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Office of Audit Services

Audit Report

Management Controls over Patent and Royalty Income at Ames Laboratory

OAS-M-05-05

May 2005

Department of Energy
Washington, DC 20585

May 10, 2005

MEMORANDUM FOR THE DEPUTY DIRECTOR FOR OPERATIONS, OFFICE OF SCIENCE
MANAGER, AMES SITE OFFICE

FROM: George W. Collard
Assistant Inspector General for Audit Operations
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Management Controls over Patent and Royalty Income at Ames Laboratory"

BACKGROUND

The National Competitiveness Technology Transfer Act of 1989 established technology transfer as a mission of the Department of Energy. To promote technology transfer, the Department encouraged its laboratories to commercialize research and development results by patenting and licensing resulting intellectual property. The Department's contracts generally require laboratories to maintain separate accounts, records, and documents to track their share of licensing income earned from research and development activities paid by the Department. The laboratories are also required to use their share of such income for research and development activities, technology transfer, or educational purposes.

Income from patent licensing has grown at an average rate of 17 percent since 1996 and is expected to continue increasing. Total Departmental licensing revenues were $25.7 million in Fiscal Year 2003, with revenues at Ames Laboratory (Ames or Laboratory) contributing 18 percent of the total. The Office of Science and Technology Policy Analysis is responsible for policy coordination throughout the Department on matters related to technology transfer. Because of continued growth of this revenue source, we initiated this audit to determine whether Ames managed its patents and royalty revenue in a manner consistent with contract terms and Departmental policy.

RESULTS OF AUDIT

Our review disclosed that Ames had not adequately controlled and accounted for patent and royalty revenues, nor expended such funds to further research, technology transfer, and education. Specifically, Ames did not maintain accounting records for the approximately $3.5 million in patent and royalty revenues earned in FYs 2002-2003 and relied on a third-party entity to control and account for such funds. Ames permitted the third-party entity to:

- Combine patent and royalty revenues with monies earned by other entities in a single bank account and make disbursements without Ames' approval; and,

- Accumulate and retain about $252,000 in investment income earned on Ames patent and royalty revenues.

Ames also had not established specific plans to use patent and royalty revenues and had expended only about $1,000 of the over $1 million available during FY 2004.

These issues occurred because the Department had not provided guidance regarding the extent to which its laboratories were permitted to rely on third-party entities to assume fiduciary responsibility for patent and royalty revenues. Furthermore, the Ames Site Office did not provide adequate oversight to ensure that Ames established a plan for the use of patent revenues in a manner consistent with contract terms. As a result, approximately $3.5 million generated by technology transfer is at greater risk of loss and of not being productively used.

Ames had been successful at commercializing its technology and had earned more licensing fees than any of the Department's laboratories during FYs 2002-2003. While these achievements are noteworthy, additional effort is needed to help ensure that fees generated by this activity are adequately protected. Therefore, we have made several recommendations designed to ensure that patent and royalty revenues are safeguarded and used as intended.

MANAGEMENT REACTION

The Office of Science generally concurred with our finding and recommendations and agreed to take corrective actions. While Science officials agreed that guidance on third-party administration of royalty revenues would be useful, they believed that such guidance requires Departmentwide development and coordination. Further, they stated that Ames was not contractually required to record patent activities in the accounting system. The Office of Science's comments are included in Appendix 3.

We consider management comments responsive to our recommendations. After consultation with Department officials suggested by the Office of Science, we continue to believe that Science is the appropriate organization to develop operational guidance on third-party administration and that recording patent activities in the accounting system would improve controls over funds.

Attachment

cc: Chief of Staff
Chief Operating Officer, Office of Science, SC-1
Director, Office of Science and Technology Policy Analysis, PI-25
Manager, Chicago Office
Team Leader, Audit Liaison, ME-100

REPORT ON MANAGEMENT CONTROLS OVER PATENT AND ROYALTY INCOME AT AMES LABORATORY

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Patent Management And Use of Royalty Revenues

The Ames Laboratory did not control royalty income resulting from the successful commercialization of its research. Rather, it relied on a third party entity to account for and control its royalty revenues without any independent verification of its status. Furthermore, Ames did not use available funds to further its research, technology transfer or education missions.

Third-Party Fiduciary

The Department's contract with Iowa State University to manage and operate the Ames Laboratory authorized the use of a third-party entity to perform all patent activities necessary to support commercialization of its research. The University contracted with a third-party entity to conduct legal actions in pursuit of patents, account for, and collect royalties from patent licensees on behalf of the University -- including those resulting from Ames' research. The third-party received 15 percent of gross royalties as a fee for its services in addition to the reimbursement of all costs associated with these services. During FYs 2002-2003, the third-party entity collected $12.5 million in royalty fees from patents generated by Ames' research. The Laboratory's net share of these fees was $3.5 million. As of May 2004, the third-party entity had distributed approximately $1 million to the Laboratory under an allocation plan that called for distributions over the life of the patent.

Although required by contract and Department regulations, Ames did not ensure that the third-party entity managing commercialization of its research properly safeguarded and controlled royalty income. In particular, Ames did not require that the entity properly controlled Laboratory resources by segregating them from other non-Laboratory funds. During our review we learned that the third-party entity co-mingled about $2.5 million of Ames' royalties in one bank account with other non-Laboratory funds. Ames had no control over the common bank account and could not restrict a complete drawn down or withdrawal of funds belonging to the Laboratory from the account.

In addition to problems associated with the scope of third-party entity control, we also found that Ames had not established funds controls over its royalty income. The Laboratory did not maintain records and had not established accounts to ensure that royalties were accumulated and expended for established purposes. Finally, investment income earned on the $2.5 million was accruing to the third-party entity rather than to Ames.

Expenditure Planning

While the Department required laboratories to plan for and expend royalty revenues in pursuit of its mission, we noted that Ames had taken little action in this area. We found that the Laboratory had not developed a detailed plan to use $1.3 million[1] it had available from royalty revenues. Lacking a plan, Ames had expended only a small fraction of the $1.3 million – about $1,000 through May 2004. The Ames Director agreed that the Laboratory needed to develop a specific plan to spend the nearly $3.5 million that will ultimately be distributed to the Laboratory in pursuit of its research, technology transfer and education missions.

Departmental Guidance and Oversight

These issues occurred, at least in part, because the Office of Science had not provided guidance regarding the extent to which its laboratories were permitted to rely on third-party entities to assume fiduciary responsibility for patent and royalty revenues. While the authorization to employ third-party entities was implemented through contract language, no additional guidance was provided regarding the scope of their responsibilities or the accounting treatment necessary for these revenues. Furthermore, the Ames Site Office had not provided adequate oversight to ensure that Ames established a plan to use patent revenues in a manner consistent with contract terms. For example, although the Site Office approved a disposition plan for royalty revenues submitted by Ames, the plan merely restated the contract terms to use royalty revenues in support of research, technology transfer and education without any specific projects or timeframes.

[1] $1.3 million was available for use by Ames as of May 2004. This amount is comprised of $1 million of the $3.5 million earned in FYs 2002-2003 and $300,000 earned in prior fiscal years.

Resources at Risk

Approximately $3.5 million generated by technology transfer is at greater risk of loss and of not being productively used for the Laboratory mission. Because of issues with segregation and funds control, the Ames Site Office lacks assurance that funds are accurately reported, properly safeguarded, and expended for their intended purpose. In addition, the Laboratory did not receive credit for about $252,000 in past investment income, and will not share in additional future investment income, as earnings on these funds accrued to the third-party entity. Finally, without a more detailed disposition plan, there is no assurance that the revenues will be used efficiently and in accordance with contractual requirements.

RECOMMENDATIONS

To ensure the accuracy of reported totals and consistent technology transfer policies, we recommend that the Deputy Director for Operations, Office of Science, in coordination with the Office of Science and Technology Policy Analysis, take the following actions:

1. Develop and implement guidance over third-party administration of royalty revenues. At a minimum, the guidance should address controls to separately account for funds and prohibit co-mingling them with non-laboratory funds; the ownership of interest or investment income; and the distribution of royalty revenues to the laboratories.

To ensure that Ames safeguards and expends revenues earned from patent and licensing activities in accordance with the terms of its contract and Department policies, we recommend that the Manager, Ames Site Office, ensure that Ames Laboratory:

2. Establishes controls over resources earned from licensing activities originating from laboratory invention disclosures, including any past and future interest earned on such resources;

3. Independently accounts for patent revenues and expenses within the Laboratory's accounting system;

4. Formulates a detailed plan for the efficient use of licensing resources for mission related purposes; and,

5. Obtains credit for investment income earned from patent royalties collected by the third-party entity.

MANAGEMENT REACTION

The Office of Science generally concurred with our finding and recommendations and agreed to take corrective actions. While Science officials agreed that guidance over third-party administration of royalty revenues would be useful, they suggested that the Office of Procurement and Assistance Policy, within the Office of Management, Budget, and Evaluation, coordinate the development of Departmentwide guidance. Science and the Ames Site Office agreed to take action to ensure that controls over patent revenues are established, that Laboratory funds held by the third-party are segregated from non-Laboratory funds, that investment income earned on Ames' revenues is credited to Ames, and to require Ames to revise its Royalty Use Plan to include more details on the planned usage of the funds. Although officials stated that Ames is not contractually required to account for patent activity within the accounting system, they did agree to require a greater amount of review and record keeping over patent revenues, and to have Ames notify the Department of the patent activity on a more frequent basis.

AUDITOR COMMENTS

Management's comments are generally responsive to our recommendations. While we are encouraged that Science agrees that guidance would be useful, other officials do not agree that Departmentwide guidance is necessary. In particular, Office of Management, Budget and Evaluation/Chief Financial Officer officials believe that the appropriate remedy is that suggested by our recommendation. These officials, which included representatives of the Office of Procurement and Assistance Policy, reviewed our report and told us that they believed that the situation we reported should be addressed through program-level guidance. These officials believe, and we concur, that current contract clauses are adequate but that operational guidance from Science is needed.

While we believe that the proposed corrective actions are a positive first step, we are concerned that some actions do not go far enough in establishing controls over patent and royalty income. Specifically, we are concerned the Department's control over patent revenue funds will not be significantly improved unless patent activities are recorded in the Laboratory's accounting system. If no other means can be found to transfer control over the funds, we suggest that program officials consider requiring the third-party entity to make an annual distribution of the entire balance, as required under the M&O contract.

OBJECTIVE

To determine whether the Ames Laboratory had managed its patents and royalty revenue in a manner consistent with contract terms and Departmental policy.

SCOPE

The audit was performed during 2004 at Department Headquarters, Washington, DC; Ames Laboratory in Ames, IA; and the Chicago Office in Argonne, IL. The scope of the audit included patent and licensing activity at the Ames Laboratory during FYs 2002-2003.

METHODOLOGY

To accomplish our audit objective, we:

- Reviewed applicable laws and regulations pertaining to patent and licensing activity;
- Reviewed Departmental and Laboratory policies and procedures related to patent activity;
- Reviewed the Government Performance and Results Act of 1993 and determined if performance measures had been established;
- Reviewed patent records and related documentation for FYs 2002-2003; and,
- Held discussions with officials and personnel from the Office of Science and Technology Policy Analysis, General Counsel, Ames Laboratory, the Ames Site Office, and the Chicago Office.

The audit was conducted in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Performance measures were not established for the area of patents and, therefore, we could not assess how they might have been used to measure performance. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of the audit. We relied on computer processed data to accomplish our audit and through limited testing, established the reliability of data we considered critical to satisfying our objective.

An exit conference was held with Ames Site Office management on April 15, 2005, and the Office of Science on April 27, 2005.

PRIOR AUDIT REPORTS

- *Management of Patent and Licensing Activities at Department-Owned Contractor-Operated Laboratories* (DOE/IG-0479, August 2000). The audit reviewed patent and licensing activities at the Department's laboratories and found that patent infringement claims against the Department's laboratories had increased in recent years. The audit contained recommendations designed to resolve issues of competition with the private sector and patent infringement.

- *Technology Transfer: Several Factors Have Led to a Decline In Partnerships at DOE's Laboratories* (GAO-02-465, April 2002). The audit reported on Technology Transfer at 12 laboratories. The report disclosed that the laboratories had substantially reduced Cooperative Research and Development Agreement partnerships primarily because of funding constraints, and were no longer offering technical assistance to small businesses, unless the business was willing to pay for the assistance. In contrast, the audit found that between 1992 and 2001 there had been a fourfold increase in Work-For-Others agreements, and an eightfold increase in technology licenses and user facility agreements.

- *Technology Transfer: DOE Has Fewer Partnerships and They Rely More on Private Funding* (GAO-01-568. July 2001). This audit reported that between 1995 and 2000, NNSA laboratories had reduced technology transfer activities which were not fully funded by the private sector, while increasing activities which were fully funded. The audit found that technical assistance to small businesses and Cooperative Research and Development Agreements had been reduced, while Work-For-Others and technology licensing activities had increased.

- *Technology Transfer: Reporting Requirements For Federally Sponsored Inventions Need Revision* (GAO/RCED-99-242, August 1999). This audit determined that federal agencies were not complying with regulations regarding the disclosure, reporting, retention, and licensing of federally-sponsored inventions. In addition, the audit determined that inaccurate and incomplete databases resulted in the Government not always being aware of inventions to which it had royalty free rights.

Department of Energy
Office of Science
Washington, DC 20585

March 4, 2005

MEMORANDUM FOR GEORGE W. COLLARD
ASSISTANT INSPECTOR GENERAL
FOR AUDIT OPERATIONS
OFFICE OF INSPECTOR GENERAL

FROM: G. LEAH DEVER
ACTING CHIEF OPERATING OFFICER
OFFICE OF SCIENCE

SUBJECT: Office of Science Comments on IG Draft Report, "Management Controls over Patent and Royalty Income at Ames Laboratory"

Thank you for the opportunity to review the subject draft report. The following is an Office of Science consolidated response, including the response from the Ames Site Office. We concur on the need for process improvements and have provided information on actions already undertaken or being planned to improve the management and oversight of patent and royalty income at the Ames Laboratory. A corrective action plan will be prepared to fully document the response upon issuance of the final report. For Recommendation Number 1, while we do not disagree that guidance may be useful, we suggest that this recommendation be addressed by the Office of Procurement and Assistance Policy, ME-61.

Recommendation No. 1: Develop and implement guidance over third party administration of royalty revenues. At a minimum, the guidance should address controls to separately account for funds and not co-mingle them with non-Laboratory funds; the ownership of interest or investment income; and the distribution of royalty revenues to the laboratories.

Response: The scope and guidance in Recommendation No. 1 requires DOE-wide development and coordination, extending beyond just the Office of Science. This recommendation should be addressed to the Office of Procurement and Assistance Policy, ME-61.

Recommendation No. 2: Establishes controls over resources earned from licensing activities originating from laboratory invention disclosures, including any past and future interest earned on such resources;

Response: Concur. The following additional controls will be implemented. The process for requesting and utilizing the resources in the Laboratory Royalty Sharing Account will be formally documented. The Iowa State University Research Foundation (ISURF) has taken action to segregate the Ames Laboratory share of unearned royalty income into a trust account to be held there until earned per the amortization schedule. ISURF will apply past and future accrued interest to these funds. ISURF will provide a semi-annual statement on details related to this account to the Ames Site Office and the Laboratory. Contractor financial activities are governed and audited by the Regents of the State of Iowa. The Ames Site Office will review the annual independent auditor's opinions on the ISURF financial statements. In addition, the internal auditor of the Laboratory will add a periodic review of royalty and patent income to include ISURF activities related to the Laboratory.

Recommendation No. 3: Independently accounts for patent revenues and expenses within the Laboratory's accounting system;

Response: Concur with need for Laboratory Accounting Office review. While the contract with Iowa State University for the operation of Ames Laboratory does not require privately funded technology transfer activities, such as patent revenues or related expenses, be incorporated into the actual financial records of the Laboratory, the Ames Laboratory is responsible for performing oversight of these activities. In addition to the controls noted above, records of funds distributed by ISURF to the Laboratory and spent according to the DOE approved Royalty Use Plan will be reviewed monthly by the Laboratory's Chief Accountant and will be subject to review under the Laboratory's Internal Audit Program. Ames Site Office will receive notification of the amount of royalty income being distributed from ISURF to the Laboratory. The Laboratory will submit comprehensive implementing procedures documenting this process to the Ames Site Office. The Laboratory will submit an annual report to the Ames Site Office with enhanced detail documenting the royalty income expenditures that have occurred during the year.

Recommendation No. 4: Formulates a detailed plan for the efficient use of licensing resources for mission related purposes:

Response: Concur. The current approved Royalty Use Plan is being revised by the Ames Laboratory to include greater detail on the approved mission related uses for this money. The Laboratory will submit the revised Royalty Use Plan to the Ames Site Office for approval.

Recommendation No. 5: Obtains credit for investment income earned from patent royalties collected by the third party entity.

Response: Concur. All accrued interest, past and future, linked to the Laboratory's share of the royalty income will be applied accordingly. The contractor has taken action to address this recommendation.

If you have any questions regarding these comments, please contact Roxanne Purucker at 630-252-2096.

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