

Subject: QA Site Inspection Program	Effective Date: September 23, 2016	Initiated by: Head, Best Practices and Quality Assurance
	Supersedes: QA-004, R1, dated 3/3/99 and TCRs 1-4	Approved: Director

Management System (Primary): 12.00 Assurance and Improvement
Management System Owner: Head, Best Practices and Outreach
Management Process: 12.30 Quality Control Inspections & Acceptance Testing
Process Owner: Head, Best Practices and Outreach
Subject Matter Experts (SMEs): Head, Best Practices and Quality Assurance

Applicability

P-071, Inspection and Acceptance Testing, describes the requirements of inspections or acceptance testing at PPPL. As stated in the policy, each person is responsible for the reviews and inspections of the quality of his or her own work. Quality Assurance (QA) is available to support this effort. This procedure describes the inspection program managed by QA.

Introduction

Inspections by QA are performed at the request of the cognizant individual assigned responsibility for specific jobs or when required by codes or procedures. This activity verifies conformance to the requirements and acceptance criteria defined by the cognizant individuals in various work documents. These inspections are performed in the field for work performed by either PPPL or on-site contractors. Attachment 1 contains the list of inspections that may be performed and the information needed for each type.

Reference Documents

P-071, Inspection and Acceptance Testing
QA-005, Control of Nonconformances

Procedure

This procedure is divided into two major sections.

Section A. Inspections by Quality Assurance
Section B. Satellite Quality Inspectors

A. Inspections by Quality Assurance

Responsibility

Action

Cognizant Individual

1. Develops Specifications, Statements of Work, Installation Procedures, Shop Work Requests, Drawings, etc. for items to be procured, fabricated, and/or installed. Assures that these documents contain appropriate inspection requirements and acceptance criteria. Identifies any hold points where verification by Quality Assurance is required before continuing with the activity.
2. Provides, whenever inspection is requested, a copy of these documents to Quality Assurance.

Quality Assurance

3. Develops a Quality Inspection Plan (QIP) and obtains QIP ID# from QA Database, specifying the inspections that will be performed and any hold points. A sample QIP is attached. Acceptance criteria must be clearly identified within the job documents.
4. Distributes the QIP to the Cognizant Individual and, where applicable, the Field Supervisor.

Cognizant Individual

5. Reviews the QIP to assure that all hold points and test requirements have been incorporated. NOTE: Comments and/or changes must be transmitted back to Quality Assurance within 5 working days.
6. Notifies Quality Assurance prior to start of work and at each hold point listed in the work documents.

Quality Assurance

7. Performs inspection and witnesses activities as described on the QIP and/or work documents.
8. Issues Nonconformance Reports, if required, in accordance with procedure QA-005.
9. Scans completed QIP into QA Database and sends copy of completed QIP to Operations Center.

B. Satellite Quality Inspectors

Responsibility

Action

- | | |
|-----------------------------------|--|
| Shop Supervisor/Quality Assurance | 1. Determines the need for a Satellite Quality Inspector in a shop. |
| Shop Supervisor | 2. Identifies a qualified individual. |
| Quality Assurance | 3. Provides training to Satellite Quality Inspector candidate. |
| Satellite Quality Inspector | 4. Performs inspections, documents results, and issues NCR's, as required, per QA-005. |

Training

Best Practices

A. Target Audience: All PPPL Staff

Instructor: Head, Best Practices and Quality Assurance

Training Method:

Read only

Standard Email distribution only

Frequency:

Upon Revisions and TCRs of this procedure

Best Practices

B. Target Audiences: Cognizant Individuals (COGs) and Responsible Line Managers (RLMs) in the Work Planning System; all QA staff

Instructor: Head, Best Practices and Quality Assurance

Training Method:

Read only

Email distribution to WP COG_RLM email group

Email distribution to BPQA email group

Frequency:

Upon Revisions of this procedure

Records Requirements Specific To This Procedure

Records Custodians must assure records are maintained as follows:

Record Title	Record Custodian	Location	Retention Time
Quality Inspection Plan	QA Technical Specialist	QA Database	Destroy when 10 years after date of issue. <i>Reference: Admin 17 Cartographic, Aerial Photographic, Architectural, Engineering, And Facility Management Records (17.c)</i>

Attachments

1. Inspection Capabilities of Quality Assurance
2. Sample Quality Inspection Plan (QIP)

Quality Assurance provides the following typical inspection services. Individuals should contact Quality Assurance if additional unspecified services are desired.

On-site Installations and Fabrications		
Type of Inspection Service	Possible Inspections	Information Required
Electrical	In process inspection of raceways, wiring, panel boards, lighting, motors, grounding, terminations, devices, security, and fire detection installations. Witnessing tests such as cable ring out, megger, hi-pot. Assembly and/or installation of components that the work planning form identified have the potential for major or serious programmatic consequences.	Drawings and/or specifications indicating desired inspections and acceptance criteria. List of applicable codes, standards, or other requirements.
Mechanical	In process visual & dimensional inspection of piping, hoses, valves, fittings, instruments, expansion joints, supports, process tubing, mounting & setting of equipment, studs/anchor bolts, and ground isolation. Witness of torquing, pressure, and vacuum testing. Assembly and/or installation of components that the work planning form identified have the potential for major or serious programmatic consequences.	Drawings and/or specifications indicating desired inspections and acceptance criteria. List of applicable codes, standards, or other requirements.
Non-Destructive Examinations	AWS Certified visual inspections of welding and brazing, dye penetrant and magnetic particle testing (information purposes only), visual examination of cadwelds and explosive welding.	Drawings and/or specifications indicating desired inspections and acceptance criteria. List of applicable codes, standards, or other requirements.

Upon request, Quality Assurance can also help establish special programs for specific tasks.

Finally, in addition to the above requested inspections, Quality Assurance staff, in their normal duties in the field, inspects the work conditions to assure that codes and standards are being implemented.

NOTE: The Quality Inspection Plan (QIP) forms are maintained online by Quality Assurance.

<p><u>Princeton Plasma Physics Laboratory</u> <u>Quality Inspection Plan</u></p> <p>QIP No: 4203</p>	
<p>Status: Closed</p> <p>Job Type: IP</p> <p>QIP Author: Boscoe John</p> <p>Vendor:</p>	<p>Issued Date: 6/9/2016</p> <p>Job Doc. No: D-NSTX IP-3843</p> <p>WPF No: WPF-2135</p> <p>Project: NSTX-U</p>
<p>Department: Plasma Science & Technology</p> <p>Cog Person: F. Jones</p>	<p>Division: Diagnostic Development</p> <p>Inspector: Gurbisz Kevin</p>
<p><u>Title or Material Description:</u> NSTX-U Transmission Grating Imaging Spectrometer Electrical Installation</p>	
<p><u>Inspection Plan Description (include drawing #'s, procedures, etc. if applicable):</u></p> <p>Verify D-Site work permit Attend/Obtain pre-job/JHA brief Verify Lock out - Tag out safing of systems per as required Verify that cabling, raceway and equipt. are installed per NEC, Lab & drawing requirements and Sect. 8 of IP Verify that grounding is installed per NEC, Lab & drawing requirements and step 8.1.6 of IP Verify labeling per Sect. 8.1 and 9 of IP Perform final inspection/walkdown with Cog or designee</p> <p>EWP # 391E</p>	
<p><u>QIP Completed:</u> Inspector: <u>kgurbisz</u> Date: <u>6/28/2016</u></p> <p style="padding-left: 150px;">QA Manager: <u>igraham</u> Date: <u>7/25/2016</u></p>	
<p><u>Distribution:</u> QC Files, Proj Doc Cntl (when closed), QA Manager, F. Jones (Cog), Gurbisz Kevin (Insp).</p>	