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

JUL -5 2012

THE INSPECTOR GENERAL

MEMORANDUM

SUBJECT: EPA's Fiscal Year 2012 Management Challenges

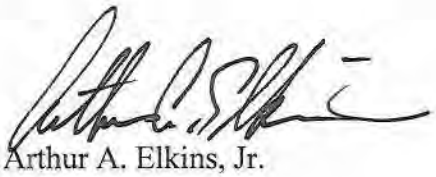
TO: Lisa P. Jackson
Administrator

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). According to the Government Performance and Results Act Modernization Act of 2010, major management challenges are programs or management functions, within or across agencies, that have greater vulnerability to waste, fraud, abuse, and mismanagement, and 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 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 provide detailed summaries of each challenge in the attachment.

This year we deleted one management challenge from the prior year (Need for Greater Coordination of Environmental Efforts) because we recognize that cross-Agency coordination is not something over which EPA has exclusive control. We have begun an effort to update our Catalog of Federal Environmental Programs which, along with work by the U.S. Government Accountability Office on duplicative federal programs, could identify duplicative programs that warrant consideration as a future management challenge.

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



Arthur A. Elkins, Jr.

Attachment

Oversight of Delegations to States

The U.S. Environmental Protection Agency's (EPA's) oversight of state programs remains a key management challenge. The U.S. Government Accountability Office (GAO) and our office have reported that EPA has made some progress in this area but the effectiveness of Agency oversight still 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 that government 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.

EPA does not abrogate its oversight responsibility when it has delegated implementation and 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,[1] and EPA has begun to improve its oversight by implementing the State Review Framework. However, GAO reported that while EPA has made substantial progress in improving priority setting and enforcement planning with states, its oversight needed further enhancement.[2] 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 Action Plan, which among other things is aimed at strengthening Agency oversight of state water quality compliance and enforcement.[3]

We have continued our work on this topic over the past year, and our recent reports demonstrate that this challenge persists. Most apparent throughout these reports is EPA's inadequate and inconsistent oversight of a variety of state activities—from state revolving fund projects to state enforcement of major environmental laws. Oversight of state activities requires that EPA establish consistent national baselines that state programs must meet, and monitor state programs

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[1] EPA, Administrator Lisa Jackson's *Seven Priorities for EPA's Future.*
[2] GAO, *EPA-State Enforcement Partnership Has Improved, but EPA's Oversight Needs Further Enhancement,* GAO-07-883, July 2007.
[3] EPA, Clean Water Act Action Plan, October 15, 2009.

to determine whether they meet federal standards. Our work identified the absence of national baselines and a lack of consistent and robust state oversight of multiple programs within the Clean Water Act (CWA), Clean Air Act, and Resource Conservation and Recovery Act.

- EPA's oversight of states did not ensure that requirements of the American Recovery and Reinvestment Act of 2009 (ARRA) were met on Clean Water State Revolving Fund projects. We found that the ARRA inspection checklist did not include enough detailed questions to facilitate EPA oversight of state programs. Further, the Office of Water was not conducting and documenting reviews of state programs in a timely manner and did not use the resulting reports to make national program decisions. Office of Water management did not make completion of the review reports a priority and did not use all of the ARRA funding Congress allocated for oversight. As a result, the EPA oversight process could not ensure that states were complying with ARRA program requirements.[4]

- EPA takes a variety of approaches to correcting underperforming state programs. These include making recommendations under the State Review Framework process, overfiling on states, and taking independent actions when states choose not to act. We found that EPA does not maximize its resources so that it can take the most stringent step—revoking state authorization—when a state is underperforming. EPA primarily identifies underperforming state programs through the State Review Framework process. While the process is generally positive, it is not consistent. EPA's criteria for state performance varied from region to region and state to state, depending on factors like state resources and varying environmental priorities. This means that citizens in different states cannot expect the same baseline of protection from pollution and human health risks. By establishing stronger organizational structures, EPA can directly implement a national enforcement strategy that ensures all citizens have, and industries adhere to, a baseline level of environmental protection. EPA could make more effective use of its resources by directing a single national workforce instead of 10 inconsistent regional enforcement programs.[5]

- Region 4 gave Georgia's Concentrated Animal Feeding Operation (CAFO) program a positive assessment. However, an EPA Office of Inspector General (OIG) review identified CAFOs that were operating without National Pollutant Discharge Elimination System (NPDES) permits or Nutrient Management Plans, inspection reports were missing required components, and the state was not assessing compliance with permit conditions. The report recommended implementing controls to require enforcement data tracking between EPA and the state, assuring CAFO inspections are complete, and taking timely and appropriate enforcement actions.[6]

- EPA Region 4 has not adequately implemented management controls to assure that North Carolina NPDES permits comply with CWA and applicable federal regulations concerning thermal discharges. Region 4 determined that the thermal limits for four of the six facilities reviewed were renewed based on insufficient documentation. Most of the

[4] EPA OIG report, *EPA and States Should Strengthen Oversight of Clean Water State Revolving Fund Recovery Act Projects*, Report No. 11-R-0519, August 24, 2011.
[5] EPA OIG, *EPA Must Improve Oversight of State Enforcement*, Report No. 12-P-0113, January 30, 2012.
[6] EPA OIG, *Region 4 Should Strengthen Oversight of Georgia's Concentrated Animal Feeding Operation Program*, Report No. 11-P-0274, June 23, 2011.

draft permits we reviewed were missing critical information needed to allow EPA and the public an opportunity for review and comment as required. Public notices for five draft permits did not contain the required statements describing the proposed thermal variance.[7]

While EPA has renewed its attention to 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. 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. Significant improvements are required before this challenge can be removed. We are continuing to review these issues and will provide additional recommendations to EPA in the future.

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."[8] EPA's fiscal year (FY) 2013 budget states that it will continue to place emphasis on promoting site reuse in affected communities,[9] and Agency guidance states that revitalizing communities and ensuring the long-term protection of human health and the environment remains a high priority for EPA at Superfund sites.[10] The Agency currently has an active effort to encourage communities, developers, industry, states, and local governments, or anyone interested to reuse contaminated sites for renewable energy development (e.g., wind, solar, biomass) facilities.[11]

EPA has successfully turned some actual or perceived problem sites into properties that reinvigorated communities and created jobs.[12] 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 positive contributions 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 contamination sources 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) varying risks as site conditions change over time; and (4) weaknesses in EPA's oversight of long-term site safety.

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[7] EPA OIG, *Oversight of North Carolina's Renewals of Thermal Variances*, Report No. 11-P-0221, May 9, 2011.
[8] EPA, *FY 2011–2015 Strategic Plan*, page 38.
[9] EPA, *FY 2013 EPA Budget in Brief.*
[10] EPA, *Office of Solid Waste and Emergency Response, FY 2013 National Program Manager's Guidance*, Draft – February 17, 2012 Publication Number 530P12001, page 23.
[11] EPA website, *"RE-Powering America's Land."*
[12] EPA website, *"Superfund Redevelopment."*

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, 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,[13] which can be a direct result of site changes brought about by reuse. Ineffective or missing long-term safety controls at reused contaminated sites can pose significant risks to human health and the environment. The New York Department of Environmental Conservation released a report listing hundreds of "old" Superfund, brownfields, and other cleanup cases that were reopened to investigate potential new threats from vapor intrusion.[14] 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.[15] 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 late 2012.[16]

EPA has acknowledged challenges to ensuring the long-term safety of contaminated sites. In 2005, the Agency released a report that examined a range of long-term stewardship issues[17] 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.[18] EPA identified five categories of challenges: (1) understanding roles and responsibilities; (2) implementing and enforcing institutional controls;[19] (3) implementing, enforcing, and monitoring engineering controls;[20] (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).[21]

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

[14] New York State Department of Environmental Conservation, *Status of Vapor Intrusion Evaluations at Legacy Sites*, February 11, 2009.

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

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

[17] 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.

[18] 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.

[19] 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).

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

[21] 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 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.

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.[22] However, many sites remain for which the implementation status of institutional controls is not available.[23] In 2010, EPA completed an internal evaluation to determine whether the required and necessary institutional controls were in place at national priority Superfund sites.[24] 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.*[25] This guidance, although not final, communicates a number of important EPA expectations about planning for, implementing, and monitoring institutional controls. The guidance is a noteworthy improvement in the Agency's management of this important issue. Recognizing the critical role of non-EPA parties in ensuring effective institutional controls, the guidance states that regions should conduct an analysis to determine whether the state and local agencies responsible for oversight and management of the controls have the ability and capacity to implement, maintain, and enforce the controls. The guidance states that "institutional controls can only be a reliable component of site cleanup if the responsible agencies have the ability, willingness and capability to oversee and manage these controls."[26]

Over the last several years, our work has identified additional and ongoing 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.[27] In 2010, Michigan's Department of Environmental Quality believed it would run out of money for its hazardous waste cleanup program.[28] We have reported on state failures to enforce cleanup agreements,[29] EPA's failure to follow Superfund site deletion guidance[30] and Five-Year Review procedures,[31] and EPA's lack of systems to determine whether a site cleanup is noncompliant.[32] In our February 2011 report,[33] 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

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[22] GAO, *Hazardous Waste Sites: Improved Effectiveness of Controls at Sites Could Better Protect the Public,* GAO 05-163, January 28, 2005. See also EPA's website "Institutional Controls."
[23] EPA website, "Published Institutional Controls."
[24] EPA, *Summary of Program Evaluations for FY 2010 Annual Performance Report.*
[25] OSWER 9355.0-89 EPA-540-R-09-001 November 2010 Interim Final.
[26] EPA, *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*, OSWER 9355.0-89 EPA-540-R-09-001 November 2010 Interim Final, page 9.
[27] 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.
[28] *The Detroit News*, "Michigan Out of Cash to Clean Up Toxic Sites," March 4, 2010.
[29] EPA OIG, *Improved Controls Would Reduce Superfund Backlogs*, Report No. 08-P-0169, June 2, 2008.
[30] EPA OIG, *EPA Decisions to Delete Superfund Sites Should Undergo Quality Assurance Review*, Report No. 08-P-0235, August 20, 2008.
[31] 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.
[32] EPA OIG, *EPA Needs to Track Compliance with Superfund Cleanup Requirements*, Report No. 08-P-0141, April 28, 2008.
[33] EPA OIG, *EPA Must Implement Controls to Ensure Proper Investigations Are Conducted at Brownfields Sites*, Report No. 11-P-0107, February 14, 2011.

Brownfields sites funded by EPA grants. In a sample of 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. 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 use of contaminated properties.[34] Weaknesses or lapses in meeting environmental due diligence or continuing obligations requirements can result in undetected or undisclosed contamination and property reuse that may pose unacceptable risk to humans. In response to our February 2011 report, EPA agreed to develop outreach materials and conduct training for Brownfields grantees and regional Brownfields staff to increase compliance with federal requirements for environmental due diligence investigations. EPA committed to completing these activities by the end of FY 2012.

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.[35] 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.[36] This type of oversight weakness can result in a failure to detect conditions that indicate a cleanup remedy does not protect human health and the environment.

In August 2011, we reported the results of a review of hyperspectral imaging data taken of Superfund sites that had been remediated and deleted from the National Priorities List.[37] At two of the sites, imaging data showed new contamination and changed site conditions. At one former industrial site, we found that the site owner was building a residence on top of the site although levels of contamination detected at the site exceeded residential safety levels and the site contained buried drums and other potential human health hazards.

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 and create new

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[34] EPA, *Brownfields Fact Sheet, EPA Brownfields Grants CERCLA Liability and All Appropriate Inquiries,* EPA 560-F-09-026, April 2009.
[35] 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.
[36] 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.
[37] EPA OIG, *Observed Conditions at Five Deleted Superfund Sites*, Report No. 11-P-0433 August 3, 2011.

incentives, such as establishing specific program goals for site reuse, 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.[38] 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 (FTE) distribution.[39] 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.

In 2009, EPA agreed with this challenge.[40] In its 2010[41] and 2011[42] responses 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. EPA has stated that its Superfund Five-Year Review process addresses the vast majority of "emerging contaminant" situations observed at Superfund National Priorities List sites and conveyed that the Five-Year Review process worked well. Specific "tools" EPA has 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, and (5) site reuse fact sheets.[43] In 2011, EPA also identified these tools as things they can offer to ensure that reuse is appropriate and will enhance long-term protectiveness.[44]

While the above tools appear to serve a purpose in enhancing reuse, reducing possible stigma associated with a contaminated property, or addressing legal obligations, their use and effectiveness as management controls for ensuring long-term human health protection has not been evaluated. However, EPA has recently taken significant steps to address and remedy vulnerabilities in the Superfund Five-Year Review process. Several actions have been in response to our findings. In 2009, EPA completed a review of the quality of Five-Year Reviews.[45] The Agency identified many reviews that needed additional support and some that needed to modify their safety determinations. Additional actions such as modifying the Agency's 2001 guidance on Five-Year Reviews may be forthcoming. In a February 2012 report, we recognized important improvements in EPA's review and oversight of Five-Year Reviews.[46] EPA has implemented national review of Five-Year Reviews to improve their consistency and quality. Still, in our February 2012 report, we identified additional opportunities for EPA to

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[38] 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.
[39] 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).
[40] EPA, *Performance and Accountability Report for Fiscal Year 2009*, section IV, page 43.
[41] EPA, *Fiscal Year 2010 Agency Financial Report,* section III, pages 37-40.
[42] EPA, *Fiscal Year 2011 Agency Financial Report*, page 174.
[43] EPA, *Fiscal Year 2010 Agency Financial Report,* section III, page 39.
[44] EPA, *Fiscal Year 2011 Agency Financial Report*, pages 174-175.
[45] EPA, *Assessing Protectiveness for Asbestos Sites: Supplemental Guidance to Comprehensive Five-Year Review Guidance,* December 3, 2009.
[46] EPA OIG, *Stronger Management Controls Will Improve EPA Five-Year Reviews of Superfund Sites,* Report No. 12-P-0251 February 6, 2012.

improve its national review process to ensure Five-Year Reviews conducted in the regions are based on quality data and adhere to Agency guidance. We believe that the Superfund Five-Year Review process is and should be a "safety-net" for detecting new contamination or other changing site conditions that may identify new potential human health risks. However, our reviews of the Five-Year Review process and conditions at deleted Superfund sites continue to demonstrate that the Five-Year Review process needs to be a stronger safety-net.

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 some of the internal challenges through improved oversight and management of EPA-directed 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 apparent 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 notes:

> 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.[47]

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

Limited Capability to Respond to Cyber Security Attacks

As technology continues to advance and the Agency increases its use of automated systems to further integrate EPA data and services with external users via the Internet,[48] having a strong information technology (IT) infrastructure that addresses security at the enterprise architecture level is critical to protecting the Agency against cyber-attacks. This growth in computer connectivity places EPA at increased risks of disruption to its critical operations as well as the possibility of unauthorized access to sensitive data. As such, it is imperative that EPA management continues efforts to strengthen practices to guard against Advanced Persistent Threats (APTs). Security experts continue to report that such attacks remain prevalent against government networks.[49]

EPA acknowledges that APTs pose a significant challenge for the Agency and has committed to making significant progress in enhancing situational awareness across the infrastructure and

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[47] EPA, *FY 2011–2015 Strategic Plan*, page 25.
[48] The Environmental Information Exchange Network presentation "Introduction to the Exchange Network."
[49] InfoWorld, "Massive 'Lurid' APT attack targets dozens of government agencies," September 26, 2011.

increasing visibility into network activities. Management stated that to address this challenge, it has identified specific automated tools to deal with cyber security concerns in a secure manner. Management also indicated it fully deployed a Security Information and Event Management (SIEM) tool to facilitate greater vigilance in log reviews and activity monitoring. Additionally, the Agency indicated that its Computer Security Incident Response Capability (CSIRC) team is working to build stronger relationships with internal organizations, such as the Office of Homeland Security, for threat intelligence sharing.[50]

EPA uses a vast array of security devices and software such as firewalls, intrusion detection systems, and the SIEM tool to monitor its network in conjunction with the CSIRC to ensure the availability, integrity, and confidentiality of network services. Our ongoing analysis shows that EPA has made great strides in addressing the cyber security challenge over the last 2 years. However, our audit work continues to identify areas where management must close the gaps between putting in place basic infrastructure for monitoring security over Agency assets to building a strong cyber security capability and using it to effectively and efficiently reduce security risk. In particular:

> **Enhancing Situational Awareness:** EPA continues to take steps to address the need to monitor network traffic flowing within and into the Agency's network boundaries. To this end, EPA has completed the transition to the Managed Trusted Internet Protocol (IP) Services, which now gives it the ability to monitor network traffic flowing through both of its Internet points of presence. However, EPA still needs to take steps to improve its operational practices to better and more quickly synthesize information obtained from the variously deployed monitoring tools in order to prepare an effective response to network attacks.[51] Management indicated that part of its situational awareness strategy was to establish a Network Security Operations Center,[52] which it did in April 2012. EPA officials indicated that co-locating its incident response capability and network security operations would enhance information exchange between the two units and reduce the time needed to respond to attacks. However, management has not yet defined or developed service level agreements for the two contractors running the incident response capability and the network security operations center. Nor has management developed its internal agreements between the two EPA organizations responsible for providing contractor oversight. Lastly, for EPA to be able to share relevant situational information with senior leaders, it must first strengthen the Agency's asset management capability in order to associate IP addresses to the critical network assets and associated data. In 2008, we reported that EPA needed to improve management of IP addresses in order to associate discovered attacks and vulnerabilities with network assets for a more timely and effective incidence response.[53] As such, EPA implemented a market leading solution for automating IP address management services across the Agency's network.[54] EPA officials briefed us on its plans for updating the network infrastructure and shared with us

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[50] FY 2011 Agency Financial Report, page 183.
[51] EPA OIG, *Improvements Needed in EPA's Network Traffic Management Practices,* Report No. 11-P-0159, March 14, 2011.
[52] Technology & Information Security Staff Strategic Plan, FY 2011-2016, version 1.0.
[53] EPA OIG, *Management of EPA Headquarters Internet Protocol Addresses Needs Improvement*, Report No. 08-P-0273, September 23, 2008.
[54] EPA meeting notes, September 21, 2011.

strategic planning documents.[55] However, continued management vigilance is required to ensure the remaining outlined actions come to fruition.

Implementing Automated Tools: EPA acknowledged that many of its continuous monitoring efforts pivot around the successful implementation of its SIEM tool.[56] In our draft audit report released to the Agency in March 2012, we found that EPA lacks a fully developed strategy to include the Agency's headquarters offices within the SIEM's environment.[57] While EPA documents showed a strategy that included each of EPA's regional offices within the SIEM's environment,[58] our ongoing analysis disclosed that efforts to include headquarters offices fell short due to turnover of technical staff and EPA's discontinued meetings with headquarters personnel.[59] EPA officials indicated they have since updated the SIEM project plan and have also hired two new personnel within the CSIRC and headquarters to become subject matter experts on the tool. EPA officials indicated that this should also help facilitate implementing the SIEM tool in headquarters.

Building Greater Relationships: EPA has made progress in increasing its ability to process intelligence information and has taken steps to widen its relationships with other federal agencies by participating in working groups, task forces, and national exercises. However, more must be done to increase the sharing of security incident information within the Agency. The need for increased information sharing to combat cyber threats is necessary and emphasized as a major effort within proposed legislative language. In particular, the proposed Cybersecurity Act of 2012 prescribes that agencies must develop policies and procedures that include reporting information security incidents to relevant OIGs.[60] Currently, EPA is working on a Memorandum of Understanding (MOU) with the EPA OIG to define roles and responsibilities in coordinating responses to intrusion activities associated with EPA's networks. The implementation of this MOU and the information gathered by the Agency's IT staff is not only necessary for the continued protection of EPA's operational mission but is necessary to preserve the crime scene associated with the intrusion event to allow us to employ our investigative mission.

Developing a Vulnerability Remediation Program: In September 2009, we reported that project delays continued to prevent EPA from implementing an Agency-wide information security vulnerability management program. Our audit highlighted both the need for the Agency to implement a tool to continuously monitor Agency assets for vulnerabilities and a management process to ensure identified vulnerabilities are remediated.[61] Since this audit, EPA has taken steps to procure a vulnerability management tool and established an Agency-wide methodology for continuously

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[55] Technology & Information Security Staff Strategic Plan, FY 2011-2016, version 1.0.
[56] Fiscal 2011 Agency Financial Report, page 183.
[57] EPA OIG, *Draft Report: Improvements Are Needed in EPA's Security Monitoring Program,* Project No. OMS-FY11-0005.
[58] EPA Security Information and Event Management (SIEM) Infrastructure, SIEM Concept of Operations (CONOPS), June 12, 2011.
[59] EPA OIG, *Draft Report: Improvements Are Needed in EPA's Security Monitoring Program,* Project No. OMS-FY11-0005.
[60] Cybersecurity Act of 2012, Section 3354, Agency Responsibilities.
[61] EPA OIG, *Project Delays Prevent EPA from Implementing an Agency-wide Information Security Vulnerability Management Program*, Report No. 09-P-0240, September 21, 2009.

identifying vulnerabilities on Agency assets. However, current audit work disclosed that, despite this effort, EPA offices continue to face challenges in eradicating known vulnerabilities from its assets.[62] This happens, in part, because the Agency has not implemented a process that requires offices to remediate identified vulnerabilities. Current discussions with EPA officials indicate that management plans to establish a Patch and Vulnerability Management Group to address this issue. However, formal policies, procedures, and organization structure are not yet approved. Until then, EPA will continue to provide potential attackers an unnecessarily large window of opportunity to exploit system weaknesses, which could ultimately compromise the Agency's network. As such, closing the time behind vulnerability identification and remediation is key in protecting EPA's critical assets and data.

Implementing Information Security at the Enterprise Level: During 2011, we reported that EPA has not clearly defined the Information Management segment within its current Enterprise Transition Plan (ETP). The Information Management segment, which addresses information security at an enterprise architecture level, is identified as "notional," or not in planning. The ETP describes EPA's overarching strategy for modernizing the Agency's infrastructure to achieve its target architecture. The ETP does not clearly define the actions it will take to achieve its security target architecture. Given the rapid rise of APTs on EPA's network, the absence of a clearly defined plan for implementing the Information Management segment shows a lack of commitment on the part of the Agency to address information security from an enterprise-wide perspective. Without this strategy, EPA executives may not be able to make proper investment decisions regarding the necessary tools to combat APTs with an Agency-wide approach.[63] In its September 26, 2011, response to this finding, EPA indicated that during FY 2012 it would take steps to achieve the security target architecture. As such, the Agency indicated it has baselined the information security architecture and drafted the target architecture. However, management emphasis is still needed to ensure completion of the needed gap analysis and implementation plans, as outlined in the Agency's corrective action plan.[64]

Increasing Skills for Personnel with Significant Security Responsibilities: Our ongoing analysis disclosed that while EPA suspects that skill gaps exists, EPA has not undertaken studies to develop strategies to align the Agency's needs and priorities with those of its workforce to ensure it can meet its legislative, regulatory, and organizational objectives. Having personnel with the right skills in the right position is critical for EPA to respond effectively to cyber-attacks. EPA recognizes that not all Information Security Officers (ISOs) perform the same functions nor do they possess comparable technical knowledge and abilities.[65] We initiated an audit to evaluate the qualifications, skills, and

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[62] EPA OIG website listing FYs 2009-2012 reports on technical vulnerability assessments of EPA's network.
[63] EPA OIG, *EPA Has Taken Steps to Address Cyber Threats but Key Actions Remain Incomplete, Allocation of Controls Based on Enterprise Security Architecture,* Report No. 11-P-0277, June 23, 2011.
[64] Memorandum from EPA Assistant Administrator for Environmental Information to EPA Inspector General, Subject: OEI [Office of Environmental Information] Corrective Action Plan for OIG Audit: 11-P-0277, *EPA Has Taken Steps to Address Cyber Threats but Key Actions Remain Incomplete*, September 26, 2011.
[65] EPA OEI, Powerpoint Presentation, *Dual ISO Designations,* presented at September 20, 2011, Quality and Information Council Meeting.

competencies of personnel with significant information security responsibilities.[66] As implementers of the Agency's information security program, ISOs as well as others with significant security responsibility are key to ensuring that risk mitigation processes are carried out as prescribed by organizational policy. As results of this audit become available, the Agency should take steps to close any identified gaps within its information security program.

Increasing User Awareness: Our on-going analysis notes that EPA has made great strides in ensuring user awareness of security threats and establishing the organizational processes for reporting security incidents. EPA officials cited the new awareness videos that have appeared on the Agency's Intranet as one of the many actions taken and outlined other key actions planned to increase users' exposure to awareness information. As cyber-attacks become more advanced and targeted, it is vital that EPA officials continue their efforts to promote personal responsibility and influence positive behavioral changes throughout its user population. As such, management should commit itself to completing plans to establish rotating awareness messages displayed on the EPA Intranet home page and work to conduct social engineering tests for users. This would help to ensure that all personnel, regardless of their specific job responsibilities, know how to apply information security basics necessary to protect vital Agency information.

Improving the Overall Information Security Program: In the broader context of its information security program, EPA officials indicated that they have begun steps to strengthen the Agency risk management governance by: (1) providing EPA executive reports on system authorizations and plans of actions and milestones in order to elevate the level of review and awareness of system statuses; (2) transitioning to conducting third party control assessments annually, with all Agency systems expected to be on this cycle by the end of FY 2014; and (3) defining an enterprise level risk management process and taking steps to implement a Risk Executive Board to ensure acceptable and cost effective system authorizations. While we are encouraged by management efforts in these critical areas, our ongoing analysis disclosed that a significant amount of the data reported under these new processes derive from an EPA information source that is unreliable for assessing the Agency's information security program. Our audit work disclosed that unsubstantiated responses for self-reported information contribute to data quality problems and that EPA conducts limited independent reviews or follow-up to correct data inaccuracies.[67] EPA indicated it would not remediate the report's recommendations until the first quarter of 2013.[68] Without taking steps to improve data used in EPA's risk management program, it is doubtful that senior executives would be provided sufficient, reliable information to make informed decisions over system authorizations.

As a continuation of this management challenge from last year, EPA leadership must continue to meet this challenge head-on by sufficiently funding the development of a real time capability to identify and investigate attacks against EPA's computer and network systems. Not only is taking

[66] EPA OIG Memorandum, *Notification Memorandum for Project No. OMS-FY12-0006, Assessment of the Qualifications of Environmental Protection Agency Personnel with Significant Security Responsibilities,* February 15, 2012.
[67] EPA OIG, *Self-reported Data Unreliable for Assessing EPA's Computer Security Program,* Report No. 10-P-0058, February 2, 2010.
[68] EPA OEI, Memorandum, *Request for Extension of Corrective Action,* January 31, 2012.

steps to address these issues paramount, but EPA must ensure it establishes a robust cyber security program that is adaptive to the myriad challenges facing the Agency. Whether it is integrating smartcards into the operating environment, providing secure access to network resources as agencies expand the use of unscheduled flexiplace, or the securing of the new types of smart devices provided to Agency employees, these various access points, from sometimes unknown origins, provide multiple potential gateways into the Agency's network. Until EPA moves beyond deploying tools to being able to use the generated information for effective decision-making and risk management, the Agency will continue to be at risk as cyber-attacks grow in sophistication and persistency.

EPA's Framework for Assessing and Managing Chemical Risks

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 information available for examination while protecting manufacturers' confidential business information. The TSCA inventory of chemicals in commerce now exceeds 84,000 chemicals.[69] Periodic TSCA chemical data reporting indicates that there are approximately 7,000 chemicals currently produced at volumes of 25,000 pounds or greater. Under TSCA, EPA is charged with the responsibility of assessing the safety of these commercial chemicals and acting upon those chemicals if there are significant risks to human health or the environment. EPA believes that this significant and long-term challenge can best be met via legislative reform of TSCA to improve EPA's chemical management authorities. However, until reform is achieved, EPA's responsibility to create a sustained and effective existing chemicals program must be carried out under current authorities. Given the vast number of chemicals, the high cost to EPA of performing comprehensive risk assessments, the need for risk management, and the Agency's responsibility to protect human health and the environment, EPA has developed the following multi-pronged approach for its existing chemicals management program:

1) Risk assessment and risk reduction
2) Data collection and screening
3) Public access to chemical data and information

The Agency intends to perform risk assessments and, if appropriate, risk management for those chemicals with well-characterized hazard concerns and which present the possibility of significant exposure. These are likely to be a relatively small number of chemicals, compared to the size of the universe of commercial chemicals. While risk assessments are being conducted for this small group of chemicals, EPA will be developing an approach to screen the thousands of other compounds to determine which ones warrant further attention, which could include comprehensive risk assessments or additional data development addressing either hazard or exposure. Many chemicals will likely be judged as being of lower concern. Finally, EPA will work toward making chemical information available. In particular, the Agency will work to ensure that hazard and exposure data are available to the public in a manner that is most useful to those who will be using the information. Taking this approach to address multiple aspects of the

[69] EPA, TSCA Chemical Substance Inventory "Basic Information" website – "Background" link.

chemicals management challenge simultaneously should allow the Agency to be more comprehensive in its efforts despite the large number of high-production chemicals.

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.[70] 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.

In 2011, we continued to identify challenges to EPA's ability to assess and manage chemical risks. When we evaluated how effectively EPA manages the human health and environmental risks of nanomaterials, we found that it does not currently have sufficient information or processes to effectively manage human health and environmental risks. Though EPA has the statutory authority to regulate nanomaterials, it lacks the environmental and human health exposure and toxicological data to do so effectively. EPA has proposed mandatory reporting rules for nanomaterials under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is also developing proposed rules under TSCA. After we found that EPA lacked a formal process to coordinate the dissemination and utilization of the potentially mandated information, the Agency agreed to our recommendation to establish a process.

This past year we also evaluated EPA's efforts to identify and manage the unique chemical risks to children. Specifically, we evaluated whether the outcomes of EPA's Voluntary Children's Chemical Evaluation Program (VCCEP) met its original goal and the goals outlined under the Chemical Right-to-Know Initiative.[71] The goal of the initiative was to give citizens information on the effects of chemicals to enable them to make informed choices in the home and marketplace. The initiative directed EPA to undertake testing of chemicals to which children are disproportionately exposed. EPA accordingly established the VCCEP pilot. We found that the VCCEP pilot did not achieve its goals to design a process to assess and report on the safety of chemicals to children. The pilot's design did not allow for desired outcomes to be produced. Specifically, the pilot had a flawed chemical selection process and lacked an effective communication strategy. Programmatic effectiveness was hampered by industry partners who chose not to voluntarily collect and submit information, and EPA's decision not to exercise its regulatory authorities under TSCA to compel data collection. EPA has not demonstrated that it can achieve children's health goals with a voluntary program.

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[70] EPA OIG, *EPA Needs a Coordinated Plan to Oversee Its Toxic Substances Control Act Responsibilities*, Report No. 10-P-0066, February 17, 2010.
[71] EPA OIG, *EPA's Voluntary Chemical Evaluation Program Did Not Achieve Children's Health Protection Goals*, Report No. 11-P-0379, July 21, 2011.

As we concluded in previous years, EPA's framework for assessing and managing chemical risks has not yet achieved the goal of protecting human health and the environment.[72] 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.

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[73] and amendments to the Safe Drinking Water Act,[74] 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, and the metabolism and blood-sugar levels). EPA established the Endocrine Disruptor Screening Programin 1998 to use validated methods for the screening and testing of chemicals to identify 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.[75]

We continue to evaluate EPA tools, procedures, and practices for assessing and managing chemical risks. One current effort includes reviewing EPA's use of the Integrated Risk Information System (IRIS). The objective is to determine how EPA program offices and regions utilize IRIS in their work and products.[76] We are also evaluating management of EPA's TSCA and FIFRA enforcement tools to determine whether the intended outcomes are efficiently and effectively achieved.[77] Given our completed and ongoing work, coupled with the significance of this issue, we believe this issue warrants being retained as an Agency management challenge.

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[72] EPA OIG, EPA's Key Management Challenges in 2010 and 2011.
[73] EPA, "Pesticides – Regulating Pesticides" website, background on the Food Quality Protection Act of 1996.
[74] EPA, "Water – Safe Drinking Water Act" website, background on the Safe Drinking Water Act Amendments of 1996.
[75] 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.
[76] EPA OIG, *Congressional Inquiry Regarding EPA's Integrated Risk Information System*, Project No. OPE-FY12-2734.
[77] EPA OIG, *Evaluation of Penalties for FIFRA and TSCA*, Project No. OPE-FY11-0018.

Workforce Planning

In 2002, EPA acknowledged human capital as an Agency internal control weakness in part due to requirements released under the President's Management Agenda[78] and audit findings that identified significant concerns with EPA's management of human capital.[79] Since that time, EPA developed a number of strategic documents to direct its human capital efforts focusing on the skills, competencies, and occupations needed to carry out its mission.[80] While knowing the required skills and competencies is useful, EPA has not developed analytical methods, nor does it collect data needed, to measure its workload and the corresponding workforce levels necessary to carry out that workload. In 2008, EPA removed human capital from the list of Agency weaknesses and added the more specific topic of Workforce Planning as an Office of the Chief Financial Officer (OCFO) office-level weakness. Both our office and GAO have recommended in previous reports that EPA strengthen internal controls—policies, procedures, and methods—for workforce planning. However, the need for systematic Agency-wide analysis of workload and workforce levels is broader than OCFO and impacts the ability of EPA programs to efficiently and effectively carry out their mission. For example, 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.[81] Due to the broad implications of workforce planning on accomplishing EPA's mission, we are including it as an Agency management challenge for 2012.

In December 2010, we reported that EPA did not have controls or a defined methodology to determine workforce levels based upon the workload of the Agency.[82] EPA's OCFO establishes budget workforce levels based on the prior year's levels and proposed funding levels. EPA's program and regional offices are not conducting systematic workload analysis or identifying workforce needs for budget justification purposes and have not done so in over 20 years.

In 2011, we reported[83] that EPA does not require program offices to collect and maintain workload data, and the programs do not have databases or cost accounting systems in place to collect data on time spent on specific mission-related outputs. Without such data, program offices are limited in their ability to analyze their workload and justify resource needs.

GAO also reported that EPA's process for budgeting and allocating resources does not fully consider the Agency's current workload. In March 2010, GAO reported that it has brought this issue to the attention of EPA officials in successive reports in 2001, 2005, 2008, and 2009.[84] In response, EPA stated that it recognized the need to improve its ability to understand and quantify

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[78] EPA, *EPA Strategic Alignment – Human Capital Planning*, January 3, 2008, page 1.
[79] EPA, OCFO, *2007 Performance Accountability Report*, pages 205-06.
[80] EPA, *EPA Strategic Alignment – Human Capital Planning, Green Summary*, January 3, 2008, page 1.
[81] 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).
[82] EPA OIG, *EPA Needs to Strengthen Internal Controls for Determining Workforce Levels*, Report No. 11-P-0031, December 20, 2010.
[83] EPA OIG, *EPA Needs Workload Data to Better Justify Future Workforce Levels*, Report No. 11-P-0630, September 14, 2011.
[84] GAO, *Workforce Planning: Interior, EPA, and the Forest Service Should Strengthen Linkages to Their Strategic Plans and Improve Evaluation*, GAO-10-413, March 31, 2010, page 19.

the relative workload of its component organizations and to make allocation decisions based on those assessments. EPA said that it was committed to improving its analytical capabilities and examining appropriate measures of workload to support the resource allocation process.

In February 2010, we reported that EPA does not enforce a coherent program of position management to assure the efficient and effective use of its available workforce.[85] Without an Agency-wide position management program, EPA leadership lacks reasonable assurance that it is using personnel in an effective and efficient manner to achieve mission results. For example, in our report issued in 2011,[86] we found that EPA's Office of Enforcement and Compliance Assurance (OECA) is constrained from actively managing its resources to direct them to the most important state enforcement problems. Under the current resource planning structure, EPA regions divide their resources among several enforcement priorities, including state oversight. If EPA regions report that they are having problems with state enforcement, OECA cannot reallocate FTEs among regions to address the problems because OECA does not control enforcement resources in the regions. Therefore, priority enforcement issues may not receive needed resources.

Since 2005, various EPA offices have attempted to assess their workloads. EPA paid contractors nearly $3 million, but EPA generally did not take action or widely share the results of these efforts. For example, in 2006, OCFO awarded a contract to gather information on methods that other government agencies used to assess workload and staffing needs, identify their advantages and disadvantages, and gauge their relevance to EPA. EPA planned to use this information to develop methods for assessing staffing in relation to workload, validate current levels, and identify areas of concern, as well as explore alternative ways to assess and benchmark staffing levels against workload shifts. The results of the analysis showed that there were not significant similarities among agencies. The contractor recommended that OCFO develop its own approach for assessing and adjusting workforce allocation to align with workload. Various offices within EPA conducted other studies. In 2009, OCFO awarded another contract to conduct a workload assessment to assist EPA in exploring ways to better assess and benchmark current staff levels against workload shifts. The analysis targeted key functions that EPA shares with other federal agencies, such as (1) regulatory development, (2) scientific research, (3) enforcement, (4) financial management, (5) environmental monitoring, and (6) permitting. The contractor completed this most recent effort in September 2011.

In April 2012, EPA issued a report[87] that highlights fundamental changes EPA is planning to develop a more robust civil rights program. One of the key recommendations from this effort was developing a staffing plan for Agency civil rights functions. The recommendation calls for the same types of workforce actions we have been encouraging the Agency to undertake, including:

- Identifying the essential functions based upon data
- Determining the skills and numbers of employees to carry out those functions
- Developing a staffing plan
- Requesting needed FTEs/resources through the budget process

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[85] EPA OIG, *EPA Needs Better Agency-Wide Controls over Staff Resources*, Report No. 11-P-0136, February 22, 2011.
[86] EPA OIG, *EPA Must Improve Oversight of State Enforcement*, Report No. 12-P-0113, December 9, 2011.
[87] EPA, *Developing a Model Civil Rights Program for the Environmental Protection Agency*, Final Report, Civil Rights Executive Committee, April 13, 2012.

While this process is just getting underway, we believe it is a step in the right direction.

EPA has recently developed draft tools and circulated these tools among Agency subject matter experts for input and feedback. The tools will subsequently be circulated for senior management review. EPA is also in the process of developing options for implementing workforce planning but has yet to implement workforce analysis Agency-wide. EPA's ability to assess its workload and accurately estimate workforce levels necessary to carry out that workload is critically important to mission accomplishment. Given the significance of this issue and the need for progress Agency-wide, we have elevated workforce planning from an internal control weakness to an Agency management challenge.