

TEMPORARY CHANGE REQUEST

TCR NO. GEN-009,R2-TCR-003

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: John DeLooper Phone Ext: 3047

Department Name: Facilities and Site Services

Document Number: GEN-009 Revision No.: 2

Document Title: GPP Prioritization

Reason for change:

Added requirements for submitting Construction Directive Requests, and any subsequent modification thereto, to DOE-PSO for approval for all GPP projects in accordance with procedure ENG-005.

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

Modified procedure steps 11 through 13.

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

John 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:

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE	No. GEN-009 Rev 2 page 1 of 3
			Subject: GPP Prioritization
		Supersedes: Revision 1 Dated 4/8/98	Approved: Director

Applicability

This procedure is applicable to all organizational elements in PPPL. This procedure provides guidance for prioritization and selection of General Plant Projects at PPPL.

Introduction

This procedure shall be used for all present and proposed activities which would be funded from General Plant Projects (GPP) funding. General Plant Projects are betterments and construction projects of a general nature with a Total Project Cost (TPC) below \$10 million per project. The projects are necessary: to adapt PPPL facilities to new or improved operating techniques; to affect economies in operation; and to reduce (or eliminate) safety, health, fire, and security problems. General Plant Projects play an important role in PPPL's ability to provide for the safe and reliable operation of its facilities. As the availability of GPP funds is limited, a systematic process for determining priorities and selection of proposed projects based upon risks and benefits is required for all departments.

The Technical Resources Committee (TRC) establishes GPP priorities and annual work plans. To facilitate this decision making process, the TRC has a subcommittee which is composed of subject matter experts from across the Laboratory who are appointed by the Chief Operations Officer to evaluate the merits of individual projects. This subcommittee uses criteria developed by the DOE for the Capital Asset Management Process (CAMP) to evaluate the proposed projects. A copy of the CAMP evaluation criteria is shown as Attachment 1. The CAMP criteria is intended to be a guideline and used as a tool for management to rank projects, but is not intended to replace sound management judgment in reaching final decisions on project priorities.

The Engineering and Infrastructure Department Facilities and Site Services Division Head will follow this procedure annually to produce a list of proposed GPP projects for inclusion in use of funding based on authorized budget. At the beginning of the fiscal year, PPPL shall present the Princeton Site Office (PSO) with a GPP Program Plan. This Plan will include project, estimated TPC, and PPPL TCR rank. This annual Plan will have some degree of consistency with the lab annual and 10-year plans. PSO will review the Plan and issue a concurrence letter for the Site Office Manager. The Facilities Head will use ENG-005: GPP Administration to implement approved GPP projects and to add projects to the GPP Plan.

Reference Documents

O-044 Technical Resources Committee (TRC) Charter
ESH-014 NEPA Review System
DOE 430.1B Real Property Asset Management

ENG-005 General Plant Project Administration

Acronyms

CAMP Capital Asset Management Process
GPP General Plant Project
TRC Technical Resources Committee

Procedure

Responsibility

Action

- | | |
|------------------|---|
| Head, Facilities | 1. Issues a call for proposed GPP activities on a periodic (at least annual) basis. The distribution shall include all Council members, at a minimum. |
| Line Managers | 2. Identifies need for a potential GPP project(s) and informs the appropriate Council member. |
| Council Member | 3. Forwards proposed projects to the Head of Facilities. |
| Head, Facilities | 4. Assembles all project proposals (new and those identified by the Chief Operations Officer as needing re-evaluation) into a concise list. The list shall include a brief description of the project and the name of the project advocate. |
| TRC Subcommittee | 5. Schedules a meeting of the TRC subcommittee for evaluation and ranking of project proposals and forwards documentation to the Subcommittee members. The Chief Operations Officer appoints the Chairperson and members of the TRC Subcommittee per O-044. |
| TRC Subcommittee | 6. Evaluates and scores the individual project proposals using the guidance provided in Attachment 1. |
| Head, Facilities | 7. Records results of the Subcommittee recommendations and forwards the results, along with project cost estimates to the TRC Chairperson. |
| TRC Chairperson | 8. Schedules a meeting of the TRC to review the ranking recommendations. |

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| TRC | 9. Reviews the priority recommendations, budget status, and strategic issues in order to endorse or modify the recommended priority listing. In the event that unresolved issues/questions arise, return to Step 5. |
| TRC Chairperson | 10. Provides priority decisions to the Director and Deputy Director. |
| Engineering
Department Deputy
Head for Infrastructure | <p>11. Prepares and forwards Construction Directive Requests to the Chief Financial Officer for review and approval in accordance with procedure ENG-005.</p> <p>12. Prepares and forwards NEPA Planning Forms and priority list to the Head, ES&H in accordance with procedure ESH-014.</p> <p>13. Prepares modification requests for Construction Directives for any proposed changes to project scope, cost or schedule. Forwards modification requests to Chief Financial Officer for review and approval in accordance with procedure ENG-005.</p> |
| Head, Facilities | 14. Informs TRC Chairperson of any significant changes in project schedules and/or cost estimates. |
| TRC Chairperson | 15. Reviews major changes in schedules and/or cost estimates and decides on need for a TRC meeting to discuss implications. |

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ATTACHMENTS

Attachment 1. CAMP Risk Ranking Criteria

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE	No. GEN-009 Rev 2 Attachment 1
	CAMP Evaluation Guidance		Page 1 of 8

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CHAPTER IV

CAPITAL ASSET MANAGEMENT PROCESS PRIORITIZATION

1. **INTRODUCTION.** Consistency throughout the Department in the prioritization, preparation, and submission of asset management resource requirements is a key element of the Capital Asset Management Process (CAMP). To achieve the desired consistency, all sites shall adopt the CAMP prioritization process discussed in this Chapter. The prioritization process is designed to rate and rank each project. The priority lists shall be updated annually. This process shall be used as a tool to help prioritize projects on a site wide, Field, and Headquarters (HQ) level.

2. **BACKGROUND.** The CAMP prioritization process is a systematic, structured, and consistent method for determining the preferred order for allocating limited resources to solve problems. This process prioritizes the problems (events, conditions, situations, requirements, etc.) that projects are intended to address. Other methods and techniques are used to assess the appropriateness or readiness of a project; examples are: value engineering, justification reviews, and project validations. For the purposes of this chapter, problems and projects can be thought of as interchangeable in the prioritization process.
 - a. **Development Basis.** The CAMP prioritization process was developed on the basis of risk management and reflects the values and culture of the Department. The prioritization criteria consist of the two elements of risk--consequence and probability. They are combined in the criteria statements and are influenced by the terminology and expressions commonly used by the people who work with the various rating criteria categories. The scores represent the risk-consequence and probability of occurrence based on the descriptions under each rating criteria. The rating criteria were developed and positioned based on Departmental intentions and public expectations, appropriate standard industrial practices, and represent the desired level of operational conduct (see Attachment IV-1).

 - b. **Universality.** The CAMP prioritization process is universal, encompassing four major categories: (1) health and safety; (2) environment/waste management; (3) safeguards and security; and (4) programmatic. The process provides for expansion, change, and improvements. Further, it can easily accommodate ratings derived from other prioritization systems, as long as the ratings reflect the same values and culture. The rating criteria and scoring process are contained in the Attachments to this Chapter and shall be maintained by HQ. Any changes to the prioritization process will be transmitted with the annual CAMP Call.

This is an excerpt from a longer document that is maintained by the Head of Maintenance & Operations Division.

3. APPROACH. The problem-rating criteria within each of the four major categories and their subcategories are aligned along a scoring scale so that they represent the same severity or priority. Therefore, any rating score in one category or subcategory represents the same problem severity as the same numerical rating score in any other category. This alignment of criteria is crucial to achieve an equivalent, integrated ranking between dissimilar problems or projects.
- a. Steps. The CAMP prioritization process consists of four steps: (1) rating; (2) scoring; (3) initial ranking; and (4) final ranking. It is vital that bias be minimized. To this end, ratings are normalized in each step of the consolidation review process (i.e., from facility, to site, to Operations Office, to HQ Program Office). This ensures consistency, equitable application of ratings, and fair and accurate comparisons and rankings. The process for developing a total score for each problem/project gives greatest emphasis to the most severe rating, but also recognizes that some problems have multiple dimensions. The process therefore should duly reflect their contributions.
- b. Severity Rating Scale. The problem severity ratings span a scale from 20 to 80. The scale could have been infinite, but the two ends were collapsed for ease of use.
- c. Benchmark Criteria. To assist in assigning major category ratings, benchmark criteria are given for a number of subcategories under each major category. Subcategory benchmark criteria are shown in Attachment IV-1. The subcategories enable project sponsors to rate problems with reference to specific technical and managerial benchmarks, as a guide to accurate rating. The probability and frequency languages used in the benchmark rating criteria for all four major categories and their respective subcategories are outlined in Attachment IV-2.
- d. Sample. A sample of an application of the rating and ranking process is presented in Attachment IV-3.
- e. Initial Ranking. Rank initially in descending order according to total rating score. The highest rating score, therefore, is the highest ranked priority. (Note: As previously stated, the benchmarks are defined so that a numeric rating on any scale denotes problem severity equal to the severity of the same numeric rating on any other scale.) For instance, a problem rating of 52 in the Programmatic Category is as important as a problem rating of 52 on the Health & Safety Category, by design. However, where two or more problems have identical overall problem ratings, their initial rankings shall be determined through a tie breaker by giving priority to each major category in the following order: Health & Safety; Environment/Waste Management; Safeguards and Security; and Programmatic.

f. Final Ranking.

- (1) Projects proposed to address the prioritized problems for out-years are seldom thoroughly defined at the time the 5-year plan is prepared and are best ranked according to the severity ratings of the problems they are to address. Once CDRs are completed, project cost, scope, and results are better defined. Nevertheless, projects should continue to be ranked primarily according to problem severity throughout the planning period. Management review of the initial ranking is important to ensure all considerations are reflected in the final ranking. Techniques such as pair-wise comparisons are useful. Supplemental information to adjust rankings may include cost, problem improvement or severity reduction (rating reduction effected by the project), scope, readiness of a project, etc. Whether and how supplemental information modifies an installation's initial ranking is left to local discretion.
- (2) Rankings may be done for all the problems/projects in the 5-year planning period and then organized into individual fiscal year rankings or ranked initially by year. Because of budget formulation considerations (e.g., funding limitations, project readiness, consolidation of like projects, etc.), actual project budget submissions could result in modifying the order of the yearly rankings.

Excerpt from:
DOE 4320.2A
2-10-94

Attachment IV-1
Page IV-5

CATEGORY/SUBCATEGORY BENCHMARK CRITERIA

Major Category Rating Criteria				
Score	I. Health & Safety	II. Environment	III. Safeguards & Security	IV. Programmatic
10	Acceptable risk; minor incidents unlikely	In compliance; working towards ALARA	Minor problems unlikely	Minor problems unlikely
20	Minor incidents slightly likely	Consistently in compliance; violations extremely unlikely	Routinely secure with acceptable risk	Adequate with acceptable risk
30	Minor incidents moderately likely; serious incidents unlikely	Routinely in compliance; low -impact violations are the exception; no offsite concern	Routinely secure with some minor problems	Adequate with some minor problems
40	Minor incidents moderately likely; serious incidents slightly likely	Occasional violations of moderate consequence	Modest threat to classified information, technology, and parts (moderately likely)	Adequacy in question with many minor problems
50	Minor incidents likely; serious incidents moderately likely	Frequent problems of moderate consequence; occasional serious problems; moderate offsite concern	Serious threat to classified information, technology, property, and parts (moderately likely)	Mission accomplishment at moderate risk
60	Serious incidents likely; fatalities unlikely	Consistently have problems of moderate consequence; frequent serious problems	Serious threat to SNM/tritium or personnel (moderately likely)	Mission accomplishment at high risk
70	Serious incidents highly likely; fatalities moderately likely	Highly likely large and uncontrolled contamination/release to offsite areas with lasting serious environmental impact	Extreme threat to SNM or personnel (moderately likely); extreme threat to classified information, technology, property, and parts (highly likely)	Critical/strategic mission accomplishment severely impacted or shut down
80	Highly likely life-threatening situation		Extreme threat to SNM or personnel (highly likely)	

I. HEALTH & SAFETY RATING CRITERIA SUBCATEGORIES									
Score	Regulatory Compliance	Best Management Practices	Special Action/Team Findings	Technological Base (R&D)	Industrial Hygiene	Industrial Safety	Fire Protection	Health Physics	Criticality
10	Absent in compliance with high margin	No concerns			Extremely effective program to limit exposure ALARA	No concerns with minor incidents	Very low probability of worker injury	No exposure to public or employees	Event essentially impossible
20	In compliance, but upcoming problems slightly likely	No interventions at present, but upcoming action possible	TSA Priority 3; Tiger Team Priority 4	Develop new technology in support of mission and national objectives; long-term probability of success and/or high risk	Very effective program to limit exposure below standards	Few concerns, with occasional minor incidents	Property loss extremely unlikely or of trivial value	Minor change from approved conditions or procedures (Category 1)	Deviation - minor change from approved conditions or procedures (Category 1)
30	Consistently in compliance with occasional minor deviation	Some minor concerns/resolutions		Develop new approaches, techniques, and methods to improve operations	Routine acceptable performance in maintaining exposure at/below standards	Meeting established internal objectives	Standard industrial protection, with acceptable risk; some property losses expected	Moderate exposure to the public slightly likely (1-5 REM/yr.); exposure to workers up to 1 REM/yr.; moderately likely	Infraction - significant change from approved conditions or procedures but no realistic way to cause a criticality (Category 2)
40	Frequent minor violations	Many minor concerns/resolutions	Tiger Team Priority 3	Develop new methods to improve health & safety capability and efficiency; intermediate probability of success and/or low risk	Frequent violation of exposure standards only through administrative control	Minor injuries exceeded goals	Events with minor injury likely		Event with probability approximately 10 ⁻⁴
50	Frequently in compliance but serious violations occasionally occur	Some significant concerns/resolutions of internal standards	Tiger Team Priority 2	Develop new methods to improve health & safety capability and efficiency; short-term probability of success and/or low risk	Frequent violation of exposure standards - no controls available	Minor injuries frequent, or occasional serious injuries	Serious injury moderately likely; Standard industrial protection; occasional significant property loss	Continuous low-level exposure to the public likely (0.1-1 Rem/yr.); high exposure to workers highly likely (10-100 REM/yr.)	
60	Serious violation frequent, or some continuing minor deviations; shutdown possible	Mandated fixes and schedules due to significant problems; likely suspension of operations pending action	TSA Priority 2	Develop necessary methods, processes and techniques in support of critical health & safety objectives; short-term probability of success and/or low risk	Potential in-between danger to site personnel through exposure; near-term action required	Serious injuries frequent	Serious injury likely; significant property losses routine	Exposure to the public slightly likely (> 100 REM/yr.); weaker exposure above regulatory limits likely (> 10 REM/yr.)	Violation - continuation of acts likely would significantly increase probability of criticality (Category 3)
70	Serious, life-threatening violations (on site personnel); shutdown assumed		TSA Priority 1; Tiger Team Priority 1		Substantial danger to personnel; fatalities possible	Fatalities possible	Fatalities possible	Moderate exposure to the public likely (1-5 REM/yr.); weaker facility slightly likely	Event credible with probability 10 ⁻⁴
80	Highly likely life-threatening situation				Highly likely life-threatening situation	Highly likely life-threatening situation	Highly likely life-threatening situation	Highly likely life-threatening situation	Criticality or near criticality (Categories 4 and 5)

II. ENVIRONMENT/WASTE MANAGEMENT RATING CRITERIA SUBCATEGORIES											
Score	Regulatory Compliance	Best Management Practice	Special Action/Team Findings	Technological Base (R&D)	Waste Management	Liquid Waste Management	Solid Waste Management	Airborne Pollutants (Waste Management)	Waste Minimization	Environmental Restoration	Corrective Activities
10	No violations	No concerns			No concerns	No concerns	No concerns	No concerns	Process generates minimum waste using best engineering practices		
20	Consistently in compliance but upcoming problems possible	No interventions at present, but upcoming action possible	Tiger Team Priority 4	Develop new technology in support of mission and national objectives; long-term probability of success and/or high risk	Effects of transport/storage; treatment discharge meets requirements	Consistently meets requirements	Consistently meets requirements	Consistently meets requirements	Process generates relatively little waste	Decontamination and decommissioning (D&D) at sites with no present impediments	
30	Consistently in compliance with occasional deviations	Some minor concerns/recommendations		Develop new approaches, techniques, and methodologies to improve operations	Occasional discharge exceeding material goals			Emissions currently within permitted level, but hard to maintain	Process generates more waste than an efficient process	Remedial actions/D&D needed to reduce risk, promote compliance, or maintain mission continuity	
40	Frequent minor violations	Many minor concerns/recommendations; some significant concerns/recommendations	Tiger Team Priority 3	Develop new methodologies to improve health & safety capabilities and efficiencies; intermediate probability of success and/or medium risk	Occasional violation of discharge permit	Occasional inadequacy of permitted storage/handling/transport/processing/disposal capacity		Emissions occasionally exceed permitted level by a small amount	Process generates excessive waste	Remedial actions/D&D required by enforce agreements	
50	Frequently in compliance, but serious violations occasionally occur	Violation of contractor standards; contractor suspension of operations likely	Tiger Team Priority 2	Develop new methodologies to improve health & safety capabilities and efficiency; short-term probability of success and/or low risk	Many or immediate violations	System capacity frequently inadequate		Emissions frequently exceed permitted level by a large amount	Process generates waste that exceeds regulatory limits	Actions required as part of a signed interagency agreement	Out-of-compliance with requirements, but no signed agreement
60	Serious violations frequent	Mandated fines and schedules due to significant problems; suspension of operations pending action		Develop necessary methodologies, processes and techniques in support of critical objectives; short-term probability of success and/or low risk	Lack of adequate storage/treatment handling/transport/packaging facilities			Emissions extremely high on occasion (not life threatening)	Process generates waste such that serious environmental impact is inevitable	Actions required as part of a signed interagency agreement	Actions required as part of a signed interagency agreement
70	Violation of law with potential serious criminal problems		Tiger Team Priority 1					Emissions dangerously high (life threatening)		Remedial actions/D&D required to protect from near-term risks	Actions needed within 1 year to prevent significant risks
80											

Exerpt from DOE 4320.2A Attachment IV-1 Page IV-9 Category/Subcategory Benchmark Criteria

IV. PROGRAM/MAINTAINING CRITERIA						
Score	Compliance with Orders/Directives	Best Management Practices	Technological Base (R&D)	Capacity	Quality	Physical Condition
10	Exceeds requirements	No concerns		State of the art to meet known future requirements	Exceeds requirements to support mission	Like-new condition
20	In compliance, but upcoming problems slightly likely	No intervention at present, but upcoming action possible; IROR \geq 20%	Develop new technology in support of mission at national objective; long-term probability of success and/or high risk	Process adequate to meet program mission requirements, but improvements warranted	Able to meet requirements; minor improvements possible	Good - performs to original specs with routine preventive maintenance, downtime does not affect operation/mission
30	Consistently in compliance, with occasional minor deviations	Some minor concerns/recom mendations; IROR \geq 50%	Develop new approaches, techniques, and methodologies to improve operations		Able to meet requirements; some significant improvements required	Adequate - meets mission, but cannot perform to all original specs, some corrective maintenance necessary
40		IROR \geq 75%; Some significant concerns/recom mendations	Develop new methodologies to improve/enhance mission capability and efficiency; intermediate probability of success and/or medium risk	Can meet mission with problems likely	Able to meet requirements; many significant improvements required	Fair - occasional sub-standard operation; repetitive corrective maintenance; can meet mission with minor problems
50	Frequently in compliance, but serious violations occasionally occur	Violation of Internal standards; suspension of operations daily; IROR \geq 100%	Develop new methodologies to improve/enhance mission capability and efficiency; short-term probability of success and/or low risk	Can meet mission with difficulty	Unable to meet some requirements	Poor - consistent sub-standard performance; operations/mission threatened
60	Serious violations frequent or many continuing minor deviations; shutdown possible	Mandated fixes and schedules due to significant problems; likely suspension of operations pending action	Develop necessary methodologies, processes, and techniques in support of critical programmatic objectives; short-term probability of success and/or low risk	Cannot meet mission, or unique capability in jeopardy	unable to meet most requirements	Severely deteriorated; mission assignment at high risk
70				Critical/strategic mission capability does not exist		Critical/strategic facilities inoperable
80						