

TEMPORARY CHANGE REQUEST

TCR NO. **TCR-ENG-029,R2-002**

(e.g., TCR-ENG-021,R0-001)

The Temporary Change Request (TCR) Form is to be used to process urgent or minor changes for PPPL Policies, Organization/Mission Statements and Procedures. The TCR should be used when changes are:
1) urgent, and can not wait the 2-4 week period for Department Head review/comment, or
2) minor, and do not warrant Department Head review.

Person Requesting Change: T. Stevenson

Phone Ext: 2657

Department Name: ENGR & INFR

Document Number: ENG-029

Revision No.: 2

Document Title: Technical Definitions and Acronyms

Reason for change:

Add USI and USID to list

Change description: (Summarize and attach changed pages, with changes clearly indicated)

Add: USI Unreviewed Safety Item

Add: USID Unreviewed Safety Item Determination

1. Does this TCR significantly alter the intent or scope of the document? YES: NO: **X**
2. Does this TCR significantly impact **ES&H**? YES: NO: **X**

If 1 or 2 is **YES**, Explain why the changes should not be routed for Department Head review:

T. Stevenson
Department/Division Head Approval

2/15/16
Date

J. DeLooper
Head, Best Practices and Outreach/designee

2/15/16
Date

Release/Effective date of this TCR: 2/15/16

Incorporate this TCR into next revision of this document?

YES: **X** NO:

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE		No. ENG-029 Rev 2 page 1 of 9
		Subject: Technical Definitions & Acronyms	Effective Date: March 2, 2012	Initiated by: Associate Laboratory Director for Engineering and Infrastructure
		Supersedes: Rev. 1, Dated: 2/13/09	Approved: Director	

TCR-ENG-029,R2-002

Management System (Primary): 03.00 Engineering
Management System Owner: Associate Director for Engineering and Infrastructure
Management Process: 03.06 Technical Project Management
Process Owner: Associate Director for Engineering and Infrastructure
Sub-Process: 03.06.23 Communications Planning and Management
Sub-Process Owner: Associate Director for Engineering and Infrastructure
Subject Matter Expert (SME): Head, Project Management Office

Applicability

This procedure is applicable to technical procedures and other technical documents for all of PPPL per applicable ENG procedures.

Introduction

This procedure standardizes terms and acronyms in use at PPPL. It is especially useful when developing procedures.

References

ENG-030 Technical Procedures for Experimental Facilities

Definitions

Access Procedures: Procedures that are used to remove or minimize all hazards in an area prior to or during personnel access.

Accountable Technical Individual (ATI): The ATI is appointed by the Responsible Line Manager (RLM) and is accountable for the technical content and accuracy of the procedure. The ATI works with the RLM and procedure writer to meet the technical requirements specified in the Procedure Requirements Checklist. This individual may be the COG, the System Engineer, or Principal Investigator, or other individual most qualified to account for the effect of the work on the system.

Activity Certification Committee: The ES&H/EB appoints an Activity Certification Committee (ACC), consisting of at least two (2) members who are not part of the activity's line organization, for each High Hazard operation as defined in ESHD 5008 Section 11 Chapter 1. The ACC remains intact for the duration of the High Hazard operation or until dissolved by the ES&H/EB. The ACC

conducts safety reviews to support recommending the issuance or denial of Safety Certificates for the operation they are assigned to.

Administrative Procedures (AD) (technical and project) Procedures that provide direction for the administration and conduct of PPPL operations. Examples of the topics covered by Administrative Procedures include the duties of operations personnel and project specific conduct of operations.

Alarm Response Procedures (AR) Written instructions that identify the source and probable cause of an alarm and define systems operator actions to be taken in response to specific system or component alarms. Additionally, these procedures describe the actions required by Security Personnel for the notification of subsystems personnel for certain alarm conditions.

Caution: Alerts users to conditions, practices, or procedures that must be observed to avoid potential hazards involving equipment and conditions adversely affecting site operations or personnel safety.

Check: The act of inspecting for satisfactory condition or performance.

Checklist/Form: An appendix to a controlled document that is used to document or control the performance of tasks. Checklists/Forms are included as separate sections in various types of procedures e.g. Alarm Response Procedures, Emergency Operations Procedures or Administrative Procedures. The main body of the procedure describes how the checklist/form is to be used. The completed checklist/form must be returned to the appropriate record keeping facility, e.g. the Operations Center. Additionally, these checklist/forms can be used to control routine administrative tasks (e.g. Work Permits, Flame Permits, etc.).

Cognizant Individual (COG): The individual selected by the RLM to plan and expedite work safely using the Work Planning system, ECNs, procedures, and Design verification, as well as ES&H Directive 5008, and other lab policies and procedures. The COG is responsible for the work process and conduct per ENG-032 Work Planning and associated ENG procedures and may be different from the ATI.

Confirm: See Check

Consistency Check: A check of the procedure by a knowledgeable reviewer to ensure that the purpose, scope and steps in the procedure are in accord with referenced drawings, piping and instrumentation diagrams (P& ID's), specifications, simulations, modeling, or procedures.

Controlled Copy: A document for which an organization has been assigned to maintain control, typically the Operations Center. These copies may be distributed to Controlled Copy Holders by the responsible organization.

Emergency Operations Procedures (EO) Written instructions designating actions to be taken in the event of abnormal conditions which, if not corrected, could result in injury to personnel, damage to equipment, or an uncontrolled release of toxic substances or radiation to the environment. EO procedures coordinate operational interactions between different systems and augment individual Alarm Response Procedures to ensure smooth integration of overall facility response to emergencies.

Ensure: A positive act of making certain of the occurrence of a particular event or events, or existence of a prescribed condition.

General Operations Procedures (site-project-OP-G): Written instructions which describe the major steps required to pass from one normal operating mode to the next; e.g., Glow Discharge Cleaning (GDC) to Pulse Discharge Cleaning (PDC). They coordinate operational interactions between the different systems, and augment the individual System Operations Procedures to ensure smooth integration of overall facilities operations.

Hold Point: A point where consultation with the system engineer, test director, quality control, or other authority is required before continuing with the activity. Hold points must be used to require the analysis, by designated system experts, of data taken during the performance of a procedure if that data provides criteria for future actions in that procedure.

Independent Review: A consistency check performed by a knowledgeable individual. The Independent Reviewer cannot be the writer, ATI, or RLM for the procedure being developed. The Independent Reviewer can be the COG if the COG is different from the ATI. An independent review is required for all procedures governing the movement and containment of tritium and maintenance of a tritium containing system or potentially tritium contaminated system. The reviewer documents the review with the marked up diagrams, drawings, and procedure).

Independent Verification: A separate, independent check performed apart in time to confirm that a device is in its required state. Independent Verification requires the action step to be initiated by one person and then at a different point in time confirmed by another person.

Integrated Systems Test Procedures (ISTP): Written instructions that define the equipment, methods, and steps required to test the integrated operation or interactions of multiple systems.

Installation Procedure (IP): Procedures that outline, define, and describe the prerequisites, requirements, safety considerations, and actions entailed in the installation of all equipment. At D-Site Installation procedures are required in the Test Cell, the Test Cell Basement, the Tritium Systems area of D-SITE, Mechanical Equipment Room, Liquid Effluent Collection System and Tanks, the Mockup Decon / Cleanroom Facility, and the NSTX Test Cell. At C-Site Installation Procedures are left to the discretion of the RLM.

Job Hazard Analysis: A Job Hazard Analysis is required to analyze or review designs of new facilities and modifications to existing facilities and equipment; operations and procedures; and equipment, product, and service needs. JHA's should be performed at the task level when the activity has matured to the point where detailed steps and procedures have been identified. Details may be found in Procedure ESH-004.

Maintenance Procedure (MP): Approved and controlled documents that specify the actions required to perform Preventive Maintenance on PPPL Programmatic Equipment.

Major Procedure Revision: A rewrite of a procedure incorporating all outstanding minor procedure changes, comments, and changes requested by the Responsible Line Manager. It also includes revisions that alter the intent or scope of the procedure.

Minor Procedure Change (MPC) An interim change to a procedure to allow deviation from the procedure or make minor corrections. An MPC cannot change the purpose, scope, or intent of the procedure. These are typically used to correct typographical errors, change the structure but not the content of tables, or provide clarification to the procedure and its steps.

Note: Provide important supplemental information to users. This information is presented in a note if it would otherwise be difficult to incorporate in the procedure.

Observe: The act of seeing a particular happening or sequence of happenings that give evidence of an event occurring, such as a motor starting, an indicator light energizing, a valve cycling, or a parameter changing.

Original Copy: The actual signed copy of a document.

P&ID Check: The mark up of Piping and Instrumentation Diagrams (P& ID's) in a stepwise fashion following the procedure steps. The marked up P& ID's serve as part of the documentation of the review.

Peer Group: The group that participates in a peer review.

Peer Review: A meeting of knowledgeable individuals called for the purpose of discussing and reviewing a procedure.

Pre-test Brief: A meeting held prior to the start of a test to discuss as a minimum the following points.

- 1 Safety
- 2 Personnel responsibilities
- 3 Personnel qualifications,
- 4 The actual test.

Preoperational Test Procedures (PTP): Written instructions that define the equipment, methods and steps required to test equipment and systems in order to qualify them as fully operational at predetermined performance levels. These tests are normally conducted prior to the initial operation of a system, after a long shutdown period, and after some critical maintenance or repair tasks to assure systems are fully operational.

Preventive Maintenance (PM): Any process (such as changing oil for a pump), or calibration, or measurement, that reduces or prevents equipment failure or degradation of an instrument's measurement accuracy.

Procedure Reviewer: A technical individual who performs a technical critique of the procedure, in a timely manner, and provides the writer with this critique on the draft copy for incorporation into the procedure. The reviewer acts as a participant in the procedure development and should have experience relating to the procedure.

Programmatic equipment: All mechanical, electrical, electromechanical, and electronic devices that, in total, comprise an experimental machine such as LTX or NSTX. Excluded are "real property" such as buildings and roads that are maintained by the PPPL Maintenance & Operations Division.

Quality Control Inspection or Witnessing: Examinations, measurements, or testing by Quality Control personnel to independently verify whether an item or an activity conforms to specified requirements or acceptance criteria.

Repair: A maintenance activity that returns a failed component to operational status.

Repair Procedure (RP) Procedures that specify the actions required to perform repairs on PPPL programmatic equipment. Repair procedures are required:

- a) When the repairs involve personnel or equipment safety considerations,
- b) On equipment governing the movement or containment of tritium, or
- c) For repair of a tritium containing system or potentially tritium contaminated systems.

Responsible Line Manager (RLM): The manager who accepts responsibility for the work and the planning process leading to the performance of the work. This includes accepting responsibility for the change and the process leading to the change and all associated procedure changes. These individuals are identified by the Department Heads. The list of approved RLMs is available on the Engineering & Technology Department home page.

Run Copy: A copy of a controlled document issued for use in the field and stamped "Run Copy." This copy is to be used to document the performance of the procedure. See ENG-030.

Safety Assessment Document: This document presents the safety assessment of a High Hazard operation (and may be used for other hazard level operations if deemed desirable). The SAD provides descriptions of relevant structures, systems and components, identification of hazards associated with the operation, and design features and administrative controls to mitigate these.

Shall: Implies that no operator flexibility outside specified limits is allowed. For example, "The current shall be 10.0 (+ 1.0, - 0.0) Amps."

Should: Implies that some flexibility in exercising operational control is allowed. For example, "The current should be 10 Amps," allows for some operator judgment.

Significant ES&H Impact: Significant ES&H impact results when non-compliance with a procedure (or with a specific action/step) could potentially result in occupational injury, radiological incident, or other ES&H event that would be classified as an unusual event or abnormal occurrence per procedure GEN-006.

System Engineer The individual assigned responsibility by line management for a specific system, such as the C-Site Motor Control System. A list of approved system engineers is available on the Engineering Department web page.

Systems Operations Procedures Approved and controlled procedures that specify the prerequisites, requirements, and actions for operating individual systems in various modes. The procedures describe the normal startup, startup after a long shutdown, shutdown, periodic testing, and operation of a single system or subsystem, using checklists to specify and document action steps wherever feasible.

Test Director - The individual assigned responsibility to manage a test defined by an Integrated System or Preoperational Test Procedure.

Test Exception: An item which affects running the test in accordance with the Run Copy of the procedure or results which are outside the limits specified in the procedure. Examples:

- 1 Instrument in place is the wrong range
- 2 Procedural steps cannot be performed in specified order
- 3 Instrument failure (reading not taken)
- 4 Valve lineup incorrect as written

Uncontrolled Copy: A copy of a controlled document issued for purposes other than use in the field. This copy will be date stamped "Uncontrolled Copy" and will not be tracked or updated.

Unreviewed Safety Issue (USI) and Unreviewed Safety Issue Determination (USID): A USID is performed for a High Hazard operation to evaluate a proposed change (e.g., a new machine component, change in operating parameters, etc.) or new information to determine whether there are any impacts on the approved SAD, approved Safety Envelope (documented in the SAD), and/or approved Safety Certificate. If the Safety Envelope and/or Safety Certificate are affected, a USI exists and the Responsible Line Manager (RLM) for the operation would determine the necessary changes that need to be made to the Safety Certificate, and the ACC would present those changes to the ES&H Executive Board. The Board would then approve or disapprove the changes, and the Safety Certificate would be revised as needed. The operation then would need to make any approved changes. TCR-ENG-029,R2-002

Verify: Check that a specific activity has occurred or that a stated condition exists. Verification requires the action step to be initiated by one person and then confirmed by another person. Not to be confused with Independent Verification .

Walkdown: Consists of physically visiting and observing the location in which the activities are to be performed and the equipment that will be used. A walkdown is performed to ensure that the equipment and environment are actually as envisioned and that the personnel involved can perform the required task.

Walkthrough: See Consistency Check. This phrase creates confusion and should not be used. It is included here for historical reasons.

Warning: Warnings alert users to conditions, practices, or procedures that must be observed to avoid loss of life or severe injury. Warnings also alert users to potential hazards to personnel or equipment.

Witness Point: A point where independent verification by Quality Control is required before continuing with the activity unless waived by Quality Control.

Work Planning Review Board (WPRB): the group convened to monitor and evaluate Work Planning at PPPL.

Work Planning Review Board Chairperson: the individual selected by the Associate Director for Engineering and Infrastructure to head the WPRB and monitor usage of the main Engineering procedures by Cogs and RLMs for consistency and compliance.

Acronyms

ACC	Activity Certification Committee
AD	Administrative
ALARA	As Low As Reasonably Achievable
AR	Alarm Response
ATI	Accountable Technical Individual
CA	Collaborations Agreement
CAM	Control Account Manager (on capital project)
COG	Cognizant Individual (Job)
CDX-U	Current Drive Experiment Upgrade
CWD	Cable Wiring Diagram
DARM	Data Acquisition Room
DRC	Design Review Chairperson
EO	Emergency Operation
ES&H	Environment, Safety and Health
ESU	Emergency Services Unit
EVMS	Earned Value Management System
FCPC	Field Coil Power Conversion
FSAR	Final Safety Analysis Report
G	General
GIS	Gas Injection System
GRD	General Requirements Document
GDC	Glow Discharge Cleaning
IP	Installation Procedure
ISM	Integrated Safety Management
ISTP	Integrated System Test Procedure
JHA	Job Hazard Analysis
LOTO	Lockout/Tagout
LTX	Lithium Torus Experiment
MP	Maintenance Procedure
MPC	Minor Procedure Change
MPTS	Multi Point Thomson Scattering (diagnostic)
NBI	Neutral Beam Injection
NEC	National Electric Code
NEPA	National Environmental Policy Act (form)

NTC	NSTX Test Cell
NSTX	National Spherical Tokamak Experiment
NSTXU	NSTX Upgrade
OCT	Office of Certification and Training
OP	Operations Procedures
P&CO	Planning & Control Officer
P&ID	Piping and Instrumentation Diagram
PDC	Pulse Discharge Cleaning
PEP	Project Execution Plan
PMSD	Project Management System Description
PPE	Personal Protective Equipment
PQA	Procurement Quality Assurance
PSRB	Project Status Review Board
PTP	Preoperational Test Procedure
QA	Quality Assurance
QC	Quality Control
RGA	Residual gas Analyzer
RLM	Responsible Line Manager
RP	Repair Procedure
SAD	Safety Analysis Document
SAR	Safety Analysis Report
SDD	System Design Description
SOW	Statement of Work
SRD	System Requirements Document
TCR	Temporary Change Request (procedures)
TIV	Torus Interface Valve
TTC	TFTR Test Cell
TCB	TFTR Test Cell Basement
TFTR	Tokamak Fusion Test Reactor
TS	Test Summary
TTC	TFTR Test Cell
UPS	Uninterruptible Power Supply
USQ	Unreviewed Safety Question
WAF	Work Authorization Form (cost estimate)
WBS	Work Breakdown Structure
WP	Work Plan
WPRB	Work Planning Review Board

TRAINING (SECTION REQUIRED FOR ALL PROCEDURES)

- Author
1. Specifies the appropriate training methods and means (below) and obtains concurrence of the Management System Owner and the Management Process Owner.
 - A. Target Audience: COGs, RLM, Procedure Authors_
 - Instructor: Tim Stevenson

Training Method:

 Read only Frequency:

 Other: As Needed

Management System 2. Notifies the Human Resources Training Office of the training so that
Owner or Designee they will be aware of the training requirements and be able to provide
assistance and guidance in the course development, implementation,
tracking, and maintenance.

Records Requirements Specific To This Procedure

Records Custodians must assure records are maintained as follows:

Record Title	Record Custodian	Location	Retention Time
There are no records generated from this Procedure			