



OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Evaluation Report

EPA Performance Measures Do Not Effectively Track Compliance Outcomes

Report No. 2006-P-00006

December 15, 2005

Report Contributors:

Katie Butler
Gabrielle Fekete
Jeff Hart
Ben Webster

Abbreviations

CAA	Clean Air Act
CCDS	Case Conclusion Data Sheets
CWA	Clean Water Act
EMP	Environmental Management Practices
EMS	Environmental Management System
EPA	Environmental Protection Agency
GAO	Government Accountability Office
GPRA	Government Performance and Results Act
ICIS	Integrated Compliance Information System
NEPA	National Environmental Policy Act
NETI	National Enforcement Training Institute
NPMS	National Performance Measures Strategy
OECA	Office of Enforcement and Compliance Assurance
OIG	Office of Inspector General
OMB	Office of Management and Budget
PART	Program Assessment Rating Tool
RCRA	Resource Conservation and Recovery Act
SEP	Supplemental Environmental Project
SNC	Significant Noncompliance



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

We did this review to determine (1) how the Office of Enforcement and Compliance Assurance (OECA) measures and reports enforcement and compliance effectiveness and progress, and (2) how well OECA's performance measures characterize changes in compliance or other outcomes, and provide transparency.

Background

Performance measures allow the U.S. Environmental Protection Agency (EPA) to chart its progress against its goals. Ensuring compliance with environmental laws and regulations is critical to accomplishing EPA's mission. EPA must publicly report its progress in the most transparent way possible so stakeholders can determine whether OECA's strategies, policies, and programs are effective.

For further information, contact our Office of Congressional and Public Liaison at (202) 566-2391.

To view the full report, click on the following link:
www.epa.gov/oig/reports/2006/20051215-2006-P-00006.pdf

EPA Performance Measures Do Not Effectively Track Compliance Outcomes

What We Found

In response to our first objective, we found that OECA primarily measures progress in ensuring compliance using output measures. OECA uses several types of internal performance reports to monitor enforcement and compliance progress throughout the year, and reports progress to Congress and the public in several ways. Through these reports, OECA has stated it generally met its annual performance goals.

In response to our second objective, we found that OECA's 2005 publicly-reported GPRA performance measures do not effectively characterize changes in compliance or other outcomes because OECA lacks compliance rates and other reliable outcome data. In the absence of compliance rates, OECA reports proxies for compliance to the public and does not know if compliance is actually going up or down. As a result, OECA does not have all of the data it needs to make management and program decisions. What is missing most, the biggest gap, is information about compliance rates. OECA cannot demonstrate the reliability of other measures because it has not verified that estimated, predicted, or facility self-reported outcomes actually took place. Some measures do not clearly link to OECA's strategic goals. Finally, OECA frequently changed its performance measures from year to year, which reduced transparency.

What We Recommend

We recommend that the Assistant Administrator for Enforcement and Compliance Assurance:

- Design and implement a pilot project to verify estimated, predicted, and facility self-reported outcomes, and report on the pilot's results to demonstrate the reliability of such performance measures;
- Improve the linkage/relationship of OECA's goals and measures in EPA strategic and budgetary documents to improve external understanding and internal usefulness; and
- Continue to improve enforcement and compliance performance measures, while continuing to publicly report key measures annually to provide the public, Congress, and other specific stakeholders a minimal amount of comparable trend data.

EPA agreed with all of our report recommendations. We also made other revisions based on EPA's comments as we determined appropriate.



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

OFFICE OF
INSPECTOR GENERAL

December 15, 2005

MEMORANDUM

SUBJECT: EPA Performance Measures Do Not Effectively Track Compliance Outcomes
Report No. 2006-P-00006

FROM: Jeffrey K. Harris /s/
Director for Program Evaluation, Cross Media

TO: Granta Y. Nakayama
Assistant Administrator
Office of Enforcement and Compliance Assurance

This is our final report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This evaluation report contains our findings that describe the problems we have identified and corrective actions we recommend. This evaluation report represents the opinion of the OIG and the findings contained in this report do not necessarily represent the final EPA position. EPA managers will make final determinations on matters in this report in accordance with established procedures.

We met with Office of Enforcement and Compliance Assurance managers on November 22, 2005, to discuss our preliminary findings, and provided our official draft report on September 9, 2005. EPA agreed with all of our recommendations. We have included EPA's official written comments in their entirety as Appendix F. EPA's attachments to its response are available on our Web site along with the report. Appendix G includes our detailed evaluation of EPA's response.

Action Required

EPA Manual 2750 requires you as the action official to provide this office with a written response to this report within 90 calendar days of the final report date. Your response should address all recommendations and must include your concurrence or nonconcurrence with all recommendations. For corrective actions planned but not completed by the response date, please describe the actions that are ongoing and provide a timetable for completion. If you do not concur with a recommendation, please provide alternative actions addressing the findings reported. For your convenience, this report will be available at <http://www.epa.gov/oig/>.

Attachment

cc: Lyons Gray, Chief Financial Officer, OCFO
Kimberly Terese Nelson, Assistant Administrator and Chief Information Officer, OEI
Phyllis Harris, Principal Deputy Assistant Administrator, OECA
Michael M. Stahl, Director, Office of Compliance, OECA
Walker B. Smith, Director, Office of Civil Enforcement, OECA
Greg Marion, Audit Followup Coordinator, OECA

Table of Contents

At a Glance

Chapters

1	Introduction	1
	Purpose	1
	Background	2
	Scope and Methodology	5
2	OECA Reported Outputs and Reported Meeting Performance Goals	7
	OECA Performance Measurement Activities.....	7
	OECA Primarily Measures Outputs	8
	OECA Reported Progress in Various Ways	8
	OECA Reported That It Generally Met Its Performance Goals	9
3	OECA’s Public Measures Do Not Effectively Characterize Changes in Compliance or Other Outcomes	11
	OECA Lacks Compliance Rates Among Its Public Measures	11
	Unverified Estimated, Predicted, and Facility Self-Reported Public Measures May Be Unreliable	14
	Some Public Measures Are Not Linked to Goals	17
	Frequent Changes in Public Measure Reporting Reduce Transparency	20
	Recommendations	21
	Further Evaluation Needed	22
	Agency Response and OIG Evaluation	23

Appendices

A	Detailed Scope and Methodology	24
B	Internal Performance Management and Reporting	27
C	Criteria for Effective Performance Measurement	28
D	OECA Fiscal 2005 Performance Goals, Measures, and Targets	29
E	OECA Performance Measures, Fiscals 1999-2004	31
F	Agency Comments	34
G	OIG Evaluation of Agency Comments	48
H	Distribution	56

Chapter 1

Introduction

Purpose

Compliance is at the heart of any regulatory agency's mission, and the U.S. Environmental Protection Agency (EPA) cannot be effective without a strong enforcement and compliance program. Ensuring compliance with environmental laws and regulations is critical to accomplishing EPA's mission.

The overarching goal of EPA's Office of Enforcement and Compliance Assurance (OECA) is to maximize compliance with environmental regulations to protect human health and the environment. Environmental laws and regulations can achieve their purpose only when those in the regulated community comply with requirements. Performance measures allow OECA to chart its progress against its compliance, environmental, and other goals. OECA must publicly report its progress in the most transparent way possible so that EPA staff, the public, and the Congress can determine whether OECA's strategies, policies, and programs are effective. Transparency requires performance changes be easily detected and readily understood.

To evaluate the effectiveness of EPA's enforcement and compliance efforts, we plan to evaluate several interrelated issues. This report builds upon our prior evaluation of OECA's regulated universe¹ by examining how OECA measures and reports its performance.

The intent of this report is to inform EPA's leadership and interested stakeholders regarding the extent to which OECA can measure the impact and effectiveness of its enforcement and compliance assurance activities. Specifically, this report answers the following questions:

- How does OECA measure and report enforcement and compliance effectiveness and progress? (**Chapter 2**)
- How well do OECA's performance measures characterize changes in compliance or other outcomes, and provide transparency? (**Chapter 3**)

¹ See EPA OIG report, *Limited Knowledge of the Universe of Regulated Facilities Impedes EPA's Ability to Demonstrate Changes in Regulatory Compliance*. Report 2005-P-00024, September, 19 2005.

Background

Compliance and Environmental Results is the Goal

A key element of Administrator Johnson's 500-day plan is to "make compliance our enforcement objective." At the Administrator's May 23, 2005, swearing-in ceremony, President Bush emphasized he wanted results – real environmental improvements and vigorous enforcement – when he said, "...we will continue our enforcement strategy which focuses on achieving real environmental improvements that benefit everyone....We'll continue to vigorously enforce our environmental laws...and we will focus on results."

EPA's fiscal 2005 enacted budget included approximately \$453 million and about 2,672 staff-years to improve compliance. The fiscal 2006 President's budget request included approximately \$487 million and about 2,715 staff-years to improve compliance.

Reliable Compliance Information Is Essential

Reliable compliance information is essential for a regulatory agency to establish baselines, set goals, monitor progress, serve as evidence to support enforcement actions, and ultimately demonstrate results.² The Agency states that it uses compliance data to:

- Identify problems in need of EPA or State attention;
- Monitor program performance; and
- Improve program effectiveness.

OECA can use compliance information to inform Agency staff and external stakeholders on compliance levels, and to demonstrate OECA's progress in achieving its goals. Compliance rates are among the Agency's most important performance measures.

Performance Measurement Defined

Performance measurement is the monitoring and reporting of program accomplishments, particularly progress toward pre-established goals. Performance measures may address the type of program activities conducted, the direct products and services delivered by a program (outputs), or the results of those products and services (outcomes). Table 1.1 further defines these performance measurement terms.

² See Appendix C for a comprehensive definition of reliability and other performance measurement criteria.

Table 1.1: Performance Measurement Terminology

Term	Definition
Input	Personnel, funds, and other resources that contribute to an activity
Output	Quantitative or qualitative measures of activities, work products, or actions (example: enforcement cases completed)
Intermediate Outcomes	Changes in knowledge, behavior, or conditions that result from program activities and are needed to achieve the end outcome (example: compliance)
End Outcomes	The ultimate outcomes of program activities (example: improved human health and environmental conditions)

Using measures to actually manage and improve a program necessitates a mix of output and outcome measures to determine what outputs produce the most important outcomes. Agencies must balance their ideal performance measurement systems against real-world considerations such as the cost and effort involved in gathering and analyzing data.

Effective Performance Measurement and Reporting

The purpose of performance measurement is to support resource allocation and other policy decisions to improve service delivery and program effectiveness. It can also serve as an early warning system of program management or performance problems, and as a vehicle for improving accountability to the public. Performance measures are also an essential element of an effective internal or management control structure and an important aspect of managing an organization. Effective internal controls are essential for reliable performance reporting.³

Effective performance measurement enables an agency to establish baselines; identify and prioritize compliance problems; and evaluate, promote, manage, control, adapt, and improve programs in response to incoming performance information. Performance measurement enables decision-makers to maximize environmental and health benefits by focusing efforts on the most successful enforcement and compliance activities and programs.

A good performance measurement and reporting system is transparent and holds an organization accountable. It also improves outcomes by increasing awareness, sharpening focus, motivating improved performance, and encouraging innovation. Externally reporting on the results of performance measurement enables the public to make educated decisions about their surrounding environment and on EPA's effectiveness in protecting human health and the environment.

³ "Internal control" (also referred to as "management control") comprises the plans, methods, and procedures used to meet missions, goals, and objectives and, in doing so, supports performance-based management. This includes the processes and procedures for planning, organizing, directing, and controlling program operations, and the system established for measuring, reporting, and monitoring program performance.

The President's Management Agenda stresses the need for clear performance measurement and reporting. It states that:

The American people should be able to see how government programs are performing and compare performance and cost across programs. The lack of a consistent information and reporting framework for performance...obscures this necessary transparency.

Strategic Planning, Measurement, and Reporting Required by Law

The 1993 Government Performance and Results Act (GPRA) prompted renewed focus on internal control to support results-oriented management. GPRA required Federal agencies to:

- clarify their missions;
- set strategic and annual performance goals; and
- measure and report annually on actual performance compared to goals.

Specifically, GPRA required agencies to:

- develop plans for what they intend to accomplish;
- measure how well they are doing;
- make appropriate decisions based on the information they gathered; and
- communicate information about their performance to Congress and to the public.

GPRA required agencies to develop a 5-year strategic plan including:

- a mission statement and long-term goals and objectives;
- annual performance plans with annual performance commitments toward achieving the goals and objectives presented in the strategic plan; and
- annual performance reports that evaluate an agency's progress toward achieving performance commitments.

In general, EPA's strategic plan outlines the Agency's five long-term goals and guides in establishing the annual goals that must be met along the way. To fulfill its five strategic goals, the plan includes a series of more specific goals in the form of objectives and sub-objectives. Each of these objectives has associated performance measures designed to demonstrate progress in achieving the objective and, eventually, the strategic goal. The annual performance plan defines the Agency's budget and associated goals and objectives in greater detail and ties the annual budget to the 5-year strategic plan. Finally, EPA issues an annual performance and accountability report as required by GPRA. This report

highlights the Agency's environmental, programmatic, and financial performance for the fiscal year.

The long-range strategic plan, annual performance plans, and annual performance reports forge links between several activities, including:

- measuring performance to assess progress and link resources actually used to results achieved; and
- reporting performance to present progress achieved and impacts on future efforts.

Scope and Methodology

Our review primarily focused on the public enforcement and compliance measures as described in *EPA's Fiscal 2005 Annual Plan* related to EPA goal 5, *Compliance and Environmental Stewardship*. EPA changed its public enforcement and compliance measures for fiscal 2005, and will not report on these measures until sometime after the end of fiscal 2005. Therefore, we were unable to assess how EPA reported on those new performance measures. However, we did assess some elements of *EPA's Fiscal 2004 Annual Report*. OECA's planned fiscal 2005 performance measures and goals are detailed in Appendix D.

To determine how OECA measured and reported enforcement and compliance effectiveness and progress, we reviewed various internal EPA documents, plans, and reports, and Office of Management and Budget (OMB) communications. We also reviewed relevant reports by the U.S. Government Accountability Office (GAO), National Academy of Public Administration, and International Network for Environmental Compliance and Enforcement.

To determine how well OECA's performance measures characterize changes in compliance or other outcomes and provide transparency, we determined and applied essential criteria for evaluating a performance measurement and reporting system. We determined and used our professional judgment in applying these criteria in evaluating OECA's performance measures. These criteria include relevance, reliability, validity, comparability, and feasibility, and are described in greater detail in Appendix C. We also met with representatives from OECA, OMB, and other external stakeholders.

Our evaluation was a review of performance measures, an essential element of effective internal or management control. Effective internal controls are essential for reliable performance reporting, and we have identified several issues regarding OECA's performance measurement and reporting system.

We did not identify any previous audit or evaluation reports specifically addressing EPA's enforcement and compliance performance measurement and reporting system. However, we identified some EPA Office of Inspector General (OIG) and GAO reports related to performance measurement, performance data, and OECA performance in general. Please see Appendix A for more details on our scope and methodology including prior audit and evaluation coverage.

We conducted our evaluation fieldwork on EPA's enforcement and compliance performance measurement and reporting between January and June 2005. We performed our evaluation in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States.

Chapter 2

OECA Reported Outputs and Reported Meeting Performance Goals

OECA primarily measures progress in ensuring compliance using output measures. OECA uses several types of internal performance reports to monitor enforcement and compliance progress throughout the year, and reports progress to Congress and the public in several ways. Through these reports, OECA has stated it generally met its annual performance goals.

OECA Performance Measurement Activities

OECA's formal performance measurement activities date back to the mid-1990's, soon after OECA was established. OECA's 1997 National Performance Measures Strategy (NPMS) was the first important step in improving its performance measurement system. The project produced principles to help guide OECA in developing a set of improved measures, and many suggestions about specific measures that OECA should consider.

Several experts consider OECA an international leader in developing and improving performance measurement for enforcement and compliance programs. For example, one expert explained that OECA was clearly ahead of the States in that few U.S. States used environmental outcome measures at all. In fact, no State was using measures throughout its environmental program. Another expert explained that OECA was also a leader among its Federal regulatory colleagues in developing measures. The expert said that no other Federal program measured outcomes, so OECA could not look to other Federal agencies as models in outcome measurement. Senior OECA officials have also spoken on performance measurement at international conferences. As States and other countries look to OECA for guidance, OECA must be able to demonstrate successful, results-oriented approaches for others to emulate.

Notwithstanding both OECA's efforts to improve its performance measurement and reporting, and also its reputation as a leader in the field, OMB found in its 2002 Program Assessment Rating Tool (PART) assessment that EPA had four major weaknesses in its civil enforcement program:

1. lack of meaningful outcome measures;
2. weak management that did not target resources based on workload analysis;
3. data quality issues; and
4. lack of adequate noncompliance rates.

EPA’s lack of meaningful outcome measures led to a “Results Not Demonstrated” characterization in both 2002 and 2003. However, OMB’s 2004 PART assessment found that the program had followed through on original PART findings by undertaking development of a measures implementation plan and rated the program as “adequate.”

OECA Primarily Measures Outputs

OECA has focused primarily on measuring outputs, such as “number of enforcement actions,” also called activity counts. OECA and other regulatory agencies have traditionally relied on activity counts because of the difficulty in demonstrating a direct cause and effect relationship between specific enforcement and compliance activities, and compliance or end outcomes.

We characterized OECA’s performance measures for the most recent complete year for which OECA has reported results. We based our characterization on both OECA’s fiscal 2004 annual performance report and OECA’s fiscal 2004 accomplishments press release. We characterized OECA’s measures as inputs, outputs, intermediate outcomes, or end outcomes, and found that most performance measures focused on outputs, as shown in Table 2.1.

Table 2.1: Characterization of Fiscal 2004-Reported Measures

Performance Report	Total Measures Reported	Outputs Reported	Intermediate Outcomes Reported	End Outcomes Reported
Fiscal 2004 Annual Performance Report	13	11	2	0
Fiscal 2004 Press Release	33	25	8	0

OECA Reported Progress in Various Ways

In the most recent reporting cycle, fiscal 2004, OECA reported its performance to the public in two documents: (1) an *Annual Report*, which communicated overall EPA performance to Congress and the public under GPRA; and (2) an annual *Accomplishments Press Release*, which OECA issued to communicate the same GPRA enforcement and compliance results in EPA’s *Annual Report*, as well as additional accomplishments not included in that report. OECA posted both documents on its website, and issued press releases to the media to encourage news organizations to report OECA accomplishments.

OECA issued a third annual report, an *Annual Accomplishments Report*, each year from fiscals 1988-2002 (except for 2000) describing results in greater detail (e.g., using case studies). OECA did not publish such a report for fiscals 2000, 2003, or 2004. An OECA official explained that OECA discontinued publishing its report with fiscal 2000 because it duplicated EPA’s overall annual report. However, subsequent Assistant Administrators started and again discontinued publishing OECA’s annual report in later years.

Besides the reporting methods mentioned above, OECA officials stated they managed programs throughout the year using the internal reporting mechanisms described in detail in Appendix B.

OECA Reported That It Generally Met Its Performance Goals

In EPA’s annual performance reports for fiscals 1999-2004, OECA said that it generally met its performance goals. Over those 6 years, OECA reported results for 105 total measures. Of these, OECA reported intended goals for 95 measures. For the remaining 10 measures reported, OECA did not provide established goals. As shown in Table 2.2, for the 95 publicly-reported GPRA performance measures with related goals, 89 percent (or 85 measures) met their goals.

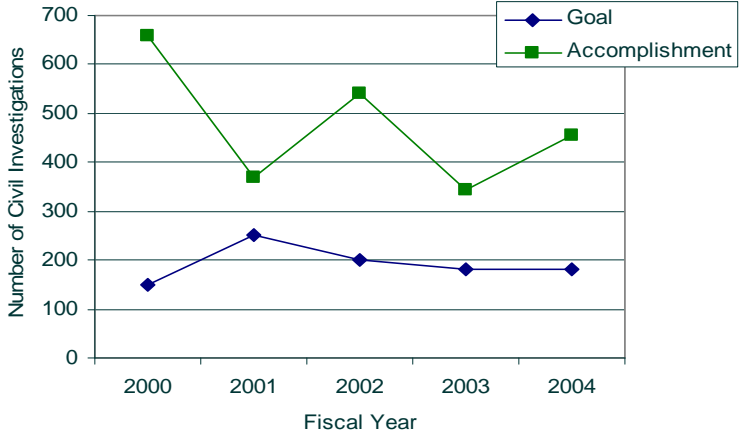
Table 2.2: Number of Publicly-Reported GPRA Performance Measures Meeting Goals, Fiscals 1999-2004

Fiscal Year	Measures Reported	Measures with Reported Goals	Measures Meeting Goals	Measures Not Meeting Goals	Percentage of Measures Meeting Goals
1999	25	15	15	0	100%
2000	14	14	10	4	71%
2001	22	22	18	4	82%
2002	19	19	18	1	95%
2003	13	13	12*	1	92%
2004	12	12	12*	0	100%
TOTAL	105	95	85	10	89%

* Included measures with data lag, listed as “to be reported”

The 89 percent of annual performance goals met by OECA were often not only met, but exceeded. For the seven measures OECA consistently reported for fiscals 2000-2004, OECA frequently exceeded annual goals. For example, Figure 2.3 illustrates how OECA consistently exceeded its goals for planning and accomplishing civil investigations.

Figure 2.3: Number of Civil Investigations Planned and Accomplished for Fiscals 2000-2004



Chapter 3

OECA's Public Measures Do Not Effectively Characterize Changes in Compliance or Other Outcomes

OECA's fiscal 2005 publicly-reported GPRA performance measures do not effectively characterize changes in compliance or other outcomes because OECA lacks compliance rates and other reliable outcome data. Four issues reduce the effectiveness of OECA's performance measures. First, OECA has not developed effective compliance rates; instead, OECA reports proxies for compliance and does not know if compliance is actually going up or down.⁴ As a result, OECA does not have all of the data it needs to make management and program decisions. What is missing most, the biggest gap, is information about compliance rates. Second, OECA cannot demonstrate the reliability of many measures because it has not verified that measured actions actually took place. Third, some public measures⁵ do not clearly link to OECA's strategic goals. Fourth, OECA frequently changed its performance measures from year to year which reduced transparency.

OECA Lacks Compliance Rates Among Its Public Measures

OECA has not publicly reported compliance rates for two primary reasons. First, OECA chose not to invest the resources necessary to produce statistically valid rates on a broad scale because that might impact its ability to inspect known or suspected significant violators. Second, other existing compliance rates are either unreliable or biased; in place of compliance rates, OECA reports proxies for compliance.

⁴ While OECA did not use the word "proxy," a top OECA executive did tell us that OECA used these measures because they would lead to compliance. "Proxy" is our characterization, and we believe it is accurate, i.e., the compliance-related measures currently reported are as close to real compliance rates that OECA can get at the present time.

⁵ We use the term "public measures" interchangeably with "GPRA measures" referring to those measures reported in EPA's annual performance plan required under GPRA. According to OECA, while not part of its public GPRA measures, OECA has published a compliance rate for Combined Sewer Overflows on its website in 2002 and 2004. OECA also stated that it plans to publish RCRA compliance rates for foundries in the next 60 days.

OECA Does Not Report Statistically Valid Compliance Rates or Other Compliance Rates

OECA lacks compliance rates among its publicly-reported performance measures. OECA conducted pilot studies to develop statistically valid compliance rates on a small scale, but has not invested the resources necessary to produce statistically valid rates on a broad scale. According to OECA, these pilots resulted in the development of statistically valid compliance rates for seven small segments of the regulated community based on inspections, and for five small segments of the regulated community based on facility self-reported information. OECA also plans to develop statistically valid rates for its national enforcement priority areas. However, according to OECA, it is not practical for OECA to determine statistically valid compliance rates for the entire regulated universe.⁶ A senior OECA executive said that OECA does not have the resources to either inspect every facility to determine the true state of compliance across programs, or randomly sample facilities to determine compliance rates, without sacrificing compliance monitoring of known significant violators.

OECA generates other compliance rates (e.g., significant noncompliance information) and internal reports (e.g., watch lists for noncompliance⁷) based on targeted inspections. OECA chose not to publicly report such information because:

- these compliance rates are based on universes known to be incomplete and the rates are therefore unreliable; and
- internal reports are based on targeted inspections at facilities suspected to be likely violators, and are therefore biased in that the results may indicate a higher level of noncompliance than might be present in the regulated community as a whole.

However, because OECA does not report compliance rates, the public, Congress, and other specific stakeholder groups cannot determine whether OECA is successfully achieving its primary goal of maximizing compliance.

As reported in our September 2005 report, *Limited Knowledge of the Universe of Regulated Entities Impedes EPA's Ability to Demonstrate Changes in Regulatory Compliance*, OECA lacks an accurate characterization of the universe of regulated entities. Better understanding of the composition of the regulated universe will allow OECA to reliably estimate compliance for segments of the regulated universe.

⁶ For additional discussion on statistically valid compliance rate computation and methods, see the section "Further Evaluation Needed" on page 22.

⁷ Please see Appendix B for detailed descriptions of these and other examples of internal OECA performance management and reporting.

To reliably estimate compliance for a segment of the regulated community, OECA needs an accurate characterization of the number of regulated facilities in that segment. OECA does have a methodology to develop statistically valid non-compliance rates. However, we have not reviewed this methodology, and therefore cannot comment on it at this time.

In the OIG report mentioned above, we recommended that OECA:

- Biennially update publicly released universe figures by tracking and recording the number of entities over which it has oversight and primary regulatory responsibility; and
- Develop an objective of having the most up-to-date and reliable data on all entities that fall under its regulatory responsibility.

With reliable information about the regulated universe, OECA can divide the regulated universe into manageable categories and develop a sampling procedure for inspections. OECA can categorize the regulated universe based on many parameters, including:

- environmental risk to the public;
- industry sector;
- compliance history;
- geography;
- regulated substance;
- potential for exposure; or
- number of people affected or potentially affected.

This will allow OECA to focus compliance and enforcement resources and efforts on particular categories and plan inspections based on the selected parameters. OECA can choose inspection sites using a number of approaches, including targeted, random, stratified, or weighted sampling.

Experts agreed that compliance rates developed for segments of the regulated universe would provide useful performance information. One expert said that calculating statistically valid compliance rates on a sector or geographic basis would suffice for identifying sector-based or geographically-focused compliance problems.

Each of these categories and sampling approaches has advantages and limitations. As we explain in the final section of Chapter 3, we will explore the benefits and disadvantages of likely approaches in future OIG evaluations. OECA has developed statistically valid compliance rates in ten small populations that OECA officials say do not tie in well with OECA priorities, and OECA can do little with the results. OECA officials want to overcome the resource, policy, and methodological hurdles to developing additional statistically valid

compliance rates. For example, OECA officials would like to use statistically valid compliance rates for national priority areas.

OECA Reported Proxies Instead of Compliance Rates

Instead of measuring and publicly reporting compliance rates, OECA relies on other compliance-related measures of activities that result from compliance and enforcement actions. These proxy compliance measures include:

- corrected violations;
- compliance assistance results; and
- facility self-audit data.

OECA publicly reported some measures of recidivism in fiscals 2001 and 2002,⁸ but did not report these measures in subsequent years because of concerns about whether the measures were meaningful, and whether they might overstate recidivism.

OECA included three compliance-related measures among the 69 performance measures contained in annual performance plans and reports from fiscals 1999-2005. OECA reported on these three measures a total of five times, from fiscals 1999-2004 as follows:

1. Percentage of automotive service and repair industry reaching targeted compliance level;⁹
2. Percentage increase over fiscal 2000 proportion of facilities in significant noncompliance (SNC) returning to compliance within two years;¹⁰ and,
3. Percentage reduction in SNCs for the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act from fiscal 2000.¹¹

Unverified Estimated, Predicted, and Facility Self-Reported Public Measures May Be Unreliable

OECA's dependence on unverified estimated, predicted, and facility self-reported measurement data decreases the reliability of its performance measurement and reporting system. OECA measures pollutant reductions using estimated data, and reports anticipated future pollutant reductions using predicted data. OECA bases these performance measures on data that OECA did not verify. Therefore, OECA cannot know if these measures provide reliable information about outcomes.

⁸ OECA publicly reported "Percent increase over 2000 proportion of SNCs [facilities in significant noncompliance] returning to compliance within two years" and "percent reduction in significant noncompliance for CAA, CWA and RCRA from 2000" in fiscals 2001 and 2002.

⁹ Reported in fiscal 1999, see Appendix E, measure 12.

¹⁰ Reported in fiscals 2001 and 2002, see Appendix E, measure 21.

¹¹ Reported in fiscals 2001 and 2002, see Appendix E, measure 22.

As an Agency, EPA has specifically avoided using estimated performance measurement data in the past. For example, EPA specifically chose to use recorded observations and values rather than estimated data in its 2004 *Draft Report on the Environment* to prevent ambiguity and potential problems with data reliability. The use of and dependence on unverified estimated, predicted, or facility self-reported data reduces the reliability of OECA's performance measures as accurate indicators of compliance. Collecting monitoring data and tracking actual values would:

- provide internal and external stakeholders with a more accurate portrayal of OECA's results;
- increase the reliability of OECA's performance measures; and
- allow OECA to more effectively characterize actual changes in environmental conditions and human health.

OECA also relied on self-reported data from regulated entities. Because regulated entities are required to comply with laws and regulations, OECA cannot rely on regulated entities as objective or reliable sources of compliance data.

OECA Bases Nearly All 2005 Measures on Estimated, Predicted, or Facility Self-Reported Performance Data

OECA measures and reports pollutant reductions using estimated, predicted, and facility self-reported data that may not reliably demonstrate progress. Table 3.1 shows OECA's fiscal 2005 performance goals, measures, and the basis for the related measures. We characterized each measure as "Unverified, Facility Self-Reported Data," "Unverified Estimates or Predictions," or "Actual Count of Activities," and found that 15 of 16 planned measures were based on facility self-reporting or estimates and predictions. Only one measure, number 16, was based on an actual count.¹²

Although OMB has recommended that OECA verify emissions reductions actually took place, OECA did not plan to verify self-reported or estimated data. In EPA's fiscal 2005 annual plan, OECA described pollutant reductions or eliminations as estimates of what may be achieved if the facility or defendant carried out the requirements of a voluntary settlement agreement, and said the use of estimates limits its measurement data.¹³ OECA officials said they expect that companies will fulfill the requirements of their consent decrees¹⁴ even without

¹² Please see Appendix D for a detailed list of all of OECA's fiscal 2005 annual performance goals, associated performance measures, and targets.

¹³ EPA's fiscal 2005 annual plan described pollutant reductions or eliminations reported on the Case Conclusion Data Sheets (CCDS) as estimates of what may be achieved if the facility or defendant carried out the requirements of a voluntary settlement agreement, and that this limits this Integrated Compliance Information System (ICIS) data.

¹⁴ Consent decrees are judicial decrees that sanction voluntary agreements between parties in dispute.

any verification. OECA believes that if these controls are effective, they would increase the likelihood that terms of the settlement agreements will be carried out and the pollution reductions actually achieved.

Table 3.1: OECA Goals and Basis of Related Performance Measures (fiscal 2005)

Performance Goal	Related Performance Measure(s)	Performance Measure Basis (shaded)		
		Unverified, Facility Self-Reported Data	Unverified Estimates or Predictions	Actual Count of Activities
Goal Area: Compliance Assistance				
Improve Understanding of Regulations	1. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting improved understanding			
	2. Percentage of entities receiving direct compliance assistance from EPA reporting improved understanding			
Improve Environmental Management Practices (EMP)	3. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting improved Environmental Management Practices (EMP)			
	4. Percentage of entities receiving direct compliance assistance from EPA reporting improved EMP			
Reduce Pollutants	5. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting pollution reductions			
	6. Percentage of entities receiving direct assistance from EPA reporting pollution reductions			
Goal Area: Compliance Incentives				
Increase percentage of facilities using incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve EMP	7. Percentage of audits resulting in pollution reduction and ecosystem protection			
	8. Percentage of audits resulting in improved EMP			
	9. Pounds pollution reduced as a result of audits			
	10. Dollars invested in EMP as a result of audits			
Goal Area: Monitoring and Enforcement				
Increase Complying Actions	11. Percentage of entities taking complying actions as a result of on-site inspections/ investigations			
Increase Pollutant Reduction/ Treatment	12. Estimated pounds of pollution to be reduced/treated as result of concluded enforcement actions			
	13. Percentage of concluded enforcement cases requiring pollutant reduction and ecosystem protection			
Improve Environmental Management Practices	14. Percentage of concluded enforcement cases requiring improved EMP			
	15. Dollars invested in improved EMP or environmental performance as a result of enforcement actions			
(No Goal)	16. Number of inspections and investigations conducted			

Because OECA tracks nine of the fiscal 2005 performance measures using estimated or predicted results, OECA reports pollutant reductions, improvements in environmental conditions, or other results that may not actually occur.

As shown in Table 3.1, regulated facilities provide self-reported data for all six OECA compliance assistance-related measures. These measures all depend upon unverified, facility self-reported data.

While OECA's fiscal 2005 annual plan states that OECA expects estimates will be prudently underestimated, the annual plan provides no basis for this expectation.

OECA Does Not Verify Estimated, Predicted, or Facility Self-Reported Data to Ensure Reliability

Although performance measurement experts stress verifying estimated, predicted, or facility self-reported data,¹⁵ OECA does not verify such data for key outcomes such as:

- pollution reduced;
- protection of populations or ecosystems; or
- environmental management practices improved or employed.

A senior OECA manager agreed that OECA could potentially validate estimated numbers such as predicted pollution reductions through a pilot verification study. Conducting such a study would allow OECA to ascertain if estimated, predicted, and facility self-reported outcomes actually occurred.

External stakeholders and performance measurement experts cited the lack of actual monitoring data used in OECA's performance measurement system as a concern. OMB officials suggested that if actual outcomes cannot be reported or estimates verified, OECA should clearly identify and label such outcomes as "planned" emissions reductions. OECA could also describe pollution reductions as estimated, predicted, facility self-reported, or actual/verified reductions.

Some Public Measures Are Not Linked to Goals

OECA's fiscal 2005 performance measures for some of its most important outcomes do not clearly link to OECA's goals and objectives. As a result, OECA is unable to clearly or effectively communicate and report on the extent to which it is accomplishing these important goals. In our opinion, this lack of linkage

¹⁵ In reporting on performance measure values, performance measurement experts and internal stakeholders encouraged using actual numbers instead of estimates or facility self-reported data or, alternatively, verifying any such data used in performance measurement.

obscures OECA's goals and makes it difficult for the public, Congress, or even EPA staff to discern OECA's progress in accomplishing its goals.

Table 3.2 shows OECA's fiscal 2005 goals, associated measures, and goal-measure relationship discrepancies. We assessed the goals and measures to determine if they agreed, and found discrepancies for 8 of 16 measures. Some OECA performance goals did not include any relevant measures linked to the goal (see measures 7 through 11 in Table 3.2). The "Compliance Incentives" performance goal is to "Increase the percentage of *facilities*...that reduce, treat, or eliminate pollution or improve EMP [environmental management practices]," but none of the four measures under this goal is designed to measure the "percentage of *facilities*." (We added bold italics in both quotes for emphasis.) While this goal is titled "Compliance Incentives" in OECA's fiscal 2005 annual plan, none of the four measures under this objective measures true "compliance," or conformity with environmental laws and regulations.

OECA's measure for another performance goal (see measure 11 in Table 3.2) was not designed to measure exactly what the goal described. This measure could easily mask real decreases in complying actions and mislead the public. Specifically, OECA aims to "Increase Complying Actions," while measuring the "Percentage of entities taking complying actions as a result of on-site compliance inspections/evaluations." To clearly articulate progress toward increasing complying actions, OECA should measure the change in the actual number of complying actions from one year to the next. Measuring only the percentage could lead to reporting an increase from one year to the next, even if the number of complying actions substantially decreased.

Table 3.2: OECA Performance Goals, Related Performance Measures, and Goal/Measure Relationship Discrepancies (fiscal 2005)

Performance Goal	Related Performance Measure(s)	Relationship Discrepancy
Goal Area: Compliance Assistance		
Improve Understanding of Regulations	1. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting improved understanding	
	2. Percentage of entities receiving direct compliance assistance from EPA reporting improved understanding	
Improve Environmental Management Practices	3. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting improved EMP	
	4. Percentage of entities receiving direct compliance assistance from EPA reporting improved EMP	
Reduce Pollutants	5. Percentage of entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting pollution reductions	
	6. Percentage of entities receiving direct assistance from EPA reporting pollution reductions	
Goal Area: Compliance Incentives		
Increase percentage of facilities using incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve EMP	7. Percentage of audits resulting in pollution reduction and ecosystem protection	Measure reports percent audits, not percent facilities
	8. Percentage of audits resulting in improved EMP	Measure reports percent audits, not percent facilities
	9. Pounds pollution reduced as a result of audits	Measure does not report percent facilities
	10. Dollars invested in EMP as a result of audits	Measure does not report percent facilities
Goal Area: Monitoring and Enforcement		
Increase Complying Actions	11. Percentage of entities taking complying actions as a result of on-site inspections/ investigations	Measure does not demonstrate increase or decrease in complying actions from year to year, and may mask changes
Increase Pollutant Reduction/ Treatment	12. Estimated pounds of pollution to be reduced/treated as result of concluded enforcement actions	
	13. Percentage of concluded enforcement cases requiring pollutant reduction and ecosystem protection	Goal does not include ecosystem protection
Improve Environmental Management Practices	14. Percentage of concluded enforcement cases requiring improved EMP	
	15. Dollars invested in improved EMP or environmental performance as a result of enforcement actions	Measure does not equate dollars with improvements
(No Goal)	16. Number inspections, investigations conducted	Related to the Goal Area of Monitoring and Enforcement, though not to a specific goal.

Frequent Changes in Public Measure Reporting Reduce Transparency

OECA frequently changed its public performance measures from year to year which reduced transparency. Since 1999, OECA officials have changed many publicly reported performance measures to improve them, according to OECA. OECA also changed performance measures to comply with changes in EPA's strategic plan, and to respond to OMB recommendations. OECA reported some measures for up to five consecutive years, and publicly reported trend data for some measures as recently as in its fiscal 2004 annual report. However, OECA changed the wording for all publicly-reported measures in fiscal 2005. Therefore, unless OECA continues tracking and publicly reporting at least some of its pre-2005 measures, the public cannot compare enforcement and compliance performance over time.

OECA frequently changed its publicly-reported performance measures and reported on the majority of the 69 different measures used between fiscals 1999-2005 for only a single year. OECA used 46 measures once, and 23 for two years or more. OECA reported or plans to report on 69 different performance measures¹⁶ in EPA's annual performance reports for fiscals 1999-2005,¹⁷ providing information on an average of 18 measures per year.

OECA consistently reported information on two measures over 6 consecutive years (fiscals 1999-2004):

1. Number of inspections; and
2. Pounds of pollutants required to be reduced through enforcement actions.

OECA consistently reported information on five additional measures over 5 years between fiscal 1999 and 2004:

1. Number of criminal investigations;
2. Number of civil investigations;
3. Number of EPA-assisted inspections conducted;
4. Number of regulated groups ("populations") served by valid compliance rates or other indicators of compliance; and
5. Number of entities voluntarily disclosing and correcting violations.

Although OECA changed its publicly-reported GPRA performance measures over time, officials stated they continue to track raw data for most modified or

¹⁶ Please see Appendix E for a complete listing of these measures.

¹⁷ EPA changed its public enforcement and compliance measures in fiscal 2005, and will not report on these measures until sometime after the end of fiscal 2005. Therefore, we were unable to assess how EPA reported on these new performance measures. However, we have included the planned 2005 performance measures as described in EPA's latest strategic and annual plans.

discontinued measures in an electronic database and could choose to compile and report historical performance data in OECA's annual press releases.

Fiscal 2005 marked the beginning of EPA's new strategic plan, with OECA's activities reorganized as part of the fifth of five EPA goals, "Compliance and Environmental Stewardship." EPA established annual performance goals to:

- increase compliance with environmental regulations;
- reduce and treat pollutants; and
- improve environmental management practices at regulated facilities.

To more closely demonstrate progress toward achieving these goals, OECA officials said they revised their publicly-reported GPRA performance measures for the 2005-2008 EPA strategic plan (see Appendix D).

OECA included 16 measures in its fiscal 2005 annual plan, and all measures differed from past years' publicly-reported measures. In some cases, the 2005 measures represented a combination of two or three past measures. For example, measure number 23 in Appendix E, "# inspections, civil investigations and criminal investigations conducted," combined measures 1, 13, and 14. In other cases, OECA reworded measures used in the past. For example, measure 42 (Appendix E), "% regulated entities receiving direct CA [compliance assistance] from EPA...reporting that they increased their understanding of environmental requirements as a result of EPA assistance," is a rewording of measure 35 (Appendix E), "% Participants Improved Understanding of Regulations."

OECA made changes to the fiscal 2005 publicly-reported GPRA measures, choosing to use percentages in tracking some measures in fiscal 2005. OECA presented some trend information in past annual performance reports, and OECA officials said they intend to continue this practice for fiscal year 2005. However, OECA officials also acknowledged that other EPA offices have sometimes modified OECA's annual planning and reporting submissions in the past.

Recommendations

We recommend that the Assistant Administrator for Enforcement and Compliance Assurance:

- 3.1 Design and implement a pilot project to verify estimated, predicted, and facility self-reported outcomes, and report on the pilot's results to demonstrate the reliability of such performance measures. Until OECA verifies these data, OECA should clearly and prominently describe all measures as estimated, predicted, or facility self-reported.

3.2 Improve the linkage/relationship of OECA's goals and measures in EPA strategic and budgetary documents to improve external understanding and internal usefulness. In addition to clarifying the language of its annual performance goals, this action should include developing measures that more clearly and directly link to those goals.

3.3 Continue to improve enforcement and compliance performance measures, while continuing to publicly report key measures annually to provide the public, Congress, and other specific stakeholders a minimal amount of comparable trend data.

Further Evaluation Needed

As mentioned on page 13 of this report, methods for producing statistically valid compliance rates come with advantages and limitations. Further evaluation of EPA's previous and potential use of statistically valid compliance rate measures will determine the feasibility and effectiveness of developing statistically valid rates and the most beneficial method for doing so; OECA has requested additional assistance from us in this area.

As stated in our September 2005 report,¹⁸ OECA does not have accurate information about the universe of regulated entities for five of six programs we sampled in that evaluation. OECA's ability to randomly select facilities, and produce statistically valid compliance rates will also be hampered by documented data quality problems.

It may be possible for OECA to produce statistically valid compliance rates on a larger scale, e.g., the Safe Drinking Water Act program. Indeed, OECA would like to expand its use of these measures and make them "a more integral part of our planning and program assessment activities." Depending on the sampling scheme that OECA chooses to use to develop statistically valid compliance rates, resources could be drawn away from known significant environmental violators.

Further evaluation is necessary of the potential generation and use of large scale statistically valid compliance rates. Among the topics that could be evaluated are:

- The statistically valid compliance rate pilot projects undertaken by OECA between fiscals 1999-2004;
- The tradeoffs of different sampling strategies, given resource considerations. This study could also include an analysis of the complexities of coordinating with States and EPA regions using the various approaches;
- The true environmental costs and benefits of a neutral-based inspection approach (random sampling) to generate statistically valid compliance rates;

¹⁸ See EPA OIG report, *Limited Knowledge of the Universe of Regulated Facilities Impedes EPA's Ability to Demonstrate Changes in Regulatory Compliance*. Report 2005-P-00024, September 19, 2005.

- An analysis of inspection-based and facility self-reported statistically valid compliance rates; and,
- OECA’s intended use of statistically valid compliance rates and how their management approaches and practices may change as a result.

Agency Response and OIG Evaluation

OECA agreed with all of our draft report recommendations as described in its comments attached as Appendix F. However, OECA stated, “...advocating a strict adherence to the use of recorded observations and values will set an impossibly high standard for data collection and will have a chilling effect on initiatives to improve outcome measures.... ” OECA also characterized our observations and recommendations as having “...marginal value and relevance, and left unaddressed the requests for assistance on the crucial issue of developing meaningful, statistically valid compliance rates....” We disagree, and have addressed OECA’s criticisms in detail in Appendix G. As described in Appendix G, we also modified recommendation 3.2 to ensure OECA clearly understood our intent.

OECA’s comments also included additional information that it believed would correct certain facts or provide additional context to the report. We have addressed each of these specific comments in detail in Appendix G. We made revisions in our final report based on their comments as we determined appropriate.

Detailed Scope and Methodology

To determine how the US Environmental Protection Agency's (EPA's) Office of Enforcement and Compliance Assurance (OECA) measured and reported enforcement and compliance effectiveness and progress toward its goals, we reviewed internal OECA documents, EPA Office of the Chief Financial Officer (OCFO) reports and plans, and Office of Management and Budget communications. We reviewed EPA's *2003 – 2008 Strategic Plan: Direction for the Future*, fiscal 2004 and 2005 annual performance plans, and the Agency's fiscal 2004 annual report. We also reviewed relevant reports by the U.S. Government Accountability Office (GAO), National Academy of Public Administration, and International Network for Environmental Compliance and Enforcement.

To determine how well OECA's performance measures characterize changes in compliance or other outcomes, and provide transparency, we determined the essential criteria for evaluating a performance measurement system. We used our professional judgment in applying these criteria in evaluating OECA's performance measures. These criteria include relevance, reliability, validity, comparability, and feasibility, and are described in greater detail in Appendix C. Specifically, we reviewed approximately 100 pieces of academic and public policy literature and interviewed a variety of performance measurement experts. We selected documents that included, and interviewed experts about, criteria for developing and assessing performance measures. We summarized the criteria identified in each document, and then grouped similar criteria to develop the comprehensive list of criteria summarized in Appendix C. We also met with representatives from OECA, the Office of Management and Budget (OMB), and other external stakeholders. We evaluated OECA's measures to determine how OECA demonstrated its progress in achieving compliance and environmental and human health goals, focusing primarily on publicly-reported measures. EPA changed its public enforcement and compliance measures in fiscal 2005, and will not report on these measures until sometime after the end of fiscal 2005. Therefore, we were unable to assess how EPA reported on these new performance measures. However, we did consider the planned 2005 performance measures as described in EPA's fiscal 2005 annual plan. See Chapter 3 for further details on these changes.

Prior Audit and Evaluation Work

We did not identify any previous audit or evaluation reports specifically evaluating EPA's OECA performance measurement and reporting system. However, we identified EPA/OIG and GAO reports listed below with findings on performance measurement, performance data, and OECA performance.

GAO: *Environmental Indicators: Better Coordination Is Needed to Develop Environmental Indicator Sets That Inform Decisions*, GAO-05-52, November 17, 2004.

GAO found a number of challenges with developing environmental indicator sets to inform decisions. Key among those was obtaining sufficient environmental data to report conditions and trends related to the indicators selected. GAO also found problems in linking specific environmental management actions and program activities to changes in environmental conditions and trends. Developers assembling environmental indicator sets to improve the performance of environmental management programs reported difficulty (1) accounting for relationships between management actions and other factors beyond the agency's control that can potentially affect environmental changes, and (2) addressing the time lag between management actions and achieved results. GAO stressed that EPA place priority on developing indicators to guide the agency's priority setting, strategic planning, and resource allocation. GAO found that EPA has not initiated or planned an institutional framework with clear lines of responsibility and accountability for developing and using environmental indicators, and no processes, procedures, or work plans exist to link the results with EPA's strategic planning and performance reporting cycle. GAO recommended that building on EPA's initial efforts on indicators and evaluating the purposes that indicators might serve, the EPA Administrator establish clear lines of responsibility and accountability among EPA's various organizational components and identify specific requirements for developing and using environmental indicators.

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

We found that OECA's performance measurement and reporting approach for the national petroleum refinery program had not provided useful and reliable information necessary to effectively implement, manage, evaluate, and continuously improve program results. OECA had not established and communicated clear goals, systematically monitored refinery program progress, reported actual outcomes, or tracked progress toward achieving consent decree goals. During consent decree implementation, EPA delays may have delayed emissions reductions and compromised compliance. We found that OECA must resolve planning issues and delays, and begin to measure outcomes, to ensure timely emissions reductions and to optimally protect human health and the environment, especially for people living in the vicinity of refineries.

GAO: *Performance Reporting: Few Agencies Reported on the Completeness and Reliability of Performance Data*, GAO-02-372, April 26, 2002.

GAO found that only 5 of the 24 Chief Financial Officer Act agencies' fiscal year 2000 performance reports included assessments of the completeness and reliability of their performance data in their transmittal letters. EPA was not among those five agencies. None of the agencies identified any material inadequacies with their performance data in their performance reports. However, concerns about the quality of performance data were identified by the agencies' inspectors general as either a major management

challenge or included in the discussion of other challenges for 11 of the 24 agencies. Discussing in performance reports the standard or method used to assess the completeness and reliability of its performance data is not required. However, such information can provide helpful contextual information to decision makers on the credibility of the reported performance data. GAO noted that EPA's performance report also provides a useful discussion of data quality. The agency discusses the source and quality of the data associated with each performance goal.

EPA OIG: *Compliance with Enforcement Instruments*, Audit Report No. 2001-P-00006, March 29, 2001.

We found that OECA's performance measures were not sufficient to determine the program's actual accomplishments. Consequently, we determined Congress had less useful performance data upon which to base its decision-making. We also found that EPA regions did not always adequately monitor compliance with enforcement instruments (e.g., consent decrees) or always consider further enforcement actions. We attributed ineffective monitoring primarily to the lack of (1) guidance detailing how or when to monitor enforcement instruments, and (2) emphasis OECA placed on monitoring. Consequently, OECA risked continued violations that would contribute to human and environmental health impacts, thus decreasing EPA's deterrent effect. In response, OECA concurred that it and the regions can and should improve tracking and enforcing compliance with requirements in enforcement instruments. At that time, we concluded that OECA had begun to take the steps necessary for us to close out the report.

GAO: *Managing for Results: Assessing the Quality of Program Performance Data*, GAO Letter Report B-285312, May 25, 2000.

GAO determined the following key dimensions to consider when producing and analyzing program performance data:

- **Accuracy**—the extent to which the data are free from significant error;
- **Validity**—the extent to which the data adequately represent actual performance;
- **Completeness**—the extent to which enough of the required data elements are collected from a sufficient portion of the target population or sample;
- **Consistency**—the extent to which data are collected using the same procedures and definitions across collectors and times;
- **Timeliness**—whether data about recent performance are available when needed to improve program management and reporting to Congress;
- **Ease of Use**—how readily intended users can access data, aided by clear data definitions, user-friendly software, and easily used access procedures.

Internal Performance Management and Reporting

Office of Enforcement and Compliance Assurance (OECA) officials told us they managed programs throughout the year using six internal management and reporting techniques:

1. **Monthly management reports** to regions about key outputs and outcomes provided snapshots of how regions performed. These reports allow OECA to compare current regional progress with past years', and regions could adjust as needed. For example, in fiscal 2003, OECA noticed that Department of Justice referrals were down from the same period in the prior year. OECA officials said they discussed the need to look into referrals, and as a result they were able to improve results by year's end.
2. **Region performance profiles** ("Trip Reports" developed by OECA staff in preparation for Assistant Administrators' planned visits to a region) provide OECA's Assistant Administrator with information about a region's progress with the National Priority Areas.¹⁹ Because OECA only began establishing specific goals for priority areas in 2005, OECA has little experience using the reports for this purpose. These profiles are the major performance reports OECA uses internally.
3. **Periodic in-depth performance analyses for specific measures** provide OECA with information on progress for certain activities or priorities. For example, OECA did a more in-depth analysis on the National Pollutant Discharge Elimination System permit system a few years back. A senior OECA executive said that such performance data allow them to look at a particular slice of the program and to have a standard format for addressing weaknesses. For example, in reviewing the National Pollutant Discharge Elimination System, OECA officials said they found follow-up problems with Significant Non-Compliers (SNCs), and were able to accelerate the use of the Watch List (see item number 6 below) to address this problem.
4. **National Priority Area data** to determine if and how the strategies for these priorities need to be adjusted. An OECA official said that because the strategies have only been in place for a few months, the organization could not yet say anything definitive about their use in managing programs. However, the official said OECA believed the organization would use these priority area updates more in the future.
5. **Mid- and end-of-year GPRA data** to determine if programs are on track for meeting their annual performance goals.
6. **Quarterly Watch Lists** identify noncompliance priorities, i.e., those facilities that remain out of compliance after a notice of violation was issued.

¹⁹ OECA identified enforcement priorities as National Priority Areas. Regions and headquarters focused efforts on these areas, which had specific goals.

Criteria for Effective Performance Measurement

Organizations should periodically evaluate performance measures to determine whether they are providing the information for which the measures were developed. Evaluating performance measures also illustrates whether other measures exist that could better measure progress toward goals. By using well-defined criteria to choose, revise, and use performance measures, program operators can manage programs based on results to ensure they use the best techniques and achieve the best possible outcomes.

We identified five criteria for evaluating performance measures: relevance, reliability, validity, comparability, and feasibility. We also determined that assessing reporting mechanisms provided important information on performance measure clarity and public accountability.

Criterion	Definition
Relevance	A performance measure should be pertinent for its intended use. It should also include aspects of program performance applicable for the intended use. A performance measure should be relevant to EPA's goals, objectives, and priorities, and to the needs of external stakeholders.
Reliability	A performance measure should be consistent and have high quality data. Samples should be large enough to yield reliable data, repeated measurements should yield the same results, and data from different offices or organizations should be based on similar definitions and data collection procedures.
Validity	A performance measure should accurately represent the condition or phenomenon that it is purporting to represent.
Comparability	A performance measure should be able to be compared to existing and past measures of conditions to develop trends and define variation. It should also provide a clear frame of reference for assessing performance over time to demonstrate performance trends.
Feasibility	A performance measure should be "collectable." Information for the measure should be available or able to be obtained with reasonable cost and effort and provide maximum information per unit of effort. The cost of collecting data should not outweigh their value.

Performance reports should clearly portray performance measures with appropriate comparisons to show trends and the adequacy of the measure itself. Program managers should provide enough information for users to correctly understand results, including information about how present performance compares with past performance, and explanations of results.

**Office of Enforcement and Compliance Assurance
Fiscal 2005 Annual Performance
Goals, Measures, and Targets**

ANNUAL PERFORMANCE GOAL	ASSOCIATED PERFORMANCE MEASURES	TARGET
Through monitoring and enforcement actions, Environmental Protection Agency (EPA) will increase complying actions, increase pollutant reduction or treatment, and improve environmental management practices	1. Pounds of pollution estimated to be reduced, treated, and eliminated as a result of concluded enforcement actions.	300 million
	2. Percentage of concluded enforcement cases (including Supplemental Environmental Projects, SEPs) requiring that pollutants be reduced, treated, or eliminated and protection of populations or ecosystems.	30
	3. Percentage of concluded enforcement cases (including SEPs) requiring implementation of improved environmental management practices.	60
	4. Number of inspections, civil investigations, and criminal investigations conducted.	18,500
	5. Dollars invested in improved environmental performance or environmental management practices as a result of concluded enforcement actions (i.e., injunctive relief and SEPs).	4 billion
	6. Percentage of regulated entities taking compliance actions as a result of compliance monitoring.	10
Through self-disclosure policies, EPA will increase the percentage of facilities reducing pollutants or improving environmental management practices	7. Percentage of audits of other actions that result in the reduction, treatment, or elimination of pollutants, and the protection of populations or ecosystems.	5
	8. Percentage of audits or other actions that result in improvements in environmental management practices.	10
	9. Pounds of pollutants reduced, treated, or eliminated as a result of audit agreements or other actions.	25 million
	10. Dollars invested in improving environmental management practices as a result of audit agreements or other actions.	2 million

Through compliance assistance, EPA will increase the understanding of regulated entities, improve environmental management practices, and reduce pollutants	11. Percentage of regulated entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they improved environmental management practices as a result of their use of the centers or clearinghouse.	60
	12. Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they improved environmental management practices as a result of EPA assistance.	50
	13. Percentage of regulated entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they reduced, treated, or eliminated pollution as a result of that resource.	25
	14. Percentage of regulated entities seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they increased their understanding of environmental requirements as a result of their use of the resources.	75
	15. Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they increased their understanding of environmental requirements as a result of EPA assistance.	65
	16. Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they reduced, treated, or eliminated pollution as a result of EPA assistance.	25

**Office of Enforcement and Compliance Assurance
(OECA) Performance Measures,
Fiscals 1999-2005**

		Fiscal Year						Planned for FY 2005	Number of Years Reported
		FY 1999 Annual Report	FY 2000 Annual Report	FY 2001 Annual Report	FY 2002 Annual Report	FY 2003 Annual Report	FY 2004 Annual Report		
OECA PERFORMANCE MEASURES									
ENFORCEMENT MEASURES									
1	# Inspections	X	X	X	X	X	X		6
2	lbs of pollutants required to be reduced through enforcement actions settled in the FY	X	X	X	X	X	X		6
3	% enforcement actions resulting in improvements in use or handling of pollutants	X	X						2
4	# enforcement actions	X							1
5	# entities regulated	X							1
6	# planning and community right to know enforcement actions	X							1
7	# planning and community right to know inspections	X							1
8	\$ value of concluded enforcement actions FY98-FY03	X							1
9	% concluded enforcement actions resulted in improvements in facility management practices and information collection	X							1
10	% formal enforcement actions by States	X							1
11	% inspections conducted by States	X							1
12	% of automotive service and repair industry achieving targeted compliance level	X							1
13	# civil investigations		X	X	X	X	X		5
14	# criminal investigations		X	X	X	X	X		5
15	# EPA-assisted inspections conducted		X	X	X	X	X		5
16	# reports produced on civil and criminal enforcement actions initiated and concluded		X	X	X				3
17	# baselines established to measure % recurring significant violations within 2 years		X						1
18	# baselines established to measure average length of time for significant violators to return to compliance or enter plans/agreements		X						1
19	% inspections and investigations at priority areas		X						1
20	% concluded enforcement actions requiring physical action that will result in pollutant reductions and/or changes in management or information practices			X	X	X			3
21	% increase over 2000 proportion of SNCs returning to compliance w/in 2 years			X	X				2

22	% reduction in SNC for CAA, CWA, and RCRA from 2000			X	X					2
23	# inspections, civil investigations and criminal investigations conducted								X	1
24	\$ invested in improved environmental performance or improved EMP as a result of concluded enforcement actions (i.e., injunctive relief and SEPs)								X	1
25	% concluded enforcement actions resulting in physical action and/or improvements in practices							X		1
26	% concluded enforcement cases (including SEPs) requiring implementation of improved environmental management practices								X	1
27	% concluded enforcement cases (including SEPs) requiring that pollutants be reduced, treated, or eliminated and protection of populations or ecosystems								X	1
28	lbs of TRI pollutants released, disposed of, treated, or combusted for energy recovery in previous year (DATA LAG)					X	X			2
29	lbs pollution estimated to be reduced, treated, and eliminated as a result of concluded enforcement actions								X	1
	COMPLIANCE ASSISTANCE MEASURES									
30	# entities (facilities) voluntarily disclosing and correcting violations	X	X		X	X	X			5
31	# compliance assistance centers in operation	X								1
32	# self disclosures	X								1
33	# user sessions	X								1
34	# visits to compliance assistance centers' internet sites	X								1
35	% participants' improved understanding of regulations	X								1
36	% participants' taking actions	X								1
37	# settlements with facilities to voluntarily disclose and correct violations			X						1
38	# students trained			X	X					2
39	# training modules provided to tribal governments by NETI			X	X					2
40	# EMS tools developed			X	X					2
41	% regulated entities receiving direct assistance from EPA (e.g., training, on-site visits) reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance								X	1
42	% regulated entities receiving direct CA from EPA (e.g., training, on-site visits) reporting that they increased their understanding of environmental requirements as a result of EPA assistance								X	1
43	% regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they improved EMP as a result of EPA assistance								X	1
44	% regulated entities seeking assistance from EPA-sponsored CA centers and clearing house reporting that they reduced, treated, or eliminated pollution as a result of that resource								X	1
45	% regulated entities seeking assistance from EPA-sponsored CA centers and clearinghouse reporting that they improved EMP as a result of their use of the centers or the clearinghouse								X	1
46	% regulated entities seeking assistance from EPA-sponsored CA centers and clearinghouse reporting that they increased their understanding of environmental requirements as a result of their use of the resources								X	1
47	% regulated entities taking complying actions as a result of compliance monitoring								X	1

48	lbs pollutants reduced, treated, or eliminated as a result of audit agreements or other actions							X	1
49	\$ invested in improving environmental management practices as a result of audit agreements or other actions							X	1
50	% audits or other actions that result in improvements in environmental management practices							X	1
51	% audits or other actions that result in the reduction, treatment, or elimination of pollutants; and the protection of populations or ecosystems							X	1
52	# Entities reached through compliance assistance					X	X		2
INTERNAL MEASURES									
53	# courses provided to State and Tribal officials	X	X	X	X				4
54	# data system improvement designs	X		X					2
55	# priority areas identified	X							1
56	populations served by valid compliance rates or other indicators of compliance		X	X	X	X	X		5
57	# import and export notices filed and reviewed		X						1
58	% operational efficiency for existing 14 info systems			X	X	X			3
59	phases of modernization of Permit Compliance System			X	X	X	X		4
60	# quality mgmt plans completed for additional data systems			X					1
61	# tribal personnel trained by EPA				X				1
62	% transboundary notices reviewed and responded to			X	X				2
63	# tribal personnel trained by NETI			X					1
64	% homeland security support to federal, state, and local entities				X				1
MISC MEASURES									
65	# facilities with performance information	X							1
66	% NEPA concerns voluntarily addressed	X							1
67	% significant federal actions (NEPA) reviewed	X							1
68	# data analyses of environmental problems in tribal lands-- Tribal Baseline Assessment Project			X		X			2
69	% reduced from 1991 levels of priority list chemicals					X	X		2
TOTAL Measures Reported Per Fiscal Year		25	14	22	20	14	12	16	
AVERAGE Measures Reported Per Fiscal Year		18							
AVERAGE Years Measure in Use		2							
ALL Measures Reported for Fiscal Years 1999-2004		107							
ALL Measures Reported and Planned for Fiscal Years 1999-2005		123							

Agency Comments

**OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE (OECA)
Response to
OFFICE OF INSPECTOR GENERAL (OIG) DRAFT EVALUATION REPORT
ON OECA PERFORMANCE MEASUREMENT AND REPORTING
October 12, 2005**

General Comments

The Office of Enforcement and Compliance Assurance (OECA) appreciates the efforts of the Office of the Inspector General (OIG) to evaluate the performance measurement and reporting practices of the national enforcement and compliance assurance program. OECA understands the value of program evaluation as a tool for improving program effectiveness, and has conducted its own series of program evaluations over the past four years to examine a number of program performance issues.

When OECA suggested performance measurement as a possible evaluation topic in response to a solicitation from the OIG, it was in the hope that the OIG could provide an objective analysis of OECA's measurement and reporting practices and recommend solutions to some of the challenges confronted by OECA as it has developed and used performance measures over the last eight years.

To that end, OECA took the extraordinary step of submitting a memo from Phyllis Harris, OECA's Principal Deputy Assistant Administrator, to Jeff Harris, Director, Cross-Media Issues, Office of Program Evaluation in the OIG on September 29, 2004 entitled, "Request for the IG's Assistance to Improve and Expand OECA's Use of Outcome-Based Performance Measures." (See Attachment 1) In that memo OECA described two primary performance measurement challenges for which it requested assistance from the OIG. The first of these challenges was to enhance the current measure for pounds of pollution reduced from enforcement actions by adding some sense of the impact of these reductions on hazard and exposure. The memo also posed a series of specific questions for the OIG about this challenge. The second challenge was to help OECA find a way to expand the use of statistically valid noncompliance rates. OECA had developed a methodology for combining inspections targeted at suspected violators with randomly selected inspections to produce representative samples on which to base statistically validates. Unfortunately, the additional increment of random inspections reduced the number of targeted inspections that could be performed and so the methodology was applied through pilot projects to relatively small segments of the regulated universe. The memo then provided a list of barriers that needed to be overcome, a set of options

for moving forward with statistically validates, and a set of specific requests for OIG assistance that would move OECA forward on the continuum of outcome measures.

Now more than one year later, the OIG evaluation does not respond to this request and provides no assistance in addressing either of these challenges. Instead, the OIG has chosen to offer a critique of OECA’s use of outcome measures, in some instances utilizing various issues OECA itself provided in its September 29, 2004 memo.

This would seem to be at odds with the OIG’s own Strategic Plan for FY 2004-2008. The “vision statement” from that Plan (provided as Attachment 2) reads as follows:

“We are **catalysts** for improving the **quality** of the **Environment** and **Government** through problem prevention and identification, *and cooperative solutions.*” (italics added)

Given the opportunity to conduct a program evaluation to find a “cooperative solution” to a significant problem in OECA’s performance measurement practice, the OIG was perhaps incapable, unwilling, or hostage to a prevailing audit mentality.

See OIG Response
in Appendix G,
Note 1

In this evaluation report, the OIG has focused on various other limitations in OECA’s use of outcome measures, offered observations and recommendations of marginal value and relevance, and left unaddressed the requests for assistance on the crucial issue of developing meaningful, statistically valid compliance rates. Their three recommendations are of little benefit -- one urges OECA to continue improving its measures, a second amounts to editorial changes in a document, and the third urges OECA to address a data problem not as dire as portrayed by the OIG. The evaluation report is a significant disappointment to the OECA managers and staff responsible for performance measurement.

See OIG Response
in Appendix G,
Notes 2 and 3

In this response we will suggest corrections to errors and misrepresentations, provide additional context that we believe will benefit the report, and respond to each of the three recommendations.

Chapter 1 - Introduction

Background

On page 2 of the report, the OIG quotes selectively from President Bush’s remarks at the May 23, 2005 swearing-in ceremony of Administrator Stephen Johnson. Here is the section of the report that includes the excerpted remarks of the President:

“At the Administrator’s May 23, 2005 swearing-in ceremony, President Bush

emphasized that he wanted results – real environmental improvements and vigorous enforcement – when he said, ‘ ... we will continue our enforcement strategy which focuses on achieving real environmental improvements that benefit everyone.... We’ll continue to vigorously enforce our environmental laws ... and we will focus on results.’”

And here is the entire quote of that portion of the President’s remarks that dealt with enforcement:

“And finally, we will continue our enforcement strategy which focuses on achieving real environmental improvements that benefit everyone. Since 2001, the EPA has increased compliance inspections by 19 percent, and civil investigations by 24 percent. And last year the agency provided compliance assistance to over 730,000 individuals and businesses.

Our strategy is working. Last year we obtained commitments to reduce future pollution by an estimated 1 billion pounds, an increase of 50 percent over the 2001 level. And I want to thank all the EPA employees who work in the field on this collaborative effort.

As Steve leads the EPA, he will maintain our common-sense approach of collaborating with leaders and volunteers at the local level to find the very best solutions to meet our national goals. We’ll continue to vigorously enforce our environmental laws. We’ll encourage good stewardship of natural resources and we will focus on results.”

Note that the excerpt from the IG report deletes: three references to program activities expressed as output measures (the increase in inspections and investigations, and the number of individuals provided compliance assistance); the reference to estimated pollution reductions; and the statement that our strategy is working.

It appears that these references are omitted from the report because they are incompatible with OIG observations presented later in the report. The report focuses on the need for outcomes, never acknowledging that a mix of outputs and outcomes is necessary to manage the program, and implies that OECA is using too many outputs. The report criticizes the use of pollution reduction measures that are based on estimates. And the report creates the impression that OECA’s strategy for managing the national program is deficient in significant ways.

**See OIG Response
in Appendix G,
Note 4**

This practice – selectively using only information that supports their observations, and ignoring incompatible information or important context -- is one OECA has seen in other recent OIG evaluation reports. (See, for example, OECA’s comments on the 9/19/05 OIG report on data about regulatory universes.) We will point out other instances of troubling practices in this OIG report elsewhere in this response.

**See OIG Response
in Appendix G,
Note 5**

Also on page 2, the OIG describes the value of compliance rates and characterizes them as the among the Agency’s most important performance measures. OECA agrees that such measures are important, and that is why we developed a methodology (with an external statistical consultant), conducted several pilot projects of our methodology, and continue to use the methodology to develop rates on key populations. And that is also why we requested assistance from the OIG to help determine how the use of statistically validates could be expanded. We do not agree, however that without statistically valid noncompliance rates we cannot effectively manage the program. Such rates are one of many tools that, taken together, comprise a comprehensive system of performance measures.

See OIG Response in Appendix G, Note 6

On page 3, the OIG discusses “effective performance measurement and reporting,” including its purposes and benefits, especially its contribution to transparency. This section is very similar to an article by Robert Behn of Harvard University (*Public Administration Review*, September/October 2003, Vol. 63, No. 5) in which he identifies eight distinct purposes for measuring performance – evaluate, control, budget, motivate, promote, celebrate, and learn. In Behn’s article, he observes that serving these purposes requires a variety of types of performance measures, including both outputs and outcomes. This is an observation that is not made in the OIG report. Using measures to actually manage and improve a program will necessitate a mix of output and outcome measures to determine what outputs produce the most important outcomes. This should be acknowledged by the OIG in this report. Similarly, the OIG report should recognize the existence of practical constraints on performance measurement. The Government Accountability Office (GAO) has noted that agencies “must balance their ideal performance measurement systems against real-world considerations such as the cost and effort involved in gathering and analyzing data.”(U.S. GAO, 1996a, p.24)

See OIG Response in Appendix G, Note 7

Scope and Methodology

On page 5, the report states that the OIG “determined and applied essential criteria,” but does not identify those criteria or point out that the criteria are listed in Appendix C. More importantly, the report does not provide any detail about *how* the criteria were applied to the individual measures used by OECA, nor does it describe what judgments were made based on reviewing the measures against the criteria.

See OIG Response in Appendix G, Note 8

Also, there are two additional criteria that OECA and other compliance and enforcement organizations have used, and these should be considered by the OIG for its list. The first is what some of the public management literature calls functionality, i.e., does the measure encourage or provide an incentive for the right kind of behavior among the regulated universe and the internal staff of the agency? The second criterion that should be added to the list is comprehensiveness. This criterion applies to

See OIG Response in Appendix G, Note 9

the set or system of measures being used by a program or organization. In evaluating a set of measures, program managers and other users of performance information will need to determine if the measures cover all or most of the important activities and results of the program.

Also, on this page, the OIG states that the “field work” for the report occurred between January and June 2005. If the definition of “field work” includes making requests of OECA staff and meeting or otherwise interacting with OECA staff and managers about the report, field work continued well beyond June and continued until days before the draft report was received by OECA. In fact, one of the reasons the report is so disappointing to OECA staff and managers is that it seems like a very small return on a significant investment of OECA staff time spent working with the OIG evaluation team.

**See OIG Response
in Appendix G,
Note 10**

Chapter 2 – Outputs and Goals

This chapter begins on page 7 with an acknowledgement that various experts cited OECA’s leadership in developing and using performance measurement for enforcement and compliance programs. We would suggest that, in addition to the opinions of experts, the OIG also include information about the various contributions OECA staff and managers have made to the practice of performance measurement. Attachment 3 contains a list of various publications and tools that OECA has developed and distributed to advance performance measurement in state environmental agencies and environmental ministries of other nations.

**See OIG Response
in Appendix G,
Note 11**

The report then focuses on a short discussion of the Office of Management and Budget’s (OMB) reviews of the civil enforcement program under the Program Rating and Assessment Tool (PART), and in doing so makes factual errors and provides an incomplete account of those reviews. On page 8, the report states that OECA received a “Results Not Demonstrated” rating in “both 2002 and 2004.” The correct account is that such a rating was received by OECA for PARTs done in 2002 (in preparation for the FY 2004 budget) and 2003 (in preparation for the FY 2005 budget). The report then confuses the account even more by saying the PART assessment for “the fiscal 2006 budget found that the program had followed through on original PART findings by undertaking development of a measures implementation plan.” The PART for the FY 2006 budget was actually conducted in 2004, and that review led to an improvement to “adequate” in the PART rating, a fact that the IG neglects to mention. The report should be revised to reflect the following: the PART conducted in 2002 (for the FY 2004 budget) and the PART conducted in 2003 (for the FY 2005 budget) gave OECA a “Results Not Demonstrated” rating; the PART conducted in 2004 (for the FY 06 budget) gave OECA an “Adequate” rating. Furthermore, the improved rating resulted not just from OECA’s undertaking a measurement improvement plan, but because OMB in 2004 categorized pounds of pollution reduced as an outcome measure rather than an output measure, finally aligning its view of outcome measurement with that of performance measurement experts.

**See OIG Response
in Appendix G,
Note 12**

OECA notes that the omission of the improved PART rating is another example of the OIG practice of selectively using only information that supports their observations, and ignoring incompatible information or important context.

Also on page 8, Table 2.1 characterizes FY 2004 OECA measures by sorting them as outputs, intermediate outcomes, or end outcomes. But the table does not identify which individual measures have been put in each respective category, leaving the OECA reviewers unable to check the accuracy of the table. Also, there seems to be an implication that the number of output measures is out of balance, though the report never explicitly makes that claim. If that is the conclusion of the OIG, it should be stated, along with the rationale or standard that the OIG is using to determine what the appropriate mix of output and outcome measures should be.

**See OIG Response
in Appendix G,
Note 13**

Chapter 3 – Characterizing Changes in Compliance or Other Outcomes

Both the title of this chapter and the title of this report itself create the false impression that OECA lacks sufficient data about outcomes to manage its programs. This practice of stating findings or conclusions that are much broader than the supporting evidence on which they are based is one the OIG has employed in other recent evaluations of the enforcement program. (See the OECA comments on the 9/19/05 OIG evaluation report on data about regulated universes at www.epa.gov/oig/reports/xmedia.html)

**See OIG Response
in Appendix G,
Note 14**

OECA fully recognizes the need to improve specific aspects of its outcome measurement and reporting. That is why OECA has been working to develop statistically valid noncompliance rates, and that is why OECA submitted its memo entitled, “Request for the IG’s Assistance to Improve and Expand OECA’s Use of Outcome-Based Performance Measures,” over a year ago. We suggest that the OIG revise both the title of the report and of this chapter to reflect the need for specific improvements in outcome measurement and reporting rather than the broader (and false) statement that our measures cannot track or characterize outcomes.

**See OIG Response
in Appendix G,
Note 15**

OECA developed its publicly reported GPRA measures to track progress toward achieving the compliance objective and sub-objectives under Goal 5 in the Agency Strategic Plan. The Goal 5 architecture, including the performance measures associated with the objective and sub-objective, are provided as Attachment 4. These measures have been designed to track whether the various tools used by the program (compliance assistance, compliance incentives, inspections and investigations, and civil and criminal enforcement) are producing specific outcomes (e.g., improvements in understanding regulatory requirements, implementation of improved environmental management practices at facilities, and reduction of pollution emissions and discharges). Moreover, to increase the value of these measures as a management and accountability tool, OECA established numeric targets for increasing these outcomes over a set period of time.

**See OIG Response
in Appendix G,
Note 16**

Also on page 11, the report includes a discussion about OECA’s history on compliance rates that contains further inaccuracies and simplifications that need to be corrected or revised. The statement that “OECA has not publicly reported compliance rates ...” is inaccurate. While OECA has not reported its statistically valid rates as part of its GPRA measures, rates have been reported on the OECA website for CSO compliance with nine minimum control requirements in 2002 and 2004, and a recently-completed rate study on foundry compliance with RCRA regulations will be posted in the next 60 days.

**See OIG Response
in Appendix G,
Note 17**

The statement that “OECA chose not to invest the resources necessary to produce statistically valid rates on a broad scale,” is misleading because it implies that sufficient resources were available but OECA invested them somewhere else. The situation is more complex than the OIG chose to portray. As we have explained on many occasions and in many ways to the OIG, the dilemma OECA is facing is that inspection resources are finite and the additional increment of random inspections necessary to produce meaningful, representative, statistically valid rates for large segments of the regulated population would mean conducting fewer overall inspections targeted at known or suspected significant violators. We request that this section be revised to correct these inaccuracies and suggest that the language on page 12 regarding “sacrificing compliance monitoring of known significant violators,” be given more prominence in the OIG’s explanation of OECA’s record on developing and using compliance rates.

**See OIG Response
in Appendix G,
Note 18**

On pages 12 and 13 the OIG report discusses information about the regulated universe and how that information can contribute to developing compliance rates. Citing a previous OIG report, this section states that “OECA lacks an accurate characterization of the universe of regulated entities” and that a “better understanding of the composition of the regulated universe will allow OECA to reliably estimate compliance for segments of the regulated universe.”

These statements reflect a lack of understanding about the true impediments to developing statistically valid rates, and are perhaps an attempt to inflate the value of the recommendations from the previous OIG report on universe data. In the work OECA has done in the last several years on compliance rates (see Table 1), we have been able to develop an accurate characterization for that portion of the regulated universe associated with a particular rate. In developing rates, OECA has been able to categorize and parse the regulated population in the various ways suggested by the OIG. These suggestions from the OIG are not new insights that will enable OECA to have a breakthrough in developing more compliance rates. The major impediment to expanding OECA’s use of rates – as we explained to the OIG in our memo from one year ago, and in many subsequent meetings since – is finding the resources necessary to conduct the necessary additional random inspections without reducing significantly the inspections targeted at known or suspected violators.

**See OIG Response
in Appendix G,
Note 19**

Also in this section (on page 12) the report states that to reliably estimate compliance for a segment of the regulated community, OECA needs “a sampling method that can produce statistically valid generalizable compliance

information for that segment of the regulated community.” OECA already has such a sampling method, has used it throughout the compliance rate pilot projects over the last several years, and has provided it to the OIG as part of their research for this report.

**See OIG Response
in Appendix G,
Note 20**

The next section (on pages 13 and 14) about reporting proxies instead of rates implies that OECA has described its current measures as proxies for compliance rates. We have never done so. Our current measures are designed to track the extent to which our various tools (assistance, incentives, inspections, and enforcement) produce important behavior changes such as improved environmental practices at facilities and changes to the environment such as pollutant reductions. Even if OECA were able to develop and use dozens of statistically valid compliance rates each year, we would continue to use and report our current measures because they provide valuable information about the results we are producing through our activities. Calling these measures proxies for compliance rates is an invention of this OIG report, not the approach OECA has adopted.

**See OIG Response
in Appendix G,
Note 21**

Table 1. Statistically Valid Noncompliance Rates for Selected Populations

Year(s) Undertaken	Sector and Noncompliance Rate	Method
FY 2000-2002	Petroleum refining: Ammonia, zinc and lead violations with more than 20% over NPDES limit	Self-reported Discharge Monitoring Report (DMR) data
FY 2000-2002	Iron and Steel: Ammonia, zinc and lead violations with more than 20% over NPDES limit	Self-reported DMR data
FY 2000-2002	Municipalities: biological oxygen demand (BOD) and total suspended solids (TSS) violations with more than 40% over NPDES limit	Self-reported DMR data
FY 2001	Organic Chemical Manufacturing: RCRA Small Quantity Generator Compliance	Statistically valid inspections
FY 2001	Iron and Steel and Metal Services: DMR Accuracy Audit	Statistically valid inspections
FY 2002	Ethylene Oxide Manufacturers: Maximum Achievable Control Technology (MACT) Compliance	Statistically valid inspections
FY 2002	Combined Sewer Municipalities: Combined Sewer Overflow (CSO) Nine Minimum Control Policy Compliance (baseline)	Statistically valid inspections
FY 2004	Combined Sewer Municipalities: CSO Nine Minimum Control Policy Compliance (Reevaluation)	Statistically valid inspections
FY 2004/2005	RCRA Foundries: Compliance with RCRA Regulations	Statistically valid inspections
FY 2005/2006	Compliance with TSCA 1018 Lead-Paint Disclosure rule in St. Louis Missouri	Statistically valid site visits

The OIG report then turns to a discussion (beginning on page 14) about issues associated with the use of estimated, predicted, or facility self-reported data, stating that the reliance on such data “reduces the reliability of OECA’s performance measures as accurate indicators of compliance.” The report states that, “As an agency EPA strives to avoid using estimated performance measurement data,” and cites as the lone example EPA’s 2004 *Draft Report on the Environment* in which EPA “chose to use recorded observations and values rather than estimated data.”

These assertions are misleading in at least three ways. First, EPA reports its performance measurement data in its *Annual Performance Report*, not in the *Draft Report on the Environment* where it reports data about environmental effects and conditions. Citing the *Draft Report* as an example of how the Agency uses performance measurement data is incorrect. Second, by using

the *Draft Report* as its example and stating that the *Draft Report* only uses recorded observations and values rather than estimated data, the OIG report creates the false impression that the use of recorded observations and values is the rule rather than the exception at EPA. On the contrary, many EPA programs are highly dependent on estimated, predicted, and self-reported data for analyzing and justifying proposed regulations, assessing the risks associated with substances and products, identifying emerging or existing environmental problems, and determining whether industries and facilities are complying with myriad requirements and carrying out voluntary agreements. Moreover, there are statutes that require regulated entities to report all manner of data – is it the view of the OIG that all such data categorically are too inaccurate to be used for the purposes prescribed by the statute? Third, the claim that using estimated, predicted, and self-reported data reduces the reliability of OECA’s performance measures is based on the *general principle* that such data is always inferior to recorded observations and values *for every purpose*, and not on an *actual analysis* of the data OECA is using for performance measurement purposes.

See OIG Response
in Appendix G,
Note 22

This practice – drawing conclusions based on a general principle with no accompanying analysis – is one we have seen all too frequently in recent OIG evaluation reports. The program evaluation function of the OIG and the programs being evaluated by the OIG are both important enough to warrant a higher standard of analysis than is evident at many points in this report.

See OIG Response
in Appendix G,
Note 23

There are other troubling issues associated with the OIG’s views about OECA and the Agency moving from estimated or self-reported data to recorded observations and values. At a time when the OIG and others are pressuring programs to develop and use more outcome measures, advocating a strict adherence to the use of recorded observations and values will set an impossibly high standard for data collection and will have a chilling effect on initiatives to improve outcome measures.

See OIG Response
in Appendix G,
Note 24

Gathering recorded observation and values will often necessitate establishing monitoring systems that can be very expensive, have long implementation periods, and require collection of significant amounts of new information from external parties. There are formidable resource barriers that will not likely be overcome in an era of steadily declining budgets. Urging that outcome measures be based on recorded observations and values will mean that most prospective performance measures will almost always fail one of the OIG’s own criteria listed in Appendix C: feasibility. As the OIG report states, feasibility means:

“A performance measure should be “collectable.” Information for the measure should be available or able to be obtained with reasonable cost and effort and provide maximum information per unit of effort. *The cost of collecting data should not outweigh their value.*” (italics added)

This practice – failing to weigh the benefits of their ideas and recommendations against the resources they entail and the competing needs and demands that will be displaced – is all too common in recent OIG evaluation reports about enforcement issues.

**See OIG Response
in Appendix G,
Note 25**

On page 15, the report introduces Table 3.1 which purports to show that of the 16 FY 2005 GPRA performance measures, 15 of them rely on unverified estimates, predictions, or facility self-reported data. This analysis is incorrect. Actually, 8 of the 16 measures rely on actual counts of activities, not on estimates or predictions. (Items 7, 8, 10, 11, 13, 14, and 15 were categorized incorrectly by the OIG.)

**See OIG Response
in Appendix G,
Note 26**

Also on page 15, the OIG raises a concern about pollutant reductions from enforcement cases not being verified and “achieved if the facility or defendant carried out the requirements of voluntary settlement agreement.” This characterization understates the likelihood that the pollutant reductions will be carried out.

Pollutant reductions can be reasonably estimated based upon the type of injunctive relief required by the terms of a settlement. Federal enforcement of environmental laws focuses on major sources of pollution found to be in significant violation of the environmental laws; resolution of these violations usually requires installation of appropriate control technology and/or significant upgrades of extant controls. Because this technology is very rarely so innovative as to be untested, EPA engineers and technical consultants are able to estimate, to a strong degree of certainty, the amount of pollution that will be released by the facility from the production line or unit in question when the control device is installed and operating correctly. This number, compared to the amount of pollution emitted or discharged prior to the enforcement action, is the basis for EPA’s pollution reduction figures.

EPA review ensures that the upgrades have been made, control technology installed and permit levels achieved. Federal consent decrees resolving environmental violations include deadlines by which compliance must be achieved. Typically, the more extensive injunctive relief provisions (e.g., those that require installation of complex pollution control systems) also include milestones that must be met prior to achieving compliance. Defendants certify to EPA that they have met such milestones and deadlines. The certifications are usually made by licensed Professional Engineers who are either employees of the defendant or hired as consultants, and the certifications are accompanied by detailed engineering reports.

As the control devices come on line, the results of performance tests are typically reported to EPA; some decrees include immediate notification of malfunctions or permit violations. EPA monitors compliance with both the terms of the consent decrees and with pollution permit levels by reviewing these reports. The Agency has found that the engineering reports have a high degree of reliability. Because the court can enforce the milestones and deadlines, defendants take them very seriously. When EPA detects or has reason to suspect an irregularity in the reports, it may inspect the facility. At the

Agency's discretion, it may also inspect the on-site progress of the defendant in meeting the terms of its agreement.

OECA suggests that the description of pollution reductions currently in the report be revised to reflect that there are controls that increase the likelihood that terms of the settlement agreements will be carried out and the pollution reductions actually achieved.

**See OIG Response
in Appendix G,
Note 27**

On page 17 the OIG states:

OECA's fiscal 2005 performance measures for some of its most important outcomes do not clearly link to OECA's goals and objectives. As a result, OECA is unable to clearly or effectively communicate and report on the extent to which it is accomplishing these important goals.

The conclusions drawn here about the lack of linkage and its impact are incorrect. Among other things, GPRA requires the Agency to: 1) develop a strategic plan, which has objectives and sub-objectives that describe performance targets covering the life of the plan; and 2) produce annual performance goals and corresponding annual performance measures. When the most recent Agency Strategic Plan was developed, OECA made a conscious effort to ensure that annual performance measures aligned with, and enabled us to report progress on, OECA's Objective and Sub-objectives in the Agency Strategic Plan. Attachment 4 arrays the FY 2005 Annual Performance Measures under OECA's Sub-objectives, and makes clear the correspondence between the two. The language of the Annual Performance Goals were written as a summary of the corresponding Sub-objective language, and the OIG is correct in noting that there are discrepancies between the wording of the FY 2005 Annual Goals and the corresponding measures. OECA will reword the Annual Goals to make the existing linkage between the performance measures and OECA's Objective and Sub-objectives in the Agency Strategic Plan clearer.

**See OIG Response
in Appendix G,
Note 28**

The OIG's comments on page 18 about the compliance incentives measure – that it does not measure true compliance or conformity with environmental laws and regulations – reflects a lack of understanding about the EPA self-audit policy that is the basis of the incentives measure. To qualify for using the audit policy, a facility or company must certify that the audit agreement will bring them into compliance. Thus, one of the consequences of an approved audit agreement is facility/company compliance. For compliance incentives, OECA measures other important outcomes, since compliance is a prerequisite for an approved audit agreement.

**See OIG Response
in Appendix G,
Note 29**

Another point raised by the OIG on this page concerns whether OECA should measure the number of complying actions resulting from certain activities or the percentage of entities taking compliance actions. Counting and reporting the number of complying actions would be misleading, for example, because within a two-year period the total number of complying actions could increase from 1000 to 2000 but the number of entities taking the actions might increase from 100 to 200 or from 20 to 21. OECA believes that tracking the

percentage of entities is the more useful measure for a national program because it demonstrates whether an increasing or decreasing percentage of the entities are achieving outcomes resulting from the EPA activity.

See OIG Response
in Appendix G,
Note 30

On page 20 of the report, the OIG begins a discussion regarding how changes made by OECA to its measures over the six-year period of 1999-2005 have reduced transparency. OECA believes that measures can be changed and improved without diminishing transparency, and provides explanatory information when such changes are made. The report points out that OECA changed the wording for all its measures in FY 2005, but does not mention until the next page that this change was in conjunction with the development of a new EPA Strategic Plan that was very different from the previous plan. The OIG also neglects to mention that the measures put in place in FY 2005 for the new strategic plan were changed largely to improve OECA's ability to measure the outcomes it was producing through its various activities.

See OIG Response
in Appendix G,
Note 31

As part of this report, the OIG painstakingly tracks the changes in individual OECA performance measures for each year from 1999-2005, displays these changes in a three-page Appendix D, and attempts to discern some trends in these changes. But this section of the report is focused on the wrong question: Isn't the important question not whether the measures are *different* over time, but whether they have *improved* over time? This would be valuable information for a program manager to have, and it is the type of question OECA hoped would be addressed when it originally suggested that the OIG evaluate OECA performance measures.

See OIG Response
in Appendix G,
Note 32

On page 22 of the report, the OIG discusses the need for further evaluation of "EPA's previous and potential use of statistically valid compliance rate measures." For the first time in the report, the OIG makes reference to the fact that "OECA has requested assistance from us in this area." However, the report makes no reference to the contents of the September 2004 memo sent by OECA to the OIG to request assistance, nor that the memo was received by the OIG over a year ago.

Recommendations

See OIG Response
in Appendix G,
Note 33

The OIG has recommended that the Administrator for Enforcement and Compliance Assurance;

- 3.1. Design and implement a pilot project to verify estimated, predicted, and facility self-reported outcomes, and report on the pilot's results to demonstrate the reliability of such performance measures. Until OECA verifies these data, OECA should clearly and prominently describe all measures as estimated, predicted or facility self-reported.

OECA Response: Concur. Although OECA believes that the OIG has exaggerated the seriousness of estimated, predicted and self-reported data, OECA will begin exploring how to conduct a pilot project to verify estimated, predicted, or self-reported data for

those measures in which such data is used. While the pilot project is ongoing, OECA will increase the prominence of caveats associated with these measures.

**See OIG Response
in Appendix G,
Note 34**

- 3.2 Improve the linkage/relationship of OECA’s goal and measures in EPA strategic and budgetary documents to improve external understanding and external usefulness.

OECA Response: Concur. OECA will revise the language of its FY 2005 Annual Performance Goals so that they conform with the language of the relevant sub-objective in the Agency Strategic Plan.

**See OIG Response
in Appendix G,
Note 35**

- 3.3 Continue to improve enforcement and compliance measures, while continuing to publicly report key measures annually to provide the public, Congress, and other specific stakeholders a minimal amount of trend data.

OECA Response: Concur. OECA is continually making efforts to improve its performance measures and improve the practice of using performance information to manage, assess and improve program performance. In light of the OIG's reluctance to assist OECA during the past year wit [sic] expanding the use of statistically valid rates, OECA will move forward on this key issue by turning to an external institution (e.g., the National Academy of Public Administration) and a statistical consultant for assistance. OECA will review its current practices for annual reporting of data and consider modifying or expanding that reporting.

**See OIG Response
in Appendix G,
Note 36**

Appendix B

In Appendix B, the OIG report provides a description of various management reports used by OECA to examine various aspects of program performance. As mentioned previously to the OIG, item #7, “Monthly Deputy Regional Administrator Conference Calls” is incorrect and should be deleted. Although the Agency holds a regularly scheduled call with the DRAs and OECA will occasionally be on the agenda for those calls it is not accurate to consider them as an OECA tool for internal performance management and reporting.

**See OIG Response
in Appendix G,
Note 37**

OIG Evaluation of Agency Comments

1. We have a strong track record of consulting with, and considering input from, the Office of Enforcement and Compliance Assurance (OECA) as we plan and implement our evaluations. We solicited comments from OECA in our multi-year planning activities for both the 2003-05 and 2006-08 cycles. And, contrary to OECA's assertions, we repeatedly addressed requests by OECA to assist them with compliance rate generation. To clarify what seems to be confusion on the part of OECA, we describe these efforts below.

As we develop our program evaluation agenda, we routinely seek input and feedback from Agency offices on potential evaluation topics. Stakeholder input is crucial to identifying and preventing problems in order to improve the environment and human health, and we consistently sought comments from OECA on evaluation topics. For example, we developed our original approach for evaluating the effectiveness of EPA's enforcement activities in consultation with the OECA. In early 2003 when developing the OIG's Multi-Year Plan Fiscal 2003-2005, we met with senior OECA officials to solicit comment on our four-phased evaluation strategy.²⁰ In response to OECA concerns about the feasibility of the plan, we agreed to pilot our approach in a regulated sector selected in consultation with OECA. The resulting evaluation, *EPA Needs to Improve Tracking of National Petroleum Refinery Compliance Program Progress and Impacts*, Report No. 2004-P-00021, June 22, 2004, validated our multi-year evaluation strategy. Again, in 2005, as we were compiling our 2-year plan for fiscal 2006-2008, we solicited input and ideas from OECA.

OECA's claim that we "left unaddressed" OECA requests for assistance is inconsistent with the facts. Our January 10, 2005, memorandum responding to OECA's September 29, 2004, memorandum requesting OIG assistance stated that: (1) thoroughly researching or evaluating either of the two major issues would require more time and staff resources than we currently have available; (2) the proposed evaluation of hazard and exposure risk characterization would require a cross-media approach and scope that would not necessarily focus solely on enforcement and compliance assurance; and (3) each question would be considered for inclusion in the OIG's next multi-year plan. In November 2005, we initiated preliminary research on a question directly related to OECA's request; *What are the costs and benefits of targeted, random, and stratified random sampling approaches to generate compliance rates?* OECA management will

²⁰ To evaluate whether EPA's enforcement approaches were optimized to ensure compliance with environmental rules and regulations, the OIG developed a plan of four reviews that would characterize the regulated universe; assess the Agency's coordination and prioritization processes, critique implementation strategies, and evaluate compliance assurance measurement and data quality.

also recall that OIG staff and OECA managers have discussed the request, and the status of the request, during meetings held on 9 December, 2004, 12 January, 2005, and July 5, 2005.

2. OECA is correct in that we temporarily set aside the other important issues discussed in note 1 above, and chose to focus on OECA's current use of outcome measures. It was and remains our opinion that we could best contribute, in the short term, by identifying improvements OECA could make in its current performance measurement and reporting approach. We also believe that our approach appropriately establishes a baseline and effectively sets the stage for our planned future work in this area.
3. We do not agree that the recommendations in this report are of little value. Rather, we find the recommendations crucial to the integrity and effectiveness of the Agency's performance measurement system for three reasons. First, in the absence of empirical evidence, EPA cannot ensure the validity and reliability of any environmental performance measure – including enforcement. We consider our recommendation to pilot selected data validations as a measured first step for OECA to establish a process to enhance the credibility of OECA's reported results. Second, a fundamental component of public accountability includes establishing and reporting on measures that can determine programmatic goal accomplishment. Public accountability suffers when program managers cannot use their measures to determine success – namely whether the program has achieved its goals. We consider the ability to clearly and logically connect measures with goals to outcomes as essential. Third, we recommend that EPA report the compliance measures that it has. While the Agency's enforcement and compliance assurance measures need improvement, that does not mean they are without value. Tracking results over time can add transparency in performance trends even when the precise outcomes remain in doubt. We consider the transparency of Agency performance – with the best data available – to be of considerable benefit. We believe these three reasons clearly demonstrate the importance and value of our recommendations to the Agency's enforcement and compliance measurement approach.
4. Our quote clearly indicated that it was selective by accurately using ellipses, and OECA's quote is also selective (but without the proper use of ellipses). We selected to quote the parts of the President's speech we did because we believe those parts fairly summed up his message, i.e., "President Bush emphasized he wanted results – real environmental improvements and vigorous enforcement – when he said, '...we will continue our enforcement strategy which focuses on achieving real environmental improvements that benefit everyone....We'll continue to vigorously enforce our environmental laws...and we will focus on results.'" We believe "real environmental improvements" are best characterized by outcomes, e.g., compliance leading to improvements in human health and the environment. We do not see "inspections and investigations, and the number of individuals provided compliance assistance" as "real environmental improvements," and we doubt OECA does either. It appears that OECA's problem may also be with our scope. Our scope was specifically focused on outcomes as clearly described by our objectives which focused on bottom-line enforcement and compliance effectiveness, and

on how well OECA's performance measures characterized changes in compliance or other outcomes. We included information that was relevant to our scope and objectives. However, we, and many experts we spoke with, certainly agree that a mix of outputs and outcomes is necessary and desirable, and we believe we have made that point clear in our final report.

5. We sought and included all contextual and other information that we determined would help answer our objectives and assist us in communicating a fair and accurate answer to those objectives.
6. We did not state that "without statistically valid noncompliance rates [OECA] cannot effectively manage the program." We are encouraged that OECA agrees, "Compliance rates are among the Agency's most important performance measures." While we agree that OECA can and has managed the enforcement and compliance program without statistically valid rates, it is also our conclusion and well-considered opinion that, "Ensuring compliance with environmental laws and regulations is critical to accomplishing EPA's mission." We cannot be certain that including such rates will markedly improve Agency management, because such improvement entirely depends on what decisions management makes with such information. Nonetheless, we believe that valid compliance rates are essential for an Agency that has a goal to "improve compliance."
7. We agree that a mix of measures is desirable, and as stated earlier, we made this point explicit in our final report. We also included the statement that agencies "must balance their ideal performance measurement systems against real-world considerations such as the cost and effort involved in gathering and analyzing data."
8. We modified the text to clearly state that we used our professional judgment in applying the five criteria mentioned in Appendix A and detailed in Appendix C. We also included in our final report that, "We determined and used our professional judgment in applying criteria to assist us in evaluating OECA's performance measures. These criteria include relevance, reliability, validity, comparability, and feasibility, and are described in greater detail in Appendix C."
9. We shared our proposed criteria with top OECA managers in numerous meetings and as part of a written document, and those managers never mentioned these additional criteria OECA now offers in its comments. Nonetheless, these other criteria OECA offers are covered within the criteria we used. We consider "functionality" as part of "feasibility," and "comprehensiveness" as part of both "reliability" and "validity."
10. The definition of OIG "fieldwork" traditionally ends when most substantive fieldwork has been completed, and draft report writing begins, i.e., June 2005. There is always a certain amount of follow-up with Agency staff that occurs during the draft report writing process.

11. We have not included such information because it is not essential to answering our objectives, and does not seem to provide essential additional context.
12. We clearly acknowledged in our official draft report that, “the fiscal 2006 budget found that the program had followed through on original PART findings by undertaking development of a measures implementation plan.” We have also clearly indicated in our final report that OECA received a rating of “Adequate” as a result of the 2004 PART. The relevant OMB examiner told us that the primary reason the PART rating was changed from “Results Not Demonstrated” to “Adequate” was OECA’s undertaking development of a measures implementation plan.
13. This portion of the report was only intended to be descriptive, i.e., reporting “what is”. We do not believe that we are in a position at this point to determine if OECA’s mix is, in fact, out of balance. We provided OECA with a list clearly indicating how we categorized each measure, and OECA did not provide any comments on our list.
14. We believe the report findings and conclusions regarding OECA performance measures are supported by the evidence we collected and the analyses we performed.
15. We did not say that OECA’s measures cannot track or characterize outcomes “at all.” We said OECA can’t track compliance outcomes effectively, and then explained in some detail what we meant by “effectively.” We think the report title, EPA Performance Measures Do Not Effectively Track Compliance Outcomes, and the Chapter 3 title, “OECA’s Public Measures Do Not Effectively Characterize Changes in Compliance or Other Outcomes,” are accurate.
16. We compared OECA’s Attachment 4 to OECA’s most recent expression of its goals and measures we had received before issuing our official draft report. We found that OECA made some changes in goals and targets. We also noted that OECA eliminated what it had called “Annual Performance Goals,” and renamed what it used to call “Performance Measures” as “Annual Performance Goals.” While OECA renamed its measures as goals, we believe that these newly labeled goals are really measures. We found no other substantive changes between the two documents expressing OECA’s goals and measures. Therefore, rather than casting new light on its strategic architecture, we found that this latest expression of OECA’s goals actually served to further confuse the issues. Therefore, we stand by our analysis.
17. In our scope and methodology section on page 5 of our draft report we clearly stated that, “Our review primarily focused on the public enforcement and compliance measures as described in EPA’s Fiscal 2005 Annual Plan related to EPA goal 5, Compliance and Environmental Stewardship.” In every case where we state, “publicly reported compliance rates” or “publicly reported measures,” we intended for it to be understood as those rates or measures reported under GPRA, and usually said so explicitly, e.g., “publicly-reported GPRA performance measures,” as used on page 9 and elsewhere in the draft report. We did not feel a need to repeat “GPRA” in each and every case.

However, to provide additional clarity, we have included a footnote in the first place we use the term “public measures” in the final report defining that these measures refer specifically to those measures reported in EPA’s annual performance plan required under GPRA. We have also added a footnote in our final report that states, “According to OECA, while not part of its public GPRA measures, OECA has published a compliance rate for Combined Sewer Overflows on its website in 2002 and 2004. OECA also stated that it plans to publish RCRA compliance rates for foundries in the next 60 days.”

18. It is, in fact, EPA’s choice about how and where to expend its enforcement resources. It is EPA management’s role, and not OIG’s role, to identify whether EPA has adequate resources for any particular given activity. We understand that resources are finite, and OECA itself recognizes in its comments that we acknowledged that, “...the additional increment of random inspections necessary to produce meaningful, representative, statistically valid rates for large segments of the regulated population would mean conducting fewer overall inspections targeted at known or suspected significant violators....” We also said at the bottom of page 11 of our draft report that “A senior OECA executive told us that OECA does not have the resources to either inspect every facility to determine the true state of compliance across programs, or randomly sample facilities to determine compliance rates, without sacrificing compliance monitoring of known significant violators.” OECA asks only that we give “more prominence” to this fact. We have given this issue more prominence by modifying the subject sentence in the introductory summary paragraph on page 11 of our report to say, “OECA chose not to invest the resources necessary to produce statistically valid rates on a broad scale because that might impact its ability to inspect known or suspected significant violators.”
19. We believe that data quality is very important, and that verification is necessary. We are not saying that OECA has not been able to develop an accurate characterization for that portion of the regulated universe associated with the particular statistically valid compliance rates (SVCRs) OECA has already developed for small segments of the regulated universe. We’re saying that OECA needs a better understanding of the composition of the universe for each and every portion of the universe for which a SVCR is desirable, i.e., OECA needs a reliable denominator to get a reliable compliance rate. Furthermore, the first bullet on page six of OECA’s September 29, 2004, memo to us states that, “Regulated universes are unknown.”
20. We believe that OECA may have missed our point here as to what kind of “method” we are talking about. We have modified our statement so as to reflect that OECA does have a method to develop SVCRs, though we did not assess their method and therefore cannot comment on it at this time.
21. We never said that, “OECA has described its current measures as proxies for compliance rates....” To clarify, we added the following footnote to the final report: “While OECA did not use the word “proxy,” a top OECA executive did tell us that OECA used these measures because they would lead to compliance. “Proxy” is our characterization, and we believe it is accurate, i.e., the compliance-related measures currently reported are as

close to real compliance rates that OECA can get at the present time. We also are not intending to imply that OECA should discontinue any particular measures even if OECA were able to develop and report on statistically valid compliance rates on a broad scale each year.

22. We consider “data about environmental effects and condition” as one type of performance measure, and disagree that “Citing the Draft Report [on the Environment] as an example of how the Agency uses performance measurement data is incorrect....” Second, we did not intend to create the impression that the use of recorded observations and values is the rule rather than the exception at EPA. The extent to which EPA programs are dependent on estimated, predicted, and self-reported data outside of the context of performance measurement was outside the scope of this evaluation. Third, we did not set forth any “general principle” or state that using estimated, predicted, and self-reported data is always inferior to recorded observations and values for every purpose. We suggested that OECA conduct an actual analysis of the data OECA is specifically using for performance measurement purposes by designing and implementing a pilot project to verify estimated, predicted, and facility self-reported outcomes, and report on the pilot’s results to demonstrate the reliability of such performance measures. Additionally, the pilot program that we suggested was vetted by and agreed upon by OECA management.
23. We disagree that we were “drawing conclusions based on a general principle with no accompanying analysis...” As stated immediately above in note 22, in this specific case, we suggested that OECA conduct the actual analysis in the form of a pilot.
24. We believe OECA is referring to prospective outcome measurement initiatives, i.e., in response to outside parties (e.g., OMB and OIG) telling them to develop better outcome measures, rather than referring to any current OECA initiative. We included OECA’s comment, (i.e., “...advocating a strict adherence to the use of recorded observations and values will set an impossibly high standard for data collection and will have a chilling effect on initiatives to improve outcome measures....”) in our summary of OECA’s comments.
25. As stated above in notes 22 and 23, in this specific case, we suggested that OECA implement a pilot project to verify estimated, predicted, and facility self-reported outcomes, and report on the pilot’s results to demonstrate the reliability of such performance measures. If such outcomes can be demonstrated to be reliable, then OECA would not necessarily need to be restricted to recorded observations and values. Perhaps most importantly, we believe that measures must be reliable, whether based on sampling or entirely on recorded observations and values.
26. We stand by our analysis. To the best of our knowledge, the source of data for these measures is the Integrated Compliance Information System (ICIS), which OECA states includes estimated data. Based on our review of the relevant measures, they all appear to

be based on EPA agreements made with industry (e.g., consent decrees). OECA has told us that those agreements are not verified.

27. We have added the following statement in our report: “According to OECA, if these controls are effective, they would increase the likelihood that terms of the settlement agreements will be carried out and the pollution reductions actually achieved.”
28. OECA seems to have agreed with at least the first part of our finding here, i.e., “performance measures for some of its most important outcomes do not clearly link to OECA’s goals and objectives.” If the first part is true, we believe the second part also must be true, i.e., “OECA is unable to clearly or effectively communicate and report on the extent to which it is accomplishing these important goals.”
29. OECA is taking exception here to one sentence/example, i.e., “While this goal is titled ‘Compliance Incentives’ in OECA’s fiscal 2005 annual plan, none of the four measures under this objective measures true ‘compliance,’ or conformity with environmental laws and regulations.” At a minimum, this is an example of unclear communication by OECA. Nowhere in its public performance reporting (e.g., in a footnote) does OECA explain that an approved self-audit policy equals compliance with all applicable environmental laws and regulations. This is also another example of OECA’s reliance on self-reporting/certification. We believe these issues are addressed by our recommendations 3.1 and 3.2.
30. To eliminate any possibility of miscommunication, we believe that the only appropriate approach is to report on both the number of complying actions resulting from certain activities, and the percentage of entities taking compliance actions.
31. We believe we adequately described OECA’s explanations for the changes in the wording of OECA’s measures, and attributed the explanations to OECA. The important point to us is that the measures changed frequently.
32. We believe it is important for OECA to both improve its measures, and handle changes in a way that maximizes comparability and transparency. That is why we specifically prefaced our related recommendation to, “Continue to improve enforcement and compliance measures, while continuing to publicly report key measures annually to provide the public, Congress, and other specific stakeholders a minimal amount of trend data.”
33. See our response to note 1.
34. See our response to note 2. We disagree that we have “exaggerated the seriousness of estimated, predicted and self-reported data.” We have elaborated in note 2 what our recommendations are trying to accomplish.

35. See our response to note 2. We have also added language to our final report Recommendation 3.2 to clarify that this action should include developing measures that more clearly link to OECA's stated goals. It is more than simply making language consistent between two documents.
36. See our response to note 2.
37. We shared the draft of this list with a top OECA executive at the end of our fieldwork and modified it at that time as requested to make it fully accurate. The official did not request that this item be removed at that time. However, we have removed this item from our list based on OECA's latest request.

Distribution

Office of the Administrator
Assistant Administrator for Enforcement and Compliance Assurance
Chief Financial Officer (Agency Followup Official)
Assistant Administrator for Environmental Information
Principal Deputy Assistant Administrator for Enforcement and Compliance Assurance
Director, Office of Compliance, Office of Enforcement and Compliance Assurance
Director, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance
Audit Followup Coordinator, Office of Enforcement and Compliance Assurance
Agency Followup Coordinator
General Counsel
Associate Administrator for Congressional and Intergovernmental Relations
Associate Administrator for Public Affairs
Inspector General