



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

Operating efficiently and effectively

EPA Completed OIG Recommendations for the Presidential Green Chemistry Challenge Awards Program but Lacks Controls over Use of Unverified Results

Report No. 18-P-0222

July 20, 2018



Report Contributors:

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Abbreviations

AFC	Audit Follow-Up Coordinator
EPA	U.S. Environmental Protection Agency
FY	Fiscal Year
MATS	Management Audit Tracking System
OCSP	Office of Chemical Safety and Pollution Prevention
OIG	Office of Inspector General
OPPT	Office of Pollution Prevention and Toxics
P2	Pollution Prevention
PGCCA	Presidential Green Chemistry Challenge Awards

Cover Photo: Presidential Green Chemistry Challenge Awards on display. (EPA photo)

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At a Glance

Why We Did This Project

We conducted this audit to accomplish two objectives:

- Identify the controls put in place by the U.S. Environmental Protection Agency (EPA) for use during the fiscal year 2017 Presidential Green Chemistry Challenge Awards (PGCCA) to prevent the use of unverified, self-reported results for agency reporting purposes.
- Assess the EPA's actions to address recommendations in Office of Inspector General (OIG) Report No. [15-P-0279](#), *EPA's Presidential Green Chemistry Challenge Awards Program Lacks Adequate Support and Transparency and Should Be Assessed for Continuation*, issued September 2015.

The PGCCA Program is sponsored by the EPA's Office of Chemical Safety and Pollution Prevention to promote the environmental and economic benefits of developing and using green chemistry by recognizing industry innovations.

This report addresses the following:

- *Operating efficiently and effectively.*

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EPA Completed OIG Recommendations for the Presidential Green Chemistry Challenge Awards Program but Lacks Controls over Use of Unverified Results

What We Found

In 2015, we reported that award results submitted to the EPA's Pollution Prevention Program from PGCCA recipients were not adequately supported or transparent. Specifically, we found that PGCCA results were self-reported by award recipients, were not verified or validated by the agency, and were included as metrics in agency reports detailing the Pollution Prevention Program's performance and goals.

The EPA discontinued the use of unverified PGCCA results in agency performance metrics, but a lack of documented controls presents risk that these data may be used in the future.

The OIG's 2015 report contained nine recommendations. During this current audit, we verified that the EPA completed the agreed-upon corrective actions for seven of these recommendations. The remaining two recommendations were not considered in this current audit; the EPA completed one before we issued our 2015 report, and the EPA and OIG later agreed that the other recommendation was not applicable.

By completing these outstanding recommendations, the EPA discontinued the use of unverified PGCCA results in its Pollution Prevention Program performance metrics, developed a program logic model that communicates how PGCCA contribute to Pollution Prevention Program goals, and established internal metrics that track program outputs and provide future direction for the PGCCA Program. However, we found that the EPA lacked documented internal controls to prevent the use of PGCCA results in agency performance metrics. Without documented controls, there is a risk that unverified PGCCA results could be used as part of future agency metrics (for example, if and when new staff become involved with the PGCCA Program).

We also found that the Office of Chemical Safety and Pollution Prevention disagreed with the OIG about the requirements regarding supporting documentation for completed corrective actions.

Recommendation and Planned Agency Corrective Action

We recommend that the Assistant Administrator for Chemical Safety and Pollution Prevention establish and document internal controls to prevent the use of PGCCA results in Pollution Prevention Program performance metrics. The EPA agreed with our recommendation and provided an acceptable planned corrective action and completion date.

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

THE INSPECTOR GENERAL

July 20, 2018

MEMORANDUM

SUBJECT: EPA Completed OIG Recommendations for the Presidential Green Chemistry Challenge Awards Program but Lacks Controls over Use of Unverified Results
Report No. 18-P-0222

FROM: Arthur A. Elkins Jr.



TO: Charlotte Bertrand, Acting Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention

This is our report on the subject audit conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). The project number for this audit was OPE-FY18-0003. This report contains findings that describe the problems the OIG has identified and the corrective action the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

In accordance with EPA Manual 2750, your office provided an acceptable corrective action and milestone date in response to the OIG recommendation. The recommendation is resolved and no final response to this report is required. However, if you submit a response, it will be posted on the OIG's website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epa.gov/oig.

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Purpose

The U.S. Environmental Protection Agency's (EPA's) Office of Inspector General (OIG) conducted this audit to address two objectives:

- Identify the internal controls put in place by the EPA for use during the fiscal year (FY) 2017 Presidential Green Chemistry Challenge Awards (PGCCA) to prevent the use of unverified, self-reported results for agency reporting purposes, as related to EPA performance measures and goals.
- Verify that the EPA implemented the corrective actions documented in the agency's Management Audit Tracking System (MATS) in response to our recommendations in OIG Report No. [15-P-0279](#), *EPA's Presidential Green Chemistry Challenge Awards Program Lacks Adequate Support and Transparency and Should Be Assessed for Continuation*, issued September 15, 2015.

Background

According to the 2015 OIG report, the PGCCA Program is part of the EPA's Pollution Prevention (P2) Program. The P2 Program's mission is to prevent pollution at the source, promote the use of greener substances and conserve natural resources. Through the P2 Program, the EPA encourages and supports innovative changes in industrial production and the use of raw materials. The PGCCA Program promotes the environmental and economic benefits of developing and using green chemistry by recognizing industry innovations.

The OIG's 2015 Report

In OIG Report No. [15-P-0279](#), the OIG found that all PGCCA results were self-reported by award recipients. The EPA did not verify or validate award results, and recipients were not required to conduct quality assurance certifications on the results they reported. Moreover, we found that the EPA used these data as part of its P2 Program performance metrics. The OIG made nine recommendations, including that the EPA discontinue using data from the PGCCA in its P2 Program performance metrics until data quality controls were in place. The OIG also recommended that the EPA assess the need for and value of the PGCCA Program to support agency goals. Based on these 2015 findings, the agency committed to discontinuing the use of PGCCA Program results in P2 Program performance metrics by September 30, 2015.

Responsible Office

The EPA's Office of Pollution Prevention and Toxics (OPPT), within the Office of Chemical Safety and Pollution Prevention (OCSPP), is responsible for the issues discussed in this report.

Scope and Methodology

We conducted this performance audit from January through May 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To answer our first objective, we interviewed key agency management and staff within the OCSPP and OPPT. For our second objective, we assessed the status of the seven outstanding recommendations from the 2015 OIG report. We interviewed agency staff and the prior OIG audit team project manager. We verified whether the information recorded in MATS matched documentation provided to us by the EPA. We also reviewed other pertinent documents about the corrective actions. We did not review Recommendations 2.c and 3 from the 2015 report. Recommendation 2.c was deemed “not applicable” by the agency, and the OIG concurred.¹ Recommendation 3 was completed before the OIG issued its 2015 report.

Results

The OCSPP completed all seven corrective actions that remained outstanding from the OIG’s 2015 report. The data in MATS matched the agency’s certification memorandum detailing these corrective actions. However, we found that the OCSPP lacked suitable controls to prevent the use of PGCCA data for agency reporting purposes in the future. The OCSPP also disagreed with the OIG regarding the documentation required by EPA Manual 2750² to adequately support the completion of corrective actions.

EPA Completed All Outstanding Corrective Actions

The EPA reported in MATS that it completed all outstanding corrective actions for the 2015 report recommendations, and the OCSPP provided us with a certification memorandum and other supporting documentation regarding these corrective actions. Our current 2018 audit verified that the information reported in MATS was consistent with the supporting documentation, as shown in Table 1.

¹ In its response to the OIG’s final 2015 report, the EPA said that Recommendation 2.c was “not applicable” because PGCCA data would be used for “information outreach and educational purposes only.” Therefore, the agency said the segregation of data to show domestic versus international benefits was unnecessary. The OIG concurred.

² EPA Manual 2750, *Audit Management Procedures*, March 28, 2017.

Table 1: EPA corrective actions for outstanding 2015 report recommendations

Outstanding recommendations		Status of recommendations
No.	Actions recommended	
1	Discontinue the use of Green Chemistry Awards data in EPA pollution prevention performance metrics until controls over data quality are implemented.	EPA corrective action taken
		The OCSPP discontinued providing PGCCA results to the P2 Program in FY 2015.
		OIG analysis of corrective action
		We reviewed the agency's <i>Annual Performance Measures</i> documents and confirmed that the EPA did not use PGCCA results within its P2 Program performance metrics in FYs 2015 and 2016. Due to the annual "data lag" in reporting performance measures, we were not able to confirm this corrective action for FY 2017.
2.a	Implement a system to track and analyze data and environmental results collected by the program.	EPA corrective action taken
		The OCSPP completed entering backlogged PGCCA data into the existing tracking system (the Green Chemistry Matrix System).
		OIG analysis of corrective action
		We reviewed the OCSPP's Green Chemistry Matrix System and verified completed data entries for the 11 awardees in FYs 2015 and 2016.
2.b	Develop a program feedback system that includes a process for gathering information on the subsequent impact(s) of projects that have received awards, and includes tracking data to evidence the long-term benefits of green chemistry innovations.	EPA corrective action taken
		The OCSPP arranged numerous site visits with award winners, as well as participated in several meetings and conferences attended by award winners and stakeholders. The OCSPP was able to obtain updates on green chemistry technologies and gather additional information on their impacts.
		OIG analysis of corrective action
		We reviewed numerous examples of site visits and meetings/conferences and verified that the OCSPP gathered information related to specific award recipients and the impact of the technologies.
2.d	Develop program-specific goals, objectives and measures.	EPA corrective action taken
		The OCSPP updated its existing P2 Program logic model to include PGCCA-specific outputs, goals and measures.
		OIG analysis of corrective action
		We reviewed the P2 Program logic model and verified that the model included PGCCA-specific goals, objectives and measures.
2.e	Link the program's activities to EPA and Office of Chemical Safety and Pollution Prevention strategic plan goals and performance measures.	EPA corrective action taken
		The OCSPP updated its existing P2 Program logic model to link its activities to EPA and OCSPP strategic plan goals and measures.
		OIG analysis of corrective action
		We reviewed the P2 Program logic model and verified that the model included links to EPA and OCSPP strategic plan goals and measures.
2.f	Create a program-specific logic model that reflects outputs and short-, intermediate- and long-term outcomes of the program.	EPA corrective action taken
		The OCSPP updated its existing P2 Program logic model to include outputs and outcomes of the PGCAA Program.
		OIG analysis of corrective action
		We reviewed the P2 Program logic model and verified that the model included PGCCA Program outputs and outcomes.
2.g	Periodically review the program to evaluate results and to assess progress in achieving goals.	EPA corrective action taken
		The OCSPP conducted an FY 2016 review of the PGCCA Program.
		OIG analysis of corrective action
		We reviewed the OCSPP FY 2016 PGCCA review report and verified that the OCSPP completed its FY 2016 PGCCA Program review.

Source: EPA MATS, OIG Report No. [15-P-0279](#), information provided by agency personnel, and OIG analysis.

EPA Lacks Internal Controls to Prevent Future Misuse of PGCCA Results as Agency Performance Metrics

As a result of the 2015 OIG report, the agency committed to discontinuing the use of unverified, self-reported PGCCA results for agency reporting purposes, as related to EPA performance measures and goals, by September 30, 2015. However, EPA managers said that the OPPT has established no documented internal controls to prevent such use. EPA managers said that only a small number of staff work on the PGCCA and that these staff know not to use PGCCA results for agency performance metrics.

A small staff may not be an effective control. Specifically, departures of key personnel may prevent this institutional knowledge from being retained. A lack of documented procedures could mean that new staff are never informed that they should not include the PGCCA results as part of agency performance metrics.

While we did verify that PGCCA results were not incorporated into EPA performance measures and goals for FYs 2015 and 2016 (see Table 1, Recommendation 1), there are no internal controls to prevent PGCCA results from being included in agency performance measures in the future.

OCSPP Disagrees with OIG About Documentation Requirements

EPA Manual 2750 requires that the audit follow-up coordinator (AFC) for each performance audit maintain “[d]ocumentation supporting completion of corrective actions” taken, as well as audit files that include “proof of completed corrective actions” and “[a]ll pertinent documentation of corrective actions taken.” In support of this current audit, the OCSPP AFC provided a certification memorandum signed by the then-OCSPP Assistant Administrator and internal emails from OCSPP staff confirming that the corrective actions for the 2015 recommendations were completed. The OCSPP AFC stated that the certification memorandum and internal emails meet the documentation requirements of EPA Manual 2750.

EPA Manual 2750 is an agency document that is subject to agency interpretation; however, the OCSPP interpretation does not provide the proof of completion that the OIG requires. The certification memorandum and emails were inadequate because they did not provide evidence that the actions occurred; rather, they documented managerial statements that the actions occurred. After we informed the OCSPP and OPPT AFCs that the information provided was inadequate, the OCSPP required several weeks to obtain and provide us with adequate documentation.

The OIG notes that in previous follow-up audits the agency did not solely rely on a certification memorandum as “proof” of completion of corrective actions. To address this issue, the OIG included a discussion regarding “supporting

documentation” requirements for follow-up audits in a previously planned meeting with the agency AFCs on March 8, 2018. In this meeting, which included agency AFCs and the OIG’s Office of Audit and Evaluation senior management, the OIG clarified that it adheres to the generally accepted government auditing standards.³ OIG management further explained that the OIG expectation is for AFCs to maintain audit files that contain direct evidence of the completion of corrective actions (e.g., actual products that evidence corrective action completion). This OIG expectation exists regardless of any agency interpretation of EPA Manual 2750.

Conclusion

The EPA’s corrective actions satisfy all outstanding recommendations from the OIG’s 2015 report. As a result, the agency did not include unverified, self-reported PGCCA results in its FYs 2015 and 2016 reporting of P2 Program accomplishments. In addition, the agency developed a program model that communicates how the PGCAA Program contributes to P2 Program goals. The agency also established internal metrics that track program outputs and provide future direction for the awards. However, without documented internal controls to prevent the inclusion of PGCCA results in agency performance metrics, there is potential for such application in the future.

Recommendation

We recommend that the Assistant Administrator for Chemical Safety and Pollution Prevention:

1. Establish and document internal controls to prevent the use of Presidential Green Chemistry Challenge Awards results in Pollution Prevention Program performance metrics.

Agency Response and OIG Evaluation

The agency concurred with the recommendation and provided an acceptable planned corrective action. The OIG considers this recommendation resolved with the corrective action pending.

In addition to a response to our recommendation, the agency provided technical comments on the draft report. Based on the technical comments received, we made revisions to the report where appropriate. Appendix A contains the agency’s response to the draft report.

³ These standards require that the auditor obtain sufficient evidence to support findings, conclusions and recommendations.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Potential Monetary Benefits (in \$000s)
1	5	Establish and document internal controls to prevent the use of Presidential Green Chemistry Challenge Awards results in Pollution Prevention Program performance metrics.	R	Assistant Administrator for Chemical Safety and Pollution Prevention	12/31/18	

¹ C = Corrective action completed.

R = Recommendation resolved with corrective action pending.

U = Recommendation unresolved with resolution efforts in progress.

Agency Response to Draft Report




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

JUL -3 2018

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

MEMORANDUM

SUBJECT: Response to Draft Report entitled "EPA Completed OIG Recommendations for the Presidential Green Chemistry Challenge Awards Program but Lacks Controls Over Use of Results."

FROM: Charlotte Bertrand 
Acting Principal Deputy Assistant Administrator

TO: Arthur A. Elkins Jr.
Inspector General

This memorandum is in response to the Office of Inspector General's (OIG's) May 29, 2018, Draft Report entitled "EPA Completed OIG Recommendations for the Presidential Green Chemistry Challenge Awards Program but Lacks Controls Over Use of Results," Project No. OAE-FY18-0003.

The Office of Chemical Safety and Pollution Prevention (OCSPP) appreciates the OIG's effort in evaluating the following:

- Whether internal controls put in place by the EPA for use during the fiscal year (FY) 2017 Presidential Green Chemistry Challenge Awards (PGCCA) prevent the use of unverified, self-reported results for agency reporting purposes.
- Whether EPA has sufficient verification of its implementation of the corrective actions associated with the OIG's September 15, 2015 report entitled, "EPA's Presidential Green Chemistry Challenge Awards Program Lacks Adequate Support and Transparency and Should Be Assessed for Continuation," Report No. [15-P-0279](#).

OCSPP's Response to the Recommendation:

Recommendation 1: Establish and document internal controls to prevent the use of Presidential Green Chemistry Challenge Awards results in Pollution Prevention Program performance metrics.

- **OCSPP Response:** OCSPP values internal controls as a critical management tool, and agrees that internal controls are important to ensure that externally-reported performance metrics are calculated properly. In our comments on the Discussion Document, OCSPP

outlined the actions the Office of Pollution Prevention and Toxics (OPPT) had taken to inform its program staff that Green Chemistry data were not to be included in the determination of performance results for any P2 Program outcome measures. OCSPP is pleased that the OIG's analysis confirmed that OPPT had indeed fully implemented the recommendations of the OIG's 2015 Report.

The Draft Report recommended that OCSPP establish additional internal controls to ensure that OPPT program staff, including new hires, are made aware of this policy. In response to this recommendation in OIG's Draft Report, OCSPP has developed modifications to the Data Quality Record (DQR) documents associated with the four P2 Program Strategic/Annual Budget outcome measures directing that Green Chemistry data are not to be included in the determination of performance results for those measures until appropriate verification procedures are implemented. DQRs are the agency's official repository for all information needed to understand and implement official performance measures. Existing and new staff and program managers refer to the DQRs as they develop targets and associated results (actuals).

OCSPP will work with the Office of the Chief Financial Officer (OCFO) to formally implement these proposed DQR modifications within six months of the date of this memorandum. The four P2 Program Outcome Measures may be found at the following locations in the attached DQR Document:

- Page 46: MEASURE CODE: 297 - METRIC TONS OF CARBON DIOXIDE EQUIVALENT (MTCO2EQ) REDUCED OR OFFSET THROUGH POLLUTION PREVENTION
 - Page 66: MEASURE CODE: 264 - POUNDS OF HAZARDOUS MATERIALS REDUCED THROUGH POLLUTION PREVENTION
 - Page 74: MEASURE CODE: 263 - BUSINESS, INSTITUTIONAL AND GOVERNMENT COSTS REDUCED THROUGH POLLUTION PREVENTION
 - Page 82: MEASURE CODE: 262 - GALLONS OF WATER REDUCED THROUGH POLLUTION PREVENTION
- **Proposed Corrective Action and Timeline for Completion:** By December 31, 2018 OCSPP will work with OCFO to implement the attached proposed amendments to the Data Quality Records (DQRs) for the four P2 Program Strategic/Annual Budget outcome measures directing that Green Chemistry data are not to be included in the determination of performance results for those measures until appropriate verification procedures are implemented.

Distribution

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