



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

THE INSPECTOR GENERAL

April 25, 2005

MEMORANDUM

SUBJECT: EPA's Key Management Challenges 2005

TO: Stephen L. Johnson
Acting Administrator

The Office of Inspector General (OIG) has identified the items listed below as the 2005 key management challenges for the U.S. Environmental Protection Agency (EPA). While the agency has made progress in most areas, the Tier 1 challenges are unchanged from last year. Notably, two challenges listed last year in Tier 2 have been removed from the list.

Tier 1

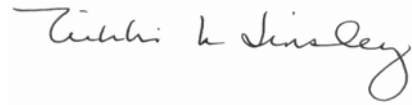
Linking Mission and Management
Agency Efforts in Support of Homeland Security
Superfund Evaluation and Policy Identification
Information Resources Management and Data Quality
EPA's Use of Assistance Agreements to Accomplish its Mission
Challenges in Addressing Air Toxics Program

Tier 2

Human Capital Management
EPA's Information Systems Security

We removed "Management of Bio-Solids" because we believe the Agency has made progress toward addressing deficiencies by completing or having ongoing activities for nearly all the projects resulting from the National Research Council report. Our communication will continue with program officials to assure all open recommendations are addressed. We removed "Backlog of NPDES Permits" because of the overall improvement in reducing the backlog, and steps EPA has taken to address the backlog for the future. We also anticipate issuing a report this year that will provide a framework for working with the agency on any remaining issues.

If your staff have any questions, please have them contact Eileen McMahon, Assistant Inspector General for Congressional and Public Liaison, at 202-566-2391.

A handwritten signature in black ink that reads "Nikki L. Tinsley". The signature is written in a cursive style with a large, looping 'y' at the end.

Nikki L. Tinsley

Attachment

OFFICE OF INSPECTOR GENERAL 2005 KEY MANAGEMENT CHALLENGES

TIER 1

Linking Mission and Management

EPA faces a continuing challenge in demonstrating accomplishment of its environmental mission through programs with clear objectives, measurable results, and accurate cost information. We have considered Linking Mission and Management as a top management challenge since 2001.¹ While the Agency is making progress, we continue to observe weaknesses across various activities, programs, and offices.

Establishing Performance Goals and Measuring Results

EPA's 2003-2008 Strategic Plan is superior to preceding plans and includes: (1) recognition of Federal, State, and Tribal partners who implement the majority of Agency programs; (2) consideration of cross-media issues; (3) improved linkages to objectives and sub-objectives; (4) inclusion of a human capital strategy and external factors affecting each goal; and (5) increased focus on achieving measurable results by including elements of risk, cost/benefit analysis, stakeholder consultations, and science. The Plan, however, does not contain sufficient substantive strategies or resource and schedule commitments leading to the attainment of its stated goals.

In a series of reviews of various Agency activities, we have observed a systematic disconnect between program goals, performance objectives developed in response to the Government Performance and Results Act (GPRA), and measures of effectiveness. For example:

- EPA needs to emphasize environmental goals and measures for its Brownfields program rather than financial or economic gains associated with the cleanup and assessment program. In response to OIG concerns, EPA has taken steps to develop environmental performance measures, including acres of Brownfields assessed and cleaned up. However, these new measures and goals have not been formally incorporated into the program's strategic objectives.²
- EPA needs to define the electronic waste program goals, performance measures, and data requirements. The Agency should (1) ensure that all future projects are clearly linked to these goals and coordinated with each other, (2) identify relevant data needed in support of the goals and measures, and (3) ensure that data is collected.³
- EPA needs to strategically plan, coordinate, and manage its stewardship and voluntary programs, and explicitly integrate them into the Agency's mission, strategic goals, and objectives.⁴
- EPA needs to establish effective program strategies, goals, and specific performance

measures and milestones to successfully promote the purchase of recycled goods. Moreover, EPA needs to establish a clear linkage between these Resource Conservation and Recovery Act requirements and the Agency's broad pollution prevention goals.⁵

- EPA's water pretreatment program needs meaningful performance goals and measures for continued improvement.⁶

As noted in prior years, developing outcome based performance measures linked to Agency activities is a challenging undertaking. The Office of Management and Budget (OMB) noted improved long-term, annual, and efficiency measures developed by the Nonpoint Source program in response to a previous program assessment.⁷ However, EPA's Fiscal Year (FY) 2006 Program Assessment Rating Tool (PART) Assessments continue to cite a need for improved measures in a number of programs.⁸ Past OMB PART assessments have noted that the absence of valid outcome performance data has hindered EPA in evaluating the impacts of its programs on the environment and public health.⁹ A number of our reports have addressed the need for appropriate measures and reliable data which are linked back to program goals and objectives.

- EPA needs current, accurate data on the extent of financial and environmental challenges posed by hard rock mining activities to assist management in determining appropriate strategies and actions to address existing and potential mining sites. Without an adequate implementation strategy, it will be difficult for EPA to achieve the environmental protection goals of its National Hard Rock Mining Framework.¹⁰
- EPA does not measure the effectiveness of either the effluent guidelines program or individual effluent guidelines. Without systematically collected data, EPA does not have sufficient evidence to show that this program has actually produced reductions.¹¹
- The data used to draw conclusions about EPA's drinking water program are incomplete and do not measure the program's results adequately because the Agency cannot account for the impact of the large number of violations that go unreported. Until the data problems are corrected, the public will not have accurate information about the quality of its drinking water.¹²
- EPA's Office of Acquisition Management needs to establish measures and capture appropriate data to analyze short- and long-term performance against its vision and goals.¹³
- EPA's Office of Enforcement and Compliance Assurance (OECA) lacks useful and reliable information needed to effectively implement, manage, evaluate and improve program results for the EPA-Department of Justice integrated refinery compliance strategy. OECA has not established and communicated clear goals, systematically monitored program progress, reported actual outcomes or tracked progress towards goals.¹⁴

Working with Stakeholders

Linking mission and management requires EPA to work effectively with States and other stakeholders. Several OIG reports described issues that the Agency needs to address in concert with stakeholders.

- EPA and States have not adequately measured whether the Nation's worst ozone nonattainment areas have made acceptable progress in reducing ozone precursor emissions. In the 14 years since passage of the 1990 Amendments to the Clean Air Act (CAA), EPA has not issued rules requiring States to demonstrate progress in reducing precursor emissions, nor guidance on how such demonstrations should be conducted, despite the CAA's requirement to do so. EPA and States encountered numerous difficulties in developing and implementing adequate emission control plans for reducing ozone precursor emissions as mandated. In addition, States may have used inaccurate data, assumptions, and projections of emission growth, resulting in fewer reductions planned than appropriate. EPA still needs to develop specific, quantifiable goals and measures and improve quality assurance processes and plans for emissions data reporting.¹⁵
- EPA and the States have not established a uniform set of measures to assess the environmental impact of the Clean Water State Revolving Fund Program, which provides about \$4 billion annually to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management. As a result, EPA does not know the actual environmental impact of the program and cannot compare the impact of individual water quality programs to make informed resource allocations.¹⁶

Linking Program Costs to Results

As EPA works to develop more outcome-oriented performance measures, it must continue improvements to track the cost of achieving environmental results. A March 2005 policy change will allow EPA to more closely link costs by familiar program or project names instead of broader, more abstract categories. It is important for EPA to collect and integrate data for tracking the cost of organizational performance. A recent OIG report on Superfund expenditures reinforces this need through findings that all costs incurred by the Superfund program cannot be identified or isolated.¹⁷

Once accurate and current cost information is available, EPA managers need to consider it when making operational and strategic decisions. With the right information at hand, they can analyze organizational and programmatic performance. EPA's financial data integration initiative began in May 2004 following steps prescribed by OMB which call for (1) identifying key business lines, (2) obtaining accurate, relevant, and timely data that inform users, (3) presenting the data in a meaningful and useable format, and (4) validating that senior officials and managers are using the reports regularly.¹⁸

EPA's success in implementing cost accounting will rely, to a great extent, on how well the Office of the Chief Financial Officer (OCFO) works with program offices to: (1) define their mission-critical activities; (2) determine where suitable cost data reside and, if not available, how the data will be gathered; (3) link information systems to optimize data usability and minimize data integrity concerns; (4) design cost reports for monitoring program results; and (5) develop and implement accurate models of workload needs in Agency programs.¹⁹

An essential aspect of this challenge will be persuading EPA managers to incorporate use of cost accounting data into the normal course of managing their programs. In addition, EPA must follow through by continuing to work with its Federal, State, and Tribal partners to develop appropriate outcome measures and accounting systems that track environmental and human health results across the Agency's revised goal structure. This information must then become an integral part of the Agency's decision-making process.²⁰

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 from those who seek to harm it. Many other Federal, state, and local agencies, including EPA, play a vital role in implementing homeland security efforts. In addition to carrying out its mission to protect human health and the environment, EPA also has the important responsibility of protecting the environment from terrorist acts. EPA has developed chemical, biological, and 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 the space shuttle explosion, 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, signed in June 2002 (Public Law 107-188), specifically tasked EPA with funding and overseeing water system vulnerability assessments and resulting emergency response plans. In addition, 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 several of EPA's actions to address its homeland security responsibilities. We found that the Agency has demonstrated improvement on several fronts. However, continuing challenges remain with oversight, preparedness, and measurement:

- Ensuring the adherence to all BioWatch-designated program responsibilities, including quality assurance guidance, as well as assisting DHS in identifying and testing more reliable, timely, and efficient alternative monitoring technologies; and ensuring that the Agency is adequately prepared to assist with consequence management plans in the event of a biological agent release.

- Developing a better process with aggressive milestones and points of accountability for identifying, obtaining, maintaining, and tracking response equipment necessary for Nationally Significant Incidents.
- Identifying impediments preventing water systems from successfully reducing or mitigating vulnerabilities in computer systems used to control water equipment (Supervisory Control and Data Acquisition, or SCADA, systems) and taking steps to reduce those impediments. EPA also needs to develop SCADA security measures to track the effectiveness of security efforts.
- Working with drinking water and wastewater stakeholders to develop performance measures for water security and the need to identify water security best practices to develop training modules and emergency response exercises for the water industry.

EPA has undertaken a number of efforts to work with Federal, State and local counterparts to enhance critical infrastructure protection. For example, the Agency updated its *Homeland Security Strategy*, established the EPA Homeland Security Collaborative Network, and joined DHS and other Federal, state, and local agencies in exercises of the new National Response Plan. However, as new threats to the Nation continue to evolve, EPA's success will require simultaneous attention to questions of risk, capabilities and deficiencies, preparedness, management and oversight, as well as effective coordination with EPA's partners at all levels of government and industry.

Superfund Evaluation and Policy Identification

In the last several years, a number of reports and reviews of the Superfund program have identified troubling obstacles to the Agency's ability to effectively and efficiently meet the nation's current and future needs for hazardous waste cleanup.²¹ These reports show that:

- Annual Superfund program needs are not estimated to fall below FY 1999 needs (\$1.54 billion) until FY 2006.
- Over the past 14 years, due to falling Trust Fund balances, the percent of Superfund appropriations coming from general revenues, rather than the Trust Fund, has gone from zero to 100 percent.
- In some cases the Agency is unaware of what its most pressing future needs might be, or the ability of responsible parties to realistically cover cleanup costs.
- The Superfund program cannot meet all of its current reported needs for cleanup and has stopped or slowed down cleanup actions at several sites across the country.
- Other cleanup programs, such as some State programs, are not financially positioned to take on their obligated Superfund responsibilities or even greater responsibilities.
- All Superfund costs cannot be determined.
- Current staffing needs for the program are unknown.
- Superfund resources are spent on non-Superfund sites or activities.
- The administration of remedial action contracts is not effective.

- Establishing credible measures of the ecological benefits that result from Superfund cleanups is difficult.

Information from recent reports points to significant challenges EPA faces in managing the Superfund program now and in the future. However, despite having its own processes for evaluating and reforming the program, EPA has failed to proactively identify, or communicate, the current fiscal and other program management challenges that are causing great pressure and attention on the program. The Agency's "90 day study", "30 day task force", and, most recently, the "120 day study" have made recommendations to provide for efficient and effective cleanups, get responsible parties to pay for cleanups, streamline the Superfund process, accelerate private party cleanups, and identify ways to direct more funds to long term Superfund cleanup actions, among others. The Agency has developed an action plan to respond to its internal 120-day study review.²² However, it will take time to determine whether the action plan is implemented and shows results. Recent OIG findings have shown that despite prior, and sometimes repeated recommendations to improve the Superfund program, problems persist.

In 1993, EPA began a series of 49 reforms to make the Superfund program "faster, fairer, and more efficient." These reforms focused on improving the effectiveness of cleanups, reducing litigation and transaction costs, making cleanup decisions more cost-effective and encouraging the redevelopment of cleaned up sites, among others. In response to Resources for the Future's 2001 report on the future costs of Superfund, EPA established a Superfund Subcommittee to the National Advisory Council for Environmental Policy and Technology to review the "role of the National Priorities List, the role of Superfund at so called mega sites, and measuring program performance." The committee's final April 2004 report indicates that consensus recommendations could not be reached on every topic. The Agency has not developed an action plan to respond to the report.²³

Recognizing that tribes are important partners in implementing the Agency's environmental programs, the Agency has undertaken three major initiatives since 1998. These include: (1) a 1998 plan to enhance the role of States and tribes in the Superfund program, (2) a 1999 Office of Solid Waste and Emergency Response action plan to respond to impediments in the implementation of tribal waste programs, and (3) the creation of the Tribal Association on Solid Waste and Emergency Response (TASWER) to provide for tribal involvement in policies, training, education and a tribal research center. These initiatives have produced some positive results and lessons that have been incorporated into the Agency's current strategy for managing the role of the tribes in the Superfund program.

Although EPA has been recognized as a Federal leader in its efforts to develop tribal relationships and fulfill trust responsibilities, its efforts to enhance the tribal role in the Superfund program have had limited success. A recent OIG evaluation found that key actions remain incomplete, the Agency's current strategy is stalled, and it cannot be effectively implemented without change.²⁴ The Agency's tribal strategy has faltered because it does not have a detailed implementation plan with milestones, priorities, resource needs, and corresponding measures to track progress and effects of the strategy. In addition, the strategy cannot be effectively implemented without critical information, including an inventory of hazardous waste sites on Indian lands. We reported in January 2004 that the Agency worked for

several years to produce this inventory but has been unsuccessful due to TASWER mismanagement and lack of Agency oversight. Additional factors impacting the lack of progress include little emphasis from senior Agency leadership and the failure to include Regions in developing the strategy, which has resulted in divergent regional programs that operate under different policies, procedures, and priorities.

Some regions have incorporated tools to enhance their relationships with tribes (consultation procedures, memorandum of agreements, special training, and establishing tribal consortia), but the Agency has no mechanism for sharing information among regions to provide learning or improvement opportunities. An OIG case study evaluation of EPA-tribal relationships shows that establishing government-to-government relationships; maintaining frequent communication and information sharing; and having responsible, knowledgeable, and consistent EPA project managers, among other things, were characteristics of strong EPA-tribal relationships.

If EPA is to continue to make progress enhancing the role of tribes in the Superfund program it needs to: (1) obtain critical information on where hazardous waste sites are located in Indian country; (2) update the Agency's strategy to reflect inventory information; (3) obtain Regional input and develop implementation plans for the strategy that include milestones, priorities, and resource needs; (4) provide clear guidance on tribal consultation and establish site specific written agreements for significant tribal relationships; and (5) create a forum for exchanging best practices and lessons learned in establishing and maintaining effective relationships with tribes. A strong working relationship between EPA and the States and Tribes is necessary if environmental goals are to be achieved. This issue warrants continued attention by EPA management.

Information Resources Management (IRM) and Data Quality

EPA acknowledges IRM data management practices as an Agency-level weakness under the Federal Managers' Financial Integrity Act (FMFIA) and has specifically targeted various components for improvement.^{25 26} The Agency faces a number of challenges with the data it uses to make decisions and monitor progress against environmental goals. These challenges cover a broad range of interrelated activities including: using enterprise and data architecture strategies to guide the integration and management of data and to make investment decisions; implementing data standards to facilitate data sharing; and establishing quality assurance practices to improve the reliability, accuracy, and scientific basis of environmental data, including data derived from laboratories. EPA and most States often apply different data definitions, and sometimes collect and input different data, resulting in inconsistent, incomplete, or obsolete consolidated national data.²⁷ However, developing a robust data management program remains a complex effort. These areas continue to require the Agency's attention to ensure effective implementation.

In 2003, EPA updated its Enterprise Architecture (EA) Plan to integrate the target architecture with the Federal Enterprise Architecture reference models and the Agency's new Strategic Plan.²⁸ One of EPA's goals is to integrate its environmental, research, and administrative "business domains."²⁹ The Plan includes a Sequencing Plan Migration

Framework to help guide IT investment decisions by setting the path and priority order for moving systems from the baseline towards the target architecture.³⁰ Moreover, EPA plans to complete construction of the central services infrastructure necessary to support the target architecture and will have at least one system (the Air Quality System (AQS)) using all the components of the centralized services infrastructure by the end of calendar year 2005.³¹ Another key initiative started in FY 2004 is the upgrading and integration of EA governance and planning systems. In September 2004, the Agency issued an interim EA Policy supported by a framework for developing EA procedures. Working within that framework, the Chief Architect and the Enterprise Architecture Coordination Committee are completing a detailed set of architecture procedures that will govern all aspects of architecture design and execution.³²

Addressing common development practices and implementing data and technology standards also are essential components for establishing EPA's suite of central services. While EPA has developed several core registry systems and metadata registries, it has yet to implement a 1998, agreed-upon, OIG recommendation to formally revise its policies and procedures supporting an Agency standards program.³³ Also, while EPA has developed and formally approved ten data standards, and continues to partner with the Environmental Data Standards Council to develop additional standards for environmental information collection and exchange,³⁴ the true challenge lies in the implementation of the approved standards, because many parties must follow through for EPA and others to realize the benefits. Some of the approved standards will not be fully implemented until FY 2006, and some have been implemented only in a targeted set of national EPA systems. Other EPA systems will be allowed to accommodate such changes as part of their normal re-engineering schedule, and States will be allowed to decide whether or not to adopt these standards. Data standards are a fundamental component for implementing EPA's National Environmental Information Exchange Network and other e-government initiatives.³⁵ If EPA's exchange network infrastructure is to work effectively, timely implementation should be required for all applicable systems. Moreover, the use of data standards should be a required condition for receiving money under the Exchange Network Grant Program.

Data reliability is another major aspect of data management needing continued attention. Prior audits indicate systems used by EPA's Enforcement, Superfund, and Water programs have inconsistent, incomplete, and obsolete data.³⁶ Despite acknowledged problems regarding the quality of the drinking water data, EPA used the flawed and incomplete data to draw and report conclusions about its drinking water goal. As a result, year after year, EPA incorrectly reported meeting its drinking water goal under the Government Performance and Results Act (GPRA).³⁷ Another OIG evaluation found that EPA's performance measurement, reporting, and program tracking systems did not effectively monitor and report refinery program progress within the Agency, to the public, and to Congress. We found that EPA's Integrated Compliance Information System captured and reported projected emissions reductions rather than actual emissions reductions related to the program, meaning that GPRA and other reports did not demonstrate the actual impacts of the refinery program.³⁸ Likewise, audits of other major Agency systems have disclosed significant error rates in crucial data fields used to track environmental progress on GPRA goals and measures.³⁹

The Government Accountability Office (GAO) noted that EPA's two scientific advisory

organizations, the Science Advisory Board and the National Advisory Council for Environmental Policy and Technology, have stated that data problems limit national indicators of environmental conditions and trends from being fully developed.⁴⁰ GAO pointed out that although EPA has made some progress in addressing critical data gaps in the agency's environmental information, the Agency still has further to go in obtaining the data it needs to manage for environmental results. GAO recently reported that of EPA's 146 national environmental indicators, 102, or 70 percent, do not have sufficient data. GAO recommended that to build on its initial efforts to fill critical gaps in environmental data, EPA should establish clear lines of responsibility and accountability among the agency's various organizational components, and identify specific requirements for developing and using environmental indicators.⁴¹

The Agency responded to data quality concerns by instituting an on-line Integrated Error Correction Process in 2000, which enables partners and stakeholders to alert EPA about potential data errors in eight data systems.⁴² EPA issued its first draft *Report on the Environment* (ROE) in the Spring of 2003, acknowledging that data gaps in some program areas limit EPA's ability to create a reliable, national picture or assess progress towards those environmental goals.⁴³ Drawing from this document, as well as input from the public, the Agency plans to develop a process for the identification of key data gaps, and an Indicators Long-Term Strategic Plan for filling key information gaps.⁴⁴ To this end, the Agency established an Indicators Work Group to develop a process for identifying and prioritizing indicator and data gaps and limitations associated with the ROE. This group proposed three high level options to the Agency's Environmental Indicators Senior Steering Committee on March 3, 2005.⁴⁵ The steering committee chose the option to integrate the identification and prioritization of ROE data and indicator gaps with the Agency's Strategic Planning Process.⁴⁶

The Office of Environmental Information (OEI) indicated that they are currently working with the Office of the Chief Financial Officer (OCFO) to shape the Strategic Plan guidance to include a discussion of the consideration of environmental indicators and data gaps or limitations. OEI is also working with OCFO and program offices to determine how best to document not only the priorities that the Goal Teams recommend pursuing, but also the rationale behind decisions to pursue little or no indicator improvements made. OEI plans to finalize the Gaps Analysis Process in July 2005; implement the process when the Strategic Plan architecture is developed between August and December 2005; and develop the Indicators Long-Term Strategic Plan in early 2006.

Additionally, in FY 2004, OEI completed a major effort to establish and revise Quality Management Plans throughout the Agency.⁴⁷ All EPA organizations that collect, evaluate or use environmental data must develop and implement Quality Management Plans. OEI indicated in October 2004 "for the first time in Agency history, all EPA organizations had approved Quality Management Plans."⁴⁸

Data quality concerns extend to questionable analyses by laboratories. Such concerns raise skepticism regarding the effectiveness of environmental decisions, and lead to additional costs and unnecessary delays when EPA has to identify and assess the impact of fraudulent data and undertake additional sampling. In a June 1999 memorandum to the Acting Deputy Administrator, we suggested actions the Agency could take to better identify data of questionable

quality.⁴⁹ Nonetheless, the number of ongoing lab fraud investigations increased by more than 150% between FY 2001 and 2003 due to complaints received. The method of fraud employed by all but two of the involved laboratories dealt with some form of altered or fraudulent test results. This type of improper laboratory practice is especially alarming considering that Agency, State or other Federal government decisions may have been based on data of unknown scientific quality.

Moreover, a 2003 EPA Task Force Study noted that the quality and comparability of data used for regional decisions is questionable when field sampling activities and laboratory methods do not incorporate the latest scientific advances.⁵⁰ Regions depend on EPA's Office of Research and Development (ORD) and program offices to provide and incorporate state-of-the-art science into program guidance. The Study's report makes numerous recommendations to improve data reliability, access, and compatibility issues, including that ORD should collaborate with program and regional offices to sponsor an exposition highlighting recent scientific advances, including data collection and analytical methodology, and identify topics for future seminars and workshops.

The Agency has taken significant action to address the quality of laboratory data and decided that Laboratory Quality System Practices was corrected as a FMFIA weakness in FY 2004. OEI noted that it had provided tools, technical evaluations, and training for environmental laboratories to provide for quality data. OEI also noted that in February 2004, EPA's Forum on Environmental Measurements developed a policy focused on ensuring and documenting the competency of Agency laboratories. Follow-up activities will determine if weaknesses in Agency laboratory practices have been corrected.⁵¹

Data reliability concerns also extend to information systems of administrative offices, such as the Office of Acquisition Management (OAM).⁵² EPA relies extensively on contractors to accomplish the Agency's mission. OAM maintains the Integrated Contract Information System (ICMS) and related systems to manage contract activities. EPA transmits information in these systems to the Federal Procurement Data System (FPDS) for government-wide reporting.

ICMS does not meet OAM's business needs and it is not consistent with the President's e-government initiatives. It provides inadequate reporting, cumbersome tracking status, and redundant data entries which result in inefficiencies and errors. ICMS's inability to provide all data needed in FPDS results in EPA's contracting actions being inaccurately portrayed in the national database, which serves as a basis for reporting to the President, Congress, and the general public. Until EPA ensures that ICMS data is consistent with FPDS, the Agency's credibility, as well as any subsequent stakeholder decision making, could be adversely affected.

While EPA is focusing its effort on standards for data shared with external partners, additional attention is needed for internal data. Although the Agency established the Data Standards Program in July of 1987,⁵³ all but one (the "Date" Data Standard) of the Agency approved "Final" and "Under Development" data standards are associated with the facilitation of sharing data with outside partners.⁵⁴ Standards for internal data are necessary to facilitate the efficient and effective development and implementation of truly integrated systems within EPA. These data standards would help to reduce reliance on interfaces and data warehouses to allow

for the sharing and integration of internal data.

EPA's ability to manage its business processes, enforce environmental laws, evaluate the impact of its programs in terms of environmental improvement, and accurately inform the public about the status of the environment may continue to be limited by gaps and inconsistencies in the quality of its data. EPA needs to continue its efforts to identify what data is necessary to manage its programs, and work, both internally and with its partners, to ensure that such information is captured and reported in a timely, accurate, and consistent manner.

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.⁵⁵ Recent OIG reports show that grant management challenges continue to exist. For example, in June 2004, we reported that EPA had not developed environmental measures for its largest assistance agreement program --the Clean Water State Revolving Fund (SRF).⁵⁶ EPA has continued to work with States to develop a set of measures but has not yet received sufficient data from the States participating in this effort to conclude whether SRF funding for projects is clearly linked to protecting or restoring waters.

In March 2005, we reported on the implementation of EPA's new grant competition order and concluded that EPA needs to compete more assistance agreements.⁵⁷ The order was ineffective because it included too many exemptions and, therefore, only applied to \$161 million of more than \$835 million of discretionary grants awarded in 2003. We also continued to identify pre-award and monitoring weaknesses that waste money and weaken program effectiveness. For example, in one report, we identified a new grant recipient that did not meet the minimum administrative and management capability required by the regulations.⁵⁸ Subsequently, EPA terminated the grant.

We reported that EPA had not provided sufficient oversight to safeguard the funds and ensure results for Alaska's Village Safe Water Program.⁵⁹ During the past 10 years, EPA has awarded 15 grants, totaling \$232 million, without establishing overall goals and measures for this grant program. The Region's oversight did not comply with established guidance for earmark grants, even though the guidance was readily available. Consequently, EPA could not determine whether environmental and health benefits were achieved. In fact, the Alaska Legislative Auditor identified one project where safe water was still not available even after spending \$1.1 million in EPA grant dollars. At one point, the State had an excess cash balance on hand of \$13 million.

While EPA issued a Grants Management Plan in April 2003, EPA has not completed all of the proposed actions in its Plan. To improve accountability, the Agency now requires that grants management responsibilities be included in the performance agreements for project officers and grants specialists. However, EPA has not completed a workload analysis to determine how resources should be allocated to ensure effective and efficient grants

management. EPA has issued several Orders since January 2005 containing new requirements for (1) identifying environmental results under assistance agreements, (2) competing grants, and (3) assessing capabilities of non-profit applicants to manage such agreements. Because these significant policies are so new, EPA has no data to show that the problems that precipitated the issuance of these policies have been corrected.

Assistance agreements are a primary means EPA uses to carry out its mission of protecting human health and the environment. More than half of EPA's fiscal 2004 budget, approximately \$4.4 billion, was awarded to organizations through assistance agreements. Because the amount is large, and because 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.

Progress Made, but Challenges Remain in Addressing Air Toxics Program Goals

Toxic air pollution is one of the more significant health and environmental problems in the United States, causing cancer, neurological, immunological, and other serious health problems.⁶⁰ EPA's goal is to reduce emissions and implement area-specific approaches to reduce the risk to public health and the environment from air toxics by 2010.⁶¹ To achieve its goal, the Agency has increased its efforts to address air toxics in recent years as evidenced by a nearly 41 percent increase in funding from \$90.7 million in FY 1999 to \$127.7 million for FY 2004.⁶² The Agency has also completed its Clean Air Act (CAA) requirement to issue technology-based standards, also known as Maximum Achievable Control Technology (MACT) standards, for categories of major stationary sources.⁶³ Although the Agency has increased its efforts to address air toxics, reducing the health and environmental risks from air toxics remains a management challenge because:

- Difficulties and uncertainties associated with developing Phase II risk-based standards for major stationary sources remain.⁶⁴
- EPA is years behind statutory deadlines for developing standards for area sources.⁶⁵
- Despite air toxic emission reductions,⁶⁶ mobile sources continue to present a significant portion of the air toxics risk in urban areas.⁶⁷
- Identifying risk-based strategies and measuring progress is difficult because of the uncertainties associated with characterizing air toxics emissions, ambient concentrations, human exposure, and health risks from exposure.⁶⁸
- Certain air toxics, classified as persistent bio-accumulative toxics (PBTs), can contribute to health risks in water bodies located miles from the source of the air emissions.
- The large number of air toxics to be regulated (188) is itself inherently challenging, yet this list was developed in 1990 and hundreds of potentially new air toxics are introduced into the United States every year.⁶⁹

Since 1990, EPA has been implementing a two-phased program to reduce emissions of air toxics from major source categories. Implementing the Phase 2 risk-based standards may

present greater challenges than Phase 1. Phase 2 requires EPA to determine the air toxics risks to human health after the Phase 1 MACT standards have been implemented and, if MACT standards are not sufficiently protective of human health, EPA must propose additional standards.⁷⁰ However, significant data gaps and uncertainties exist with respect to estimating human exposure to air toxics and the risks associated with differing levels of air toxic exposures for the 188 air toxics. Accordingly, determining the health risk associated with air toxics emissions from MACT regulated sources will be difficult.⁷¹

Area sources (small stationary sources not classified as major) are significant sources of air toxics emissions and risk, particularly in urban areas.⁷² As part of its Integrated Urban Air Toxics Strategy for addressing cumulative health risk in urban areas, EPA identified the air toxics that pose the greatest public health threat in urban areas.⁷³ EPA has identified 70 area source categories that contribute significantly to emissions of these air toxics and was required by the CAA to set standards for these sources by November 2000.⁷⁴ As of April 2005, EPA had issued standards for 15 of these 70 source categories, and is under a court-ordered deadline to complete standards for five additional source categories. EPA has prioritized another twenty source categories for regulatory action while thirty categories remain unaddressed.⁷⁵

Mobile sources present another significant source of emissions and risk in urban areas.⁷⁶ Mobile source rulemaking efforts are underway to address 21 air toxics from both on-road and off-road sources, and existing mobile source rules designed to reduce levels of particulate matter and ozone are also expected to reduce air toxic emissions significantly.⁷⁷ Despite these efforts, mobile source emissions of air toxics remain a significant health concern. In particular, mobile source emissions have the potential to create air toxics hot spots in urban areas.⁷⁸ Recent research suggests that individuals living, working, or attending school very close to major roadways may be subjected to greater exposure from air toxics than individuals farther away.⁷⁹

Identifying risk-based air toxics control strategies, and measuring air toxics progress, is difficult because of the uncertainties associated with characterizing air toxics emissions, ambient concentrations, human exposure, and health risks.⁸⁰ Ambient air toxics monitoring data is limited and EPA relies on modeling of emissions data to estimate air toxics risk.⁸¹ The relationships between air toxics emissions, ambient concentrations, human exposures, and health risk are not fully understood; and there is limited data on the impact of exposure to multiple air toxics, such as the exposures that routinely occur in urban areas.⁸² While EPA's ultimate goal is to reduce air toxics risk, the program has measured progress based on reductions of air toxics emissions.⁸³ However, there are concerns with the accuracy of this data, and EPA faces considerable challenges in improving this measure.⁸⁴ Improvements in methods for calculating air toxics emissions are needed if the Agency is to accurately gauge the extent to which emission reductions have occurred.⁸⁵

Persistent bio-accumulative toxics, such as mercury, present challenges because of their ability to be transported over great distances before they are deposited into water bodies. For example, atmospheric deposition of mercury has contributed to impaired listings of numerous waters and widespread fish consumption advisories. At least 44 states have issued fish consumption advisories related to the accumulation of mercury in fish tissue.⁸⁶ In some States, a substantial proportion of the atmospheric deposition of mercury derives from sources located

outside the State's boundary, and State-specific efforts to reduce mercury in water may have limited success in reducing mercury fish-tissue concentrations to safe levels.⁸⁷ In these cases water bodies may attain water quality standards only with additional reductions of mercury air emissions from other states, regions, and countries. Addressing this problem will require EPA to work nationally and internationally across traditional program boundaries of water and air.⁸⁸

Finally, hundreds of new chemicals are introduced into the environment every year, yet no new air toxics have been added to the original list of 188 since it was established in 1990.⁸⁹ Some of these recently introduced chemicals could be more harmful than those currently regulated through the air toxics program.⁹⁰ We will continue to monitor the progress EPA makes in addressing these important issues.

TIER 2

Human Capital Management

EPA continues to face challenges in developing and sustaining a highly skilled, diverse, results-oriented workforce with the right mix of technical expertise, experience, and leadership capabilities. EPA also faces challenges in more thoroughly integrating human capital management activities and measures into its core business processes. Such integration will help strengthen accountability and ensure alignment of strategic human capital goals with environmental and human health goals as well as achievement of all these goals.⁹¹ Additionally, the Office of Personnel Management (OPM) and Office of Management and Budget (OMB) are concerned about EPA's efforts to achieve "Green Status" under the President's Management Agenda (PMA) human capital initiative.⁹² Specifically, OPM and OMB are concerned about EPA's ability to address skill gaps for mission critical occupations and its ability to achieve a green status by July 2005 based on its current Proud to Be (P2B) milestones.⁹³ OPM and OMB have indicated that they will work with the Agency to help resolve their concerns.

The Agency remains committed to ensuring that it addresses these challenges through its various human capital initiatives. EPA has made substantial progress in addressing human capital concerns by implementing many of the initiatives presented in its human capital strategic plan, *Investing in Our People II, EPA's Strategy for Human Capital: 2004 and Beyond*.⁹⁴ EPA reorganized its Office of Human Resources (OHR) to better position OHR to lead EPA's efforts to achieve the PMA human capital initiative and recruit, develop, and strategically plan for the most talented workforce possible. OHR has committed to remain people focused and environmentally driven.⁹⁵ EPA also linked employee performance standards to the Agency's five strategic goals; developed a comprehensive strategic workforce strategy and deployment plan; provided restructuring options to all EPA senior managers; and monitored and reported diversity statistics to address under representation.⁹⁶ In addition, EPA has taken or proposed corrective actions to address several recommendations presented in a recent OIG report on human capital activities. These corrective actions include:

- Evaluating justifications and analyses of strategic human capital needs as part of the budget process;

- Revising performance guidance for senior executives to strengthen accountability for accomplishments;
- Reporting on the Agency’s progress in the Annual Report;
- Developing a “scorecard” to measure office progress and alignment with EPA’s *Strategy for Human Capital*; and
- Engaging all EPA offices in implementing strategic human capital management activities.⁹⁷

Although EPA has made progress, it still needs to do more to ensure successful Agency-wide implementation of strategic human capital management activities. In a recent report, the OIG concluded that while EPA’s headquarters and regional offices are prepared to implement strategic human capital management activities, the offices have not aligned their human capital activities to the Agency’s *Strategy for Human Capital*. The report emphasized that senior executives vary in their recognition of the importance of human capital management and have not fully integrated human capital management activities into the Agency’s core management processes. These variations hamper the Agency’s ability to measure Agency-wide progress on strategic human capital management activities. “Ultimately, if EPA does not fulfill its human capital vision of having people with the right skills, in the right place, at the right time to protect human health and the environment, its ability to achieve its environmental mission may be impeded.”⁹⁸

The OIG has identified instances where human capital issues have affected EPA’s work. The OIG indicated in one report⁹⁹ that attrition has contributed to the decline in particulate matters (PM) methods development. The loss of in-house expertise has been occurring for years and will likely continue. The OIG report emphasized that the Office of Research and Development recognized the impact of this loss and initiated some efforts to address it.

Recruiting and retaining first-rate scientists was discussed in a January 2003 Government Accountability Office (GAO) report entitled *Major Management Challenges and Program Risks*.¹⁰⁰ GAO reported that EPA needs to fully prepare for the loss of leadership, institutional knowledge, and scientific expertise that will likely result from upcoming retirements.¹⁰¹ Technical expertise was also discussed in a 2003 Agency-wide task force study¹⁰² which emphasized that human resource management needs to focus more on hiring, developing, retaining, and supporting competent scientists and engineers.

In another report,¹⁰³ the OIG emphasized the need for the Office of Acquisition Management (OAM) to identify skill and full-time equivalent gaps within its workforce. The OIG recommended that OAM complete its *workload* analysis and then perform a *workforce* analysis. These analyses will allow OAM to identify needed skills so that any skill gaps or surpluses can be addressed. OAM indicated that it had previously attempted to conduct a workload analysis partly to compare full-time equivalents usage against workload processes. However, OAM was unable to complete the analysis because of the poor quality of data in their information systems and the application of subjective weighting to the data.

In summary, while EPA is steadily progressing in its efforts to address human capital management, it continues to be a challenge. We will continue to monitor the Agency’s progress.

Implementation of the Human Capital Strategic Plan is an Agency-level weakness under the FMFIA.¹⁰⁴

EPA's Information Systems Security

In an information society, the significance of information and information systems is widely accepted. Threats to information systems may arise from intentional or unintentional acts and may come from internal or external sources. Despite the enormous benefits from the use of information systems, there are significant risks associated with their use. These risks lead to gaps between the need to protect systems and the degree of protection applied. EPA must implement adequate security measures to help ensure the smooth functioning of information systems and protect the Agency from loss or embarrassment caused by security failures.

Under the leadership of the Office of Environmental Information (OEI), EPA's goal is to make information on its computer systems available, while protecting the confidentiality and integrity of the information.¹⁰⁵ As indicated in its FY 2004 Annual Report, EPA continues to enhance its security program by strengthening management controls to improve implementation of the Agency's security program. For example, EPA implemented a testing and evaluation program to measure the effectiveness of implemented controls. In addition, EPA continues to enhance its program through risk assessments, penetration testing, and monitoring of the Agency's firewall.¹⁰⁶

The dynamic nature of security, however, requires continued emphasis and vigilance, and we believe EPA needs to take the following additional actions to protect its information and systems:

- Implement processes to ensure system Certification and Accreditation (C&A) are complete and up to date. Although a recent Government Accountability Office review indicated that EPA implemented processes to monitor and update its C&A status and activities, it noted the Agency did not routinely assess the quality of its efforts, such as whether the criteria identified in guidance are met.¹⁰⁷ Also, a recent OIG report disclosed similar concerns regarding testing of security control and completion of C&A packages. Specifically, we found instances where offices placed major applications into production without testing security controls or completing a C&A package. We found system owners incorrectly reported the status of their system's C&A progress during the FY 2004 Federal Information Security Management Act self-assessment process.¹⁰⁸ Accordingly, OEI needs to do more to ensure EPA program officials assess the risks to operations and assets under their control and determine the level of security appropriate to protect such assets and operations. Without regular, effective oversight processes, EPA will continue to place unsubstantiated trust in the many components involved in implementing, practicing, and documenting security requirements.
- Develop and ensure implementation of a training program to provide information security training to EPA employees with significant information security responsibilities.¹⁰⁹ This includes OEI's plans to implement a system to aid in the tracking of such training.¹¹⁰

- Establish a process to complete timely background investigations on contractor personnel who, by the nature of their work, have access to sensitive and/or confidential files. At this time, EPA has contract employees with such access who have not received any clearance. We reported that a program office granted contractor personnel sensitive access rights to a major financial application, although the office had not requested or received assurance that these individuals did not pose a significant risk to the integrity of the system.¹¹¹ In addition, EPA has not established a target date for correcting security weaknesses in the FY 1999 Remediation Plan regarding security screening for contractor personnel.¹¹² Until the Agency addresses this issue, it will be vulnerable to information leaks, theft, tampering, and destruction.
- Develop and implement oversight processes to increase security surrounding remote access servers. A recent OIG audit disclosed EPA needs to establish processes to independently verify and validate that remote access servers comply with published policies and standards. In addition, EPA needs to take further steps to develop and implement a comprehensive security-monitoring program that includes using a variety of network vulnerability assessment tools and ensuring all remote access servers are registered and tested. Without an effectively implemented process for securing remote access servers, the confidentiality and integrity of EPA's data, as well as the availability of the network, is at risk.¹¹³

We recognize that EPA has made significant strides to secure its data resources. Last year, the Agency decided to consider this weakness corrected for FMFIA reporting purposes.¹¹⁴ While progress has been made, for the reasons stated above, we still consider information security to be a top management challenge given the evolving nature of technology, the magnitude of system development activities, and new technology implementation efforts.

¹ Inspector General Memoranda to the Administrator, *EPA's Key Management Challenges*, December 17, 2001, September 6, 2002, May 22, 2003, and, April 21, 2004.

² OIG Report No. 2002-M-00016, *Observations on EPA's Plans for Implementing Brownfields Performance Measures*, May 24, 2002; OIG Report No. 2004-P-0020, *Substantial Progress Made, But Further Actions Needed in Implementing Brownfields Program*, June 21, 2004; GAO Report GAO-05-450T, *Brownfield Redevelopment: Stakeholders Cite Additional Measures That Could Complement EPA's Efforts to Clean Up and Redevelop Properties*, April 5, 2005.

³ OIG Report No. 2004-P-00028, *Multiple Actions Taken to Address Electronic Waste, But EPA Needs to Provide Clear National Direction*, September 1, 2004.

⁴ OIG Report No. 2005-P-00007, *Ongoing Management Improvements and Further Evaluation Vital to EPA Stewardship and Voluntary Programs*, February 17, 2005.

⁵ OIG Report No. 2003-P-00013, *Pollution Prevention: Effectiveness of EPA's Efforts to Encourage Purchase of Recycled Goods Has Not Been Demonstrated*, September 22, 2003, Executive Summary.

⁶ OIG Report No. 2004-P-00030, *EPA Needs to Reinforce Its National Pretreatment Program*, September 28, 2004.

⁷ Fiscal Year 2006 Budget of the United States, Analytical Perspectives, page 14.

⁸ OMB Performance and Management Assessments for Fiscal Year 2006 (EPA Results) <<http://www.whitehouse.gov/omb/budget/fy2006/pma/epa.pdf>>.

⁹ OMB Performance and Management Assessments for Fiscal Year 2004 (EPA Results), page 247.

¹⁰ OIG Report No. 2003-P-00010, *Implementation, Information, and Statutory Obstacles Impede Achievement of Environmental Results from EPA's Hardrock Mining Framework*, August 7, 2003, Executive Summary.

¹¹ OIG Report No. 2004-P-00025, *Effectiveness of Effluent Guidelines Program for Reducing Pollutant Discharges Uncertain*, August 24, 2004.

¹² OIG Report No. 2004-P-0008, *EPA Claims to Meet Drinking Water Goals Despite Persistent Data Quality Shortcomings*, March 5, 2004.

¹³ OIG Report No. 2005-P-00006, *Office of Acquisition Management Can Strengthen Its Organization Systems*, February 17, 2005.

¹⁴ OIG Report No. 2004-P-00021, *EPA Need to Improve Tracking of National Petroleum Refinery Compliance Program Progress and Impacts*, June 22, 2004.

¹⁵ OIG Report No. 2004-P-00033, *EPA and States Not Making Sufficient Progress in Reducing Ozone Precursor Emissions in Some Major Metropolitan Areas*, September 29, 2004.

¹⁶ OIG Report No. 2004-P-00022, *Stronger Leadership Needed to Develop Environmental Measures for Clean Water State Revolving Fund*, June 23, 2004.

¹⁷ OIG Report No. 2004-S-00004, *OIG Response to Congressional Request on Superfund Administrative Costs*, Sept. 15, 2004.

¹⁸ OIG Report No. 2005-1-00021, *Audit of EPA's Fiscal 2004 and 2003 Financial Statements*, November 15, 2004, page 29.

¹⁹ OIG Report No. 2004-S-00004, *OIG Response to Congressional Request on Superfund Administrative Costs*, Sept. 15, 2004; OIG Report, *Opportunities Exist to Improve Management of Brownfields Administrative Resources* (DRAFT - Agency has seen); April 2005.

²⁰ EPA Strategic Information Plan: A Framework for the Future, July 29, 2002, page 11.

²¹ OIG Report No. 2004-P-00027, *Some States Cannot Address Assessment Needs and Face Limitations in Meeting Future Superfund Cleanup Requirements* <<http://www.epa.gov/oig/reports/2004/20040901-2004-P-00027.pdf>>; (2) OIG Response to Congressional Request on Superfund Administrative Costs, No. 2004-S-00004 <<http://www.epa.gov/oig/reports/2004/20040915-2004-S-00004.pdf>>; (3) OIG Report No. 2004-P-00035, *Superfund Program Needs Clear Direction and Actions to Improve Effectiveness* <<http://www.epa.gov/oig/reports/2004/20040930-2004-P-00035.pdf>>; (4) OIG Report No. 2005-P-00001; *Response Action Contracts: Structure and Administration Need Improvement* <<http://www.epa.gov/oig/reports/2005/20041206-2005-P-00001.pdf>>; (5) Superfund Benefits Analysis (DRAFT), January 28, 2005 <<http://www.epa.gov/superfund/news/benefits.pdf>>.

²² Superfund Building on the Past Looking to the Future: The 120-Day Study Action Plan, February 2005 <<http://www.epa.gov/superfund/action/120day/pdfs/plan/actionplan.pdf>>.

²³ Final Report: Superfund Subcommittee of the National Advisory Council for Environmental Technology and Policy, April 12, 2004, <http://www.epa.gov/oswer/docs/naceptdocs/NACEPTsuperfund-Final-Report.pdf>.

²⁴ OIG Report No. 2004-P-00035, *Tribal Superfund Program Needs Clear Direction and Actions to Improve Effectiveness*, September 30, 2004 <<http://www.epa.gov/oig/reports/2004/20040930-2004-P-00035.pdf>>.

²⁵ OEI FY 2004 Federal Managers' Financial Integrity Act Annual Assurance Letter, Summer of 2004, Attachment 2, *Data Management Practices*.

²⁶ Draft FY 2005 Mid-Year Federal Managers' Financial Integrity Report, Attachment 2, *Data Management Practices*.

²⁷ EPA Strategic Information Plan: A Framework for the Future, July 29, 2002, page 8

²⁸ EPA Enterprise Architecture Status Report 2003, September 8, 2003, page SR-1.

²⁹ Ibid.

³⁰ EPA Enterprise Architecture Status Report 2003, September 8, 2003, Section C, and EPA Enterprise Architecture and Sequencing Plan Presentation by Chief Architect to Quality Information Council, dated August 27, 2003, page 3.

³¹ EPA Enterprise Architecture Status Report 2004, September 13, 2004, page 2, Paragraph 3.

³² EPA Enterprise Architecture Status Report 2004, September 13, 2004, page 2, Paragraph 2.

³³ Report No. E1N WG6-15-0001-8100177, *Office of Water Data Integration Efforts*, June 22, 1998, page 15.

³⁴ EPA Web site <www.epa.gov/edr> Data Standards page.

³⁵ Ibid.

³⁶ OIG Report No. E1N WG6-15-0001-8100177, *Office of Water Data Integration Efforts*, June 22, 1998; OIG Report No. 2002-P-00004, *Unreliable Data Affects Usability of Docket Information*, January 18, 2002; and OIG Report No. 2002 P-00016, *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality*, September 30, 2002.

³⁷ OIG Report No. 2004-P-0008, *EPA Claims to Meet Drinking Water Goals Despite Persistent Data Quality Shortcomings*, March 5, 2004.

³⁸ OIG Report No. 2004-P-00021, *Opportunities Exist to Improve and Replicate EPA's National Petroleum Refinery Compliance Program*, Executive Summary, June 22, 2004.

³⁹ OIG Report No. 2002-P-00004, *Quality of Data in Enforcement's DOCKET System*, dated January 18, 2002, and OIG Report No. 2002-P-00016, *Comprehensive Environmental Response, Compensation, and Liability Information System Data Quality*, September 30, 2002.

⁴⁰ GAO's Summary of Major Management Challenges at the EPA <<http://www.gao.gov/pas/2005/epa.html>> 2nd paragraph.

⁴¹ Ibid.

⁴² EPA Strategic Information Plan: A Framework for the Future, July 29, 2002, page 8, and OEI NewsLetter, dated April 2001, page 3.

⁴³ Presentation regarding *State of the Environment*, by Denise Shaw (EPA/ORD), at OIG National Conference, December 2003.

⁴⁴ OEI FY 2003 Federal Managers' Financial Integrity Act Annual Assurance Letter, Summer of 2003. Attachment 6, pages 1 & 3.

⁴⁵ Gaps Process Options, February 25, 2005, provided by Nancy Wentworth, Director, Environmental Analysis Division, Office of Information Analysis and Access, OEI.

⁴⁶ Memorandum to the Indicators Steering Committee from Kim Nelson (CIO) Re: Summary of Key Decisions Reached at the March 3, 2005 Steering Committee Meeting.

⁴⁷ OEI FY 2003 Program and Project Highlights, dated October 2003, page 6.

⁴⁸ Ibid.

⁴⁹ Memorandum to the Acting Deputy Administrator, Laboratory Fraud: Deterrence and Detection, June 25, 1999, pages 1 and 3

⁵⁰ Final Report on the 45-day Task Force Study's Findings on the Use of Science in Regional Decision Making, August 11, 2003.

⁵¹ Memorandum entitled Recommended Actions on EPA's Management Weaknesses for FY 2004 Integrity Act Report, November 2, 2004, Attachment 1, pages 2 and 3.

⁵² OIG Report No. 2003-P-00008, *EPA Could Increase Savings and Improve Quality Through Greater Use of Performance-Based Service Contracts*, March 31, 2003 and OIG Report No. 2005-P-00006, *Office of Acquisition Management Can Strengthen Its Organizational Systems*, date February 17, 2005.

⁵³ EPA Directive 2100 (*EPA IRM Policy Manual*), Chapter 5 (*Data Standards*), (<http://epawww.epa.gov/rmpolicy/ads/manuals/Chaptr05.PDF>), page 5-1.

⁵⁴ EPA web site: www.epa.gov/edr - Data Standards page.

⁵⁵ *Additional Efforts Needed to Improve EPA's Oversight of Assistance Agreements*, Report No. 2002-P00018, September 30, 2002.

⁵⁶ *Stronger Leadership Needed to Develop Environmental Measures for Clean Water State Revolving Fund*, Report No. 2004-P-00022, June 23, 2004.

⁵⁷ OIG Report No. 2005-P-00014, *EPA Needs to Compete More Assistance Agreements*, March 31, 2005.

⁵⁸ OIG Report No. 2004-P-00010, *Review of Hotline Complaint Regarding Technical Assistance Grant No. I-97025201 Awarded to the Basin Clean-up Coalition, Coeur d'Alene, Idaho*, March 25, 2004.

⁵⁹ OIG Report No. 2004-P-00029, *EPA Oversight for the Alaska Village Safe Water Program Needs Improvement*, September 21, 2004.

⁶⁰ "The Clean Air Act Amendments of 1990 - Summary Materials," Office Of Air and Radiation (OAR), U.S. Environmental Protection Agency, November 15, 1990; "Control Of Emissions Of Hazardous Air Pollutants from Mobile Sources: Response to Comments," EPA-420-R-00-024, December 2000, p. 15; EPA FY 2003 Annual Plan, p. I-3; "Taking Toxics Out of the Air: Progress in Setting 'Maximum Achievable Control Technology' Standards Under the Clean Air Act," EPA-452/K-00-002, August 2000.

⁶¹ 2003-2008 EPA Strategic Plan, September 30, 2003, p. 13.

⁶² FY 2004 Final Annual Performance Plan (requested) and FY 1999 Final Annual Performance Plan (enacted). The FY 2005-06 air toxics budget is not provided since the Agency's budget information is presented differently in these years, does not provide a summary total for air toxics, and is not comparable.

⁶³ March 25, 2004 meeting with T. Clemons, Emissions Standards Division, EPA/OAQPS.

⁶⁴ *Air Quality Management in the United States*, National Research Council of the National Academies (2004), pp 57, 190, and 215.

⁶⁵ FY 2005 Congressional Justification, page I-18.

⁶⁶ 2005 Air Toxics Workshop presentation, "Mobile Source Air Toxics: Where Are We? Where Are We Going," Slides 4-5, Kathryn Sargeant, Mar. 30, 2005; and FY 2005 Congressional Justification, page I-18.

⁶⁷ 2005 Air Toxics Workshop presentation, 1999 National Air Toxics Assessment (NATA) National Scale Assessment, slides 14-15, April 1, 2005.

⁶⁸ Air Toxics Multi-Year Plan, EPA Office of Research and Development, April 2003 version, pages 8-9.

⁶⁹ *Air Quality Management in the United States*, National Research Council of the National Academies (2004), p 78.

⁷⁰ Section 112 (f) of the 1990 Clean Air Act Amendments.

⁷¹ OIG Report No. 2005-P-00008, *Progress Made in Monitoring Ambient Air Toxics, But Further Improvements Can Increase Effectiveness*, March 2, 2005, pp. 3-6, 11-16, 33-38; EPA-SAB-EC-ADV-00-005; An SAB Advisory on NATA - Evaluating the National-Scale Air Toxics Assessment 1996 Data, December 2001, Page2, Recommendations 3 and 4; and *EPA's Draft Report on the Environment, Technical Document*, EPA-260-R-03-050, June 2003, page I-6; Letter from Dr. Morton Lippman, Interim Chair, Science Advisory Board (SAB), to Carol M. Browner, (former) Administrator, EPA, EPA-SAB-EC-00-005 July 25, 2000, pp. 1-2; Executive Committee Commentary on Residual Risk Program; EPA-SAB-EC-00-015, July 25, 2000, pp.1-4, and 8-9; "NATA-Evaluating the National Scale Air Toxics Assessment 1996 Data-An SAB Advisory," EPA-SAB-ED-ADV-02-001, December

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⁷³ Federal Register/ Vol. 64. No. 137/ Monday, July 19, 1999, p. 38714.

⁷⁴ Document entitled “*ESD Area Source Projects Litigation Status*” prepared by OAQPS.

⁷⁵ 2005 Air Toxics Workshop presentation on Area Source Program, April 1, 2005.

⁷⁶ Federal Register/ Vol. 64. No. 137/ Monday, July 19, 1999, pp. 38711-38712; 2005 Air Toxics Workshop presentation, 1999 National Air Toxics Assessment (NATA) National Scale Assessment, Slides 14-15, April 1, 2005.

⁷⁷ 2005 Air Toxics Workshop presentation, “Mobile Source Air Toxics: Where Are We? Where Are We Going,” Slide 3, Kathryn Sargeant, March 30, 2005.

⁷⁸ Treadwell, Melinda, NESCAUM / Keene State College, Presentation: “Understanding the Mobile Source Contribution to Ambient Hot Spots,” National Training Workshop on Local Urban Air Toxics Assessment and Reduction Strategies, Detroit, MI, Nov. 14, 2001, slide 5; and Health Effects Institute Update, Fall, 2004, page 1; FY 2005 Congressional Justification, page I-28.

⁷⁹ Zhu, Y. Hinds, W.C., Kim, S., and Sioutas, C., “Concentration and size distribution of ultrafine particles near a major highway.” *J. Air Waste Management Assoc.*, 52, 1032-1042 (2002); Winer, Arthur, *Air Quality in Southern California – Time for a Paradigm Shift, The State of the Region 2004: Measuring Regional Progress*, February 3, 2005 <http://www.scag.ca.gov/publications/pdf/2004/SOTR04_FullReport_lowres.pdf>.

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⁸¹ EPA’s *Draft Report on the Environment*, EPA-260-R-02-006, pages I-13, I-22, June 2003; *Technical Document: EPA’s Draft Report on the Environment*, EPA-600-R-03-050, pp. I-39, 40; OIG Report 2002-000691, *EPA’s Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement*, March 31, 2004, page 1.

⁸² “Framework for Cumulative Risk Assessment (External Review Draft),” April 23, 2002, U.S. Environmental Protection Agency, Risk Assessment Forum, Washington, DC; FY-2002 Integrity Act Annual Assurance Letter from Jeffrey R. Holmstead, AA for OAR, to Christine Todd Whitman, Administrator, EPA, p. 4; and Air Toxics Multi-Year Plan, EPA Office of Research and Development, April 2003 version, pages 8-9.

⁸³ OIG Report 2002-000691, *EPA’s Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement*, March 31, 2004, page 1.

⁸⁴ OIG Report 2002-000691, *EPA’s Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement*, March 31, 2004, pages 8-18; EPA’s *Draft Report on the Environment*, Technical Document, EPA-260-R-03-050, page I-39, June 2003.

⁸⁵ EPA’s *Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement*, OIG Report 2002-000691, March 31, 2004, pages ii, 19 -21, 24.

⁸⁶ OIG Report No. 2005-P-00003, *Additional Analyses of Mercury Emissions Needed Before EPA Finalizes Rules for Coal-Fired Electric Utilities*, Feb. 3, 2005, pp. 1-3; Environmental Council of States, 2003, *Elements for Developing a National Mercury Reduction Strategy to Achieve Water Quality Standards* <<http://www.ecos.org/content/general/detail/719>> accessed April 14, 2005.

⁸⁷ For example, computer modeling conducted for the Northeast States and Eastern Canadian Provinces estimates that 30 percent or more of the mercury deposited originates from sources outside of the region (<http://www.mass.gov/dep/ors/files/negecp.pdf>, accessed April 14, 2005). The state of Minnesota (<http://www.pca.state.mn.us/publications/wq-iw4-01b.pdf>, accessed April 20, 2005) estimates that 70 percent of the atmospheric deposition of mercury in Minnesota derives from anthropogenic sources outside of Minnesota, 30 percent from natural emissions, and only 10 percent from anthropogenic sources within Minnesota.

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⁹² OMB’s PMA Scorecard for EPA, December 31, 2004, page 2.

⁹³ EPA’s PMA Management Status for July 1, 2003, Revised June 25, 2003.

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⁹⁸ OIG Report No. 2004-P-00024, *EPA Prepared to Implement Strategic Human Capital Management Activities But Challenges Remain*, September 20, 2004, page i.

⁹⁹ OIG Report No. 2003-P-00016, *Decline in EPA Particulate Matter Methods Development Activities May Hamper Timely Achievement of Program Goals*, September 30, 2003, page 11 <<http://www.epa.gov/oig/reports/2003/PMreport20030930.pdf>>.

¹⁰⁰ GAO Report GAO-03-112, *Major Management Challenges and Program Risks: Environmental Protection Agency*, January 01, 2003 <<http://www.gao.gov/htext/d03112.html>>.

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¹⁰⁴ The Office of Administration and Resources Management’s FY 2004 Assurance Letter and Integrity Act Reports, Attachment 4.

¹⁰⁵ EPA Strategic Information Plan, page iii.

¹⁰⁶ EPA FY 2004 Annual Report, page 24.

¹⁰⁷ GAO Report No. GAO-04-376, *Information Security: Agencies Need to Implement Consistent Processes in Authorizing Systems for Operation*, June 2004, page 31.

¹⁰⁸ OIG Report No. 2005-1-00021, *Audit of EPA's Fiscal 2004 and 2003 Financial Statements*, November 15, 2004, page 23.

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¹¹⁰ OIG Report No. 2003-S-00008, Question C.3.

¹¹¹ OIG Report No. 2004-P-00026, *EPA Needs to Improve Change Control for Integrated Financial Management System*, August 24, 2004, page 7.

¹¹² OIG Report No. 2005-1-00021, page 32.

¹¹³ OIG Report No. 2005-P-00011, *Security Configuration and Monitoring of EPA's Remote Access Methods Need Improvement*, March 22, 2005, pages 3 through 4.

¹¹⁴ Decision Memorandum from Chief Financial Officer to EPA Administrator, *Recommended Actions on EPA's Management Weaknesses for FY 2004 Integrity Act Report*, November 2, 2004, Attachment 2.