



U.S. Department of Energy
Office of Inspector General
Office of Audits and Inspections

AUDIT REPORT

Public Dissemination of Research Results

DOE/IG-0912

May 2014



Department of Energy
Washington, DC 20585

May 22, 2014

MEMORANDUM FOR THE SECRETARY

FROM: 
Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Audit Report on "The Department of Energy's
Public Dissemination of Research Results"

BACKGROUND

The Department of Energy invests over \$11 billion annually in research and development. Although a large part of these funds are expended directly by the Department's National Laboratory system, significant funding is provided through financial assistance awards to academic institutions, small businesses, and others and, through Cooperative Research and Development Agreements (CRADA) initiated by Department field and contractor-operated sites. The *Atomic Energy Act of 1946* and subsequent laws and regulations encouraged the dissemination of Department-sponsored research results, when appropriate. The Department's mandate to publicly disseminate unclassified research results is fulfilled by the Office of Science's Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee. The results of research funded by the Department are submitted to Energy Link (E-Link), the Department's system for collecting, reviewing and releasing technical reports and other forms of scientific and technical information. E-Link, which is operated by OSTI, contains the results from research, development, demonstration and commercial activities. OSTI's inventory includes 1.2 million full-text paper documents; approximately 344,000 publicly available full-text electronic documents; and, approximately 2.2 million citations of publicly available documents.

Due to the Department's sizeable investment in research and the importance of making research results available as broadly as possible, we initiated this audit to determine whether the results of taxpayer-funded science and energy research were properly disseminated. We focused on research funded by the Department through financial assistance awards and CRADAs.

RESULTS OF AUDIT

Department-funded science and energy research results were not always properly disseminated to the public. We found that financial assistance recipients had not always submitted final technical reports to OSTI, unrestricted reports submitted to E-Link were not always reviewed and subsequently released publicly, and reports were not released after the expiration of associated data protection periods. Specifically:

- Financial assistance recipients had not submitted final technical reports for about 1,863 of 7,802 (24 percent) of the financial assistance awards that ended during Fiscal Years 2006 to 2012 at five offices we selected for review.

- About 1,094 of 4,341 (25 percent) final reports we examined had not been made publicly available. The program offices failed to make these reports available to the public even though the entities submitting them had not identified any restrictions on distribution.
- The Department had not always released final reports eligible for public release at the end of respective data protection periods. CRADA and Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) reports are protected from disclosure for periods of up to 5 years, and, in some cases, even longer. Our examination of data provided by OSTI identified 4,300 CRADA and SBIR/STTR reports that were beyond the respective data protection periods and had not been released to the public.

The problems we identified occurred due to weaknesses in the Department's processes for monitoring receipt of final reports from recipients, reviewing and releasing reports that have been received, addressing processing errors that prevent receipt or release of reports, and identifying and releasing reports upon expiration of data protection periods.

The failure to obtain and disseminate the results of Department-funded research has been a long-standing problem that the Office of Inspector General has previously brought to management's attention. Specifically, in our 1997 report on *Departmental Receipt of Final Deliverables for Grant Awards* (DOE/IG-0415, December 1997), we found that final technical reports had not been received or were waived for grants awarded by five different awarding offices. More recently, in our reports on *Cooperative Research and Development Agreements at the Department of Energy's Office of Science Laboratories* (DOE/IG-0826, September 2009), and *Cooperative Research and Development Agreements at National Nuclear Security Administration Laboratories* (OAS-M-13-02, March 2013), we found that contractors that manage and operate the Department's national laboratories had not sent final technical reports to OSTI. Effective action to correct this problem is necessary to ensure that the results of Department-funded research are properly disseminated so that the work can be used by other researchers. In this way, science is advanced and the return on the taxpayers' investment is maximized. Moreover, the lack of documented Department research results increased the risk of redundant research and wasteful spending.

We made several recommendations that, if implemented, should improve the timeliness of dissemination of research results to the public. To their credit, OSTI officials told us that they were taking corrective actions on several of the issues we brought to their attention.

MANAGEMENT REACTION

Management generally concurred with our recommendations and identified planned actions or actions already completed to address our recommendations. We considered management's comments responsive to our recommendations. Management's comments are included in Appendix 3.

Attachment

cc: Deputy Secretary
 Deputy Under Secretary for Science and Energy
 Under Secretary for Nuclear Security
 Chief of Staff

AUDIT REPORT ON PUBLIC DISSEMINATION OF RESEARCH RESULTS

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PUBLIC DISSEMINATION OF RESEARCH RESULTS

DETAILS OF FINDING

The Offices of Science (Science), Fossil Energy (Fossil Energy), Nuclear Energy (Nuclear Energy), Energy Efficiency and Renewable Energy (EERE), and the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) program (referred to collectively as program offices) provide financial assistance awards to academia, small businesses, and others to fund research projects as part of the Department of Energy's (Department) science and energy mission. At the completion of a research project, financial assistance recipients submit their final technical reports through the Department's Energy Link (E-Link) system, operated by the Office of Scientific and Technical Information (OSTI). E-Link generates an automated email to the responsible releasing official or awarding office. The report is then reviewed and released to OSTI for public dissemination. The released report is processed by OSTI's systems, stored and made available to the public through traditional web search technology. Reports for Cooperative Research and Development Agreements (CRADAs) are processed and reviewed at Department field and contractor operated sites before submission to OSTI. Financial assistance recipients, sites and offices may individually upload the reports via E-Link and the majority of Department laboratories utilize established automated options for routine submission of reports.

Department-funded science and energy research results were not always properly disseminated to the public. Specifically, we found that financial assistance recipients had not always submitted final technical reports to OSTI, and that reports submitted to E-Link without restrictions were not always reviewed and released for public access. Additionally, we identified issues regarding public release of documents after data protection periods expired.

Receipt of Reports

As shown in Table 1, OSTI had not received final reports for 1,863 of 7,802 (24 percent) financial assistance awards that ended during Fiscal Years (FYs) 2006 to 2012 at the five program offices included in our review.

Program Office	Total Awards*	Awards with Final Reports	Awards without Final Report	
			Number	Percentage
Science	2,931	1,824	1,107	38%
SBIR/STTR	2,222	1,867	355	16%
EERE	1,563	1,223	340	22%
Fossil Energy	877	826	51	6%
Nuclear Energy	209	199	10	5%
Totals	7,802	5,939	1,863	24%

*Excludes awards that did not require a final technical report in the award terms. However, Science was unable to identify those awards that did not require a final report; therefore, we included the total number of awards.

Of the 1,863 awards without final technical reports, 1,465 awards (79 percent) had expired at least 1 year prior to March 31, 2013. Financial Assistance Rules (10 CFR 600.171) required that recipients submit all reports within 90 days of the completion of the award term.

Not receiving reports has been a long-standing problem at the Department. In our report, *Departmental Receipt of Final Deliverables for Grant Awards* (DOE/IG-0415, December 1997), we found that the Department did not receive final technical reports for grants awarded through five awarding offices and, in some cases, the reporting requirements were waived. In our more recent audit reports, *Cooperative Research and Development Agreements at the Department of Energy's Office of Science Laboratories* (DOE/IG-0826, September 2009), and *Cooperative Research and Development Agreements at National Nuclear Security Administration Laboratories* (OAS-M-13-02, March 2013), we identified similar issues at the Department's contractors. Specifically, we found that contractors were not submitting final research reports funded through CRADAs to OSTI as required.

Public Release of Reports

We also found a significant number of financial assistance final reports submitted to E-Link had not been reviewed and released for public availability even though the financial assistance recipients submitting the reports had not identified any restrictions on distribution. Not all technical reports will become publicly available because distribution of certain types of information is restricted by various laws and regulations. Examples include export controlled information, proprietary information, and copyrighted material. Other data, such as final reports from the Department's SBIR/STTR programs and CRADAs may be restricted for a limited period of time. OSTI maintains systems whereby restricted reports may be available for Department use during the restricted period as authorized. Specific information, by program office, is detailed in Table 2.

Program Office	Reports Without Restrictions on Release*	Released and Publicly Available	Awards Not Publicly Available	
			Number	Percentage
Science	1,852	1,047	805	43%
SBIR/STTR	344	162	182	53%
EERE	1,097	1,040	57	5%
Fossil Energy	884	835	49	6%
Nuclear Energy	164	163	1	< 1%
Totals	4,341	3,247	1,094	25%

*The total number of reports is not the same as in Table 1 because of report release restrictions and some recipients submitted more than one report per award.

As noted in Table 2, 1,094 reports (25 percent) of the total number of reports without restrictions were not publicly available. Of these reports, 495 had been awaiting review for at least 1 year as of March 31, 2013, with 203 that had been awaiting review for over 5 years.

Expiration of Data Protection Periods

Finally, we found that the Department and its CRADA sites did not initiate action to release SBIR/STTR grant and CRADA final reports once statutory data protection periods expired. Final reports from SBIR/STTR grants are protected from disclosure for a period of at least 4 years and CRADA reports are protected for 5 years. Data provided by OSTI demonstrated that as of July 26, 2013, there were 3,892 SBIR/STTR reports with no other restriction identified that were submitted at least 4 years ago; however, the Department had not taken steps to release the reports unless a request was made. Additionally, as of March 31, 2013, we identified 408 CRADA reports that had not been publicly released although it was after the respective protection period and had no other restrictions on the release.

Processes over Receipt and Release of Final Reports

The problems we identified occurred due to weaknesses in the Department's processes for monitoring receipt of final reports from recipients, reviewing and releasing reports that have been received, addressing processing errors that prevent release of reports, and identifying and releasing reports upon expiration of data protection periods.

Monitoring Receipt of Final Reports

We found that program offices did not always provide adequate monitoring of financial assistance recipients to ensure the receipt of their final reports. Notably, we found that program offices did not provide sufficient follow-up when recipients were unresponsive. Although financial assistance recipients were informed at the beginning of their awards that final technical reports were due within 90 days after the end of their award, many recipients did not submit reports until they were contacted by the Department. However, the Office of Science's Chicago Office officials, responsible for oversight of Science and SBIR/STTR recipients, acknowledged that they were not always timely in following up on whether recipients submitted the reports, and did not consistently send letters to remind recipients at the end of the award term. They noted, however, that a corrective action plan was developed to address this issue. In contrast, we were told that Nuclear Energy, Fossil Energy, and EERE have computer systems in place to send reminders to recipients to submit the technical reports at the end of the award term and periodically thereafter. However, despite these reminders, EERE's Golden Field Office told us that recipients failed to submit final reports as required. While mechanisms were in place to remind recipients of requirements, our findings suggest the mechanisms were not fully effective. In addition, Fossil Energy stated that recipients might have been unable or unwilling to submit a final report due to the unavailability of funding or key personnel on a recipient's project team.

Furthermore, our findings indicate that there was little consequence for recipients for not submitting required reports. The Department's *Guide to Financial Assistance* lists possible remedies for recipients with overdue reports, such as debarment or denial of future awards. Although the Chicago and Golden Offices both stated that these actions were options, neither office could provide us with evidence they pursued these remedies, or whether the remedies worked because the offices did not track their use. Finally, we found that none of the program

offices were using performance measures to help monitor and evaluate how timely reports were being received and released to the public.

Report Review Processes

We found that the most common reason for the lack of public dissemination of reports was related to the failure of program offices to review and release the reports. Additionally, weaknesses in the OSTI notification process and delays in award closeout contributed to delays in public dissemination of reports. Specifically, the status of 757 of the 1,094 unreleased reports (69 percent) was identified as "sent to releasing official," meaning these reports were awaiting review by a program office releasing official. As of March 31, 2013, 495 of these reports had been awaiting review for at least 1 year. After identifying these issues, we expanded our testing to all reports awaiting review by all Department program offices. OSTI identified 2,355 final technical reports that were in the status of "sent to releasing official" Department-wide as of August 7, 2013. Of these reports, 1,202 had no identified restrictions on their release. Our analysis showed that 784 were awaiting review for more than a year, which included 77 reports that were awaiting review for 8 to 11 years.

We found that OSTI did not have automated mechanisms in place to remind program offices of reports awaiting review. When an award recipient submits a final report in E-Link, the system generates an email to the appropriate releasing official or awarding office for review and release. For cases in which the email is sent to the awarding office, that office is then responsible for ensuring the appropriate releasing official is notified that the report is available for review. This email is the only scheduled notification to the releasing official or awarding office and represents a single point of failure. For example, the single notification could be ignored, forgotten, deleted, or routed to the wrong person. After the initial notification, there are no automated reminders to releasing officials or awarding offices to review the reports. We did learn that reports are available within the E-Link system to check the status of reviews, and that these reports were highlighted during recent training sessions. Further, there are several reasons why a report's release may be delayed. For example, during our discussions with the program offices, we learned that a report may be delayed due to revisions requested from the awardee or due to patent issues. In addition, we learned that the Chicago Office was not releasing the final technical reports until an award was closed out. If there is a delay in the closeout of an award, there will be a delay in the release of the final report. As we noted in *Management Controls over Monitoring and Closeout of Small Business Innovation Research Phase II Grants* (OAS-M-08-09, July 2008), and *The Department of Energy's Small Business Innovation Research and Small Business Technology Transfer Programs* (DOE/IG-0876, November 2012), performing timely closeouts has been a weakness at the Chicago Office. The Chicago Office indicated that there were several new protocols and policies in place to correct the past deficiencies and it expected resolution of this finding on or around September 30, 2014.

Processing Errors

We found that 337 of the 1,094 unreleased reports (31 percent) at the 5 offices included in our review were caused by processing errors. For example, 201 Science and SBIR/STTR reports that should have been available for public release had been erroneously labeled as "DOE

Dissemination Only," which did not permit their release to parties outside of the Department. We were told that these errors were caused by the incorrect selection of the "DOE Dissemination Only" option, available during the completion of the E-Link record by the releasing official. OSTI has since changed how this option is presented to releasing officials. While OSTI made this change, there is no standardized definition of when reports should be designated for "DOE Dissemination Only."

Another 99 reports were affected by submission errors in which recipients had attempted, but not succeeded in submitting final technical reports to the E-Link system. When a recipient fails to properly submit a report, the program offices are not aware that the document exists unless they query the system for the particular award number or run a report of failed submissions within E-Link. Program offices receive no direct notification of the attempted submission. We found that OSTI did not have a systematic means to follow-up on these processing errors. OSTI officials told us that when recipients submit reports into E-Link, there may be errors in the submission process that are flagged by the system for the submitter to correct. If the error is not corrected before the amount of time allowed by the system, entities submitting the report have to start the process over. Occasionally OSTI will see records that failed in the system and delete these records if the recipient submitted a new record, but officials acknowledged this process is applied on an inconsistent basis.

Expired Restrictions Processes

We found that there were no processes in place to identify and release SBIR/STTR and CRADA final reports after the expiration of the appropriate data protection periods. OSTI officials stated that they do not automatically release the reports because the reports may contain other protected information. Therefore, they stated that program office officials or the CRADA site must review the reports and approve the release of reports. However, OSTI did not routinely notify CRADA sites that the final reports were awaiting review and release.

In our discussion with an SBIR/STTR Programs Office official, we learned that the programs office only releases a report once a request is made to view that specific report. The SBIR/STTR's policy on disseminating technical reports states that the reports can be released 4 years after submission if the SBIR/STTR Programs Office obtains confirmation from the small business that it has been 4 years since the last deliverable utilizing that research. If the small business cannot be contacted, the report may be released 12 years after submission. All reports may be released 20 years after submission. However, all of these actions only occur after someone has made a request and effectively limit the dissemination of reports to those individuals that are aware of the existence of a specific report, thereby, preventing others from discovering/finding the report using OSTI's information search capabilities. From 2009 to 2013, the program office released 35 reports that once were subject to the SBIR/STTR 4-year time restriction. This is a small number of reports considering there were 3,892 SBIR/STTR reports potentially available to the public. The official told us that identification of the expiration of data protection periods is complicated by the fact that the periods can be extended. Specifically, the data protection period is defined as at least 4 years from when the final deliverable is received under the award; however, the period can be extended by a subsequent award using the data contained in the report. We found no process in place to systematically identify the proper

expiration dates of the data protection periods and prompt a review to determine whether the reports should be publicly released. As for the CRADA reports, several of the Department site operating contractor officials we contacted told us that they were unaware that further action was required to release these reports after the period of protection expires.

Potential for Wasteful Spending

The Department has stated that accelerating the dissemination of research and development information serves to accelerate the pace of scientific progress itself, and that success should be measured when scientific and technical information is disseminated. By not ensuring that technical reports had been disseminated, the Department had not ensured that research results produced the maximum return on taxpayer investment. Moreover, the lack of documented Department research and development increases the likelihood of redundant research and wasteful spending.

OSTI officials told us that they are taking corrective actions on several of the issues we brought to their attention during the course of our audit. Specifically, they plan to send reminder emails for delinquent report reviews, provide quarterly notification to program offices experiencing large numbers of failed submissions, and decide whether the "DOE Dissemination Only" designation continues to be useful. OSTI officials also informed us that they were updating their computer system to automatically generate an email to the CRADA site when the 5-year CRADA protection period expires asking the site to update the record, and will send updated listings of CRADA reports residing in the OSTI collection for which the 5-year withholding period has expired.

RECOMMENDATIONS

To address the issues noted in this report and ensure that research results are publicly disseminated to the greatest extent possible, we recommend that the Acting Director, Office of Scientific and Technical Information:

1. Develop an automated means to notify releasing officials when reports have been waiting for release for an extended period of time, including developing a standard for the amount of time a releasing official should have to perform the review;
2. Establish procedures and performance measures to monitor the timely release of final technical reports;
3. Develop procedures to ensure that processing errors are addressed in a timely manner;
4. Develop procedures to address when it is appropriate to use "DOE Dissemination Only;" and
5. Establish, in consultation with Department program offices and CRADA sites, a process to facilitate the release of CRADA reports beyond the periods of protection.

We also recommend that the Acting Director, Office of Science; the Assistant Secretaries of Energy Efficiency and Renewable Energy and Nuclear Energy; and the Principal Deputy Assistant Secretary for Fossil Energy:

6. Develop procedures and performance measures to ensure that financial assistance recipients submit final technical reports at the completion of award terms;
7. Track the usage of, and gauge the effectiveness of remedies, such as debarring or denying awards to recipients that do not meet reporting requirements; and
8. Ensure reports are reviewed and released to the public as soon as practicable.

We also recommend that the Acting Director, Office of Science:

9. Revise the release policy for SBIR/STTR technical reports to ensure technical information is disseminated in the timeliest manner possible.

MANAGEMENT RESPONSE

Management generally concurred with our recommendations and identified planned actions or actions already completed to address our recommendations. Regarding Recommendations 1 through 5, OSTI stated it would work with the programs to further develop guidance and enhance the understanding of the processes. It would also send email reminders and develop new reports to help track the status of the reports. Regarding Recommendations 6 through 8, the program offices indicated that they will or have already taken measures to receive, track, and release reports more timely. The Office of Fossil Energy partially concurred with Recommendations 6 and 7 because it took issue with the scope of our finding. The Office of Fossil Energy stated that the number of awards without a final report was significantly less than the 51 stated in our report. Specifically, it reported there were fewer than 20 reports past due and, within the last 2 months it reduced this number to fewer than 10. When addressing Recommendation 9, the Office of Science partially concurred because it was concerned about the administrative burden with releasing the SBIR/STTR technical reports; however, it agreed to explore options to improve the timeliness of dissemination.

AUDITOR COMMENTS

The Department's planned corrective actions are responsive to our recommendations.

Regarding the Office of Fossil Energy's comments, we determined that the 51 reports identified in Table 1 were not contained in E-Link at the time of our audit. As discussed with officials during the audit, we determined that 38 of the 51 missing reports had been received; however, the Office of Fossil Energy had deleted these reports from E-Link until they could be approved for release. We believe that Office of Fossil Energy actions to delete the reports diminish the value of E-Link as it is not possible to learn the status of reports awaiting review. Further, OSTI cannot determine the number of reports received and awaiting review. Management's comments are included in Appendix 3.

OBJECTIVE, SCOPE AND METHODOLOGY

Objective

The objective of this audit was to determine whether the results of Department of Energy (Department) funded science and energy research were properly disseminated to the public.

Scope

We conducted this audit from April 2013 to May 2014, at the Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee. We also contacted and requested information for financial assistance awards from the Offices of Fossil Energy, Nuclear Energy, Energy Efficiency and Renewable Energy, and Science in addition to Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants. We then contacted six contractor sites to discuss release of final reports for Cooperative Research and Development Agreements (CRADAs) at Brookhaven National Laboratory, Lawrence Livermore National Laboratory, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, Sandia National Laboratory, and the Y-12 National Security Complex. Our review was limited to the results of financial assistance awards and CRADAs. This audit was conducted under the Office of Inspector General Project Number A13CH026.

Methodology

To accomplish the audit objective, we:

- Reviewed laws, regulations and Department directives and manuals related to the dissemination of research.
- Visited OSTI and obtained an understanding of its collections, processes and systems.
- Held discussions with responsible Department and contractor personnel.
- Obtained and reviewed listings of financial assistance awards ending in Fiscal Years (FYs) 2006 through 2012 for selected program offices.
- Obtained the status of final technical reports for financial assistance awards ending in FYs 2006 through 2012.
- Reviewed a listing of the final reports claiming the SBIR/STTR restriction to determine how many reports had not been made publicly available.
- Reviewed a listing of final reports for CRADAs to determine how many reports had not been made publicly available.
- Selected a judgmental sample of four Department program offices as well as the Department's SBIR/STTR awards to review the status of the final technical reports for

financial assistance awards made by those programs. We selected programs that were amongst the largest submitters of reports to OSTI based on preliminary data we reviewed for the number of reports submitted during FYs 2006 through 2012. We also selected six contractor sites to review the process used to publicly release final CRADA reports to the public. We selected the six sites with the most reports that had been submitted more than 5 years prior to our review but were not publicly available. Because a judgmental sample of programs and sites was used, results were limited to those programs and sites selected.

We conducted this performance audit 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, we assessed significant internal controls and compliance with laws and regulations necessary to satisfy the audit objective. In particular, we assessed the implementation of the *GPR Modernization Act of 2010* and found that performance measures had not been established. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. Finally, we conducted an assessment of computer-processed data relevant to our audit objective and we determined that the data was sufficiently reliable for the purposes of our report.

An exit conference was held with the Office of Science on May 7, 2014. The Offices of Energy Efficiency and Renewable Energy, Nuclear Energy and Fossil Energy waived an exit conference.

PRIOR REPORTS

- Audit Report on [*Cooperative Research and Development Agreements at National Nuclear Security Administration Laboratories*](#) (OAS-M-13-02, March 2013). The audit found that National Nuclear Security Administration (NNSA) laboratories were generally managing the use of selected Cooperative Research and Development Agreements (CRADA) in an effective manner. However, the audit noted that controls could be improved in the area of obtaining and disseminating CRADA results. Specifically, NNSA laboratories had not always obtained final reports from researchers and had not forwarded the reports they did obtain to the Office of Scientific and Technical Information (OSTI) for dissemination.
- Audit Report on [*The Department of Energy's Small Business Innovation Research and Small Business Technology Transfer Programs*](#) (DOE/IG-0876, November 2012). Grant closeouts continued to be an issue as the number of Small Business Innovation Research (SBIR) grants awaiting closeout for more than 3 years had increased significantly since a 2008 audit, from 84 to 252. The audit also identified 12 Small Business Technology Transfer (STTR) grants that had been awaiting closure for more than 3 years. The Department of Energy (Department) had not received final financial status reports for 156 of these grants, despite the requirement that grantees submit the reports within 90 days of the completion of the grant term. We found no evidence that Chicago Office officials had attempted to contact half of these grantees to request closeout documents, even though its closeout procedures called for sending a letter requesting documents 15 days after the end of the award term.
- Audit Report on [*Cooperative Research and Development Agreements at the Department of Energy's Office of Science Laboratories*](#) (DOE/IG-0826, September 2009). The audit found that although the Office of Science generally managed CRADAs according to Departmental requirements, it did not always ensure that its laboratories received final reports and forwarded them to OSTI. The audit noted that site offices did not exercise adequate oversight of CRADA activities at the laboratories, and had not established goals and measures to evaluate the success of the laboratories in obtaining the final reports and forwarding them to OSTI.
- Audit Report on [*Management Controls over Monitoring and Closeout of Small Business Innovation Research Phase II Grants*](#) (OAS-M-08-09, July 2008). The audit found that the Chicago Office had not completed action on or was unable to provide files for 73 out of 84 (87 percent) of SBIR Phase II grants with completion dates exceeding 3 years. Since the 3-year document retention period had expired, untimely closeouts jeopardized the Department's ability to audit the costs.
- Audit Report on [*Dissemination of Research from the Environmental Molecular Sciences Laboratory*](#) (DOE/IG-0526, September 2001). The audit found that officials at the Environmental Molecular Sciences Laboratory (EMSL) often did not collect and forward research results to OSTI. In fact, EMSL officials had not received deliverables for 94 out of 153 completed research projects and therefore, could not forward them to OSTI. Even

when research results were received, those results were not always sent to OSTI. Only 60 out of 700 deliverables received had been sent to OSTI.

- Audit Report on [*Peer-Reviewed Scientific Literature Generated at the Department's Light Sources*](#) (DOE/IG-0520, August 2001). The audit noted that only 44 percent of the abstracts associated with the research performed at the Department's light sources in Fiscal Year 2000 were available for public dissemination through OSTI. This was attributed to OSTI's lack of procedures to ensure all abstracts were collected in the PubSCIENCE database. Additionally, laboratories did not notify OSTI of available peer-reviewed journal articles. As a result, scientific advancement was not fully promoted and research and development efforts were more likely to be duplicated because scientists were not aware of research already performed.
- Audit Report on [*Departmental Receipt of Final Deliverables for Grant Awards*](#) (DOE/IG-0415, December 1997). Over 700 grants awarded through Headquarters, Chicago and Oak Ridge Operations Offices, the Federal Energy Technology Center, and the Chicago Regional Support Office did not receive final technical and financial reports and, in some cases, final deliverable requirements were waived. Without the final deliverables, the report concluded that the Department could not demonstrate that the public benefit specified in the grant instrument was achieved.
- Audit Report on [*Department of Energy's Scientific and Technical Information Process*](#) (DOE/IG-0407, June 1997). The Department and its management and operating (M&O) contractors are required to establish life-cycle systems to identify, collect, and disseminate scientific and technical products generated under Department funded research and development activities and provide these products to OSTI. The Department neither utilized a life-cycle management process nor ensured that all information generated by its M&O contractors was provided to OSTI. As a consequence, the Department was not in a position to know whether it received value for its significant investment in research and development or whether information emanating from these efforts received the widest possible dissemination.

MANAGEMENT COMMENTS



Department of Energy
Office of Science
Washington, DC 20585

Office of the Director

April 3, 2014

MEMORANDUM FOR RICKEY R. HASS
DEPUTY INSPECTOR GENERAL
FOR AUDITS AND INSPECTIONS
OFFICE OF INSPECTOR GENERAL

FROM: PATRICIA M. DEHMER 
ACTING DIRECTOR, OFFICE OF SCIENCE

SUBJECT: Response to Inspector General's Draft Report, "Public
Dissemination of Research Results"

Thank you for the opportunity to review and comment on the subject draft report. We appreciate the efforts of the Inspector General (IG) to identify opportunities for improving the management and dissemination of DOE's unclassified R&D. In the 7-year period (FY 2006-2012) covered in the scope of the IG's audit, the Office of Scientific and Technical Information (OSTI) incorporated 129,500 scientific and technical information (STI) products resulting from DOE research into the Department's STI web-based searchable databases. In this timeframe, the IG's audit revealed approximately 3,000 financial assistance awards for which the final reports were not disseminated to the public. OSTI's goal is 100 percent comprehensiveness and full public dissemination as appropriate, and the results of the IG audit are useful in meeting this goal. Working with DOE Program Offices, releasing officials, and the research community, OSTI is committed to continuously improving STI management and dissemination practices.

The Office of Science and OSTI management response to the specific recommendations in the draft report is outlined below. General comments and program-specific action plans for the Office of Energy Efficiency and Renewable Energy, Office of Fossil Energy, and Office of Nuclear Energy are attached.

Recommendation 1

Develop an automated means to notify releasing officials when reports have been waiting for release for an extended period of time, including developing a standard for the amount of time a releasing official should have to perform the review.

Management Response: Concur. OSTI concurs with the recommendation to develop an automated means to notify releasing officials when reports have been waiting for an extended period of time. In addition to the current automated notification, OSTI will incorporate quarterly emails to Releasing Officials as a reminder of items in E-Link that



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have been submitted by an awardee and are in “Submitted to Releasing Official” status. In order to develop a standard for the amount of time a releasing official should have to perform the review, OSTI will solicit input and coordinate with appropriate Departmental staff. In addition, OSTI will request an official management point of contact for the various Awarding Offices for the purposes of communication related to these recommendations. OSTI will complete the steps described above by May 30, 2014.

Recommendation 2

Establish procedures and performance measures to monitor the timely release of final technical reports.

Management Response: Concur. Based on the standard established under Recommendation 1, OSTI will establish a new, routine report available in E-Link that will list awards that have exceeded the standard period for review. Offices and Releasing Officials will be notified when this report is available in E-Link. In addition, OSTI will ensure this report is provided to POCs on no less than an annual basis for their use. OSTI will complete action this recommendation by July 1, 2014.

Recommendation 3

Develop procedures to ensure that processing errors are addressed in a timely manner.

Management Response: Concur. Currently, lack of awareness of processing errors is the most significant contributing factor to delays in addressing these issues. OSTI will establish a quarterly report of E-Link records that are in “Submitted to OSTI” status but have not passed all processing requirements. Processing errors for items on this list will be resolved by OSTI. OSTI will complete action on this recommendation by June 5, 2014.

Recommendation 4

Develop procedures to address when it is appropriate to use “DOE Dissemination Only.”

Management Response: Concur. Based on E-Link data, OSTI will solicit input from Awarding Offices to develop a definition of “DOE Dissemination Only” and then either (1) develop guidance on its use or (2) notify Offices of its discontinuation. OSTI will complete action by August 1, 2014.

Recommendation 5

Establish, in consultation with Department program offices and CRADA sites, a process to facilitate the release of CRADA reports beyond the periods of protection.

Management Response: Concur. In FY 2013, OSTI implemented a process for routinely sending email notification to Releasing Officials and/or Scientific and

Technical Information Program (STIP) contacts for CRADA reports as they meet the end of the five year withholding period. On an annual basis, a master list of CRADA reports, including those beyond the period of protection, will be generated for each site. Regarding existing CRADA reports, OSTI has initiated discussions with DOE laboratories and at least one laboratory is nearing completion of the review/release process for existing reports. Discussions will continue with sites/offices for all identified CRADAs. This action will be completed by July 1, 2014.

Recommendation 6

Develop procedures and performance measures to ensure that financial assistance recipients submit final technical reports at the completion of award terms.

Management Response: Concur. The Office of Science has completed the following corrective actions:

- Developed closeout reports that alert the Contract Specialists of pending award expirations;
- Developed policy that mandates that Contract Specialists initiate closeout determination (process to determine whether an award will be renewed, extended without additional funding, or transferred to closeout status) 30 calendar days prior to expiration; and
- Revised individual performance expectations as applicable to measure timeliness of award expiration notices (requests for closeout documents).

In addition, the following corrective action will be completed by August 31, 2014:

- Develop a mechanism to monitor when recipients submit final technical reports relative to the completion of the award and develop measures to assess the timeliness of report receipt.

Recommendation 7

Track the usage of, and gauge the effectiveness of remedies, such as debarring or denying awards to recipients that do not meet reporting requirements.

Management Response: Concur. A database has been added to the Chicago Shared Directory titled "Chronically Delinquent Recipient." This database will be used to track the use and gauge the effectiveness of remedies for recipients that do not meet reporting requirements. The corrective action associated with this recommendation has been completed for the Office of Science.

Recommendation 8

Ensure reports are reviewed and released to the public as soon as practicable.

Management Response: Concur. The Office of Science Chicago Office (CH) has revised its policy on the review and release of final reports. Contract Specialists are now required to review and release final reports for applicable awards within 5 business days of receiving technical and intellectual property clearance. CH will coordinate with the Intellectual Property Office and other relevant offices to establish a timeline for technical and intellectual property clearances. The Office of Science corrective actions associated with this recommendation will be completed by May 15, 2014.

Recommendation 9

Revise the release policy for SBIR/STTR technical reports to ensure technical information is disseminated in the timeliest manner possible.

Management Response: Partially Concur. Management agrees with the need to ensure technical information is disseminated in a timely manner but believes that this should be balanced against the administrative burden this may place on the agency and small businesses. The SBIR/STTR Programs Office will explore a number of options for improving the timeliness of report dissemination and the associated resource burdens in order to make a more informed decision regarding policy. The SBIR/STTR Programs Office has begun discussions with OSTI and will make a determination about potential enhancements by August 1, 2014.

If you have any questions on these comments, please contact Laura Biven at 301-903-9556.

Attachments



Department of Energy

Washington, DC 20585

April 9, 2014

MEMORANDUM FOR: RICKEY R. HASS
 DEPUTY INSPECTOR GENERAL FOR AUDITS AND
 INSPECTIONS
 OFFICE OF INSPECTOR GENERAL

FROM: MATTHEW S. DUNNE *MSD*
 CHIEF OPERATIONS AND STRATEGIC INNOVATION OFFICER
 ENERGY EFFICIENCY AND RENEWABLE ENERGY

SUBJECT: ACTION: Comments on IG Draft Report "Public Dissemination of
 Research Results" (A13CH026)

The Office of Energy Efficiency and Renewable Energy is pleased to provide the following comments regarding the IG Draft Report "Public Dissemination of Research Results."

Recommendation 6

Develop procedures and performance measures to ensure that financial assistance recipients submit final technical reports at the completion of award terms.

Management Response: Concur.

Action Plan: EERE has implemented the following corrective actions:

- a) The EERE Reorganization (October 2013) established clear roles, responsibilities, and expectations, for project management staff resulting in an increased emphasis on comprehensive portfolio management for Technology Managers (TM) and Project Managers (PM). The TM/PM is now responsible for all the steps necessary for the proper closeout of awards, including ensuring the submission of final deliverables and release of the Final Technical Report (FTR) to the Office of Scientific and Technical Information (OSTI) database.
- b) EERE developed a FOA Standard Operating Procedure (SOP) in 2013.
 - a. As part of the effort, a model Cooperative Agreement was created that includes a new requirement for submission of a draft FTR 60 days prior to project end date to be reviewed prior to submission. The model cooperative agreement is made available to all potential applicants as part of the FOA publication to provide advance notice to applicants of all project reporting requirements should they be selected for an award.
 - b. In addition, a webinar template was developed for the initial kick-off meeting with all new selectees. The template emphasizes the importance of clearly describing EERE's expectations for performance under the award including the proper completion and submission of all final reporting requirements.



- c. Training for EERE's new FOA SOP was delivered to over 400 EERE personnel in Summer and Fall 2013. Training outlined the new roles and responsibilities under the reorganization and emphasized the responsibilities of the TM/PM to manage the successful closeout of his or her portfolio.
- c) EERE also developed an Active Project Management (APM) SOP in 2013.
 - a. Training for EERE's new APM SOP was delivered to over 400 EERE personnel in January/February 2014. The APM SOP and Training recommends a closeout meeting to reiterate closeout responsibilities and discuss, define, and agree to expectations at least 60 days prior to the end of the project period. This includes discussion of submission of the FTR to the OSTI database.
- d) EERE also finalized an Award Closeout SOP in January 2014. Specifically, the Head of Contracting Activity for the Golden Service Center approved this SOP in January 23, 2014. This will be incorporated into the broader APM SOP.
- e) Existing awards are managed in the Project Management Center (PMC) Database which has an automated notification capability. The PMC sends notification emails to the performer's technical and business leads of upcoming deliverable, as well as automated delinquent reporting notifications to performers that have neglected to submit required reports.

Recommendation 7

Track the usage of, and gauge the effectiveness of, remedies, such as debarring or denying awards to recipients that do not meet reporting requirements.

Management Response: Concur.

Action Plan: As a remedy, EERE has implemented on a pilot basis including a provision in the Special Terms and Conditions of all awards to withhold reimbursement of up to 10% of federal project funds until the final deliverables are received, particularly for the submission of the FTR for RDD&D awards. EERE will track the effectiveness of the use of this remedy on an on-going basis. Further, EERE will continue to comply with Federal financial assistance regulations, which prohibit the issuance of grants to debarred and suspended organizations.

Recommendation 8

Ensure reports are reviewed and released to the public as soon as practicable.

Management Response: Concur.

Action Plan: EERE has implemented the following corrective actions:

- a) EERE will undertake proactive measures to ensure reporting requirements are met by recipients. For example, EERE plans to implement a new enterprise IT solution (IRIS) that will track reporting deadlines and compliance with reporting requirements. This will enable EERE to identify outstanding actions that require resolution and ensure prompt dissemination of research reports.

- b) The EERE Reorganization (October 2013) established clear roles, responsibilities, and expectations, for project management staff resulting in an increased emphasis on comprehensive portfolio management for Technology Managers and Project Managers. The TM/PM is now responsible for all the steps necessary for the proper closeout of awards, including ensuring the submission of final deliverables and release of the Final Technical Report (FTR) to the Office of Scientific and Technical Information (OSTI) database.
- c) Because OSTI did not historically have an automated mechanism to notify the appropriate releasing official in EERE when an FTR has been submitted to OSTI, the Golden Service Center set up a central mailbox to receive bulk notifications from OSTI of reports that had been submitted. A single point of contact (POC) manages the mailbox and sends individual notification to the releasing officials. In addition, the POC has historically generated a monthly report and sent it to representatives of the Technology Offices.
- d) EERE staff has begun reviewing data in OSTI database and identifying records that may not be FTR's. EERE staff is requesting assistance from OSTI to clean up invalid, duplicative, or otherwise extraneous records. EERE staff can then assist Technology Offices in clearly identifying FTRs that need to be reviewed by the releasing officials.
Estimated Completion Date: 08/31/14



Department of Energy
Washington, DC 20585

APR 07 2014

MEMORANDUM FOR RICKEY R. HASS
DEPUTY INSPECTOR GENERAL
FOR AUDITS AND INSPECTIONS
OFFICE OF INSPECTOR GENERAL

FROM: DENNIS MIOTLA 
CHIEF OPERATING OFFICER
OFFICE OF NUCLEAR ENERGY

SUBJECT: Response to Inspector General’s Draft Report, “Public
Dissemination of Research Results”

Thank you for the opportunity to review and comment on the subject draft report. We appreciate the efforts of the Inspector General (IG) to identify opportunities for improving the management and dissemination of DOE’s unclassified R&D.

The response to the recommendations 6, 7, and 8 in the draft report is outlined below.

Recommendation 6

Develop procedures and performance measures to ensure that financial assistance recipients submit final technical reports at the completion of award terms.

Management Response: Concur

Action Plan: The Idaho Operations Office provides support to the Office of Nuclear Energy (NE) for NE-sponsored financial assistance awards. The Idaho Operations Office already has an automated system in place which tracks the reporting requirements on each financial assistance award. Using the system information, the Idaho Operations Office monitors reporting status to ensure timely reporting. In addition, the system generates e-mail reminders which are sent to recipients two weeks prior to report due dates. If a report is past due, the system generates and sends a past due reminder the next month. For reports that are overdue more than a month, the Idaho Operations Office sends the recipient an e-mail stating what actions can be taken for failure to comply with the reporting requirements.

Estimated Completion Date: Not applicable. Procedures and performance measures are already in place.



Recommendation 7

Track the usage of, and gauge the effectiveness of, remedies, such as debarring or denying awards to recipients that do not meet reporting requirements.

Management Response: Concur

Action Plan: The Idaho Operations Office provides support to NE for NE-sponsored financial assistance awards. Idaho Operations Office already utilizes an automated system which maintains a log of recipients' reporting histories. Before making new awards or modifications to an existing award, the Contracting Officer ensures that the recipient does not have any past due reports outstanding and has a satisfactory reporting history. If there is a past due report outstanding, an e-mail is sent to the recipient notifying them that no further action will be taken until past due reports have been submitted.

Estimated Completion Date: Not applicable. Tracking and evaluation of reporting history prior to financial assistance actions is already in place.

Recommendation 8

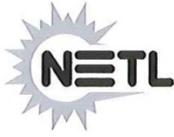
Ensure reports are reviewed and released to the public as soon as practicable.

Management Response: Concur

Action Plan: The Idaho Operations Office provides support to NE for NE-sponsored financial assistance awards. The Office of Science's Office of Scientific and Technical Information (OSTI) is responsible for releasing reports to the public, and the Idaho Operations Office supports this effort by submitting reports to OSTI as soon as practicable.

Idaho Operations Office already has a process in place that automatically sends reports directly to Chicago for patent review and Idaho Operations Office Security for sensitivity review. After clearance is approved, reports are released into OSTI. A notice is also received directly from OSTI when a report has been submitted by the recipient into OSTI. The Idaho Operations Office tracks and monitors report status to ensure timely release into OSTI as part of the closeout process.

Estimated Completion Date: Not applicable. Idaho Operations Office already has a process in place to ensure that reports are released as soon as practicable.



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



April 10, 2014

MEMORANDUM TO RICKEY R. HASS
DEPUTY INSPECTOR GENERAL FOR AUDITS AND
INSPECTIONS, OFFICE OF INSPECTOR GENERAL

FROM: D. DENISE RIGGI *D. Riggi*
DIRECTOR, ACQUISITION AND ASSISTANCE DIVISION

SUBJECT: Response to Inspector General's Draft Report, "Public Dissemination of
Research Results"

The National Energy Technology Laboratory's (NETL) response to the specific recommendations in the draft report for the Office of Fossil Energy (FE) is outlined below.

Recommendation 6

Develop procedures and performance measures to ensure that financial assistance recipients submit final technical reports at the completion of award terms.

Management Response: Partially Concur. FE determined that the number of FE financial assistance awards lacking final reports was significantly fewer than 51 reports as stated in the report's findings. At the time of the audit, the number of past due final reports for FE awards that ended in FY2006 through FY2012 was fewer than 20. All of these past due reports were for awards issued prior to the 2009 upgrade of the Federal Information Tracking System (FITS).

In the past two months, FE has further reduced the number of reports past due to fewer than 10. To date, FE has received and the Department of Energy (DOE) Releasing Official has submitted almost 99 percent of the final reports (covered by the audit) to the osti.gov website for public release and viewing.

The latest version of FITS generates automated notices of delinquent reports. If a recipient does not submit a final report when required, an email is issued from FITS to the recipient, stating that the recipient has 30 days to submit the report or DOE payment will be withheld. If the report is not submitted within the 30-day requirement, a final Letter of Delinquency, signed by a DOE contracting officer, is generated by FITS and sent to the recipient. The letter states that payment will be withheld until the required report is correctly submitted to DOE. DOE continues to maintain and improve the FITS functionality for receipt and management of all required reports.

Action Plan: FE will continue to work with any recipients which are late with their final report to expedite delivery of the report.

Estimated Completion Date: Complete (Procedures are in place.)

Recommendation 7

Track the usage of, and gauge the effectiveness of, remedies, such as debarring or denying awards to recipients that do not meet reporting requirements.

Management Response: Partially concur. Fossil Energy believes that the current practice described in the Management Response for Recommendation 6 above is effective.

Action Plan: FE will continue the effort described in the Action Plan for Recommendation 6 above.

Estimated Completion Date: Complete (Procedures are in place.)

Recommendation 8

Ensure reports are reviewed and released to the public as soon as practicable.

Management Response: Concur.

Action Plan: Fossil Energy will continue to review and submit final reports to the osti.gov website as soon as practicable for public use. A periodic review will be performed to confirm that publically available reports submitted to the osti.gov website have been made publicly available.

Estimated Completion Date: Complete (Procedures are in place.)

If you have any questions on these comments, please contact me at 304/285-4241 or via email at denise.riggi@netl.doc.gov.

FEEDBACK

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Office of Inspector General (IG-12)
Department of Energy
Washington, DC 20585

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