oversee the contractor's quality assurance program. GAO reviewed DOE documents and obtained the insights of ORP's internal experts on WTP quality assurance efforts and outcomes.

What GAO Recommends

GAO recommends that DOE direct the WTP contractor to determine the extent of problems in WTP structures, systems, and components and order work stops when problems recur, and DOE should direct ORP to revise its organizational structure to ensure the independence of the Quality Assurance Division. DOE generally agreed with GAO's recommendations.

View [GAO-18-241](#). For more information, contact David C. Trimble at (202) 512-3841 or trimbled@gao.gov.

April 2018

HANFORD WASTE TREATMENT PLANT

DOE Needs to Take Further Actions to Address Weaknesses in Its Quality Assurance Program

What GAO Found

The Department of Energy (DOE) has taken several actions to identify and address quality assurance problems at the Waste Treatment and Immobilization Plant (WTP) at its Hanford site in Washington. Among the actions taken is the implementation of the Managed Improvement Plan by DOE's Office of River Protection (ORP) and the WTP contractor. The plan is intended to ensure that the WTP can operate in compliance with DOE-approved safety and quality requirements. The contractor has stated that the plan is fully implemented, but GAO found that a number of key activities may be incomplete and ORP officials will not be able to verify the extent of implementation until December 2018.

According to DOE documents that GAO reviewed and ORP quality assurance experts GAO spoke with, ORP has not ensured that all WTP quality assurance problems have been identified and some previously identified problems are recurring. For example, a 2016 DOE report found quality assurance problems, such as engineering errors and construction deficiencies, that neither ORP nor the contractor had identified when the work was conducted. ORP quality assurance experts GAO spoke with reiterated the issues identified in reports. In addition, DOE audits have found that previously identified quality assurance problems have recurred in key areas, such as the procurement of items that do not meet requirements or perform as specified. These problems were also raised by several of the ORP quality assurance experts GAO interviewed. According to these experts, such recurring problems may lead to significant rework at WTP facilities in the future if work is not stopped and the issues addressed. ORP's quality assurance framework requires the contractor to determine the extent to which quality assurance problems exist in all WTP structures, systems, and components when such problems are identified, and allows ORP to stop work at a facility if recurring issues arise. However, ORP has neither directed the contractor to make this determination nor stopped work when problems recur because it has confidence in the Managed Improvement Plan.

ORP's organizational structure may not provide its Quality Assurance Division with sufficient independence from the office's upper management to oversee the contractor's quality assurance program effectively. GAO has previously found that an oversight organization should be structurally distinct and separate from program offices responsible for cost and schedule performance to avoid conflict between mission objectives and safety. However, a 2017 DOE headquarters assessment found that ORP's Quality Assurance Division's effectiveness has been limited. This is because in some cases ORP upper management had mischaracterized its findings, and in other instances, ORP upper management had not used this division to evaluate the extent of potential quality assurance problems. ORP quality assurance experts GAO spoke to were also concerned that ORP's organizational structure does not always ensure the independence of the division. For example, two of these experts described instances when ORP upper management had downgraded the division's findings so that the contractor could take less stringent corrective measures. By providing the Quality Assurance Division adequate independence, DOE can better ensure that compliance with nuclear safety requirements will not be subordinated to other project management goals, such as meeting cost and schedule targets.