



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

OFFICE OF
INSPECTOR GENERAL

April 21, 2006

MEMORANDUM

SUBJECT: EPA's Key Management Challenges

FROM: Bill A. Roderick
Acting Inspector General

A handwritten signature in black ink, appearing to read "Bill A. Roderick", is written over a horizontal line.

TO: Stephen L. Johnson
Administrator

The Office of Inspector General (OIG) has identified what we regard as the 2006 key management challenges for the U.S. Environmental Protection Agency (EPA). After discussions with your staff throughout the year, our office agreed that, where possible, we would provide challenges that were more specific, so that progress in resolving the issues might be more apparent. Nevertheless, we believe that many of these challenges are not easily addressed, and we recognize that remaining on our list over the course of several years does not necessarily reflect a lack of attention to the issues.

We used your Action Plan in developing our list of challenges and believe they are consistent with your principles to accelerate the pace of environmental protection. We welcome the opportunity to discuss this with you in more detail.

We removed from the list three of last year's challenges: "Superfund Evaluation and Policy Identification," "Challenges in Addressing Air Toxics Program Goals," and "Information Security." We state our reasons below.

"Superfund Evaluation and Policy Identification" was removed because EPA is taking, or has completed, steps to address most of the key issues we highlighted. Broadly, EPA has developed an action plan to respond to the majority of the 108 recommendations in its internal review of the Superfund program (the 120-Day Study) and has agreed to implement recent OIG recommendations that identify improvements in managing Superfund resources. We will continue to monitor EPA's progress related to improving the Superfund program and will identify the program's challenges, as warranted.

We removed "Challenges in Addressing Air Toxics Program Goals," although we believe this remains a very important focus for both the Agency and the OIG. EPA has expanded its efforts to address air toxics by increasing funding 20 percent since 1999, from \$89.9 million in FY 1999 to \$108.2 million for FY 2006.¹ EPA has also completed

its Clean Air Act (CAA) requirement to issue technology-based standards (MACT standards) for categories of major stationary sources.² Although EPA has enhanced its efforts to address air toxics, reducing the health and environmental risks from air toxics remains a significant focus, because difficulties and uncertainties associated with developing Phase II risk-based standards for major stationary sources remain.³ We will continue to monitor EPA's progress in this area.

We removed "Information Security" from our list because the Agency has demonstrated steady progress in this area, primarily through strengthened policies and procedures of the Office of Environmental Information. We noted that EPA scored an A⁺ on the 2005 Congressional Federal Information Security Management Act Report Card. We will continue to monitor information security, particularly the practices employed by the various offices for the systems they are responsible for protecting.

Our key management challenges below are not presented in priority order.

Data Gaps

Data Standards and Data Quality

Information Technology Systems Development and Implementation

Managing for Results

Human Capital Management

EPA's Use of Assistance Agreements to Accomplish Its Mission

Agency Efforts in Support of Homeland Security

Voluntary, Alternative, and Innovative Practices and Programs

Efficiently Managing Water and Wastewater Resources and Infrastructure

Emissions Factors for Sources of Air Pollution

Data Gaps

If EPA is to manage for results, it needs to decide what environmental and other indicators will be measured; provide data standards so that organizations responsible for delivering environmental programs are measuring what is important and are using common definitions; and ensure that data are of sufficient quality for effective decision making. OIG audits and evaluations have also pointed out that data to measure program success are not always present.

EPA's FY 2005 Performance Report and the latest draft of the Report on the Environment 2007 demonstrate the utility and value of environmental indicators for accountability and tracking environmental progress. Some important environmental results information is already being captured, such as trends in wetlands acreage, statistically representative baselines for the condition of the Nation's coastal waters and small streams, concentrations of ozone-depleting chemicals in the lower atmosphere, and baselines for the number of Superfund National Priorities List sites and Resource Conservation Recovery Act high priority corrective action sites where offsite migration of contaminated groundwater is or is not occurring. Such information helps EPA managers make more effective and efficient resource investment decisions.

While some important data exist, EPA and its partners are not yet engaged in an effort to ensure that high priority data gaps are filled and that data deemed important will be collected in the future. Most indicators rely on data gathered by the States, other Federal programs, and the private sector. Increasing budgetary pressures at the State and Federal levels may threaten the future collection and analysis of such data. For example, many indicators in the draft Report on the Environment 2007 are based on land use/land cover data that are already 15 years old. Such information needs to be updated.

Addressing data gaps will require a coordinated effort by EPA and its partners involving extensive collaboration during both budget preparation and strategic prioritization activities. EPA plans additional actions to address this challenge. We understand that during the development of the 2006-2011 Strategic Plan, the Agency will identify data gaps by building on the information in the draft Report on the Environment 2007. Progress will then be reported to the Quality Information Council and the Chief Financial Officer on a regular basis.

Data Standards and Data Quality

The Agency has a substantive effort in place to develop data standards and provide guidance for their implementation, but incorporating data standards in information collections from initial plans to obtaining the data for analysis is not yet a routine activity in all programs.⁴ Data standards are an essential component of EPA's information program. They promote efficiently sharing environmental information among EPA, States, tribes, and other information partners. Using common data standards among partners ensures consistently defined and formatted data elements and sets of data values, and ensures access to more meaningful environmental data.

EPA recognizes data standards as a weakness and has developed a three-step corrective action plan involving a communication strategy that promotes the awareness of implementation documentation and best practices, tracking implementation of data standards, and a validation strategy to review progress in implementing the standards and the effectiveness of corrective actions. Completing this plan is projected for 2010.

EPA and its partners also need to continue to focus on ensuring that data are of sufficient quality for decision-making. For example, EPA considers data quality for drinking water as an Agency-level weakness and has a corrective action completion target date that extends to 2007.⁵ OIG evaluation and investigative activities involving laboratories' analysis of drinking water samples continue to raise concerns with the integrity of sample results. Without any national studies of water quality data that include examining laboratory integrity, the full extent of the problem remains unassessed. Given the potential impact of poor quality data on human health, EPA should assess drinking water laboratory integrity and incorporate promising techniques to identify improper practices and fraud into the required elements of the laboratory oversight process.

Also impacting the data quality issue is the need for policies and procedures for approving electronic reporting systems under the Cross-Media Electronic Reporting Rule (CROMERR). CROMERR is intended to permit and encourage using electronic reporting that reduces the cost and burden of data transfer and maintenance, improves data quality and availability, and maintains the level of corporate and individual responsibility and accountability for electronic reports and records that exist in the paper environment.⁶ The integrity and quality of electronic reports are essential. Inconsistencies in deploying these systems could place at risk the continued viability of self-monitoring and self reporting that provide the framework for compliance under most EPA environmental programs. Therefore, EPA should take further steps to ensure consistent approval of electronic reporting systems throughout EPA.^{7 8} In addition, EPA has reconsidered its approach to electronic record keeping and is not issuing final record keeping rules at this time.⁹ Enforcement activities rely on the availability of electronically submitted documents needed to prosecute enforcement violations. Therefore, EPA should take steps to continue its efforts to address the “Record Keeping” portion of the rule.¹⁰

Information Technology Systems Development and Implementation

EPA requested approximately \$600 million in system development/maintenance funding for fiscal years 2006 and 2007.¹¹ The Agency has experienced system development and implementation problems similar to those encountered by other Federal agencies. Recently, we reported that the EPA did not sufficiently oversee information technology (IT) projects to ensure they met planned budgets and schedules. For example, PeoplePlus, EPA’s new combined human resources, payroll, and time and attendance application, cost at least \$3.7 million more than originally budgeted and took 1 year longer than planned to deploy. The cost of the Clean Air Markets Division Business Systems’ development has increased by approximately \$2.8 million and the target completion date has been extended by 2 years.¹²

Among EPA’s numerous system projects, two financially related information system efforts have Agency-wide implications - migrating EPA’s payroll processing functions to the Defense Finance and Accounting Service and replacing its core financial accounting system. Modernizing any major system will never be a risk-free proposition; the Government Accountability Office (GAO) has reported that the Federal government has long been plagued by financial management system modernization efforts that have failed to meet their cost, schedule, and performance goals.¹³

The EPA Chief Information Officer has taken steps to strengthen EPA’s Capital Planning and Investment Control (CPIC) and system development processes by:

- updating its CPIC policy to ensure that the process for managing information technology investments is consistent with Federal statutes, regulations, and policies, and supports the Agency’s System Life Cycle and Enterprise Architecture requirements¹⁴;
- publishing an interim Agency System Life Cycle Management Policy¹⁵; and

- promulgating procedures for EPA offices to utilize Earned Value Management for its IT projects.¹⁶

EPA needs to further enhance its IT investment control structure and hold system managers accountable for following it. Revisions to the Interim Policy to define requirements for life cycle documentation and ensuring that system managers follow established procedures are just two examples of steps that should be taken.

Managing for Results

EPA has made considerable progress in linking resource investments to results. Programs reviewed using OMB's Program Assessment Rating Tool have received improved scores. EPA plans to work with its partners and stakeholders to develop more outcome-oriented goals and intends to integrate performance and cost information more closely when developing the FY 2008 budget.

EPA needs to focus on the logic of program design, measures of success (outcomes and outputs), measures of efficiency, and ensuring that Agency programs and processes are set up so that EPA can evaluate the results and make necessary changes. As discussed above, the type and quality of the data used are key factors in determining the success of any program. This long-term challenge encompasses the Agency's work from strategic planning, through tracking what is actually accomplished, and how much it costs.

As the Agency drafts the new 2006-2011 Strategic Plan, it has the opportunity to strengthen this underlying foundation for managing for environmental results. This effort challenges all EPA offices to:

- leverage all parties' resources by coordinating EPA's mission more closely with the missions of Federal, State, and tribal partners and identify specific opportunities for eliminating gaps or conflicts;
- fully address cross-media issues;
- link goals, performance objectives, sub-objectives, strategies and measures explicitly and clearly;
- integrate EPA's human capital strategy into each goal;
- build in considerations of risk, cost/benefit analysis, and stakeholder consultations; and
- incorporate the strategic goals of its regional offices in a coherent approach that demonstrates how to link local and regional environmental issues to national goals and measures.

The new plan should provide a clear roadmap of substantive strategies, interim and long-term measures, and timeframes to meet its stated goals.

To evaluate program efficiency, EPA must continue improvements to track the cost of achieving environmental results. Equally important is getting EPA managers to consider cost when making operational and strategic decisions. With the right

information in hand, EPA can analyze and improve its performance.

Human Capital Management

Maintaining a highly skilled, diverse, results-oriented workforce is vital to successfully accomplishing EPA's mission. EPA faces challenges in developing, attracting, and sustaining this type of workforce. Like many Federal agencies, EPA is trying to maintain its workforce as the number of employees eligible to retire increases.¹⁷ EPA recognizes the importance of implementing a workforce planning system, supported by reliable and valid workforce data, to ensure that it hires the right number and type of people, and allocates resources to meet mission needs.¹⁸

In FY 2005, EPA reported Human Capital Strategy Implementation/ Employee Competencies as an Agency weakness with a planned closure date in fiscal year 2006.¹⁹ EPA's corrective action strategy for eliminating human capital (HC) management as an Agency weakness includes actions to address workforce planning and human capital accountability among other efforts.

Workforce Planning. EPA issued its first comprehensive Strategic Workforce Plan (SWP) in March 2006, which presents a national-level approach to workforce planning for the Agency. This SWP provides data and focuses on developing, implementing, and evaluating activities for meeting the Agency's future workforce needs and, as appropriate, controlling workforce costs. It presents a framework that will guide all of EPA's future workforce development activities. The process as shown in the SWP includes four primary activities that EPA needs to complete: identifying high priority competencies needed to achieve Agency goals, completing an inventory of the current workforce, comparing what exists to what is needed and identifying gaps, and developing strategies and solutions to close identified gaps.

The SWP recognizes the reality of tight budgets as one of the drivers that will influence the nature or emphasis of EPA's work. EPA will need to impose greater rigor in focusing on priorities and managing limited human capital resources to achieve continued improvements in environmental and human health protection.

Human Capital Accountability. In September 2005, EPA issued the Human Capital Accountability Plan for Achieving Results that focuses on both results and the accountability process needed to drive EPA toward achieving HC goals. The Plan also describes how the Agency evaluates its headquarters and regional HC operations for effectiveness, efficiency, and compliance with Merit System Principles and the laws and regulations that support them.

On the President's Management Agenda scorecard for the second quarter of FY 2006, OPM indicated that EPA continued to make progress in developing performance appraisals and workforce planning. EPA received "Green in Progress" for its accomplishments during this quarter.²⁰ However, EPA must now evaluate the results

of the HC initiatives over time and adjust its strategy as necessary to ensure the Agency meets its HC goals.

EPA's Use of Assistance Agreements to Accomplish Its Mission

Since 1996, EPA has reported Management of Assistance Agreements as a material or agency weakness under the Federal Managers Financial Integrity Act.²¹ EPA awarded more than half of its fiscal year 2005 obligations to organizations through assistance agreements. The work involved is critically important to fulfilling EPA's mission; it is imperative that the Agency use good management practices in awarding and overseeing these agreements to ensure they cost-effectively contribute to attaining environmental goals. EPA has taken action to improve its management of grants and to address issues in OIG reports. Two areas where continued emphasis is needed are incorporating environmental results into grants and holding project officers and their supervisors accountable for effective grants management.

Since January 2005, EPA policy has been to link grants to the strategic plan and ensure that work plans contain well-defined outputs and, to the maximum extent practicable, well-defined outcomes. The Agency needs to continue its work to define environmental measures for its activities, so that the measures can be incorporated into grant documentation. An agency evaluation of non-competed grants in 2005 showed that many grant work plans (77 percent) included a discussion of outcomes, but only a small percentage (17 percent) included quantifying outcomes.

EPA also needs to continue to emphasize accountability for managing grants in accordance with policies and procedures. In September 2005, the OIG reported that while EPA had made progress in establishing accountability, managers did not sufficiently hold supervisors and project officers accountable for grants management because no process existed to measure most grants management activities. Managers and supervisors generally did not discuss grants management responsibilities during year-end evaluations. In the limited cases where grants management weaknesses were identified, managers did not effectively communicate these weaknesses to staff.²²

EPA agreed with the report's recommendations and developed a twelve-step corrective action plan to be completed by February 2008. The final step is to conduct 2007 performance reviews using new grants management performance measures. EPA established a Performance Measures Workgroup to develop the 2007 performance measures by October 2006. The Workgroup is also exploring options for creating new performance recognition and incentive programs for individual project officers and supervisors to encourage excellence in grants management.

Agency Efforts in Support of Homeland Security

The Department of Homeland Security (DHS) maintains the lead for the unified national effort to better prepare for, prevent, and respond to potential attacks against the United States. In addition to carrying out its mission to protect human health and the

environment, EPA has the important responsibility of protecting the environment from terrorist acts. EPA has developed chemical, biological, radiological, technical, and scientific expertise that enhances the ability of DHS to address potential terrorist threats.

EPA also possesses emergency response capabilities that complement the efforts of other Federal agencies. EPA's role in responding to terrorist incidents and other national emergencies, such as Hurricanes Katrina and Rita, has further defined and demonstrated the Nation's expectations of EPA's emergency response capabilities. The Public Health Security and Bioterrorism Preparedness and Response Act (Public Law 107-188) specifically tasked EPA with funding and overseeing water system vulnerability assessments and resulting emergency response plans. The National Response Plan and several Homeland Security Presidential Directives direct EPA to support and develop the preparedness of State, local, and tribal governments, and private industry, to respond to, recover from, and continue operations after a terrorist attack.

Over the past year, OIG analyzed EPA's homeland security emergency response activities. We found that the Agency's *Emergency Response Business Plan* ("the Plan") provides a framework to address readiness for simultaneous incidents of national significance while maintaining effective "day-to-day" emergency response and removal operations. Also, the Plan briefly describes the necessary changes in the management of personnel, financial, and other resources required to address incidents of national significance readiness. However, continuing challenges remain as EPA's Office of Emergency Management finalizes the Plan to address four observations and related suggestions we identified during our analysis: (1) selecting incidents of national significance scenarios included in the Plan, (2) dealing with the conflicts inherent in preparing for incidents of national significance while maintaining an effective emergency response and removal program, (3) specifying EPA's role in the National Approach to Response work plans, and (4) monitoring progress through the Core Emergency Response evaluation process.

The OIG also reviewed the accountability and procedures of key homeland security activities to assure they were accomplished effectively and in a timely manner. We found that EPA made limited progress in accomplishing the initiatives in its 2004 Critical Infrastructure and Key Resources Protection Plan (CIPP). The CIPP contained those actions the Agency considered essential for identifying, acquiring and protecting critical infrastructure and key resources needed to respond to emergencies. While EPA began work on 9 of the 10 major CIPP initiatives, it had not sufficiently accomplished 5, had not assigned milestones for 4 other initiatives, and did not have a system for effectively tracking counter terrorism/emergency response (CT/ER) equipment. As a result, EPA's ability to protect public health and the environment from future terrorist attacks or other nationally significant incidents is not at the level the Agency determined necessary.

The lack of overall accountability for monitoring the CIPP delayed its implementation, and hindered EPA's efforts to obtain and protect needed CIPP assets. Furthermore, the lack of procedures for managing CT/ER equipment caused

inconsistencies that could delay getting equipment to an emergency. This was apparent in EPA's response to Hurricane Katrina because needed equipment could not be located easily. EPA needs to assign responsibility for monitoring the CIPP, which is now spread across four offices, to one office that will be held accountable for all key actions, better ensuring emergency responsiveness as envisioned by the Agency.²³

Voluntary, Alternative, and Innovative EPA Practices and Programs

EPA supports and advocates a range of voluntary programs, and innovative or alternative practices, designed to provide flexibility and novel and beneficial approaches to achieve environmental goals. The basic premise of voluntary approaches is flexible, collaborative, market-driven solutions that can deliver measurable environmental results. These programs primarily work with business, community or other partners to either reduce pollution below regulatory requirements, or ameliorate environmental problems not otherwise regulated by EPA (e.g. water and energy use, recycling). In 2002, EPA released an innovation strategy that described EPA activities and priority issues.

Significant and noteworthy examples of successful innovative or voluntary practices and programs exist. For example, "Energy Star," one of EPA's flagship voluntary programs, is recognized by more than 60 percent of the American public and results in reduced energy consumption, as well as consumer savings on utility bills. EPA's recent "Good Samaritan" initiative can provide private, and innocent, landowners the ability to voluntarily clean up pollution from abandoned mine sites, without fear of Superfund liability. This innovative approach holds promise for restoring and protecting watersheds that could otherwise remain contaminated due to private party concerns about Superfund cleanup liability.

Voluntary programs and innovative or alternative approaches hold promise and need to be encouraged. However, their growth has not been matched by efforts or processes to define the programs, determine which programs work, how efficiently they work, or how to determine the respective goals and expectations of voluntary programs or alternative approaches compared to regulated programs and approaches. The challenge this poses for EPA is to overcome its inability to fully articulate or measure the results of voluntary programs or innovative and alternative approaches. In 2002, the National Academy of Sciences reported that rigorously evaluating voluntary programs is important because of the historical failure of markets and voluntarism to address environmental problems, and because resource depletion creates a heavy burden of proof for those who advocate voluntary alternatives to regulation.

Clearly, EPA must be innovative and flexible, and adapt to changes in environmental protection, to move forward and continue progress toward environmental goals. The challenge is to maintain those vital elements of the existing system, such as the standards, permits, and compliance assurance efforts that are part of EPA's basic mandate, while simultaneously pursuing creative new tools and approaches that complement and enhance the Agency's efficiency and effectiveness.

In 2004, the Innovation Action Council was charged with voluntary program oversight and created the Voluntary Program Coordination team. This team has issued several guidance documents and has attempted to stay in regular contact with many of the voluntary programs. However, it does not have Agency-wide oversight authority to conduct day-to-day management functions, or to develop management procedures, measurement protocols, or outcome reporting requirements. EPA can take steps to address these oversight, evaluation, and management challenges to maximize potential environmental benefits of voluntary, innovative, and alternative approaches.

Efficiently Managing Water and Wastewater Resources and Infrastructure

America's water assets are critical to the country's public health and economic, environmental, and cultural vitality. About 160,000 public drinking water systems and 16,000 sewage treatment plants throughout the Nation supply fresh water and remove and treat used water. Over the past 20 years, communities have spent more than \$1 trillion (in 2001 dollars) on drinking water treatment and supply, and wastewater treatment and disposal. Still, these systems are projected to have huge costs to repair, replace, and construct new water infrastructure. Current systems are wearing out, and recent and future environmental requirements from EPA will necessitate additional investments. In 2002, EPA estimated the 20-year water infrastructure capital needs as ranging between \$485 billion and \$896 billion.

EPA has had a two-pronged approach to influencing this gap. It annually commits funding to the Clean Water and Drinking Water State Revolving Funds (SRFs) to ensure that communities have access to capital for their drinking and wastewater infrastructure needs. The 2007 President's Budget proposes \$688 million for the Clean Water SRF and \$841.5 million for the Drinking Water SRF. These amounts are less than previous years and will play a limited role in meeting overall needs. EPA has approached this challenge by focusing on its "Four Pillars of Sustainable Infrastructure" – better management, water efficiency, full cost pricing, and the watershed approach.

While EPA hopes to build upon these pillars using the tools of technology, innovation, and collaboration, it is faced with the challenge of trying to do more with less. It has to find ways to be more innovative on the finance and management fronts to assist States and communities in overcoming infrastructure issues. OIG work on such topics as Drinking Water Protection Efforts, Source Water Protection, Combined Sewer Overflows and State Revolving Funds have all found funding to be a significant barrier to progress. Our work has shown that a competition exists between infrastructure and other priority water needs (e.g. drinking water source protection, regulatory program implementation, security.) for the limited available SRF money. Funding requirements can be more difficult for small systems to meet, impeding their ability to obtain much needed resources.

The Agency faces a continuing challenge to find ways to reach and influence the management behavior, skills, and abilities of thousands of small utilities. Preparing and publishing documents, and convening workshops reach only a small portion of the systems that need EPA's expertise. Recent OIG work shows that lack of long-term

planning, management and operator competencies and retention, and problems understanding regulations continue to be challenges for small utilities. Good practices, such as mentoring programs by larger utilities, show promise for wider application to benefit small utilities and could help address the management issues that are a component of the water infrastructure challenges. EPA needs to define its role as part of a long-term national strategy on sustainable water infrastructure that addresses financial and management issues, so that the Nation's water quality is protected now and in the future.

Emissions Factors for Sources of Air Pollution

EPA; State, local, and tribal agencies; industries; environmental groups; and others use emissions factors to develop the emissions data that are the cornerstone of many important environmental decisions.²⁴ Emissions factors are used for about 80 percent of emissions determinations for sources of air pollution.²⁵ These decisions include facility permitting, developing control strategies, making compliance and enforcement decisions, measuring environmental progress, and demonstrating program results under the Government Performance and Results Act.²⁶ Without reliable emissions factors, users cannot be sure that (1) air pollution control strategies target the right industries or products, (2) permitting programs include all required sources and establish proper emission limits, and (3) air programs are effective in reducing air pollution.²⁷

The Agency faces significant challenges in improving emissions factors. A recent OIG evaluation found (1) conflicting guidance on appropriately using emissions factors, (2) a rating system that did not quantify the uncertainty associated with the emission factor, (3) inadequate funding of the emissions factor program, and (4) the lack of a comprehensive plan to improve data collection and set emissions factor priorities.²⁸ These management-related issues contribute to impairing emissions factor development, and hamper achieving the Clean Air Act's requirements and major air program goals.²⁹

As a result, emissions factors are being inappropriately used for key environmental decisions.³⁰ For example, emissions factors are being used for non-inventory purposes, such as setting permit limits and reporting the level of air pollution control at specific facilities.³¹ For three industry sectors EPA examined, inappropriately using emissions factors contributed to more than 1 million tons of pollutants not being controlled.³² EPA guidance states that the user must take into account the uncertainty of the emission factor when considering its use;³³ however, emission factor uncertainty is little understood, leading to inappropriate uses.³⁴ As one example, because the fiberglass industry believed EPA emissions factors were overestimating their emissions, it developed new emissions factors.³⁵ As a result, their improved emissions factors increased the estimated emissions for the fiberglass industry by about 100 percent.³⁶

EPA is shifting its efforts toward more direct, continuous monitoring and measuring emissions from all major emissions sources.³⁷ However, increased demand for low-cost quality environmental data is driving the need for more quality emissions factors.³⁸ Factors will continue to be used for a broad array of environmental decisions, including measuring and reporting environmental progress.³⁹ If EPA can improve the

quality of its factors, this should improve environmental decision-making for reducing air pollution.⁴⁰ However, if EPA continues to use insufficient measures to determine program results, the Agency may not be reaching the goals it has claimed to reach, the air may not be as clean as the Agency claims,⁴¹ and EPA and States may make misinformed selections regarding the most promising future actions to improve air quality.⁴²

EPA's challenges are to limit the decisions being made with poor quality emissions factors, and provide significant non-regulatory incentives to industry, State, or local agencies to provide EPA with the data it has long sought to improve the quality of emissions factors.⁴³

¹ April 4, 2006, meeting with Laurie Trinca, EPA Office of Air & Radiation (OAR)/Office of Air Quality Planning & Standards (OAQPS)/Central Operations and Research (CORE)/Program Planning & Analysis. EPA's *FY 2006 Annual Performance Plan and Congressional Justification*, pp. 63, 69; retrieved March 31, 2006, from <http://www.epa.gov/ocfo/budget/2006/emp.pdf>. EPA's *FY 2007 Annual Performance Plan and Congressional Justification*, p. 12, 19; retrieved March 31, 2006, from <http://www.epa.gov/ocfo/budget/2007/epm.pdf>. EPA's *FY 2006 Annual Performance Plan and Congressional Justification*, pp. 14, 48; retrieved March 31, 2006, from <http://www.epa.gov/ocfo/budget/2006/sciencetech.pdf>. EPA's *FY 2007 Annual Performance Plan and Congressional Justification*, p. 13, 59; retrieved March 31, 2006, from <http://www.epa.gov/ocfo/budget/2007/sciencetech.pdf>. EPA's *OAR Final National Program and Grant Guidance for Fiscal Years 2004-2006* (Table). EPA's *OAR Final National Program and Grant Guidance for Fiscal Years 2005-2007*, pp. A-23, A-24; retrieved March 31, 2006, from <http://www.epa.gov/ocfo/npmguidance/oar/fy04oarfinal.pdf>. EPA's *OAR Final National Program and Grant Guidance for Fiscal Years 2006-2008*, p. A-36; retrieved March 31, 2006, from http://www.epa.gov/ocfo/npmguidance/oar/2005/oar_finalnpguide.pdf.

² March 25, 2004 meeting with T. Clemons, Emissions Standards Division, EPA/OAQPS.

³ *Air Quality Management in the United States*, National Research Council of the National Academies (2004), pp. 57, 190, 215.

⁴ Attachment 2, p. 2, regarding OEI's Weaknesses for a 10/5/05 Management Integrity Meeting, Office of Environmental Information FY 2005 Integrity Act Report, Implementation of Data Standards.

⁵ U.S. Environmental Protection Agency Performance and Accountability Report, Fiscal Year 2005, Appendix C, Data Quality, p. C18.

⁶ Federal Register, Part III Environmental Protection Agency, Cross-Media Electronic Reporting: Final Rule, p. 59849, Section I Overview.

⁷ EPA Procedure: Office of Information Collection Cross-Media Electronic Reporting Rule (CROMERR) Implementation Procedures for EPA Systems, March 22, 2006.

⁸ EPA Procedure: Procedure for Approval of State, Tribal or Local Government Delegated Program Allocations for Implementing the Cross-Media Electronic Reporting Rule (CROMERR), March 22, 2006.

⁹ Federal Register, Part III Environmental Protection Agency, Cross-Media Electronic Reporting: Final Rule, p. 59851, Section I Overview, Letter C.

¹⁰ Federal Register, Part III Environmental Protection Agency, Cross-Media Electronic Reporting: Final Rule, p.59851, Section I Overview. Letter C.

¹¹ e-mail from OEI *Total Dollars for Major IT Investments in the Development Phase of the System Life Cycle*, March 31, 2006.

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- ¹² Report No. 2005-P-00023, *EPA Needs to Improve Oversight of Its Information Technology Projects Report*, September 14, 2005, p. 4.
- ¹³ GAO Report No.06-184, *Financial Systems Modernization*, March, 2006, pp. 1, 3.
- ¹⁴ CIO Policy Transmittal 06-003, Classification No.: 2100.3, Capital Planning and Investment Control (CPIC) Program Policy for Management of Information Technology (IT) Investments, December 15, 2005, p. 1.
- ¹⁵ Interim Environmental Protection Agency Order 2100.4, Interim Agency System Life Cycle Management Policy, December 29, 2003, p. 1.
- ¹⁶ Environmental Protection Agency (EPA), *Earned Value Management (EVM) Procedures, Addendum To CPIC Procedures*, December 2005, p. 1.
- ¹⁷ EPA's FY 2005 Human Capital Accomplishments Report, Attachment, p. 3.
- ¹⁸ FY 2005 HR Integrity Act Report, p. 1.
- ¹⁹ FY 2005 OARM Assurance Letter, p. 8 and HR Integrity Report, p. 1.
- ²⁰ EPA's PMA Scorecard for the quarter ending December 31, 2005.
- ²¹ *Additional Efforts Needed to Improve EPA's Oversight of Assistance Agreements*, Report No. 2002-P-00018, September 30, 2002.
- ²² *EPA Managers Did Not Hold Supervisors and Project Officers Accountable for Grants Management*, Report No. 2005-P-00027, September 27, 2005.
- ²³ The OIG anticipates issuing the final report in May 2006.
- ²⁴ EPA *Summary of Emissions Factors Improvements Projects Fact Finding Survey*, June 2004, p. 1.
- ²⁵ GAO Report # GAO-01-46 *EPA Should Improve Oversight of Emissions Reporting by Large Facilities*, April 2001 p. 3.
- ²⁶ EPA *Summary of Emissions Factors Improvements Projects Fact Finding Survey*, June 2004, table 2.
- ²⁷ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, .At a Glance.
- ²⁸ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, pp. 15-24.
- ²⁹ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, pp. 15-24; Memorandum: Inspector General's Candidates for Fiscal 1996 Weaknesses, To: Sallyanne Harper, Acting Chief Financial Officer, Attachment 2 of 9.
- ³⁰ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, At a Glance.
- ³¹ *Ibid.*
- ³² *Ibid.*

³³ “Procedures for Preparing Emission Factor Documents,” EPA-454/R-95-015 revised, Office of Air Quality Planning and Standards, Office of Air and Radiation, U.S. Environmental Protection Agency, November 1997 pg 8; Introduction to AP-42, Volume 1, Fifth Edition – January 1995, pp. 4-5.

³⁴ Document entitled “3.0 Options for Revising Factor Quality Assessments” prepared by MACTEC for Emission Factors and Policy Application Group, EMAD, OAQPS, OAR, August 2004 pp. 2 – 4.

³⁵ e-mail Response from Indiana Department of Environmental Management, September 22, 2005.

³⁶ *Ibid.*

³⁷ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, p. 32.

³⁸ Document prepared for OIG, prepared by Emission factors and Policy Application Group, EMAD, OAQPS, OAR, January 6, 2005; OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, p. 35.

³⁹ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, p. 35.

⁴⁰ *Ibid.*

⁴¹ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, p. 25.

⁴² *Ibid.*

⁴³ OIG Report No. 2006-P-00017: *EPA Can Improve Emissions Factors Development and Management*, pp. 17, 18, 19, 23, 25, OIG opinion.