

U.S. DEPARTMENT OF COMMERCE
Office of Inspector General



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*NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY*

*NIST's Policy of Allowing Informal
Collaborations with Non-Federal
Researchers Requires Additional Controls*

Inspection Report No. IPE-10854 / September 1998

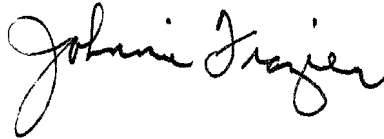
Office of Inspections and Program Evaluations





September 30, 1998

MEMORANDUM FOR: Raymond G. Kammer
Director
National Institute of Standards and Technology

FROM: Johnnie E. Frazier 
Acting Inspector General

SUBJECT: Final Report: *NIST's Policy of Allowing Informal Collaborations with Non-Federal Researchers Requires Additional Controls* (IPE-10854)

This is our final report examining the National Institute of Standards and Technology's (NIST) management of interagency and other special agreements. This report is part of a series of reports to be issued on our Department-wide review of the various types of interagency and other special agreements that the bureaus enter into with federal and non-federal parties. These agreements involve performing work for others (reimbursable agreements), acquiring work from others (obligation agreements), or coordinating complementary programs without the transfer of funds (memoranda of understanding or agreement). We also tried to identify where Commerce bureaus should be using agreements to better define their activities with other parties.

On a positive note, NIST has established and maintains a reliable process, with the necessary policies and procedures, to monitor its interagency and other special agreements.¹ Based on limited field work performed from October 1997 through January 1998 at the National Institute of Standards and Technology (NIST) operations in Gaithersburg, Maryland, and Boulder, Colorado, we determined that NIST's agreement processes and procedures compared favorably with other Commerce bureaus. For example, NIST has a comprehensive set of guidelines for processing agreements. Sections of its administrative manual are currently being updated and its intranet site includes sample agreements, contact names, links to relevant regulations and laws, and decision trees to help program officials decide which agreements are appropriate. NIST also maintains databases of its agreements that provide information such as party, dollar amounts, and relevant dates.

However, we later identified one issue that warrants management attention—NIST's policy of allowing informal collaborations with non-federal researchers without a signed, written

¹Because of work recently conducted by our Office of Audits, we excluded NIST's cooperative research and development agreements and guest researcher agreements from the scope of this review.

agreement. This portion of our review was conducted from March 24, 1998, through April 24, 1998.

With few exceptions, a written agreement is preferable when non-federal researchers work in NIST facilities. NIST's current policy of requiring a written agreement only when a non-federal researcher works at NIST for more than 10 days during a calendar year does not violate federal laws or regulations, but there are several inherent risks associated with this policy. To provide more protection for proprietary information and government property, we believe that at a minimum, NIST should keep a log of all short-term visiting researchers who are conducting substantive work in NIST facilities without the benefit of a written agreement with NIST.

NIST's response to our draft report concurred with our finding and recommendation and indicates that NIST is taking preliminary actions to address our concern. A copy of the response is included as an attachment to this report.

Please provide us with an action plan within 60 days addressing the inspection recommendation, including when your action will be completed, in accordance with the procedures described in DAO 213-5. We appreciate the cooperation and courtesies extended by your staff during our inspection.

Background

NIST's authorizing legislation directs it to work with U.S. industry and academia through four programs: (1) measurement and standards research and development, (2) the Advanced Technology Program, (3) the Manufacturing Extension Partnership, and (4) the Malcolm Baldrige National Quality Award. These programs involve working extensively with outside parties, sharing information and resources, and/or making scientific results available to the public. NIST uses several forms of written agreements to encourage and formalize its collaborations with other parties, including grants, contracts, cooperative research and development agreements, guest researcher agreements, and interagency agreements. NIST also informally works with outside parties without any written agreement.

According to NIST's policy, a written agreement is not required when a non-federal researcher works in NIST facilities for 10 days or less during a calendar year. This report is concerned only with those non-federal visitors who qualify under this rule, by working for 10 days or less at NIST without a written agreement. These visiting researchers may work in NIST facilities for several days and engage in a broad array of work. Some visitors attend conferences or have brief meetings with NIST personnel without doing any work in a laboratory, while others perform substantive laboratory work. Furthermore, some visitors may meet with NIST personnel in an office and then have a brief tour of a laboratory. We are primarily concerned with visiting researchers who are performing substantive laboratory work rather than with those visiting offices or simply touring the facilities. With some limited exceptions, NIST does not keep any records of these visiting researchers; therefore, we could not determine how many visited NIST in fiscal year 1997.

Additional Controls Are Necessary to Better Address the Risks of Not Always Requiring Written Agreements

As part of a 1995 internal review of commercializing technology, NIST considered the strengths and weaknesses of not always requiring written agreements with visiting researchers. Weighing the risks against its mission requirements, NIST decided to retain its policy of requiring non-federal researchers to enter into a written agreement with NIST only if they work at its facilities for longer than 10 days a year. NIST's primary concern with requiring written agreements for all visiting researchers is that the time involved in preparing and finalizing an agreement may deter short-term visiting researchers. However, our concern is that there is not sufficient consideration given to controlling visitor access to materials, equipment, and information.

We believe that the main risks identified by NIST—protection of intellectual property rights, safeguarding proprietary information, and potential liability for personal and property damages—that led to written agreements for long-term visiting researchers also apply to short-term researchers. In addition, because NIST does not keep a log or other record of visitors, NIST cannot determine whether it is in compliance with its own requirement to have written agreements with researchers who stay longer than 10 days. We believe that, at a minimum, NIST should require its laboratories to keep a log of all non-federal researchers who visit its facilities but do not have a written agreement with NIST. This information should provide additional protection against the risks of not having written agreements.

Documenting access to proprietary information and valuable equipment

NIST is required by law to ensure the security of proprietary material. Relevant laws and regulations include the Economic Espionage Act, the Trade Secrets Act, and the Department's *Personnel Security Manual*. In addition, the Department's *Physical Security Manual* provides procedures for permitting access to facilities and safeguarding government-owned property. We did not review how well NIST implements these laws and regulations. We only evaluated whether informal collaborations with non-federal researchers violate security regulations and unnecessarily expose NIST to the risk of disclosing protected information and having valuable property stolen or damaged. Considering recent security problems with short-term visitors at other federal laboratories,² we have concerns about the lack of controls over visiting researchers working at NIST without an agreement.

We observed two potential security weaknesses in NIST's current practice of permitting informal collaborations with non-federal researchers. First, visiting researchers may obtain unauthorized access to proprietary material. In fiscal year 1997, NIST had 127 agreements with non-federal parties that prohibited the unauthorized disclosure of any proprietary information exchanged. The actual amount of proprietary information may be limited, but the existence of any such material is

²*Department of Energy: DOE Needs to Improve Controls Over Foreign Visitors to Weapons Laboratories*, GAO/RCED-97-229, September 25, 1997.

of concern to us. Considering that visiting researchers generally have free access to most, if not all, areas of NIST laboratories, sensitive materials may not be properly protected.

Second, NIST's lack of access controls places expensive equipment and other property at risk of being stolen and makes recovery of these items more difficult. Over the past several years, NIST's Gaithersburg facilities have experienced increased incidents of petty theft as the surrounding area has continued to develop. The Department's Office of Security is in the process of reviewing NIST's physical, information, and personnel security. NIST possesses a substantial amount of specialized and costly equipment. If equipment is stolen or damaged by a visiting researcher, NIST may not be able to identify all of the people who may have spent a substantial amount of time working with or around the equipment.

Because of its mission, NIST has determined that it should have a higher degree of openness in dealing with the public than most other government agencies. However, NIST must maintain a balance between meeting its security responsibilities and interacting with the public. We are concerned that NIST cannot determine or estimate how many visiting researchers are working at its facilities and therefore is not sufficiently aware of the associated risks. A record of visiting researchers would allow NIST to determine who had access to certain facilities if equipment is missing or damaged or if there is a claim that an unauthorized person had access to proprietary material. In addition, a record could potentially be a deterrent to someone intending to steal or damage NIST property and could aid in the recovery of lost property.

Minimizing the Administrative Burden

Knowing how many short-term researchers use its facilities would allow NIST to better quantify and perhaps even reduce the risks of not always requiring written agreements. NIST could also use the information as a management tool to help determine whether these collaborations are within its mission and an appropriate use of the laboratories' resources. Keeping track of these visiting researchers would also provide the information needed for NIST to periodically reassess its policy of not requiring formal agreements for these short-term researchers.

The limited additional burden of implementing a record-keeping system would not outweigh its advantages. Unlike the processing of written agreements, keeping a log of visitors does not require significant administrative time. In fact, implementation at the division level would be fairly simple. The NIST employee hosting a non-federal researcher could record basic information about the visitor, such as name, employer, citizenship, and purpose and date of the visit. The information should then be consolidated at the laboratory level for management's use. Because we are suggesting that NIST employees record the information about short-term visitors, it is also unlikely that these researchers would be discouraged from collaborating with NIST.

At least one laboratory (the Electronics and Electrical Engineering Laboratory) currently collects and reports its informal interactions with outside researchers. The laboratory records interactions at the division level and periodically consolidates the data for the entire laboratory. Information such as the name of the visitor, visitor's affiliated institution, nationality, dates visited, and

sponsoring NIST employee are recorded. We believe this is a good practice that should be followed by the other NIST laboratories. In implementing our recommendation, we stress that NIST should require its divisions and laboratories to focus on recording informal collaborations that involve substantive laboratory work.

At our exit conference for this review, we were told that NIST plans to implement a new requirement for all foreign and domestic researchers who perform laboratory research for any length of time. These visitors may sign a written agreement or provide basic personal information, such as name, citizenship, and employer, that NIST will store centrally. We believe that this policy could be responsive to our recommendation if implemented properly. We request that NIST provide more detail about which visitors this policy will apply to, the types of information that will be collected, and the method of implementation.

Recommendation

We recommend that the NIST Director require the agency's laboratories to record informal interactions with non-federal researchers where work is performed in NIST laboratory facilities and there is no written agreement with the researcher. Data should be collected at the division level and consolidated at the laboratory level. This additional data should be used by NIST to periodically evaluate its policy of not requiring formal agreements for these short-term researchers.

In response to our draft report, NIST agreed with our recommendation presented in the report. NIST's response states that the recommendation will be resolved as a matter of course by continuing implementation of the newly developed policies and procedures on foreign and domestic guest researchers. We have requested a copy of an action plan to address our recommendation.

Attachment

cc: Bruce Mattson, Program Coordinator, NIST Industrial Partnerships Program
Michael R. Rubin, NIST Council
Marilyn Khan, NIST Audit Liaison

NIST's Response To The Report



NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899
OFFICE OF THE DIRECTOR

September 15, 1998

MEMORANDUM FOR Johnnie Frazier
Acting Inspector General

From: Raymond G. Kammer
Director

Subject: Response Draft Inspection Report: NIST's Policy of Allowing Informal Collaborations with Non-Federal Researchers Requires Additional Controls (IPE-10854)

Thank you for the opportunity to review the subject draft audit report entitled, "NIST's Policy of Allowing Informal Collaborations with Non-Federal Researchers Requires Additional Controls."

Report Recommendation

Overall, the auditors indicate that NIST has "established and maintains a reliable process with the necessary policies and procedures, to monitor its interagency and special agreements...we determined that NIST's agreement processes and procedures compared favorably with other Commerce bureaus. For example, NIST has a comprehensive set of guidelines for processing its agreements. Sections of its administrative manual are currently being updated and its internet site includes sample agreements, contact names, links to relevant regulations and laws and decision trees to help program officials decide which agreements are appropriate."

However, the auditors identified one issue that warranted management attention - NIST's policy of allowing informal collaborations with non-federal researcher without a signed, written agreement when the non-federal researcher works at NIST for ten (10) days or less. The report recommends that:

"the NIST Director require the agency's laboratories to record informal interactions with non-federal researchers where work is performed in the NIST laboratory facilities and there is no written agreement with the researcher. Data should be collected at the division level and consolidated at the laboratory level. This additional data should be used by NIST to periodically evaluate its policy of not requiring formal agreements for these short-term researchers."

The auditors believe "that the main risks identified by NIST - protection of intellectual property rights, safeguarding proprietary information and potential liability for personal and property damages - that led to written agreements for long-term visiting researchers also apply to short-term researchers." It is the auditors opinion that the "limited additional administrative burden of implementing a record-keeping system would not out weigh it's advantages."

NIST Response

NIST recognizes the need for additional controls for short-term researchers who use NIST facilities informally; and agrees with the spirit of your recommendation. NIST plans to implement measures that will provide better information about short-term researchers and their use of NIST facilities. As the auditors noted at the exit conference, NIST recognized this need and had revised its Foreign and Domestic Guest Researcher policies and forms. Specifically, NIST was planning to require a written agreement for any research use - short-term or long-term - of its research facilities. Given your recommendations, NIST will reconsider its proposed implementations and the tradeoffs between formal/informal agreements. NIST, as you, wishes to minimize the administrative burden on our staff, while maintaining appropriate controls.

Attachments: Proposed Administration Manual Subchapters and forms for the Foreign and Domestic Guest Researcher Programs.

