

## QAM 12100: INCOMING INSPECTION AND ACCEPTANCE

### Revision History

<b>Author</b>	<b>Description of Change</b>	<b>Revision Date</b>
T.J. Sarlina	Inserted a best practice recommendation for First Article Inspection. See Section 5.7	August 2023
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## 1.0 INTRODUCTION AND SCOPE

Equipment, components, materials, and services are acquired from other partnering/collaborating institutions or procured and received across Fermilab site and FRA-leased spaces every day. Per the [QA Manual Chapter 12002 – Fermilab Quality Program](#), inspections and tests are performed to verify that the physical and functional aspects of items, services, and processes meet requirements and are fit for use. [1] The verification of items acquired or procured for use in Fermilab projects, experiments, operations, or processes is required to ensure they conform to requirements, identified specifications or the subcontract.

An additional note of importance is the introduction of counterfeit items into the supply chain by entities that manufacture substandard and/or unsafe products and disguise them to appear as qualified items. More detailed information on the Fermilab Suspect/Counterfeit Item Program can be found in [QA Manual Chapter 12020](#). [2]

This chapter is applicable to the Fermilab site and FRA-leased spaces.

## 2.0 DEFINITIONS & ACRONYMS

**Acceptance Testing** – The set of evaluation or tests to be performed to verify if predefined requirements and specifications are met which can be used to determine if the item will be accepted.

**Counterfeit item** – An item that has been copied or substituted without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by the vendor, supplier, distributor, or manufacturer.

**eMarketplace** – The online procurement system for off-the-shelf supplies commonly requested by laboratory employees.

**Inspection** – The evaluation or test performed on an item to verify that it meets or exceeds the specification of what was acquired or procured.

**Nonconforming item** – Any item that does not meet specified requirements.

**ProCard** – Procurement credit cards issued to a select group of FRA employees upon the completion of training by a Procurement representative. Cardholders may use the ProCard for the acquisition of commercial goods and off-site services priced up to \$2,500 and are not available through eMarketplace as described in the ProCard Users Guide.

**Receipt** – Delivery of an item. This does not necessarily imply that the item is acceptable for use.

**Requestor** - FRA personnel making the request for equipment, component, or material; either acquired from a partnering/collaborating institution or via a procurement. This may also be the person responsible for performing the incoming inspections or acceptance testing.

**Suspect/Counterfeit Item (S/CI)** – An item identified through visual inspection, testing, or other means that does not appear to conform to established Government or industry-accepted specifications or national consensus standards. Or, items whose documentation, appearance, performance, material, or other characteristics may have been knowingly misrepresented by the vendor, supplier, distributor, or manufacturer.

## 3.0 RESPONSIBILITIES

### 3.1 Requestor

- Define and specify the material requirements, operating parameters or constraints, and any other characteristics that are necessary for the proper integration of the component or operation of the equipment being acquired or procured.
- If item is being acquired from a partnering/collaborating institution:
  - Ensure inspection of the items received is completed in a timely fashion to verify that what was received meets expectations/requirements/specifications.
  - Include the necessary stakeholders in the inspection and acceptance testing process as defined by requirements, project/experiment plans, or agreements.
  - Document results by completing the Incoming Inspection and Acceptance Form (see Section 7.0) or by following APS-TD specific incoming inspection processes. [7]
  - Provide appropriate notification of results per processes and follow appropriate record retention requirements.
- If item is being procured:
  - Inform Requisition Preparer of any specified inspection and acceptance requirements that should be included in the requisition.
  - Advise Procurement of final acceptance period to allow for negotiation of payment provisions.
  - Inspect the items received in a timely fashion to verify that what was received is what was ordered and meets expectations/requirements/specifications.
  - Document results by completing the Incoming Inspection and Acceptance Form (see Section 7.0) or by following APS-TD specific incoming inspection processes. [7]
  - Include necessary stakeholders in the inspection and acceptance testing process as defined by requirements, project/experiment plans, or agreements.
  - Notify Receiving once received items have been inspected and/or tested to meet the original specifications.
  - Notify Procurement if received items do not meet inspection and testing standards as stated in the subcontract.

### 3.2 Requisition Preparer

- Complete the purchase requisition with the requestor's specified requirements. Submit to Procurement.

### 3.3 Procurement Specialist

- Transmit requirements specified by the requestor to the supplier via approved Purchase Order.
- Work with the requestor and the supplier if received material, components, or equipment has not met specifications as stated in the subcontract.

## 4.0 PROCUREMENT OF GOODS AND SERVICES

Procurement of goods is a responsibility of the Finance Section. Only those individuals within the Finance Section specifically authorized to do so can make financial commitments on behalf of FRA.

Materials and equipment can enter the site in a variety of ways. Some items are procured from the onsite Fermilab stockroom. Orders from vendors may be placed via eMarketplace, ProCard, or Purchase Requisition. Projects and experiments may have items that are procured through collaborators or in-kind institutions and then shipped or transported to Fermilab.

Procedures for obtaining materials will vary across the laboratory due to the nature of the organization, the type of order placed, the method of delivery, and which material receipt system has been specified (e.g., being delivered to a centralized receiving location or delivered directly to the requestor).

## 5.0 INSPECTION AND ACCEPTANCE TESTING

Acceptance testing of specified items, services, and processes is conducted using established acceptance and performance criteria to verify operation within safety limits and requirements. Test programs include initial inspections upon delivery, proof tests before installation, pre-operational tests, and operational tests. Test programs are implemented by or for the organization performing the work to be tested, using a graded approach.

The graded approach is a process by which the level of analysis, documentation, and actions necessary to comply with requirements are commensurate with the following, but not limited to:

- Relative importance to safety, safeguards, quality, and security;
- Magnitude of any hazard involved as identified, analyzed, and controlled;
- Impact/consequences on programmatic mission of the facility/activity or project;
- Criticality or complexity of products or services involved;
- Other traceability requirements in applicable codes and standards;
- Performance history of the vendor.

### 5.1 Stockroom Orders

The FRA stockroom procures items in varying quantities and maintains an inventory on site. Inspection is the responsibility of the person making the withdrawal or the person that will use the item in the field. Any item found to not meet the expected standard will be returned to the stockroom and the stockroom staff will be informed of the deficiency. Items from the deficient batch shall be checked for non-compliance with assistance from the appropriate S/CI Coordinator(s) and/or the FRA S/CI Program Manager. [2]

### 5.2 Purchase Requisitions and eMarketplace

Purchase requisitions and eMarketplace orders are filled out by requestors and established Procurement processes are followed. Receiving is prepared to receive items from specified vendors. Shipments arriving at Shipping & Receiving are processed against the packing lists provided by the supplier. A visual inspection of packaging material is conducted for obvious damage, but packages are not routinely opened nor are contents inspected or counted. Receiving personnel do not perform

verification to determine if all items meet the technical specifications as stated in the subcontract as that verification is the responsibility of the requestor.

### 5.3 ProCard Orders

ProCard orders are processed directly by Directorate/Division//Project (ALD/DD/PM) representatives authorized to use a procurement credit card. Materials and supplies ordered via this method may be delivered to Fermilab's Shipping & Receiving at Warehouse 2 or directly to the building or location specified on the order. [3] It is the responsibility of the personnel placing the order to verify materials and supplies meet specifications. If material procured via ProCard does not meet technical specifications, the requestor should work with the supplier to decide if the material needs to be returned or discarded and if a replacement will be sent or a credit will be issued. Documentation of inspection and acceptance of ProCard orders may be required, see Section 7.0 – Incoming Inspection and Acceptance Form.

### 5.4 Hand Carried by Collaborators

Projects and experiments have collaborators from universities who may occasionally bring equipment or components to site from their home institutions. In most cases, this may be a feature of the collaborating institution's contribution to the project or experiment. This method of transport may be determined by the experiment or project due to concerns about damage to sensitive components during shipping or merely convenience. If this method is used, competent collaboration personnel must perform the appropriate incoming inspection and acceptance tests upon receipt of the material, component, or equipment to verify that it meets the requirements of the project, experiment, or process. The results of the inspection and acceptance shall be documented, and records maintained per record retention policies. See Section 7.0 – Incoming Inspection and Acceptance Form.

If the items were procured on behalf of FRA and hand carried by a collaborator, project or experiment personnel have the responsibility to ensure Receiving obtains the appropriate documentation to close out the procurement. Documentation of the inspection or acceptance results may be required by the project or experiment. The results must be included or referenced in the Incoming and Acceptance Form (Section 7.0). If following APS-TD's incoming inspection and receiving processes, complete necessary requirements. [7]

*Note: This method allows for the least control of items brought to site and is strongly discouraged.*

### 5.5 In-Kind Contributions

The successful execution of Projects may rely on in-kind contributions from other domestic and international institutions. In most cases, the in-kind contributions are procured via the particular institution's procurement processes. FRA or applicable institution is responsible for ensuring the specifications, operating requirements, or constraints are appropriately identified, communicated, and translated to the institution as input to their processes prior to fabrication or manufacturing. The project management teams are responsible for identifying the appropriate incoming inspections and acceptance testing required for these contributions; as well as identifying the individuals who are responsible for performing the inspection and acceptance testing. This increases the probability that the FRA Project specifications and expectations are met upon receipt at Fermilab or leased spaces. The responsible Project personnel shall work with the Property and Logistics subject matter experts to ensure appropriate systematic processes are followed for receiving in-kind contributions not procured by FRA. It is the responsibility of FRA or applicable institution personnel to ensure the

appropriate incoming inspection and acceptance tests are conducted upon receipt of the in-kind contributions and verify all parties in the contribution receive appropriate documentation to close out the contribution acceptance. Documentation of the inspection or acceptance results may be required by the project or experiment. The results must be included or referenced in the Incoming Inspection and Acceptance Form (Section 7.0) if another project form is not available. If following APS-TD's incoming inspection and receiving processes, complete necessary requirements. [7]

## 5.6 Inspection Upon Receipt

The responsibility for inspection and acceptance resides with the requestor. If an item is found to be defective, does not meet the original specifications as stated in the subcontract, or is an incorrect part, the requestor has the responsibility to work with the ProCard holder or Procurement to obtain the proper replacement prior to official acceptance. [3]

In the case that material received is defective or nonconforming, there are a few different ways that it is handled. If the material was procured through collaboration efforts, based on the collaborating agreement, the collaboration may be contacted, and the project or experiment works with the collaborator to resolve the issue with the collaborator's vendor. In the cases where the material is procured via FRA Procurement processes, Procurement is notified and personnel work with Procurement to resolve the issue. In the case of in-kind contributions, the Project responsible for coordinating the receipt of the materials is responsible for developing specific plans of action for substandard items arriving at Fermilab under these types of agreements. In each case, Quality Assurance Liaison (QAL) for the appropriate ALD/DD/PM should be notified as to the severity of the nonconformance.

If an item is found to be counterfeit, the requestor must inform their ALD/DD/PM S/CI Coordinator and the FRA S/CI Program Manager. The S/CI Coordinator will determine the extent of the problem and follow the DOE notification requirements as detailed in [QAM Chapter 12020](#). [2]

Directorates, Divisions, Projects, and experiments, are expected to have procedures in place to evaluate incoming components and equipment, including a means to document the incoming inspections and acceptance test results. If an item is identified as defective or non-conforming during acceptance inspection/testing or it does not meet the technical specifications, or if procured, does not meet requirements as stated in the subcontract; it must be tagged as such, removed from inventory, and segregated from other items to prevent inadvertent use. Documentation of this information is required along with the follow-up actions.

For procured items, Procurement is notified of defective or non-conforming items and the item(s) returned to the vendor. It is important to note that Procurement is the laboratory representative to communicate with the vendor and **not** the requisition preparer, requestor, or end user.

Currently, there is no single lab-wide system for documenting acceptance inspections or tests. The [Incoming Inspection and Acceptance Form](#) linked in Section 7.0 of this document provides a means to document incoming inspections and acceptance results. Formally defined and approved processes and forms are used by some groups to document inspections and acceptance testing (e.g. APS-TD) [7]. Travelers are also utilized to store information about material throughout its lifecycle (design through installation/commissioning). The form linked in Section 7.0 shall be used if no formally

defined and approved method for capturing incoming inspection and acceptance testing results is in place.

As with inspection procedures, acceptance criteria must be developed by the individual project or experiment personnel to suit the needs of the programs along with the method to document results. In many cases, there may be no formally documented set of criteria, however, personnel may have a series of steps that must be performed to accept the items. Examples would be testing purity on cryogenic deliveries, load testing of power supplies, or computer hardware being “burn in” tested by the Computing. However, results are to be documented for traceability purposes.

### **5.7 First Article Inspection**

This is a recommended best practice when procuring a custom item from a vendor with multiple items to be fabricated over the course of the contract. An agreement is established with the vendor that they will produce and ship the first piece prior to moving forward with the remaining items. This will allow the laboratory to conduct an incoming inspection to ensure it meets all required specifications before giving the vendor the green light to manufacture the rest. This method may typically cost a bit more, but it can help identify quality and performance issues up front. The first article inspection method is also suggested in the event of major equipment design changes or vendor changes in manufacturing lines or locations.

### **5.8 Acceptance of Services**

Service work that does not result in an item or component being delivered to the laboratory may also require evaluation during, or upon completion of, services rendered. Design or engineering services, inspection contracts, temporary labor personnel, and other professional services are examples that fall into this category. While physical testing is not possible for services, there is still a need to assure that the requirements of the contract have been met. As stated above, the graded approach should be applied to determine the appropriate rationale and method in accordance with the complexity of the services supplied in accordance with the terms of the contract.

### **5.9 Closeout Requirements**

No matter how items are acquired by Fermilab, results of the inspection and acceptance shall be documented, and records stored accordingly. All documentation and records shall be stored per the ALD/DD/PM or Experiment documentation requirements which shall align with the Fermilab policies on Records Management and Documentation Management and Control. [5][6]

## **6.0 REFERENCES**

- [1] [QA Manual Chapter 12002 – Fermilab Quality Program](#)
- [2] [QA Manual Chapter 12020 Suspect/Counterfeit Items \(S/CI\) Program](#)
- [3] [ProCard Users Guide](#)
- [4] [FRA Procurement Policy and Procedures Manual](#)
- [5] [Policy on Records Management](#)
- [6] [Document Management and Control Policy](#)
- [7] [TD-2201 Flow of Parts and Assemblies Received at the Technical Division Component Storage Facility](#)



## 7.0 [INCOMING INSPECTION AND ACCEPTANCE FORM](#)

Access the form via the link below. Upon completion of the form, share the completed form as necessary, identifying the individual(s) the form was distributed to in the “Sent To” field. Possible distribution of information may include the following stakeholders or interested parties:

- Procurement Specialist
- Accounts Payable
- Receiving ([receiving@fnal.gov](mailto:receiving@fnal.gov))
- Requestor
- Project Manager
- Lead Engineer / Project Engineer
- Quality Assurance

Complete the form per the following instructions:

Step 1: Click on the following link: [Incoming Inspection and Acceptance Form](#)

Step 2: Download the writeable pdf form.

Step 3: Populate the form per the guidance below.

Step 4: After you have entered the appropriate information, email the form to:

- Continue the Payment action,
- Delay/Stop Payment,
- Begin the Return To Vendor action, or
- Move forward with the Other actions specified on the form.

Step 5: Save the form to the appropriate storage location (i.e. server, DocDB, FermiPoint, Teamcenter, etc.).

***NOTE: Your desktop is NOT considered an acceptable location for storing records.***

## Instructions for Inspection Form by line

1. The Project or Operational/Task/Activity that is associated with the item being received.
2. An identifier for the item such as a serial number or model number.
3. The Purchase Order (PO) number against which the item was procured.
4. The line item of the PO that corresponds with this item (as applicable).
5. The date the item was received.
6. The person(s) that performed the incoming inspection.
7. The date the inspection took place.
8. The type of inspection or test that was performed for the incoming inspection, e.g. visual, functional, measurement, etc.
9. The location the inspection or test took place.
10. The link to any reference documentation used to conduct the inspection/test.
11. The traveler number associated with the inspection/test if applicable.
12. A brief description of the inspection or test performed.
13. The location of the inspection/test results (e.g. FermiPoint, DocDB, Teamcenter, server, etc.).
14. The result of the inspection (select one)
15. Action taken if the item failed inspection or if “Other” was selected in step 14.
16. Identify the individuals that this form has been distributed to.