



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Quick Reaction Report

Plans to Migrate Data to the New EPA Acquisition System Need Improvement

Report No. 10-P-0071

February 24, 2010

Abbreviations

CO	Contracting Officer
CS	Contracting Specialist
EAS	EPA Acquisition System
EPA	U.S. Environmental Protection Agency
FPDS	Federal Procurement Data System
ICMS	Integrated Contracts Management System
NIST	National Institute of Standards and Technology
OAM	Office of Acquisition Management
OMB	Office of Management and Budget



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The Office of Inspector General contracted with Williams, Adley & Company, LLP, to review the U.S. Environmental Protection Agency's (EPA's) plans for migrating data from the Integrated Contracts Management System (ICMS) to the EPA Acquisition System (EAS) to determine whether planned controls will ensure complete and accurate data transfer.

Background

EPA's Office of Acquisition Management supports the procurement needs of program offices throughout the EPA and utilizes the ICMS system to facilitate that process. The Office of Acquisition Management is in the process of replacing the in-house-developed ICMS system with EAS, a commercial off-the-shelf acquisition system that will be configured and modified to meet EPA requirements. As part of the implementation process, data residing in ICMS will be migrated to EAS.

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

To view the full report, click on the following link:
www.epa.gov/oig/reports/2010/20100224-10-P-0071.pdf

Plans to Migrate Data to the New EPA Acquisition System Need Improvement

What Williams, Adley & Company, LLP, Found

EPA's plans for migrating data from ICMS to EAS lack sufficient incorporation of data integrity and quality checks to ensure the complete and accurate transfer of procurement data. In particular, verification of overall data accuracy relies heavily on Contracting Officers to review their own contract data in EAS after it has been migrated from ICMS. However, EPA does not require that Contracting Officers attend data migration training. In addition, plans to migrate closed contracts do not require verification of the accuracy and completeness of that data, which will be utilized for historic reporting purposes in EAS. While EAS data validation and edit checks will enforce integrity constraints over user-entered data, proper data migration controls are paramount to ensuring that the acquisition data transfer accurately and completely from ICMS to EAS.

Proper data migration controls ensure data intended for migration arrive in the new system ready for their intended purpose and that erroneous data are identified and corrected prior to release in the new system. By taking steps to improve its data migration strategy now, EPA increases its chances of achieving effective data clean-up prior to migrating ICMS data to EAS. Likewise, incorporation of data integrity checks and manual quality control review of data would provide management with assurance that (1) it could rely on the accuracy and completeness of the data in the new system, and (2) it could report EPA has effective internal controls over financial reporting as required by Office of Management and Budget Circular A-123, *Management's Responsibility for Internal Control*.

What Williams, Adley & Company, LLP, Recommends

Williams, Adley & Company, LLP, recommends that the Director, Office of Acquisition Management, Office of Administration and Resources Management, require third-party review of migrated data for active and inactive contracts prior to release in EAS, enhance the EAS data migration training requirements and ensure all Contracting Officers involved in the process attend the training, and develop a plan to ensure closed contract data are reviewed for accuracy.

The Agency generally agreed with the findings and recommendations.



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

OFFICE OF
INSPECTOR GENERAL

February 24, 2010

MEMORANDUM

SUBJECT: Plans to Migrate Data to the New EPA Acquisition System
Need Improvement
Report No. 10-P-0071

FROM: Rudolph M. Brevard
Director, Information Resources Management Assessments
Office of Inspector General

Rudolph M. Brevard

TO: John Gherardini, Acting Director
Office of Acquisition Management
Office of Administration and Resources Management

This is the report on the subject audit conducted by Williams, Adley & Company, LLP, (Williams Adley) on behalf of the Office of Inspector General of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems Williams Adley identified and corrective actions recommended. This report represents the conclusions of Williams Adley 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.

The estimated cost of this report – calculated by multiplying the project's staff days by the applicable daily full cost billing rates in effect at the time – is \$130,684.

Action Required

In accordance with EPA Manual 2750, you are required to provide a written response to this report within 90 calendar days. You should include a corrective actions plan for agreed-upon actions, including milestone dates. We have no objections to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact me at (202) 566-0893 or brevard.rudy@epa.gov, or Harry Kaplan, Project Manager, at (202) 566-0898 or kaplan.harry@epa.gov.



February 24, 2010

MEMORANDUM

SUBJECT: Plans to Migrate Data to the New EPA Acquisition System Need Improvement

FROM: Robert J. Fulkerson
Senior IT Audit Manager
Williams, Adley & Company, LLP

THRU: Rudolph M. Brevard
Director, Information Resources Management Assessments
Office of Inspector General

TO: John Gherardini, Acting Director
Office of Acquisition Management
Office of Administration and Resources Management

This memorandum is to inform the U.S. Environmental Protection Agency (EPA) of Williams, Adley, & Company LLP critical findings that require management action regarding the migration of data to the new EPA acquisition system.

If you or your staff have any questions regarding this report, please contact Rudolph Brevard at (202) 566-0893 or brevard.rudy@epa.gov; or Harry Kaplan, Project Manager, at (202) 566-0898 or kaplan.harry@epa.gov.

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Purpose

The Office of Inspector General contracted with Williams, Adley & Company, LLP, (Williams Adley) to review the U.S. Environmental Protection Agency's (EPA's) plans for migrating data from the Integrated Contracts Management System (ICMS) to the EPA Acquisition System (EAS) to determine whether planned controls will ensure complete and accurate data transfer.

Background

EPA's Office of Acquisition Management (OAM) supports the procurement needs of program offices throughout EPA and utilizes ICMS to facilitate that process. OAM is in the process of replacing the in-house-developed ICMS application with EAS, a commercial off-the-shelf acquisition system that will be configured and modified to meet EPA requirements. As part of the implementation process, data residing in ICMS will be migrated to EAS.

According to the EAS Data Migration Scope and Approach document, data migration to EAS was scheduled to begin in June 2009. However, EPA has delayed data migration until April 5, 2010, due to concerns regarding adequate documentation of system requirements, test scripts, and testing plans. Like its predecessor ICMS, EAS will provide summary procurement data to the General Services Administration's Federal Procurement Data System – Next Generation (FPDS-NG) to support congressional reporting and public access to the data.

Federal guidance underscores how important it is that EPA ensure the accuracy and completeness of data imported into the EAS system from ICMS. The National Institute of Standards and Technology (NIST) and Office of Management and Budget (OMB) require EPA to consistently apply data entry controls to ensure the integrity of their information technology systems and data and to accurately report contractual actions to the Federal Procurement Data System (FPDS). Specifically, OMB Circular A-127, *Financial Management Systems*, states that internal controls over data entry and transaction processing shall be applied consistently throughout the system to ensure the validity of information. NIST Special Publication 800-30, *Risk Management Guide for Information Technology Systems*, states that system and information owners are responsible for ensuring proper controls are in place to address integrity of data they own. Small Business Administration publication M-06-28, *Reporting Small Business Contracting Information*, states that each agency and department is responsible for submitting accurate data to FPDS and verifying the accuracy of such data. Lastly, Federal Acquisition Regulation 4.604(a) holds the Senior Procurement Executive and head of the contracting activity responsible for monitoring a process that ensures accurate reporting of contractual actions to FPDS.

Scope and Methodology

We performed this audit from April through December 2009 at EPA Headquarters in Washington, DC. We conducted the audit in accordance with generally accepted government auditing standards.

These standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. The evidence obtained from our audit tests and processes provides a reasonable basis for our findings and conclusions.

We assessed the EAS Data Migration process and considered relevant internal controls associated with the scope of our review. We reviewed relevant Data Migration documentation, such as project and data management plans, migration tool requirements and design documents, and sample migration code. We also conducted interviews with the EAS Project Management Team and attended a data migration training session to ascertain the adequacy of planned data integrity controls.

Findings

EPA's plans for migrating data from ICMS to EAS lack sufficient incorporation of data integrity and quality checks to ensure the complete and accurate transfer of procurement data. In particular, verification of overall data accuracy relies heavily on Contracting Officers (COs) to review their own contract data in EAS after it has been migrated from ICMS. However, EPA does not require that COs attend data migration training. In addition, plans to migrate closed contracts do not require verification of the accuracy and completeness of that data, which will be utilized for historic reporting purposes in EAS. While EAS data validation and edit checks will enforce integrity constraints over user-entered data, proper data migration controls are paramount to ensuring that the acquisition data transfer accurately and completely from ICMS to EAS.

Proper data migration controls ensure data intended for migration arrive in the new system ready for their intended purpose and that erroneous data are identified and corrected prior to release in the new system. By taking steps to improve its data migration strategy now, EPA increases its chances of achieving effective data clean-up prior to migrating ICMS data to EAS. Likewise, incorporation of data integrity checks and manual quality control review of data would provide management with assurances that (1) it could rely on the accuracy and completeness of the data in the new system, and (2) it could report EPA has effective internal controls over financial reporting as required by OMB Circular A-123, *Management's Responsibility for Internal Control*.

Migration Plans Lack Third-party Review of Migrated Data Prior to Release

Data migration plans include data clean-up efforts that focus on reconciling Vendor and Financial Data to the financial system of record prior to data migration. The accuracy of remaining procurement data, such as detailed contract terms, relies on verification by the CO or Contracting Specialist (CS) once it has been migrated to EAS. Data that have been migrated to EAS but have yet to be reviewed and released into the system are referred to as "reconstruct" data. The CO or CS will be required to review this reconstruct data for accuracy and completeness prior to releasing it into EAS. While verification guidance outlined in the EAS Reconstruct Review Steps indicates functionality to route the reconstruct to another party such as the CO for additional review, this routing has not been explicitly stated as a requirement. Thus, data are

currently only required to be validated by the sole CO or CS responsible for migration of that contract.

Relying on a single CO or CS verification is a weak quality control procedure that should be enhanced by requiring a third party, such as a CO not responsible for the contractor or another outside party, to perform a secondary review of data prior to release into EAS. Such a requirement would provide greater assurance regarding the accuracy of migrated data.

Migration Plans Lack Mandatory Data Migration Training

Williams Adley attended an EAS Migrated Data Review Orientation (data migration training) on April 2, 2009, conducted for COs and CSs at the Ronald Reagan Building in Washington, DC. The purpose of this training was to instruct COs and CSs on the data verification phase of the migration. We noted that appropriate emphasis was placed on instructing COs and CSs to verify migrated EAS data against the hardcopy version of the procurement documents, which at EPA is the document of record. At the time of the training, the procurement document attachment feature of EAS was not functional and was thus not addressed in detail. As the revised EAS project rollout plan includes migration of attachment documents from ICMS to EAS, training materials must be updated to ensure COs and CSs are instructed to verify such attachments against the hardcopy versions to ensure the correct attachments were migrated.

While OAM recommends that all COs and CSs involved in verification of the migrated data attend the data migration training, it has not been made a mandatory prerequisite for CO and CS participation in the data verification process. Because verification of overall data accuracy relies heavily on COs to review their own contract data in EAS once they have been migrated from ICMS, it is imperative that these individuals have the knowledge and toolset to carry out that responsibility, as well as understand its importance.

Migration Plans Lack Review of Closed Contract Data Used for Reporting

According to Migration Tool Design Documents, migrated data verification efforts performed by the CO and CS will be limited to active contracts imported from ICMS. Inactive ICMS contracts will only be reviewed and released into EAS as needed by the CO or CS. By design, closed contract data will not be subject to the same data integrity checks and verification efforts as active contracts. These closed contracts will be migrated to an Ad Hoc Reporting module of EAS as is, where the data will be available for reporting purposes. Because EPA's priority is to verify data needed to carry out work on ongoing contracts, significant historical reporting and output data inaccuracies could potentially exist, and any inconsistencies in closed contract data will carry forward to the new EAS system. This situation could potentially reduce the ability of EPA management to rely on EAS data for decision-making purposes.

In response to the draft report issued on December 18, 2009, we met with the Agency on February 2, 2010. The Agency, in general, agreed with the findings and recommendations. The

Agency expressed concern about the resources needed to conduct a 100 percent third-party review of migrated data. However, the Agency sees the value in conducting such reviews and will develop a plan to address our concerns.

Recommendations

Williams, Adley & Company, LLP, recommends that the Director, Office of Acquisition Management, Office of Administration and Resources Management:

1. Require third-party review of migrated data for active and inactive contracts prior to release in EAS.
2. Enhance the EAS Migrated Data Review Orientation and require that all Contracting Officers who will be involved in the data migration process attend.
3. Develop a plan to ensure closed contract data are reviewed for accuracy.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
1	4	Require third-party review of migrated data for active and inactive contracts prior to release in EAS.	O	Director, Office of Acquisition Management, Office of Administration and Resources Management			
2	4	Enhance the EAS Migrated Data Review Orientation and require that all Contracting Officers who will be involved in the data migration process attend.	O	Director, Office of Acquisition Management, Office of Administration and Resources Management			
3	4	Develop a plan to ensure closed contract data are reviewed for accuracy.	O	Director, Office of Acquisition Management, Office of Administration and Resources Management			

¹ O = recommendation is open with agreed-to corrective actions pending
 C = recommendation is closed with all agreed-to actions completed
 U = recommendation is undecided with resolution efforts in progress

Appendix A

Distribution

Office of the Administrator
Assistant Administrator, Office of Administration and Resources Management
Agency Follow-up Official (the CFO)
Agency Follow-up Coordinator
Acting Director, Office of Acquisition Management, Office of Administration and
Resources Management
General Counsel
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Office of Administration and Resources Management
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