

TEMPORARY CHANGE REQUEST

TCR NO. **TCR-ENG-005,R3-001**

(e.g., TCR-ENG-021,R1-001)

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: J. DeLooper

Department Name: Engineering and Infrastructure

Document Number: ENG-005 Revision No.: 3

Document Title: General Plant Projects Administration

Reason for change:

Added requirements for submitting Construction Directive Requests to DOE-PSO for approval for all GPP projects.

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

Modified and added steps for preparing, reviewing and approving GPP Construction Directive Requests and any subsequent modifications. These include review by the PPPL CFO, approval by the PPPL Director, and approval by DOE-PSO.

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:

Erik Perry
Department/Division Head Approval

6/20/16
Date

J. DeLooper
Head, Best Practices and Outreach / Designee

6/20/16
Date

Release/Effective date of this TCR: 6/20/16

Incorporate this TCR into next revision of this document? Yes X No

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		Subject: General Plant Project Administration	Effective Date: November 4, 2010	Initiated by: Head, Engineering and Infrastructure
		Supersedes: Revision 2, dated April 10, 2007	Approved: Director	

Applicability

This procedure applies to all activities at C and D-Sites of the Laboratory. This procedure applies to the administration and implementation of approved General Plant Projects per GEN-009.

Introduction

This procedure describes the sequential steps and responsibilities necessary for PPPL administrative control of the planning, design, and implementation of a typical General Plant Project (GPP) from inception through completion. Each GPP project will have a construction directive associated with the work. PPPL will submit a Construction Directive Request to DOE-PSO for approval prior to work.

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Definition of General Plant Projects (GPPs)

- GPPs are betterments and construction projects of a general nature, having a useful life in excess of two years, and costing less than \$10,000,000.
- GPPs are necessary to upgrade and modernize facilities, structures and systems or adapt them to new uses, and to address health, fire, and safety concerns.
- GPPs provide for design, construction, renovation and restoration to land, buildings, other structures and systems.
- All modifications to existing real property meeting any of the following requirements:
 - Expansion of existing facilities that adds to the overall dimensions of the existing facility.
 - Major structural revision which changes the functional purpose for which the facility is used.
 - A complete replacement of a facility fixture which has deteriorated beyond the point of repair.
 - Work required to accommodate regulatory or other requirement changes.

(Examples include construction of new buildings, repairs to roads and parking areas, roof replacement and utility system upgrades.)

Reference Documents

P-077	Roles & Responsibilities for General Plant Projects
GEN-009	GPP Prioritization
ENG-006	Review and Approval of Specifications & Statements of Work
DOE Order 430.1B	Real Property Asset Management
DOE Order 440.1A	Worker Protection Management for DOE Federal and Contractor Employees
DOE Order 534.1B	Accounting

ES&HD 5008	Environment, Safety & Health Directives Manual
ENG-010	Control of Drawings, Software and Firmware
ENG-032	Work Planning Procedure
ENG-033	Design Verification

Procedure

This procedure applies to projects with Total Project Cost (TPC) under \$2 million and from \$2 million to \$10 million per the following description of the extent of written notification required:

I. For GPP projects having a TPC less than \$2M:

As Projects are funded, PPPL shall provide written notification to the PSO which includes the description of the work scope, the estimated TPC, and the estimated completion date. The breakdown of costs shall be provided as follows:

- Management
- Design
- Construction
- Indirect Cost
- Contingency

If only design costs are to be obligated to a new project at project commencement, the written notification shall still include the estimated TPC. Any significant changes to the scope, and/or any changes to the cost and schedule estimate greater than 20%, require an updated notification to PSO.

II. For GPP projects having a TPC of \$2M or greater:

PPPL shall prepare a project management plan that contains the following elements that are graded towards the size and complexity of the project as follows:

- Description of work scope and final deliverable;
- Budget profile;
- TPC and Cost breakdown (as similar to projects less than \$2M);
- Completion date;
- Interim milestones having a frequency of approximately one milestone per quarter;
- Designate the PPPL assigned project manager;
- Earned value management system, if deemed appropriate;
- Procurement strategy;
- Change control methodology;
- Risk description.

PSO will issue a concurrence letter to this plan from the Site Office Manager.

III. For all GPP projects:

- a. PPPL shall request a Davis-Bacon determination for each construction project planned for award that fiscal year upon initiation of the project. *No work can commence until a Davis-Bacon determination is received signed by the Contracting Officer.*
- b. A written close-out report shall be provided to PSO at project close-out and include the following items:
 - Acknowledgement of the work scope status (completed, completed in-part or cancelled);
 - The final TPC and breakdown of costs;
 - The date the betterment has been placed into beneficial use;
 - Acknowledgement that all subcontract release of claims has been obtained;
 - The property record(s) and asset type(s) the betterment has been assigned;
 - Statement by the PPPL CFO that the ‘*Project is closed-out. No further expenditures are to be made to this project.*’
- c. On a monthly basis, PPPL Facilities and Site Services Division and Engineering and Infrastructure Department will provide the PSO team with a general accounting list of all open GPP projects and their actual statuses. The PPPL monthly Project Status Report spreadsheet is adequate for this purpose.

A. Planning Phase

Responsibility	Action
Head, Facilities and Site Services	1. Implement approved GPP Plan or add proposed General Plant Project (GPP) with written notification to PSO.
Technical Resource Committee (TRC)	2. Prioritize and approve annual GPP plan for implementation.

Engineering
Department Deputy
Head for Infrastructure

3. Prepare a Construction Directive Request and forward to Chief Financial Officer for review and approval.

NOTE: The directive form is prescribed by the DOE Princeton Site Office. It includes scope, budget and schedule. Supporting documentation must be produced, such as a Work Authorization Form (per procedure ENG-053), or the scope must be limited to an engineering study so that an Architect/Engineer can produce formal drawings and specs that can be bid. At that time the construction directive will be updated with information that supports the cost.

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4. Submit Project NEPA Request to ES&H.

ES&H

5. Review NEPA request.

Chief Financial Officer

6. Review the Construction Directive Request, assure that the project meets the required contractual and accounting standards (including assuring that the source of funding is appropriate for the scope of work). Approve and the Construction Directive Request and forward to the PPPL Director for approval.

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Laboratory Director

7. Review and approve each Construction Directive Request and forward to DOE-PSO for approval.

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Budget Office

8. Open account with budget approved by DOE- PSO.

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Project Engineer

9. Prepare Statement of Work (SOW) for Architect/Engineering (A/E) services, if required, in accordance with ENG-006.

Procurement

10. Send SOW to A/E.

11. Review A/E Proposal with Project Engineering.

Project Engineer

12. Advise Procurement to release the Purchase Order for A/E Services.

Procurement

13. Issue the Purchase Order for A/E Services.

B. Design Phase

Responsibility

Action

Project Engineer

1. Coordinate Design Package development with A/E if necessary.

2. Review A/E Design Package with appropriate PPPL and DOE-PSO staff. Coordinate reviews in accordance with Procedure ENG-033.

C. Procurement Phase

Responsibility

Action

Project Engineer

1. Prepare Information Package for the RFB (Request for Bid) which includes the following:
 - SOW (including critical schedule milestones, required documentation submittals, and training requirements)
 - Plans and specifications
 - Detailed cost estimate
 - Health & Safety Plan requirements
 - Integrated Safety Management (ISM) Plan (Refer to P-025)

Head, Facilities and
Site Services
Procurement

2. Establish Project roles and responsibilities as delineated in Policy P-077.
3. Prepare Request for Bid (RFB) document package.
4. Release RFB.
5. Conduct Pre-Bid meeting with prospective bidders and appropriate design review participants.
6. Receive and review bids and subcontractor qualifications with Project Engineer.
7. Obtain DOE award approval (if required) and forward executed subcontract to Project Engineer.

D. Construction Phase

Responsibility

Action

Project Engineer

1. Initiate request for Title III Services, if required.

Procurement

2. Issue Purchase Order for Title III services, if required.

Procurement

3. Obtain required bonds, insurance certificate, etc. And issue 'Notice to Proceed.'

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| Head, Facilities and Site Services | 4. Assign Construction Coordinator. |
| Project Engineer | 5. Contact Environmental Services Division to ensure that any applicable agency notifications (i.e., environmental) have been completed in accordance with permit requirements. |
| Environmental Services Division | 6. Notify agencies (e.g., NJDEP) of start of work as required by permits (e.g., for projects involving remediation etc.). |
| Construction Manager | 7. Notify Lab Personnel of Work Schedule. At a minimum, notification includes the following: Facility Manager, ESU, ES&H, D-Site Shift Supervisor, DOE-PSO. |
| | 8. Schedule and coordinate required subcontractor 'Integrated Safety Management,' (ISM) training. Ensure sufficient advance notice is provided to schedule the required training. |
| Construction Manager | 9. Direct construction operations. |
| | 10. Monitor project for ES&H compliance. Interface with project and support organizations (Environmental Services, ES&H, etc.) as necessary. |
| | 11. Inform Project Engineer of significant events (i.e. events which may affect the scope of work, schedule, or cost) encountered during day-to-day operations. |
| Project Engineer | 12. Prepare technical documentation for Change Orders and forward to Procurement (if required). |
| Procurement | 13. Send Change Order requests to Subcontractor negotiate and agree upon final terms, as required. |
| Engineering Department Deputy Head for Infrastructure | 14. Prepare modification requests for Construction Directive Requests for any proposed changes to project scope, cost or schedule. Forward modification requests to Chief Financial Officer for review and approval. |
| Chief Financial Officer | Review the modification requests for Construction Directive, assure that the project meets the required contractual and accounting standards (including assuring that the source of funding is appropriate for the scope of work). Forward request to the Laboratory Director for approval. |

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| Laboratory Director | 15. Review and approve each modification to Construction Directive and forward to DOE-PSO for approval. | TCR-ENG-005,R3-001 |
| Project Engineer | 16. Track project schedules and work with Subcontractor to develop recovery plans, if necessary, to keep project on schedule and within cost. | |
| Construction Manager | 17. When project has been completed, Schedule a 'Walk-Through' to evaluate the quality and completeness of the project | |
| Construction Manager | 18. Generate a 'Punch List'. | |
| Project Engineer | 19. Collect all warranties, design drawings, etc. from Subcontractor. | |
| Project Engineer | 20. After 'Punch-List' resolved, Issue Final Acceptance Letter. | |
| | 21. Notify Procurement and Accounting that Construction has been completed. | |

E. Closeout Phase**Responsibility****Action**

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| Architect/Engineer
(A/E) | 1. Make changes to 'As-Built' drawings and return them to the Project Engineer. |
| Project Engineer | 2. Compile and review all drawings and documentation and forward to the Head, Facilities for retention in the central project file. |
| | 3. Notify Procurement and Accounting that A/E services are completed. |
| | 4. Forward FIMS data and Project Description to Accounting. |
| Subcontractor | 5. Forward signed 'Release of Claims' to Procurement. |
| Procurement | 6. Forward Internal Order to Accounting. |
| Accounting | 7. Upon receipt of last Internal Order, pay Final Invoice(s). |
| | 8. Prepare RFBA to close project work package and forward it to the Cost Center Manager. |

- Cost Center Manager 9. Sign RFBA and forward to the Budget Office.
- Budget Office 10. Sign RFBA and forward to Accounting.
- Accounting 11. Close project work package.
- Accounting 12. Prepare a Preliminary Cost Report and forward it to the Project Engineer.
- Project Engineer 13. Resolve any discrepancies on the Preliminary Cost Report and return it to Accounting.
- Accounting 14. Forward revised Preliminary Cost Report to DOE-PSO.
- Accounting 15. Prepare a Final Cost Report and forward it to the Head, Facilities.
- Head, Facilities and Site Services 16. Sign and return Final Cost Report to Accounting.
- Chief Financial Officer 17. Obtain additional signatures required on Final Cost Report; and prepare the final revision of the Construction Directive to close the project and forward both to the Laboratory Director for approval.
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- Laboratory Director 18. Approve closeout of the final Construction Directive and forward it along with the Final Cost Report to DOE-PSO for closeout.
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- Accounting 19. Update FIMS (Facility Information Management System) and financial records, as appropriate.