JUL 27 2011

TO: Thomas R. Frieden, M.D., M.P.H.
Director
Centers for Disease Control and Prevention

FROM: Daniel R. Levinson *Daniel R. Levinson*
Inspector General

SUBJECT: Nationwide Review of Federal Laboratories' Compliance With Select Agent Regulations (A-02-09-02023)

The attached final report provides the results of our review of Federal laboratories' compliance with select agent regulations.

This report contains restricted, sensitive information that may be exempt from release under the Freedom of Information Act, 5 U.S.C. § 552. The report will not be posted on the Internet. If information in the report is released pursuant to a request under the Act, the restricted, sensitive information and other information exempt from release will be redacted.

If you have any questions or comments about this report, please do not hesitate to call me, or your staff may contact Lori S. Pilcher, Assistant Inspector General for Grants, Internal Activities, and Information Technology Audits, at (202) 619-1175 or through email at Lori.Pilcher@oig.hhs.gov. We look forward to receiving your final management decision within 6 months. Please refer to report number A-02-09-02023 in all correspondence.

Attachment

Department of Health & Human Services

OFFICE OF INSPECTOR GENERAL

NATIONWIDE REVIEW OF FEDERAL LABORATORIES' COMPLIANCE WITH SELECT AGENT REGULATIONS

[redacted]

Daniel R. Levinson
Inspector General

July 2011
A-02-09-02023

Office of Inspector General

http://oig.hhs.gov

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health & Human Services (HHS) programs, as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by the following operating components:

Office of Audit Services

The Office of Audit Services (OAS) provides auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations. These assessments help reduce waste, abuse, and mismanagement and promote economy and efficiency throughout HHS.

Office of Evaluation and Inspections

The Office of Evaluation and Inspections (OEI) conducts national evaluations to provide HHS, Congress, and the public with timely, useful, and reliable information on significant issues. These evaluations focus on preventing fraud, waste, or abuse and promoting economy, efficiency, and effectiveness of departmental programs. To promote impact, OEI reports also present practical recommendations for improving program operations.

Office of Investigations

The Office of Investigations (OI) conducts criminal, civil, and administrative investigations of fraud and misconduct related to HHS programs, operations, and beneficiaries. With investigators working in all 50 States and the District of Columbia, OI utilizes its resources by actively coordinating with the Department of Justice and other Federal, State, and local law enforcement authorities. The investigative efforts of OI often lead to criminal convictions, administrative sanctions, and/or civil monetary penalties.

Office of Counsel to the Inspector General

The Office of Counsel to the Inspector General (OCIG) provides general legal services to OIG, rendering advice and opinions on HHS programs and operations and providing all legal support for OIG's internal operations. OCIG represents OIG in all civil and administrative fraud and abuse cases involving HHS programs, including False Claims Act, program exclusion, and civil monetary penalty cases. In connection with these cases, OCIG also negotiates and monitors corporate integrity agreements. OCIG renders advisory opinions, issues compliance program guidance, publishes fraud alerts, and provides other guidance to the health care industry concerning the anti-kickback statute and other OIG enforcement authorities.

Notices

THIS REPORT CONTAINS RESTRICTED INFORMATION

This report should not be reproduced or released to any other party without specific written approval from OAS.

OFFICE OF AUDIT SERVICES FINDINGS AND OPINIONS

The designation of financial or management practices as questionable, a recommendation for the disallowance of costs incurred or claimed, and any other conclusions and recommendations in this report represent the findings and opinions of OAS. Authorized officials of the HHS operating divisions will make final determination on these matters.

EXECUTIVE SUMMARY

BACKGROUND

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002, 42 U.S.C. § 262a, requires the U.S. Department of Health & Human Services (HHS) to regulate select agents and toxins (referred to as "select agents"), which are biological materials that have the potential to pose a severe threat to public health and safety. Within HHS, this responsibility has been assigned to the Centers for Disease Control and Prevention (CDC), Division of Select Agents and Toxins (DSAT). In collaboration with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), DSAT establishes select agent regulations and monitors and enforces compliance with the regulations.

Any government agency (Federal, State, or local); academic institution; research organization; or other legal entity that possesses, uses, or transfers select agents must register with DSAT or APHIS and comply with Federal select agent regulations. (We refer collectively to these entities as "laboratories.") Pursuant to 42 CFR part 73, laboratories must, among other things, designate a Responsible Official authorized to ensure compliance with the regulations; restrict access to select agents to individuals approved by the HHS Secretary based on a security risk assessment by the Attorney General (referred to as "approved individuals"); develop and implement security, biosafety, and incident response plans; provide training on biosafety and security; maintain detailed select agent inventory and access records; and comply with select agent transfer requirements.

Following the 2001 terrorist attacks and anthrax release, we conducted a series of reviews of compliance with Federal select agent regulations by State, local, nonprofit, and university laboratories. In April 2008, we began a series of similar reviews at six Federal laboratories for which DSAT had oversight responsibility. We found weaknesses in controls over select agents at each of the six laboratories.

OBJECTIVES

Our objectives were to (1) summarize the findings in our six individual reviews and (2) determine whether DSAT's oversight was adequate to ensure that the selected Federal laboratories complied with certain Federal select agent regulations.

SUMMARY OF FINDINGS

All six laboratories that we reviewed properly appointed a Responsible Official and developed and implemented a biosafety plan. However, the laboratories did not always restrict access to select agents to approved individuals, maintain complete select agent inventory and/or access records, ensure that approved individuals received select agent training, ensure that security and incident response plans functioned as intended, and comply with select agent transfer requirements.

We found that DSAT did not effectively monitor and enforce certain Federal select agent regulations at the laboratories. Specifically, DSAT inspections did not always identify noncompliance with Federal select agent regulations, and DSAT personnel entered incorrect select agent registration information into its national registry database for one laboratory. These weaknesses may have contributed to the laboratories' not being in full compliance with certain Federal select agent regulations, which may have put public health and safety at increased risk.

RECOMMENDATION

We recommend that CDC direct DSAT to consider the information presented in this report to ensure that Federal laboratories comply with Federal select agent regulations by (1) ensuring that inspector checklists are detailed enough to identify all noncompliance with Federal select agent regulations and implementing a formal, standardized program for training inspectors and (2) following its procedures for amending laboratories' registration information and including details on the registration changes in its amendment letters.

CENTERS FOR DISEASE CONTROL AND PREVENTION COMMENTS

In its comments on our draft report, CDC concurred with our recommendation and stated that it has verified through inspections that each entity listed in our report has resolved the deficiencies noted in our prior audit reports. In addition, DSAT described actions that it had taken or planned to take to address our findings.

CDC's comments, except for technical comments, are included as the Appendix.

TABLE OF CONTENTS

INTRODUCTION

BACKGROUND

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002, 42 U.S.C. § 262a, requires the U.S. Department of Health & Human Services (HHS) to regulate select agents and toxins (referred to as "select agents"), which are biological materials that have the potential to pose a severe threat to public health and safety.[1] Within HHS, this responsibility has been assigned to the Centers for Disease Control and Prevention (CDC), Division of Select Agents and Toxins (DSAT).[2]

Any government agency (Federal, State, or local); academic institution; research organization; or other legal entity that possesses, uses, or transfers select agents must register with DSAT or APHIS and comply with Federal select agent regulations. (We refer collectively to these entities as "laboratories."[3])

Division of Select Agents and Toxins

In collaboration with APHIS, DSAT establishes select agent regulations and agency policies and monitors and enforces compliance with the regulations. To ensure that laboratories meet the requirements for possession, use, and transfer of select agents, DSAT's written policies and procedures require that a laboratory inspection be performed by DSAT- and/or APHIS-authorized designees before registration, renewal, or certain amendments to a laboratory's registration. These inspections may be performed more often, as deemed necessary, based on a laboratory's compliance history.

Federal Select Agent Regulations

Pursuant to 42 CFR part 73, laboratories must, among other things, designate a Responsible Official authorized to ensure compliance with select agent regulations; restrict access to select agents to individuals approved by the HHS Secretary based on a security risk assessment by the Attorney General (referred to as "approved individuals"); develop and implement security, biosafety, and incident response plans; provide training on biosafety and security; maintain detailed select agent inventory and access records; and comply with select agent transfer requirements.

---

[1] For purposes of this report, "select agents" refers to all agents and toxins listed in 42 CFR §§ 73.3 and 73.4.

[2] DSAT regulates select agents that could pose a severe threat to public health and safety. The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), regulates select agents that could pose a severe threat to animal or plant health, or animal or plant products. DSAT and APHIS coordinate regulatory activities for those select agents that may affect both humans and animals (commonly referred to as "overlap select agents").

[3] Laboratories that possess, use, or transfer select agents regulated by only DSAT or only APHIS must register with the appropriate agency. However, laboratories may choose to register with either agency (but not both) if they possess, use, or transfer overlap select agents.

Office of Inspector General Reviews

Following the 2001 terrorist attacks and anthrax release, we conducted a series of reviews of compliance with Federal select agent regulations by State, local, nonprofit, and university laboratories. In April 2008, we began a series of similar reviews at six Federal laboratories for which DSAT had oversight responsibility.[4] We found weaknesses in controls over select agents at each of the six laboratories.

OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives

Our objectives were to (1) summarize the findings in our six individual reviews and (2) determine whether DSAT's oversight was adequate to ensure that the selected Federal laboratories complied with certain Federal select agent regulations.

Scope

Our reviews of the six laboratories and DSAT covered various periods between April 18, 2005, the effective date of HHS's final rule for implementing select agent regulations,[5] and April 30, 2009. We did not perform an indepth review of the laboratories' or DSAT's internal control structure. Rather, we limited our review to controls related to the laboratories' and DSAT's compliance with certain Federal select agent regulations. Specifically, we reviewed DSAT's controls for inspecting laboratories and amending laboratories' registrations.

We conducted our fieldwork at six Federal laboratories throughout the United States and at DSAT's offices in Atlanta, Georgia.

Methodology

To accomplish our objectives:

- we reviewed applicable Federal laws, regulations, and guidance;
- we, for each of the six laboratories:
  - reviewed DSAT's records related to the laboratory's registration;
  - reviewed the most current DSAT inspection report;

[4] Two of the laboratories were operated by CDC, two by the Food and Drug Administration (FDA), and two by the National Institutes of Health (NIH).

[5] 70 Fed. Reg. 13294-13325 (Mar. 18, 2005).

- reviewed and tested the laboratory's security plan(s), biosafety plan(s), and incident response plan(s);

- held discussions with laboratory officials to gain an understanding of the laboratory's policies and procedures for implementing select agent regulations;

- reviewed laboratory records related to biosafety and security training for approved individuals;

- reviewed the laboratory's select agent inventory and access records; and

- reviewed the laboratory's procedures for transferring select agents;

- we reviewed DSAT's written policies and procedures for conducting inspections, training its inspectors, and amending laboratories' registrations; and

- we interviewed DSAT officials to gain an understanding of DSAT's inspections process, inspector training, and registration procedures.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

FINDINGS AND RECOMMENDATION

All six laboratories that we reviewed properly appointed a Responsible Official and developed and implemented a biosafety plan. However, the laboratories did not always restrict access to select agents to approved individuals, maintain complete select agent inventory and/or access records, ensure that approved individuals received select agent training, ensure that security and incident response plans functioned as intended, and comply with select agent transfer requirements.

We found that DSAT did not effectively monitor and enforce certain Federal select agent regulations at the laboratories. Specifically, DSAT inspections did not always identify noncompliance with Federal select agent regulations, and DSAT personnel entered incorrect select agent registration information into its national registry database for one laboratory. These weaknesses may have contributed to the laboratories' not being in full compliance with certain Federal select agent regulations, which may have put public health and safety at increased risk.

FINDINGS AT SIX FEDERAL LABORATORIES

The table below summarizes our findings at the six Federal laboratories we reviewed.

Office of Inspector General Findings

	1	2	3	4	5	6	
Laboratory (Report No.)	Improper Access to Select Agents	Inadequate Inventory and/or Access Records	Lack of Training	Security Plan Deficiencies	Inadequate Incident Response Plan	Unapproved Select Agent Transfers	Areas With Weaknesses
[redacted]	X	X	X		X		4
[redacted]	X	X	X				3
[redacted]				X	X		2
[redacted]			X	X		[redacted]	2
[redacted]	X	X	X			X	4
[redacted]			X				1
Total	**3**	**3**	**5**	**2**	**2**	**1**	**16**

- We found that three laboratories had weaknesses that could have allowed access to select agents by unapproved individuals (column 1). For example, [redacted][6] As a result, the individuals were still able to gain access to select agent areas. The laboratory's access records showed that the 3 individuals entered select agent areas a total of 35 times after they stopped working with select agents.

[6] During our audit period, the Responsible Official amended the laboratory's registration records to cancel the access rights of those three individuals.

- The same three laboratories did not maintain accurate inventory and/or access records as required by select agent regulations (column 2). For example, the CDC Edward R. Roybal laboratory's inventory was inaccurate because it stored some select agents in areas not listed on its registration. In April 2008, during a reorganization of laboratory space, a scientist found two select agent vials stored in a drawer in a laboratory area that was not listed on the laboratory's certificate of registration and was not secured for select agents. In addition, the NIH [redacted], laboratory did not maintain accurate access records of visitors. The main campus' security plan required that unapproved individuals and their approved escorts sign a visitors' log before entering select agent areas. However, the visitors' log at one laboratory showed that two unapproved visitors from the maintenance department had signed the log but an approved escort had not. Laboratory officials stated that the visitors had been accompanied by an approved individual who did not sign the log as required.

- Five of the laboratories did not ensure that approved individuals received select agent training (column 3). For example, the CDC Division of Vector-Borne Infectious Diseases laboratory did not provide biosafety and security training to 88 of its 168 approved individuals before granting them access to select agent areas. Although the individuals subsequently received training, it was delayed by as long as 1 year.

- Although all six laboratories had security plans, the plans for two laboratories did not meet one or more regulatory requirements for developing and implementing plans (column 4). For example, the [redacted] security plan did not contain procedures for changing the combination on the lockbox used to store the key to the select agent freezer following staff changes. The security plan also did not contain provisions for documenting that employees understood and complied with security procedures.

- The incident response plan for two laboratories did not function as intended (column 5). For example, the [redacted] incident response plan contained specific procedures for announcing emergency situations to all building personnel via the public address system. Even though the laboratory's documentation showed that the plan was tested annually, we determined through testing that emergency announcements could not be heard over the public address system in select agent laboratory and storage areas.

- One laboratory did not always obtain approval from DSAT to transfer select agents or ensure that only approved individuals accepted delivery of select agents (column 6). Specifically, the Edward R. Roybal laboratory made five separate transfers of viable select agents without DSAT authorization to do so. One transfer was shipped to a registered entity, while the remaining four transfers were shipped to unregistered entities.

INADEQUATE OVERSIGHT

DSAT's oversight at the selected laboratories did not adequately ensure that the six Federal laboratories complied with certain Federal requirements because of flaws in its inspections process and the process for updating its national registry database. Specifically, DSAT inspections were not consistent and did not always identify noncompliance with Federal select agent regulations, and for one laboratory, DSAT officials entered incorrect select agent registration information into its national registry database.

Division of Select Agents and Toxins Inspections

Inspections are a critical element of DSAT's oversight program and are provided for by Federal regulation (42 CFR § 73.18) and DSAT's written policies and procedures.

DSAT's inspections at the six Federal laboratories identified several instances of noncompliance with Federal select agent regulations; however, the inspections did not identify all deficiencies. Specifically, a comparison of our findings at the 6 laboratories to DSAT's site-inspection reports[7] indicated that DSAT did not identify any of the 16 total deficiencies we identified. This occurred because checklists that inspectors followed in performing inspections were not sufficiently detailed to ensure that inspectors would identify all instances of noncompliance. Specifically, the checklists generally restated Federal regulations and did not contain detailed instructions for evaluating each item. Further, DSAT did not have a formal, standardized program for training inspectors. DSAT officials stated that inspector trainees were expected to develop their skills for evaluating laboratories from experienced inspectors while doing the job. These two factors resulted in inconsistencies in inspections and, ultimately, in a failure to identify instances of noncompliance with the regulations.

Laboratory Registration Amendments

Pursuant to 42 CFR § 73.7(h), a laboratory may amend its certificate of registration to reflect changes in its circumstances (e.g., replacement of the Responsible Official or other personnel changes, changes in the activities involving any select agents, or the addition or removal of select agents). Select agent regulations require the Responsible Official to notify DSAT of any changes to the certification of registration. Before any change, the Responsible Official must apply for an amendment by submitting the Application for Registration for Possession, Use, and Transfer of Select Agents and Toxins (APHIS/CDC Form 1) to DSAT. In accordance with DSAT's procedures for processing amendments, on receipt of APHIS/CDC Form 1, DSAT personnel revise the laboratory's registration record in the National Select Agent Registry (NSAR) database.[8] The procedures state that a DSAT team leader must then perform a quality assurance review of the change to ensure that the information entered into the NSAR database is

[7] We reviewed the most recent DSAT site-inspection report completed before our fieldwork.

[8] The NSAR database is shared by DSAT and APHIS and contains registration information for each laboratory, including a list of select agents, a list of individuals who have access to select agents, laboratory information, and select agent transfers to and from the laboratory.

accurate. Pursuant to 42 CFR § 73.7(h)(2), DSAT then notifies the laboratory in writing that DSAT has approved the amendment to the certificate of registration.

The NSAR registration record for one laboratory (CDC Division of Vector-Borne Infectious Diseases) did not accurately reflect changes that the laboratory requested on APHIS/CDC Form 1. Specifically, the laboratory requested the addition of 94 new rooms and the select agent(s) that would be stored in each room to its registration. However, our comparison of APHIS/CDC Form 1 to the NSAR registration record revealed that, for 28 of these 94 rooms, DSAT listed a different select agent than what the laboratory had requested. This occurred because DSAT personnel made a clerical error when transcribing the information from APHIS/CDC Form 1 to the NSAR registration record.[9] The error was not found by a DSAT team leader during his quality assurance review or before his approval of the registration change. As a result, the NSAR database did not include the correct registration information for this laboratory. DSAT notified the laboratory in writing that its requested changes had been approved; however, DSAT did not detail the changes made to the laboratory's registration record, which precluded the laboratory from identifying the error.

RECOMMENDATION

We recommend that CDC direct DSAT to consider the information presented in this report to ensure that Federal laboratories comply with Federal select agent regulations by (1) ensuring that inspector checklists are detailed enough to identify all noncompliance with Federal select agent regulations and implementing a formal, standardized program for training inspectors and (2) following its procedures for amending laboratories' registration information and including details on the registration changes in its amendment letters.

CENTERS FOR DISEASE CONTROL AND PREVENTION COMMENTS

In its comments on our draft report, CDC concurred with our recommendation and stated that it has verified through inspections that each entity listed in our report has resolved the deficiencies noted in our prior audit reports. In addition, DSAT described actions that it had taken or planned to take to address our findings.

CDC's comments, except for technical comments, are included as the Appendix.

[9] DSAT personnel incorrectly entered "VSV" (vesicular stomatitis virus) instead of "VEE" (Venezuelan equine encephalitis virus), as requested by the laboratory.

APPENDIX

APPENDIX: CENTERS FOR DISEASE CONTROL AND PREVENTION COMMENTS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333

TO: Daniel R. Levinson
Inspector General

FROM: Thomas R. Frieden, M.D., M.P.H.
Director, Centers for Disease Control and Prevention
Administrator, Agency for Toxic Substances and Disease Registry

DATE: May 20, 2011

SUBJECT: Office of Inspector General's Draft Report: "Nationwide Review of Federal Laboratories' Compliance with Select Agent Regulations" (A-02-09-02023)

The Centers for Disease Control and Prevention (CDC) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report, "Nationwide Review of Federal Laboratories' Compliance with Select Agent Regulations."

As stated in the draft, the objective of this review was to (1) summarize the findings in the six individual reviews, and (2) determine whether the Division of Select Agents and Toxins' (DSAT) oversight was adequate to ensure that the selected federal laboratories complied with certain federal select agent regulations. The draft provided the following recommendation to address the identified findings regarding DSAT's oversight:

OIG Recommendation: That CDC direct DSAT to consider the information presented in this report to ensure that federal laboratories comply with federal select agent regulations by (1) ensuring that inspector checklists are detailed enough to identify all noncompliance with federal select agent regulations and implementing a formal, standardized program for training inspectors, and (2) following its procedures for amending laboratories' registration information and including details on the registration changes in its amendment letters.

CDC Response: CDC has verified through inspections of the entities listed in the OIG report that all six entities have already successfully resolved the deficiencies noted in the OIG audits.

OIG Recommendation: Ensure that inspector checklists are detailed enough to identify all noncompliance with federal select agent regulations, and implement a formal, standardized program for training inspectors.

CDC Response: CDC concurs with the recommendation. DSAT notes the following steps taken to ensure consistent findings using the current inspector checklists and has incorporated the current checklists into our already implemented formal, standardized program for training inspectors.

Development of the Inspection Advisory Team

In October 2010, the DSAT Inspection Advisory Team was established to develop a standardized approach for conducting verification inspections as part of a project to evaluate the effectiveness of unannounced inspections, and to establish internal interpretative guidelines for all items on currently used inspection checklists for routine inspections. Products that have originated from this group included:

- For verification inspections:
  - Protocols for conducting verification inspections
  - Reporting tools to evaluate whether past deficiencies have been resolved
  - Standardized, consolidated checklists containing selected elements from the regular checklists
  - Interpretative guidelines for inspector use for each item on the standardized, consolidated checklists
- For routine inspections:
  - Interpretative guidelines for inspector use for each item on the BSL2 and BSL3 checklists, including 42 CFR, Part 73.12 a–d, and each item specified in the *Biosafety in Microbiological and Biomedical Laboratories* (*BMBL*) for the standard and special microbiological practices, safety equipment, and facilities. Purpose is to achieve greater consistency between inspectors as they apply these checklists during inspections.
  - Interpretative guidelines for inspector use for selected safety standards from the *BMBL*, as they apply to "storage only" facilities
  - Interpretative guidelines for additional checklists are under development

Development of the Facility Advisory Team

In March 2011, the DSAT Facility Advisory Team was established to develop Guidance Documents for inspectors and the regulated community for interpretation of facility issues. Products that have originated from this group included:

- Guidance for verification of the functionality of the laboratory HVAC system to ensure there is no reversal of airflow under failure conditions (consistent language is now applied to all inspection reports)
- Draft document to guide inspectors on when to request documentation of failure testing
- Draft document listing annual verification requirements for BSL3 and ABSL3 facilities
- Draft document of facility questions that inspectors should ask when conducting inspections of BSL3 and ABSL3 facilities

Inspection Debriefings

Internal inspection debriefings are conducted after each inspection with the following members present: Operations Manager, Team Lead, Lead Inspector, and other members of the inspection team, whenever possible. These debriefings are typically scheduled the week following the scheduled inspection, but not later than 2 weeks after the inspection, with each session lasting from 30 minutes to 1 hour. If for any reason the inspection debrief cannot be held, the Lead

Inspector is responsible for sending the Operations Manager and Team Lead a summary of the inspection findings via e-mail.
Each debrief typically consists of the following:

(1) A brief entity summary (registered agents, rooms, number of Principal Investigators, and scope of work)
(2) Positive observations from the inspection
(3) Observed deficiencies to be incorporated into the inspection report
(4) An appraisal of the resolution of past inspection deficiencies
(5) An overall "score" of 1–5, with 1 being poor and 5 being excellent

The outcomes of the inspection debrief:

- Provides an opportunity for the Operations Manager to ensure that similar observations are handled consistently from entity to entity, and from team to team.
- Provides an opportunity for discussion of observations, sometimes extensive, and therefore, is a mentoring process for junior inspectors to receive guidance from senior inspectors, the Team Lead, and Operations Manager.
- Creates a process (i.e., a "score") that is used as one factor in an overall assessment of the entity, which is further used to
  - Determine the need for frequency of visits (i.e., is there a need for another inspection before the next scheduled inspection?)
  - Determine the need for an unannounced inspection during the next visit.
  - Assist in evaluating the severity of inspection findings by a means other than the number of deficiencies (i.e., a few serious deficiencies may result in a lower score than many minor deficiencies, thus tending to minimize the seriousness of the former).
- Provides an opportunity to determine whether any of the inspection observations merit referral to the Compliance Team.

Implementation of a Formal, Standardized Program for Training Inspectors

In April 2010, DSAT completed an internal training needs assessment and began developing an interim training program. The current training program includes partnering with internal and external subject matter experts (SMEs) on the following:

- Comprehensive training in the Select Agent Regulations that include training sessions conducted by the Training and Outreach Coordinator, the Associate Director for Science, the Associate Director for Policy, and the Compliance Officer.
- DSAT's hands-on training using "mock" entity inspection records to train inspectors on how to prepare for inspections. The training sessions are conducted by the Records Management SMEs, the Facility Reviewer, the Biosafety Specialist, the Biosafety Officer, the Emergency Response Coordinator, and the Logistics Coordinator.
- DSAT's hands-on training using "mock" laboratories to train inspectors on how to perform inspections that are conducted by the Security Officer, Team Leads and the Operations Manager. As part of this inspector training module, DSAT collaborates with the following external partners:
  - The CDC's Office of Safety, Health, and Environment for inspectors to receive training on HVAC systems and facilities design for BSL2 and BSL3 laboratories.

  - The CDC's Animal Resources Branch for inspectors to receive training by an Animal Care and Biocontainment Facility SME on the introduction and safety in ABSL3 laboratories.
  - The Emory University for inspectors to attend the "BSL3 Science and Safety Course" to learn and practice new skills for BSL3 laboratories.
  - The University of Texas Medical Branch, National Biodefense Laboratory, for inspectors performing maximum containment inspections to attend a 4-week course on safe and secure BSL4 laboratory practices. After completion of this course, these identified individuals received extensive mentoring by the DSAT Biosafety Officer.
- DSAT's hands-on training using "mock" entity records to train inspectors on how to manage entity files that include training sessions by Team Leads and Technical Reviewers in charge of APHIS/CDC Forms 1–5.
- DSAT's mentoring program for new inspectors once they are assigned to teams (at which time they are assigned files and begin participating in inspections):
  - Review of newly assigned files with past file owner
  - Assignment of a team mentor
  - Daily one-on-one sessions with Team Lead or team mentor for in-depth understanding of how to classify documents, process amendments, renewals, and other file management issues for the assigned files (time dependent upon the inspector)
  - Review of all correspondence by the Team Lead or team mentor created by the new inspector prior to sending to the entity.
  - Participation in three or more inspections as an observer
  - Participation in additional inspections as a member on a team with at least one senior inspector in attendance (number dependent upon the inspector)
  - Coaching sessions with the Team Lead or mentor to allow the new inspector to serve as a practice lead inspector
  - Final stage of mentoring: new inspector serves as lead
- CDC and HHS University training courses on written and oral communication skills.

In addition to this training program, there are regularly scheduled inspector training opportunities held monthly or more frequently depending on the topic being covered. Topics for these sessions included natural disaster response, facility reviews, facility security, biosafety, renewal procedures, joint inspections, standard operating procedures, and recaps from conferences attended.

OIG Recommendation: Follow its procedures for amending laboratories' registration information and include details on the registration changes in its amendment letters.

CDC Response: CDC also concurs with the recommendation that DSAT follow its procedures for amending laboratories' registration information and including details on the registration changes in its amendment letters. In addition to the new inspector training programs detailed above for the management of accurate records, DSAT recently completed an extensive audit of the National Select Agent Registry (NSAR) database, as described below:

Audit of NSAR Database

In January 2009, DSAT conducted a detailed review of the historical information contained in the NSAR database associated with the APHIS/CDC Forms 1 (Application for Laboratory Registration for Possession, Use, and Transfer of Select Agents and Toxins), 2 (Request to Transfer Select Agents and Toxins), and 4 (Report of the Identification of a Select Agent or Toxin) to identify, categorize, and correct errors. This detailed review was completed on December 2010. The review consisted of verifying information captured in the electronic database records with the information captured on the submitted forms received from the regulated community. Each of the data sets associated with the three APHIS/CDC Forms were reviewed according to defined processes. Of the 830,736 records reviewed, the overall error rate was 0.92%.

- **Form 1 Data Review Summary**
  A total of 607,216 data fields were reviewed, resulting in an overall error rate of 1.05%. Of these, 87.14% of the error classifications were identified as File Maintenance or Keying Errors. These two error types are largely preventable and have resulted in the implementation of process revisions pertinent to entity file management workflow and data entry. These process revisions mitigate the risks of these errors occurring in the future.

- **Form 2 Data Review Summary**
  A total of 2,699 individual Form 2 submissions were reviewed spanning the majority of the NSAR historical record. Keying Errors were the majority of errors documented. The downward trend in the Keying Errors per calendar year (4.19% for calendar year 2005 to 0.45% for calendar year 2009) reflects the implementation of a more robust transfer review and approval process, as well as an increasing understanding of the capabilities of the NSAR database by DSAT users over time.

- **Form 4 Data Review Summary**
  A total of 7,396 Form 4 reports, containing 131,913 individual fields, were reviewed. The discrepancy rate exhibited a downward trend over time (14.84% for calendar year 2008 to 3.09% for 2010) due largely to updated data entry and review processes and improved communication with the regulated community.

Summary of Enhancements

Given the level of detail and the analytical approach in which the Archive Data Review project was conducted, many documents and processes, both current and historical, were examined. The review resulted in the implementation of a variety of adjustments, enhancements, and revisions to the records management and data entry processes. Those improvements mitigate the risk of these errors reoccurring. Following is a list of enhancements implemented as a result of the Archive Data Review activities:

- The relationship in NSAR regarding the data contained within Forms 1, 2, and 4 is now more clearly understood by data entry staff.

- Fewer documents are duplicated, thereby eliminating unnecessary paperwork and increasing productivity while decreasing the potential for errors.
- A comprehensive Form 1 Guidance Document was created and is now used by all DSAT File Managers.
- Guidance Documents for the completion and submission of Forms 1, 2, and 4 by the regulated community were created and published on the Select Agent Program's website (http://www.selectagents.gov/).
- Database search capabilities have been greatly enhanced.

Development of the File Management Team

In January 2009, the DSAT File Maintenance Team was established to develop Guidance Documents relating to the processing of amendments and the maintenance of entity working folders. Products that originated from this group included:

- A protocol that allows File Managers to remove duplicative, erroneous, or illegible documentation from amendments in order to facilitate a more effective review of the amendment, to ensure uniformity across DSAT File Managers, and to reduce the overall physical size of DSAT's files
- A set of *Minimum Submission / Approval Requirements for Application Amendments* that provides the minimum requirements to move an amendment forward through the approval process
- A comprehensive *Amendment Processing Guidance Document* that illustrates all File Manager, Data Entry, and Team Lead activities pertaining to entity registration amendment processing and approval
- *Working Folder Assembly Instructions* for the uniform creation and maintenance of the six-part entity working folders as well as the uniform construction of registration amendment 'packets'
- *Guidance Document for the Completion of the APHIS/CDC Form 1* to provide detailed information and direction to applicants and registered entities on how to complete all sections of APHIS/CDC Form 1, which is available on the Select Agent Program's website (http://www.selectagents.gov/)

The team's next task is to determine the best way to communicate more specific information within amendment approval letters, which are faxed to regulated entities. One proposal developed in July 2010 that is being considered is:

(1) The Receipt Letter language will continue to be generated and entered by Data Entry staff and the information provided in the letter will remain general. The primary purpose of this letter is to acknowledge receipt of the amendment request and is not intended to convey detailed information regarding the requested change(s).
(2) The Approval Letter language will continue to be generated and entered by Data Entry staff but they will now adhere to specific guidelines for entering additional information. The specific guidelines for entering more detailed amendment information are under development. This language in the Approval Letter will be reviewed by the Team Lead for accuracy during the amendment review/approval and will be adjusted by the Team Lead if necessary.

Technical comments on the draft report are provided in the attachment. We appreciate your consideration of our general and technical comments as you develop the final report. Please direct any questions regarding these comments to Mr. Shaun Ratliff by telephone at (404) 639-2809 or by email at iggao@cdc.gov.

Thank you for your review of this important matter.

Thomas R. Frieden, M.D., M.P.H.

Attachment:
CDC Technical Comments on the Draft OIG Report, "Nationwide Review of Federal Laboratories' Compliance with Select Agent Regulations" (A-02-09-02023)