

TEMPORARY CHANGE REQUEST

TCR NO. **TCR-ENG-036,R0-002**

(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-036

Revision No.: 0

Document Title: Control of Temporary Modifications

Reason for change:

Add USI/USID requirements per Procedure ESH-025 and reference.
Add Management System, Training Requirements and Records Retention Information

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

Add to Introduction as 2nd paragraph and as Procedure step A.1.i

Any activity or issue that may challenge the SAD, safety envelope, or Safety Certificate shall have an Unreviewed Safety Item Determination (USID) performed in accordance with Procedure ESH-025.

Any positive USI resulting from application of Procedure ESH-025 shall be reviewed by the applicable ACC for recommendation prior to any issue of a Temporary Modification.

Add Procedure ESH-025 to references

1. Does this TCR significantly alter the intent or scope of the document? YES: NO:

2. Does this TCR significantly impact ES&H? YES: NO:

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

This TCR adds USI/USID per procedure ESH-025 which will receive department 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: NO:

Subject: Control of Temporary Modifications	Effective Date: December 8, 2005	Initiated by: Engineering and Technology Development Department Head
	Supersedes: OP-AD-03 R09 dated 8/8/05	Approved: Director

TCR-ENG-036, R0-002

Management System (Primary): 03.00 Engineering
Management System Owner: Head, Engineering and Infrastructure
Management Process: 03.07 Conduct of Operations
Process Owner: Head, Engineering and Infrastructure
Sub-Process: 03.07.13 Operations Procedures
Sub-Process Owner: Head, Engineering and Infrastructure
Subject Matter Experts (SMEs): Head, Project Management

TCR-ENG-036,R0-002

Applicability

This procedure applies to all equipment related to experimental devices and areas on the PPPL site. This procedure replaces D-Site procedure OP-AD-03 in function and as referenced in other procedures. This procedure does not replace or alter any of the requirements of the PPPL Safety Lockout/Tagout Procedures or the PPPL Environmental Safety and Health (ES&H) Manual, ES&HD-5008

Introduction

Temporary modifications (T-Mods), as its name indicates, are changes made to components or systems to effect changes that are required for a short time. These changes are meant to be temporary (typically <90 days), and are not meant to modify the intended configuration as documented in drawings. T-Mods are needed occasionally to facilitate testing, maintenance, and operations during contingency situations. This procedure provides the system of administrative controls for temporary modifications (T-MODS). Systematic procedures for control of T-MODS are necessary to assure the safety of operations, to minimize disruption while the T-MODS are in effect, and to assure orderly restoration of normal equipment status following reversal of the temporary changes.

Any activity or issue that may challenge the SAD, safety envelope, or Safety Certificate shall have an Unreviewed Safety Item Determination (USID) performed in accordance with Procedure ESH-025.

Any positive USI resulting from application of Procedure ESH-025 shall be reviewed by the applicable ACC for recommendation prior to any issue of a Temporary Modification. **TCR-ENG-036,R0-002**

This document covers the procedures and records required to implement T-MODs, and specifies the necessary approvals and reporting of T-MODs. It applies generally to temporary modifications that have a potential safety implication, or that include any of the following (but is not limited to):

- Degrading the effectiveness of any system that is intended to prevent or mitigate injury to personnel or equipment damage.
- Disabling or changing the set point of any operational alarm or trip circuit function.
- Disabling of any indication circuit.
- Temporarily testing a system for suitability
- Temporarily modifying a system to maintain operability

TCR-ENG-036, R0-002

Each T-MOD shall be conspicuously marked with a tag(s) which may be obtained from the Shift Supervisor and identified by a unique tag number which shall consist of abbreviating letters and the next sequential number.

If a particular procedure requires the installation and removal of a T-MOD, and the installation and removal are both specified in that procedure document, then the requirements of that procedure take precedence over this general administrative procedure.

Troubleshooting activities do not require T-MOD Tags, **if all of the following conditions are met:**

1. The person performing the troubleshooting does not leave the vicinity of the job site while the work is in process.
2. The Shift Supervisor is informed when the troubleshooting begins, when it ends, and what the effect of the troubleshooting will be on current or planned system operations.
3. The person performing or supervising the work shall list all modifications made during the troubleshooting, and shall use the list as a checkoff to ensure that the system is fully restored after all changes are completed.

Reference Documents

DOE O 422.1	Conduct of Operations
DOE O 414.1A	Quality Assurance (criterion 6 – Design)
ES&HD-5008	PPPL Environmental Safety and Health (ES&H) Manual
ENG-030	PPPL Technical Procedures for Experimental Facilities
OP-AD-39	D-Site Conduct of Operations
ESH-025	Operations Hazard Classification Criteria and Safety Certification System
	TCR-ENG-036,R0-002

Definitions

T-MOD	A planned, controlled, and temporary change in system configuration that will exist for a limited duration, normally not more than 90 days .
Troubleshooting	The process of analyzing and isolating equipment malfunctions or failures of a particular component.
Engineering Operations Manager	As designated by the Head, Engineering and Technical Infrastructure
Shift Supervisor	Coordinates the activities of operations, construction, radiological protection, maintenance/repair, installations, instrumentation and control, and security groups to accomplish the objectives for the shift. The Shift supervisor can be reached at in-house pager # 163.

Procedure**A. Implementation of Temporary modifications**

The need to make a temporary modification to equipment or systems may be identified and proposed by any knowledgeable party involved in the operation, utilization, or maintenance of the facility. Such a proposal shall be evaluated by the Cognizant Engineer of the system involved to determine the need for implementing the T-MOD and the appropriateness of the method proposed. If the modification is deemed needed and appropriate, the Cognizant Engineer shall apply to the Shift Supervisor for a T-MOD.

ResponsibilityAction

Cognizant Engineer

1. Determines the need for any T-MODs to be made to systems under their cognizance and within the scope of this procedure. Documents such needs on the T-Mod Form of Appendix I.

Make the determination on the “Safety Implications” question (see Attachment I) if the T-Mod applies to any of the following types of equipment or systems:

- a. Hardwired interlocks of circuit breakers that are tripped as part of an E-stop system.
- b. Hardwired interlocks of a Personnel Access Control System.
- c. Safety disconnect switches.
- d. Safety lockout device.
- e. An Emergency Stop System.
- f. Any of the Kirk Key Interlock Systems.
- g. Fire Protection/Alarm Systems
- h. Other situations deemed “personnel safety related” by the Cognizant Engineer or the Shift Supervisor.
- i. Any activity or issue that may challenge the SAD, safety envelope, or Safety Certificate shall have an Unreviewed Safety Item Determination (USID) performed in accordance with Procedure ESH-025. Any positive USI resulting from application of Procedure ESH-025 shall be reviewed by the applicable ACC for recommendation prior to any issue of a Temporary Modification. TCR-ENG-036,R0-002

Environmental, Safety,
and Health (ES&H)
Manager or designee

2. Reviews and approves any and all T-MODs designated as having possible personnel safety implications as determined by the cognizant engineer. If for expediency the safety approval is verbal, the Cognizant Engineer shall document the verbal by entry of the name of the ES&H representative approving and the date/time of the approval.

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|--------------------------------|--|
| Shift Supervisor | <p>3. Reviews and approves the technical implications of the requested T-MOD by signing and issuing the T-MOD tags. Enters the T-Mod information into the computerized T-MOD log.</p> <p>Coordinates the installation of T-MODs with other current operations activities.</p> |
| Engineering Operations Manager | <p>4. Reviews and approves all T-MODs. Note that this review may occur in parallel with the following steps. Should the T-MOD not be approved, the cognizant engineer is responsible to uninstall the T-Mod expeditiously per step 10.</p> |
| Cognizant Engineer | <p>5. Meets with the individual(s) responsible for installing the T-MOD to assure that they understand the work.</p> |
| Assigned Individuals | <p>6. For a temporary modification that is accessible and visible, the T-MOD Tag shall be affixed directly to the modification. For temporary modifications that are not accessible and visible, the T-MOD Tag shall be placed in a conspicuous location as near to the modification as possible or at multiple locations if the entire modification cannot be viewed from a single point.</p> |
| Cognizant Engineer | <p>7. Confirms the correctness of the installation and removal of the T-MOD, by physical inspection and testing, as required. This step may also be done by the Shift Supervisor in the absence of the Cognizant Engineer or appropriate supervisor if the work lies within the scope of their technical competency.</p> <p>8. Specifies on the T-MOD form or on a separate procedure, all special protection measures that may be required by the T-MOD during the tag-out period in accordance with ES&HD 5008, Section 2.6.4.</p> <p>9. Ensures that T-MOD modifications are installed to good engineering practice.</p> <p>10. Removes the modification (or supervises removal), and schedules, performs, and documents any testing required for system restoration after the T-MOD is removed. Reviews the system configuration and ensures that the system operates in a safe fashion, and for the purpose for which it was designed. Non-compliance with approved operating configurations shall be brought to the immediate attention of the cognizant engineer's supervisor and the shift supervisor. Close out the T-MOD and returns the tags to the Shift Supervisor.</p> |
| Cognizant Engineer | <p>11. If necessary, requests an extension of the T-MOD by presenting a justification to the Shift Supervisor on why the modification should remain.</p> |

TCR-ENG-036, R0-002

- Shift Supervisor 12. Approves (or denies) the extension request and updates the T-MOD database as appropriate. If approved, reissues tags with the new extension date for installation in the field.

B. Maintenance of T-MOD Database

- Shift Supervisor 1. Ensures that the electronic database is backed up at least once a week.
2. Review the T-MOD log at least monthly to ensure that no T-MOD has expired. If the duration of a T-MOD approaches the expiration date (or exceeds it), the Shift Supervisor shall request the person supervising the work to develop a suitable means of permanently disposing the T-MOD. The T-MOD can be extended with Shift Supervisor concurrence, updating the computerized T-Mod log as appropriate.

Training (Section Required for All Procedures) TCR-ENG-036,R0-002

- Head, Project Management 1. For Procedures changes
- A. Target Audience:** All COGs, RLMs, Project Managers and System Engineers

Instructor: Head, Project Management_____

Training Method:

- Read only
- Email distribution only
- Briefing
- Classroom
- Online

Frequency:

- Once only

2. For new COGs, RLMs, Project Managers and System Engineers

A. Target Audience: All COGs, RLMs and Project Managers

Instructor: Head, Project Management_____

Training Method:

- Classroom

Frequency:

- Annual

- Head, Project Management 3. Notifies the Human Resources Training Office of the training so that they will be aware of the training requirements and be able to provide assistance and guidance in the course development, implementation, tracking, and maintenance.

TCR-ENG-036, R0-002**Records Requirements Specific To This Procedure** TCR-ENG-036,R0-002

Records Custodians must assure records are maintained as follows:

Record Title	Record Custodian	Location	Retention Time
T-Mod form	Shift Supervisor	Department Records	Destroy 5 yrs after form is superseded, or canceled. Reference Admin 16 Administrative Records (3.a)
T-Mod Database	Shift Supervisor	Department Records	Destroy 5 yrs after form is superseded, or canceled . Reference Admin 16 Administrative Records (3.a)

Attachments:

Examples of T-MOD Database Form and T-MOD Tag

T-MOD#: _____

FA - _____

REQUESTOR _____ NUMBER OF TAGS _____

DATE OPENED _____ EXPIRATION DATE _____

SAFETY EFFECTS SAD AMENDMENT REQ'D

TYPE OF T-MOD _____

LOCATION _____

OPEN/CLOSED

Description:

Reason/Permits Continued Operation:

Possible Adverse Effects and Testing After Removal:

Approval of Safety Rep. (if Safety Issue) _____

Approval of Shift Supervisor _____

Approval of Caretaking Manager _____

*****Return tags to or contact Shift Supervisor to close T-MOD*****

PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE	No. ENG-036 Rev 0 Attachment 1 pg 2 of 2
Examples of T-MOD Database Form and T-MOD Tag		

Temporary Modification Tags

Each T-MOD shall be conspicuously marked with a tag(s) which may be obtained from the Shift Supervisor and identified by a unique tag number which shall consist of abbreviating letters and the next sequential number.

For a temporary modification that is accessible and visible, the T-MOD Tag shall be affixed directly to the modification. For temporary modifications that are not accessible and visible, the T-MOD Tag shall be placed in a conspicuous location as near to the modification as possible or at multiple locations if the entire modification cannot be viewed from a single point.

Temporary Modification
Tag No. _____
Modification Type _____
Location: _____

Person Requesting: _____
Date: _____
COE Approval: _____
Date: _____
Personnel Attaching: _____
Date: _____

T-Mod Tag front

Description of Modification: _____

T-Mod Tag back