



At a Glance

Why We Did This Review

The U.S. Environmental Protection Agency (EPA), Office of Inspector General (OIG), conducted this review to evaluate how the EPA and states use existing authorities to regulate the potential impacts of hydraulic fracturing on water.

The use of horizontal drilling with hydraulic fracturing greatly expanded the ability of producers to recover natural gas and oil from unconventional sources. According to an April 2014 report by the U.S. Energy Information Administration, natural gas production is projected to increase by 56 percent from 2012 to 2040. In addition, crude oil production will climb from 7.5 million barrels per day in 2013 to 9.6 million barrels per day by 2019. The increase in unconventional oil and gas development has led to new and increased potential impacts to water resources.

This report addresses the following EPA goals or cross-agency strategies:

- *Protecting America's waters.*
- *Ensuring the safety of chemicals and preventing pollution.*

Send all inquiries to our public affairs office at (202) 566-2391 or visit www.epa.gov/oig.

The full report is at: www.epa.gov/oig/reports/2015/20150716-15-P-0204.pdf

Enhanced EPA Oversight and Action Can Further Protect Water Resources From the Potential Impacts of Hydraulic Fracturing

What We Found

Since 2007, the EPA, states and other stakeholders have collectively established regulations, policy, guidance, industry standards and recommended practices to manage impacts to water resources from unconventional oil and gas development. Our review identified two issues in need of improvement by the EPA.

Enhanced EPA oversight of the permitting process for diesel fuel use during hydraulic fracturing can further EPA efforts to protect water resources, and establishment of a plan for determining whether to propose a chemical disclosure rule can help address the public's concerns about hydraulic fracturing chemicals.

First, the EPA needs to improve oversight of permit issuance for hydraulic fracturing using diesel fuels, and address any related compliance issues. Evidence shows that companies have used diesel fuels during hydraulic fracturing without EPA or primacy state underground injection control Class II permits. The EPA has also not determined whether primacy states and tribes are following the agency's interpretive memorandum for issuing permits for hydraulic fracturing using diesel fuels. Enhanced EPA oversight can increase assurance that risks associated with diesel fuel hydraulic fracturing are being adequately addressed.

Second, the EPA needs to develop a plan for responding to the public's concerns about chemicals used in hydraulic fracturing. In May 2014, the EPA initiated a process to evaluate whether to establish federal requirements for chemical disclosure. However, the agency has not yet developed a plan of action for further steps in this proposed rulemaking activity. A plan outlining the agency's next steps would inspire public confidence that the agency is indeed taking action to evaluate disclosure options within a defined timeframe.

Recommendations and Planned Agency Corrective Actions

We recommend that the EPA's Assistant Administrator for Water determine whether primacy states and tribes issue permits for the use of diesel fuels as required. We recommend that the Assistant Administrator for Enforcement and Compliance Assurance address any compliance issues related to issuing permits for hydraulic fracturing using diesel fuels. We also recommend that the Assistant Administrator for Chemical Safety and Pollution Prevention establish and publish a plan with milestone dates that outlines all steps for determining whether to propose a rule to obtain information concerning chemical substances and mixtures used in hydraulic fracturing.

The agency either agreed with our recommendations or proposed actions that meet the intent of our recommendations. All recommendations are resolved or closed and no further response from the agency is needed.