



DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office Of The General Counsel

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JAN 31 2013

Catherine A. McMullen
Chief, Disclosure Unit
United States Office of Special Counsel
1730 M. Street, N.W., Suite 218
Washington D.C. 20036-1505

Re: Office of Special Counsel File No. DI-12-2390

Dear Ms. McMullen:

On January 28, 2013, the Secretary of the Air Force signed the Report of Investigation (ROI) for the above-referenced matter. In his letter, the Secretary explained that a redacted version of the ROI was included for purposes of your public disclosure requirements.

The redactions made in this ROI were of the names of witnesses and other individuals specifically identified within the ROI, with the exception of Dr. David Hardy (who is an SES), Dr. Robert Peterkin (who is an ST), the whistleblower¹ and the named subject. The purpose of removing personally identifying information of the individuals/witnesses was to protect them from an unwarranted invasion of personal privacy which could result in harm, embarrassment, inconvenience, or unfairness. The altered language does nothing to change the substance of the ROI. Because the alterations are immaterial to the meaning of the evidence, the law, the analysis and the conclusions, the attached redacted report for public release is substantively identical to the unredacted version.

Our request for these redactions is based on exemptions 6 and 7(C) of the Freedom of Information Act (FOIA). See 5 U.S.C. §552. Both exemptions protect from public release information that would amount to an unwarranted invasion of personal privacy. To determine whether the information falls under either exemption, the agency conducts a balancing test that weighs the privacy interests of the individual versus the public's interest in the disclosure. If the balancing test favors the public, the information must be released. If it favors the individual, however, the FOIA prohibits the release. The Air Force has conducted this balancing test with respect to the names of witnesses and other individuals named in the ROI. With the exception of the named members of the senior executive corps, the witnesses and certain other named

¹ According to correspondence with your office, the whistleblower consented to the release of his name.

individuals have a reasonable expectation of privacy in the information presented in the ROI. Further, disclosure of their names or other identifying information would not benefit the general public in that the specific identity of the individuals need not be revealed in order for the reader of the redacted report to understand the relevant facts. That is, the redacted information does not in and of itself reveal anything regarding the operations or activities of the Air Force, or the performance of its statutory duties. In our view, the individuals' probable loss of privacy outweighs the public interest in knowing the names of the individuals or other personally identifiable information. Therefore, those names redacted are done because the FOIA, and by implication 10 U.S.C. § 1219(b), requires it. For the named members of the senior executive corps, the balancing test tipped in the other direction. Because of their high ranks and positions within the Air Force, they are more in the public light and therefore there is a significantly higher benefit to the general public in knowing their identities. *See DoD 5400.7-R_AFMAN 33-302, Freedom of Information Act (FOIA) Program.*

Our request for these redactions is also based upon the Privacy Act which prohibits disclosing personal information to anyone other than the subject of the record without his or her written consent (unless such disclosure falls within one of the Privacy Act exceptions not applicable herein). *See 5 U.S.C. §552a.*

With regard to the copy of the ROI sent to the whistleblower, we understand that under OSC policy, the whistleblower received an unredacted version of the ROI and we express no objection.

For your convenience, the Air Force attached a witness/name legend to the redacted version. Thank you for your consideration of this request. If you have any questions regarding this request, please contact Deborah Gunn at 703-695-4435 or by email at deborah.gunn@pentagon.af.mil or you may contact Major Garrett Condon at 703-695-6552 or by email at garrett.condon@pentagon.af.mil.

Sincerely,



CHERI CANNON
Deputy General Counsel
(Fiscal, Ethics and Administrative Law)

REPORT OF INVESTIGATION
OSC File No. DI-12-2390

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INFORMATION INITIATING THE INVESTIGATION

By letter dated August 7, 2012 and signed by the Special Counsel, the Office of Special Counsel (OSC) referred to the Secretary of the Air Force for investigation a whistleblower disclosure case (OSC File No. DI-12-2390) alleging that Dr. Deanna Pennington at the Directed Energy Directorate of the Air Force Research Laboratory (AFRL/RD) directed the transfer of laser equipment from AFRL/RD to the Department of Energy's Sandia National Laboratories (SNL) without authorization. After review and based on the information disclosed by Dr. Roy Hamil,¹ OSC "concluded that there is a substantial likelihood that the information the whistleblower provided to OSC discloses a violation of law, rule, or regulation" and referred the allegations to the Air Force for investigation. In its letter, OSC noted that "where specific violations of law, rule, or regulation are identified, these specific references are not intended to be exclusive."

OSC SUMMARY OF DISCLOSURE INFORMATION

According to the OSC Referral Letter, Dr. Hamil provided the following information to OSC:

- (1) Dr. Roy Hamil disclosed that in August 2011, Dr. Deanna Pennington violated a law, rule or regulation by directing the transfer of approximately \$20,000 worth of laser equipment from the Air Force Research Laboratory to the Department of Energy, Sandia National Laboratory [sic], Livermore, California, without the required authorization.
- (2) According to OSC, transfers of goods and services between federal agencies are generally governed by the Economy Act of 1932, 31 U.S.C. § 1535 (1994). OSC stated that "it appears the Air Force Logistics Materiel Control Activity (LMCA) has an alternative authorization process for transfers of scientific equipment and support when standard procedures are not sufficient to satisfy supply needs. See AFMAN 23-110, CD Basic USAF Supply Manual, Vol. 2, Part 2, 'Standard Base Supply System,' Ch. 21, 'Research Development, Tests, and Evaluation Supply Support,' April 1, 2012. Under both processes, designated authorities are required to approve the transfer to ensure the transfer is appropriate and in the best interests of the involved agencies."
- (3) Dr. Hamil alleged that Dr. Pennington was not designated as authorized to approve equipment transfers under either the Economy Act or the LMCA process. Dr. Hamil further stated that the transfer authorization process had been initiated for the laser equipment transfer, but Dr. Pennington disregarded the process and ordered the transfer without receiving final approval from the

¹ Dr. Hamil, according to the OSC Referral Letter, has consented to the release of his name in conjunction with this Report of Investigation.

appropriate personnel. Subsequently, the authorization process ceased once the transfer was completed.

- (4) Dr. Hamil stated that no required authorization has been obtained to date for the equipment transfer at issue. Thus, there remains no approved justification for the transfer and no documentation for the transferred equipment. Also, without the authorization paperwork, the Department of Energy does not have any written liability for the equipment. Further, Dr. Hamil alleged there is no scheduled date for the Department of Energy to return the equipment.

CONDUCT OF THE INVESTIGATION

The OSC Referral Letter was forwarded for investigation to the Senior Officials Directorate of the Office of the Inspector General (SAF/IGS). On August 16, 2012, an investigating officer (IO) in SAF/IGS was appointed to conduct an investigation into the whistleblower disclosures contained in the OSC Referral Letter. In the course of the investigation, the IO conducted an initial interview with Dr. Hamil on August 29, 2012 and thereafter interviewed 13 witnesses.² These interviews were conducted between September 5, 2012 and December 21, 2012. The IO also collected and examined other relevant documentation, including emails, photographs, employment contracts, draft agreements, and background descriptions of the organizations related to the investigation. Pertinent legal authorities, including applicable Department of Defense (DoD) and Air Force regulations, were researched and reviewed.

The standard of proof used in determining the finding for each allegation was the preponderance of the evidence, *i.e.* was it more likely than not that the alleged violation occurred.

Pursuant to 5 U.S.C. § 1213(c), an agency is afforded 60 days to complete the required report of investigation. The Air Force has been granted two extensions for its response to the OSC Referral Letter, which is due on February 11, 2013.

CLARIFICATION OF REFERRED ALLEGATIONS

As stated above, according to OSC's Referral Letter, Dr. Roy Hamil³ alleged that Dr. Deanna Pennington⁴ authorized "equipment transfers" without being authorized to do so. The

² A complete list of the witnesses interviewed is set forth in the Appendix of this Report.

³ Dr. Hamil has a grade of "DR-4" (GS-15 equivalent). He is a Technical Advisor within AFRL/RDLA. He has been in that position since 2010. Dr. Hamil was commissioned as a second lieutenant in the Air Force in 1969. While on active duty, he received a PhD in optical sciences. He left active duty in 1980 and worked for SNL. In approximately 2000, he was detailed to AFRL on Kirtland AFB pursuant to an agreement under the Intergovernmental Personnel Act of 1970 (commonly referred to as an "IPA") between the Air Force and SNL. He later was hired by the Air Force as a civilian employee at AFRL.

⁴ Dr. Pennington is currently serving on an IPA detail with AFRL/RD under an agreement between the Air Force and her permanent employer, Lawrence Livermore National Laboratory. As stated in the IPA agreement, the Air

Referral Letter specifically discussed the Economy Act and the “LMCA process,” the latter of which OSC defined as “an alternative authorization process for transfers of scientific equipment and support when standard procedures are not sufficient to satisfy supply needs” under AFMAN 23-110, Chapter 21. OSC stated “[u]nder both processes, designated authorities are required to approve the transfer to ensure the transfer is appropriate and in the best interests of the involved agencies.” Also according to OSC, Dr. Hamil alleged that “no required authorization has been obtained to date for the equipment transfer at issue” and “there remains no approved justification for the transfer and no documentation for the transferred equipment.”

With regard to the alleged “LMCA process” referenced in OSC’s referral letter, OSC’s vague citation to a 180 page chapter in a voluminous Air Force manual left the specific meaning of this allegation ambiguous. Review of that chapter as well as the entire AFMAN 23-110 failed to uncover any “alternative authorization process” relevant to the facts at issue.

During his interview, Dr. Hamil was asked about the “LMCA process.” When he was read the summary of allegations from the OSC Referral Letter, the discussion went as follows:

IO: Okay, uh, so I want to get into the allegation here. I want to read what the Office of Special Counsel submitted to the Secretary of the Air Force to ensure that we are all on the same page. What they stated here is Dr. Hamil alleged that Dr. Pennington was not designated as authorized to approve equipment transfers under either the Economy Act or the LMCA process. Dr. Hamil further stated that the transfer authorization process had been initiated for the laser equipment transfer but Dr. Pennington disregarded the process and ordered the transfer without receiving final approval from the appropriate personnel. Subsequently, the authorization process ceased once the transfer was complete. Do you have any issues with the way OSC framed your complaint?

W: Except for one thing. I don’t know what the term LMC is.

IO: LMCA?

W: Yeah, LMCA, I’m sorry.

IO: We were going to ask you that (laughing).

W: (laughing).

IO2: But Dr. Hamil, that’s good to know. This is [IO2]. So with respect to what OSC wrote there, you had not mentioned that terminology with them to your recollection?

W: I don’t believe so... basically what I knew that moving you know, equipment, you know, without authorization between agencies is a violation of the 1934 [sic] Economy Act.

Force agreed to Dr. Pennington’s IPA assignment in order for AFRL to have “a world-renowned physicist experienced in laser research, development, and transition to serve as the principal scientific authority and independent researcher in the field of laser technology.” Her original IPA agreement was effective from July 26, 2010 through July 25, 2012. The agreement has since been extended through July 25, 2013. For protocol purposes, she was designated as an ST-equivalent. “ST” positions are “scientific and professional positions,” and are equivalent to being a member of the Senior Executive Service. As the Senior Scientist for Laser Technology, she reports directly to the Director of the Directed Energy Directorate of the AFRL.

This was shortly followed by:

IO: Okay, and digging . . . digging through that letter a little further, I see that they referenced LMCA as the Air Force Logistic Material Control Activity . . . uh, as having an alternative authorization process for transfers of scientific equipment and support when standard procedures are not sufficient to satisfy supply needs. Does that ring a bell? Are you familiar with that at all?

W: Well, now that you say it, I know there is a process uh, but I didn't know what it was called. Frank, frankly what I'm aware of is you know, you need to have some kind of arrangement, a partnership uh, a memorandum of agreement, something that authorizes you to lets [sic] say move the equipment for the, the . . . let's say some scientific purpose that would be of benefit to both organizations.

IO: Uh huh. I think . . . maybe to simplify for the discussion uh, I was looking at that paragraph. Maybe we can break it down into three parts. The first part being Dr. Pennington was not designated as authorized to approve equipment transfers under either Economy Act of [sic] the LMCA process. Are you aware, is there a specific... or what role does the Economy Act play in regarding against designating approving officials?

W: Well, you know, basically uh, you know, unless there is some kind of a special agreement between the agencies meaning uh, DOD and DOE... uh, you are not to just transfer equipment without some kind of authorization, some kind of an agreement, some documentation that would authorize you to do so and then you use the various group, uh, group here, LMCA or whoever to do that.

After substantial review of AFMAN 23-110 and based on the above testimony of Dr. Hamil, the Air Force requested clarification from OSC on November 21, 2012 as to the basis and meaning of the "LMCA process" allegation. The letter stated in relevant part:

The plain language [of the "LMCA process" allegation within the OSC Referral Letter] seems to imply that the Air Force Manual gives authority, similar to the Economy Act, for the Air Force to supply equipment to other agencies. However, the purpose of the Manual is to provide guidance on the accountability and responsibility of Air Force property. Further, it is a basic tenet of fiscal law that statutory authority (as opposed to an administrative regulation) is necessary for transfers between appropriations. The OSC Referral Letter cites to the volume, part, and chapter of an Air Force Manual as authority, but does not cite a paragraph or otherwise give reference to what language is alleged to have been

violated. In reviewing the 180 pages of that chapter, (as well as other parts of the voluminous Manual) we have been unable to locate any reference within the entire manual – which includes seven active volumes with well over 100 chapters -- that might be applicable to the circumstances at issue herein.

We had anticipated that the whistleblower would clarify the confusion that exists in the OSC Referral Letter. However, when asked to clarify his allegation about the LMCA process, the whistleblower stated that he did not mention this in his complaint to OSC and only cited the Economy Act as any legal authority related to his disclosure. As such, he was unable to clarify the allegation or otherwise shed any light on the stated allegation as it related to a potential violation of the Air Force Manual as set forth in OSC Referral Letter. To ensure we complete an adequate investigation and submit a responsive Report of Investigation, we request clarification on the meaning of the LMCA allegation. Please provide a response to this letter explaining the allegation and please provide a specific reference to the paragraph within AFMAN 23-110 that OSC believes is at issue.

On November 29, 2012, OSC responded as follows:

Thank you for the letter of November 21, 2012 requesting a clarification and extension of time⁵ in the above-referenced matter. You requested clarification concerning the statement in OSC's referral letter that an alternative authorization process for transfers of equipment may exist. It was alleged that beyond statutory procedures set forth by the Economy Act, the Air Force may have an alternative procedure through the Air Force Logistics Materiel Control Activity for processing equipment transfers or loans. Because OSC is not authorized to investigate disclosures and has limited access to agencies' policies, the Air Force is in the best position to determine whether an alternative transfer process exists and if that process was utilized to authorize the equipment transfer at issue. Thus, if the Air Force was unable to locate such a policy, that conclusion should be articulated in the 1213(c) Report.

Accordingly, as your letter indicates that the Air Force Manual is inapplicable and that therefore there is no potential violation of the Manual, a second extension for DI-12-2390 is not warranted based on this issue alone. However, if the Air Force still believes a second extension is necessary, we will need additional information to demonstrate that it is conducting a good faith investigation that will require more time to successfully complete.

⁵In its November 21st letter to OSC, the Air Force had also requested an extension of time.

During Dr. Hamil's interview, the IO also asked him about the Economy Act allegations. He testified that the essence of his allegation was more of a technical violation (*i.e.* a written agreement was not executed properly) than a substantive one (*i.e.* no agreement could be authorized even if there was a written document):

W: Okay, normally, there would be some kind of a contract, an agreement, something that would authorize you uh, to be able to uh, move that equipment between agencies, okay? And an MOU would be one of those ways of doing that. Uh, uh, because the laboratory uh, Sandia Laboratory and uh, oh, and Livermore is basically uh, a contractor operated, you know, federal entity that belongs to DOE . . . you wouldn't be writing a contract. It would have to be some kind of an agreement and an MOU or an MOA [memorandum of agreement] is probably the preferred way of doing it and if you don't have one, then you have to establish one in order to allow you to do that.

IO: You said preferred. Would it be unheard of to do something like this via e-mail, Director to Director?

W: Uh, I don't think so . . . I think it actually has to be a signed agreement.

Dr. Hamil later stated that, if the agreement is approved in concept but not reduced to writing, the "transfer" could not take place because "[i]t wouldn't be legal" but if "the two signature blocks on the MOU . . . [was signed] the day before they take off on the plane" then "[i]t would be all legal." This issue was again repeated:

IO: So again, if the MOU is signed, there is no violation of Air Force or Department of Defense or a government standard?

W: It gives you the legal mechanism to do it . . . if that MOU exists, then you are legally . . . if it's done right, if it says the right things . . . uh, then you are legally allowed under that MOU to then process the paperwork, to loan the equipment or whatever for some purpose that uh, is covered under that MOU that would be of value to the Air Force.

While Dr. Hamil provided the IO with much greater clarity as to what he alleged, the investigation process reviewed the entire matter to see if any related law, rule or regulation was violated or potentially violated.

LEGAL FRAMEWORK

The laws, rules and regulations at issue are set forth below, including Federal statutes, as well as Department of Defense (DoD) and Air Force rules and regulations.

Economy Act as Transfer Authority

The Government Accountability Office (GAO) has articulated a general rule of appropriations⁶ which provides that unless authorized by law a transfer of funds between agency appropriation accounts is prohibited by law. B-308762 (September 17, 2007); B-302760 (May 17, 2004), citing 31 U.S.C. § 1532. GAO has described a transfer as the movement of funds between separate appropriations that requires statutory authority. *Id.* That is, the sharing of funds across appropriation accounts, in effect, constitutes a transfer between appropriations.

In articulating this general rule of appropriations, GAO relies, in large part, on the legal interpretation of two statutes -- the Purpose Act, 31 U.S.C. § 1301(a), and the Miscellaneous Receipts Act, 31 U.S.C. § 3302(b). The Purpose Act provides that public funds may be used only for the purpose or purposes for which they were appropriated. If an agency spends its appropriated funds for a purpose different than the purpose(s) authorized, the result is a potential violation of law. Without transfer authority, the Purpose Act prohibits agencies from using its appropriations for the authorized purposes of another agency. Under the Miscellaneous Receipts Act, an agency may not, unless authorized by law, keep money it receives from sources other than congressional appropriations, but must deposit the money in the Treasury. *See* 31 U.S.C. § 3302(b). This statute prohibits an agency from keeping funds transferred from another appropriation without statutory authority.

Statutory transfer authority may be specific to an agency or more generally available to the government as a whole. Congress enacted the Economy Act, 31 U.S.C. §§ 1535 and 1536 as general transfer authority to promote economy and efficiency in the federal government. The Economy Act provides that if amounts are available and it is in the best interest of the government, an agency may place an order with another agency for goods and services that the other agency can provide, or can procure by contract, more conveniently or economically than through direct commercial acquisition by the ordering agency. *See* 31 U.S.C. § 1535. The Economy Act authorizes both inter- and intra-departmental furnishing of materials or performance of work or services on a reimbursable basis. It is a statutory exception to the Miscellaneous Receipts Act, authorizing a performing agency to credit reimbursements to the appropriation or fund charged in executing its performance. Because the Economy Act is general statutory authority allowing transfers between separate appropriations, it does not apply unless there is such a transfer.

The Economy Act states that the ordering agency must pay the actual costs of the goods or services provided by the supplying agency, and may do so either with an advance payment of the estimated cost (adjusted, as needed, after the fact based on the actual costs) or by reimbursement of the actual costs.⁷ *See* 31 U.S.C. § 1535(b).

⁶ An appropriation is statutory authority to incur financial obligations on behalf of the government. Generally, an appropriation includes limitations as to the amount of funds that may be spent, the purposes for which those funds may be used and the time in which those funds may be obligated.

⁷ Charging more than the actual costs would result in the agency placing the order using its funds for an impermissible purpose as well as the agency fulfilling the order receiving an improper augmentation to its appropriations. Charging less than the actual costs would result in the same violations but reversed. There is no bright-line formula used for the computation of actual costs. Generally, the determination will include direct and indirect costs.

The GAO has also held that, “[i]f the Economy Act authorizes the permanent transfer of equipment, and it unquestionably does, then it must also authorize ‘lesser transactions between departments on a *temporary loan* basis.’” 30 Comp. Gen. 295, 296 (1951) (emphasis in original). According to GAO, the reimbursement of actual costs is somewhat different for loans of personal property than for other Economy Act transactions. If an agency loans a piece of equipment to another agency and the borrowing agency returns it in as good condition as when loaned, the loaning agency has not incurred any direct costs. Thus, under case law, GAO has stated that the borrowing agency *should* agree “to reimburse the department for the cost, if any, necessarily incurred by it in connection with such transaction,” plus repair costs. *See* 24 Comp. Gen. 184, 186 (1944).

The Economy Act does not by its terms require a written agreement. However, under the Recording statute, Economy Act agreements *should* generally be recorded in a written agreement. *See* 31 U.S.C. § 1501;⁸ 13 Comp. Gen. 234, 237 (1934) (emphasis added). Decisions of the Comptroller General have confirmed that, unless specifically prohibited by law, the Economy Act applies to government corporations, as they are instrumentalities of the federal government. *See, e.g.*, 13 Comp. Gen. 138 (1933).

DoD and Air Force Regulations

DoD Instruction 4000.19, *Interservice and Intragovernmental Support*, dated August 9, 1995, contains the DoD policies on support agreements that involve at least one DoD-affiliated agency.

DoD Instruction 4000.19, at paragraph 4.4, permits Economy Act agreements between a DoD agency and a non-DoD agency “when funding is available to pay for the support, it is in the best interest of the United States Government, the supplying activity is able to provide the support, the support cannot be provided as conveniently or cheaply by a commercial enterprise, and it does not conflict with any other agency’s authority.” That paragraph also requires that these determinations be made by “the head of the major organizational unit ordering the support and attached to the agreement,” and that authority may be delegated to no lower than Senior Executive Service, Flag, or General Officer.

Regarding documentation, DoD Instruction 4000.19 states that “intragovernmental support that requires reimbursement *shall* be documented on a DD Form 1144” but that “[b]road areas of recurring interservice and intragovernmental support and cooperation that do not require reimbursement *should* be documented with a memorandum of agreement (MOA) or memorandum of understanding (MOU).” *See* DoD Instruction 4000.19 at paragraph 4.5 (emphasis added). Also, “[s]upport that benefits a receiver without creating additional cost to the supplier (*e.g.*, gate guards, fire protection) *may* be included on a DD Form 1144, but must be identified as non-reimbursable.” *See id.* (emphasis added). Additionally, “[p]rovision of a single

⁸ The Recording statute, 31 U.S.C. § 1501, requires written documentation to record an obligation of funds of the United States. By its terms, it does not reference loaning of equipment.

item or one time service, sales of Defense Business Operations Fund (DBOF) mission products and services, and intragovernmental sales specifically directed or authorized by law *may* be accomplished on the basis of an order or requisition without preparing a support agreement.” *See id.* (emphasis added). Finally, “[n]o-cost agreements with city, county, State, and Federal government activities, and with non-profit organizations *should* be executed with MOAs and MOUs” while “[a]greements that require the Department to reimburse a non-profit organization, city, county, or State government (other than National Guard units) *must* be executed with a contract.” *See id.* at paragraph 4.5.2 (emphasis added).

AFI 25-201, *Support Agreements Procedures*, dated May 1, 2005, Incorporating Change 1 dated January 28, 2008 and Air Force Guidance Memorandum dated May 4, 2012, states “[s]upport agreements [including those between the Air Force and non-DoD Federal activities] administered by the Air Force *are normally* documented on DD Form 1144.” *See* AFI 25-201, at paragraph 1.1.1 (emphasis added). Such documentation is only required in instances of “significant recurring support provided by the Air Force” and when the Air Force is the receiver. *See* AFI 25-201, at paragraph 1.1.2.

AFMAN 23-110, *USAF Supply Manual*, dated April 1, 2009, Incorporating through Interim Change 11, dated April 11, 2012, is implementing regulation authorized by 10 U.S.C. § 9832 on accountability and responsibility of Air Force property.⁹ The purpose of the manual is to establish “a uniform system of stock control throughout the USAF by prescribing standardized procedures for the requisition, purchase, receipt, storage, stock control, issue, shipment disposition, identification of and accounting for supplies by AF organizations, and, where applicable, by the reserve forces.” *See* AFMAN 23-110, Volume 1, Chapter 1, at paragraph 1.1.

Federal Acquisition Regulation

Federally Funded Research and Development Centers (FFRDCs) are governed under the Federal Acquisition Regulation (FAR). *See* 48 C.F.R. Part 35.017. Each FFRDC must have a sponsoring federal agency, which is responsible for overseeing the FFRDC. *See* 48 C.F.R. Part 35.017(b). However, the sponsoring agency does not generally operate, manage, or administer their FFRDC. Rather, those roles are usually accomplished by a university, group of universities, nonprofit organization(s), or industrial firm “as an autonomous organization or as an identifiable separate operating unity of a parent organization.” *See* 48 C.F.R. Part 35.017(a)(3).

The purpose of an FFRDC is defined as follows:

An FFRDC meets some special long-term research or development need which cannot be met as effectively by existing in-house or contractor resources. FFRDC’s [sic] enable agencies to use private sector resources to accomplish tasks that are integral to the mission and operation of the sponsoring agency. An FFRDC, in order to discharge its responsibilities to the sponsoring agency, has access, beyond that which is common to the normal contractual

⁹ 10 U.S.C. § 9832 simply states “[t]he Secretary of the Air Force may prescribe regulations for the accounting for Air Force property and the fixing of responsibility for that property.”

relationship, to Government and supplier data, including sensitive and proprietary data, and to employees and installations equipment and real property. The FFRDC is required to conduct its business in a manner befitting its special relationship with the Government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency. It is not the Government's intent that an FFRDC use its privileged information or access to installations equipment and real property to compete with the private sector. *However, an FFRDC may perform work for other than the sponsoring agency under the Economy Act, or other applicable legislation, when the work is not otherwise available from the private sector.*

See 48 C.F.R. Part 35.017(a)(2) (emphasis added).

SUMMARY OF EVIDENCE

Background

AFRL/RD

The Directed Energy Directorate of the Air Force Research Laboratory (AFRL/RD) researches, develops, and integrates directed energy capabilities for the Air Force. Directed energy is the emission of energy, such as high power microwaves and lasers, in an aimed direction without the use of a projectile. In military application, directed energy can be used for many purposes, including enabling precision accuracy with long-range strike capabilities at the speed of light, enabling surgically precise engagement of tactical targets to deliver controlled effects (disrupt and destroy) with minimal collateral damage, protecting air and ground forces with shields of directed energy to increase survivability and effectiveness, monitoring near and deep-space objects, and enabling high resolution imaging of objects in space.

The Directed Energy Directorate is located at Kirtland Air Force Base (AFB), New Mexico. There are four divisions: the Laser Division, the High Power Microwave Division, the Optics Division, and the Technology Division. The allegations stem from within the Laser Division (AFRL/RDL), which at the time was made up of three branches: the Advanced Electric Laser Branch (AFRL/RDLA), the Gas Laser Branch (AFRL/RDLC) and the Laser Effects Branch (AFRL/RDLE).

Sandia National Laboratories

Sandia National Laboratories (SNL) began in 1945 as "Z Division," the ordnance design, testing, and assembly arm of Los Alamos National Laboratory. It became Sandia Laboratory in 1948. Shortly thereafter, Sandia Corporation was established, as a company of Western Electric,

to manage the laboratory. In 1956, a second site was opened in California's Livermore Valley. In 1979, Congress designated SNL as a national laboratory.

SNL's primary mission is to ensure the nuclear arsenal of the United States is safe, secure, reliable, and can fully support the nation's nuclear deterrence policy. SNL also applies advanced science and technology for purposes of creating national defense systems and assessments, solving problems related to energy, climate and infrastructure security, and reducing risks associated with weapons of mass destruction and catastrophic incidents.

SNL is an FFRDC. It is still operated and managed by Sandia Corporation, which is now a wholly-owned subsidiary of Lockheed Martin Corporation. Sandia Corporation operates SNL as a contractor for the Department of Energy's (DOE's) National Nuclear Security Administration and supports numerous federal, state, and local government agencies, companies, and organizations.

The Fiber Laser Spectral Beam Combining Concept

On June 30, 2010, employees at SNL contacted Dr. Robert Peterkin¹⁰ of AFRL/RD to discuss "teaming" together on a "fiber laser spectral beam combining concept." The email stated the Air Force, the Navy, and SNL were all interested in researching this idea, and had previously discussed it informally. Dr. Peterkin testified that the experiment was important for the Air Force because "[i]t's part of our overall effort to advance the state of the art of high energy lasers for ultimate, eventually applications in the weapons arena." He testified that "I am aware of our [AFRL] desire to collaborate with the best and the brightest and Sandia [SNL] is one of those best and brightest." Dr. Peterkin testified that he was generally part of creating the collaboration on this project, stating an SNL employee "had some novel ideas for fiber laser combining and I'm sure I said something like we should look for a way to work together and that's probably the way we left that meeting when I met him back on the order of two years ago."

According to Dr. Deanna Pennington, Dr. [AFRL Scientist 1]¹¹ "had started the collaboration [with Sandia] prior to [her] getting [to AFRL/RD]." Dr. [AFRL Scientist 2]¹² confirmed that this project "was pretty much set up by [Dr. AFRL Scientist 1] to work with Sandia [SNL] on some kind of concept that he wanted to do." Dr. Pennington testified that,

Dr. [SNL Scientist] is very well known in the fiber laser community and he was developing some of the beam combining techniques independently. He was also working and trying to spectrally compress the laser pulse using a fiber component. He was paying out of his budget to develop very special fiber that was being fabricated by the University of Bath in [the] United Kingdom. Dr. [AFRL Scientist 1] and Dr. [SNL Scientist] had put the proposal in to the [Joint Technology Office (JTO)], so they

¹⁰ Dr. Peterkin has a grade of ST (SES equivalent). He is the Chief Scientist for AFRL/RD.

¹¹ Dr. [AFRL Scientist 1] was a Technical Advisor for the Advanced Electric Laser Branch. He retired in 2010 and was replaced by Dr. Hamil.

¹² Dr. [AFRL Scientist 2] has a grade of "DR-4" (GS-15 equivalent). He is a Senior Science Advisor.

were proposing to do this work jointly. Some of the work would have been done at Sandia [SNL], some of it would have been done in the AFRL laboratories. That was their original proposal.

The evidence indicates substantial Air Force interest in the “fiber laser spectral beam combining concept.” Dr. [AFRL Scientist 3]¹³ testified the Air Force had an interest in the concept for “either a tactical or strategic laser on an airplane to kill targets on the ground.” Dr. Pennington stated the concept “was very relevant to both our fiber laser research as well as our ultra short pulse laser research.” Dr. Pennington also testified to the importance of this concept to the Air Force and military at large:

[F]iber lasers are considered a very compact way of achieving high quality laser output. It is believed that that can give you a much smaller higher intensity output payload. So, the Navy is very interested in this and is using it as a missile defeat application on their helicopters. They are interested in it for ship-based applications. The Air Force is very interested in it for airborne applications. The Army is interested in it for ground-based applications. This is a major thrust area for both the high energy laser Joint Technology Office as well as for all of the individual services.

Dr. [AFRL Scientist 3] testified that she herself “was a believer in this project” and that Dr. Pennington was “very supportive of . . . she was a believer in this project.”

According to Dr. Pennington, Dr. [AFRL Scientist 1]’s attempt to get the project funded was originally unsuccessful. Dr. [AFRL Scientist 3] also testified that “[t]he first JTO proposal, I believe, was rejected. . . . They had a proposal that had been rejected, probably the previous summer, maybe the summer of 2010, in that time frame.”

Dr. Pennington testified that there were “multiple layers” of funding proposals for this concept. “The one that Dr. [AFRL Scientist 1] and the Navy put together with Sandia [SNL] would have been directly funded by the [DoD Joint Technology Office] so each organization would have received a share of the funding.”

So, now there is a branch of the Navy that was pushing for spectrally combined laser application, which is very hot right now. In addition, we’re interested in another method which really doesn’t play into this particular discussion, but we were pursuing both methods at the time. And, though Dr. [AFRL Scientist 1] was partnering with NAVAIR to try to get a proposal funded for this spectrally combined fiber laser for the helicopter applications for the Navy. That was not accepted. They went and gave a

¹³ From August 2005 until May 2010, Dr. [AFRL Scientist 3] was an Air Force Lieutenant Colonel, serving as the AFRL/RDLA (Fiber Lasers) Branch Chief. Thereafter, she was hired by AFRL as a civilian with a grade of “DR-3” (GS-14 equivalent). She is a Senior Research Physicist.

presentation at the Joint Technology Office forum, but it was not accepted for funding. So that's why they came back again and said, well we think we need information or more data to be able to substantiate our approach.

When Dr. [AFRL Scientist 1] retired in December 2010, he passed his research to Dr. [AFRL Scientist 3]. According to Dr. Pennington, Dr. [AFRL Scientist 3] had taken up the cause after Dr. [AFRL Scientist 1] retired and started working a new attempt at getting funding. Dr. [AFRL Scientist 2] testified that he thought Dr. [AFRL Scientist 3] was the Principal Investigator for the project with SNL and that she "had taken over the project that Dr. [AFRL Scientist 1] had outlined, 'cause he was not able to see it to the end." He testified that Dr. [AFRL Scientist 3] was brought in "to try to push the collaboration forward" and explained that "there's a lot of things that we do in collaboration with those national laboratories."

Dr. [AFRL Scientist 3] agreed in her testimony that she was part of the early discussions between AFRL/RD and SNL on the experiment concept. Email traffic confirms that Dr. [AFRL Scientist 3] was largely responsible for coordinating the AFRL/RD's overall management of the project, but also that she would often request advice and assistance from Dr. Pennington.

On January 1, 2011, Dr. [AFRL Scientist 3] sent an email explaining what she believed "[AFRL Scientist 1] had in mind for AFRL's contribution to the Sandia Livermore [SNL] project." Dr. [AFRL Scientist 3] stated in that email "[i]t was my vague understanding that we would work with Sandia Livermore [SNL] on the expt [experiment] when they came. Sandia Livermore [SNL] would be in the lead since it is their concept and they have the expertise. AFRL would gain by seeing first hand whether or not this is a viable concept."

On February 7, 2011, an employee of SNL came to AFRL/RD and presented the concept of the experiment. SNL was to take the lead with the experiment, but Dr. [AFRL Scientist 3] explained that SNL "needed the Air Force's help to increase the power of the laser." In a follow-up email the day after that meeting, an SNL employee told Dr. Pennington that he "look[s] forward to developing a strong partnership with you and AFRL."

Dr. [AFRL Scientist 3] testified that both she and Dr. Pennington "wanted to try to move the project forward with a goal of maybe being able to do a joint proposal [with SNL] and get some funding in order to validate the concept." Dr. Pennington testified that Dr. [AFRL Scientist 3] requested internal funding in order to develop data to include in the next funding proposal.¹⁴ Dr. Pennington testified:

¹⁴ The evidence indicates that AFRL/RD worked with SNL on a number of funding proposals to support the fiber laser research. As stated above, the first proposal in this "multiple layers" of funding proposals was the joint Navy/AF/SNL proposal involving Dr. [AFRL Scientist 1], which was not accepted for funding. After the first proposal was rejected, Dr. [AFRL Scientist 3] proposed using internal AFRL funding to collaborate with SNL to develop data in an effort to substantiate or validate the approach and overall concept. This "validation" project is the project at issue herein. Dr. [AFRL Scientist 3] was and would continue to be involved in preparing these proposals seeking long term funding from outside AFRL for a joint project with SNL on the concept of "Spectral Compression – a novel approach to use broadband fiber lasers for high power scaling."

Dr. [AFRL Scientist 3] came and said, "We think we would have a better chance of getting these funded if we had some internal funding that we could put towards it and actually demonstrate something prior to submitting the next proposal. She went to her branch chief and asked, "Can I get funding and authorization to work on this?", and engaged me. She sent, at that point in time, Dr. [AFRL Scientist 4]¹⁵ was the Tech Advisor for the division and I got a copy of the abstract that she was proposing as well as Dr. [AFRL Scientist 4].

Both of us reviewed that, thought it was in good alignment with our strategic direction and recommended that it be included as a something that we start looking at.

On February 9, 2011, Dr. [AFRL Scientist 3] emailed Dr. Pennington and discussed using an AFRL/RD amplifier for the "validation" project with SNL or potentially building a new amplifier. Dr. Pennington also testified to this effect, stating that Dr. [AFRL Scientist 3]'s proposal called for collaborating with SNL by paying for and building the laser (which may also be referred to as an amplifier), which after completion would be used with equipment already purchased by SNL. Dr. [AFRL Scientist 3]'s proposal also called for the Air Force to pay for AFRL/RD employees to travel to SNL to help set up the experiment. Dr. Pennington testified:

That was also what Dr. [AFRL Scientist 3] was proposing was go forward [sic]. That because Sandia Livermore [SNL] was actually developing this fiber on their own dime we wanted to technically evaluate it to understand whether it would apply to the efforts we were conducting. And it had some very unique properties that could have benefited us quite a bit. So, we agreed to take one of our lasers and use it to evaluate their fiber. That was what was going to help substantiate the [long term funding] proposal going forward.

Dr. [AFRL Scientist 2] testified that Dr. Pennington, on behalf of Dr. [AFRL Scientist 3],¹⁶ eventually approached him and asked if his subordinate, Mr. [AFRL Scientist 5],¹⁷ could help in building the amplifier for the "validation" experiment with SNL. Dr. [AFRL Scientist 2] testified that he gave his "OK" for Mr. [AFRL Scientist 5] to do the work. Because Dr. [AFRL Scientist 2] did not have a role in overseeing this project, he testified that he "chopped"¹⁸ Mr. [AFRL Scientist 5] to Dr. [AFRL Scientist 3] and agreed with the IO that "she can direct him to do whatever he needs to do to support her as the Principle [sic] Investigator for this project." Mr. [AFRL Scientist 5] testified that he received general direction to build the amplifier from Dr.

¹⁵ According to Dr. [AFRL Scientist 3], Dr. [AFRL Scientist 4] has retired from AFRL/RDLA.

¹⁶ Dr. [AFRL Scientist 2] believed Dr. [AFRL Scientist 3] asked Dr. Pennington to approach him, rather than do it herself, because Dr. [AFRL Scientist 3] might have been "afraid" to ask and be turned down.

¹⁷ Mr. [AFRL Scientist 5] (DR-2) is a Research Engineer within the AFRL.

¹⁸ The term "chopped" in this context meant an informal and temporary detail of a subordinate to a different supervisor.

Pennington, Dr. [AFRL Scientist 2], and Dr. [AFRL Scientist 3]. However, once he received this task he independently worked it without technical oversight from anyone at AFRL/RD.

In an email dated February 27, 2011, Dr. Pennington informed both Dr. [AFRL Scientist 3] and Dr. [AFRL Scientist 2] that she had briefed Dr. Peterkin on the proposal. She stated Dr. Peterkin “is on board” with the project and would help support funding. Dr. Pennington also indicated that she and Dr. [AFRL Scientist 2] had “discuss[ed] [the project] with [AFRL Scientist 5] on Friday [February 25, 2011] and he is also interested in participating.” In an email from Dr. [AFRL Scientist 3] to SNL on February 28, 2011, she stated “I think that we need to talk this week to determine what AFRL’s participation in the joint project is going to be so that I can include it in the proposal along with the costs.”

In an email from Dr. Pennington to Dr. [AFRL Scientist 3], Dr. Hamil, and Dr. [AFRL Scientist 2] on April 21, 2011, she stated that AFRL/RD was “collaborating on future efforts to leverage the SNL work in our beam combining efforts” and “the SNL effort is aligned with the AFRL strategic roadmap.”

In approximately April or May 2011, Mr. [AFRL Scientist 5] began building the amplifier. The construction took about two or three months. Mr. [AFRL Scientist 5] testified that, for the purposes of this project, he was the AFRL/RD employee doing the technical work, conducting the research, coordinating with SNL, and doing the principal investigating for AFRL/RD. He explained that Dr. [AFRL Scientist 3] was more of a program manager for the project, as she was generally responsible for writing proposals and guiding the project administratively.¹⁹

During this time period, Dr. [AFRL Scientist 3] worked on drafting a memorandum of understanding (MOU) for the “validation” project between AFRL/RD and SNL that could be signed. While she was the lead on these tasks, email traffic obtained by the IO during that timeframe made clear that she received assistance from Dr. Pennington, Dr. Hamil, and others within AFRL/RD. According to Dr. [AFRL Scientist 3], she was only doing the MOU because Dr. Hamil as the technical advisor, told her to do it. “Yeah, I was pursuing it because he [Dr. Hamil] told me it would be wrong to ship it out there” without an agreement.

The draft MOU stated that AFRL/RD “first became interested in the Sandia [SNL] spectral compression concept the spring of 2010” and that AFRL/RD, the Navy, and SNL were part of a JTO proposal that was previously turned down “primarily because of lack of confidence on the part

¹⁹ Mr. [AFRL Scientist 5] explained that normally a principal investigator (PI) and a program manager (PM) are designated in writing as part of the funding proposal for any given project. However, because SNL was viewed as the lead in the long term project and was the entity that would be eventually submit an official proposal requesting funds, SNL employees would be designated with these titles. While Mr. [AFRL Scientist 5] and Dr. [AFRL Scientist 3] were never officially designated in writing as PI and PM respectively, they performed the same basic duties associated with those titles on behalf of AFRL/RD. As a frame of reference, Dr. Peterkin testified to the difference between a PM and a PI. “PM would be a program manager and a program manager would be generally, again generally, in charge of, you know, costs, for a project, would be in charge of costs, schedule, risk assessment. A big program or even a moderate sized program will often times have a PM and a PI, principal investigator and the principal investigator is kind of the chief scientist type. You know, the person with the technical expertise who would, you know, guide the research and give advice to the program manager on where to spend money.”

of JTO as to the scalability of the concept to higher powers.” The draft MOU stated AFRL/RD and SNL would collaborate on this project in an effort to validate the concept by gaining “an important, intermediate data point as to whether or not this concept can be scaled to [a higher power].”

According to the draft MOU, the stated purpose was “for the construction and loan” by AFRL/RD of an amplifier to be used by SNL “to enable validation of the Sandia [SNL] concept for spectral compression of broad linewidth fiber amplifiers.” Under the draft agreement, AFRL/RD would construct the amplifier and then SNL, with assistance from AFRL/RD, would conduct the experiment using that amplifier at their laboratory in Livermore, CA. “AFRL/RD will assist in the experiment and will witness, first hand, the results.” The draft MOU specifically stated that “[t]his MOU is not a DOE Reimbursable Agreement, Cooperative Research and Development Agreement or procurement.”

According to the draft MOU, each party would be responsible for their own costs. AFRL/RD would build the amplifier, ship it to SNL at AFRL expense and be responsible for all of the costs of Mr. [AFRL Scientist 5]’s labor and travel to participate in setting up the experiment. SNL was responsible for leading the experiment at the Livermore site, analyzing data, sharing the data with AFRL/RD and preparing any technical reports. All costs associated with these efforts were SNL’s responsibility. The draft MOU stated, “[i]t is recognized that this is a research and development activity in which there is a possibility of damage to equipment.” In the event of damage to the amplifier, the draft MOU specifically provided that SNL “will have no financial responsibility.”

Dr. [AFRL Scientist 3] testified she was working the MOU for some time, but that it was eventually determined that the contractors running SNL (who work for Sandia Corporation not DOE) could not sign the MOU. As a result, “[s]omebody else high up in the Department of Energy would have had to sign it, and it felt like this is impossible, the last time we did something like this it took a year.” After the decision was made not to continue to pursue getting an MOU executed, Dr. [AFRL Scientist 3] stated she was not engaged in the process of shipping the amplifier components to SNL. However, she testified that she “went and told [Dr. Hamil]” because “he’s the one that was advising me early on, oh, you have to have an MOA in place or an MOU in place. You can’t just send anything up to these people.”

In approximately July 2011, Mr. [AFRL Scientist 5] completed building the amplifier and shipped its components to SNL,²⁰ which he valued at approximately \$15,000. The amplifier’s components are considered “expendable.” Dr. Hamil explained that the equipment was potentially reusable, “as long as you don’t damage it. It turns out that these fiber lasers, they have a way of blowing up, you might say or damaging themselves so if it were damaged, there still would be pieces of it that would be valuable but uh, it just depends on what state it’s in.” Mr. [Management Support Specialist]²¹ testified that the equipment at issue is “expendable, once

²⁰Mr. [AFRL Scientist 5] testified the amplifier was about the size of a lunchbox, but was shipped in several pieces. The shipped components were six IPG diodes, a tapered fiber bundle, a 3-Watt isolator, and a tap coupler (see Figures 1 through 5 in the Appendix). These components were assembled to construct a 10x16 inch amplifier with six slots for the IPG diodes.

²¹Mr. [Management Support Specialist] is a Management Support Specialist with the AFRL. He has been at the AFRL for more than three years, and in the logistics career field for almost 30 years with the Air Force.

they're burned up or once they're broke, um, you just order another one and replace it, basically."

Mr. [AFRL Scientist 5] stated that it was his understanding from the time he began building the amplifier that it would eventually be sent to SNL to be incorporated in the "validation" experiment and that he would travel there to work with SNL. He testified that "there was an agreement going on between AFRL and Sandia, Livermore saying we will deliver an amplifier over there to conduct research and we'll in the long term [the research] will benefit the AFRL." He further testified, however, that he was not aware of any written agreement to collaborate on the "validation" joint project.

Mr. [AFRL Scientist 5] testified that he arranged for his travel to SNL, but that his travel request was approved by the normal approval channels within his supervisory chain. He further testified that "nobody actually told me to put [the amplifier] in the box and send it over." However, when he was approved to travel, he sent the amplifier to SNL because "the amplifier has to be there before I get there. That's how I managed the timing." Mr. [AFRL Scientist 5] indicated that he did not complete any paperwork to send the components to SNL. He further testified that "I was the guy that you know, [told] the contractor hey, let's send this and is it okay then we send it [sic]." Mr. [AFRL Scientist 5] testified that building the amplifier would benefit the Air Force "as far as the proposal yes, because it's a collaborative effort. Uh, then everybody can benefit from it."²²

On July 11, 2011, Mr. [AFRL Scientist 5] traveled to SNL at Livermore, California, to receive the individual components and assemble the amplifier. He remained at Livermore for three weeks to participate in the initial experiments. Mr. [AFRL Scientist 5] testified that he needed to be there because the employees at SNL "[did not] know how to set up an amplifier." He stated that when he got there:

They didn't have anything set up. When I got there the actual situation was worse than I thought because I thought they already [had] a lab and [had] some equipment that we were just able to get do to get things done right away, just to set up amplifier. But, it actually [took] a week to set up amplifier and extra weeks to do the . . . two more weeks to do the amplifiers, I mean, to do the real raman compression study.

Dr. Pennington testified Mr. [AFRL Scientist 5]'s branch chief or division chief would have approved his travel to SNL. She also stated that she "stopped being engaged" in detail with the project once it went to Mr. [AFRL Scientist 5] to begin building the amplifier. She further testified that she "never saw any correspondence as to how the transfer of the amplifier was actually achieved. Beyond approving the funding²³ to go there, I ceased to be engaged." She

²² Mr. [AFRL Scientist 5] testified that he was aware this was a joint endeavor because he saw draft proposals which were being prepared for submission to the Air Force Office of Scientific Research (AFOSR) and the Joint Technology Office (JTO) that listed both the AFRL/RD and SNL as collaborators in those proposals.

²³ According to Dr. [AFRL Scientist 2], "all ST's [Senior Technical Advisors] receive \$100,000 a year from AFOSR." Dr. Hardy, the Director of the Directed Energy Directorate of the AFRL, confirmed that "the money is

stated “when we approved the use of our funds for [AFRL Scientist 5] to do this experiment, I approved that and then it was handled at the branch level so I wasn’t involved in any of the details of how this would occur. As a high level advisor I was informed that yeah it was going to go forward, but I wasn’t involved in the details of how it was going to go forward.” She did, however, visit Mr. [AFRL Scientist 5] when he was at SNL to review and advise on his work. According to Mr. [AFRL Scientist 5], “I [met] with Dr. Pennington over there [SNL] at the third week but I wasn’t sure if . . . I mean, she was there just to get things uh, you know, collimated²⁴ everything so you know, everybody is on the same page.”

According to Dr. [AFRL Scientist 3], the only person who had an issue with transferring this amplifier to SNL was Dr. Hamil. She stated that he thought it was wrong because “he has a fundamental belief that you have to have an MOA in place to lend something to somebody.” Dr. [AFRL Scientist 3] stated that no one else shared that opinion and that she was not aware of whether a rule exists or not covering the transfer of this equipment from the AFRL to SNL.

Dr. Hamil testified that he believed Dr. Pennington authorized the amplifier to be “transferred” to SNL in approximately August 2011 and that no written agreement was ever executed between AFRL/RD and SNL. He stated that he understood that a draft agreement had been worked, but that the transfer occurred before the agreement was finalized. He testified that he based this understanding not on firsthand knowledge, but “because [AFRL Scientist 3] told me so.” Dr. Hamil testified that Dr. [AFRL Scientist 3] had told him she had drafted an agreement, but the property was sent from AFRL/RD to SNL prior to signature. He stated “I think she [Dr. AFRL Scientist 3] was, she was upset that she had done all that work uh, to create this document and actually, uh, she was doing it of her own volition. It turns out that she was on board with sending it . . . sending the equipment but then you know, it really would have to be done legally.”

Dr. Hamil testified that the property that had been sent from AFRL/RD to SNL had not been returned at the time of his interview. He also stated that it was his understanding that the experiment using this equipment “it probably was finished within a month or two of when the equipment originally was shipped there.”

Mr. [AFRL Scientist 5] testified that at the time he went to SNL, he expected that the experiments would be completed during the time he was there and that he would then return to AFRL/RD with the amplifier he had built. However, there was a problem. He stated that the University of Bath was also collaborating with this experiment by agreeing to supply SNL with a certain type of fiber that was supposed to, according to Mr. [AFRL Scientist 5], help achieve a

normally given to an ST in order for them to . . . have some ability to affect resource allocation toward the areas where they have particular scientific interest.” He stated that Dr. Pennington “can recommend how she wants to spend that money. All ST’s are given the, the, given this as a part of their being assigned as an ST, they’re given some dollars for which they can suggest where the money gets spent, and it’s almost always we say okay, you know, it is still reviewed. Uh, they can’t, again, they cannot actually put the money any place without line authority and they don’t have line authority.” He testified that it was Dr. Pennington’s “prerogative to allocate those dollars within my approved programs.” Dr. Pennington testified that as a Senior Technical Advisor, she used \$47,000 of her funds for the project conducted by Mr. [AFRL Scientist 5].

²⁴ “Collimate” means “to make parallel” and is typically used in the context of aligning light rays all in the same direction.

higher power in the amplifier. Without this fiber, they could not conduct the full experiment. However, during the time Mr. [AFRL Scientist 5] was at SNL, the fiber never arrived. Mr. [AFRL Scientist 5] testified:

IO: And by the time you left they still had not received the Bath [fiber]?

W: They had some preliminary, you know, the preliminary one, but the parameters were not right for the wave lengths, for the color of the laser we were working on.

IO: So basically you're [sic] travel up there expired before they had the correct [fiber] in place to test the concept?

W: That's right.

IO2: Is that why you left it [the amplifier] there when you came back?

W: Yes. That's exactly the reason, because only they had been in contact with Bath University and they should have it in a month or so if they can manage to draw the [fiber].

Mr. [AFRL Scientist 5] stated that SNL did have other fiber that would "kinda give us an understanding of what was going to happen" once they got the actual fiber requested from the University of Bath, and that is what he worked with while on travel to SNL.

Mr. [AFRL Scientist 5] testified that he left the amplifier at SNL to allow a "continuation of the [compression] study." Although there was no paperwork reflecting this action, he stated the understanding was that SNL wanted to eventually use the amplifier again when the fiber arrived from the University of Bath, but that the amplifier ultimately belonged to AFRL/RD and they could retrieve it whenever they chose. Mr. [AFRL Scientist 5] also testified that at the time while awaiting the right fiber, AFRL/RD considered the project on-going and was waiting for SNL to provide results. He stated that from time to time, the SNL employee (serving as the technical PI for SNL) would contact him to ask questions about the amplifier as part of SNL's funding request.

At the time of Mr. [AFRL Scientist 5]'s interview with the IO on September 17, 2012, the amplifier was still at SNL. However, he testified that it was understood that the amplifier equipment belonging to the AFRL/RD would be eventually returned to the AFRL/RD based on his discussions with SNL employees in May 2012. According to Mr. [AFRL Scientist 5], SNL appeared to be continuing to use the amplifier for the same project:

IO2: Okay. And what did they tell you in May that they were doing with your amplifier?

W: They were just trying to turn it on and see if we could get back to the same power when I was there.

By the time of that conversation, Mr. [AFRL Scientist 5] had moved on to other projects and was no longer involved in this "validation" experiment. However, Mr. [AFRL Scientist 5] explained that, based on conversations with his counterpart at SNL, SNL would "turn [the amplifier] on

once a month and it was really just used for the compression study.” Mr. [AFRL Scientist 5] surmised that SNL may have continued to use the amplifier to generate more data as they awaited the fiber from the University of Bath. Mr. [AFRL Scientist 5] also testified about the potential for SNL to be using the amplifier for other purposes:

IO2: Would it [the amplifier] have been useful for anything else, or was it built specifically for this specific experiment?

W: Oh you can use it for a lot of things, yes. Um, it’s not really built specific for this experiment. You can also do other type of studies, yes.

IO2: Okay and as far as you know you don’t think that SNL was using it for other type of studies?

W: I don’t think they did because the way they set up the amplifier is already hooked up into a compression study. They’d have to . . .

IO2: And that’s what they needed you kinda to help them come and help them set it up.

W: Right. Right, that’s the part. So, once that part’s done, it would take like, a person [who] really know[s] how to build the amplifier again to reconfigure it.

IO2: And that’s the whole reason you came up was that they didn’t have someone like that?

W: Right.

When asked if Mr. [AFRL Scientist 5] was supposed to return with the amplifier, Dr. Pennington answered “[t]hat one is just not in my purview. I paid for the experiment and that’s kind of where I didn’t get involved after that point.” She was clear in her testimony that she is a senior advisor to the Director, and that she has neither supervisory authority nor authority over the procurement or control of equipment. According to her IPA agreement, she is not a supervisor but rather her position description states that she is “responsible for planning, conducting, evaluating, and coordinating theoretical and experimental studies in laser device technology within AFRL and with other DoD laboratories and agencies.” Dr. Pennington was also asked if there was an intention for the amplifier to change ownership to SNL. She responded:

No, to my knowledge there was not an intention for a change of ownership. I believe he left it there because they anticipated being awarded one of these two proposals that was submitted to the Office of Scientific Research or the one that was submitted to the [JTO], but that didn’t end up getting funded last December. So, they did have a collaboration at least through the end of the year while they were trying to get those proposals and I believe they’re still trying to pursue this as part of their technical approach through the division.

While she was not certain whether the amplifier was still at SNL, Dr. Pennington did testify that they “had some very interesting results from the experiments that they did with Mr. [AFRL Scientist 5]” and of the continuing nature of this project:

Sandia [SNL] is still pursuing this spectral approach under their own funding internally, I believe and that is likely why the Electric Laser [B]ranch chose to leave that amplifier there because we have quite a few of these amplifiers. They left it there in, I guess, [in] a temporary mode until . . . to allow them to continue to collect some data that does benefit our program, with the agreement that anytime they call and say we need this amplifier it would obviously have to come back because it belongs to AFRL . . . I’m assuming that the branch chief agreed to the extension of leaving it there because they are responsible for the resources for their branch.

Email traffic obtained by the IO also showed that the results of the experiment were shared between SNL and AFRL/RD, and that the experiment Mr. [AFRL Scientist 5] participated in was only one step in a multi-faceted and potentially lengthy process of researching this concept. However, Dr. Hamil testified that it was his understanding that the experiment “was finished within a month or two of when the equipment originally was shipped there” and Dr. [AFRL Scientist 3] testified that she believed the project was “pretty dead at this point.” In clarifying this point, Dr. [AFRL Scientist 3] explained “I mean, it’s, you know, it’s dead. I don’t even know. [AFRL Scientist 5] went out to Sandia Livermore, I guess, in the summer of 2011 to do experiments with them for a couple weeks. I really don’t know whatever came out of that either.”

According to Mr. [AFRL Scientist 5], despite the attempts of the University of Bath over the course of a year, they were not able to create the right fiber for the experiment because “that particular draw is too difficult for Bath to do it.” Mr. [AFRL Scientist 5] testified that around February or March of 2012, the decision was made for the University of Bath to drop out of the project. Mr. [AFRL Scientist 5] testified that he believed at that point, the experiment was “pretty much done” because the technical problem associated with trying to create the right fiber is a “showstopper.” On December 14, 2012, the amplifier was shipped from SNL to Dr. [AFRL Scientist 3] at AFRL/RD. It arrived on December 19, 2012. Mr. [AFRL Scientist 5] could not explain why the amplifier was not returned earlier, but stated “I think it’s just been sitting there” as opposed to SNL actually using it. However, Mr. [AFRL Scientist 5] also stated that had the amplifier been returned early, it would “[p]robably sit there [at AFRL/RD]” because it would not be needed for any on-going project.²⁵

Dr. David Hardy,²⁶ the Director of the Directed Energy Directorate of the AFRL, stated that he was not aware of the collaboration at the time it was being worked. However, he explained in general “[t]o the best of my knowledge, uh, again if it’s, a scientist-to-scientist collaboration, uh, there is not a requirement, or we don’t have a requirement for written MOA.”

²⁵ Mr. [AFRL Scientist 5] also explained that the amplifier or its components could be used at AFRL/RD, if needed.

²⁶ Dr. Hardy, a member of the Senior Executive Service, is the Director of AFRL/RD.

Further, he explained it is within the prerogative of each branch chief to collaborate with other entities if it is considered by him or her to be to the benefit of the Air Force:

We're a research organization; it's sort of assumed that we're going to have broad collaboration across the community because that's the way we optimize our research dollars by leveraging other people's research and being able to work with other folks whenever we can.²⁷

Dr. Hardy explained that if equipment is transferred to another national laboratory, "typically" a written agreement would be accomplished, but only for the purpose of keeping track of it.

With regard to Dr. Pennington's authority, Dr. Hardy testified:

[S]he has been operating since I got here as my senior strategist for lasers . . . she provides suggestions on where we should go strategically, but she does not have any line authority. She cannot actually direct anybody to do anything. She is purely, you know, ST's are purely advisory, they are by definition I believe, even by statute not supervisory positions, so she's not in the supervisory chain, and therefore she cannot sign off on sending equipment, uh, allocating dollars, she can't sign, you know, she's not a, uh, she cannot approve contractual actions. She can suggest and she's a strong personality, she strongly suggests on occasion, but she doesn't have any authority, uh, you know, if equipment is going to be transferred, she cannot sign the document that transfers equipment.

Dr. Robert Peterkin, Chief Scientist for the Directed Energy Directorate, provided a similar description of Dr. Pennington's authorities:

W: She is the senior technologist for the laser part of the Direct Energy portfolio. So, she's not a line manager, she's not in charge of people, she's not in charge of budget, but because of her knowledge and rank her technical expertise is the thing that's valued and we all listen to the technical advice given by people like her.

IO: Does she have any directing authority even though she doesn't have any people working for her. Can she direct activities?

W: No. She . . . not really. Formally she can't direct activities, but again, she gives expert advice and opinions and every one of us should and most of us do, take her advice seriously.

²⁷ Dr. [AFRL Scientist 2] similarly testified, stating succinctly that with respect to research and the AFRL mission, "I can collaborate with whomever I want."

Witness testimony and evidence collected support the testimonials above that Dr. Pennington performed an advisory and technical expert role in regards to the spectral compression experiment. Specifically, over 200 emails gathered as evidence reveal that Dr. Pennington was heavily involved in advising the project participants during the planning stage, but once she had approved the funding for the project her role diminished. The investigation found no evidence of Dr. Pennington either “disregarding” an established process or “ordering” the transfer of AFRL equipment.

Dr. Peterkin wrapped up by testifying:

Look, I, like you, take whistle blower complaints quite seriously, it is a quite serious issue to be dealing with, but I’m not seeing, I’m not really seeing unethical behavior here, based on what you’ve told me. If some paperwork that should have been put in place wasn’t put in place, then that was a mistake, but I’m not sure who would have been, whose job it was to rectify or made sure that mistake didn’t happen. Sort of not Dr. Pennington’s job. Her job as the Senior Technologist for Lasers is to give technical advice and that includes making contact with other research laboratories and establishing collaborations. She gets graded on her ability to establish nationally important collaborations. So, everything I’ve heard so far sounds like she was doing her job. Again, if paperwork should have been filed that wasn’t and, I don’t know, it would probably be worth finding out who failed to do that job, and rectify the process. But, boy, I’m having a hard time seeing any unethical behavior on the part of Dr. Pennington or anybody else, based on what you’ve told me.

The LMCA

Mr. [Management Support Specialist] is an equipment custodian at AFRL/RD. In that capacity, he “maintain[s] all the equipment in the laboratories under our division.” He testified that the LMCA is an organization, not a process, and that they are the “supply focal point” for the AFRL/RD and “basically they oversee all the equipment accounts.”

Mr. [Management Support Specialist] testified that, per AFMAN 23-110, the LMCA tracks certain types of equipment. Mr. [Management Support Specialist] testified that he was aware the amplifier components had been shipped to SNL. He stated that property was considered “non-accountable” and not subject to AFMAN 23-110. He explained that there is no law, rule or regulation that would require documenting the transfer of such non-accountable equipment to another organization or entity.²⁸ Mr. [Management Support Specialist] further testified:

²⁸ [Management Support Specialist] did note that it would nevertheless be good practice to create such documentation.

IO2: So do one of those links you sent us [to AFMAN 23-110] discuss how you manage non-accountable expendable equipment?
W: Negative.

According to Dr. Hamil, the property sent to SNL was “non-accountable.” Mr. [AFRL Scientist 5] also made clear that everything he made and shipped for the joint validation experiment with SNL was non-accountable equipment.

The IO reviewed AFMAN 23-110. He found “that the material items involved in this case do not meet the characteristics of any of the four categories applicable to Ch. 21.”

ANALYSIS

The investigation revealed that the type of transaction which occurred between AFRL/RD and SNL in the summer of 2011 did not trigger the Economy Act. The Economy Act applies where one agency places an order for goods or services with another agency. The evidence adduced herein reflects a joint collaborative effort between AFRL/RD and SNL where each party bore the cost of its contribution to the joint project. SNL did not place an order with AFRL/RD for an amplifier; it was AFRL/RD’s contribution to the joint project. As such, it was built and sent to SNL *for an Air Force purpose*. It was unanimously agreed to by all witnesses and fully corroborated with the documentary evidence that the cost and use of the amplifier was justified with a clear benefit to the Air Force and wholly within the mission of AFRL/RD. AFRL/RD is authorized to use its funds and property to accomplish its mission. Moreover, there was no transfer of funds or property. The draft MOU contemplated that the amplifier remained Air Force property and even if the amplifier was damaged, SNL bore no responsibility to repair it.

Dr. Hamil made clear in his testimony that he did not object to AFRL/RD’s participation with SNL on this project. He confirmed, like all the witnesses did, that the Air Force had the authority and a good reason to invest its time and resources in this particular research project. Dr. Hamil explained the thrust of his allegation was a highly technical one, not a substantive one. Namely, he believed it was “illegal” not to have the agreement in writing. However, he is mistaken. Even if, *arguendo*, the Economy Act applied to this joint project, the Economy Act, by its terms and as held in GAO case law, does not require a written agreement.

DoD Instruction 4000.19 addresses support between the DoD and other federal agencies. Specifically, section 4.5 covers documentation of “support and cooperation.” The DoD guidance stipulated that “intragovernmental support that requires reimbursement shall be documented on a DD Form 1144.” (emphasis added). Whereas, for cooperation that does not require reimbursement, the DoD Instruction stated only the support “*should* be documented with a memorandum of agreement.” (emphasis added). Furthermore, provision of a single item or one-time service may be accomplished “without preparing a support agreement.” AFI 25-201 has similar language, calling for support agreements to be *normally* documented in writing.

As the project at issue involved only collaborative effort and no reimbursement, the DoD Instruction and AFI 25-201 do not require a written agreement. While it is generally better practice to document when government property is physically moved from one agency to another, there is no requirement, in the circumstances presented here, that it must be. As such, and because the amplifier at issue was paid for by the AFRL and used for an AFRL/RD purpose in a joint project with SNL, there is no law, rule or regulation that was violated.

While the amplifier was left at SNL for a lengthy period of time, the evidence made clear that it was being held in anticipation of receiving the necessary fiber from the University of Bath. According to Mr. [AFRL Scientist 5], the amplifier was only used by SNL for the compression study. Further, AFRL/RD was not in need of the amplifier or its components at the time, and if such a need arose AFRL/RD could have retrieved the amplifier at any time. As Mr. [AFRL Scientist 5] testified, even after it was determined that the University of Bath would not be able to make the necessary fiber, the amplifier was simply "sitting" at SNL rather than "sitting" at AFRL/RD. The amplifier has since been returned to AFRL/RD. With this evidence, there is no indication of any violation of law, rule or regulation.

The allegation referred by OSC also stated that Dr. Pennington was responsible for ordering the "transfer" without authority and bypassing "appropriate personnel." While this issue was not reached because the substance of the allegation was not substantiated, it should be noted that the IO found no evidence to support a conclusion that Dr. Pennington directed or ordered shipment of the AFRL amplifier to SNL. The majority of emails regarding the project were initiated by Dr. [AFRL Scientist 3] and most of Dr. Pennington's inputs were advisory, not directive.

With regards to "LMCA Process," this part of the referred allegation states a legal nullity in that AFMAN 23-110 does not create a transfer authority in any way similar to the Economy Act. Mr. [Management Support Specialist] confirmed that AFMAN 23-110 has no bearing on the AFRL/RD amplifier at issue, Dr. Hamil stated the amplifier was "non-accountable," and Mr. [AFRL Scientist 5] made clear that everything he shipped for the joint project with SNL was "non-accountable." Further, after substantial review, it was found the amplifier components do not meet the characteristics of any of the four categories applicable to AFMAN 23-110, Chapter 21. Notably, the whistleblower denied making this allegation, and OSC could not explain their rationale for referring the allegation. As such, this allegation was not substantiated.

In sum, the investigation revealed no violations or apparent violations of law, rule or regulation.

ACTIONS TAKEN OR PLANNED AS A RESULT OF THE INVESTIGATION

No actions have been taken or are planned as a result of this investigation.

CONCLUSION

Upon review of the evidence and testimony adduced during the investigation, and based upon a preponderance of the evidence, there were no findings of any violation or apparent violation of law, rule, or regulations. The investigation did not reveal a criminal violation. Therefore, referral to the Attorney General, pursuant to 5 U.S.C. §§ 1213(c) and (d) is not appropriate. This Report is submitted in satisfaction of my responsibilities under 5 U.S.C. §§ 1213(c) and (d).

APPENDIX

WITNESSES INTERVIEWED

(Alphabetical Order)

Ms. [Witness 1]
Dr. Roy Hamil (Complainant)
Dr. David Hardy
Dr. [AFRL Scientist 3]
Ms. [Witness 2]
Mr. [Management Support Specialist]
Mr. [AFRL Scientist 5]
Ms. [Witness 3]
Ms. [Witness 4]
Dr. Deanna Pennington
Dr. Robert Peterkin
Dr. [AFRL Scientist 2]
Mr. [Witness 5]
Ms. [Witness 6]

ABBREVIATIONS USED

AF – Air Force
AFB – Air Force Base
AFI – Air Force Instruction
AFRL – AF Research Laboratory
AFRL/RD – AFRL Directed Energy Directorate
AFRL/RDL – Laser Division of the AFRL/RD
AFRL/RDLA – The Advanced Electric Laser Branch of AFRL/RDL
AFRL/RDLC – The Gas Laser Branch of AFRL/RDL
AFRL/RDLE – The Laser Effects Branch of AFRL/RDL
AFOSR – Air Force Office of Scientific Research
DoD – Department of Defense
DOE – Department of Energy
FAR – Federal Acquisition Regulation
FFRDC – Federally Funded Research and Development Center
GAO – Government Accountability Office
IG – Inspector General
IO – Investigating Officer
IPA – Intergovernmental Personnel Act
JTO – Joint Technology Office
LMCA – Logistics Materiel Control Activity
MIPR – Military Interdepartmental Purchase Requests
MOA – Memorandum of Agreement
MOU – Memorandum of Understanding

OSC – Office of Special Counsel
RDT&E – Research, Development, Tests, and Evaluation
SAF/IG – Air Force Inspector General
SAF/IGS – Senior Officials Directorate of the Office of the Inspector General
SNL – Sandia National Laboratories
ST – Scientific or Professional position

FIGURES 1-5

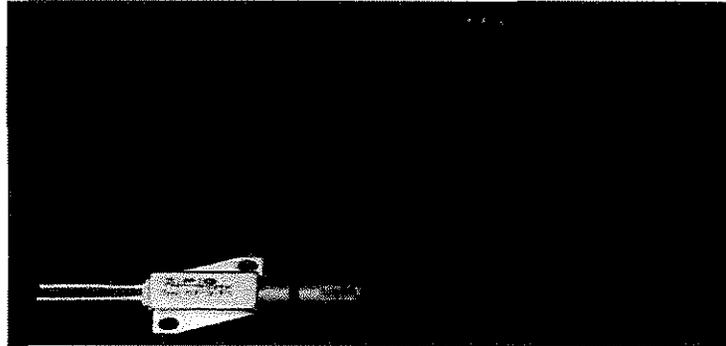


Figure 1: LPG Diode

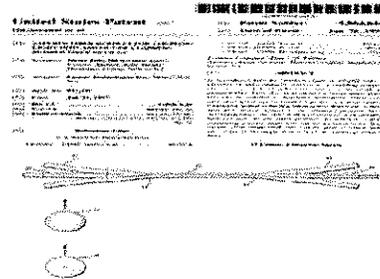


Figure 2: Tapered fiber bundle

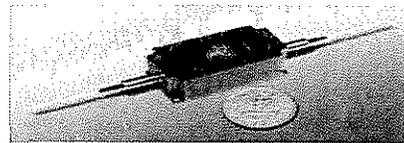


Figure 3: 3W Isolator



Figure 4: Tap Coupler

Figure 5: Completed Amplifier (with 6 slots for diodes)

