

# TEMPORARY CHANGE REQUEST

TCR NO. **TCR-P-039, R1-002**

(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: Jerry Levine Phone Ext: 3439

Department Name: ES&H

Document Number: P-039 Revision No.: 1

Document Title: Hazard Analysis and Controls

## Reason for change:

**Changes in organization and referenced procedures. Also corrections to one sentence for accuracy.**

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

Changed Initiated by to "Head, ES&H Department". Changed sentence on preference of preventative measures to place "engineering changes" as the first method of prevention. Replaced reference to former ESHD 5008 Section 11 Chapter 1 with current procedure ESH-025, and clarified this in the text. See attachment.

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:

J. Levine 12/8/16  
Department/Division Head Approval **Date**

J. Graham 12/13/16  
Head, Best Practices and Outreach/designee **Date**

Release/Effective date of this TCR: 12/13/16

Incorporate this TCR into next revision of this document? YES: X NO:

<b>PPPL</b>	<b>PRINCETON PLASMA PHYSICS LABORATORY</b>	<b>POLICY</b>	<b>No. P-039 Rev 1 page 1 of 1</b>
	<b>Subject:</b>  <b>Hazard Analysis and Controls</b>	<b>Effective Date:</b>  October 29, 1993	<b>Initiated by:</b>  Head, ES&H Department
		<b>Supersedes:</b> P-039, Rev. 0 Dated 12/02/91	<b>Approved:</b>  Director

Various equipment needed to support the activities at the Laboratory present hazards to people, the environment, and property. It is Laboratory policy that hazards be identified and that reasonable measures be taken to prevent them from causing harm. Barriers and controls shall be established to reduce risks by separating personnel, equipment, and the environment from hazards.

Preventative measures shall include:

- Engineering changes, i. e., substitution, elimination, etc., where practical.
- Energy barriers (designed to prevent unwanted transfer of energy between an energy source or hazard and a potential target);
- Safety barriers (designed to restrict times and means by which qualified personnel may gain access to energy sources or hazardous areas, and prevent access by unqualified personnel);
- Warning devices (means of alerting people to the presence of hazards – such as signs and lights);
- Administrative controls (methods for providing an added level of controls between hazards and targets by informing, guiding, and monitoring personnel and activities).

It is always preferable to establish engineering barriers as the first method of prevention, and to use energy barriers, safety barriers, warning devices, and administrative controls as supplements to provide the most effective measures. The confined space program is an example that includes training personnel, hazard posting, and issuing work permits. Administrative controls enhance the more effective barriers such as padlocking and fencing of confined spaces.

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Development, installations, operations, and changes of barriers and controls are carefully thought out and implemented in accordance with Laboratory procedures. The need for establishing barriers and controls is determined as part of the hazard classification, analysis, review, and certification processes per Procedure ESH-025. Suggestions for improvements to existing systems are encouraged at all times. Barrier and control methods are subject to ES&H reviews, QC inspections, and Quality Assurance audits to ensure effectiveness.

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#### **Reference Documents**

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ESH-025, Operations Hazard Classification Criteria and Safety Certification System

ESH-016, Control of Hazardous Energy (Lockout/Tagout)

ESH-004, Job Hazard Analysis