

# TEMPORARY CHANGE REQUEST

TCR NO. TCR-ENG-021, R5-002

(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: Mike Viola Phone Ext: 3655

Department Name: Engineering

Document Number: ENG-021 Revision No.: 5

Document Title: Program for Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment

## Reason for change:

Title and responsibility changes.  
Added new Engineering Standard to list for Lift Manager.

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

Change sub-process owner and SME to Lift Manager.  
Change Manlift Manager responsibilities to Lift Manager.  
Updated title for Engineering Department Head.  
Replaced Cog with Task Manager  
Added ES-MECH-014, Refueling and Recharging Vehicles and Equipment to Lift Manager oversight duties.

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:

\_\_\_\_\_  
Department/Division Head Approval

\_\_\_\_\_  
Date

\_\_\_\_\_  
Head, Quality Assurance/Quality Control/designee

\_\_\_\_\_  
Date

Release/Effective date of this TCR: 9/21/17

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

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<b>PPPL</b>	PRINCETON PLASMA PHYSICS LABORATORY	<b>PROCEDURE</b>		No. ENG-021,R 5 Page 1 of 7
		<b>Subject:</b>	<b>Effective Date:</b>  11/20/13	<b>Initiated by:</b>  Engineering Department Head
<b>Program for Hoisting &amp; Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment</b>		<b>Supersedes:</b>	<b>Approved:</b>	
		ENG-021 Rev. 4 and TCR-ENG-021,R4-003	Deputy Director for Operations	

**TCR ENG-021,R5-002**

**Management System (Primary):** 03.00 Engineering  
**Management System Owner:** Engineering Department Head **TCR-ENG-021,R5-002**  
**Management Process:** 03.04 Engineering Programs and Processes  
**Process Owner:** Engineering Department Head  
**Sub-Process:** 03.04.02 Program for Hoisting & Rigging, Forklifts,  
Manlifts, Special Purpose Vehicles, Utility Vehicles  
and Portable Equipment  
**Sub-Process Owner:** Lift Manager  
**Subject Matter Experts (SMEs):** Lift Manager **TCR-ENG-021,R5-002**

### Applicability

This procedure applies to all PPPL sites and operations, including subcontractors and subcontracted organizations. This procedure covers the PPPL Hoisting & Rigging Program, as well as the maintenance and operations of Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment.

### Introduction

This procedure describes the responsibilities and authorities for Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment program on the PPPL site. Detailed requirements and responsibilities with respect to this equipment are contained in the referenced PPPL Engineering Standards ES-MECH-007, ES-MECH-010, ES-MECH-011, and ES-MECH-012.

An organization chart that depicts the hierarchy of responsibilities and authorities for the Hoisting & Rigging portion of this procedure is shown in Attachment 1.

Only qualified operators may operate equipment at PPPL and only qualified riggers may perform rigging.

### Definitions

**Subject Matter Expert (SME)** An individual with prerequisite background or experience necessary for instructional competency in a specific subject, task, or field of knowledge. Such an individual is qualified by education, training, or experience, and is a recognized expert on a particular subject, task, or system. These individuals are capable of developing training courses and materials, presenting classroom and On-the-Job instruction, and evaluating trainees, within their subject area.

### References

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- ESHD 5008 PPPL Environment, Safety, and Health Directives Manual  
Section 1.0 - [Construction Safety](#)  
Section 2.0 - [Electrical Safety](#)  
Section 8.0 - [Industrial Hygiene](#)  
Section 9.0 - [Occupational Safety](#)
- ES-MECH-007 PPPL Hoisting and Rigging Engineering Standard  
ES-MECH-010 Forklift Engineering Standard  
ES-MECH-011 Special Purpose Vehicles and Equipment Engineering Standard  
ES-MECH-012 Manlifts Engineering Standard  
ENG-006 Preparation, Review and Approval of Specifications & Statements of Work  
MC-001 Control of Government-Owned Property  
OSHA 1910  
[Subpart A - General](#)  
[Subpart B - Adoption and Extension of Established Federal Standards](#)  
[1910.28 - Safety requirements for scaffolding.](#)  
[Subpart F - Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms](#)  
[Subpart N - Materials Handling and Storage](#)  
[Subpart P - Hand and Portable Powered Tools and Other Hand-Held Equipment](#)  
[1910.269 - Electric Power Generation, Transmission, and Distribution.](#)
- OSHA 1926  
[Subpart A - General](#)  
[Subpart B - General Interpretations](#)  
[Subpart C - General Safety and Health Provisions](#)  
[Subpart G - Signs, Signals, and Barricades](#)  
[Subpart I - Tools - Hand and Power](#)  
[1926.431 - Maintenance of equipment.](#)  
[1926.441 - Batteries and battery charging.](#)  
[Subpart L - Scaffolds](#)  
[Subpart M - Fall Protection](#)  
[Subpart O - Motor Vehicles, Mechanized Equipment, and Marine Operations](#)  
[Subpart P - Excavations](#)  
[Subpart R - Steel Erection](#)  
[Subpart T - Demolition](#)  
[Subpart V - Power Transmission and Distribution](#)  
[Subpart W - Rollover Protective Structures; Overhead Protection](#)  
[Subpart CC - Cranes & Derricks in Construction](#)
- DOE STD-1090 DOE Hoisting and Rigging Standard

**Procedure****Responsibility****Action**

Engineering  
Department Head

1. Appoints a qualified engineer as PPPL Lift Manager. The Lift Manager serves as PPPL's subject matter expert, OSHA competent person, and program manager for Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment, as covered in ES-MECH-007, ES-MECH-010, ES-MECH-011, ES-MECH-012 and Es-MECH-014. TCR-ENG-021,R5-002
2. Provides the necessary resources to support the Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment programs.
3. Appoints Lift Engineers to support the Lift Manager

Lift Manager

4. Maintains current expertise in the areas of responsibility including applicable DOE, industry, OSHA, and ANSI requirements and standards.
5. Ensures that this procedure and ES-MECH-007, ES-MECH-010, ES-MECH-011, ES-MECH-012 and ES-MECH-014 are current and reflect applicable requirements and standards; and manages these programs by assuring training is developed and provided; providing oversight, guidance, and support for implementation; and assuring compliance. TCR-ENG-021,R5-002
6. Performs specific duties as documented in ES-MECH-007, ES-MECH-010, ES-MECH-011, ES-MECH-012, and ES-MECH-014 including review and approval of lift procedures for Critical Lifts. TCR-ENG-021,R5-002
7. May designate a qualified person (as designated in the PPPL SME list [http://sportal.pppl.gov/bp/Lists/PPPL%20Experts/OSHA\\_CP\\_SME\\_POCs.aspx](http://sportal.pppl.gov/bp/Lists/PPPL%20Experts/OSHA_CP_SME_POCs.aspx)) to perform Subject Matter Expert duties as necessary. (i.e. reviewing and permitting subcontractor equipment onsite)

Human Resources

8. Identifies qualified instructors and arranges for their training. [Instructor qualification requirements are listed in PPPL Procedure TR-005 or the Instructor may be a subcontractor if approved by the Lift Manager.] TCR-ENG-021,R5-002
9. Arranges training of equipment operators, crane operators, and riggers and maintains records of training and current listings of qualified individuals. TCR-ENG-021,R5-002

Qualified Instructor

10. Provides instruction to equipment operators, crane operators, and rigging specialists in the safe operation of specific classes of equipment as recommended by the Lift Manager. TCR-ENG-021,R5-002

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|--|--|
| Lift Engineers                           | 11. Provide support to the Lift Manager including review and approval of written lift procedures for Critical Lifts and other duties as documented in ES-MECH-007.   |
| All Groups of the Engineering Department | 12. Carry out responsibilities as defined by this procedure and the Engineering Standards ES-MECH-07, ES-MECH-010, ES-MECH-011, ES-MECH-012 and ES-MECH-014. Cooperates with the Lift Manager, and Lift Engineers and provides necessary support. <b>TCR-ENG-021,R5-002</b>  |
| Princeton Technical Representative (PTR) | 13. Ensures that all equipment under their cognizance has assigned equipment Custodians and Contacts per MC-001.   |
|  | 14. Accompanies all subcontractor service personnel during their time on site, or designates a technically qualified alternate representative to accompany subcontractor.  |
|  | 15. Ensures that subcontractors follow all requirements of applicable SOW/Specifications; and that all forms, training, qualifications and requirements for onsite work are met completely and on time.<br><br>[The Princeton Technical Representative must either: evaluate and accept subcontractor personnel qualifications; or the personnel must carry approved documentation (e.g., qualification card) and the PTR has evaluated and accepted the subcontractor's qualification program.] |
| Task Manager                             | 16. Identifies the need for lift performance or use of Hoisting & Rigging, Forklifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment. <b>TCR-ENG-021,R5-002</b>   |
|  | 17. Works with the Lift Manager, Lift Engineer, or Qualified Rigging Specialist to develop and meet requirements: for Hoisting and Rigging in accordance with ES-MECH-007; and use of Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment in accordance with ES-MECH-0010, ES-MECH-011, and ES-MECH-012. Complies with fueling requirements of ES-MECH-014. <b>TCR-ENG-021,R5-002</b>   |
|  | 18. Maintains responsibility for the safe handling of critical loads and the protection of critical items in spaces around, or below any load.   |
| Qualified Rigging Specialist (QRS)       | 19. Works with the Task Manager to direct the performance of critical lifts. Performs other specific duties as documented in ES-MECH-007 including serving as an Area QRS, when appointed. <b>TCR-ENG-021,R5-002</b>   |
| Qualified Operator                       | 20. Operates specified equipment or specified crane(s) safely and effectively (including the ability to accurately spot and control loads.)  |

- Qualified Inspector      21. Performs inspections, repairs, and maintenance of equipment. [These responsibilities are performed by qualified PPPL personnel (e.g., a PPPL qualified operator) and may also be carried out by qualified subcontractor personnel hired to perform the Qualified Inspector duties as approved by the Lift Manager, as appropriate. The PPPL PTR or qualified designee must oversee subcontractor inspections, repairs, and maintenance.]
- Quality Control (QC)      22. Performs independent verification of hoisting and rigging activities as specified by ES-MECH-007.
- PPPL Operations Center      23. Provides central record archive and distribution for Lift Procedures, Lift Data Sheets, Operator Daily Checklist records, and equipment repairs and periodic inspections.

**Training** (section required for all procedures)

<p>Lift Manager</p>	<ol style="list-style-type: none"> <li>1. Ensures the training methods and means below are provided for this procedure.             <ol style="list-style-type: none"> <li>a. Target Audience:                 <ul style="list-style-type: none"> <li>Engineering Department Head</li> <li>Lift Manager</li> <li>Human Resources Training Specialist</li> <li>Qualified Instructors</li> <li>Lift Engineers</li> <li>Princeton Technical Representatives for applicable equipment</li> <li>Task Manager</li> <li>Qualified Rigging Specialists</li> <li>Qualified Operators</li> <li>Qualified Inspectors</li> <li>Quality Control</li> <li>PPPL Operations Center</li> </ul> <p style="text-align: center;"><b>TCR-ENG-021,R5-002</b></p> <ul style="list-style-type: none"> <li>Instructor: <u>Online from the Lift Manager</u></li> <li>Training Method: <u>Online at <a href="http://hr.pppl.gov/OnlineTrainingList.html">http://hr.pppl.gov/OnlineTrainingList.html</a></u></li> <li>Frequency: <u>Once only</u></li> </ul> </li> <li>b. Target Audience: <u>Supervisors</u></li> <li>Instructor: <u>Self-guided</u></li> <li>Training Method: <u>Read only via standard Email distribution of procedure updates from Best Practices to all supervisors</u></li> <li>Frequency: <u>Once only upon major revision of this procedure.</u></li> </ol> </li> <li>2. 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.</li> </ol>
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**Records Requirements Specific to this Procedure** (section required for all procedures)

The referenced subordinate Engineering Standards contain the nearly all details and related records associated with the program for Hoisting & Rigging, Forklifts, Manlifts, Special Purpose Vehicles, Utility Vehicles and Portable Equipment.

Records Custodians must assure records are maintained as follows:

<b>Record Title</b>	<b>Record Custodian</b>	<b>Location</b>	<b>Retention Time</b>
Training Records	Human Resources	Human Resources Files	Cut off at the time of separation or transfer of the employee. Destroy 4 years after cutoff. (per DOE records schedule A1 29.1.a.1)

**Attachments**

None