FIPS 201 Evaluation Program Development - Laboratory Specification

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Document History

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1 Introduction

1.1 Identification

This Lab Specification (Lab Spec) document is a detailed description of the General Services Administration's (GSA) Evaluation Program (EP) Laboratory (Lab) operation to determine conformance of Supplier Products and Services against the requirements of Federal Information Processing Standard (FIPS) 201 and its related technical publications.

This document establishes details and guidelines regarding daily operations of the Lab and is complemented by the GSA EP *Laboratory Concept of Operations,* which provides a high-level overview of the approval process carried out by the Lab.

1.2 Background and Objective

On August 27, 2004, Homeland Security Presidential Directive-12 (HSPD-12) - "*Policy for a Common Identification Standard for Federal Employees and Contractors*" was issued. HSPD-12 directed the promulgation of a new Federal standard for a secure and reliable form of identification issued by all Federal Agencies to their employees and contractors.

In response to this Directive, the National Institute of Standards and Technology (NIST) published FIPS 201 – "*Personal Identity Verification (PIV) for Federal Employees and Contractors*" on February 25, 2005. The Office of Management and Budget (OMB) has designated GSA as the Executive Agent for government-wide acquisitions for the implementation of HSPD-12. OMB has directed Federal agencies to purchase only Products and Services that are conformant with the Federal policy, Standard and numerous supporting technical specifications.

NIST has also established the NIST Personal Identity Verification Program (NPIVP) to ensure conformance of Supplier Products with the technical specifications of FIPS 201. In support of NPIVP, NIST has developed a suite of tests that are described in Special Publication (SP) 800-85 - *PIV Middleware and PIV Card Application Conformance Test Guidelines.* At present, the NPIVP includes conformance tests for: (i) PIV Card Applications and (ii) PIV Middleware. Conformance is tested to the specifications of SP 800-73 - *Interfaces for Personal Identity Verification.* Additional conformance tests will be added as the NPIV Program evolves.

Similar to the NPIV Program, GSA's FIPS 201 Evaluation Program ensures Products and Services are conformant with established FIPS 201 requirements. That is, if the Lab analysis or evaluation demonstrates that a Supplier's Product or Service conforms to FIPS 201 specifications, as revised from time to time, then the name, part number, version(s) and other important details of the Supplier's Product or Service is added to an Approved FIPS 201 Products and Services List (Approved Products List [APL]).

The Lab provides an environment, by means of an evaluation bed, whereby GSA collaborates with Suppliers and their representatives to validate Product and/or Service conformance with FIPS 201 specifications, a prerequisite for availability to Agencies seeking to implement an HSPD-12 solution.

Strict adherence to the Lab Spec results in a consistent evaluation of Products and Services, and unbiased results. It facilitates efficient, low risk capability to handle high volumes of approvals of conformant Products and Services while addressing overall Lab usability in context of meeting timeliness demands of Federal and Supplier communities.

1.3 Purpose

The purpose of this document is to provide sufficiently detailed guidance regarding Lab establishment and all facets of daily operation. This includes roles, responsibilities, facilities, security, processes, and procedures necessary to operate each and every Lab commensurate with the aforementioned objectives. Because of its comprehensive detail, the Lab Spec is a roadmap to achieve "live" operational capability as well as described operations.

1.4 References

The following is a list of references used to develop this document.

[HSPD-12] HSPD 12, *Policy for a Common Identification Standard for Federal Employees and Contractors*, August 27, 2004.
http://www.idmanagement.gov/documents/HSPD-12.htm

[FIPS 201] NIST FIPS 201-1, *Personal Identity Verification (PIV) of Federal Employees and Contractors*, NIST, March 2006.
http://www.csrc.nist.gov/publications/fips/fips201-1/FIPS-201-1-chng1.pdf

[SP 800-18] NIST Special Publication 800-18, *Guide for Developing Security Plans for Federal Information Systems*, Revision 1, February 2006.
http://csrc.nist.gov/publications/nistpubs/800-18-Rev1/sp800-18-Rev1-final.pdf

[SP 800-53] NIST Special Publication 800-53, *Recommended Security Controls for Federal Information Systems*, Revision 3, December 2007.
http://csrc.nist.gov/publications/nistpubs/800-53-Rev2/sp800-53-rev2-final.pdf

[SP 800-73] NIST Special Publication 800-73-2, *Interfaces for Personal Identity Verification (4 Parts)*, NIST, August 2009.

i. http://csrc.nist.gov/publications/nistpubs/800-73-2/sp800-73-2_part1-datamodel-final.pdf
ii. http://csrc.nist.gov/publications/nistpubs/800-73-2/sp800-73-2_part2_end-point-piv-card-application-card-command-interface-final.pdf
iii. http://csrc.nist.gov/publications/nistpubs/800-73-2/sp800-73-2_part3_end-point-client-api-final.pdf

iv. http://csrc.nist.gov/publications/nistpubs/800-73-2/sp800-73-2_part4_transitional-specification-final.pdf

[SP 800-76] NIST Special Publication 800-76-1, *Biometric Data Specification for Personal Identity Verification*, NIST, January 2007. http://www.csrc.nist.gov/publications/nistpubs/800-76-1/SP800-76-1_012407.pdf

[SP 800-78] NIST Special Publication 800-78-1, *Cryptographic Algorithms and Key Sizes for Personal Identity Verification*, NIST, August 2007. http://csrc.nist.gov/publications/nistpubs/800-78-1/SP-800-78-1_final2.pdf

[SP 800-79] NIST Special Publication 800-79-1, *Guidelines for the Accreditation of Personal Identity Verification (PIV) Card Issuers (PCI's)*, NIST, June 2006 http://csrc.nist.gov/publications/nistpubs/800-79-1/SP800-79-1.pdf

[NVLAP] NIST Handbook 150, 2001 Edition, *Procedures and General Requirements Handbook*, July 2001. http://ts.nist.gov/ts/htdocs/210/214/docs/nist-handbook-150.pdf

[ConOps] FIPS 201 Evaluation Program - Laboratory Concept of Operations, GSA, v1.0.0, February 13, 2006

[CM Plan] FIPS 201 Evaluation Program - Configuration Management Plan, v2.0.0

[Web Tool Manual] FIPS 201 Evaluation Program - Web-enabled Tool Laboratory User Guide, v1.0.0

[LAB QUAL] FIPS 201 Evaluation Program - Laboratory Qualification Procedures & Requirements, v2.4.0

1.5 Document Organization

The layout of the Lab Spec describes a support process and not a system. *Nothing in this document is confidential or business proprietary.* The remaining document describes the support process as follows:

- Section 1 – provides document identification, background and scope, purpose, and document references.
- Section 2 – provides a high level system overview of the Lab.
- Section 3 – provides the details on Lab Instantiation. More specifically it details the Lab sizes; the roles, responsibilities, and qualifications for the staff and organizations involved in product and service evaluation; the facilities setup, security controls as well as the various equipment (e.g. IT, furniture etc) required.

- Section 4 – details Lab operations requirements such as scheduling, and activities (e.g., data backups) on a daily, weekly, and monthly basis as well the approval process followed.

- Appendix A – templates for various letters and notices used by the Lab, Suppliers, and Approval Authority.

- Appendix B – provides a Product Inventory List template.

- Appendix C – lists the EP Lab rules of behavior.

- Appendix D – provides a list of the various acronyms used in the document.

2 System Overview

The GSA Office of Government-wide Policy (OGP) authorizes the functioning of each Lab for evaluating Products and Services to be conformant to FIPS 201. Each Lab includes a facility; staff; software; operating systems; networks; approval processes consisting of Approval Procedures, Test Procedures; approval mechanisms and evaluation criteria. All of these, working within government policies, guidelines and procedures, form the basis of the Lab Spec.

2.1 Laboratory Functions

The core function of each Lab is to analyze and evaluate Supplier Products and Services for conformance with FIPS 201 specifications. Based on the Lab evaluation results, an authorized GSA official, the Approval Authority makes the final determination as to whether the Product or Service should be approved and added to the Approved Product List (APL).

Table 1 provides a high-level summary of each function performed by each Lab as it evaluates Supplier Products and Services.

Lab Function	Description
Application Processing	Review of Supplier application and determination of acceptance. Initiate scheduling and evaluation preparation as appropriate upon acceptance.
Evaluation Preparation	Prepare evaluation environment. Install and configure the Product under evaluation. Speak with Supplier before evaluation, if necessary, to resolve issues and questions, to optimize and expedite actual evaluation.
Evaluate Supplier Products & Services	Conduct consistent, accurate, formal evaluations of Supplier Products and Services to verify conformance with applicable FIPS 201 specifications, following well-defined Approval Procedures and Test Procedures to ensure consistency and neutrality.
Evaluation Report Preparation	The Evaluation Report formally documents all evaluation and test results conducted in accordance with the Approval Procedure for a specific category.
Relationship Management	Facilitate and assist with the Supplier application and deliverables process to ensure efficient, optimal task progression and evaluation correctness. Address questions from Suppliers, Evaluation Program (EP) Program Management Office (PMO) and the Approval Authority. Address non-conformance reviews, concerns and provide evaluation status information to Suppliers

Lab Function	Description
	and the Approval Authority as requested.
Facilitate updates to the Approved Products List	Once an evaluation is completed and the Product or Service is deemed to be conformant, the Lab facilitates updates to the Approved Products List, per Approval Authority approval. Updates also include changes to information on the APL viz. Supplier point of contact.
Change Management	Ensuring disciplined, risk managed change to roles, responsibilities, processes, procedures, strategies as may be required from time to time. Collaborating with EP PMO and other GSA stakeholders regarding change requests.
Facilitate updates to the Removed Products List	Collaborating with the EP PMO to update the RPL when products and services are deemed to be non-conformant or when they are no longer offered for sale by suppliers.

Table 1 - Laboratory Functions

2.2 Laboratory Environment and Operations

To support the core function of each Lab and establishment of the Lab environment, appropriate operational processes and controls are required. Table 2 provides a high-level summary of these operational processes and controls required to support an efficient and effective Lab.

Operational Process/Controls	Description
Lab Facilities	Non-security related aspects of the Lab such as power, HVAC, space layout, storage and LAN/WAN.
Lab Operations	Approval processes employed by the Lab to approve Products and Services, This includes scheduling processes and other operational activities done on an ongoing basis (i.e., daily, weekly, monthly).
Update of Evaluation Status	Timely update on the status of the evaluation using the EP Web-Enabled Tool (EP Web Tool). This tool serves as an informational source on the status of a Product/Service in the approval process to all parties.
Security	Lab security controls (i.e., safeguards and countermeasures) implemented in accordance with NIST Special Publication (SP) 800-53. These include:

Operational Process/Controls	Description
	▪ **Management Controls** – security controls that focus on the management of risk and the management of information systems; ▪ **Operational controls** – security controls for an information system that are primarily implemented by people, as opposed to systems; and ▪ **Technical controls** – security controls for an informational system that are primarily implemented and executed by an information system. This includes identification and authentication, access control, audit and accountability.

Table 2 - Laboratory Controls

3 Lab Instantiation

A well-staffed, well-established environment (i.e., capacity and the capability) is essential to providing Lab core services and functions in an efficient and effective manner. This section details the minimum requirements for instantiating a physical Lab environment and includes staffing and space requirements based on the size of the Lab.

Where applicable and practical, the environment should be capable of flexibility and scalability, in response to fluctuating work volumes. At a minimum, the environment must always support all basic ongoing operational tasks as described herein.

3.1 Staffing

Table 3 specifies the minimum staff required for each size Lab, and the role(s) each staff member will undertake.

	Number of Staff		
Role	Small Lab	Medium Lab	Large Lab
Lab Director	1	1	1
Relationship Manager		1	1
Team Lead	1	1	2
Engineer		2	3
Total Minimum Lab Staff	2	5	10

Table 3 - Lab Staff Requirements

The size of the Lab is based on the number of evaluations it intends to perform in any given year. The year commences from the date that Lab is given the Authority to Operate (ATO) by the EP PMO.

A small Lab is one that can perform up to 100 evaluations per year, a medium Lab is one that performs up to 200 evaluations per year and a large Lab is one that performs over 200 evaluations per year. If a Lab desires to perform evaluations in addition to the permissible limit, then the Lab needs to upgrade to the next size and provide proof of compliance to the EP PMO.

3.2 Roles, Responsibilities and Qualifications

While the Lab Concepts of Operations [ConOps] provided a conceptual overview of Lab roles and responsibilities, this document provides the additional detail necessary to implement each Lab role and all its responsibilities. The additional detail provided herein includes:

- Frequency of task – the specific trigger(s) that initiate the responsibility;
- Duration of task – the amount of time expected for the responsibility to be completed. All durations are targets durations. Circumstances (e.g., response time by external parties such as the Applicant and the Approval Authority, peak

periods where the number of applications submitted temporarily exceed Lab resources) will likely impact durations, for better or for worse;

- Other individuals – internal and external participants needed for successful conclusion;
- Forms required – the key forms, letters, and notices required to complete the responsibility; and
- Qualifications – the essential education, training, and certification requirements to perform successfully all responsibilities cited for the position.

3.2.1 Lab Director

The Lab Director is responsible for the overall operation of the Lab, which includes oversight of evaluation and quality assurance. The Lab Director responsibilities include:

- **Set the daily goals for the Lab** – the frequency of this task is daily. It must be completed at the beginning of each business day, or as quickly as possible as necessary during the day, so as not to impose a delay on any Lab activity. The duration of this task depends upon the nature of the issues of the day (e.g., complexity, priorities). However, sufficient decisions and unambiguous direction must be given each day to ensure uninterrupted operations of the Lab in accordance with evaluation response times and commitments in effect at the time. Project management mechanisms should be used where applicable to ensure optimal decision-making and efficient tracking.
    - No forms are relevant to this task.
- **Ensure all Lab operations adhere to the security and confidentiality requirements** – the frequency of this task is daily. The duration of this task is typically minutes, requiring brief visual inspection(s) or confirmation (verbal or written) from appropriate staff (e.g., Lab Team Lead(s), Relationship Manager). The Lab Director should strongly consider completing a formal audit every six (6) months to determine conformance in accordance with the established security and confidentiality requirements. The Lab Director shall keep a log of all audits, inspections and verifications for review by the EP PMO if required.
    - No forms are relevant to this task.
- **Make efficient, effective use of the Lab's staff and other resources** – the frequency of this task is weekly. The duration of this task should be relatively short, one hour or less to assess needs and to make determinations. The Lab Director should consult with Lab Team Lead(s) and Relationship Manager to optimize this task. Decision factors should include size of work queues, average time to perform approvals in accordance with Approval Procedures, and planned staff commitments. Project planning tools should be used as necessary to optimize planning and scheduling.
    - No forms are relevant to this task.
- **Ensure all evaluation activities are consistent with the Lab Spec** – the frequency of this task is daily. The duration of this task is typically minutes, requiring brief visual inspection(s) or confirmation from appropriate staff. Other

participants may include Lab Team Lead(s), who provide evaluation reports, and Lab Engineers, who demonstrate that processes being used are conformant. The Lab Director should strongly consider completing a formal audit every six (6) months to determine conformance in accordance with the established security and confidentiality requirements. The Lab Director shall keep a log of all audits, inspections and verifications for review by the EP PMO if required.

  - No forms are relevant to this task.

- **Participate in Lab Documentation Updates**– the frequency of this task is on an "as needed" basis. The Lab Director participates in providing comments on draft version of Approval Procedures, Test Procedures and various other Lab documents and forms as they get revised. The Lab Director has evaluation experience and can provide substantial comments to improve the quality and content of the Lab documentation.
  - No forms are relevant to this task.
- **Appoint roles and delegating responsibilities** – the frequency of this task is once at Lab opening, and then on an "as needed" basis. The initial duration may take days in order to sufficient planning. Subsequent "as needed" instances should be very quick due to previous contingency planning. Consultation with others should be done if useful, but is not necessarily required to complete this task successfully.
  - No forms are relevant to this task.
- **Brief the EP PMO and Approval Authority on evaluation status** – the frequency of this task is weekly, or "as requested" intermittently. The duration of this task is variable (e.g., one minute email response to an informal status update request, or a one hour status meeting), but should not be long in duration. Other participants may include Lab Team Lead(s) to provide up-to-the-minute status updates.
  - No forms are relevant to this task
- **Maintain current procedures for evaluations** – the frequency of this task is once at Lab opening, and then on an "as needed" basis". The duration of this task is approximately a few minutes depending on the number of documents that have changed. The Lab Director is responsible for making sure that the Lab is using the most recent version of the documents (forms, Approval Procedures, Test Procedures etc.) while performing evaluations. If necessary (e.g., significant changes to procedures), the Lab Director must hold an "all hands" meeting with Lab staff to fully explain the changes and answer any questions.
  - No forms are relevant to this task.
- **Authorize submission of the Evaluation Report to the Approval Authority** – the frequency of this task is "as requested" by Lab Team Lead(s). The Lab Director reviews the report for completeness and appropriateness of its conclusion, per supporting test results. If there are any problems or issues with the report, the Lab Director must consult the appropriate Lab Team Lead and resolve any issues or concerns in the Evaluation Report providing sufficient guidance and

direction. Execution should be as quickly as possible but is dependent upon the scope and extent of the issues raised. The duration of this path is one (1) business day from receipt of the Evaluation Report. The Lab Director should encourage rapid Approval Authority response to maintain optimal Lab efficiency and rapid updates to the Approved Products List.

  - Forms used in this task include the Evaluation Report, and Approval Request Letter.

- **Authorize submission of the Non-Conformance Letter to the Applicant** – the frequency of this task is "as requested" by Lab Team Lead(s). The Lab Director must review the report for completeness and appropriateness of its conclusion, per supporting test results. If there are any problems or issues with the report, the Lab Director must consult the appropriate Lab Team Lead and resolve any issues or concerns in the Evaluation Report providing sufficient guidance and direction. Execution should be as quickly as possible but is dependent upon the scope and extent of the issues raised. If the report is satisfactory, the Lab Director must provide the Relationship Manager with the Evaluation Report and instruct the Relationship Manager to inform the Applicant of evaluation non-conformance. The duration of this path is one (1) business day from receipt of the Evaluation Report.

  - Forms used in this task include the Evaluation Report, and Non-Conformance Authorization Notice.

- **Resolve Non-Conformance Review requests and/or disagreements submitted by Suppliers** – the frequency of this task is "as submitted" by Suppliers. In the event that a Supplier's Product or Service is deemed non-conformant, and the Supplier disagrees with the decision, the Supplier can submit a non-conformance review request. The Lab Director is responsible for determining the cause of non-conformance via discussions with Lab Staff and resolving the issue by following the non-conformance review process.

  - Forms used during this task include the Evaluation Report, Non-Conformance Review Form, Review Decision Letter, and Instruction Notice.

3.2.1.1 *Qualifications*

The following qualifications are applicable to the Lab Director position:

- Bachelor's degree in Computer Science or similar;
- Broad experience with program management including budgeting, scheduling, resource allocation, organizational management, establishment of policies and procedures, internal auditing of conformance, relationship management, and strategic planning;
- Hands-on knowledge of and experience with project management methodology (e.g., PMI, CMM) and related tools (e.g., MS Project);
- Strong written and verbal communication skills;
- Thorough understanding of HSPD-12 objectives and FIPS 201 requirements; and

- Subject matter expertise in smart card, biometric and PKI technologies. EP PMO reserves the right to interview, select, and require replacement of said individual.

3.2.2 Relationship Manager

For the evaluation of products and services, the Relationship Manager has the following responsibilities:

- **Provide fee structure to Applicants** – the frequency of this task is "as needed" by the Suppliers. On contact by the Suppliers regarding the fees charged by the Lab, the Relationship Manager shall obtain sufficient information from the Supplier on his Product/Service so as to determine the fees that the Lab will charge. The Relationship Manager may need to discuss technical details with Lab Director to come up with an appropriate fee for the evaluation.
    - No forms are relevant to this task.
- **Primary point of contact for Applicant interaction and evaluation** – the frequency of this task is "as needed" by the Lab. The duration is for the full life cycle of each Applicant application/evaluation. Upon submission of an application package by the Applicant, the Relationship Manager must notify the Applicant of his role as the Supplier's primary point of contact and explain the Relationship Manager's services.
    - No forms are relevant to this task.
- **Assist Applicants with the application process** – the frequency of this task is "as needed" by the Suppliers. Upon assignment to an Applicant and upon submission of an application, the Relationship Manager must assist the Applicant with successful completion of the application. The Relationship Manager must have ongoing contact with the Applicant primary contact to effectively coordinate and facilitate the application process. The Relationship Manager must communicate to the Applicant – early and often – application and application process requirements and expectations (e.g., rapid response to questions, in-person availability of Applicant staff to assist with installation and configuration). This ensures that the Applicant immediately understands how to submit a successful (i.e., complete and accurate) application, and what specific items of evidence and other deliverables (e.g., installation and configuration guides) are required for the Technical Evaluation Team to conduct an efficient and effective evaluation. Telephone conference calls with the Applicant are sufficient. The duration of this task is primarily dependent upon the Applicant. However, the Relationship Manager should not spend an inordinate amount of time on this task. One (1) business day or less of assistance per application is considered acceptable. Input from Lab Engineers may be required from time to time in order for the Relationship Manager to assist fully the Applicant during the application submission step.
    - No forms are relevant to this task.
- **Receive, review and approve the application package** – the frequency of this task is per application taken off the application queue. This task requires detailed review of all facets of the application for completeness and usefulness. Input from

Lab Engineers may be required from time to time in order for the Relationship Manager to make a fully informed judgment.

- Forms used during this task include the Application Form, Application Acceptance Notice and the Application Rejection Notice.

- **Update the Applicant's evaluation status on the EP Web Tool** – The Relationship Manager must use the EP Web Tool to reflect the following statuses: "*Application Rejected*", "*Package Complete*", and "*Non-conformant.*" The status update must occur immediately (at the latest within one[1] business day) upon the new state occurring (i.e., the Relationship Manager completes review of an application from the Application Queue or the Relationship Manager receives a Non-Conformance Authorization Notice from the Lab Director). The frequency of this task is "as status changes" per evaluation. The duration of this task is minimal, typically minutes per update.
  - Forms used during this task include the Application Acceptance Notice, the Application Rejection Notice and the Non-Conformance Authorization Notice.
- **Brief the Applicant on evaluation status of their Product or Service** – the frequency of this task is "as needed" or "as requested." Typically, the duration of such a briefing is very short, perhaps minutes per briefing. Suppliers can typically see the status of their application using the EP Web Tool; however a brief email or a phone call may also be necessary at times. A briefing pertaining to an evaluation non-conformance status is likely to take longer, and may require an in-person meeting. In this instance, the duration is more likely to be one to two (1-2) hours for a complete, thorough briefing as to what was non-conformant, why it was found non-conformant, and suggested corrective actions.
  - Forms used in this task include the Evaluation Report, Approval Authorization Letter, and Non-Conformance Letter.
- **Transmit the Non-Conformance Letter to the Applicant** – the frequency of this task is "as requested" by the Lab Director in the event of a non-conformance. The duration of this task is minimal, requiring one (1) hour or less to complete per request. The Lab Director instructs the Relationship Manager via a Non-Conformance Authorization Notice authorizing the sending of a Non-Conformance Letter to the Applicant.
  - Forms used during this task include the Evaluation Report and Non-Conformance Letter.
- **Facilitate updates to the Approved Products List, per Approval Authority decisions** – the frequency of this task is per Approval Authorization Letter received from the Approval Authority. The duration of this task is minimal, requiring one (1) hour or less to complete per request. Once the Supplier's Product or Service has been approved by the Approval Authority, the Relationship Manager informs the EP PMO to update the Approved Products List with the newly approved Product or Service.
  - No forms are relevant to this task.

3.2.2.1 *Qualifications*

The following qualifications are applicable to the Relationship Manager position:

- Bachelor's degree in any field;
- Broad experience with customer interaction and relations;
- Attention to detail;
- Efficient and timely handling of matters in accordance with documented procedures;
- Experience with web-based tools;
- Strong communication skills;
- Proactive; and
- Strong familiarity with HSPD-12 objectives and FIPS 201 requirements.

3.2.3 Lab Team Lead

A Lab Team Lead is responsible for the evaluation of Products and Service in one or more category(s). The Lab Team Lead has the following responsibilities:

- **Prioritize evaluation and other day-to-day Lab tasks** – the frequency of this task is daily. Upon receiving overall goals, priorities, and Lab operation instructions from the Lab Director, the Lab Team Lead must implement those instructions in a tangible way for each assigned evaluation. As necessary, the Lab Team Lead must contact the Lab Director if clarification is required or an exception is necessary. The duration of this task is ongoing, requiring constant assessment and adjustment as guidance from the Lab Director changes and as the daily workflow evolves.
    - No forms are relevant to this task.
- **Assign resources for evaluating Products and Services** – the frequency of this task is "per evaluation." The duration of this task should be minimal, requiring no more than one (1) hour. To the extent practical, Lab Team Lead(s) must coordinate and plan assignment of resources (i.e., staff and assets) in advance, as appropriate for the current and awaiting applications in the evaluation queue. In addition, the Lab Team Lead must determine the required skills and experience needed for the evaluation category. Such a meeting should be held daily, but can be held weekly if circumstances allow. Lab Team Lead(s) may need input from specific Lab Engineers to optimize advance planning (e.g., find out about vacation plans).
    - No forms are relevant to this task.
- **Oversee Lab evaluations** – the frequency of this task is daily. The duration is ongoing, as this is a primary responsibility of the Lab Team Lead. Appropriate project management tools should be used to ensure up-to-date, correct and synchronized information. Team meetings (e.g., with the Technical Evaluation Team) must be used as necessary to obtain status and projections, and to communicate expectations, constraints, and targets (e.g., budgeted hours per task,

milestone dates). Daily meetings must be considered, but weekly or "as necessary" is acceptable.

  - Forms used during this task include the Evaluation Report.

- **Communicate with the Suppliers** – the frequency of this task is "as requested" by a Technical Evaluation Team. The Lab Team Lead must fully understand the issue issues raised or the question asked by the Technical Evaluation Team. If the Lab Team Lead cannot provide any input or guidance to the team, the Lab Team Lead then must contact the Applicant primary contact within one (1) business day of receiving the initial request. The Lab Team Lead must clearly communicate to the Applicant primary contact the questions and issues being raised, action items requested (e.g., providing what additional material, answering the questions, providing an on-sight resource to assist), response expectations (e.g., scope and extent of the answer, qualified technical engineer), response timeframes, and consequences of failing to respond as requested. For audit purposes, the Lab Team Lead should follow-up the conversation by providing a written summary of all requests and points made during the conversation. An email is sufficient for the written summary. The Lab Team Lead must monitor the Applicant for a response within the expected period and contact (i.e., facilitate) the Applicant as necessary. During this period, the Lab Team Lead must determine when the evaluation should be terminated due to the Applicant's failure to respond, resulting in a Non-Conformance Letter.
  - No forms are relevant to this task.
- **Assist in reviewing and resolving Non-Conformance Review requests** – the frequency of this task is "as requested" by the Lab Director. The duration of this task variable, as differing amounts of time and attention may be required for each submitted non-conformance review request form. However, the average duration should not exceed one (1) business day from receiving the request to investigate. The Lab Team Lead must research all available information (e.g., case file documentation, personal email and archives) and speak to all relevant parties (e.g., Relationship Manager, Technical Evaluation Team) as necessary to provide the Lab Director with complete, accurate information, and if requested, a recommendation.
  - Forms used during this task include the Non-Conformance Review Form and Instruction Notice.
- **Provide Evaluation Reports to the Lab Director** – the frequency of this task is "per evaluation." Upon completion of an evaluation, the Technical Evaluation Team notifies the Lab Team Lead of evaluation completion by providing a completed Evaluation Report. The Lab Team Leads commences review of the Evaluation Report and if clarification or additional information is needed, the Lab Team Lead must speak with the Technical Evaluation Team, either by email or via an in-person meeting. The Lab Team Lead must submit the completed and reviewed Evaluation Report to the Lab Director via email within one (1) business day of receiving Technical Evaluation Team findings.

- Forms used during this task include the Evaluation Report and Evaluation Report Notice.

3.2.3.1 *Qualifications*

The following qualifications are applicable to the Lab Team Lead position:

- Bachelor's degree in Computer Science or related (advanced degree preferred);
- Strong hands-on knowledge of and experience with project management methodology and related tools (e.g., MS Project);
- Strong written and verbal communication skills;
- Experience writing test result reports;
- Efficient and timely handling of matters in accordance with documented procedures;
- Experience with customer interaction and relations;
- Proactive; and
- Thorough understanding of HSPD-12 objectives and FIPS 201 requirements.

3.2.4 Lab Engineer

Lab Engineers execute the day-to-day tasks of the Lab. Lab Engineer responsibilities include:

- **Manage internal network and information technology systems** – the frequency of this task is daily for monitoring and minor fixes, and weekly or monthly for scheduled maintenance. Most of the work should be up front, when initially implementing and configuring the internal network and systems. This will likely takes days or weeks depending upon complexity and dependencies (e.g., equipment procurement, Internet provider response). Once operational, Lab Engineers must monitor the network and systems on a daily basis to ensure proper operations. Monitoring is brief (a few seconds or minutes) several times each day. Maintenance and upgrades to the network and systems must be done on a regularly scheduled basis (monthly, or if circumstances allow, quarterly) to ensure up to date licensing, functioning, and security. Scheduled maintenance must be coordinated with Lab activities and commitments so as not cause unnecessary disruption. Unscheduled maintenance (e.g., unexpected failure, high priority security problem) requires immediate notification to all Lab staff, particularly all Lab Team Leads and the Lab Director.
    - No forms are relevant to this task.
- **Prepare the environment for evaluation** - including establishing baselines for systems and the network environment – the frequency of this task is "per electronic test." If electronic testing is necessary, the one or more Lab Engineers assigned to the Technical Evaluation Team must establish the appropriate environment. This pertains to basic test environment infrastructure such as PCs needed and network configuration. Lab Engineers must use the relevant Test Procedures, as they provide general infrastructure and configuration guidelines.

  - No forms are relevant to this task.
- **Perform evaluation -** This may be done on an individual basis or as part of a team, as determined on a case by case basis by the Lab Team Lead. The frequency of this task is "per evaluation." If electronic testing is necessary, the one or more Lab Engineers assigned to the Technical Evaluation Team must setup and configure the Product in the test environment. Lab Engineers must use the Supplier provided manuals and guides, as they provide specific instructions regarding Product installation, configuration, and troubleshooting. Regardless of whether electronic testing is to be conducted, the Technical Evaluation Team must follow all relevant Approval Procedures as written at all times while performing evaluations. Lab Engineers must contact the Lab Team Lead to pass along questions and other requests for assistance to the Applicant primary contact.
  - No forms are relevant to this task.
- **Document evaluation result**s – the frequency of this task is "per evaluation." Upon completion of an evaluation, the Technical Evaluation Team completes the evaluation report and provides the Lab Team Lead with all findings. This information must be fully documented and conveyed to the Lab Test Lead within two (2) business days of evaluation completion.
  - Forms used during this task include the Evaluation Report.
- **Provide technical expertise** – the frequency of this task is "as requested." The Lab Engineer must coordinate with Lab Team Leads to ensure pockets of availability to provide this service. The duration of this service is variable, dependent upon the request. For any assistance that exceeds planned availability, the Lab Engineer must coordinate with the Lab Team Lead before fully committing, and possibly impacting evaluations.
  - No forms are relevant to this task.

3.2.4.1 *Qualifications*

The following qualifications are applicable to the Lab Engineer position:

- Bachelor's degree in Computer Science or related;
- Minimum one (1) year experience electronic testing of card readers;
- Minimum one year (1) experience auditing or evaluating evidence (e.g., attestations) for conformance;
- Experience documenting test results;
- Strong written and verbal communication skills;
- Experience working directly with suppliers;
- Efficient and timely handling of matters in accordance with documented procedures;
- Proactive; and
- Thorough understanding of HSPD-12 objectives/intent and FIPS 201 requirements.

3.2.5 Other Lab Roles

These roles are not filled by the Lab personnel, but are critical to the functioning of the Evaluation Program.

3.2.5.1 *Applicant*

The Applicant has a specific role and various responsibilities in the overall application and evaluation process – whether submitting a Product or Service. The Applicant has the following responsibilities:

- **Complete the application in its entirety** – the frequency of this task is "per application." The Applicant is responsible for selecting a lab for conducting the evaluation. Once the fees and terms are agreed between the supplier and the lab application package needs to be submitted through the FIPS 201 Evaluation Program - Web-enabled Tool. Applicant must ensure a complete and accurate application is submitted. Application packages that are not acknowledged by a lab and remains in the application queue for 10 days are deleted automatically from the FIPS 201 Evaluation Program - Web-enabled Tool. The Applicant must request assistance from their Relationship Manager regarding any questions, issues, or concerns regarding the application process or the application itself. The Applicant must submit the application via the EP Web Tool. The duration of this task is variable, dependent upon the Applicant.
    - Forms used during this task include the Application Form.
- **Provide necessary documentation and artifacts** – the frequency of this task is "per application." The Applicant must include all evidence (e.g., attestations, certificates and/or test reports) and other deliverables (e.g., installation guides) during application submission that are necessary for the Technical Evaluation Team to efficiently and effectively conduct an evaluation. The Applicant must request assistance from their Relationship Manager regarding any questions, issues, or concerns regarding submittal of evidence or other deliverables. Where possible, the Applicant must submit evidence and other deliverables via the EP Web Tool. The duration of this task is variable, dependent upon the Applicant.
    - Forms used during this task include the Application Form.
- **Complete the Customer Satisfaction Survey** – the Applicant must complete the customer satisfaction survey via the Web-Enabled Tool. The Survey assists the EP PMO in obtaining feedback from the Applicant on their opinion on how the evaluation progressed and if there were any commendations/complaints about any aspect of the evaluation. The survey serves as a tool for continuous improvement and directly supports improving the quality of personnel, service and evaluation criteria used within the EP.
    - No forms are relevant to this task.
- **Provide technical staff** – the Applicant must make knowledgeable staff available to the Technical Evaluation Team who can definitively assist the Technical Evaluation Team with installation, setup, configuration, and functional operation. This includes having an expert on-sight at the Lab during the evaluation, if requested by the Relationship Manager.

  - No forms are relevant to this task.
- **Initiate a Non-Conformance Review** – the frequency of this is once per Non-Conformance Letter. If the Applicant believes the Non-Conformance Letter is without merit, the Applicant has thirty (30) business days to initiate the Non-Conformance Review.
  - Forms used during this task include the Non-Conformance Review Form

3.2.5.1.1 Qualifications

Applicant personnel assigned to the support the application process must have ready expertise (i.e., knowledge and skills) needed to answer questions and solve problems pertaining to the product or service being evaluated. The Relationship Manager must communicate this expectation to the Applicant early in the relationship.

3.2.5.2 *Approval Authority*

The Approval Authority is the Program Manager appointed by OGP and has the following responsibilities:

- **Review Evaluation Reports** – the frequency of this task is "as requested" by the Lab Director. The designated Approval Authority is provided with the Evaluation Report by the Lab Director and an Approval Request Letter. The duration of the review is up to the Approval Authority, but a decision within five (5) business days of receipt of the Approval Request Letter is highly recommended. If there are any questions or requests for additional information or clarification, the Approval Authority must contact the Lab Director.
  - Forms used in this task include the Evaluation Report and Approval Request Letter.
- **Approve Product and Services** – the frequency of this task is per Evaluation Report review. Once an Evaluation Report review is completed, the Approval Authority must make an official determination whether to approve or deny the Lab Director's request for approval.
  - Forms used in this task include the Evaluation Report.
- **Provide Applicant Approval or Denial Letters** – the frequency of this task is per Evaluation Report review. If the Lab Director's request is approved, the Approval Authority creates an Approval Authorization Letter and posts it to the case number for the Product/Service being evaluated. If the Lab Director's request is denied, the Approval Authority emails an Approval Denial Letter to the Lab Director, whereupon appropriate actions are taken.
  - Forms used in this task include the Approval Authorization Letter or Approval Denial Letter.
- **Qualify Evaluation Labs -** the frequency of this task is "as needed" by the Evaluation Program. On application submission by a Supplier intending to be an Evaluation Lab, the Approval Authority accredits the Supplier after following the Lab qualification process [LAB QUAL]. Once accredited, the Lab is listed as a

qualified Lab on the EP Website, and is then permitted to accept applications from Suppliers desiring to have their Product and/or Service evaluated.

- No forms are relevant to this task.

3.2.5.2.1 Qualifications

The following qualifications are applicable to the Approval Authority position:

- Must be a Government employee;
- Thorough understanding of HSPD-12 objectives and FIPS 201 requirements; and
- Subject matter expertise in all areas of Personal Identity Verification including but not limited to smart cards, PKI, biometrics, smart card readers etc.

3.2.5.3 *Evaluation Program (EP) Program Management Office (PMO)*

The Evaluation Program (EP) Program Management Office (PMO) is assigned by Approval Authority and has the following responsibilities:

- **Develop and Maintain Lab Documentation** – the frequency of this task is "as needed" by the Evaluation Program. All Lab documentation used within the Evaluation Labs (e.g. Approval Procedures, Test Procedures and forms) is kept current by the EP PMO and new documentation is developed as necessary. Updates to the Standard, its supporting technical specifications along with feedback from Labs, Suppliers and the Approval Authority are the key factors which drive the document revision process. All documentation is revised and maintained in accordance with the [CM Plan].
  - No forms are relevant to this task.
- **Maintain the Test Tools -** the frequency of this task is "as needed" by the Evaluation Program. As the technical specifications of the Standard are updated as newer technologies emerge, the EP PMO makes sure that the test tools used within the Evaluation Program are also kept current and aligned with the Standard. Additionally, as Products and Services get tested using these tools, any software anomalies are reported by the Lab. These anomalies are then fixed by the EP PMO and an updated version of the test tool is built for use within each qualified Lab.
  - No forms are relevant to this task.
- **Provide access to the EP Web Tool -** the frequency of this task is "as needed" by the Evaluation Program. On submission of a login request by a Supplier, the EP PMO creates a domain (if applicable), user-id, and password (for all with access granted by Approval Authority) for access to the EP Web Tool. Once this access is provided, the EP web tool user is able to update/edit/add information to the tool. In addition, the EP PMO is also responsible for the full range of identity management functions including password changes, unlocking of accounts, update of user names etc.
  - Forms used in this task include the evaluation login request form.

- **Update EP Website with current information -** the frequency of this task is "as needed" by the Evaluation Program. The EP PMO is responsible for maintaining the Approved Products List (APL) as well as announcements, contact information, program-related updates, qualified labs along with Lab documentation (e.g. Approval Procedures, Test Procedures, Lab forms, supporting documents and special publications) on the EP Website.

3.2.5.3.1 Qualifications

The following qualifications are applicable to the EP PMO position:

- The EP PMO is assigned by the GSA Approval Authority and may include both Government and Contractors. However at a minimum, a Government employee must be present;
- Thorough understanding of HSPD-12 objectives and FIPS 201 requirements; and
- Subject matter expertise in all areas of Personal Identity Verification including but not limited to smart cards, PKI, biometrics, smart card readers etc.

3.3 Facility Management

3.3.1 Laboratory Layout

Each Lab layout is based on the size of the Lab and must support the minimal set of capabilities and features necessary. Current and accurate engineering blueprints should be obtained from the building management as a means to verify compliance.

Table 4 lists the dedicated spaces that are required to instantiate the Lab.

Space	Small Lab	Medium Lab	Large Lab	Additional Requirements
Lab Staff Office	1 office (Minimum 10'x10')	2 offices (Minimum 10'x10')	4 offices (Minimum 10'x10')	Two (2) occupants per office
Testing Area	1 test area 1 office (Minimum 10'x10')	2 test areas 1 office (Minimum 10'x10')	4 test areas - 2 offices (Minimum 10'x10' each)	
Conference Room	1 conference area (Minimum 12'x15')	1 conference area (Minimum 12'x15')	1 conference area (Minimum 15'x18')	Should be separate from test areas and from offices, to maintain privacy and to not to disrupt other efforts.
Reception	1 reception	1 reception	1 reception	Locate near Lab

Space	Small Lab	Medium Lab	Large Lab	Additional Requirements
Area	area (Minimum 8’x10’)	area (Minimum 8’x10’)	area (Minimum 8’x10’)	entrance to receive visitors. Include seating for a minimum two (2) visitors.
Storage Area	1 storage area (Minimum 5’x7’)	1 storage area (Minimum 5’x7’)	1 storage area (Minimum 7’x7’)	Must be able to store small equipment and paper documents
Break Room	1 break area (Minimum 7’x10’)	1 break area (Minimum 10’x15’)	1 break area (Minimum 12’x15’)	Should be physically distant from test areas and from offices, to maintain privacy and to not to disrupt other efforts.
Bathroom	Building-determined	Building-determined	Building-determined	
Network and Telephone Closet	1 closet (Minimum 4’x4’)	1 closet (Minimum 4’x4’)	1 closet (Minimum 4’x4’)	Locate near Lab. Must have lock (industrial strength).

Table 4 – Lab Space Requirements

3.3.2 Office Equipment and Services

Table 5 specifies the minimum office equipment and services required to instantiate the Lab:

Equipment	Description
PCs	Lab must provide one (1) Desktop or Laptop per Lab employee.
LAN/WAN	Lab must implement LAN and WAN (Internet) capability. Secure WiFi (WPA or greater) is acceptable; otherwise, each Lab space must have a network jack for the maximum number of persons planned for each area.

Equipment	Description
Telephony	Lab must implement one (1) Lab-wide telephone system that includes features such as voice mail, transfer, hold, and speakerphone. Each Lab area must have a phone jack for the maximum number of persons planned in each area. Each Lab employee should have one (1) telephone and dedicated telephone number assigned to him/her. In addition, the Lab should implement a tabletop speakerphone system in the primary conference room.
Fax	Lab must implement a minimum one (1) fax machine in a central location (reception area)
Printer	Lab must implement a minimum of one (1) high-speed, high-volume printer in a central location (reception area) connected to the LAN to allow access by all individuals connected to the LAN. In addition, the Lab should place dedicated low-end printer in each Lab staff office to protect printing of confidential information.

Table 5 – Office Equipment and Services

3.3.3 Office Furniture

Table 6 specifies the minimum office furniture required to instantiate the Lab:

Space	Description
Per Lab Staff Office	Two (2) desks, two (2) chairs, one (1) small locking file cabinet, one (1) wastebasket, and one (1) whiteboard.
Per Testing Area	One (1) 3’x5’ table, one (1) chair
Per Conference Room	One (1) table, four (4) chairs, one (1) overhead projector, one (1) whiteboard
Per Reception Area	One (1) desk, one (1) receptionist chair, one (1) table for fax and printer, two (2) visitor chairs
Per Storage Area	Shelving and/or one (1) tall locking cabinet (industrial strength) for securing Supplier Products and artifacts. Additional security measures must be implemented for highly confidential or high cost items being stored.

Space	Description
Per Break Room	One (1) table, four (4) chairs
Per Network and Telephone Closet	One (1) router, one (1) patch panel, one (1) Internet service connection box, one(1) rack to hold equipment – or as needed.

Table 6 – Office Furniture

3.3.4 Lab Inventory

A minimum asset inventory is required for Lab staff to perform all basic Lab operations.[1]

3.3.4.1 *Test Workstation #1*

Test Workstation #1: For use testing PIV Cards and card data models			
#	**Description**	**Product Name**	**Manufacturer**
1.1	PC (or laptop) running Windows XP SP2 with: • serial port • USB port • JRE v.5.0 • monitor, keyboard, mouse	Generic	Generic
1.2	Reference CONTACT card reader, supporting T=0 and T=1	Smartcard Reader Unotron SAC2 www.unotron.com	Unotron
1.3	Reference CONTACTLESS card reader, supporting Type A and Type B	SmartLOGON Pro www.ieprox.com	Integrated Engineering
1.4	Reference PIV Card	GemCombi Xpresso R4 E72 PK Card with GemPIV applet v1.10 www.gemplus.com	Gemplus

Table 7 – Workstation #1 Setup Inventory

[1] Note: PIV Card and Card Reader products listed on the GSA EP FIPS 201 APL may be used in-place of PIV Card and Card Reader products listed in the tables below.

3.3.4.2 *Test Workstation #2*

Test Workstation #2: For use testing physical and logical access readers			
#	**Description**	**Product Name**	**Manufacturer**
2.1	Laptop running Windows XP SP2 with: • serial port • USB port • PC Card Type II Slot • JRE v.5.0 • monitor, keyboard, mouse	Generic	Generic
2.2	Reference CONTACT Card T=0 only + Reference CONTACTLESS card Type A only	SafesITe FIPS 201 applet on Gemalto GemCombi'Xpresso R4 E72 PK Card www.gemplus.com	Gemplus
2.3	Reference CONTACT card T=1 only	PIV EP v. 108 Java Card Applet on Oberthur ID-One Cosmo 64 v5 Smart Card	Oberthur
2.4	Reference CONTACT card Type A only	SafesITe FIPS 201 applet on Gemalto GemCombi'Xpresso R4 E72 PK Card www.gemplus.com	Gemplus
2.5	Reference CONTACTLESS card Type B only	StepNexus PIV Application v4.2.1 on KeyCorp MULTOS 64K Smart Card	KeyCorp
2.6	Serial converter – 25 pin to 9 pin	Serial Adapter Cable DB9M to DB25F www.startech.com	StarTech

Table 8 – Workstation #2 Setup Inventory

3.3.4.3 *Breakout Box*

Breakout Box: For connecting PHYSICAL ACCESS readers			
#	**Description**	**Product Name**	**Manufacturer**

Breakout Box: For connecting PHYSICAL ACCESS readers			
#	**Description**	**Product Name**	**Manufacturer**
3.1	ABS Enclosure Box	Project Enclosure – 6”x4”x2” (Model #270-1806)	Radio Shack
3.2	Wiegand to Serial board	CVX-1200 Universal Format Converter	Cypress
3.3	Power Supply	Radio Shack 12V AC Adapter	Radio Shack
3.4	Terminal Block, 4-position dual-row	4-Position Dual-Row Barrier Strips (Model #274-658)	Radio Shack
3.5	24-gauge wire	100-Ft. 4-Conductor Phone Cable (Model #278-873)	Radio Shack
3.6	DB9 Female end	9-Position Female Crimp D-Sub Connector (Model #276-1428)	Radio Shack
3.7	Cable ties	4” Nylon Wire Ties (Model #278-1632)	Radio Shack
3.8	Wire-Tie Mounts	Wire-Tie Mounts 10-Pack (Model #278-441)	Radio Shack
3.9	Insulated Spade tongues	Solderless Insulated Flanged Spade Tongues (Model #164-3044)	Radio Shack

Table 9 – Breakout Box Setup Inventory

Breakout box tools needed:

- Drill
- Screw driver
- Crazy glue

3.3.5 Asset Management

The Lab must track and manage assets, both internal as well as assets provided as part of an evaluation in a formal, disciplined manner. A thorough management of Lab assets exposes asset redundancy and excess inventory so as to facilitate optimal inventory and deployment for use. Therefore, the Lab must consider the following:

- **Asset tracking methodology** – processes and procedures that encompass discovery, tracking, and reconciliation of assets over time. At a minimum, the Lab Inventory List shall be used in accordance with the [CM Plan] to record and track Supplier Products and artifacts submitted to the Lab for evaluation;
- **Asset tracking tool** –A capability that should address, at a minimum:
  - A database of complete and current asset information possessed by the Lab and used within the Evaluation Program.
- **Asset tagging** – Unique identification placed on each asset, preferably bar code readable or RFID based. However manual labelling will also suffice. For Supplier provided Products and artifacts, labelling shall include tagging the item with the appropriate case number at a minimum.

3.3.6 Environmental Factors

Environmental factors must be addressed adequately for the Lab to operate safely and optimally. At a minimum, the following must be addressed (additional security related environmental controls are discussed in Section 3.3.10.2):

- **Electrical** – Power requirements (including surge estimates) must be adequate for all assets planned to be located in each Lab area.
- **Heating, Ventilation, and Air Conditioning (HVAC)** – proper air conditioning is necessary to protect assets, particularly electronic assets such as computers. Coordinate with building engineers to determine sufficient cooling in the Lab.
- **Water** – ensure quality plumbing for all relevant areas, such as bathrooms and the break room, to supply the necessary amount of water.
- **Lighting** – ensure appropriate lighting for each Lab area. Consider options such as dimming lights for conference room areas. Ensure proper electrical wiring for all planned types of lighting. Factor in lighting when calculating overall electric requirements per area.
- **Raised flooring and ceiling** – raised floors and/or raised ceilings to facilitate the running of wires and cables throughout the Lab.
- **Sprinkler system** – a sprinkler system should be installed to protect against fires. Coordinate with building engineering to ensure proper installation.
- **Signage** – a sign clearly indicating the name of the Lab must be placed at the front entrance to ensure all visitors can easily find your Lab. In addition, confirm that the building has added the Lab name to the building directory. A sign inside the Lab area, preferably by reception, is highly suggested.
- **Carpeting** – install industrial strength (high-traffic resistant) carpeting. This is also important in terms of providing safe walking traction. As appropriate, consider static from carpeting will interfere with any electronic equipment and/or testing. If so, act accordingly.
- **Paint** – given there will be visitors to the Lab, ensure that all areas are freshly painted, providing a clean, professional appearance throughout the Lab.

3.3.7 Network Connectivity

The Lab must have computer connectivity. The following must be considered:

- **LAN connectivity** – local area networking is necessary for effective, efficient, and productive performance by Lab staff. High-speed connectivity (e.g., fast Ethernet) is preferred. Ensure that a sufficient number of IP addresses are available to support planned maximum, concurrent access. This is especially important if any large group events will be held in the Lab. See Section 7 for security control requirements.
- **Internet connectivity** – connectivity to the Internet is also necessary for effective, efficient, productive performance by Lab staff. High speed connectivity (e.g., T1) is preferred. Firewall and other such protections must be implemented. See Section 7 for security control requirements.
- **Network Closet** – a dedicated area must be established for network connectivity related equipment. Preferably, the closet is inside the Lab, but the existing building configuration may place it outside the Lab (e.g., in the public hallway leading to the Lab). The network closet will contain all wires, cables, and equipment (e.g., routers, hubs, patch panel) pertaining to computer network connectivity and telephony. The area should be secure and accessible to authorized Lab personnel only.

3.3.8 Escorting Visitors

Non-Lab personnel (e.g., Applicant representatives, telephone company engineers, Internet provider engineers, building management and engineering staff) will need access to the Lab facilities from time to time. The following policy must be implemented:

- Visitor sign-in at reception area;
- Badge assigned to visitor indicating the person is a visitor. Badge includes name, company and date;
- Lab escort is needed at all times;
- Visitor sign-out at reception area at end of visit; and
- Badge taken back by the Lab.

3.3.9 Minimum Security Requirements

This section discusses the various minimum security requirements that need to be implemented by the Lab. These requirements are derived from the set of controls applicable to a system with a system security categorization of LOW as identified in [SP 800-53] and [NVLAP]. However, in addition to this minimum set, the Lab is also required by the EP PMO to implement additional controls as described in [SP 800-53] that apply to a system of impact-level of LOW.

3.3.9.1 *Personnel Security*

- All personnel filling the various roles are selected on the basis of loyalty, trustworthiness, and integrity. The requirements governing the qualifications,

selection and oversight of individuals who operate, manage, oversee, and audit the Lab functions are specified in Section 3.

- When employment is terminated, the Lab terminates all information system access, conducts exit interviews, ensures the return of all Lab information system-related property (e.g., keys, identification cards, building passes), and ensures that appropriate personnel have access to official records created by the terminated employee.
- The Lab employs a formal sanctions process for personnel failing to comply with established information security policies and procedures.

3.3.9.2 *Physical and Environmental Protection*

3.3.9.2.1 Physical Access

- All physical access points (including designated entry/exit points) to the Lab's facilities, including the area containing the Lab's information systems, are controlled.
- The Lab develops and keeps current lists of personnel with authorized access to the facilities, the Lab's information systems, as well as the supplier submissions. The Lab promptly removes personnel no longer requiring access to the Lab.
- The Lab controls physical access by authenticating visitors before authorizing access to facilities including areas designated as publicly accessible. The Lab maintains a visitor access log that includes: (i) name and organization of the person visiting; (ii) signature of the visitor; (iii) form of identification; (iv) date of access; (v) time of entry and departure; (vi) purpose of visit; and (vii) name of the person visited.

3.3.9.2.2 Emergency Power and Lighting

- The Lab provides a short-term uninterruptible power supply to facilitate an orderly shutdown of all information and test systems in the event of a primary power source loss.
- The Lab employs and maintains automatic emergency lighting systems that activate in the event of a power outage or disruption and that cover emergency exits and evacuation routes.

3.3.9.2.3 Fire Protection

- The Lab provides a short-term uninterruptible power supply to facilitate an orderly shutdown of the all information and test systems in the event of a primary power source loss.

3.3.9.2.4 Temperature and Humidity Control

- The Lab regularly maintains within acceptable levels and monitors the temperature and humidity within the facility.

3.3.9.2.5 Water Damage Protection

- The Lab protects the facilities and all equipment from water damage resulting from broken plumbing lines or other sources of water leakage by ensuring that master shutoff valves are accessible, working properly, and known to Lab personnel.

3.3.9.3 *Contingency Planning*

3.3.9.3.1 Backups

- The Lab conducts daily incremental backups and weekly full backups of user-level, system information and supplier related information contained in the Lab's information system.
- The Lab must have an alternate storage site for storing of backup system information.
- Copies of all backups must be stored off-site in a location with environmental protections and security commensurate with (or better than) the security controls described in this section.

3.3.9.3.2 System Recovery

- The Lab employs mechanisms with supporting procedures to allow information systems to be recovered and reconstituted to the system's original state after a disruption or failure (i.e. all system parameters are reset, patches are reinstalled, configuration settings are re-established, system documentation and operating procedures are available, application and system software is reinstalled, information from the most recent backups is available).

3.3.9.4 *Maintenance*

- The Lab schedules, performs, and documents routine preventative and regular maintenance on the components of the information system in accordance with manufacturer or supplier specifications. In this regard, appropriate Lab officials approve the removal of the information system or information system components from the facility when repairs are necessary. If the information system or component of the system requires off-site repair, the Lab removes all information from associated media.
- The Lab maintains a list of personnel authorized to perform maintenance on the Lab's information systems. Only authorized personnel perform maintenance on the information system. When maintenance personnel do not have needed access authorizations, Lab personnel with appropriate access authorizations supervise maintenance personnel during the performance of maintenance activities on the information system.

3.3.9.5 *System and Information Integrity*

- The Lab's information systems implements malicious code protection that includes a capability for automatic updates. Additionally, the Lab employs virus protection mechanisms at critical information system entry and exit points (e.g., firewalls, electronic mail servers, remote-access servers) and at workstations, servers, or

mobile computing devices on the network. The Lab uses the virus protection mechanisms to detect and eradicate malicious code (e.g., viruses, worms, Trojan horses) transported by: (i) electronic mail, electronic mail attachments, Internet accesses, removable media (e.g., diskettes or compact disks), or other common means; or (ii) exploiting information system vulnerabilities. The Lab updates virus definitions on a daily basis.

- The Lab receives information system security alerts/advisories on a regular basis, and takes appropriate actions in response.
- The Lab's information system implements spam and spyware protection. In this regard, the Lab employs spam and spyware protection mechanisms at critical information system entry points (e.g., firewalls, electronic mail servers, remote-access servers) and at workstations, servers, or mobile computing devices on the network. The Lab uses the spam and spyware protection mechanisms to detect and take appropriate action on unsolicited messages and spyware/adware, respectively, transported by electronic mail, electronic mail attachments, Internet accesses, removable media (e.g., diskettes or compact disks), or other common means.

3.3.9.6 *Media Protection*

- The Lab ensures that only authorized Lab personnel have access to information in printed form or on digital media. In this respect, the Lab physically controls and securely stores all paper and digital information media.
- The Lab sanitizes or destroys digital media before its disposal or release for reuse, to prevent unauthorized individuals from gaining access to and using the information contained on the media. Media destruction and disposal should be accomplished in an environmentally approved manner.

3.3.9.7 *Awareness and Training*

- The Lab ensures all personnel are exposed to basic information system security awareness materials before authorizing access to any of the Lab's system and on an annual basis thereafter.
- The Lab documents and monitors individual information system security training activities.

3.3.9.8 *Identification and Authentication*

- The Lab's information systems uniquely identify and authenticate Lab personnel. Authentication of the user's identity must be accomplished through the use of passwords, tokens, biometrics, or using multifactor authentication comprising of some combination therein – commensurate with the level of impact (e.g., legal, financial, disclosure of confidential information) associated with access by an unauthorized person.
- The Lab manages user identifiers by: (i) uniquely identifying each user; (ii) verifying the identity of each user; (iii) receiving authorization to issue a user identifier from an authorized Lab official; (iv) ensuring that the user identifier is issued to the intended party; and (v) archiving user identifiers.

3.3.9.9 *Access Control*

- The Lab manages information system accounts, including establishing, activating, modifying, reviewing, disabling, and removing accounts. The Lab identifies authorized users of the Lab's information systems and specifies appropriate access rights/privileges.
- The Lab grants access to its information system based on: (i) a valid need-to-know that is determined by assigned official duties and satisfying all personnel security criteria; and (ii) intended use. The Lab specifically disables any guest/anonymous or unnecessary accounts.
- The Lab policies and procedures ensure that system administrators are notified when Lab users are terminated or transferred and associated accounts are disabled. Administrators are also notified when a user's information system usage or need-to-know changes.
- The Lab's information systems also enforces a limit of five (5) consecutive invalid access attempts by a user during a twenty-four (24) hour time period.

3.3.9.10 *Audit and Accountability*

Technical records of the Lab consist of accumulations of data and information that result from carrying out evaluations for products and services. These may include, but not limited to forms, contracts, work sheets, workbooks, check sheets, work notes, supplier documentation and feedback. In this regard, the Lab retains records of original observations, derived data and sufficient information to establish an audit trail, staff records, and a copy of each evaluation report issued, for a defined period.

4 Laboratory Operations

This section describes approval processes employed by the Lab to approve Products and Services, as well as scheduling processes and other operational activities done on an ongoing basis (i.e., daily, weekly, monthly).

Where process improvement and/or cost efficiencies are apparent, Lab management has the discretion to deviate from Lab Spec guidelines with approval from GSA Program Manager prior to deviation.

4.1 Rules of Behavior

- Lab Director makes readily available to all Lab staff a set of rules that describes their responsibilities and expected behavior regarding all facets of the Lab including information system usage (See Appendix C).
- Every Lab staff member (employee and contractor) must provide a signed acknowledgement that they have read, understand, and agree to abide by the rules of behaviour. This must be done before any Lab activity is undertaken, and is a pre-requisite to obtaining authorization to access information systems.

4.2 Scheduling

Various Lab activities require formal scheduling to ensure advance notification and confirmation. Lab-wide use of MS Outlook (or similar tool) is required. The following sections detail how scheduling is to be done for each key activity.

4.2.1 Internal Meetings

All internal meetings (e.g., daily status meeting, weekly meetings) must be scheduled. A recurring meeting should be published so only one notification is sent to cover an extended period. Having recurring meetings posted to everyone's calendar in advance is essential to avoid future scheduling conflicts. Recipients of meeting requests must respond using the scheduling tool to accept or decline (including a reason) the invitation. If any declines are received, the requester must decide whether to reschedule. Ad-hoc meetings must be scheduled in the same manner, but if time does not allow, can be announced via less formal means (e.g., email message, telephone call, verbally).

4.2.2 Evaluations

The Lab Team Lead(s) schedule evaluations. The Lab Team Lead must coordinate availability of required staff and assets in order to avoid scheduling conflicts.

4.2.3 Material Review Board Meetings

The Lab Director schedules Material Review Board (MRB) meetings. The Lab Director must coordinate availability of the Applicant, required Lab staff, and assets (if needed). Lab Staff must be notified about their participation via the scheduling tool. Scheduling with the Applicant must be done via direct contact with the Applicant primary contact.

4.3 Configuration Management

Configuration management is done in accordance with [CM Plan]:

- The Lab controls evaluation-related items (i.e., products, software, artifacts, documentation) entering and exiting the facility and maintains appropriate records of those items. In this regard, the Lab controls the delivery area and, where possible, isolates this area from the Lab's information systems and media libraries to avoid unauthorized access. The Lab Inventory Sheet is used to record and track Supplier items entering the Lab facility; and
- The Lab develops, documents, and maintains a current, baseline configuration of the Lab's assets and an inventory of the Lab's constituent components.

4.3.1 Document Control

All documents issued to Lab staff are reviewed and approved for use by the Lab Director. A master list or an equivalent document control procedure identifying the current revision status and distribution of documents should be established and readily available to preclude the use of invalid and/or obsolete documents. The procedure(s) adopted by the Lab require that:

- Authorized editions of appropriate documents are available at all locations where operations essential to the effective functioning of the Lab are performed;
- Documents are periodically reviewed and, where necessary, revised to ensure continuing suitability, and conformance with applicable requirements;
- Invalid or obsolete documents are promptly removed from all points of issue or use;
- Obsolete documents retained for either legal or knowledge preservation purposes are suitably marked;
- Documents generated by the Lab are uniquely identified. Such identification includes the date of issue and/or revision numbers, page numbering, and the total number of pages or a mark to signify the end of the document; and
- Documents must be stored in an online central repository.

4.4 Activities

4.4.1 Start up

- **Appoint Roles and Delegating Responsibilities** – The Lab Director assigns roles and responsibilities in accordance with Lab size staffing requirements. The Lab Director reviews qualifications and skill sets of staff, and assign roles and responsibilities accordingly. The Lab Director meets with individuals to discuss their assignments and expectations. In addition, the Lab Director instructs individuals to read and become expert in all Lab policies and procedures, particularly those that pertain to their assignment.
- **Create Lab Documentation** – in collaboration with the Lab staff, the Lab Director develops all necessary policies and standard operating procedures for the

Lab. The Lab Director is also responsible for developing a staffing plan which should address staffing peaks and valleys, to ensure efficient, effective staffing changes over time, as needed. The Lab must identify all critical paths and key dependencies, to ensure full understanding of the activities that directly affect time frames (and therefore commitments) as well as potential impacts on other activities. Budget plans may also be developed to clearly define budget constraints and the metrics to be used to measure monetary performance over time, to ensure operations within means, and therefore without unintended interruption to Lab operations. The documents must be used ongoing as the collective roadmap for Lab operations and assignments, and must be updated on an ongoing basis, as necessary.

- **Document Management** – The Lab Director is also responsible for the following:
  - Establishing an online central repository for storage of templates and Lab documentation (see Appendix A);
  - Storing the templates in the repository for use within the Lab;
  - Coordinate with the EP PMO to ensure the Lab has the latest version of Lab documentation; and
  - Notify the Lab Staff as new/updated/revised documents are posted for use within the Lab for performing evaluations.

4.4.2 Daily Tasks

- **Goal Setting** – The Lab Director uses master project plan, staffing plan, budget, and status of queues to assess current and pending commitments against current priorities and resources. The Lab Director has a daily meeting (beginning of each business day) with Lab Team Lead(s) and Relationship Manager to obtain additional information and to coordinate overall goal decisions. The Lab Team Lead(s) and Relationship Manager immediately propagate new goals and priorities throughout the Lab by their own actions, review of reports, and, as necessary, via email notification to other Lab staff. This includes resource reallocation, staff reassignments, and perhaps a change to the “first in, first out” (FIFO) approach to queue retrieval based on Lab commitments and scheduling.
- **Security and confidentiality conformance self-assessment** – During daily goal setting meeting, the Lab Director polls each Lab Team Lead and Relationship Manager regarding conformance to documented security and confidentiality requirements. If there are any indications of non-conformance, the Lab Director instructs (verbally and in writing) the appropriate Lab Team Lead(s) and/or Relationship Manager to implement necessary corrections within one (1) business day if critical, and within three (3) business days if not critical. Assigned staff must document the issue and the corrective action taken, add it to the operations archive for tracking purposes, and send an email to the Lab Director indicating that the corrective action has been implemented. In addition, each day the Lab Director may do a walkthrough to inspect visually the Lab facility and Lab operations for areas of non-conformance. The Lab Director will document each

violation. Upon conclusion of walkthrough, the Lab Director will notify the Lab Team Lead(s) and the Relationship Manager of violations, and provide instructions to appropriate persons to correct in accordance with the aforementioned process and time frames. The Lab Director must maintain (and archive) a log of all security and confidentiality conformance audits.

- **Approval process conformance self-assessment** – During daily goal setting meeting, the Lab Director polls each Lab Team Lead and Relationship Manager regarding conformance to documented Approval Process. If there are any indications of non-conformance, the Lab Director instructs (verbally and in writing) the appropriate Lab Team Lead(s) and/or Relationship Manager to implement necessary corrections within one (1) business day if critical, and within three (3) business days if not critical. Assigned staff must document the issue and the corrective action taken, add it to the operations archive for tracking purposes, and send an email to the Lab Director indicating that the corrective action has been implemented. The Lab Director must maintain (and archive) a log of all approval process conformance audits.
- **Ensure successful daily operations and Lab performance –** The Lab Team Lead(s) use their project management skills and overall guidance from the Lab Director (per daily goal setting meetings) to proactively oversee and facilitate staff towards successful execution of all assigned tasks and general Lab operations. The Lab Team Lead(s) meet with their staff (e.g., Technical Evaluation Team) on a daily basis or as appropriate to obtain status updates, issues, and to follow-up on open action items. The Lab Team Lead(s) are accountable for addressing (directly or by assigning the responsibility to appropriate others) all matters pertaining to successful day-to-day operations and performance. The Lab Team Lead(s) proactively audit (e.g., visual inspection) operations and tracks queue latencies (i.e., how long entries remain on each queue before being retrieved from the queue for processing. Based on inputs provided and personal monitoring and assessment, the Lab Team Lead(s) must implement necessary changes such as staffing changes and asset allocation, or make definitive decisions such as ending an evaluation. Prior to implementing changes, the Lab Team Lead(s) must coordinate with others (e.g., other Lab Team Lead(s), Relationship Manager) to preclude unintended consequences or conflicts of interest (e.g., assignments, allocations, commitments). The Lab Team Lead(s) must initiate formal and/or informal meetings with relevant staff to communicate clearly any issues, concerns, and corrective action.
- **Managing internal network and IT systems** – The Lab Engineer(s) assigned by the Lab Team Lead(s) monitor the internal network and Lab system infrastructure (e.g., Network Servers, Desktop PCs, Laptops, Routers) to ensure optimal, proper operation, and to determine security breaches. This is done by system log reviews, test transactions, and other standard methods of network monitoring and maintenance. All security breaches must be documented in the manner and within the timeframe specified in the security plan. The Lab Team Lead(s) must be notified immediately to discuss severity, next steps, and resolution time frames. Lab Engineer(s) continuously monitor availability of updates and patches

(particularly security related patches) from appropriate sites (e.g., CERT and product suppliers), and obtain and install within three (3) business days of availability (or sooner for high severity security issues).

- The Lab policies enforce explicit rules governing the downloading and installation of software by users. If provided the necessary privileges, users have the ability to download and install software. The Lab policies dictate what software downloads and installations are permitted (e.g., updates and security patches to existing software) and what types of downloads and installations are prohibited (e.g., software that is free only for personal, not government, use). This policy and procedure shall be described in detail in the Security Plan.
- The Lab must restrict the use of install-on-demand software.
- See Section 3.3.10 for additional details regarding general system maintenance and contingency planning (i.e., backup and restore).

4.4.3 Weekly Tasks

- **Staff and resource review** – At each weekly goal setting meeting, the Lab Director consults with the Lab Team Lead(s) and Relationship Manager to determine status and effectiveness of current staffing plan and resource availability. Discussion must assess size of work queues, average time to complete Approval Procedures, delays in staff and asset availability, and any changes in Lab goals and priorities. Based on overall assessment and anticipated Lab workload, the Lab Director makes appropriate decisions. The Lab Team Lead(s) and Relationship Manager immediately propagate new goals and priorities throughout the Lab by their own actions, review of reports, and, as necessary, via email notification to other Lab staff.
- **Attend Lab Teleconference:** The purpose of the weekly teleconference is to discuss any issues within the FIPS 201 Evaluation Program, its documents (approval procedures, test procedures), and the software tools. GSA EP EPO will inform the Labs of any new development within the Program as well as present an opportunity for Labs to seek answers to any general questions they may have. Lab attendance on the call will support the dissemination of relevant information such that it doesn't have to be repeated individually to each Lab. Due to the sensitive nature of the evaluation, discussions of any issues specific to vendor submission will not be discussed – these issues will be resolved at other times on an as-needed basis directly between the EP PMO and the concerned Lab.

4.4.4 Monthly Tasks

- **Provide monthly reports to the EP PMO** – each month, the Lab Director is required to submit the following written reports:
  - Report of violations and instructions resulting from security and confidentiality conformance self-assessments; and
  - Report of violations and instructions resulting from approval process conformance self-assessments.

- **Maintain Updates to Lab Policies and Procedures** – throughout each month, the Lab Director documents suggested enhancements to Lab policies and procedures, usage of the EP Web Tool and the EP Website. Suggestions are from all relevant sources including Lab staff, and Suppliers should be considered. Additionally, the Lab Director proactively solicits suggestions at the daily meetings. The Lab Director conveys suggestions to the EP PMO as necessary. If significant changes to the Lab documentation occur as a result of the update, the Lab Director must hold an "all hands" meeting with Lab staff to fully explain the changes and to answer questions.

4.5 Lab Approval Process

4.5.1 Overview

The approval process encompasses five (5) phases – four mandatory phases, and one optional phase initiated at the discretion of the Applicant. They are (1) Application Phase, (2) Evaluation Phase, (3) Evaluation Report Phase, (4) Notification Phase, and (5) the optional Non-Conformance Review (also known as Material Review Board) Phase. Each phase bridges into the next phase via a specific trigger (e.g., a letter, a notice, retrieval of an item from a queue).

The approval process uses three queues. They are (1) Application Queue, (2) Evaluation Queue, and (3) Non-Conformance Review Queue. Workflow is typically driven by taking the next entry awaiting processing off each queue (i.e., "first come, first served"). However, Lab staff can select any entry in a queue as circumstances warrant, as long as the evaluation phase does not exceed ten (10) business days. A successful evaluation results in the Applicant's Product or Service being added to the Approved List, which is published at the EP Website. Figure 1 highlights the five phases of the approval process, as well as other essential elements such as queues and lists.

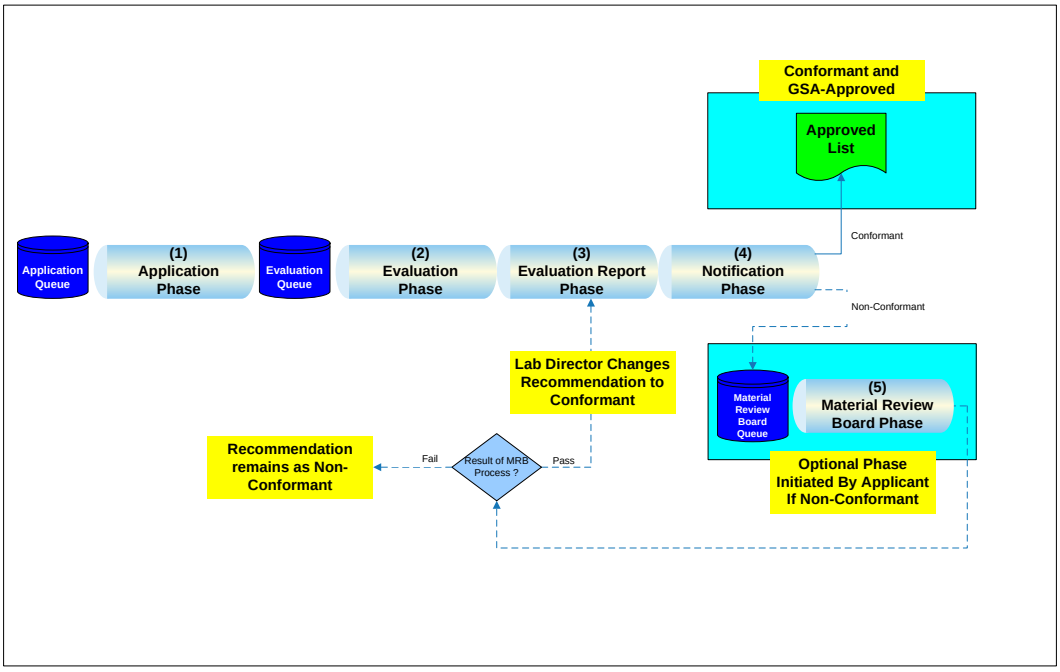

Figure 1 – Approval Process Phases

As an application submission progresses through the five phases, application status is updated accordingly. Table 10 highlights the statuses and related pertinent information. The approval process statuses are:

Status #	Status	Updated By	Phase
1	“Begin Application”	EP Web Tool	Application Phase
2	“Package Submitted”	Relationship Manager	Application Phase
3	“Package Complete”	Relationship Manager	Application Phase
5	“Evaluation In Progress”	Automatic – EP Web Tool	Evaluation Phase
5a	“SV Begun”	Technical Evaluation Team	Evaluation Phase
5a	“SV Complete”	Technical Evaluation Team	Evaluation Phase
5b	“VTDR Begun”	Technical Evaluation Team	Evaluation Phase
5b	“VTDR Complete”	Technical Evaluation Team	Evaluation Phase
5c	“LTDR Begun”	Technical Evaluation Team	Evaluation Phase
5c	“LTDR Complete”	Technical Evaluation Team	Evaluation Phase
5d	“VDR Begun”	Technical Evaluation Team	Evaluation Phase
5d	“VDR Complete”	Technical Evaluation Team	Evaluation Phase
5e	“C Begun”	Technical Evaluation Team	Evaluation Phase
5e	“C Complete”	Technical Evaluation Team	Evaluation Phase
5f	“A Begun”	Technical Evaluation Team	Evaluation Phase
5f	“A Complete”	Technical Evaluation Team	Evaluation Phase
6	“Evaluation Complete”	Technical Evaluation Team	Evaluation Phase
7	“Evaluation Report In Progress”	Automatic – EP Web Tool	Evaluation Report Phase
8	“Evaluation Report Complete”	Lab Team Lead	Evaluation Report Phase
9	“Evaluation Report Under Review”	Lab Director	Evaluation Report Phase
10	“Evaluation Report Review Completed”	Lab Director	Evaluation Report Phase
11	“Customer Satisfaction Survey Pending”	Automatic – EP Web Tool	Notification Phase
12	“Customer Satisfaction Survey Completed”	Automatic – EP Web Tool	Notification Phase
13	“Awaiting Govt. Approval Authorization”	Lab Director	Notification Phase
14	“Approved”	Approval Authority	Notification Phase
15	“Non-Conformant”	Lab Director	Notification Phase
16	“Awaiting Non-Conformance Review”	Lab Director	Non-Conformance Review Phase
17	“Non-Conformance Review In Progress”	Lab Director	Non-Conformance Review Phase
18	“Non-Conformance Review Complete”	Lab Director	Non-Conformance Review Phase
19	“Application Rejected”	Relationship Manager	Application Phase

Table 10 - Status Codes

Each key step of the overall approval process has an expected duration, to facilitate timely completion of evaluations and additions to the Approved List. Circumstances

(e.g., response time by external parties such as the Applicant and the Approval Authority, peak periods where the number of applications submitted temporarily exceed Lab resources) will likely impact durations.

The Lab Director will forecast expected resource availability, and submit in writing to Approval Authority any conditions that may cause the Lab to exceed the expected duration.

Table 11 highlights the expected durations for each key step in the overall approval process.

Key Step	Responsible Party	Duration	Result
Upload at least one (1) document after submitting an application for evaluation.	Applicant	Ten (10) business days from beginning the Application.	If no document is uploaded within ten (10) business days, the application will be automatically deleted. No notification will be provided.
Finish documentation upload and submit all artifacts to the Lab for evaluation	Applicant	Five (5) business day from uploading the first document	If all application package items are not uploaded and/or submitted within five (5) business day from uploading the first document, the application will be rejected.
Upload missing documentation and/or submit all artifacts once the application is rejected	Applicant	Ten (10) business days from the time the application is rejected.	If all application package items are not uploaded and/or submitted within ten (10) business day from the application being rejected, the application will be automatically deleted. No notification will be provided.
Evaluation of Application	Lab Team Lead and Lab Engineer(s)	Six (6) business days from the time the application is deemed	

Key Step	Responsible Party	Duration	Result
		"Package Complete".	
Collecting and documenting evaluation results and findings	Lab Engineer(s)	Two (2) business days after completing the evaluation	
Finalize and sign-off on the Evaluation Report	Lab Team Lead	One (1) business days from receipt of Evaluation Report from Technical Evaluation Team	
Review the Evaluation Report	Lab Director	One (1) business day from receipt of Evaluation Report	
Complete Customer Satisfaction Survey	Applicant	One (1) business day from receipt of Customer Satisfaction Survey Pending notification	
Authorize either an Approval Request Letter to the Approval Authority or a Non-Conformance Letter to the Applicant	Lab Director	One (1) business day from receipt of Customer Satisfaction Survey completed notification	
Review Approval Request Letter and make determination for approval	Approval Authority	Maximum of (5) business days from receipt of Approval Request Letter	
Notify the Applicant and send the FIPS 201 Approved logo	Relationship Manager	One (1) business day from the receipt of approval.	
Send Non-Conformance Letter to Applicant	Relationship Manager	One (1) business day from receipt of Non-Conformance Notice from the Lab Director	

Key Step	Responsible Party	Duration	Result
Submit a Non-Conformance Review Form	Applicant	Thirty (30) calendar days from receipt of Non-Conformance Letter, after which after which the initial ruling is final.	
Non-Conformance Review Resolution	Lab Director	Fifteen (15) business days from receipt of a fully completed Non-Conformance Review Form	

Table 11 - Expected Durations of Key Steps

Evaluation of a product or service encompasses one or two types of conformance review activities, dependent upon the category in which the product or service resides. These are:

- **Evaluation** – pertains to confirming attestations (e.g., statements of conformance) and other evidence of conformance (e.g., documentation, test reports). In most cases (i.e., most product and service categories), only evaluation is required.
- **Testing** – pertains to *electronic testing* in the Lab, and is necessary to verify that components that contain requirements that could directly affect interoperability of PIV are met by the Supplier.

In cases where Products are to be tested in the Lab, both testing and evaluation are required.

To facilitate consistency, non-repudiation, and tracking, all approval process phases require communications manifested as Letters, Notices, Reports, and Forms. Each is based on a template, and is used as a means of communication between two appropriate parties. Notices are for internal communications. Letters are for external communications. Templates for the various notices and letters are found in Appendix A.

4.5.2 Approval Mechanisms

The Lab uses the following means to evaluate submitted Products/Services. Based on a Product/Service category, one or more approval mechanisms may be used in order to determine compliance.

- **Site Visit (SV) -** primarily involves Lab Engineers visiting the specified site in order to evaluate the Product/Service offered by the Supplier. Site visits are considered necessary in those circumstances when the Supplier is offering a Product/Service that cannot be brought into the Lab due to some constraint (e.g. size).

  The duration of a site visit is limited to two (2) consecutive business days. Lab Engineers participating in the site visit will be available to the Supplier to identify

and help to remediate any areas of non-conformance. After two business days, the site visit activity will end and the evaluation report will be written based on the status of the site visit at the end of the second day.

- **Vendor Test Data Report (VTDR) -** is a technical report submitted by the Supplier demonstrating the conformance of the Product to one or more requirements for each category. The submitted test report is reviewed and evaluated to determine how the Product was tested to arrive at the conclusion that the Product meets the requirements set forth and should be forwarded to the lab, via electronic upload.

  The VTDR must contain sufficient data to show that each applicable VTDR requirements is met. The VTDR must at a minimum include:

  - Date and time the test was performed;
  - Name, phone number, and e-mail address of the tester;
  - Detailed description of Test Procedure performed
    - A statement justifying how this test meets satisfies the requirement specified;
    - If Test Procedures are automated (e.g. – test program or scripts), the VTDR should details the procedural steps performed within the software;
    - Data values verified/stored in reference implementations must be included in the VTDR
    - A description of hardware and software used to test conformance, including model numbers and versions (if applicable for testing)
  - Test results of each Test Procedure

  Note: Use of reference devices (e.g. – smart cards or readers) may be used for confirmation of requirements. However, it is ultimately the Supplier's responsibility to ensure that reference devices are adequate and comply with the necessary and applicable requirements.

- **Lab Test Data Report (LTDR) -** is a technical report generated by the Lab during the evaluation process. This report provides the test results for requirements that are electronically tested in the Lab.

- **Vendor Documentation Review (VDR) -** is a review of the documentation provided by the Supplier to determine compliance of the product or service to one or more applicable requirements. "Attestation Letters" or documentation which regurgitates the requirement in another form for use by Evaluation Program will not be accepted as legitimate vendor documentation. Vendor documentation should be documentation that is developed to coexist with the Product or Service provided by the Supplier and <u>must not be targeted specifically to meet the requirements of the Evaluation Program.</u> Examples of valid vendor documents include user guides, developer guides, third party testing, whitepapers, etc.

- **Certification (C) -** refers to the process by which the vendor produces a certification (from an authority other than EP lab) statement stating the compliance of the Product/Service to a particular requirement (e.g. FIPS 140-2 certification).
- **Attestation (A) -** refers to a formal statement provided by the Supplier (a minimum "C" level individual, e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner) providing testimony to the fact that the product or service meets the necessary requirements for that category.

Figure 2 shows the overall high-level approval process flow in terms of the key phases. The blue shading indicates the five (5) phases. As mentioned earlier the Non-Conformance Review Phase is optional and may be activated by the Applicant if the Applicant desires to dispute the Lab's decision.

High-level Overall Process Flow

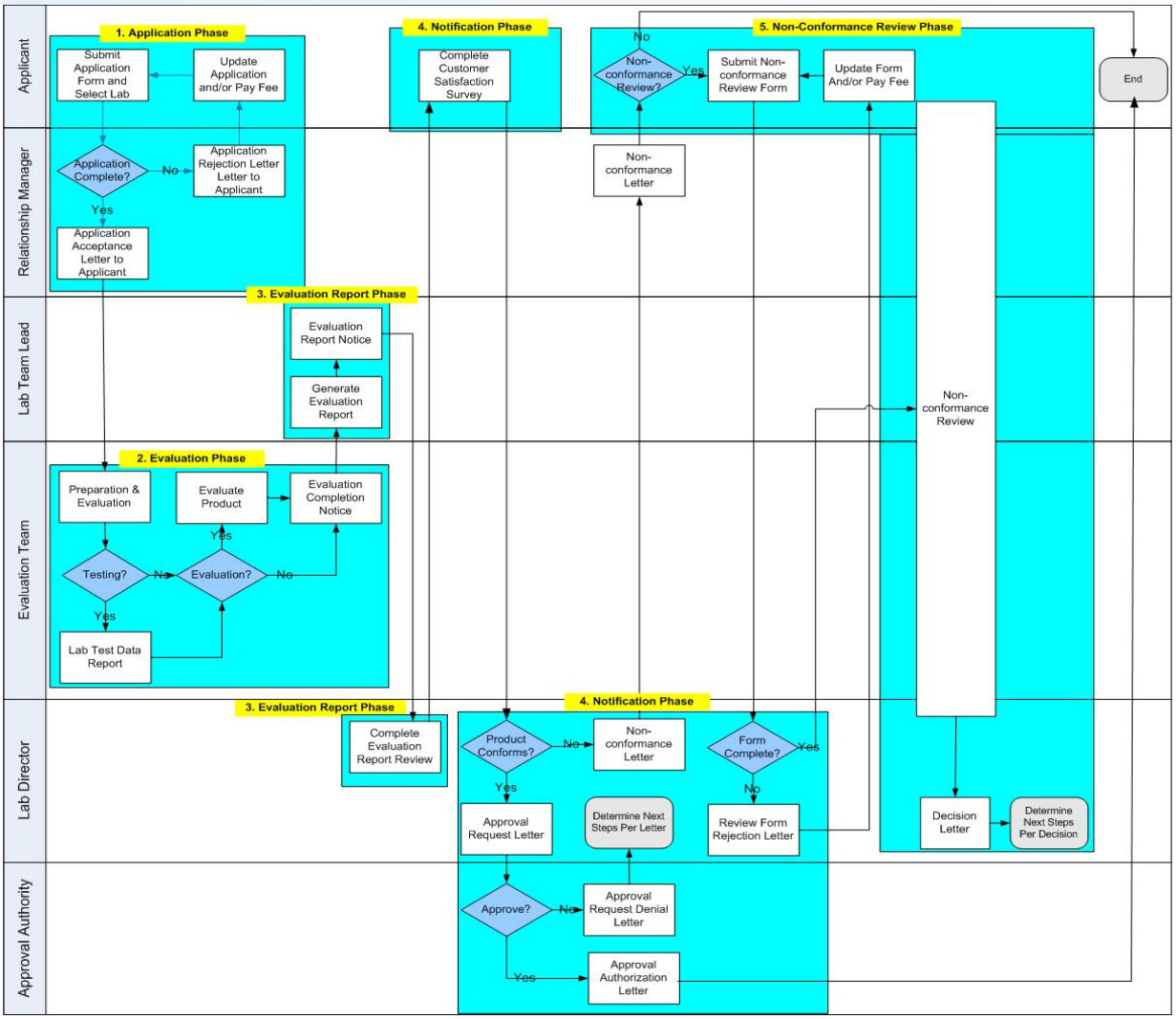

Figure 2 - High Level Overall Process Flow

4.5.2.1 *Phase Descriptions*

4.5.2.1.1 Application Phase

Figure 3 details the steps involved during the Application Phase.

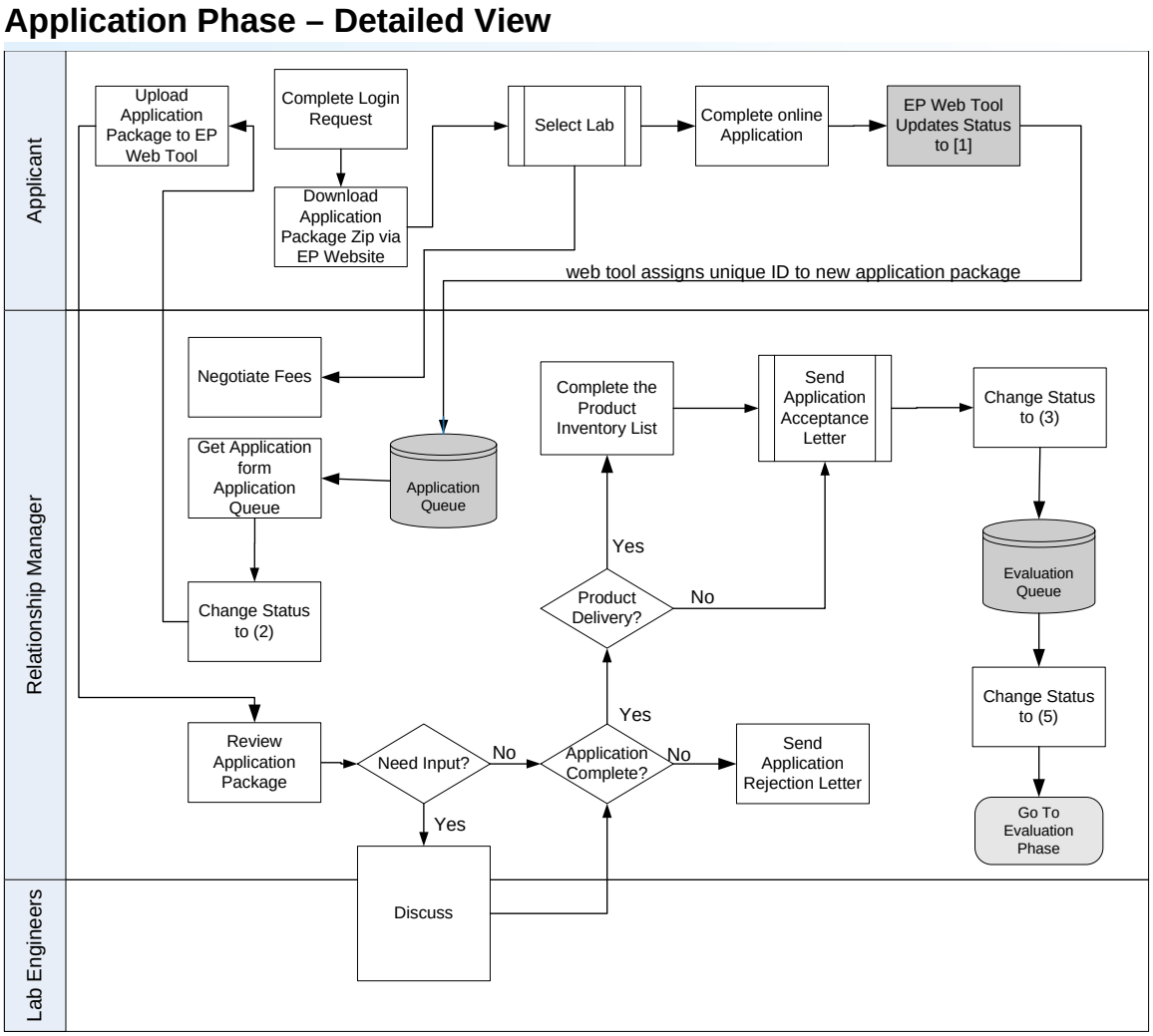

Figure 3 - Application Phase Flow Diagram

4.5.2.1.2 Application Package Submission Process

- Applicant visits the EP Website; downloads, completes and submits the Evaluation Login Form in order to obtain a login to the EP Web Tool.
- Applicant downloads the appropriate Approval Procedure (Application Package) Zip file from the EP Website which contains details on the items that need to be submitted to the Lab for evaluating their Product or Service.
- Applicant selects the Lab that would evaluate their Product/Service.

- Applicant and Lab negotiates and mutually agrees upon on evaluation fees prior to submitting the Application Package (out-of-band)[2].
- Applicant completes the online application sheet as part of their application submission.
- Once the Applicant creates an application submission, the EP Web Tool adds Application Package to the end of the internal Application Queue – "first in, first out" approach and sets its status to "*Begin Application*". Additionally, the EP Web Tool assigns a unique ID to the application.
- Relationship Manager acknowledges the receipt of the application and sets the status to "*Package Submitted*" in the EP Web Tool.
- Applicant gathers all necessary documentation (e.g., product or service guides) and evidence (e.g., certificates of conformance).
- Applicant uploads all electronic documents and evidence that needs to be submitted to the EP Website; Applicant includes signed Lab Services Agreement or Non Disclosure Agreement found in the .zip file.
- In the event that the Product/Service category requires submission of the Product and/or artifacts to the Lab, the Applicant makes sure that these items are delivered to the Lab (e.g. Courier, hand-delivery).

4.5.2.1.3 Retrieve Next Entry in Application Queue

- The Relationship Manager uses the EP Web Tool to retrieve the application off the Application Queue.
- The Relationship Manager can retrieve another application off the Application Queue if is a resubmission of an earlier application that was rejected and since then the Applicant has uploaded the missing documentation. In this case the application will have a status of "*Application Rejected*".

4.5.2.1.4 Application Package Review

- The Relationship Manager reviews entire application package in detail and determines whether the application form is complete. The Relationship Manager verifies that all necessary Product or Service documentation (e.g., install guide, configuration instructions, user guide) is present as specified in the Approval Procedure and as documented in the submitted Supplier Vendor Documentation Review / Vendor Test Data report justification worksheet for the Product or Service. The Relationship Manager also verifies that all necessary evidence (e.g., attestation forms) is present and sufficient for the Lab to make a final conformance determination.
- If necessary to make an informed decision regarding the completeness and sufficiency of the Application Package, the Relationship Manager contacts appropriate Lab Engineer(s) to obtain their feedback.

[2] Payment terms and conditions are considered outside the scope of the Lab Spec and handled directly between the Lab and the Supplier.

- If the Application Package is deemed incomplete or insufficient by the Lab, Relationship Manager informs the Applicant primary contact an Application Rejection Letter indicating the reasons for rejection and sets the status in the EP Web Tool to "*Application Rejected*".
- Upon receipt of an Application Rejection Letter, the Applicant uses EP Web Tool to update the existing Application Package as required (e.g., updates to the application form, submission of revised documentation, fee payment, submission of a signed Lab Services Agreement, etc.). The Applicant has 10 days within which all missing documentation must be uploaded after which the application will be deleted altogether. The Relationship Manager is responsible for providing the appropriate Application Rejection Letter to the Applicant and notifying the PMO in case an application needs to be deleted.
- Applicant submits the update.
- The Relationship Manager reviews the application package after the Applicant has provided the necessary documentation.

4.5.2.1.5 Complete Product Inventory List (if necessary)

- If the Product/Service Category requires the Applicant to deliver the Product and/or artifacts to the Lab for electronic testing by the Lab, the Relationship Manager updates the Product Inventory List to keep track of the Applicant's submissions. The Product and/or artifacts are labelled with the unique case number for the evaluation for identification.

4.5.2.1.6 Application Acceptance Letter Transmittal

- Once the above-mentioned steps are completed, the Relationship Manager informs the Applicant primary contact that the application package has been accepted as complete using the Application Acceptance Letter[3].
- Relationship Manager uses EP Web Tool to change application status to "*Package Complete*."

4.5.2.1.7 Move to Evaluation Queue

- Once the Relationship Manager changes the status in the EP Web Tool to "*Package Complete*", the tool automatically changes the status to "*Evaluation in Progress*". This concludes the Application Phase.

[3] All transmittal letters may be conveyed to the appropriate entity by using the comments field within the EP Web Tool. The Labs may maintain copies of these letters outside of the tool for record keeping and archiving purposes and to follow organization-specific processes.

4.5.2.2 *Evaluation Phase*

Figure 4 details the steps involved during the Evaluation Phase.

Evaluation Phase – Detailed View

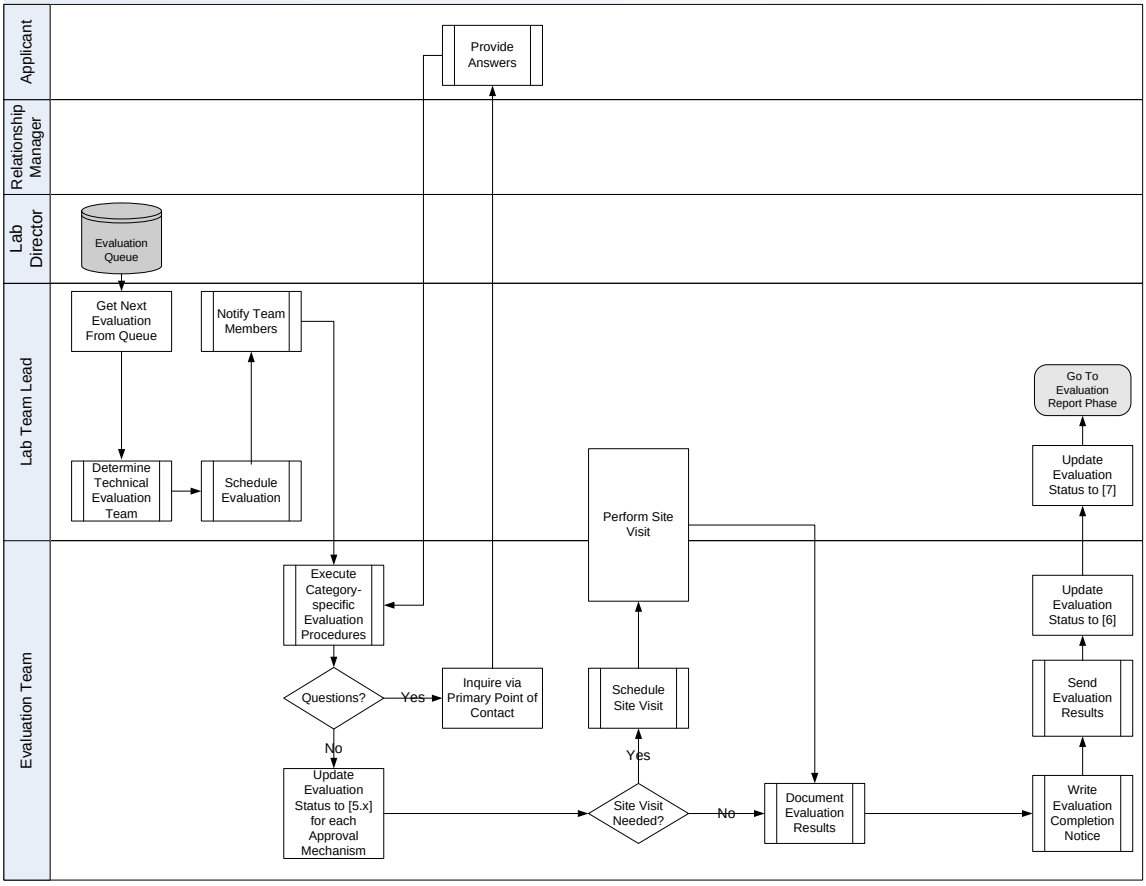

Figure 4 - Evaluation Phase Flow Diagram

4.5.2.2.1 *Retrieve Next Entry in Evaluation Queue*

- The Lab Team Lead uses the EP Web Tool to retrieve the next application to undergo evaluation from the Evaluation Queue.

4.5.2.2.2 *Assign Staff and Schedule the Evaluation*

- Lab Team Lead reviews the Application Package, noting the Product or Service category involved.
- Based upon Approval Procedure for that Product or Service category, Lab Team Lead considers three key resource assignment factors: (1) scope of evaluation such as whether testing is required, (2) overall skills needed, (3) number of Lab Engineers required.
- Lab Team Lead reviews current overall evaluation schedule to determine availability of appropriate Lab Engineers and earliest date that the evaluation can begin.

- Lab Team Lead selects Lab Engineer(s) required for the evaluation.
- Lab Team Lead informs the Lab Engineer(s) notifying them of the new evaluation assignment.

4.5.2.2.3 Prepare Test Environment

- Technical Evaluation Team reviews the relevant Approval Procedure and if applicable the relevant Test Procedure.
- If the Product or Service requires electronic testing, the Technical Evaluation Team prepares the test environment – in terms of (a) basic test support infrastructure and (b) Product or Service to be tested.
  - The Technical Evaluation Team uses the Product Inventory List obtained from case file.
  - The Technical Evaluation Team coalesces, installs, and configures basic infrastructure to support the testing. This is based on the test setup as described in the Test Procedure for the category.
  - The Technical Evaluation Team confirms that the Product (and associated documents) supplied is the exact version noted on the Application. Technical Evaluation Team reads Product material to understand sufficiently installation, configuration, and functioning. Technical Evaluation Team proceeds with installation and configuration.
- If there are questions during preparation, the Technical Evaluation Team directly asks Applicant point of contact. If a question was asked, and there is no response or insufficient response from the Applicant, the Technical Evaluation Team ends the evaluation and proceeds with evaluation closeout steps. The Lab should allow two (2) business days to receive a sufficient response, but circumstances may allow more or less time before concluding the evaluation. The Lab may use its best judgment in this regard, factoring in overall Lab schedule and other commitments.

4.5.2.2.4 Execute Category-specific Procedures

- If more than one Lab Engineer assigned to the Technical Evaluation Team, evaluation procedure tasks are apportioned as appropriate. The Technical Evaluation Team consults with the Lab Team Lead if necessary.
- The Technical Evaluation Team reviews evaluation procedure sequencing to optimize resource usage and to minimize evaluation duration. This includes determining what evaluation procedures can be done in parallel (e.g., testing and evaluation in parallel).
- Technical Evaluation Team performs all category-specific Evaluation Procedures, as currently written and without deviation, using specified evaluation mechanisms.
- The Technical Evaluation Team uses EP Web Tool to change status as appropriate through each approval mechanism that applies to the category.

- If a site visit is required, the Technical Evaluation Team schedules the visit with the Applicant primary contact. As part of the scheduling discussion, the Technical Evaluation Team may provides the Applicant primary contact with a written list of all evaluation tasks that will be performed as part of the on-site assessment, however the details of the assessment shall be followed in accordance with the appropriate Approval Procedure. The Technical Evaluation Team also requests that Applicant representatives be available during the site visit to address any questions that may come up. On the date of the visit, appropriate Technical Evaluation Team members go to the site to conduct tests – in accordance with Approval Procedure for the category.
- If there are questions during evaluation, the Technical Evaluation Team directly asks Applicant point of contact. If a question was asked, and there is no response or insufficient response from the Applicant, the Technical Evaluation Team ends the evaluation, and proceeds with evaluation closeout steps. The Lab should allow two (2) business days to receive a sufficient response, but circumstances may allow more or less time before concluding the evaluation. The Lab may use its best judgment in this regard, factoring in overall Lab schedule and other commitments.
- During the evaluation and site visit (if any), Technical Evaluation Team documents all findings and results.

4.5.2.2.5 Evaluation Closeout

- The Technical Evaluation Team documents all evaluation findings and results:
  - For evaluations that include electronic testing, the Technical Evaluation Team completes a Lab Test Data Report.
- The Technical Evaluation Team member completes an Evaluation Completion Notice.
- The Technical Evaluation Team member sends the Evaluation Completion Notice along with the evaluation results to the Lab Team Lead indicating that the evaluation has concluded.
- The Technical Evaluation Team uses EP Web Tool to change application status to "*Evaluation Complete*."
- The EP Web Tool automatically updates application status to "*Evaluation Report in Progress*". This concludes the Evaluation Phase.

4.5.2.3 *Evaluation Report Phase*

Figure 5 details the steps involved during the Evaluation Report Phase.

Evaluation Report Phase – Detailed View

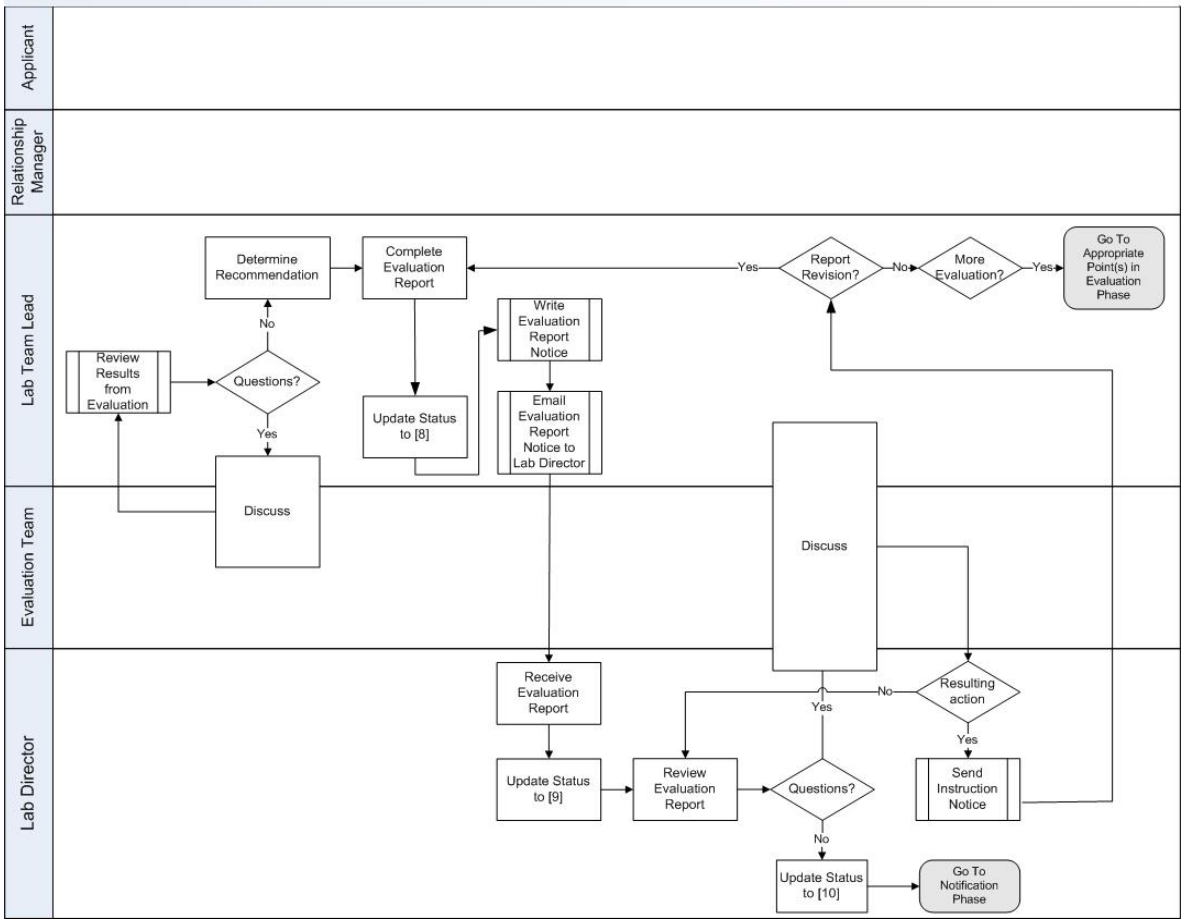

Figure 5 - Evaluation Report Phase Flow Diagram

4.5.2.3.1 Review Results and Findings

- The Lab Team Lead reviews the evaluation results assembled by the Technical Evaluation Team. The Lab Team Lead reviews all findings in detail for completeness, clarity, and whether all evaluation procedure steps have been followed.
- If the Lab Team Lead has any questions or concerns about the findings, the Lab Team Lead contacts one or more Technical Evaluation Team members to discuss. Depending upon the scope and extent of the questions and the number of participants, the discussion may be via telephone or via an in-person meeting. Upon receiving answers and clarifications, Lab Team Lead continues reviewing evaluation results and findings.

4.5.2.3.2 Finalize Evaluation Report

- Once all findings have been reviewed, and answers and clarification received, Lab Team Lead provides the final sign-off on the Evaluation Report and determines the recommendation to be included within this Report. In almost all cases, the recommendation will be self-evident, per the Technical Evaluation Team findings and results.

4.5.2.3.3 Send to Lab Director

- The Lab Team Lead sends an Evaluation Report Notice along with the Evaluation Report to the Lab Director.

4.5.2.3.4 Review Evaluation Report

- On receiving the Evaluation Report Notice from the Lab Team Lead, the Lab Director uses EP Web Tool to change application status to "*Evaluation Report Under Review*."
- The Lab Director reviews the Evaluation Report in detail. Lab Director reviews for completeness, clarity, and appropriateness of recommendation.
- If the Lab Director has any questions or concerns about the Evaluation Report, the Lab Director contacts the Lab Team Lead and/or one or more Technical Evaluation Team members to discuss. Depending upon the scope and extent of the questions and the number of participants, the discussion may be via telephone or via an in-person meeting. Upon receiving answers and clarifications, the Lab Director continues reviewing the Evaluation Report.

4.5.2.3.5 Determine Any Additional Actions

- Per discussions with the Technical Evaluation Team, it may be determined that: (i) additional evaluation is required, (ii) particular evaluation steps must be redone, and/or (iii) the Evaluation Report must be revised.
  - The Lab Director completes an Instruction Notice documenting the next steps for the evaluation, including any specific deadlines;
  - Lab Director emails the Instruction Notice to the Lab Team Lead describing the action items.
- If additional evaluation is required, the Lab Team Lead facilitates a return to the appropriate point(s) in the Evaluation Phase. The Lab Team Lead must address issues of resource and staff availability, and schedule accordingly. To the extent possible, Lab Team Lead must maintain the same Technical Evaluation Team.

4.5.2.3.6 Complete Evaluation Report Review

- The Lab Director reviews any changes to the evaluation report based on additional actions. Once evaluation report is deemed complete and satisfactory, the Lab Director uses EP Web Tool to change the application status to *"Evaluation Report Review Completed."*

4.5.2.4 *Notification Phase*

Figure 6 details the steps involved during the Notification Phase.

Notification Phase – Detailed View

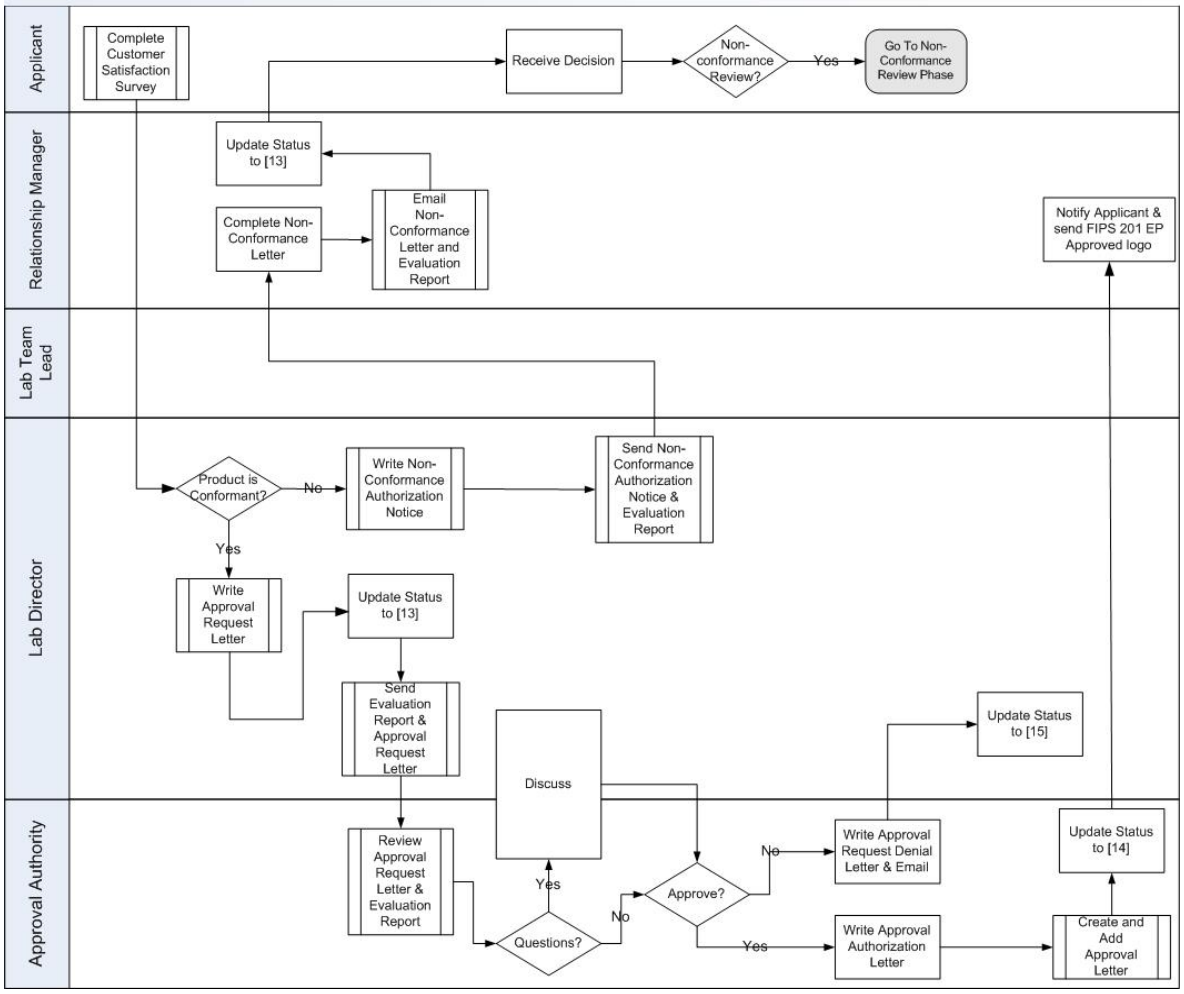

Figure 6 - Notification Phase Flow Diagram

4.5.2.4.1 Complete Customer Satisfaction Survey

- Upon Evaluation Report Review completion, the application status is changed automatically by the EP Web Tool to *"Customer Satisfaction Survey Pending."*
- The Applicant is notified via email that the customer satisfaction survey needs to be completed. The Applicant uses the EP Web Tool to complete the survey by clicking *"Customer Satisfaction Survey"* link.
- Once the survey is completed, the application status is changed automatically by the EP Web Tool to *"Customer Satisfaction Survey Completed."*

4.5.2.4.2 Make Conformance Determination

- Once the survey has been completed, the Lab Director continues on with the process which is dependent on whether the Product or Service is conformant.

4.5.2.4.3 Conformant Product or Service

- If the Product is conformant, the Lab Director completes an Approval Request Letter for the appropriate case file.
- The Approval Request Letter is added to the EP Web Tool by copying the content of the letter in to the "Status Note:" section of the case file.
- The Lab Director uses EP Web Tool to change application status to "*Awaiting Government Approval Authorization*."
- The Lab Director sends the Approval Request Letter and final Evaluation Report to the Approval Authority.
- The Approval Authority reviews Approval Request Letter and Evaluation Report.
- If the Approval Authority has any questions or requests for clarification, the Approval Authority contacts the Lab Director to discuss. Contact can be in any method acceptable to the Approval Authority, such as email, teleconference or in person meeting. The Lab Director will respond accordingly.

4.5.2.4.4 Approval Authority Approves Request

- If Approval Authority approves the request, the Approval Authority writes an Approval Authorization Letter.
- The Approval Authority uses the EP Web Tool to add the Approval Authorization Letter to the appropriate case file.
- The Approval Authority then uses EP Web Tool to change application status to "*Approved*."
- Once the application is *"Approved"* the Relationship Manager notifies the Applicant and sends the FIPS 201 Approved Logo.

4.5.2.4.5 Approval Authority Rejects Request

- If Approval Authority rejects the request, Approval Authority writes an Approval Request Denial Letter. Approval Authority must include specific reasons as to why the Approval Request is denied.
- The Approval Authority emails the signed Approval Request Denial Letter to the Lab Director cited in the Approval Request Letter.
- Upon receipt, the Lab Director uses the EP Web Tool to add the Approval Request Denial Letter to the appropriate case file.
- The Lab Director reviews the Approval Request Denial Letter to determine appropriate next steps for the Lab, if any.

- The Lab Director uses EP Web Tool to change application status to “Non-Conformant” if the final decision is found to be consistent with that of the Approval Authority.

4.5.2.4.6 Non-Conformant Product or Service

- If the Product is non-conformant, the Lab Director completes a Non-Conformance Authorization Notice.
- The Lab Director sends the Non-Conformance Authorization Notice to the Relationship Manager.
- The Relationship Manager completes a Non-Conformance Letter.
- The Relationship Manager uses the EP Web Tool to add the Non-Conformance Letter to the appropriate case file.
- The Non-Conformance Letter is added to the EP Web Tool by copying the content of the letter in to the “Status Note:” section of the case file.
- The Relationship Manager emails the Non-Conformance Letter and Evaluation Report to the Applicant primary contact.
- Upon receipt of Non-Conformance Letter and Evaluation Report, the Applicant decides whether to request a Non-Conformance Review.

4.5.3 Non-Conformance Review Phase

Figure 7 details the steps involved during the Non-Conformance Phase.

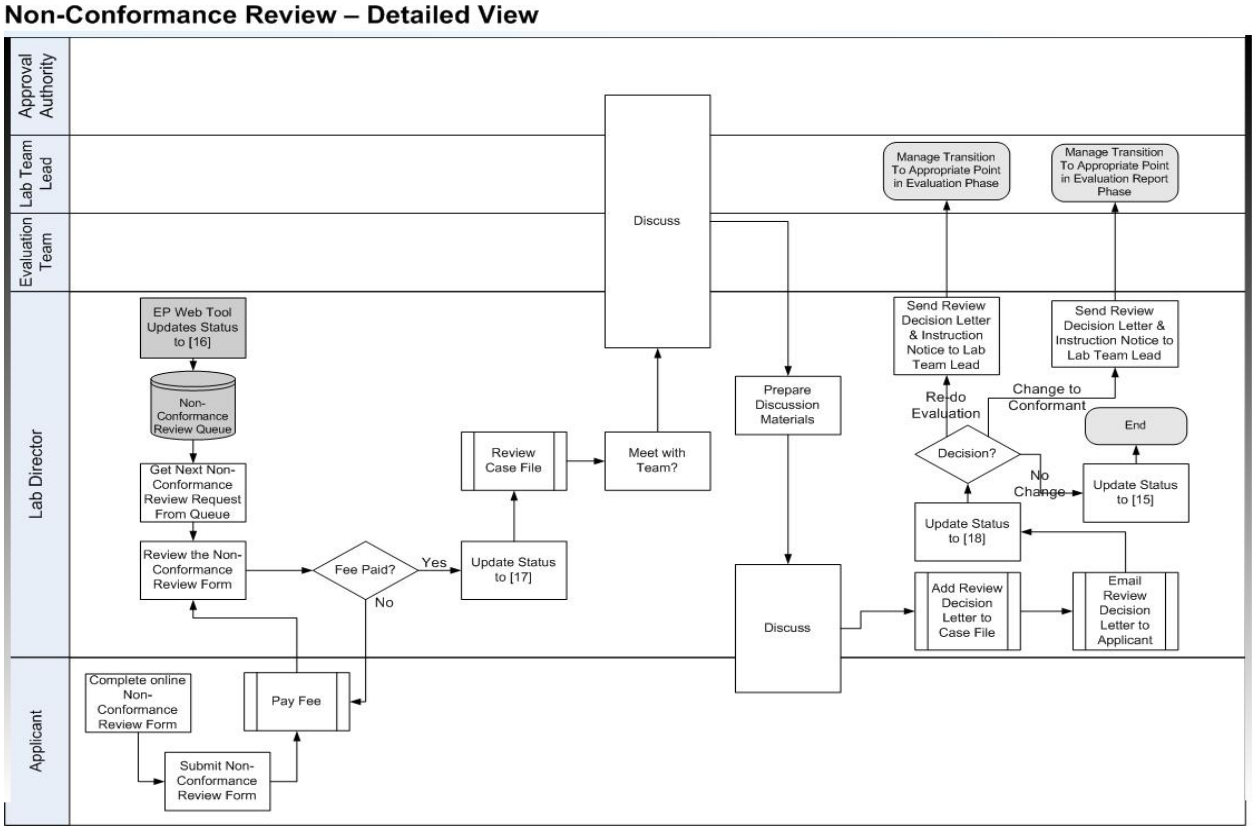

Figure 7 - Material Review Board Phase Flow Diagram

4.5.3.1.1 Initiate Non-Conformance Review

- The Applicant completes the non-conformance review form (located at the following URI: http://fips201ep.cio.gov/documents/NCR Form.pdf) requesting a non-conformance review.
- The Applicant uploads the form to the case number under which the application was deemed as non-conformant initially.
- Upon intent of an Applicant to go through the non-conformance review phase, the Lab Director will set the status in the EP Web Tool to "*Awaiting Non-Conformance Review*". This adds the Non-Conformance Review to the end of the internal Non-Conformance Review Queue – "first in, first out" approach.
- The Applicant pays the specified non-conformance review fee as determined by the Lab.

4.5.3.1.2 Retrieve Next Entry in Application Queue

- The Lab Director uses EP Web Tool to retrieve the next Non-Conformance Review Form off the Non-Conformance Review Queue. The Lab Director can

retrieve another Non-Conformance Review Form off the Non-Conformance Review Queue simply by clicking on another entry listed in the Queue, or searching by case file number.

4.5.3.1.3 Review the Non-Conformance Review Form

- The Lab Director reviews the form for completeness and clarity. In addition, Lab Director verifies that the associated fee has been paid.
- If the Lab Director determines that the form is incomplete or not understandable, or that the fee has not been paid, the Lab Director informs the Applicant, specifying the exact issues that must be resolved (e.g., updates to Non-Conformance Form, fee payment etc).
- The Lab Director must accept all requests for review that have a completed form and where full payment is verified.

4.5.3.1.4 Applicant Makes Corrections If Necessary

- If the Applicant still owes Non-Conformance Review fee, the Applicant pays fee.
- If the Non-Conformance Review Form is incomplete, the Applicant updates the Non-Conformance Review Form per instructions from Lab Director. Applicant uploads the updated form to the case number for the non-conformant submission.
- Upon receipt of the updated form, Lab Director continues the review process from the applicable point in the process.
- Upon receiving a satisfactory Non-Conformance Review Form and verifying that the fee has been paid, Lab Director uses EP Web Tool to change application status to "*Non-Conformance Review In Progress*."

4.5.3.1.5 Begin Non-Conformance Review

- The Lab Director retrieves all relevant materials from the appropriate case file and reviews them.
- If necessary, the Lab Director contacts the Lab Team Lead and/or the one or more Technical Evaluation Team members to discuss. Depending upon the scope and extent of the questions and the number of participants, the discussion may be via telephone or via an in-person meeting. Upon receiving answers and clarifications, the Lab Director continues review as necessary.
- If necessary, the Lab Director should contact the Approval Authority to obtain guidance.

4.5.3.1.6 Discuss With Applicant

- Upon completing initial review, the Lab Director contacts the Applicant primary contact to schedule a meeting to discuss review findings. Depending upon the findings, the Lab Director may request a teleconference or an in-person meeting. If the Lab Director is certain that the review is in favour of the Applicant, the Lab Director can indicate so to the Applicant primary contact, whereupon both may agree to skip the formal meeting.

- The Lab Director determines whether any other Lab Staff should participate in the meeting (in person or via teleconference), including the Lab Team Lead and one or more Technical Evaluation Team members. The Lab Director should consider other Lab commitments (i.e., the overall Lab schedule) and budget when making this decision.
- During the meeting, the Lab Director formally presents the findings and the decision.
- The Lab Director responds to the Applicant's questions or requests for clarification.
- The Lab Director asks the Applicant questions and requests clarifications as necessary. Answers and clarifications can change the Lab Director's decision.
- The Lab Director may ask the Applicant to provide evidence of conformance during the meeting, which can influence Lab Director's decision if sufficient.
  - The Lab Director, or designated staff, must ensure that evidence applies to the Product or Service version originally submitted to the Lab for evaluation.
  - The Lab Director, or designated staff, must ensure that the Applicant does not introduce any Product or Service component whose version differs from the version originally submitted to the Lab for evaluation. This includes patches to the Product or Service. If so, the case is deemed as non-conformant and the Applicant will be requested to resubmit a new application with the updated Product or Service.

4.5.3.1.7 Make Final Decision

- Upon complete review, all necessary discussions, and further evidence (if provided), the Lab Director makes final decision strictly adhering to:
  - The Lab Director can reverse a Non-Conformance Letter only if there is definitive, demonstrable proof of conformance to applicable, documented FIPS 201 requirements.
  - The Lab Director cannot reverse a Non-Conformance Letter if any question remains as to full conformance per applicable, documented FIPS 201 requirements.
- The Lab Director completes a Review Decision Letter indicating the official decision, and next steps, if any.
- The Lab Director uses EP Web Tool to add completed Review Decision Letter to the appropriate case file.
- The Lab Director uses EP Web Tool to change application status to "*Non-Conformance Review Complete*."
- The Lab Director emails Review Decision Letter to Applicant primary contact.
- The Lab Director makes one of the following decisions:
  - **Non-Conformance Letter Stands** – there is no further processing by the Lab. The overall approval process is concluded. The Applicant can submit their

product or service again, but must begin the approval process anew, including application fee payment. The Lab Director uses EP Web Tool to change application status back to "*Non-Conformant*."

- **Reverse the Non-Conformance Letter without any further evaluation** – case file review and/or Applicant-provided information clearly proves conformance. The Lab Director emails Lab Team Lead the Review Decision Letter and an Instruction Notice to update the Evaluation Report per the Review Decision Letter. Process flow then continues as described in other phases.
- **Have Lab redo subset of Evaluation Procedures** – The Lab Director determines that specific evaluation steps should be redone (not necessarily all steps). The Lab Director notifies the Lab Team Lead of the Review Decision Letter and an Instruction Notice to initiate a redo of some or all of the evaluation procedures per the Review Decision Letter. Process flow then continues as described in other phases. This decision does not guarantee reversal of the Non-Conformance Letter, only that the Lab will try again with revised understanding. The Lab Director must make this point clear to the Applicant in discussions and in the Review Decision Letter.

4.6 Approval Procedures Updates

As the PIV Program evolves i.e. FIPS 201 and its supporting technical publications get updated, changes will need to be made to the procedures that the Lab uses to evaluate Products and Services. It is expected, although not guaranteed, that updates made to these procedures will be minimal. Technical specifications get updated as technology advances and Products get obsolete. This coupled with the fact that the primary goals of PIV are security, reliability and interoperability, Suppliers that currently have Products and/or Services already on the APL will be required to update the same, if necessary, and attest that the Product and/or Service submitted meets all the necessary requirements at all times. In this respect, it is the goal of the Evaluation Program at any point in time to only list Products and Services on the APL that are in conformance with the current version of the Standard and its specifications. The FIPS 201 Approved Products List is dynamic and will only list products and services that are in compliance with the current version of the Standard and its supporting Publications. [4]

4.6.1 Product/Service being Submitted

Suppliers submitting a Product or Service must ensure that the latest version of Approval Procedure has been downloaded and followed during application submission. It is recommended that before uploading any documents to the EP Web Tool, that the latest Application Submission Package be downloaded and reviewed. Suppliers should compile the list of documents and/or artifacts that need to be submitted prior to upload.

4.6.2 Product/Service in Evaluation

If an Approval Procedure is updated while a Supplier's application is in the application or evaluation queue, the Relationship Manager will inform the Applicants as soon as possible. Suppliers will be required to sign a new version of the attestation form which may contain a list of updated requirements as reflected in the Approval Procedure.

The notification to the Supplier will outline the changes made from the previous version as well as the time frame in which Supplier have to update any documentation. This time frame will be determined by the Lab based on discussions with the EP PMO and is typically based on the type and number of requirements that are being changed/added to the Approval Procedure. In the event that the Supplier desires to recall their Product or Service until all new requirements have been adequately addressed, the Supplier may do so.

In the event that only documentation needs to be updated, Suppliers will be given ten (10) days to update their documentation and upload the updates to the EP Web Tool.

[4] Note: APL Products/ Services highlighted (yellow and italicized) are currently in the process of being re-evaluated for continuing compliance. If found to be compliant, the highlighting will be removed, else the Product/Service will be moved to the Removed Product List.

4.6.3 Product/Service on the APL

If the Lab determines that a previously approved product or service needs to be either partially or fully re-evaluated and/or re-tested based on the updates to the Approval Procedure, the Lab will inform the Supplier.

The notification sent to the Supplier by the Lab will outline the changes made from the previous version as well as the time frame by which the Supplier needs to comply. This timeframe is determined by the Lab based on discussions with GSA and is typically based on the type and number of requirements/test scenarios that are being changed/added to the Approval Procedure. Therefore for each update, the Lab in collaboration with GSA will identity a suitable timeframe for submission of new artifacts.

In the event that the Supplier cannot comply within the established timeframe, the Supplier may request an extension through the Lab. Supplier's requests for extensions must be made in writing and cannot exceed more than ten (10) business days beyond the established deadline.. Requests made for extension beyond this timeframe will not be accepted. Please note that the Labs are not authorized to accept any requests for extension on behalf of the FIPS 201 Evaluation Program. Final authorization for all extension requests will be granted by GSA only. Once the timeframe for submission is over, the Labs notify the PMO to remove the product from the APL until compliance has been determined.

Products and services that are in the midst of a re-evaluation will be identified as such on the APL until the re-evaluation has been completed. Depending on whether the product or service is found to be conformant or not, its listing on the APL will either continue to exist or will be moved to the Removed Products List (RPL).

In the event that a product that is cross-referenced as part of another APL line item is removed from the APL, the Supplier for the latter product will be notified by the Lab. The Lab will inform the Supplier of the steps that are necessary to be taken to remain on the APL.

4.7 Supplier Submissions

4.7.1 Product/Service Submission

Suppliers must submit Products and Services that meet the definition of the category as described on the EP Website. Considering that the Evaluation Program's primary objective is that of "evaluation" i.e. to check compliance of a Product or Service with the applicable FIPS 201 requirements, the Lab will not entertain submission of identical components whose method of sale is different (e.g. out-right purchase vs. lease) or the same product with a different part number based on the quantity for sale. This is considered to be an acquisition method and is independent of the technical functionality of the Product and Service, the only concern of the Evaluation Program.

For similar or identical Products that are bundled slightly differently, the Supplier needs to make it evident to the Lab as to the differences between the submissions. Failure to do so will result in the application package being considered as a duplicate and will be deleted.

4.7.2 Updates to Product and Services

Figure 8 illustrates the process and details the steps to be followed during Supplier Product or Service updates.

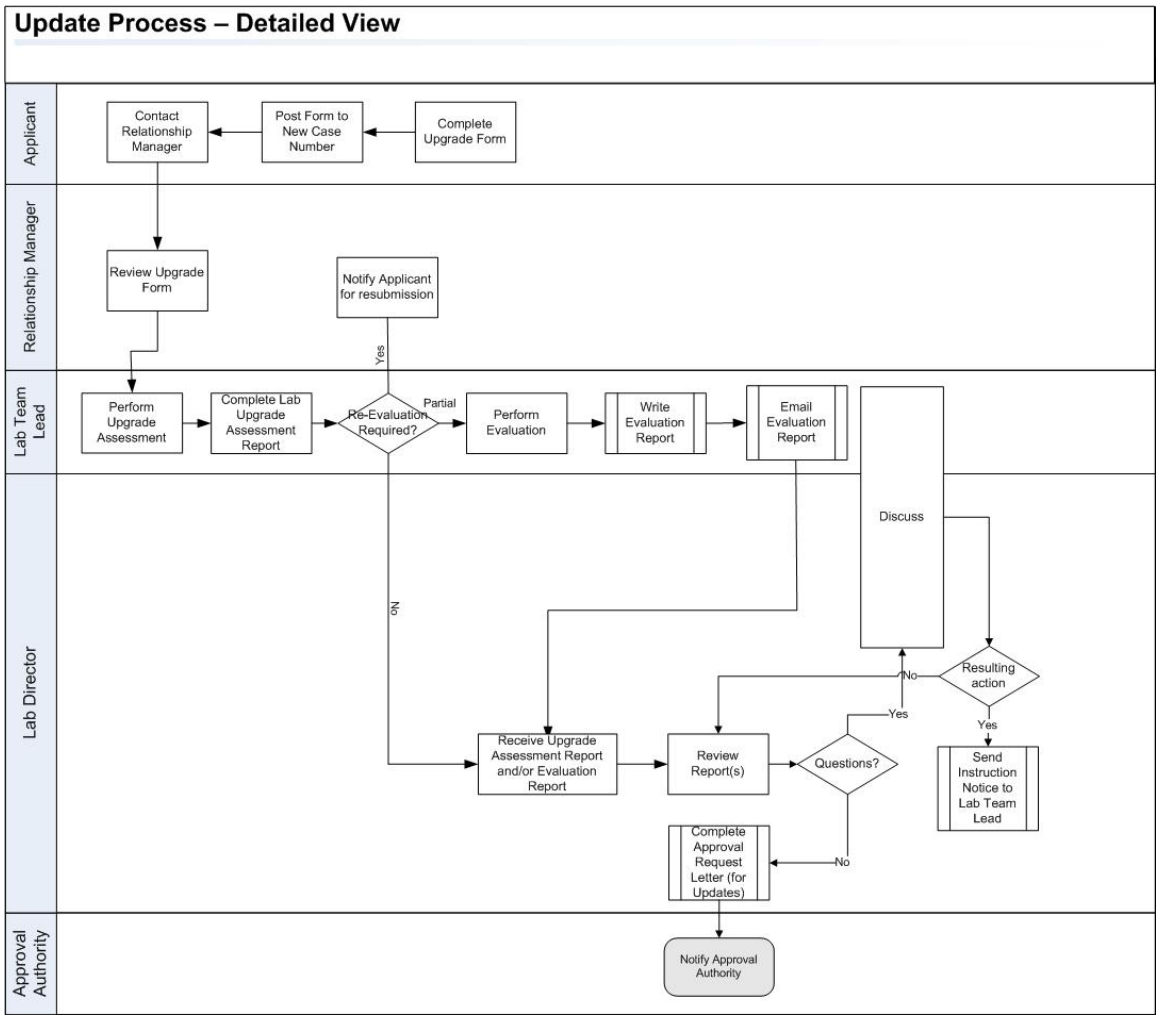

Figure 8 - Upgrade Process Flow Diagram

4.7.2.1 *Product/Service Updates*

4.7.2.1.1 Submit Upgrade Form

- If the Supplier makes an update to their Product that necessitates a change to the version (hardware, software, firmware etc), and the Supplier desires to have the

new version of their Product listed on the Approved Products List, the Supplier will have to complete the Upgrade Form (located at the following URI: http://fips201ep.cio.gov/documents/upgrade_form.pdf) . This form is used to describe to the Lab the detail of the changes that have been made to the Supplier's Product. In the case of Services, if the Supplier changes any Products (including their versions) approved to execute the Service or makes changes to the Service itself (e.g. change of location), the Supplier needs to have the Lab re-evaluate the Service for continued compliance. The Upgrade Form in this case is used to describe to the Lab the detail of the changes that have been made to the Supplier's Service.

- A new application shall be created by the Applicant and the Upgrade Form shall be signed and uploaded to the new case. The person signing this Upgrade Form needs to be a minimum "C" level individual within the organization (e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner).
- Once the Upgrade Form is uploaded, the Relationship Manager reviews the form for completeness.
- The Relationship Manager then notifies the Lab Team Lead to review the Upgrade Form to make a determination for Product re-evaluation.

4.7.2.1.2 Review the Upgrade Form

- The Lab Team Lead evaluates the changes and makes a determination whether the updated Product/Service needs to go through complete re-evaluation or whether the changes do not affect the current requirements.[5] The burden of proof is on the Supplier to provide the necessary details in the Upgrade Form in order for the Lab to accurately make a determination of whether a re-evaluation is required. In addition to documenting the changes made to the Product/Service within the Upgrade Form, the Supplier is also expected to submit the necessary artifacts (e.g. configuration management documents, diagrams/drawings, developer/release notes, product literature, samples, etc) substantiating the claim. Where necessary, the Labs will assist Suppliers in submitting the necessary artifacts, and will be identified by the Lab on a case-by-case basis based on the nature of the upgrade All artifacts provided for the upgrade process shall be sufficient to validate the claim made by the Supplier.

  Please note that in the context of the Evaluation Program, an upgrade implies that the updated product will be sold using the same, original part number. In the event that a Supplier changes the part number, the upgrade process shall not be followed. Additionally, in the case that the Supplier desires to have both the original and the updated product listed on the APL, the updated product needs to have a new part number.

[5] Changes to alphanumeric characters following a dash (-) in the Part Number are considered as an Update to the product or the service offered. For example, the original Part Number is XXXX-AAA and the Part Number after product upgrade is changed to XXXX-BBB.

- For cases where the Lab performs testing (via LTDR), the Supplier may need to submit the new version of their Product to the Lab as part of the upgrade assessment.

4.7.2.1.3 Make Determination

- Once the Lab reviews the Upgrade Form, there are three (3) possible paths:
    1. The Lab Team Lead determines that the Product/Service does not need to be re-evaluated. In this case, the Relationship Manager will notify the Applicant and set the status to "*Package Complete*". The Lab Team Lead will transition through the evaluation statuses within the EP Web Tool. The Lab completes the "Upgrade Assessment Report", checking the "No Re-evaluation" box and stating that the product/service does not need to be re-evaluated. In the report, the Lab will also provide substantiating evidence (not including information from the Upgrade Form submitted by the Supplier) which concludes that re-evaluation is not required.
    2. The Lab Team Lead determines that the Product/Service needs to be partially re-evaluated. In this case, the Relationship Manager will notify the Supplier accordingly. The Lab completes the "Upgrade Assessment Report", checking the "Partial Re-evaluation" box and stating that the product/service needs to be partially re-evaluated. In the report, the Lab will also provide substantiating evidence (not including information from the Upgrade Form submitted by the Supplier) which concludes that partial re-evaluation is required. The Relationship Manager sets the case to "*Application Rejected*" and the Supplier will then have ten (10) days to submit the necessary documentation for Product evaluation. If documentation is not provided within this timeframe, the application will be deleted. The Supplier can re-submit their upgrade form along with the new documentation and Product /artifacts once they are ready for re-submission. If the Applicant does submit their updates within the stipulated timeframe, the Relationship Manager sets the status to "*Package Complete*". The Lab then performs the necessary re-evaluation in accordance with the "Evaluation Phase" processes. In this scenario, the Evaluation Report is completed only for those requirements that are re-tested and for the requirements that weren't affected, the Lab shall identify these with – "*Not affected as part of the Upgrade*."
    3. If the Lab determines that the Product/Service needs to be completely re-evaluated, the Lab will notify the Supplier accordingly. In this case as well, the Lab completes the "Upgrade Assessment Report", checking the "Full Re-evaluation" box and stating that the product/service needs to be fully re-evaluated. In the report, the Lab will also provide substantiating evidence which concludes that full re-evaluation is required. The Supplier will then have ten (10) days to submit the necessary documentation for Product evaluation. If documentation is not provided within this timeframe, the application will be deleted. Once all the necessary documentation and Product/artifacts are submitted, the Lab performs the

evaluation in accordance with the "Evaluation Phase" processes. Re-evaluation implies that the Supplier must submit all items required by Section 2.4 of the Approval Procedure.

- In all the cases above, the Upgrade Assessment Report, the Evaluation Report (completed for scenarios 2 and 3) is sent to the Lab Director.
- The Lab Director completes an Approval Request Letter (for Updates).
- The Lab Director uses the EP Web Tool to add the completed Approval Request Letter (for Updates) to the appropriate case file.
- The Lab Director uses EP Web Tool to change application status to "*Awaiting Government Approval Authorization*."

4.7.2.1.4 Update APL

- On obtaining the Approval Authorization Letter from the Approval Authority, the EP PMO will update the existing listing[6] on the Approved Products List to include the Product along with the new version numbers (h/w, s/w and f/w as applicable). In the context of the Evaluation Program - an upgrade implies that the older version of the Product is no longer going to be sold by the Supplier. The old Product/Service entry on the APL will be updated to include the new Product/Service listing. Product/Service that are removed from the APL will placed on the RPL in order to maintain an history and archiving purposes.

4.7.2.2 *Lab Transfer Notifications*

- If a Supplier wishes to use the services of a different Lab instead of the initially selected Lab under a variety of circumstances. Lab transfers may be made midstream of an evaluation or can be made during an upgrade evaluation, i.e. wherein one Lab performed the initial evaluation, while another performs the upgrade.
- Once the Supplier submits a change request for transferring a particular case in writing, GSA will make the provisions necessary to transfer the evaluation to the new Lab. The Supplier point of contact will be notified by GSA once the transfer process has been completed. Suppliers are required to submit change requests to GSA at **fips201eplabmain@gsa.gov.**

[6] In the case of an upgrade, the Part Number has to remain the same.

Appendix A: Templates

The following templates shall be used to communicate key information and decisions within the Lab, and between external parties such as Applicants and the Approval Authority.

For convenience as well as usability, certain fillable forms (login request form, non-conformance review form, upgrade form etc.) are not included within this document. These are individually packaged and accessible through the EP Website.

During the course of the evaluation, several letters will be sent to the Applicant and is based on the status of their application. Some of these letters may be conveyed to the Applicant using the EP Web Tool, while at other times a letter may need to be emailed. Whenever such letters are emailed, it is encouraged that these be on the Lab letterhead. However, for the sake of consistency within the Evaluation Program, the content of these letters shall be as provided herein.

Lastly, as mentioned earlier, Notices are primarily intended for internal communications within the Lab. It is expected that these Notices will be sent electronically via email between the different Lab Staff and therefore do not need to be on the Lab letterhead nor do they need to be electronically signed.

A.1 Application Acceptance Letter

<Date>
<Lab Name>
<Lab Address>

<Point of Contact>
<Company Name>
<Address>

Re: Application Acceptance Letter
Case File Number <*case file number*>

Dear <Point of Contact>:

We are pleased to inform you that your application as identified below has been accepted as complete and now awaits evaluation.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

We appreciate your participation in this important Initiative.

Sincerely,

(Signature here)
Relationship Manager
< Relationship Manager Contact Information>

A.2 Application Rejection Letter

<Date>
<Lab Name>
<Lab Address>

<Point of Contact>
<Company Name>
<Address>

Re: Application Rejection Letter
Case File Number <*case file number*>

Dear <Point of Contact>:

Your application as identified below has been reviewed.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

Unfortunately, there are problems with the submission that need correction. The errors are:

<*Bullet list of errors*>

Once corrected, please update your application at http://fips201ep.cio.gov/ as necessary. Please note that you will have ten (10) business days to provide the requested corrections. If corrections are not made, this Case File will be deleted.

Please don't hesitate to contact us if you have any questions.

Sincerely,

Relationship Manager
< *Relationship Manager Contact Information*>

A.3 Approval Request Letter

<Date>
<Lab Name>
<Lab Address>

Re: Approval Request Letter
Case File Number <*case file number*>

To: <Approval Authority>:

Evaluation of the following <*Product/Service*> has completed. The evaluation indicates full conformance with all relevant <*category name*> category requirements.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	
TAA Compliant?	Yes/No

Restrictions Required:

- <List Restrictions>

Please review the enclosed Evaluation Report.

If you disagree with the Evaluation Report recommendation of approval, please return a completed Approval Denial Letter to the Lab.

Sincerely,

Lab Director
< Lab Director Contact Information>

Enclosure: Evaluation Report

A.4 Approval Request Letter (for Updates)

<Date>
<Lab Name>
<Lab Address>

Re: Approval Request Letter (for Updates)
Case File Number <*case file number*>

To: <Approval Authority>:

Evaluation of the following <*Product/Service*> has completed. The evaluation indicates full conformance with all relevant <*category name*> category requirements.

Existing Product/Service:

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

Updated Product/Service:

Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	
TAA Compliant?	Yes/No

Restrictions Required:

- <List Restrictions>

Please review the enclosed Evaluation Report and Upgrade Assessment Report.

If you disagree with the Evaluation Report recommendation of approval, please return a completed Approval Denial Letter to the Lab.

Sincerely,

Lab Director
< Lab Director Contact Information>

Enclosure: Evaluation Report, Upgrade Assessment Report

A.5 Approval Authorization Letter

<Date>
Approval Authority
<Approval Authority Address>

Re: Approval Authorization Letter
Case File Number: *<case file number>*

To: <Relationship Manager>

The Approval Authority officially authorizes approval of the following *<Product/Service>* to be placed on the GSA FIP 201 Approved Products List (APL).

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

Sincerely,

(Signature here)
Approval Authority
< Approval Authority Contact Information>

A.6 Approval Denial Letter

<Date>
Approval Authority
<Approval Authority Address>

Re: Approval Request Denial Letter
Case File Number *<case file number>*

To: <Lab Director>:

The Approval Authority officially rejects approval of following *<Product/Service>*.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

The reason(s) for denial are:

<Bullet list of reasons>

Sincerely,

(Signature here)
Approval Authority
< Approval Authority Contact Information>

A.7 Non-Conformance Letter

<Date>
<Lab Name>
<Lab Address>

<Primary Point of Contact>
<Company Name>
<Address>

Re: Non-Conformance Letter
Case File Number <*case file number*>

Dear <Primary Point of Contact>:

Evaluation of below-mentioned <*Product/Service*> indicates non-conformance with one or more relevant FIPS 201 requirements and associated publications. Therefore, we are unable to add the product to the Approved FIPS 201 Products and Services List.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

Enclosed is a copy of the Evaluation Report, which cites the specific areas of non-conformance. Please contact myself if you have any questions.

If you believe that the results are in error, you may request a non-conformance review with the Lab. Simply go to http://fips201ep.cio.gov/ for instructions. You have thirty (30) business days from the date of this notice to submit the review request.

Alternatively, after addressing the areas of non-conformance, you may resubmit your application. Please note that the application fee will be associated with re-submission.

Sincerely,

(Signature here)
Relationship Manager
< *Relationship Manager Contact Information*>

Enclosure: Evaluation Report

A.8 Review Form Rejection Letter

<Date>
<Lab Name>
<Lab Address>

<Point of Contact>
<Company Name>
<Address>

Re: Review Form Rejection Letter
Case File Number *<case file number>*

Dear <Point of Contact>:

Your request for a non-conformance review for the *<Product/Service>* as identified below has been reviewed.

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

Unfortunately, there are problems with the submission that need correction, before it can be processed. The errors are:

<Bullet list of errors>

Once corrected, please update your non-conformance review form at http://fips201ep.cio.gov/ as necessary.

Please don't hesitate to contact us if you have any questions.

Sincerely,

Lab Director
< Lab Director Contact Information>

A.9 Review Decision Letter

<Date>
<Lab Name>
<Lab Address>

<Point of Contact>
<Company Name>
<Address>

Re: Review Decision Letter
Case File Number *<case file number>*

Dear <Point of Contact>:

After careful consideration of all the facts, of relevant conversations, additional research, and the specific requirements defining conformance, I have determined that the following *<Product/Service>*:

Supplier Name:	
Name of Product or Service:	
Part Number:	
Hardware Version:	
Software Version:	
Firmware Version:	

<does not conform, per original evaluation results. The matter is closed. You may submit another version for evaluation, but that will require a new application and payment of the application fee.> OR

<appears to conform. Accordingly, the Evaluation Report will be revised and submitted to the General Services Administration (GSA) Approval Authority for final review and approval. My decision to revise the Evaluation Report does not guarantee approval, which is the sole discretion of the GSA Approval Authority. You will soon receive a letter indicating the final disposition.> OR

<should be re-evaluated in part or in whole. Accordingly, I will instruct Lab staff to re-evaluate the following requirements :> <bullet list of evaluation re-do items>. <You will soon receive a letter indicating the results of the revised evaluation, including a revised Evaluation Report.>
Sincerely,

Lab Director
<Lab Director Contact Information>

A.10 Evaluation Completion Notice

Re: Evaluation Completion Notice
Case File Number <*case file number*>

To: <Team Lead Name>:

Evaluation of <*Name of Product or Service*> has been completed. Please review the documented results and complete the Evaluation Report.

Technical Evaluation Team member
< *Technical Evaluation Team member Contact Information*>

A.11 Evaluation Report Notice

Re: Evaluation Report Notice
Case File Number <*case file number*>

To: <Lab Director>:

Evaluation Report for <*Name of Product or Service*> has been written. Please review the Evaluation Report, and provide the appropriate authorization.

Lab Team Lead
< *Lab Team Lead Contact Information*>

A.12 Instruction Notice

Re: Instruction Notice
Case File Number *<case file number>*

To: <Lab Team Lead>:

Please take the following actions:

<Bullet list of instructions>

Please don't hesitate to contact me with any questions.

Lab Director
< Lab Director Contact Information>

A.13 Non-Conformance Authorization Notice

Re: Non-Conformance Authorization Notice
Case File Number <*case file number*>

To: <Relationship Manager>:

Evaluation of <*Name of Product or Service*> indicates non-conformance.

Please send the applicant a Non-Conformance Letter and a copy of the Evaluation Report.

Lab Director
< Lab Director Contact Information>

Appendix B: Supplier Product Inventory List Template

Case #	Supplier	Item Description	Quantity	Type	Receipt Method	Received Date	Received From	Received By

Appendix C: Rules of Behavior

C-1. INTRODUCTION

All EP Lab staff shall follow the following rules of behavior. The rules delineate responsibilities of, and expectations for all individuals for EP Lab purposes. Non-compliance of these rules may result in denial of access to EP Lab systems and resources, and/or other actions that are commensurate with the non-compliance activity.

C-2. ACCESS

- Only use data for which you have been granted authorization.
- Do not retrieve information for someone who does not have authority to access the information, only give information to personnel who have access authority and have a need to know for their EP Lab jobs.
- Do not access, research, or change any file, directory, table, or record not required to perform your OFFICIAL duties.

C-2.1 Account Registration

- Each lab employee shall apply for their own user id for accessing the EP Web Tool.

C-2.2 Logging On to the EP Web Tool

- Each lab employee shall only login to the EP Web Tool using their own user id.

C-2.3 Information Accessibility

- The lab shall restrict access to government and proprietary commercial information. Lab employees shall only have access to that information required to perform their EP lab duties.

C-3. JOB PERFORMANCE

C-3.1 Accountability

- Behave in an ethical, technically proficient, informed, and trustworthy manner.
- Prevent access to PCs (e.g., initiate password based screen saver) whenever you leave the vicinity of your PC.
- Logout of the EP Web Tool whenever you leave the vicinity of your PC.

C-3.2 Confidentiality

- Be aware of the sensitivity of electronic and hardcopy information, and protect it accordingly.
- Do not allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- Store hardcopy reports/storage media containing confidential information in a locked room or cabinet.
- Erase sensitive data on storage media, prior to reusing or disposing of the media.

C-3.3 Integrity

- Protect EP equipment against viruses and similar malicious programs.
- Observe all software license agreements. Do not violate Federal copyright laws.
- Do not install or use unauthorized software on EP equipment. Do not use freeware, shareware or public domain software without your manager's permission and without scanning it for viruses first.
- Observe all software license agreements. Do not violate Federal copyright laws.
- Follow industry standard procedures for maintaining and managing EP Lab hardware, operating system software, application software, and/or database software and database tables.

C-3.4 Passwords

- Protect your password(s) from disclosure. You are responsible for any EP Web Tool activity associated with your user ID and password.
- Do not share your password with others or reveal it to anyone. If there is an operational need to do so, immediately change the password after the need has passed.
- Do not post your password in your work area or hard code it into script.
- Do not use another person's user ID and password.
- Change your password if you think your password is known by an unauthorized individual.
- NEVER give your password out over the phone.
- Be alert to others who may try to obtain your password. Sometimes hackers pose as a system administrator. A hacker may randomly call a user and say that something is wrong on the system to get arbitrary access to your system. They may tell you that they need your password in order to issue you a new one. Always remember that system administrators DO NOT need your password in order to issue you a new password.
- Do not write down your password(s). Memorize them using easy to remember phrases.
- Do not re-cycle passwords by changing them at the required interval and using a few of them over and over in turn, or making minor changes to passwords by adding a number to the base password (e.g., password is changed to password1, password1 is changed to password2).

C-3.5 Reporting

- Contact and inform the Lab Director that you have identified an IT security incident.
- NEVER assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.
- Seek assistance and/or challenge unescorted strangers in areas wherever EP equipment or information is being used.

C-3.6 Session Time Out

- EP Lab staff shall utilize a screen saver with password protection set to suspend operations at no greater than 15-minutes of inactivity. This will prevent inappropriate

access and viewing of any material displayed on your screen after some period of inactivity.

C-3.7 Backups

- Make backups of PCs files on a regular, defined basis.
- Store backups in a secure environment.

C-3.8 Test Equipment

- Avoid placing EP test equipment near obvious environmental hazards (e.g., water pipes).
- Do not eat or drink near EP test equipment.
- Keep an inventory of all EP test equipment.
- Keep records of maintenance/repairs performed on EP Test equipment.

C-3.9 Awareness

- Participate in organization-wide security training as required.
- Read and adhere to security information pertaining to hardware and software.

Appendix D: Acronyms

Acronym	Meaning
APL	Approved FIPS 201 Products and Services List
ATO	Authority to Operate
CM	Configuration Management
CMM	Capability Maturity Model
CONOPS	Concept of Operations
EP	Evaluation Program
FIFO	First-In-First-Out
FIPS	Federal Information Processing Standard
GSA	General Services Administration
HSPD	Homeland Security Presidential Directive
HVAC	Heating, Ventilation and Air Conditioning
ID	Identifier
JRE	Java Runtime Environment
LAN	Local Area Network
MS	Microsoft
NIST	National Institute of Standards and Technology
NPIVP	NIST Personal Identity Verification Program
NVLAP	National Voluntary Laboratory Accreditation Program
OGP	Office of Government-wide Policy
OMB	Office of Management and Budget
PC	Personal Computer
PIV	Personal Identity Verification
PKI	Public Key Infrastructure
PMI	Project Management Institute
PMO	Program Management Office
RFID	Radio Frequency Identifier
RPL	Removed Products List
SP	Special Publication
USB	Universal Serial Bus
WAN	Wide Area Network

Attachment A – Login Request Form

FIPS 201 Evaluation Program –Login Request Form (located at the following URI: http://fips201ep.cio.gov/documents/FIPS201_Evaluation_Program_Login_form.pdf)

Attachment B – Lab Services Agreement

FIPS 201 Evaluation Program - Laboratory Services Agreement (located at the following URI: http://fips201ep.cio.gov/documents/LSA.pdf)

Attachment C – Non Disclosure Agreement

FIPS 201 Evaluation Program - Laboratory Services Agreement (located at the following URI: http://fips201ep.cio.gov/documents/NDA.pdf)

Attachment D – Evaluation Report Template

FIPS 201 Evaluation Program – Evaluation Report Template available for each specific FIPS 201 Product/Service category