



Highlights of [GAO-06-1029](#), a report to congressional requesters

## Why GAO Did This Study

The Nuclear Regulatory Commission (NRC) is responsible for overseeing the nation's 103 commercial nuclear power plants to ensure they are operated safely. The safety of these plants has always been important, since an accident could release harmful radioactive material. NRC's oversight has become even more critical as the potential resurgence of nuclear power is considered. NRC implemented a new Reactor Oversight Process (ROP) in 2000 to address weaknesses in its oversight of nuclear plant safety.

In this report, GAO reviewed (1) how NRC oversees nuclear power plants, (2) the results of the ROP over the past several years, and (3) the status of NRC's efforts to improve the ROP. To complete this work, GAO analyzed programwide information, inspection results covering 5 years of ROP operations, and detailed findings from a nonprobability sample of 11 plants.

## What GAO Recommends

GAO recommends that NRC aggressively monitor; evaluate; and, if needed, implement additional measures to increase the effectiveness of its safety culture changes and make publicly available more information on nuclear power plants' safety culture. In commenting on a draft of this report, NRC generally agreed with GAO's findings, conclusions, and recommendations.

[www.gao.gov/cgi-bin/getrpt?GAO-06-1029](http://www.gao.gov/cgi-bin/getrpt?GAO-06-1029).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jim Wells at (202) 512-3841 or [wellsj@gao.gov](mailto:wellsj@gao.gov).

# NUCLEAR REGULATORY COMMISSION

## Oversight of Nuclear Power Plant Safety Has Improved, but Refinements Are Needed

### What GAO Found

NRC uses various tools and takes a risk-informed and graded approach to ensure the safety of nuclear power plants. These tools consist of physical inspections of plants and quantitative measures or indicators of plant performance. They are risk-informed in that they focus on the aspects of operations considered most important to plant safety. On the basis of the results of this information, NRC takes a graded approach to its oversight, increasing the level of regulatory attention to plants where safety is declining. NRC assesses overall plant performance and communicates the results to the public, including providing detailed results of its oversight process through a Web site devoted to the ROP.

Since 2001, the ROP has resulted in more than 4,000 inspection findings concerning plants' failure to fully comply with safe operating procedures, and NRC has subjected more than 75 percent (79) of the 103 plants to increased oversight for varying periods. Almost all of the inspection findings were for actions NRC considered important to correct but of low significance to safe plant operations. While the majority of plants received some level of increased oversight, only 5 plants were subjected to NRC's highest level of oversight. Plants in this category were generally subjected to this higher oversight for long periods due to the more systemic nature of their performance problems.

NRC has improved its oversight process in various areas, but it has been slow to act on needed improvements, particularly in improving the agency's ability to identify and address early indications of declining safety performance. NRC is improving its oversight process on the basis of feedback from stakeholders, including better focusing inspections on areas most important to safety. NRC also is addressing what GAO believes has been a significant shortcoming by modifying the ROP to improve its ability to address plants' safety culture—that is, the organizational characteristics that ensure issues affecting nuclear plant safety receive the attention their significance warrants. GAO and others, including some stakeholders, believe these changes could enable NRC to better identify safety culture issues and thus provide earlier indications of declining plant safety performance. However, some in the industry have opposed the changes because they believe the changes could introduce undue subjectivity to NRC's oversight, given the difficulty in measuring these often intangible and complex concepts. NRC has been reluctant to incorporate safety culture into the ROP because it considered this type of activity as a management function, and NRC did not believe that it should be directly involved in managing licensees' plants. NRC program officials view the current changes as the beginning of an incremental approach and acknowledge that they will need to assess their effectiveness at identifying declining safety performance at plants before significant safety events occur.