



Appendices

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Appendix A: Program Evaluations Completed in FY 2006

INTRODUCTION

EPA relies on program evaluations and analyses to inform decisions, design effective strategies, and adjust approaches to improve results. Appendix A lists and summarizes information for each program evaluation completed in FY 2006. It includes evaluations that apply to a specific annual performance goal (APG) (which are also listed under relevant APGs in Section 2 of this report) and broader evaluations that encompass more than one APG. This appendix lists evaluations by goal and objective, and provides information on the evaluator; scope of the evaluation; relevant findings; recommendations; EPA's response; and public access to the evaluation reports.

Goal 1

Evaluation Title: Particulate Matter: EPA Has Started to Address the National Academies' Recommendations on Estimating Health Benefits, but More Progress is Needed

Evaluator: U.S. Government Accountability Office

Scope of Evaluation: Goal 1, Objective 1. Under the Clean Air Act, EPA periodically reviews the appropriate air quality level at which to set national standards to protect the public against the health effects of particulate matter. EPA proposed revisions to these standards in January 2006 and issued a draft regulatory impact analysis of the revisions' expected costs and benefits. A 2002 National Academies (NAS) report generally supported EPA's approach but made 34 recommendations to improve how EPA implements its approach. GAO was asked to determine whether and how EPA applied the NAS' recommendations in its estimates of the health benefits expected from the January 2006 proposed revisions to the particulate matter standards. GAO examined the draft analysis, met with EPA officials and interviewed members of the NAS' committee.

Evaluation Findings: EPA has begun to change the way it conducts and presents its analyses of health benefits in response to recommendations from the NAS. Specifically, EPA applied, at least in part, 22 of the recommendations to its health benefit analysis of proposed revisions to particulate matter standards. EPA officials said that ongoing research and development efforts will allow the agency to gradually achieve more progress in applying the recommendations. EPA has not applied the remaining 12 recommendations to the analysis for a variety of reasons. EPA considers most of these recommendations as relevant to its health benefit analyses and emphasized the agency's commitment to respond to the recommendations.

Planned Response: As noted, EPA considers most of the NAS recommendations as relevant to its health benefit analyses and remains committed to implementing the NAS recommendations.

Public Access: The report is available at <http://www.gao.gov/new.items/d06780.pdf>, Report No. GAO-06-780, July 2006.

Evaluation Title: Clean Air Act: EPA Should Improve the Management of Its Air Toxics Program

Evaluator: U.S. Government Accountability Office

Scope of Evaluation: Goal I, Objective I. EPA's most recent data indicates that 95 percent of all Americans face an increased likelihood of developing cancer as a result of breathing air toxics—pollutants such as benzene and asbestos that may cause cancer or other serious health problems. Sources of air toxics include large industrial facilities, smaller facilities such as dry cleaners and cars and trucks. The 1990 Clean Air Act Amendments required EPA to regulate 190 pollutants from these sources through a multifaceted regulatory program. While EPA issues federal standards, state and local agencies generally administer these standards and some develop their own rules to complement the federal standards. In this context, GAO was asked to assess: (1) EPA's progress and challenges in implementing the air toxics program; (2) available information on the program's costs and benefits; and, (3) practices of state and local air toxics programs.

Evaluation Findings: While EPA has made some progress implementing the 1990 CAA air toxics program, major aspects of the program have still not been addressed. Many of the unmet requirements pertain to limiting emissions from small stationary and mobile sources, which collectively account for most emissions of air toxics. The agency faces continuing implementation challenges stemming from the programs low priority relative to other programs and related funding constraints. The program's agenda is largely set by external stakeholders who file litigation when the agency misses deadlines. As a result of EPA's limited progress, the Agency has not addressed health risks from air toxics to the extent or in the time frames envisioned in the CAAA. Available information on EPA's efforts to control air toxics is not sufficiently comprehensive to measure the program's total costs and benefits. Specifically, EPA has not comprehensively estimated the national economic costs of all air toxics standards and lacks the data necessary to assess the benefits of these standards. The state and local programs reviewed use practices that could potentially help EPA enhance the effectiveness of its air toxics program. For example several state programs have systematic approaches for identifying and prioritizing new pollutants that could inform EPA's efforts to meet the Act's requirement to review and update the list of regulated pollutants.

Evaluation Recommendations: EPA agrees in part with the conclusions and recommendations in the report. EPA must coordinate its internal plans to reduce toxic air pollution with court ordered actions. EPA has a large number of rules pertaining to hazardous air pollutants (HAP) scheduled for completion under different provisions of the Clean Air Act (CAA): mobile source emission standards, stationary source emission standards, and risk-based standards. In March 2006, EPA proposed a rule that would reduce air toxics from mobile sources. Specifically, the rule proposes standards to limit: (a) the benzene content of gasoline; (b) exhaust and evaporative emissions from passenger vehicles; and (c) emissions from gas cans due to evaporation and spillage. Promulgation of this rule is expected to reduce 350,000 tons of air toxics by 2030. The result of the proposal and other mobile source control programs would be a reduction by over 1 million tons in mobile source air toxics between 1999 and 2030. The final rule is expected to be promulgated February 9, 2007. The final MSAT rule mentioned above is the only mandatory air toxics activity for mobile sources. EPA has aggressively been working on mobile source regulations through fuel and engine standards, and other efforts. The Agency is focusing on reducing air toxics through regulatory actions, as well as a voluntary diesel retrofit program, which we are expanding to include stationary diesel engines. Based on 1990 levels, we expect a 90 percent reduction in diesel emissions and a 60 percent reduction in other mobile source air toxics (MSAT) by 2020. GAO recommends that EPA develop a plan for improving the management of its air toxics program, including a prioritization scheme, timelines, and estimates of resources needed to meet its statutory obligations. EPA met its obligations to adopt standards for major stationary source categories by issuing 96 Maximum Achievable Control Technology (MACT) standards that apply to 174 source categories. To meet fully our statutory obligations, we are developing additional standards for area source categories according to the following schedule that is consistent with an order recently issued by the U.S. District Court for the District of Columbia in *Sierra Club v. Johnson*, No. 1:01-cv-01537-PLF (August 2, 2006). While EPA sought to develop a strategy that prioritizes resources to maximize risk reduction, the above-mentioned court-ordered schedule has caused us to reexamine our plans in light of the extremely tight deadlines imposed by the court's order. We are making every effort to complete the remaining rules and comply with the court's order, but this will have a significant impact on our ability to prioritize based on risk, and will necessitate our focusing on those rules for which we have the greatest available information currently and can thus most readily meet the near-term deadlines.

Planned Response: EPA will work on meeting the court-ordered deadlines and on developing the residual risk and technology review program.

Public Access: The report is available at <http://www.gao.gov/new.items/d06669.pdf>, Report No. GAO-06-780, June 2006.

Evaluation Title: Monitoring Needed to Assess Impact of EPA's Clean Air Mercury Rule on Potential Hotspots

Evaluator: U.S. EPA's Office of the Inspector General

Scope of Evaluation: Goal I, Objective 1. About 40 percent of U.S. man-made airborne mercury is emitted from coal-fired utilities. EPA revised a previous finding that mercury emissions from coal-fired utilities be regulated with a Maximum Achievable Control Technology standard. Instead, EPA adopted a cap-and-trade program to reduce mercury emissions. Several State agencies and environmental groups objected to these actions. One concern was that a cap-and-trade program could result in localized areas with unacceptably high levels of mercury, or "hotspots." In support of its Clean Air Mercury Rule (CAMR), the EPA conducted a detailed analysis of mercury emissions and deposition. EPA concluded that "utility-attributable" hotspots would not occur after implementation of CAMR's mercury trading program. This evaluation assesses the basis for EPA's conclusion.

Evaluation Findings: EPA brought significant scientific, technical and modeling expertise to bear in developing a specific methodology to consider the potential for mercury hotspots. Several uncertainties associated with key variables in the analysis could affect the accuracy of the Agency's conclusion that the CAMR will not result in "utility-attributable" hotspots. The OIG noted: gaps in available data and science for mercury emissions estimates; limitations with the model used for predicting mercury deposition; uncertainty over how mercury reacts in the atmosphere; and, uncertainty over how mercury changes to a more toxic form in waterbodies. The OIG also concluded that based on their interpretation of CAMR, the Agency could not take action to mitigate a mercury hotspot unless the Agency first determined that the hotspot was solely "utility-attributable."

Evaluation Recommendations: The OIG recommended that EPA develop and implement a mercury monitoring plan to: (1) assess the impact of CAMR, if adopted on mercury deposition and fish tissue; and (2) evaluate and refine mercury estimation tools and models. The OIG also recommended that EPA clarify in the final rule that the "utility-attributable" hotspot does not establish a prerequisite for making future revisions to CAMR.

Planned Response: EPA agrees that additional mercury monitoring is needed and explained that CAMR does not establish the "utility-attributable" hotspot definition as a prerequisite for future changes to CAMR.

Public Access: The report is available at <http://www.epa.gov/oig/reports/2006/20060515-2006-P-00025.pdf>, Report No. 2006-P-00025, May 15, 2006.

Evaluation Title: EPA Can Improve Emissions Factors Development and Management

Evaluator: U.S. EPA's Office of the Inspector General

Scope of Evaluation: Goal I, Objective 1. Emissions factors are broad estimates of the emissions generated from a source, such as a factory. Nationally, emissions factors are used for about 80 percent of emissions reporting. An emissions factor is a representative value that attempts to relate the quantity of a pollutant released with an activity rate associated with the release. Emissions factors underlie many environmental decisions. Recently, states and industry have been developing emissions factors and submitting them to EPA. The OIG sought to determine whether the air emissions factors used by EPA are of acceptable quality for making environmental decisions, and whether EPA's process for developing, improving and rating emissions factors is sufficient to meet users' needs.

Evaluation Findings: EPA has made progress in emissions factors development since our review of the program in 1996 but a large number of factors continue to be rated low. The number of EPA-rated factors increased by nearly 94 percent from 1996 to 2004. However the percentage of emissions factors rated below average or poor increased from 56 percent in 1996 to 62 percent in 2004. The quality of many emissions factors remains low in part because EPA did not have a sufficient process for developing, improving and rating emissions factors, nor did EPA have a comprehensive strategic plan. The OIG found inconsistent emissions factors guidance, continuing reliance on a qualitative rating system when a quantitative range of uncertainty is needed, an insufficient program funding when needs are increasing.

Evaluation Recommendations: The OIG made a number of recommendations including: develop emissions factors guidance that addresses the development and appropriate use of emissions factors for non-inventory purposes; establish a rating system that provides the quantitative range of uncertainty for emissions factors for both inventory and non-inventory purposes; work with industry, state and local agencies, and others to leverage available resources for meeting increasing demands for new factors; and establish a workgroup to develop a comprehensive strategic plan for the Emissions Factors Program, and ensure that requested resources are used to achieve program goals.

Evaluation Title: EPA Can Improve Emissions Factors Development and Management

Evaluator: U.S. EPA's Office of the Inspector General

Planned Response: The OIG recommendations generally align with EPA's current improvement efforts. EPA is making it easier for industry to transform their emissions data into emissions factors and to transmit them to State and Federal reviewers quickly through reengineering the program to speed the development of emissions factors, increasing the number of emissions factors, and accounting for uncertainty in emissions factors. By analyzing and reporting on the uncertainty of emissions factors, we will be able to assess the uncertainty of not only future, but also existing, emissions factors. Our analysis and report have undergone an internal peer review process, and our efforts were determined to be acceptable, scientific approaches to evaluating uncertainty. We are summarizing the documents now for a non-technical audience. The analysis and report will be available on the web for external review and comment this year. We expect that discussions and decisions on the means to express uncertainties will take eighteen to twenty-four months to complete. In addition, guidance on rulemaking that may follow from the decisions is expected to take at least another thirty-six months. Before fall 2006, EPA will have developed and tested a new emissions factors streamlining process and developed emissions factors for coke ovens, landfills, municipal waste combustors, steel mini-mills, landing losses for external floating roofs, and low pressure petroleum storage tanks. Working with other groups—consistent with our long-term goal of using others' resources to improve emissions factors—we will initiate development of emissions factors for natural gas engines, rubber manufacturers, and animal feeding operations.

Public Access: The report is available at <http://www.epa.gov/oig/reports/2006/20060322-2006-P-00017.pdf>, Report No. 2006-P-00017, March 22, 2006.

Evaluation Title: Climate Change: EPA and DOE Should Do More to Encourage Progress Under Two Voluntary Programs

Evaluator: U.S. Government Accountability Office

Scope of Evaluation: Goal 1, Objective 5. To reduce greenhouse gas emissions linked to climate change, two voluntary programs encourage participants to set emissions reduction goals. The Climate Leaders Program, managed by EPA, focuses on firms. The Climate VISION (Voluntary Innovative Sector Initiative: Opportunities Now) Program, managed by the Department of Energy (DOE) along with other agencies, focuses on trade groups. GAO examined: (1) participants' progress in completing program steps, the agencies' procedures for tracking progress, and their policies for dealing with participants that are not progressing as expected; (2) the types of emissions reduction goals established by participants; and, (3) the agencies' estimates of the share of U.S. greenhouse gas emissions that their programs account for and their estimates of the programs' impacts on U.S. emissions.

Evaluation Findings: EPA expects Climate Leaders firms to complete several program steps within general time frames, but firms' progress on completing those steps is mixed. EPA is developing a system for tracking firms' progress in completing these steps, but it has no written policy on what to do about firms that are not progressing as expected. DOE has no means of tracking trade groups' progress in completing the steps in their plans and no written policy on what to do about group that are not progressing as expected.

Evaluation Recommendations: GAO recommends that DOE develop a system for tracking groups' progress in completing program steps. Also, GAO recommends that both agencies develop written policies on what to do about participants not progressing as quickly as expected. EPA did not comment on the recommendation and DOE agreed with the recommendation on a tracking system and said it will consider the recommendation on establishing a written policy.

Planned Response: EPA believes that the recommendation identified by GAO is not a program weakness and has been addressed in the initial design of the program. In response to GAO's finding, EPA has detailed its existing policy in an internal written memo which documents the steps that EPA will take if it believes a Partner is not progressing in completing the program requirements in a timely manner. Given the differences in the size and complexity of Partners' corporate inventories, EPA believes that a public written policy establishing consequences for not meeting program steps on a specified schedule would be detrimental to recruiting companies to undertake the significant voluntary effort that is necessary to meet the program requirements.

Public Access: The report is available at <http://www.gao.gov/new.items/d0697.pdf>, Report No. GAO-06-97, April 2006.

Goal 2

Evaluation Title: Drinking Water: EPA Should Strengthen Ongoing Efforts to Ensure That Consumers Are Protected from Lead Contamination, GAO-06-148

Evaluator: U.S. Government Accountability Office

Scope of Evaluation: Goal 2, Objective 1. GAO was asked to evaluate: (1) the completeness of information that EPA has to evaluate implementation; (2) areas of the rule where modifications could strengthen public health protection; and (3) the availability of information to assess the quality of drinking water in schools and child care facilities with respect to lead.

Evaluation Findings: GAO found that data submitted by states to EPA is incomplete and EPA has not analyzed violation and enforcement data to assess the adequacy of state oversight efforts. They identified several areas of the rule where, based on their review, protection could be strengthened. They identified other issues that require additional research and evaluation to inform whether changes to rule or guidance are needed and found there is little information on how states implemented the 1988 Lead Contamination Control Act.

Evaluation Recommendations: GAO recommended that EPA (1) work with states to get complete data and analyze data on violations and corrective actions, (2) review regulations and guidance to address specific issues raised in the report, (3) carry out additional research to address other issues raised in the report, and (4) collect and analyze the results of testing in schools and child care facilities, assess the pros and cons of remediation strategies, and make results known the public.

Planned Response: As part of its Drinking Water Lead Reduction Plan (announced in March 2005), EPA is carrying out a number of activities that are responsive to the findings raised in the report, specifically with respect to changes to regulation and guidance. Regulatory revisions, which addressed some of GAO's concerns, were proposed in July 2006. EPA will continue to work with states to ensure that we have complete data with which to assess implementation and engaging in a broad effort to encourage voluntary testing for lead in drinking water in schools and child care facilities.

Public Access: The report is available at <http://www.gao.gov/new.items/d06148.pdf>

Evaluation Title: Promising Techniques Identified to Improve Drinking Water Laboratory Integrity and Reduce Public Health Risks

Evaluator: EPA's Office of the Inspector General

Scope of Evaluation: Goal 2, Objective 1. This evaluation was conducted to identify: vulnerabilities in the drinking water sample analysis process, techniques to mitigate those vulnerabilities, and opportunities to further safeguard human health.

Evaluation Findings: Within the drinking water sample analysis process, we identified vulnerabilities not addressed by EPA's process which can compromise the integrity of the analysis process and the quality of data produced. States that have implemented new techniques to detect laboratory integrity problems have found additional deficiencies, inappropriate procedures, and even cases of fraud. Without any national studies of water quality data that examine the integrity of laboratories, the full extent of the problem remains unassessed.

Evaluation Recommendations: EPA assess drinking water laboratory integrity and incorporate promising techniques to better identify inappropriate procedures and fraud into the laboratory oversight process. In addition, EPA must better address the root causes of vulnerabilities, including limited laboratory controls and economic pressures.

Specifically, EPA needs to:

- Enhance guidance and further encourage EPA and State laboratory certification officers to use promising techniques, and reduce uncertainty by monitoring and assessing laboratory and certification program conditions.
- Review procurement policy and promote ethical practices.
- Create a policy and mechanism to identify affected data.

Evaluation Title: Promising Techniques Identified to Improve Drinking Water Laboratory Integrity and Reduce Public Health Risks

Evaluator: EPA's Office of the Inspector General

Planned Response: EPA indicated that it will encourage the use of promising techniques identified and "play a greater role" in preventing and detecting inappropriate procedures and fraud in drinking water laboratories. EPA stated a commitment to the quality of data in Agency databases and will submit OIG's recommendations to the Agency's Quality and Information Steering Committee for action. A full corrective action plan is expected.

Public Access: Website access: <http://www.epa.gov/oig/reports/2006/20060921-2006-P-00036.pdf>. Available: September 21, 2006. Report number: 2006-P-00036.

Evaluation Title: Lessons Learned: EPA's Response to Hurricane Katrina

Evaluator: EPA's Office of the Inspector General

Connection to EPA's Strategic Plan: This evaluation was not included in the "Proposed Future Program Evaluation" section in the *FY 2003–2008 Strategic Plan*.

Scope of Evaluation: Goal 2; Objective 1. This report consolidated the lessons learned by the OIG in conducting three prior evaluations in assessing EPA's response to Hurricane Katrina in restoring drinking water and wastewater treatment facilities; and managing debris and hazardous waste removal. The report also compared EPA's response to Hurricane Katrina to the lessons learned in the prior OIG report on *EPA's Response to the World Trade Center Collapse: Challenges, Successes, and Areas for Improvement* (Rpt. No. 2003-P-00012, August 21, 2003).

Evaluation Findings: We found that coordination problems within EPA, with State and local officials, and with the U.S. Army Corps of Engineer (USACE) resulted in duplicative work being completed by EPA and Louisiana officials. Also, initially, there were problems with the transport of drinking water in potentially hazardous tanker trucks. In addition, State of Louisiana officials reported problems querying and verifying the quality of data in EPA's database used to collect floodwater results.

Evaluation Recommendations: We recommended that the Assistant Administrators for the Offices of Solid Waste and Emergency Response and of Water, as part of EPA's lessons learned from Katrina, ensure that planned corrective actions are implemented, including conducting interagency meetings and establishing coordination protocols with the trucks in tribal lands in Region 4.

Planned Response: EPA agreed with our recommendations and have taken action or is currently taken actions to implement the recommendations.

Public Access: The report is available at <http://www.epa.gov/oig/reports/2006/20060914-2006-P-00033.pdf>. Also, the report is available by contacting the OIG Office of Congressional and Public Liaison. September 14, 2006. Report No. 2006-P-00033.

Evaluation Title: Much Effort and Resources Needed to Help Small Drinking Water Systems Overcome Challenges

Evaluator: EPA's Office of the Inspector General

Scope of Evaluation: Goal 2, Objective 1. The challenges of small drinking water systems in providing water that is safe to drink and the adequacy of EPA and State initiatives for addressing those challenges, including: (1) assuring that drinking water meets current and future Safe Drinking Water Act (SDWA) requirements; (2) the effectiveness of EPA and the States in assisting small drinking water systems and (3) the impact of these efforts on the health of consumers of drinking water from small systems.

Evaluation Title: Much Effort and Resources Needed to Help Small Drinking Water Systems Overcome Challenges

Evaluator: EPA's Office of the Inspector General

Evaluation Findings: After many years, small drinking water systems continue struggling with financial/management matters and regulatory/compliance issues, despite many Government and nongovernmental initiatives and approaches to assist their resolution of these problems. While it is difficult to measure the effectiveness of individual EPA and State activities to assist small drinking water systems, we identified several indicators of success as well as limitations of these approaches.

Limited data exist on the health impacts related to small drinking water systems. The Centers for Disease Control and Prevention (CDC) states that while incidence is vastly underreported, data does show health outbreaks related to small drinking water systems.

Evaluation Recommendations: EPA should work with States to identify successful approaches for working with small systems to obtain financing. EPA should work closer with States to identify and compile small system best practices and establish a method for disseminating the information, to maximize limited resources to assist small systems.

Planned Response: In response to our report, the Agency has agreed to accept our recommendations, and proposed corrective actions that the OIG has accepted. The OIG will track the Agency's progress implementing these actions.

Public Access: The report is available at: <http://www.epa.gov/oig/reports/2006/20060530-2006-P-00026.pdf>. Report Number: 2006-P-00026.

Evaluation Title: Clean Water: How States Allocate Revolving Loan Funds and Measure Their Benefits

Evaluator: U.S. Government Accountability Office

Scope of Evaluation: Goal 2, Objective 2. At the request of the House of Representatives Committee on Appropriations, Subcommittee on Interior, Environment, and Related Agencies, GAO undertook a study of (1) the extent to which states currently use their Clean Water State Revolving Funds (CWSRF) to support conventional wastewater treatment plant construction versus other qualifying expenses; (2) the strategies states use to allocate their CWSRF dollars among qualifying expenses; and (3) the measures states use to evaluate their allocation strategies.

Evaluation Findings: (1) Since 1987, states have used 96 percent (about \$50 billion) of their CWSRF dollars to build, upgrade, or enlarge conventional wastewater treatment facilities and conveyances. (2) The 50 states (and Puerto Rico) have used a variety of strategies to allocate CWSRF funds to meet their individual needs. For example, some states target a certain portion of their funds to nonpoint source projects, while other states target borrowers in small or rural communities. States' allocation strategies may change as certain states' priorities and clean water needs shift. (3) EPA and the states use a uniform set of financial and environmental measures to help determine efficient and effective use of CWSRF resources. EPA regional officials conduct annual reviews of each state program to help ensure the fiscal integrity of the state programs. All programs are also subject to annual independent financial audits. To measure environmental outcomes of CWSRF-funded projects, in FY 2005, EPA developed an electronic benefits reporting system that all 51 programs have agreed to use.

Evaluation Recommendations: None.

Planned Response: No response or action is necessary since the GAO report did not contain recommendations.

Public Access: Public access to the report can be found at: <http://www.gao.gov/new.items/d06579.pdf>

Evaluation Title: Sustained Commitment Needed to Further Advance Watershed Approach

Evaluator: EPA's Office of Inspector General

Scope of Evaluation: Goal 2, Objective 2. The OIG undertook this evaluation to determine how well the EPA is doing in four critical elements to advance the watershed approach. These four elements are integration, stakeholder participation, strategic planning, and performance measurement.

Evaluation Findings: EPA has made progress integrating watershed approach principles into some of its core water programs, but needs to address challenges to ensure further success. Stakeholders were enthusiastic about the watershed approach, but identified a number of obstacles when adopting the approach. EPA has made important strides incorporating the watershed approach into its strategic plans, but it must improve some key steps. Although EPA developed a performance measurement system for improving water quality on a watershed basis, EPA did not develop measures to evaluate key programs and activities, and its national outcome measures were not understandable, comparable, and reliable.

Evaluation Recommendations: The OIG recommended that EPA address challenges to integrating watershed approach principles into its core programs, as well as obstacles identified by stakeholders concerning the watershed approach. EPA also needs to improve its strategic plans and performance measurement system that address the watershed approach.

Planned Response: EPA will continue to integrate the watershed approach into its core water programs; work in partnership with stakeholders to ensure obstacles with implementing the watershed approach are addressed; continue to refine and improve key aspects of the strategic planning process; and continue to improve key aspects of the performance measurement system. The results of the program evaluation will influence changes in the strategic architecture. The evaluation impacted how EPA develops the performance baseline for sub objective 2.2.1 of the strategic plan. The evaluation also recommends that EPA improve the design of the outcome measures for sub objective 2.2.1. Finally, the evaluation recommends that EPA revise its Program Activity Measures to better measure the impact of critical national strategies and core water programs that lead to achieving sub objective 2.1.1.

Public Access: Public access to the report can be found at: <http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf>

Evaluation Title: EPA Can Better Implement Its Strategy for Managing Contaminated Sediments

Evaluator: EPA's Office of Inspector General

Scope of Evaluation: Goal 2, Objective 2. The OIG undertook this evaluation to determine the effectiveness and outcomes achieved from the EPA's *Contaminated Sediment Management Strategy* (1998). In particular the OIG evaluated whether Federal authorities and resources provided effective solutions, and how well EPA measured Strategy effectiveness and assessed contamination.

Evaluation Findings: EPA needs to better manage its efforts to clean up contaminated sediments on a nationwide basis. EPA made some progress with its *Contaminated Sediments Management Strategy*. However, the Agency cannot assure that resources devoted to addressing contaminated sediments provide the most effective and efficient solutions for reducing the environmental and human health risks posed by this national problem. Program offices generally did not use National Sediment Inventory data for decision making, even though the inventory represents the most comprehensive source of data on contaminated sediments in the United States. EPA did not sufficiently coordinate contaminated sediment activities performed by various EPA program offices. The Agency did not develop sediment quality criteria to ensure the comparability of data gathered to assess sediment contamination and its effects. EPA contaminated sediment research efforts did not fully meet the Agency's needs, and EPA can improve coordination of its research efforts with those of other Federal agencies. The Agency also did not establish cross-program performance measures that fully evaluate the effectiveness of its Strategy and enable EPA to determine its progress. Many of these issues occurred because no program office within EPA has responsibility for overseeing contaminated sediments. EPA's 2004 *National Sediment Quality Survey* report did not provide a complete assessment of the extent and severity of sediment contamination across the Nation, nor fully meet the requirements of the Water Resources Development Act.

Evaluation Recommendations: The committee indicated below is addressing.

Planned Response: An Intra-agency Committee on Preventing and Managing Contaminated Sediments led by OW was established on April 6, 2006. The committee is meeting regularly and has developed an initial workplan for completing the Action Plan which will describe specific actions to: (1) ensure that the Agency uses the National Sediment Inventory as part of EPA's decision making; (2) ensure that contaminated sediment issues are managed and addressed through a cross-program approach; and 3) update the Strategy.

Public Access: Public access to the report can be found at: <http://www.epa.gov/waterscience/cs/stratndx.html>.

Evaluation Title: Review of the Office of Research and Development's Drinking Water Research Program at the U.S. Environmental Protection Agency

Evaluator: Board of Scientific Counselors (BOSC) Subcommittee on Drinking Water Research.

Strategic Plan Connection: This evaluation was conceptually included as a Proposed Future Program Evaluation in the *FY 2003–2008 Strategic Plan*. Under "Research" evaluations, research programs were proposed to be reviewed against the OMB Criteria of relevance, quality and performance.

Scope of Evaluation: Goal 2, Objective 3. This evaluation reviewed the DWRP performance, relevance, quality, and scientific leadership.

Evaluation Findings: The DWRP is relevant and critically important to the overall EPA mission. The DWRP is also focused on timely delivery of high-quality research that is of national importance. It has remained involved within rapidly evolving drinking water areas by conducting innovative research and methods development.

Evaluation Recommendations:

Key recommendations for this program include:

- The decision to consolidate three long-term goals into two is not well justified.
- Evaluate strategies that could be implemented to encourage more cutting edge research to identify and circumscribe issues, problems, and solutions that impact safe drinking water:
- Develop a "Science Leadership" mission statement and to identify those areas it believes it is capable of establishing or sustaining international leadership over the long term.
- Be proactive in developing metrics to document and support its assertion that translation of its research outputs is making significant contributions.
- Aggressively pursue partnering with other agencies and nongovernment organizations to ensure that the Criteria Contaminant List (CCL) needs are addressed adequately.
- To anticipate new problems in drinking water contamination, treatment, distribution, and source water protection, the Agency should consider STAR solicitations that are somewhat more open ended.

Planned Response: Findings from this evaluation will be used to revise the long-term goal structure of the program to encourage anticipatory and cutting-edge research ideas. The DWRP will also increase utilization of research partnerships to help fund research of mutual interest. Finally, the DWRP is working towards improved long-term outcome metrics that will measure program performance.

Public Access: The report is available online at: <http://www.epa.gov/osp/bosc/pdf/dw1027rpt.pdf>.

Evaluation Title: Review of the Office of Research and Development's Water Quality Research Program at the U.S. Environmental Protection Agency

Evaluator: Board of Scientific Counselors (BOSC) Subcommittee on Water Quality Research

Strategic Plan Connection: This evaluation was conceptually included as a Proposed Future Program Evaluation in the *FY 2003–2008 Strategic Plan*. Under "Research" evaluations, research programs were proposed to be reviewed against the OMB Criteria of relevance, quality and performance.

Scope of Evaluation: Goal 2, Objective 3. This evaluation reviewed the Water Quality Research Program's (WQRP) performance, relevance, quality, scientific leadership, and coordination/communication.

Evaluation Findings: Overall, the WQRP is contributing significantly to the strategic goals of the EPA and provides needed technical support and products for environmental managers. The program also has a diverse and competent staff and is providing leadership in the area of water quality research for management.

Evaluation Recommendations:

Key recommendations for this program include:

- A more transparent approach to prioritizing research is recommended. This should be provided in the next update to Multi-Year Plan document.
- An annual accounting of Program outcomes is needed.
- The exploratory part of the Science To Achieve Results (STAR) Program should be reinstated and made sustainable.
- The Program should continue to improve partnering and collaboration, particularly with the states.
- The Multi-Year Plan needs considerable improvement if it is to better communicate the goals of the Program as it is intended.
- Biosolids should not be elevated to a Long-Term Goal (LTG). This research should be subsumed either in LTG 3 or under the same structure as other pollutant sources in the frameworks for LTGs 1, 2, and 3.

Planned Response: The program is currently revising its Multi-Year Plan (MYP) document with attention to creating a process for collecting information and transparently prioritizing its research. In this revised MYP, the program is striving to provide greater background information and context, along with a description of future research directions. Also as part of the MYP process, workgroups (consisting of representative from ORD, OW offices, and Regions) are actively seeking new opportunities for collaboration by identifying State and/or Regional individuals who can help create local contributions to national efforts on a subject-by-subject basis. Additionally, the program is developing metrics and collecting data to better track progress toward its outcomes.

Public Access: The report is available online at: <http://www.epa.gov/osp/bosc/pdf/wq0605rpt.pdf>

Goal 3

Evaluation Title: A Comprehensive Review of EPA Policy and Guidance for Federal Facility Cleanup and Property Transfer

Evaluator: U. S. EPA, Federal Facilities Restoration and Reuse Office (FFRO)

Scope of Evaluation: Goal 3, Objective 2. As a follow-up to the Superfund Federal Facilities Response Program's 2005 PART assessment, the purpose of this evaluation was to inform the program of where current policy and/or guidance could be made more effective, as well as identify means to make future policy development and implementation more efficient and effective.

Evaluation Findings: The evaluation found that despite their age, policy and guidance for Federal facilities cleanup and property transfer should not be retired, nor should they be revised or updated unless a change in statute or EPA policy would require it. In addition, the evaluation identified key aspects of the policy development process where improvements could be made for future policy development, as well as methods to ensure policy and guidance are more accessible and meet the needs of EPA Regions.

Evaluation Recommendations:

The evaluation resulted in the following key recommendations:

- Evaluate the current policy development process to increase effectiveness of Regional participation;
- Leverage existing communications infrastructure to inform policy development;
- Develop policy and guidance "packaging" prototype;
- Implement website improvements;
- Consider developing training or outreach on complex subject matters; and
- Review policy and guidance inventory to identify appropriate candidates for revisions.

Planned Response: The Superfund Federal Facilities Response Program will evaluate the findings and recommendations of the evaluation and implement appropriate actions in FY 2007.

Public Access: Additional information on this evaluation can be found at <http://www.epa.gov/fedfac>.

Evaluation Title: More Complete Data and Continued Emphasis on Leak Prevention Could Improve EPA's Underground Storage Tank Program (GAO-06-45)

Evaluator: U.S. Government Accountability Office

Strategic Plan Connection: This evaluation was a "Proposed Future Program Evaluation" in the *FY 2003–2008 Strategic Plan*. The title in the Plan was: *Evaluation of Factors Influencing Performance in Underground Storage Tank Program*. The completed Program Evaluation focused on one of the aspects affecting the Agency's ability to meet or exceed the performance goal of cleanups completed.

Scope of Evaluation: Goal 3, Objective 2. To investigate the national status of abandoned tank cleanup. The study includes 5 case studies of states and how they prioritize, conduct, and fund cleanups, including Federal funding sources, such as the Leaking Underground Storage Tanks (LUST) Trust Fund.

Evaluation Findings: The data the states report to EPA on underground storage tanks provides the Agency with information it can use to determine the overall trends and status of the UST program; however, with the data currently collected, the Agency cannot readily determine the number of abandoned tanks requiring cleanup nationwide, whether this number is growing, whether states are completing work, and what are the potential impacts on state and Federal resources.

Evaluation Recommendations: GAO recommends that the Administrator of EPA require that states separately identify, in their reports to the Agency, information on the number of and cleanup status of all known abandoned underground storage tanks within their boundaries.

Evaluation Title: More Complete Data and Continued Emphasis on Leak Prevention Could Improve EPA's Underground Storage Tank Program (GAO-06-45)

Evaluator: U.S. Government Accountability Office

Planned Response: Obtaining information on abandoned tanks would be an important contribution to the underground storage tank program. In EPA's response, it states that the Agency will explore the extent to which states may already have information on abandoned tanks and whether EPA can access it without placing an undue burden on states. Additionally, EPA noted that collecting specific information on abandoned tank sites might be difficult because of the need to conduct site assessments.

Public Access: The report is available at <http://www.gao.gov/new.items/d0645.pdf>. Contact: Robin Hughes, Office of Underground Storage Tanks, hughes.robin@epa.gov

Evaluation Title: The National Academy of Sciences Report on Superfund and Mining Megasites: Lessons from the Coeur d'Alene River Basin.

Evaluator: National Academy of Sciences.

Scope of Evaluation: Goal 3, Objective 2. In 2002, Congress instructed EPA to ask the National Research Council (NRC) to conduct an independent evaluation of the Coeur d'Alene River basin Superfund site in northern Idaho as a case study to examine EPA's scientific and technical practices in Superfund megasites, including physical site definition, human and ecologic risk assessment, remedial planning, and decision making. NRC established the Committee on Superfund Site Assessment and Remediation in the Coeur d'Alene River Basin. In this report, the committee analyzes the record of decision and supporting documents from this Superfund site to assess the adequacy and application of EPA's own Superfund guidance in terms of available scientific and technical knowledge and best practices.

Evaluation Findings: The committee found that scientific and technical practices used by EPA for decision making regarding human health risks at the Coeur d'Alene River basin Superfund site are generally sound. However, for EPA's decision-making regarding environmental protection, the committee has substantial concerns, particularly regarding the effectiveness and long-term protection of the selected remedy. The findings included the need for greater collection and use of site-specific information, the need for universal blood lead screening of children age 1-4 years, increased support of institutional-control programs, increased attention to groundwater, factoring in flooding in the remedy decision, and increased attention to needed waste repositories.

Evaluation Recommendations: In its remedial planning, EPA should incorporate new data that have been made available by the U.S. Geologic Survey (USGS), the Coeur d'Alene tribe, and others since issuance of the ROD and should proceed, as planned, with more thorough source identification before cleanup to verify the location, magnitude, disposition, and contributions from contaminant sources. A better understanding of dissolved metals, particularly zinc, is needed to account for movement to and from groundwater and surface water. The chemical and hydrologic components of the assessment should be sufficiently rigorous to identify source areas of contaminants and permit evaluation of the consequences of alternative remedies to the transport of dissolved metals through the system. Understanding the speciation of metals is important to characterize risk more effectively and ascertain the potential effectiveness of remedial actions. Speciation information should be collected and examined to elucidate the potential for metal transport and the effect of transformation processes on the fluxes and bioavailability of metals.

Planned Response: EPA's National Mining Team (NMT) has formed a subgroup to carefully evaluate each one of the recommendations made by the NAS. Over the next year, the subgroup will draft action items for each recommendation, as it sees applicable and develop work plans as appropriate. These draft action items will be discussed with the entire NMT and senior management and finalized, if approved. In addition, EPA will develop blood lead and geometric standard deviation (GSD) guidance, and bioavailability guidance.

Public Access: The report can be downloaded from <http://www.epa.gov/superfund/reports/coeur.htm>.

Evaluation Title: EPA Can Better Manage Superfund Resources; Report No. 2006-P-00013; dated February 28, 2006. The OIG closed this report on July 07, 2006.

Evaluator: EPA's Office of Inspector General

Scope of Evaluation: Goal 3, Objective 2. The OIG performed this review in response to a congressional request to evaluate Superfund expenditures at headquarters and the regions and recommended options to increase resources directed to extramural cleanup while minimizing administrative costs. The OIG addressed four questions, developed in agreement with Senate and House Appropriations Committee staff:

- What have headquarters and regional Superfund expenditures been for the last 5 years (FYs 1999 to 2003)?
- How effective are the processes and criteria for determining, allocating, and optimizing regional and headquarters' Superfund administrative and support resources?
- How effective are the processes and criteria for allocating Superfund program dollars to program needs?
- How effective are EPA's procedures for integrating efficiency and effectiveness information into the Superfund program?

Evaluation Findings: The OIG provided answers to congressional questions about EPA's Superfund program expenditures and identified numerous opportunities for EPA to more effectively manage its existing Superfund resources, its program, and direct more resources to cleanup. EPA needs to overcome challenges in accounting for Superfund resources, understanding the program's resource needs, and decentralized management of the Superfund program. Several obstacles prevented EPA from efficiently and effectively managing the Superfund program for performance and adequately accounting for Superfund resources. EPA has been unable to allocate and manage Superfund resources for cleanup efficiently and effectively as possible because of the way the Agency accounts for program resources, manages by functions, supplements the program with other funds, relies on an outdated workload model, and maintains unliquidated Superfund obligations and funds in special accounts. Closely aligning offices that support the Superfund program, and producing program performance and cost data, have been limited because EPA disperses the responsibility for allocating and managing program resources.

Evaluation Recommendations: The OIG recommended changes that will help EPA overcome these obstacles and better manage its Superfund resources. They recommended actions that enabled the Agency to direct additional funds to Superfund cleanup and recommended a specific action Congress could take to help improve the Superfund program.

Planned Response: The Agency concurred with the OIG's recommendation that there be an accountable entity to allocate and manage Superfund resources across the Agency and stated that the existing Superfund Board of Directors serves that purpose. The Agency concurred with the OIG's recommendation that costs be defined in a manner that supports management decision making and as a result modified Superfund eFacts to reflect site costs. In addition, the Agency agreed to explore alternative definitions of administrative costs and to seek approval from Congress, as appropriate, to revise the definition. The Agency concurred with the OIG's recommendation that EPA monitor Superfund carryover and evaluate the need to reprogram carryover for extramural cleanup. The Agency stated that we would continue to monitor the utilization of appropriated Superfund resources periodically throughout each fiscal year and evaluate the need to reprogram carryover for extramural cleanup on an annual basis. The Agency concurred with the OIG recommendation that EPA undertake a workforce assessment and stated that an FTE analysis was already underway across headquarters and regions to assist in making future resource allocations. This workload assessment is scheduled for completion by January 31, 2007. The Agency concurred with the recommendation that EPA continue to review and deobligate unliquidated obligations with the goal of reducing the time it currently takes to deobligate funds. The Agency described their existing annual process to review unliquidated obligations and return funds to the national remedial action funding pool. The Agency concurred in part with the OIG recommendation on the need to monitor the use of special accounts. While the Agency disagreed with the OIG's identification of \$465 million as available for deobligation, EPA stated that they would continue to monitor special accounts in accordance with the existing "Management of Special Accounts" guidance. Concurring with the OIG recommendations to continue EPA's processes for effectively managing Superfund resources did not result in any change in the Agency's strategic architecture in terms of what should be measured or what the targets should be.

Public Access: EPA Can Better Manage Superfund Resources; Report No. 2006-P-00013; dated February 28, 2006; can be viewed in full at <http://www.epa.gov/oig/reports/land.htm>.

Evaluation Title: Site-Specific Charging at Superfund Sites: Benchmarking Regional Practices

Evaluator: EPA, Office of Solid Waste and Emergency Response

Scope of Evaluation: Goal 3, Objective 2. EPA conducted its first benchmarking project, which is the process of identifying best practices and adapting these practices for use throughout an organization to improve program performance. The first process selected by EPA Superfund's Best Practices/Benchmarking Steering Committee was to identify regional best practices in site-specific payroll charging. Site-specific charging is the basis for the Agency's cost recovery efforts and is a primary means of demonstrating to external parties, such as Congress and OMB, how the Agency is managing and accounting for its Superfund resources. A small benchmarking team composed two regional EPA employees and three from EPA headquarters interviewed staff from four regions (regions 3,5,7,10) and headquarters for this project.

Evaluation Findings: The Benchmarking Team identified four primary regional Best Practices with respect to site-specific payroll charging: 1) availability of technical assistance and training on all aspects of PeoplePlus to staff via a point of contact(s); 2) availability of regular in Superfund site-specific payroll charging reports to managers on all staff with Superfund fixed account numbers (FAN); 3) providing clear criteria for what can and what cannot be charged site-specifically; and 4) providing consistent and firm senior and mid-level management attention and oversight. The Benchmarking Team also identified several issues that impact site-specific payroll charging nationwide and, ultimately, impact the ability of the Agency to accurately document the hours spent doing site-specific work. There are instances where staff can do site-specific work but cannot charge their time to specific sites according to Agency policy or are unsure of the Agency policy with respect to these instances. These instances are time spent responding to Freedom of Information Act (FOIA) requests; and overtime or compensatory time. By excluding this time from site-specific payroll charging, the Agency is not accurately accounting for all the time staff spent doing site-specific work. The Benchmarking Team also identified time that is charged site-specifically using Special Accounts that is not being captured in Agency site-specific payroll charging reports.

Evaluation Recommendations: The Benchmarking Team recommended: (1) that EPA headquarters and regional Superfund personnel work to implement these best practices; (2) that regional and headquarters Superfund site-specific payroll charging be benchmarked again in FY 2007 to determine whether practices have changed; (3) that the Agency address the FOIA and overtime/compensatory charging issue; and (4) that the Agency capture site-specific time charged to Special Accounts in its standard reports on site-specific payroll charging.

Planned Response: The program is implementing recommendations 1, 2, and 4. Work is underway to determine how to address recommendation 3.

Public Access: This is an internal program report. For a copy of this report, please contact Melanie Hoff of EPA's Office of Superfund Remediation and Technology Innovation at 703-603-8808.

Evaluation Title: Information Security Series: Security Practices - Comprehensive Environmental Response, Compensation and Liability Information System; Report No. 2006-P-00019; dated March 28, 2006. This evaluation was closed August 10, 2006.

Evaluator: EPA's Office of Inspector General

Scope of Evaluation: Goal 3, Objective 2. The overall general objective of this assignment was to perform an independent evaluation of the implementation and effectiveness of EPA's information security practices. More in depth reviews were conducted in the following security areas:

- To what extent have program and regional offices implemented processes and security controls over contractor owned and operated information systems which contain EPA data?
- Has EPA: (1) developed and implemented procedures for performing incident handling and reporting and (2) implemented incident prevention strategies to complement its incident response capability?

Evaluation Findings: The Office of Solid Waste and Emergency Response's (OSWER's) implemented practices to ensure production servers were being monitored for known vulnerabilities and personnel with significant security responsibility completed the Agency's recommended specialized security training. However, the OIG found that OSWER's CERCLIS, a major application, was operating without a current (1) certification and accreditation package and (2) contingency plan or testing of the plan. OSWER officials could have discovered the noted deficiencies had they implemented practices to ensure these Federal and Agency information security requirements were followed. As a result, CERCLIS had security control weaknesses that could effect OSWER's operations, assets, and personnel.

Evaluation Title: Information Security Series: Security Practices - Comprehensive Environmental Response, Compensation and Liability Information System; Report No. 2006-P-00019; dated March 28, 2006. This evaluation was closed August 10, 2006.

Evaluator: EPA's Office of Inspector General

Evaluation Recommendations: It was recommended that the CERCLIS System Owner:

- Conduct an independent review of security controls and a full formal risk assessment of CERCLIS and update the certification and accreditation package in accordance with Federal and Agency requirements,
- Conduct a test of the updated CERCLIS contingency plan, and
- Develop a Plan of Action and Milestones in the Agency's security weakness tracking system (ASSERT database) for all noted deficiencies.

It was recommended that the OSWER Information Security Officer:

- Conduct a review of OSWER's current information security oversight processes and implement identified process improvements.

Planned Response: OSWER agreed with the report's findings and has updated the CERCLIS security plan and re-authorized the application. OSWER has also updated the CERCLIS contingency plan and conducted a tabletop exercise in the updated plan.

- An independent review of CERCLIS security controls, and an inspection and update of the current risk assessment. These activities resulted in a subsequent update to the CERCLIS Security Plan which was approved and signed December 23, 2005.
- A review, update, and test of the CERCLIS Continuity of Operations Plan (COOP) conducted on December 17, 2005.
- All security vulnerabilities identified during the FISMA annual self-assessments will be documented and monitored in the Agency's ASSERT database. Upon completion of the risk assessment, risks will be identified and documented, and all deficiencies will be monitored and remediated using ASSERT.
- A re-certification and accreditation of CERCLIS in accordance with Federal and Agency requirements approved and signed February 01, 2006.

Public Access: Information Security Series: Security Practices - Comprehensive Environmental Response, Compensation, and Liability Information System; Report No. 2006-P-00019; dated March 28, 2006; can be viewed in full at <http://www.epa.gov/oig/reports/infotech.htm>.

Evaluation Title: A Formative Evaluation of a National Program for School Pollution Prevention and Chemical Cleanout (SC3).

Evaluator: Office of Solid Waste and Emergency Response, prepared by Indtai, Inc.

Scope of Evaluation: Goal 3, Objective 2. The goal of this evaluation project was to gain insights into the structure, processes, stakeholders and administrators, and operations of existing SC3-like programs to help EPA design its national SC3 program. The purpose of this formative evaluation was to provide EPA with a review of the potential components of a national SC3 program, and an analysis of potential roles for EPA and various partner organizations in program scoping and implementation.

Evaluation Findings: While each school has its own set of unique circumstances, one common thread is the need for chemical management and prevention practices that ensure schools are safe from chemical risks. The formative evaluation has clearly shown that elements of a SC3 program are not one size fits all due to the complex nature of effective chemical management.

Evaluation Recommendations: The evaluation made the following recommendations: conduct a scoping and needs assessment exercise prior to SC3 program creation; increase promotion of EPA grant fund availability; use the grant process to inventory current state of chemicals in schools; provide program management services; leverage existing resources and relationships; and dedicate a source of "emergency" funds for cleanout.

Evaluation Title: A Formative Evaluation of a National Program for School Pollution Prevention and Chemical Cleanout (SC3).

Evaluator: Office of Solid Waste and Emergency Response, prepared by Indtai, Inc.

Planned Response: EPA plans to use the results of this evaluation, in combination with the results of the results evaluation which is underway, to develop a national cleanout, prevention, and awareness program. A national schools chemical cleanout campaign will help achieve the our 2008 performance objectives under several sub-objectives:

- 3.2.1—Prepare for and Respond to Accidental and Intentional Releases.
- 4.1.3—Reduce Chemical and Biological Risks.
- 4.2.2—Restore Community Health.
- 5.2.1—Prevent Pollution and Promote Environmental Stewardship by Government and Public.

As a result of the formative evaluation and the early findings of the program evaluation, EPA has worked to build a national public/private network to address the issue of dangerous chemicals in K-12 schools. Using the logic model approach in the evaluations, this group is developing tools and approaches for behavior change, based on the findings of the evaluation.

Public Access: The SC3 formative program evaluation is not yet publicly available.

Evaluation Title: Review of the Office of Research and Development's Land Restoration and Preservation Research Program at the U.S. Environmental Protection Agency

Evaluator: Board of Scientific Counselors (BOSC) Subcommittee on Land Restoration and Preservation Research

Strategic Plan Connection: This evaluation was conceptually included as a Proposed Future Program Evaluation in the *FY 2003–2008 Strategic Plan*. Under "Research" evaluations, research programs were proposed to be reviewed against the OMB Criteria of relevance, quality and performance.

Scope of Evaluation: Goal 3, Objective 3. This evaluation reviewed the Land Research program's performance, relevance, quality, and leadership.

Evaluation Findings: The Land Research program is relevant and bases its research plans and goals off of the needs of EPA Program Offices and Regions. The program design used for producing knowledge, know-how, and decision-support tools is logical and comprehensive. The Land program also applies regular peer review to maintain high quality output.

Evaluation Recommendations: Key recommendations for this program include:

- Improve the primary planning document to better anticipate future conditions, increase clarity, and search for additional collaboration opportunities.
- Increase focus on emerging issues.
- Address problem of retiring scientific expertise by developing new scientists.
- Balance need for performance metrics with the costs and restraints these place on the program.
- Improve linkage between short-term performance outcomes with long-term outcomes.
- Consider how to characterize and communicate uncertainties inherent in assessment methods and models.

Planned Response: The program has taken steps in its revised Multi-Year Plan to better communicate research, document collaboration, and anticipate future needs. For example, the program is currently discussing how nanotechnology research should fit into the program. Additionally, Land program researchers routinely note emerging issues as part of their professional activities and advise the research coordination team of potential research directions. In conjunction with the 2006 PART review, the program is working to improve the clarity of the linkages between its annual performance measures and its long-term measures.

Public Access: Full report available online at: <http://www.epa.gov/osp/bosc/pdf/land0603rpt.pdf>.

Goal 4

Evaluation Title: Measuring the Impact of the Food Quality Protection Act: Challenges and Opportunities

Evaluator: EPA's Office of the Inspector General

Scope of Evaluation: Goal 4, Objective 1. Determine the ability of EPA's Office of Pesticide Programs (OPP) to measure its performance in meeting the mandates of the Food Quality Protection Act (FQPA), the strengths and weaknesses of OPP's current measuring system, ways OPP can use existing data to measure, and the impact FQPA had on mitigating dietary pesticide exposure risk on children's health.

Evaluation Findings: EPA has made progress in implementing the requirements of the FQPA, however OPP has primarily measured its success and the impact of FQPA by adherence to its reregistration schedule rather than by reductions in risk to children's health. OPP generally uses measures of actions taken, but lacks measures of outcomes to assess the specific impact of those actions on the health of children and others. By integrating existing data on health-based indicators of children's health risks from other federal agencies into a suite of performance measures, OPP can better track the effectiveness of regulatory decisions and program performance. For example EPA can measure the impact of FQPA on children's health more efficiently with the pesticide exposure, changes in usage patterns, substitutions, and import trends by using the U.S. Department of Agriculture's Pesticide Data Program data to illustrate dietary risk changes since the passage of FQPA in toxicity risks on foods consumed by children.

Evaluation Recommendations: OPP should implement a suite of output and outcome measures to assess the human health and environmental impacts of its work. OPP should pursue revision of EPA's goal structure as appropriate, and work with other EPA program offices and other Federal agencies to obtain needed data.

Planned Response: In response to our report, the Agency has agreed to accept our recommendations. The OIG awaits the Agency's 90-Day Response specifying the corrective actions to be taken. Outcome oriented strategic targets have been developed for the 2006-2011 Strategic Plan, still awaiting final acceptance. Likewise the program is developing output oriented goals and measures to be included in the 2008 Annual Plan and Congressional Justification.

Public Access: The report is available at: <http://www.epa.gov/oig/reports/2006/20060801-2006-P-00028.pdf>. Report Number 2006-P-00028.

Evaluation Title: Evaluation of EPA Hospitals for Healthy Environment (H2E) Program

Evaluator: Eastern Research Group Inc. for EPA Office of Planning, Economics and Innovation and EPA Office of Pollution Prevention and Toxics

Scope of Evaluation: Goal 4, Objective 1. The evaluation attempted to answer 6 questions covering assessment of measurable environmental outcomes and waste reducing environmental activities for both mercury and non-mercury waste reductions; satisfaction of H2E partners with the program; and, potential improvements to the program.

Evaluation Findings: The H2E Program has developed a product that has met the needs of its customer base; almost all hospitals have taken actions, or are taking actions, to virtually eliminate mercury; H2E partners have tended to take more actions that lead to successful outcomes than non-partners; and, it is not possible to generate representative estimates of reduced waste or to isolate the effect of the H2E program given the available data.

Evaluation Recommendations: Use the results of this evaluation for strategic planning purposes; focus on what customers liked and where improvements are still needed; make a strong effort to collect baseline and annual follow-up Facility Assessment form data from current partners; collect baseline and annual follow-up data from new partners; and, develop a method of normalizing the data collected from the Facility Assessment form.

Evaluation Title: Evaluation of EPA Hospitals for Healthy Environment (H2E) Program

Evaluator: Eastern Research Group Inc. for EPA Office of Planning, Economics and Innovation and EPA Office of Pollution Prevention and Toxics

Response to recommendations: The H2E program was launched as an independent, non-profit organization in the spring of 2006 and is no longer an EPA-run program. Though EPA is no longer able to unilaterally direct the program to implement the recommended changes on its own, we will continue to ensure continuous improvement, including the recommendations from this assessment by (1) including performance requirements in any future EPA cooperative agreements with the H2E organization and (2) having the EPA representative, who serves as a non-voting representative on the Board of Directors of the H2E organization, ensure that the Board of Directors reviews progress on the implementation of the recommendations in the Program Evaluation, as well as other continuous improvement measures.

Public Access: This report is available at <http://www.h2e-online.org/>.

Evaluation Title: Opportunities to Improve Data Quality and Children's Health through the Food Quality Protection Act

Evaluator: EPA's Office of the Inspector General

Scope of Evaluation: Goal 4, Objective 1. Determine the impact of the 1996 Food Quality Protection Act (FQPA) on EPA's need for scientific data on the impact of pesticides on children's health, and whether EPA enacted guidelines and procedures, and addressed new aggregate exposure and cumulative risk assessment efforts.

Evaluation Findings: To meet the requirements of FQPA, EPA instituted numerous data requirements designed to provide infants and children with better protection against the health risks of pesticides, and revisions of regulations, guidelines, and procedures. The Office of Pesticide Programs (OPP) made substantial changes to the aggregate risk assessment process and collected data on the cumulative effects of pesticides sharing a common mechanism of toxicity, representing combined risks from a group of pesticides. EPA's required testing does not include sufficient evaluation of behavior, learning, or memory in developing animals and there is no standard evaluation procedure for interpreting results from developmental neurotoxicity tests. OPP is unable to collect sufficient data on aggregate risk due to time and cost, relying on data of other agencies. Evaluation Recommendations: EPA can improve its data collection by developing standard evaluation procedures, evaluating certain testing methods, and reducing uncertainties; and its aggregate exposure and cumulative risk assessments, including updating databases and expanding partnerships with other Federal organizations. EPA can also enhance accountability, act on Science Policy papers, try alternative testing strategies, and develop an overarching logic model and long-term strategic plan.

Planned Response: OPP agreed to develop a Standard Evaluation Procedure to assess results of developmental neurotoxicity testing (DNT), and to update the dietary exposure databases. The Office also agreed to finalize selected Science Policy Issue papers; sustain the development of an alternative testing strategy, and develop an overarching logic model and long-term strategic plan across divisions to identify and link immediate work outputs to outcomes. Finally, that OPP coordinate with the Office of Research and Development on a variety of pesticide science issues to address FQPA mandates.

Public Access: The report is available at: <http://www.epa.gov/oig/reports/2006/20060110-2006-P-00009.pdf>. Report Number: 2006-P-00009.

Evaluation Title: EPA Needs to Conduct Environmental Justice Reviews of Its Programs, Policies, and Activities**Evaluator:** EPA's Office of the Inspector General

Scope of Evaluation: Goal 4, Objective 2. Determine whether EPA's program and regional offices performed environmental justice reviews of their programs, policies, and activities as required by Executive Order 12898 and whether they needed additional guidance.

Evaluation Findings: The OIG survey results showed that EPA senior management has not sufficiently directed program and regional offices to conduct environmental justice reviews in accordance with Executive Order 12898. Consequently, environmental justice reviews were not conducted and survey respondents expressed a need for further guidance to conduct reviews. Until environmental justice reviews are performed, the Agency cannot determine whether its programs cause disproportionately high and adverse human health or environmental effects on minority and low-income populations.

Evaluation Recommendations: The Deputy Administrator should: (1) require the Agency's program and regional offices, to the Executive Order applies, to plan for performing the necessary reviews; (2) ensure that environmental justice reviews determine whether the programs, policies, and activities may have a disproportionately high and adverse health or environmental impact on minority and low-income populations; (3) require each program and regional office to develop, with the assistance of the Office of Environmental Justice, specific environmental justice review guidance, which includes protocols, a framework, or directions for conducting environmental justice reviews; and (4) designate a responsible office to (a) compile the results of environmental justice reviews, and (b) recommend appropriate actions to review findings and make recommendations to the decision-making office's senior leadership.

Planned Response: The Agency has agreed to accept our recommendations and is developing its plan for taking specific corrective actions.

Public Access: The report is available at: <http://www.epa.gov/oig/reports/2006/20060918-2006-P-00034.pdf>. Report Number: 2006-P-00034

Evaluation Title: Chesapeake Bay Program: Improved Strategies Are Needed to Better Assess, Report, and Manage Restoration Progress, October 28, 2005**Evaluator:** U.S. Government Accountability Office

Scope of Evaluation: Goal 4, Objective 3. Examine (1) the extent to which appropriate measures for assessing restoration progress have been established, (2) the extent to which current reporting mechanisms clearly and accurately describe the bay's overall health, (3) how much funding was provided for the effort for FYs 1995 through 2004, and (4) how effectively the effort is being coordinated and managed.

Evaluation Findings: Need to improve measures and communication about Bay health and develop realistic measures. Refer to summary of findings at <http://www.gao.gov/highlights/d0696high.pdf>.

Evaluation Recommendations: (1) complete its efforts to develop and implement an integrated assessment approach; (2) revise its reporting approach to improve the effectiveness and credibility of its reports; and (3) develop a comprehensive, coordinated implementation strategy that takes into account available resources. In commenting on this report, the signatories to the Chesapeake 2000 agreement generally agreed with GAO's recommendations.

Planned Response: The Chesapeake Bay Program concurred in all the recommendations and has implemented, or is in the process of implementing, all of them. At a July 13, 2006, follow-up hearing, GAO testified that EPA-CBPO had taken affirmative steps on all the assessing and reporting recommendations. The GAO also acknowledged that the Program was engaged in a program management review to address the recommendation for a "realistic" implementation plan that takes into account available resources. New communications products that reflect the assessment and reporting recommendations from GAO have been adopted by the Program. Integrated assessment methods are under further development, including peer-review by the Program's Scientific and Technical Advisory Committee. The Program has worked with the Office of Water to revise the FY07 Guidance to better reflect realistic targets, and the Program has similarly worked with the Office of the Chief Financial Officer to develop more appropriate targets for the draft *Strategic Plan* for FY 2006-2011. The results of the program evaluation influenced changes to the strategic plan through development of ambitious yet realistic (taking into account available resources) targets for *FY 2006-2011 Strategic Plan*.

Public Access: Public access to the report can be found at: <http://www.gao.gov/highlights/d0696high.pdf>.

Evaluation Title: Review of the Office of Research and Development's Global Change Research Program at the U.S. Environmental Protection Agency

Evaluator: Board of Scientific Counselors (BOSC) Subcommittee on Global Change Research

Scope of Evaluation: Goal 4, Objective 4. This evaluation reviewed the Global Change Research Program's performance, relevance, quality, scientific leadership, and resources.

Evaluation Findings: The Global Change Research Program has provided substantial benefits to the nation and is on course to make significant further contributions to societal outcomes by informing and facilitating decisions by the public and private sector actors who must consider the prospects of global change.

Evaluation Recommendations: Key recommendations for this program include:

- A more rigorous approach to priority setting.
- Redirection of its place-based activities toward those that will have broader national applicability.
- Increased attention to threshold and episode-driven changes.
- An expansion of its consultation with external advisors who can identify emerging opportunities for productive work, help the Program avoid projects with minimal payoffs, and increase interaction with complementary U.S. Climate Change Science Program efforts.

Planned Response: The program is in the process of developing a more rigorous approach to priority setting. Specifically, the program is exploring a "decision-assessment" approach; if successful, the results will be used to develop an explicit framework for priority setting and project selection. The approach entails developing a dynamic "decision inventory" to identify different classes of climate-sensitive decisions in different regions of the country, and evaluating the returns from providing better scientific information to inform those decisions. The program is also committed to continuing its practice of engaging external advisors at key points in its research activities during which major decisions are made about future program directions and focus area projects. As a result of BOSC recommendations, the program has already taken action to integrate its ecosystems and water quality components, more closely aligning those areas with EPA's statutory mandates related to water quality.

Public Access: The full report is available at: <http://www.epa.gov/osp/bosc/pdf/glob0603rpt.pdf>.

Goal 5

Evaluation Title: EPA Performance Measures Do Not Effectively Track Compliance Outcomes.

Evaluator: EPA's Office of the Inspector General

Scope of Evaluation: Goal 5, Objective 1. The evaluation examined the methods EPA uses to measure and report effectiveness and progress in achieving enforcement and compliance assurance results. The evaluation assessed how well the Agency's performance measures track changes in compliance or other outcomes and ensure transparency.

Evaluation Findings: The assessment of EPA compliance and enforcement performance measures indicated that: (1) some measures track outputs, rather than outcomes; (2) there are data gaps associated with compliance rates; (3) EPA cannot demonstrate the reliability of its proxy measures because it has not verified the estimated, predicted, or facility self-reported outcomes; and (4) changes in performance measures through time reduces transparency.

Evaluation Recommendations: The OIG recommends that the Agency verify and publicly report estimated, predicted, and facility-reported outcomes of enforcement and compliance assurance work. While continuing to improve enforcement and compliance performance measures, the OIG also recommended that the EPA continue publicly reporting key measures and comparable trend data. The report highlights the need for stronger linkages between goals and measures that appear in Strategic Plans and budget documents.

Planned Response: EPA will design and implement a pilot project over the next twelve months that verifies the estimated, predicted, and facility self-reported outcomes of the enforcement and compliance assurance program. EPA will improve the linkage and relationship between goals and measures in strategic planning, annual performance reporting, and budget documents by increasing the consistency of the wording of the goals and measures across these documents.

Public Access: The report is available at <http://www.epa.gov/oig/reports/2006/20051215-2006-P-00006.pdf>, December 15, 2005, Report Number: 2006-P-00006.

Evaluation Title: An Evaluation of the California Dairy Quality Assurance Program (CAQAP) and the Livestock and Poultry Environmental Stewardship (LPES) Curriculum

Evaluator: Office of Policy, Economics, and Innovation

Scope of Evaluation: Goal 5, Objective 2. The goal of this evaluation is to determine whether these two innovative programs are good candidates for broader Agency application.

Evaluation Findings: Scale-up of the CDQAP could include: (1) expand to address new regulations; (2) adapt for use by a new segment of the animal production sector and; (3) transfer to dairy producers in other states. Scale-up efforts for the LPES Curriculum could include: (1) provide additional support for current dissemination efforts, (2) develop and promote an LPES modeled curriculum for other segments of the agricultural industry (for example, crop growers), (3) develop and promote an LPES modeled curriculum for other non-agriculture industry sectors, and (4) add materials to the existing curriculum.

Evaluation Recommendations: For the CDQAP environmental stewardship program, OPEI recommends three actions. First, look for potential locations where industry groups within the agriculture sector have expressed clear interest in and concern about improving their environmental stewardship and compliance practices. Second, address barriers to environmental stewardship certification in order to enhance program results, e.g. developing financial or regulatory-based incentives. Third, consider scaling up specific components of the CDQAP environmental stewardship program, e.g., developing comprehensive regulatory checklists for federal, state and local regulations applicable to various types of producers. For the LPES Curriculum, OPEI recommends three actions. First, update and expand existing curriculum materials with greater industry participation in curriculum development and dissemination. Second, repeat the LPES Curriculum Impact survey to develop quantitative data of the numbers of producers, students and other stakeholders trained with the curriculum and what modifications they have made in order to apply it for local use. Third, promote further state and local dissemination activities to facilitate modifying and adapting the curriculum.

Planned Response: The agency's Innovation Action Council will consider the results of this evaluation as part of its plans for promoting innovative environmental solutions in the Agriculture sector in FY 2007.

Public Access: For a copy of the report, please contact Katherine Dawes at dawes.katherine@epa.gov.

Evaluation Title: Indian Tribes: EPA Should Reduce the Review Time for Tribal Requests to Manage Environmental Programs

Evaluator: U.S. Government Accountability Office (GAO)

Scope of Evaluation: Goal 5, Objective 3. At the request of Congressional sponsors, GAO evaluated the extent to which EPA has followed its processes for reviewing and approving tribal applications for TAS and program authorization under the Clean Water, Safe Drinking Water and Clean Air Acts.

Evaluation Findings: The report found that "EPA followed its processes in most respects for approving tribal requests for TAS status and program authorization for the 20 cases we reviewed, but we found some lengthy delays in these processes." The report also notes that some tribes are frustrated by what they perceive as difficulty in getting clear information about the status of pending applications.

Evaluation Recommendations: To better facilitate the timely review of tribal requests for TAS status for program authorization and to increase the transparency of the process to tribes, GAO recommends that "EPA should develop a written strategy, including estimated time frames, for reviewing tribes' TAS applications for program authority and updating the tribes on the review status."

Planned Response: EPA sent its response to GAO on June 8, 2006. EPA agrees with GAO's recommendation and agrees more could be done to improve the timeliness of EPA's reviews and to improve communication with tribes concerning their TAS requests. EPA is developing a strategy for improving the management of EPA's reviews of tribal TAS applications to administer EPA regulatory programs. The strategy will be designed to improve the timeliness and efficiency of EPA's reviews and provide regular, useful feedback to applicant tribes concerning the status of their requests.

Public Access: Public access to the report can be found at <http://www.gao.gov/new.items/d0695.pdf>.