



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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THE INSPECTOR GENERAL

MEMORANDUM

SUBJECT: EPA's Fiscal Year 2011 Management Challenges

TO: Lisa P. Jackson
Administrator

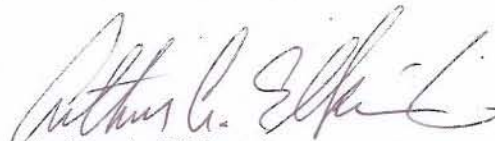
We are pleased to provide you with a list of areas the Office of Inspector General considers as key management challenges confronting the U.S. Environmental Protection Agency (EPA). The passage of the GPRA (Government Performance and Results Act) Modernization Act of 2010 provides a new government-wide definition of major management challenges. According to the Act, major management challenge means programs or management functions, within or across agencies, that have greater vulnerability to waste, fraud, abuse, and mismanagement where a failure to perform well could seriously affect the ability of an agency or the federal government to achieve its mission or goals.

The Reports Consolidation Act of 2000 requires our office to report what we consider as the most serious management and performance challenges facing the Agency. Given this requirement, our list includes management challenges and significant performance issues facing EPA. We used audit, evaluation, and investigative work, as well as additional analysis of Agency operations, to identify challenges and weaknesses. Additional challenges and weaknesses may exist in areas that we have not yet reviewed, and other significant findings could result from additional work. We provided detailed summaries of each challenge in the attachment.

Management Challenges	Page
Need for Greater Coordination of Environmental Efforts	1
Oversight of Delegations to States	4
Safe Reuse of Contaminated Sites	7
Limited Capability to Respond to Cyber Security Attacks	12
EPA's Framework for Assessing and Managing Chemical Risks	15

This year we deleted two management challenges (Water and Wastewater Infrastructure and Reducing Domestic Greenhouse Gas Emissions) because we moved relevant excerpts to the challenge on the need for greater coordination on environmental efforts.

We welcome the opportunity to discuss our list of challenges and any comments you might have.



Arthur A. Elkins, Jr.

Attachment

Need for Greater Coordination of Environmental Efforts

Congress passed the National Environmental Policy Act (NEPA) and created the U.S. Environmental Protection Agency (EPA) in 1970 to carry out national environmental policy. Before EPA's creation, more than a dozen federal agencies had environmental responsibilities, resulting in the lack of an organized, concerted focus to address pollution and degradation. Reorganization Plan No. 3 of 1970 created EPA and transferred to it programs housed in 15 units of several existing federal departments and independent agencies. Creating EPA served as the first step to address national environmental policy by consolidating separate federal efforts. Despite efforts to consolidate federal environmental programs, EPA's 2006-2011 Strategic Plan noted that 25 other federal departments and agencies conduct environmental activities.

In June 2010, we reported that NEPA does not outline a national strategy, set national priorities and goals, or unify all stakeholder efforts.¹ In addition, EPA faces challenges related to interagency coordination since EPA lacks complete authority or control over many activities that affect the condition of our nation's environment, such as land use and transportation planning. Environmental quality depends on policies related to farming, energy, water, transportation, and federal land management, but neither Congress nor the Executive Branch has fully engaged in harmonizing these issues.

Funding and budget data illustrate the degree to which other agencies have a role in protecting the environment. For example, nearly 20 percent (\$147 billion) of the total funding of \$787 billion under the American Recovery and Reinvestment Act of 2009 (ARRA) has gone to federal agencies other than EPA that have environmental mandates in areas such as energy usage, air quality, climate change, water quality, solid and hazardous waste, materials management, or land conservation. Budget data also identify potential areas of duplication and the need to coordinate more efficiently cross-agency efforts to achieve environmental goals. Testimony in 1995 by the Comptroller General noted that, "The lack of an integrated approach to government leads to redundancy and waste. Government can make huge efforts to provide services to the public, yet still fall far short of its intentions because of faulty coordination of its efforts within and across agency lines."

The following examples of past management challenges identified by our office and the Government Accountability Office (GAO) illustrate how EPA cannot fully address the goals of NEPA due to ineffective, segregated coordination efforts.

Water and Wastewater Infrastructure According to some studies, local communities will need to spend up to \$400 billion over the next 20 years to maintain and improve clean water infrastructure.² EPA's Clean Water and Drinking Water State Revolving Funds received about \$1.4 billion in federal capitalization grants in FY 2009.³ Congress added \$6 billion to these funds through the ARRA. The U.S. Departments of Housing

¹ EPA OIG, *National Environmental Policy and Quadrennial Review Needed*, Report No. 10-P-0140, June 8, 2010.

² Clean Water Funding Network Website,

http://cleanwaterfunding.org/index.php?option=com_content&view=article&id=51&Itemid=58.

³ U.S. EPA, *Drinking Water State Revolving Fund Allotments*; U.S. EPA, *Clean Water SRF Federal Capitalization Grants by Federal Fiscal Year of Award by State*.

and Urban Development and Agriculture also provided grant and loan assistance for water and wastewater infrastructure of about \$2 billion in FY 2006⁴ and received funding through the ARRA. These programs are small in relation to the funding gap and are not part of a comprehensive investment strategy to address water infrastructure needs. The federal government does not have a national approach to bridging the water and wastewater infrastructure gap. Since EPA is primarily responsible for administering the Clean Water Act and Safe Drinking Water Act, it should take the lead in organizing a coherent federal strategy within the limits of its statutory authorities and responsibilities. A comprehensive approach to bridging the water and wastewater infrastructure gap would systematically assess the investment requirements, alert the public and Congress of unfunded liabilities and risks, and work with other federal agencies, States and local governments to organize resources to meet needs.

Greenhouse Gases (GHGs) - In October 2009, the GAO recommended developing a national strategy for climate change.⁵ In October 2010, the White House interagency task force on climate change adaptation issued a final report that noted “significant gaps in the U.S. government’s approach to climate change adaptation and building resilience.”⁶ Among the gaps the report noted were a unified strategic vision and approach; coordinated efforts across state, local, and federal lines; and coherent research programs to assess regional effects. In January 2011, EPA initiated the Cross-EPA Climate Change Adaptation Planning Work Group to develop and implement a climate change adaptation plan for EPA.⁷ EPA relies on multiagency research organizations⁸ for the information and tools to help address GHGs,⁹ and to accelerate the development of new and advanced GHG reduction technologies.¹⁰ Consequently, EPA has limited control over the content, conduct, and timing of this research. The FY 2012 President’s Budget shows that EPA is one of 13 departments and agencies that contribute research to the U.S. Global Change Research Program¹¹ to improve understanding of the science of climate change and its

⁴ U.S. Department of Agriculture, Rural Development, Water and Environmental Programs, *Annual Activity Report – FY 2006*, page 6.

⁵ GAO, *Climate Change Adaptation: Strategic Federal Planning Could Help Government Officials Make More Informed Decisions*, GAO-10-113, October 2009.

⁶ White House Council on Environmental Quality, *Progress Report of the Interagency Climate Change Adaptation Task Force: Recommended Actions in Support of a National Climate Change Adaptation Strategy*, October 5, 2010.

⁷ EPA, Memorandum from Louise Wise, EPA Acting Associate Administrator for Policy, *Establishment of Cross-EPA Climate Change Adaptation Planning Work Group & Call for Work Group Member Nominations*, January 13, 2011.

⁸ EPA relies on the U.S. Global Change Research Program and the Climate Change Technology Program to understand better the effects and risks of climate change and to develop new technologies to reduce GHG emissions. EPA information on climate change regulatory initiatives, policies, and actions, including EPA’s *Performance and Accountability Report for Fiscal Year 2009*, November 16, 2009.

⁹ EPA OIG, *EPA Needs a Comprehensive Research Plan and Policies to Fulfill its Emerging Climate Change Role*, Report No. 09-P-0089, February 2, 2009; Pielke, Roger A., Jr., “Scientific Information and Global Change Policymaking,” *Climate Change* 28: 315-19, 1994.

¹⁰ C-Span video archives, EPA Administrator’s Address to the National Press Club on the Agency’s Key Priorities, March 8, 2010, at 00:24:04 and 00:25:48.

¹¹ U.S. Global Change Research Program website, *Participating Departments and Agencies*
<http://globalchange.gov/agencies>.

potential impacts.¹² EPA recognizes that it needs creativity and innovation, among other things, from all stakeholders to meet GHG challenges,¹³ and that is beyond EPA's direct control.¹⁴

Water Ecosystems – Chesapeake Bay - EPA participates in interagency efforts to solve complex environmental challenges in large coastal freshwater and marine ecosystems.¹⁵ A joint 2006 report by our office and the U.S. Department of Agriculture OIG on the Chesapeake Bay noted that while local farming associations support clean-up efforts, they oppose granting EPA authority to control nonpoint source pollution entering the watershed. This creates an opportunity for the U.S. Department of Agriculture to assist EPA in working with local farming communities surrounding the Bay.

US Mexico Border Water Program - In March 2011, GAO issued its first annual report to Congress identifying federal programs, agencies, offices, and initiatives, within departments or government-wide, that have similar or overlapping goals or activities.¹⁶ The report described how fragmented federal efforts to meet water needs in the U.S.-Mexico border region have resulted in an administrative burden, redundant activities, and an overall inefficient use of resources. GAO found that seven federal agencies, including EPA, that are active in the border region obligated at least \$1.4 billion from FYs 2000 through 2008 to fund numerous projects in the region, but their efforts are ineffective because they have not comprehensively assessed the needs of the region. GAO suggested that Congress require federal agencies develop a task force in partnership with state and local officials to leverage collective resources and establish compatible and coordinated policies across relevant agencies.

These complex environmental issues show how EPA needs to continually work to improve external coordination with federal agencies and others with which it shares environmental protection responsibilities. However, as noted in the *Environmental Law Reporter*, "Interagency coordination concerning the environment is uneven at best."¹⁷ The implementation of a national environmental policy could reduce or eliminate federal agencies' duplication, overlap, or fragmentation, and help agencies more efficiently and effectively address environmental problems, while providing the federal government with cost-saving opportunities. Our research

¹² U.S. Global Change Research Program website, "About/Program Overview"
<http://globalchange.gov/about/overview>.

¹³ C-Span2 video archives, Administrator's address to the National Press Club on the Agency's key priorities, March 8, 2010, at 00:24:04 and 00:25:48.

¹⁴ DOE, U.S. Climate Change Technology Program, *Vision and Framework for Strategy and Planning*, Report No. DOE/PI-0005, September 2006.

¹⁵ We evaluated EPA's attempts to resolve the environmental challenges in these water bodies in several reports, including: *EPA Needs to Accelerate Adoption of Numeric Nutrient Water Quality Standards*, Report No. 09-P-0223, August 26, 2009; *EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern*, Report No. 09-P-0231, September 14, 2009; and several reports on the Chesapeake Bay that can be found at <http://www.epa.gov/oig/reports/chesapeake.htm>.

¹⁶ GAO, *Opportunities to Reduce Potential Duplication in Government Programs, Save Tax Dollars, and Enhance Revenue*, GAO-11-318SP, March 2011.

¹⁷ *Environmental Law Reporter News & Analysis*, Special Issue: Agenda for a Sustainable America, National Governance: Still Stumbling Toward Sustainability, 39 *Env'tl. L. Rep. News & Analysis* 10321 (April 2009).

has found a push for developing national strategies related to various environmental aspects, including invasive species, sustainable development, and environmental justice.

Given the absence of a national environmental policy, there are a number of near-term corrective actions that EPA could take to coalesce various environmental stakeholder efforts. The EPA Administrator could send a letter to stakeholder groups asking for their insight on areas a national environmental policy should address. Next, EPA could form study groups to address key concepts, topics, and/or missions relevant to a national environmental policy. The EPA Administrator could send a letter to stakeholder organizations encouraging participation in the interagency groups. EPA's study groups could then meet regularly and develop position papers on their respective topics. Position papers could identify shared goals, overlapping/duplicative programs, strategies to attain goals, and measures to assess progress. Currently, EPA has ad hoc interagency workgroups – such as that between EPA and the U.S. Departments of Transportation and Housing and Urban Development to create a framework to foster sustainable communities – but EPA lacks an overall coordinated strategy and goals that integrate these efforts with other stakeholder activities. Moreover, Congress should provide EPA and other federal agencies the capacity to identify and manage environmental problems of national significance. EPA should work with Congress and the Administration to examine ways to leverage resources expended to various, insular environmental protection efforts.

Oversight of Delegations to States

EPA's oversight of state programs is a key management challenge. GAO and our office have reported that EPA has made some progress in this area; however, the effectiveness of Agency oversight has a number of limitations.

To accomplish its mission to protect human health and the environment, EPA develops regulations and establishes programs that implement environmental laws. Many of the federal statutes establish federal and state regulatory programs in which states are given the opportunity to enact and enforce such laws, meeting minimum federal criteria, to achieve the regulatory objectives which Congress has established. As such, EPA may authorize state, local, or tribal governments to implement these laws when they request authorization and EPA deems the agency capable of operating the program consistent with federal standards. EPA relies heavily on authorized state, and tribal agencies to obtain performance data and to implement compliance and enforcement programs. In its FY 2007 Performance and Accountability Report, EPA stated that it delegated the responsibility for issuing permits and for monitoring and enforcing compliance to the states and tribes.

EPA does not abrogate its oversight responsibility when it has delegated enforcement responsibility. Federal intent is to ensure national minimum level environmental protection standards. In addition, federal requirements establish consistency for businesses and within industries nationwide. States' discretion adds flexibility to address specific circumstances and local issues, but joint implementation and enforcement leads to special challenges in interpretations, strategies, and priorities. Therefore, EPA performs oversight of state, local, and tribal programs to provide reasonable assurance that they achieve national goals.

Improving EPA-state relationships is a priority for EPA,¹⁸ and EPA has begun to improve its oversight by implementing the State Review Framework.¹⁹ However, GAO reported that while EPA has made substantial progress in improving priority setting and enforcement planning with states, its oversight needed further enhancement. The framework is intended to provide a consistent approach for overseeing programs and identifying weaknesses and areas for improvement, but EPA has not implemented it in a consistent manner. For example, evaluations of the State Review Framework show that EPA has limited ability to determine whether states are performing appropriate enforcement in a timely manner, and whether penalties are applied to environmental violators in a fair and consistent manner within and among states. In response to these findings, EPA made changes to the State Review Framework and initiated a Clean Water Act Enforcement Action Plan, which among other things is aimed at strengthening Agency oversight of state water quality compliance and enforcement.

We have continued our work on this topic over the past year, and our recent reports demonstrate that this challenge persists. Two key factors limiting EPA's knowledge about state programs are (1) data limitations and (2) inadequate oversight of state activities.

- *Data Limitations*—Limitations in the availability, quality, and robustness of program implementation and effectiveness data, and limited Agency resources to independently obtain such data, prevent EPA from ensuring that the intent of the law is met. Our work this year found issues with two federal data systems: the Safe Drinking Water Information System and the Resource Conservation and Recovery Act (RCRA) Information System (RCRAInfo).
 - We found that EPA could not accurately assess the risk of public water systems delivering contaminated drinking water from emergency facilities because of limitations in Safe Drinking Water Information System data management. EPA and state officials we interviewed said they were unaware of instances similar to the situation we reported on in Illinois. However, they also stated that they currently have no way to know whether an emergency facility had been turned on without notice. There is no federal regulatory requirement for EPA or states to oversee or monitor emergency facilities. As a result, neither EPA nor the states know the amount of risk that public water system customers may face from misuse of water from emergency facilities.²⁰
 - We also found that the RCRAInfo data that track hazardous waste handlers and the shipment and receipt of hazardous waste contain errors and miss source documentation. These conditions call into question the quality and

¹⁸ EPA, Administrator Lisa Jackson's Seven Priorities for EPA's Future, <http://blog.epa.gov/administrator/2010/01/12/seven-priorities-for-epas-future/>.

¹⁹ EPA, State Review Framework, <http://www.epa.gov/oecaerth/state/srf/index.html>.

²⁰ EPA OIG, *EPA Lacks Internal Controls to Prevent Misuse of Emergency Drinking Water Facilities*, Report No. 11-P-0001, October 12, 2010.

reliability of data within the RCRAInfo system, as well as any resulting reporting.²¹

- *Inadequate Oversight*—Oversight of state activities requires that EPA establish national baselines that state programs must meet, and monitor state programs to determine whether they meet federal standards. Our work identified the absence of national baselines and a lack of robust state oversight with respect to the Clean Water Act, Superfund program, and RCRA.
 - EPA’s authorizing memoranda of agreement with states are critical common denominators for state-authorized programs and should represent a common, national baseline. We found that EPA and states have outdated and inconsistent state agreements under the National Pollutant Discharge Elimination System. EPA headquarters does not hold EPA regional or state offices accountable for updating their memoranda of agreement when necessary. Instead, EPA relies on an inconsistent variety of other planning and management mechanisms to exercise control over state programs. Without current, written agreements with all authorized states, EPA cannot ensure Agency management control and effective oversight over this state-administered national program.²²
 - Long-term monitoring of the ground water is necessary to ensure that the Superfund remedial action remains protective of human health and the environment. However, our work found that the State of Pennsylvania did not collect ground water samples from the Bruin Lagoon Superfund Site for 6 years, from 2001 to 2007. EPA Region 3 managers told us they made a deliberate but undocumented decision to not use oversight authority to require the state to conduct ground water sampling at the site. In June 2007, Pennsylvania resumed sampling ground water at the site. The Region’s 2009 Five-Year Review, which included these results, indicated that the site was protective. Nonetheless, gaps in long-term monitoring may result in a failure to detect conditions that indicate that a cleanup remedy is not protecting human health and the environment.²³
 - RCRA requires EPA to provide oversight of sites where cleanup authority is delegated to states. In addition, EPA’s Public Involvement Policy encourages EPA staff and managers to ensure that decision-making processes are open and accessible. Our office received a Hotline complaint from Citizen Action New Mexico alleging that the New Mexico Environment Department mismanaged the Sandia National Laboratory’s Mixed Waste Landfill

²¹ EPA OIG, *EPA Could Improve RCRAInfo Data Quality and System Development*, Report No. 11-P-0096, February 7, 2011.

²² EPA OIG, *EPA Should Revise Outdated or Inconsistent EPA-State Memoranda of Agreement*, Report No. 10-P-0224, September 14, 2010.

²³ EPA OIG, *EPA Should Improve Oversight of Long-term Monitoring at Bruin Lagoon Superfund Site in Pennsylvania*, Report No. 10-P-0217, September 8, 2010.

monitoring wells. We found that Region 6's documentation of its oversight was insufficient. Therefore, we could not determine whether the allegations had merit or whether New Mexico Environment Department's actions and decisions were technically sound.²⁴

While EPA has renewed its attention on the oversight of programs delegated to states, much work remains. The Agency must address limitations in the availability, quality, and robustness of program data, and limitations in implementation across environmental statutes to provide effective oversight. Effective oversight of delegations to states also requires an organizational structure capable of maintaining clear lines of accountability. Our ongoing, national review of issues related to this management challenge focuses on how EPA's organizational structure may impede its ability to oversee state Clean Air Act (CAA), Clean Water Act, and RCRA enforcement programs. If EPA does not adequately oversee states' authorized enforcement programs, it cannot hold states accountable for meeting their enforcement responsibilities. As a result, EPA would not be able to ensure Americans that states maintain a baseline level of environmental protection.

Safe Reuse of Contaminated Sites

In the last decade, EPA has increasingly emphasized the reuse of contaminated or once-contaminated properties. In its 2011–2015 Strategic Plan, EPA announced a shift in the definition of success at a Superfund site from “construction complete” of a site cleanup to when a site is “ready for anticipated use.”²⁵ Recently, the Agency identified thousands of contaminated sites that it encourages developers and “anyone interested” to use for building renewable energy (e.g., wind, solar, biomass) facilities.²⁶ EPA has successfully turned some actual or perceived problem sites into properties that reinvigorated communities and created jobs.²⁷ Contaminated properties have become viable again as retail stores, public recreation areas, housing complexes, sports stadiums, and commercial office space.

Recycling and reusing contaminated property can produce measured economic benefits, provide environmental benefits that result from preserving undeveloped lands, and improve quality of life for communities. While EPA's recycle and reuse goals are notable and may have made a positive contribution in difficult economic times, EPA's duty is to ensure that contaminated sites are safe for humans and the environment. EPA faces significant and increasing challenges in this area due to: (1) the common practice of not removing all sources of contamination from hazardous sites; (2) a regulatory structure that places key responsibilities for monitoring and enforcing the long-term safety of contaminated sites on non-EPA parties that may lack necessary resources, information, and skill; (3) changes in risks as site conditions change over time; and (4) weaknesses in EPA's oversight of the long-term safety of sites.

Many contaminated sites, such as Superfund sites, must be monitored in the long term (i.e., 30 years or more) because known contamination is often not fully removed or remediated,

²⁴ EPA OIG, *Region 6 Needs to Improve Oversight Practices*, Report No. 10-P-0100, April 14, 2010.

²⁵ EPA, FY 2011–2015 Strategic Plan, page 38, <http://www.epa.gov/planandbudget/strategicplan.html>.

²⁶ EPA website, “RE-Powering America's Land,” <http://www.epa.gov/renewableenergyland/>.

²⁷ EPA website, “Superfund Redevelopment,” <http://www.epa.gov/superfund/programs/recycle/index.html>.

and controls that prevent prohibited activities at sites must be maintained and enforced. New controls or monitoring may be required if previously undetected or new contaminants emerge,²⁸ which can be a direct result of site changes brought about by reuse. The lack of effective long-term monitoring and enforcement of reuse controls at contaminated sites can pose significant risks to human health and the environment. The New York Department of Environmental Conservation released a report in March 2009 listing hundreds of “old” Superfund, Brownfields, and other cleanup cases that were reopened to investigate potential new threats from vapor intrusion.²⁹ Improvements in analytic techniques and knowledge gained from site investigations has increased awareness of soil vapor as a medium of concern and of the potential for human exposure from the soil vapor intrusion pathway.³⁰ However, EPA has yet to finalize guidance on assessing or addressing potential risks from vapor intrusion and does not estimate that it will do so until 2012.³¹

EPA has acknowledged challenges to ensuring the long-term safety of contaminated sites.³² In 2005, the Agency released a report that examined a range of long-term stewardship issues³³ and challenges it faced, as well as the role of non-EPA parties (e.g., states, tribes, and other federal agencies) in ensuring long-term safety of contaminated sites. EPA identified five categories of challenges: (1) understanding roles and responsibilities; (2) implementing and enforcing institutional controls;³⁴ (3) implementing, enforcing, and monitoring engineering controls;³⁵ (4) estimating long-term stewardship costs and obtaining funding and resources; and (5) managing and communicating information to prevent breaches of controls and ensuring consistent information in databases. The report made a number of recommendations that generally rely on partnerships and relationships to share, communicate, and exchange necessary information on roles, responsibilities, and costs associated with long-term stewardship responsibilities. The report encouraged non-EPA parties to adhere to legal provisions for implementing institutional controls, where applicable (e.g., Uniform Environmental Covenants Act).³⁶

²⁸ EPA, *Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment*, EPA 542-R-08001, March 2008.

²⁹ New York State Department of Environmental Conservation, *Status of Vapor Intrusion Evaluations at Legacy Sites*, February 11, 2009; New York State Department of Environmental Conservation, *Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York*, DER-13, October 18, 2006.

³⁰ New York State Department of Environmental Conservation, *Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York*, DER-13, October 18, 2006.

³¹ EPA OIG, *Lack of Final Guidance on Vapor Intrusion Impedes Efforts to Address Indoor Air Risks*, Report No. 10-P-0042, December 14, 2009.

³² EPA, *Long-Term Stewardship: Ensuring Environmental Site Cleanups Remain Protective Over Time: Challenges and Opportunities Facing EPA's Cleanup Programs*, EPA 500-R-05-001, September 2005.

³³ EPA generally characterizes long-term stewardship activities as activities that ensure (1) ongoing protection of human health and the environment, (2) the integrity of remedial or corrective actions so they continue to operate properly, and (3) the ability of people to reuse sites in a safe and protective manner.

³⁴ Institutional controls are legal or administrative controls intended to minimize the potential for human exposure to contamination by limiting land or resource use. A local government is often the only entity that has legal authority to implement certain types of institutional controls (e.g., zoning restrictions).

³⁵ Engineering controls are the engineered physical barriers or structures designed to monitor and prevent or limit exposure to the contamination.

³⁶ The Uniform Environmental Covenants Act confirms the validity of environmental covenants (i.e., institutional controls/land use controls) by ensuring that land use restrictions, mandated environmental monitoring requirements, and a wide range of common engineering controls designed to control the potential environmental risk of residual contamination will be reflected in land records and effectively enforced over time. Currently, about

In response to a GAO report on institutional controls, EPA has also taken some steps to better manage the implementation of institutional controls at Superfund sites.³⁷ However, many sites remain for which the implementation status of institutional controls is not available.³⁸ In 2010, EPA completed an internal evaluation to determine whether the required and necessary institutional controls were in place at national priority Superfund sites.³⁹ EPA's review disclosed that controls to protect human health were not in place at a number of sites they reviewed. EPA made recommendations to improve the implementation of these controls to protect human health at sites where risks remained. In November 2010, EPA also revised Agency guidance and sought public comment on its "interim final guidance," *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*.⁴⁰

Our work has identified a number of additional challenges that EPA faces in ensuring effective long-term monitoring or stewardship of contaminated sites. We found that some states were not financially prepared to take over their long-term monitoring and maintenance responsibilities for Superfund cleanups.⁴¹ In 2010, Michigan's Department of Environmental Quality believed it would run out of money for its hazardous waste cleanup program.⁴² We have reported on state failures to enforce cleanup agreements,⁴³ EPA's failure to follow Superfund site deletion guidance⁴⁴ and Five-Year Review procedures,⁴⁵ and EPA's lack of systems to determine whether a site cleanup is noncompliant.⁴⁶

We found that EPA relies on the self-certification of a third-party environmental professional to determine whether statutorily required environmental due diligence has been performed at Brownfields sites funded by EPA grants. In all sample environmental due diligence investigations we reviewed, environmental professional certifications failed to meet federal requirements and therefore failed to assure that a proper environmental investigation occurred.⁴⁷

one-half of U.S. states have passed a Uniform Environmental Covenants Act. The Uniform Environmental Covenants Act was drafted by the National Conference of Commissioners on Uniform State Laws in August 2003.
³⁷ GAO, *Hazardous Waste Sites: Improved Effectiveness of Controls at Sites Could Better Protect the Public*, GAO 05-163 January 28, 2005. See also <http://www.epa.gov/superfund/policy/ic/index.htm>.

³⁸ EPA website, "Published Institutional Controls,"
http://www.epa.gov/ictsw07/public/export/regionalReport/ALL_REGIONS_IC_REPORTS.HTM.

³⁹ EPA, "Summary of Program Evaluations for FY 2010 Annual Performance Report,"
http://www.epa.gov/planandbudget/Summary_of_Prog_Evals_for_FY_10_APR.pdf.

⁴⁰ *Federal Register*, Environmental Protection Agency, "Guidance on Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites," November 30, 2010.

⁴¹ EPA OIG, *Some States Cannot Address Assessment Needs and Face Limitations in Meeting Future Superfund Cleanup Requirements*, Report No. 2004-P-00027, September 1, 2004.

⁴² *The Detroit News*, "Michigan Out of Cash to Clean Up Toxic Sites," March 4, 2010.

⁴³ EPA OIG, *Improved Controls Would Reduce Superfund Backlogs*, Report No. 08-P-0169, June 2, 2008.

⁴⁴ EPA OIG, *EPA Decisions to Delete Superfund Sites Should Undergo Quality Assurance Review*, Report No. 08-P-0235, August 20, 2008.

⁴⁵ EPA OIG, *EPA Has Improved Five-Year Review Process for Superfund Remedies, But Further Steps Needed*, Report No. 2007-P-00006, December 5, 2006; EPA OIG, *EPA's Safety Determination for Delatte Metals Superfund Site Was Unsupported*, Report No. 09-P-0029, November 19, 2008.

⁴⁶ EPA OIG, *EPA Needs to Track Compliance with Superfund Cleanup Requirements*, Report No. 08-P-0141, April 28, 2008.

⁴⁷ EPA OIG, *EPA Must Implement Controls to Ensure Proper Investigations Are Conducted at Brownfields Sites*, Report No. 11-P-0107, February 14, 2011.

EPA also conducts no oversight of the requirement to meet “continuing obligations” at Brownfields properties funded by EPA. Continuing obligations include land use controls and institutional controls designed to prevent unacceptable uses of a contaminated properties.⁴⁸ Weaknesses or lapses in meeting environmental due diligence or continuing obligations requirements can result in undetected or undisclosed contamination and inappropriate land use.

Our January 2010 report found new contamination at a delisted Superfund site in Delaware where EPA conducted informal and undocumented oversight of the site reuse plans.⁴⁹ The current site owner had nearly finalized plans for reusing the site for public recreation but in a manner inconsistent with the site cleanup plan. EPA had not kept current with the current owner’s site reuse plans. In addition, EPA did not issue a Ready for Reuse (RfR) determination for this site because it believed it was not necessary. An RfR could potentially address some of the internal challenges to ensuring safe reuse of contaminated sites. However, there is no requirement to complete RfRs, and they have been treated as discretionary. Nonetheless, EPA has held up RfRs as providing the necessary “limitations that need to be followed to ensure [site] protectiveness.” An RfR was not issued for the site reviewed in our January 2010 report because site managers believed an RfR was only needed to aid the real estate market. At another Superfund site, we also found that EPA did not take action to address a 6-year gap in environmental sampling that the state should have conducted.⁵⁰ This type of oversight weakness can result in a failure to detect conditions that indicate that a cleanup remedy does not protect human health and the environment.

EPA’s management of the long-term oversight and monitoring requirements for the safe reuse of contaminated sites has lagged behind its marketing of site reuse opportunities and showcasing of successes. Only in the last several years has EPA focused attention on the long-term stewardship aspects of contaminated sites across its cleanup programs. This gap promises to increase substantially as EPA continues to heavily promote the reuse of contaminated sites without investing in tools needed to ensure the safe, long-term use of these sites. Many Superfund sites are now moving to the long-term monitoring phase, with more sites expected to do so in the future.⁵¹ EPA’s December 2008 report on future Superfund workload needs states that the “post-construction” workload will require the greatest increase in coming years and will increase by 89 percent over the current full-time equivalent distribution.⁵² EPA will continually need to assess challenges it faces, as well as challenges among the diverse group of non-EPA parties it must work with, to ensure that sites are safely reused. In its assessments, EPA should consider new or expanded authorities and regulations, new organizations, measures and goals, new methods of sharing information, and dedicated funding and resources for long-term stewardship activities.

⁴⁸ EPA, *Brownfields Fact Sheet, EPA Brownfields Grants CERCLA Liability and All Appropriate Inquiries*, EPA 560-F-09-026, April 2009.

⁴⁹ EPA OIG, *Changes in Conditions at Wildcat Landfill Superfund Site in Delaware Call for Increased EPA Oversight*, Report No. 10-P-0055, January 27, 2010.

⁵⁰ EPA OIG, *EPA Should Improve Oversight of Long-term Monitoring at Bruin Lagoon Superfund Site in Pennsylvania*, Report No. 10-P-0217, September 8, 2010.

⁵¹ EPA, *Long-Term Stewardship: Ensuring Environmental Site Cleanups Remain Protective Over Time: Challenges and Opportunities Facing EPA’s Cleanup Programs*, EPA 500-R-05-001, September 2005.

⁵² EPA, *Superfund Workload Assessment Report*, OSWER Document 9200-2-81, December 2, 2008. Post-construction workload can refer to all activities after a cleanup remedy is constructed (including long-term monitoring and reuse activities).

In 2009, EPA agreed with this challenge.⁵³ In its 2010 response to this challenge, EPA stated that it had several tools it actively promotes to ensure appropriate and safe reuse of sites, and that it will continue to explore new tools and approaches to sharing risk information to ensure that sites remain safe in their future uses.⁵⁴ EPA stated that its Superfund Five-Year Review process addresses the vast majority of “emerging contaminant” situations observed at Superfund National Priority List sites and conveyed that the Five-Year Review process worked well. Six specific “tools” EPA said it promotes to ensure appropriate and safe reuse of sites are: (1) RfR determinations, (2) comfort and status letters, (3) prospective purchaser inquiry calls, (4) EPA-funded reuse planning offers, (5) site reuse fact sheets, and (6) Comprehensive Environmental Response, Compensation and Liability Information System data on institutional controls. EPA has recently taken significant steps to address and remedy vulnerabilities in the Five-Year Review process. Several actions have been taken in response to our findings. In 2009, EPA completed a review of the quality of Five-Year Reviews. The Agency identified many reviews that needed additional support and some that needed modified safety determinations. Additional actions such as modifying the Agency’s 2001 guidance on Five-Year Reviews may be forthcoming.

We will review and recognize EPA efforts to address the significant challenge of ensuring the long-term safety of contaminated sites. Our work and the Agency’s work have shown that EPA can address these internal challenges through improved oversight and management of activities inherent to successful long-term stewardship of contaminated sites. However, successful long-term stewardship also depends on having properly resourced and informed non-EPA parties, who have ongoing access to current information, are actively involved in compliance, and conduct appropriate due diligence and oversight of contaminated sites. EPA is highly limited in addressing this challenge when state or local governments with primary responsibility for addressing many long-term safety issues have neither the money nor the will to do so. The lessons from recent issues such as vapor intrusion show that site reuse can generate new environmental risks. In its 2011–2015 Strategic Plan, EPA states:

Complications can arise when new scientific information concerning contaminants at a site suggests that a risk assessment that was protective when a remedy was selected is no longer protective given the contaminant levels remaining at a site and their potential exposure pathways. . . . EPA must incorporate emerging science into decision making to maintain its commitment to provide permanent solutions.”⁵⁵

EPA needs new strategies that take the Agency beyond merely encouraging non-EPA parties to fulfill requirements and focus on providing EPA and other parties the information, resources, and authorities to ensure long-term safety of reused sites.

⁵³ EPA, *Performance and Accountability Report for Fiscal Year 2009*, section IV, page 43.

⁵⁴ EPA, *Fiscal Year 2010 Agency Financial Report*, section III, pages 37–40.

⁵⁵ EPA, *FY 2011–2015 Strategic Plan*, page 25.

Limited Capability to Respond to Cyber Security Attacks

Continuing from the management challenge from last year, EPA still has a limited capacity to effectively respond to external network threats despite reports that Advanced Persistent Threats (APTs) designed to steal or modify information without detection are becoming more prevalent throughout government.⁵⁶ In addition, the Agency does not have an overarching understanding of system exploitations from an insider threat perspective. This type of threat can come from a user, through unauthorized physical access by an individual, through a breach due to access and weak controls via contract facility connections, or from insertion of malware that allows for unauthorized remote access.

Our ongoing analysis shows that the Agency still faces challenges with respect to protecting against APT-type attacks. Although the Agency has deployed new tools to improve its architecture, these tools raise new security challenges and, therefore, concerns by our office. EPA deployed Symantec Endpoint Protection in an attempt to identify malware on Agency systems. The full extent of this deployment and the ability of the Agency to rapidly correlate the reporting of system vulnerabilities are limited. The Agency implemented "BigFix" servers for managing patch and software updates. While use of these systems is beneficial, the systems introduce security concerns because a single compromise of the BigFix system could modify computers throughout the EPA domain. Some of these BigFix servers were reported to have been compromised this year.

The Agency does not have an Agency-wide governance of its critical infrastructure designed to identify critical components, systems, and data, and any associated back-up or redundant systems, so that when a compromise occurs, the Agency and our office can quickly engage key stakeholders, assess the significance of the threat, and take appropriate actions. The Agency recently had one of these designated "critical" systems reported as compromised. However, due to a lack of critical system redundancy, investigators responding to the an incident were unable to take the systems offline to preserve evidence. This failure to provide for critical redundant capability exist at the wide area network (WAN) and local area network levels of EPA infrastructure.

EPA is in the process of transferring to the U.S. General Services Administration's Managed Trusted IP Services (MTIPS) contract. MTIPS is reported to provide services such as intrusion detection, intrusion protection, incident response, managed firewall, vulnerability scanning, antivirus management, and managed e-authentication. Integration of these services into the control and oversight of EPA's Office of Environmental Information (OEI) has not been fully realized or understood. When we asked OEI staff whether the Agency and our office would have access to the day-to-day EPA's networks security logging data controlled by the MTIPS contractor, staff had no ready answers. OEI staff responded that the focus was on transition and that security was a secondary concern. This response is concerning given that we noted last year that EPA could not identify the owners of approximately 10 percent of the Internet Protocol (IP) addresses that are potentially compromised due to an APT.⁵⁷ These compromised systems extend to every EPA regional office and headquarters. In September 2010, the Agency stopped

⁵⁶ *Federal Computer Week*, "Google Attacks: A Wake-up Call or Curtain Call for Agencies?" February 4, 2010.

⁵⁷ Electronic mail from EPA's Computer Security Incident Response Capability Center, April 6, 2010.

producing and or sharing this data with our office; thus, we do know whether EPA has remedied this situation.

Security of EPA's network greatly depends on ongoing public- and private-sector partnerships led by the United States Computer Emergency Readiness Team (US-CERT).⁵⁸ The mission of US-CERT is to protect the nation's Internet infrastructure and to coordinate national defense against and responses to cyber attacks.⁵⁹ Accordingly, it disseminates actionable cyber security information to EPA's Computer Security Incident Response Capability Center (CSIRC), whose goal is to protect EPA information assets and respond to actual and potential incidents.⁶⁰ The unknown origins of many cyber attacks and the complex ways they compromise data networks⁶¹ make this ongoing collaboration crucial to the security of EPA's network. Although US-CERT has been a key provider of cyber threat data or intelligence to the Agency, up until February 2011, EPA only had the Research Triangle Park point of presence (POP) monitored by US-CERT sensing equipment. While EPA was waiting on the WAN 2010 upgrade to install a sensor at its District of Columbia POP, US-CERT did not have visibility on an estimated 8,000–10,000 EPA personnel and contractors utilizing this POP for an extended period.

The management challenge issued in FY 2010 stated, "EPA's CSIRC is expected to have sufficient technical expertise and resources to coordinate rapid and highly skilled responses to incidents of malicious attacks on its network." To date, the staffing resources at CSIRC are limited and cannot provide the required information requested by our office. We are in discussions with OEI staff regarding procedures they should follow in handling requests from our office that exceed their staffing resources.⁶²

EPA is working toward acquiring, training, and deploying forensic tools and experienced technical specialists to analyze and determine whether attackers have gained entry to EPA's network systems, what they did while within EPA's domain space, what information was compromised, and what information may have been maliciously removed from the EPA network. Our office is working with OEI on a memorandum of understanding to define roles and responsibilities for our two offices in response to intrusion activities associated with EPA's networks. The implementation of this memorandum of understanding and the information gathered by the Agency's information technology staff will benefit and support not only EPA's operational mission, but our investigative mission as well, specifically as it relates to the preservation of the crime scene associated with intrusion events.

To meet this challenge to EPA's network head on, EPA leadership must understand the threats to EPA's confidential business information and the importance of minimizing those risks. Further, the Chief Information Officer and the Office of Technology Operations and Planning leadership should carefully study the classified intelligence materials provided to them regarding threats against government domains and disseminate the information to necessary offices. These intelligence materials are especially critical as EPA's network is reportedly compromised. Last

⁵⁸ US-CERT website, <http://www.us-cert.gov/aboutus.html>.

⁵⁹ US-CERT website, <http://www.us-cert.gov/aboutus.html>.

⁶⁰ EPA intranet, http://cfint.rtpnc.epa.gov/otop//security/csirc/about_us.cfm.

⁶¹ *CNN.com/technology*, "U.S. Government Sites among Those Hit by Cyber Attack," July 8, 2009.

⁶² Reference e-mail, OEI to OIG, dated March 12, 2011, 10:11 AM.

year, before reporting to our office stopped, there were approximately 7,800 EPA systems identified as potentially communicating to known hostile IPs or domains. We note that not all 7,800 systems were compromised, but we do not know which ones were compromised.

Further, EPA leadership must clearly articulate to Congress the costs of protecting its infrastructure and seek from Congress sufficient funds for the development of a real-time capability to identify and analyze attacks against EPA's computer and network systems.

EPA also should compile a better inventory of network assets, including intellectual properties, and identify where data sit on its network. EPA should also deploy a better method of identifying and authenticating individuals allowed to access EPA's network. Only then will EPA be able to execute a strategy that effectively protects its resources, infrastructure, and intellectual property from individuals and entities that intend to do harm.

In addition, EPA should aggressively address previously reported security weaknesses to strengthen its ability to detect and respond to network attacks.⁶³ In particular, EPA should:

- Implement a process that tracks IP address assignments and documents the origin of all active IP addresses so responders can take quicker steps to minimize harm caused by APTs.⁶⁴
- Implement a vulnerability management program to proactively identify and correct commonly known vulnerabilities before they can be exploited.⁶⁵
- Communicate high-risk vulnerability alerts more effectively throughout the Agency and follow up with responsible parties to ensure satisfactory remediation.⁶⁶
- Verify that EPA's numerous information security officers are adequately skilled to conduct regular vulnerability tests of their respective local area networks and systems, as well as successfully recognize and remediate high and medium risks in a uniform and acceptable manner.⁶⁷

⁶³ EPA OIG, *Project Delays Prevent EPA from Implementing an Agency-wide Information Security Vulnerability Management Program*, Report No. 09-P-0240, September 21, 2009.

⁶⁴ EPA OIG, *Management of EPA Headquarters Internet Protocol Addresses Needs Improvement*, Report No. 08-P-0273, September 23, 2008.

⁶⁵ EPA OIG, *Project Delays Prevent EPA from Implementing an Agency-wide Information Security Vulnerability Management Program*, Report No. 09-P-0240, September 21, 2009.

⁶⁶ EPA OIG, *EPA Needs to Strengthen Financial Database Security Oversight and Monitor Compliance*, Report No. 2007-P-00017, March 29, 2007.

⁶⁷ EPA OIG, *Results of Technical Network Vulnerability Assessment: Region 9*, Report No. 09-P-0052, December 9, 2008; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Radiation and Indoor Environments National Laboratory*, Report No. 09-P-0053, December 9, 2008; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Las Vegas Finance Center*, Report No. 09-P-0054, December 9, 2008; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Research Triangle Park Campus*, Report No. 09-P-0055, December 9, 2008; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA Headquarters*, Report No. 09-P-0097, February 23, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Great Lakes National Program Office*, Report No. 09-P-0185, June 30, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's National Computer Center*, Report No. 09-P-0186, June 30, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessment: Region 8*, Report No. 09-P-0187, June 30, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Potomac Yard Buildings*, Report No. 09-P-0188, June 30, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's 1310 L Street Building*, Report No. 09-P-0189, June 30, 2009; EPA OIG, *Results of Technical Network Vulnerability*

- Take steps to improve the reliability of data used to assess the status of its information security program and posture with regard to known network threats.⁶⁸
- Train EPA's information security community on testing and documenting information systems security controls, and enhance the quality assurance process to verify that self-assessments evaluate all required security controls.⁶⁹
- Develop and implement comprehensive log review policies and procedures, establish a management control process to review the performance of the contractors conducting these reviews, and update and approve the WAN security plan and properly certify and accredit future significant WAN configuration changes prior to moving them into production.⁷⁰
- Develop and implement a network traffic analysis methodology to be used to identify abnormal network traffic.⁷¹
- Deploy a system of obtaining full network packet capture of all traffic within and traveling outside of its domain, to have the ability to historically understand cyber incidents that occur and any loss of sensitive data.

Taking these actions would enhance EPA's ability to effectively (1) identify what key data (intellectual, confidential, privacy) have been stolen, (2) determine collateral damage to the Agency's trusted business partners, (3) remediate threats as they occur, and (4) better defend its network domain. EPA's limitation in these areas is alarming, because a large-scale cyber attack could be as devastating to the U.S. economy and infrastructure as a terrorist bombing.⁷²

EPA's Framework for Assessing and Managing Chemical Risks

EPA's framework for assessing and managing chemical risks has not yet achieved the goal of protecting human health and the environment. In 1976, Congress passed the Toxic Substances Control Act (TSCA), authorizing EPA to collect information on, and to regulate the production and distribution of, chemicals. TSCA required EPA to (1) create an inventory of "existing chemicals" already in commerce, (2) regulate unreasonable risk from "new chemicals" introduced into commerce subsequent to the act, and (3) make health and safety

Assessment: EPA's Research Triangle Park Finance Center, Report No. 09-P-0227, August 31, 2009; EPA OIG, *Results of Technical Network Vulnerability Assessments: EPA's Andrew W. Breidenbach Environmental Research Center*, Report No. 10-P-0210, September 7, 2010; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Erlanger Building*, Report No. 10-P-0211, September 7, 2010; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Ronald Reagan Building*, Report No. 10-P-0212, September 7, 2010; EPA OIG, *Results of Technical Network Vulnerability Assessment: EPA's Region 4*, Report No. 10-P-0213, September 7, 2010.

⁶⁸ EPA OIG, *Self-reported Data Unreliable for Assessing EPA's Computer Security Program*, Report No. 10-P-0058, February 2, 2010.

⁶⁹ EPA OIG, *Improvements Needed in Key EPA Information System Security Practices*, Report No. 10-P-0146, June 15, 2010.

⁷⁰ EPA OIG, *Improvements Needed in EPA's Network Traffic Management Practices*, Report No. 11-P-0159, March 14, 2011.

⁷¹ EPA OIG, *Improvements Needed in EPA's Network Traffic Management Practices*, Report No. 11-P-0159, March 14, 2011.

⁷² *CNN.com/technology*, "U.S. at Risk of Cyber Attacks, Experts Say," August 18, 2008.

information available for examination while protecting manufacturers' confidential business information.

EPA's effectiveness in assessing and managing chemical risks is hampered in part by limitations on the Agency's authority to regulate chemicals under TSCA. When TSCA was enacted, it authorized the manufacture and use, without any evaluation, of all chemicals that were produced for commercial purposes in 1976 or earlier years. Thus, manufacturers of these grandfathered chemicals were not required to develop and produce data on toxicity and exposure, which are needed to properly and fully assess potential risks. Further compounding this problem, the statute never provided adequate authority for EPA to evaluate existing chemicals as new concerns arose or as new scientific information became available. As enforcement is critical to ensuring environmental protection, while TSCA authorizes EPA to conduct inspections, issue subpoenas, and impose civil penalties for violations, the statute lacks the broad information-gathering and enforcement provisions found in other major environmental protection statutes. For example, TSCA does not provide EPA the administrative authority to seek injunctive relief, issue administrative orders, collect samples, and quarantine and release chemical stocks.

On September 29, 2009, the Administration outlined core principles to strengthen U.S. chemical management laws. Administrator Jackson testified before Congress on December 2, 2009, on the need to revise and modernize TSCA. In the absence of new legislation, we found that EPA could better manage existing authorities. In 2010, we published a report on the New Chemicals Program that showed that EPA did not have integrated procedures and measures in place to ensure that new chemicals do not pose an unreasonable risk to human health and the environment.⁷³ We recommended that EPA better coordinate risk assessment and oversight activities by establishing a management plan that contains new goals and measures that demonstrate the results of EPA actions. Additionally, we recommended that EPA establish criteria for selecting chemicals or classes of chemicals for low-level exposure and cumulative risk assessments, and develop confidential business information classification criteria to improve EPA's transparency and information sharing. Finally, we recommended that EPA develop a management plan for Core TSCA enforcement that includes training, consistent enforcement strategies across regions for monitoring and inspection protocols, and a list of manufacturers and importers of chemicals for strategic targeting. The Agency agreed with our recommendations, and in November 2010, we accepted the Agency's corrective action plan outlining the steps it intends to take to address our recommendations.

EPA's framework for assessing and managing chemical risks from endocrine disruptors is also failing to show results. In August 1996, Congress passed both the Food Quality Protection Act and amendments to the Safe Drinking Water Act, calling for the screening and testing of chemicals and pesticides for possible endocrine-disrupting effects (i.e., adverse effects on the development of the brain and nervous system, the growth and function of the reproductive system, as well as the metabolism and blood-sugar levels). EPA established the Endocrine Disruption Screening Program in 1998. The Endocrine Disruption Screening Program was mandated to use validated methods for the screening and testing of chemicals to identify

⁷³ EPA OIG, *EPA Needs a Coordinated Plan to Oversee Its Toxic Substances Control Act Responsibilities*, Report No. 10-P-0066, February 17, 2010.

potential endocrine disruptors. In 2000, EPA estimated that approximately 87,000 chemicals would need to be screened for potential endocrine-disrupting effects. As of February 25, 2010, EPA issued test orders to industry for 67 pesticide active ingredients and high-production volume chemicals with some pesticide inert uses. Thus, 14 years after the passage of the Food Quality Protection Act and amendments to the Safe Drinking Water Act, EPA has yet to regulate the endocrine-disrupting effects of any chemicals.

Though we have not yet completed any additional reports on EPA's activities under TSCA, we have identified some potential challenges for the Agency. To address the unique properties of nanomaterials and to better address children's health concerns, revisions to EPA's regulations and management approaches may be necessary. In 2009, EPA launched a new initiative to enhance the Agency's current chemicals management program within the limits of existing authorities. Since then, EPA has proposed several new regulations under TSCA that may allow it to better address both children's health and nanomaterials. As EPA implements these steps to improve its management of chemical risks, it must institute sufficient internal controls to ensure the success of its efforts. Specifically, the Agency should create performance measures that demonstrate the impact and overall success in reaching the desired outcome. The Agency must also have a clear strategy that formalizes intra-agency coordination and prioritizes activities to maximize the impact of available resources in pursuit of its goals, ensuring that the most significant risk areas are addressed first.⁷⁴

⁷⁴ EPA OIG, *EPA's Endocrine Disruptor Screening Program Should Establish Management Controls to Ensure More Timely Results*, Report No. 11-P-0215, May 3, 2011.