

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE		No. ENG-052 Rev.0 page 1 of 2
		Subject: Operating Expense (OPEX) Projects Prioritization and Administration	Effective Date: July 2, 2010	Initiated by: Head, Facilities Division
		Supersedes: NEW	Approved: Director	

I. APPLICABILITY

This procedure applies to present and proposed Operating Expense (OPEX) activities (i.e., those funded through operations funding) performed at PPPL.

II. INTRODUCTION

Operating Expense (OPEX) Projects play an important role in PPPL's ability to provide for the safe and reliable operation of its facilities. As OPEX funds are limited, a systematic process is used for determining priorities for proposed projects based upon risks and benefits to safe and reliable facility operations.

The Head of Facilities, with concurrence from the Associate Laboratory Director for Engineering & Infrastructure, is the authority for establishing OPEX priorities and annual work plans. The OPEX Committee evaluates proposed projects using the DOE Capital Asset Management Process (CAMP) and provides input to the Facilities Division Head.

III. REFERENCES

PPPL Accounting Manual, Exhibit 8-1 "DOE Fund Definitions"

DOE Accounting Handbook, Chapter 10 "Plant and Capital Equipment"

IV. DEFINITIONS

Work Prioritization is the process by which requests for work related to the repair, maintenance and improvement of the Laboratory's infrastructure and site are funded on the basis of need and risk and within available resources.

OPEX (Operating Expense Projects) include projects of with a total estimated cost of \$5,000 to \$50,000 that are not expensed as capital expenditures. OPEX projects, managed by the PPPL Facilities Division, and are necessary for needed repairs, construction, maintenance, and alterations of existing PPPL facilities.

V. PROCEDURE

Responsibility

Action

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| Head, Facilities Division | 1. Issues call for proposed activities annually to all Council members and Division Heads. |
| Council Members and Division Heads | 2. Forward proposed projects to the Head, Facilities Division. |
| Head, Facilities Division | 3. Assembles all project proposals (new and those previously identified) into a list, which includes a brief description of the project and the name of the project advocate. |
| | 4. Assigns work requests received through the Computerized Maintenance Management System (CMMS) meeting the current definition of OPEX to the OPEX List for evaluation and prioritization. |
| | 5. Schedules a meeting of the OPEX committee for evaluation and ranking of project proposals and forwards project documentation to the committee members |
| OPEX Committee | 6. Discuss, evaluate, scores, and ranks the project proposals using the guidance provided in the CAMP Risk Ranking Criteria (Attachment 1). |
| Head, Facilities Division | 7. Records results of the committee recommendations and forwards the prioritized OPEX project listing results, along with project cost estimates to the Associate Laboratory Director for Engineering & Infrastructure. |
| Associate Director for Engineering & Infrastructure | 8. Reviews the priority recommendations, budget, and strategic issues; makes any necessary modifications; and endorses the priority listing. |
| Facilities Division | 9. Distributes the list of scheduled and queued OPEX projects to Council members and Division Heads for their review and so they are aware and can offer adjustments if circumstances warrant. |
| Facilities Division | 10. Executes OPEX projects according to the priority list. |
| | 11. Directs and monitors execution of OPEX projects and makes necessary schedule, cost, and scope adjustments based on available funding, facility restrictions, emergency conditions, and potential changes in priorities of Lab mission related objectives. |

VI. ATTACHMENTS

1. CAMP Risk Ranking Criteria (Exerpt from DOE O 4320.2A Attachment IV-1 Page IV-9 Category/Subcategory Benchmark Criteria)
2. OPEX Project Prioritization Process Flow Chart

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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 DOE O 4320.2A Attachment IV-1 Page IV-9 Category/Subcategory Benchmark Criteria) of which the Head of Facilities Division maintains a copy.

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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 (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.

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)	

CAMP Risk Ranking Criteria

Attachment 1

I. HEALTH & SAFETY RATING CRITERIA SUBCATEGORIES

Score	Regulatory Compliance	Best Management Practice	Special Action/Team Findings	Technological Base (R&D)	Industrial Hygiene	Industrial Safety	Fire Protection	Health Physics	Criticality
10	Always 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 intervention at present, but upcoming action possible	TSR 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	Minor internal objectives	Standard industrial protection, with some property loss expected	Moderate exposure to 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 category (Category 2)
40	Frequent minor violations	Many minor concerns/resolutions	Tiger Team Priority 3	Develop new methods to improve/enhance health & safety capability and efficiency; intermediate probability of success and/or low risk	Fewer against frequent violation of exposure standards only through administrative controls	Minor injuries covered goals	Events with minor injury likely	Events with probability approximately 10^{-4}	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/enhance health & safety capabilities 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.)	Violation - continuation of activity would significantly increase probability of category (Category 3)
60	Serious violation frequent, or some continuing minor deviations shutdown possible	Mandated fines and schedules due to significant problems; likely suspension of operations pending action	TSR 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 substantial danger to site personnel through exposure; near-term action required	Serious injuries frequent	Serious injury likely; significant property loss routine	Excessive exposure to the public likely (5-100 REM/yr.); worker exposure above regulatory limits likely (5-30 REM/yr.)	Violation - continuation of activity would significantly increase probability of category (Category 3)
70	Serious, life-threatening violations (on site personnel); shutdown assumed		TSR Priority 1		Substantial danger to personnel, fatalities possible	Fatalities possible	Fatalities possible	Moderate exposure to the public likely (1-5 REM/yr.); worker fatality 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	Catastrophic or near catastrophic (Categories 4 and 5)

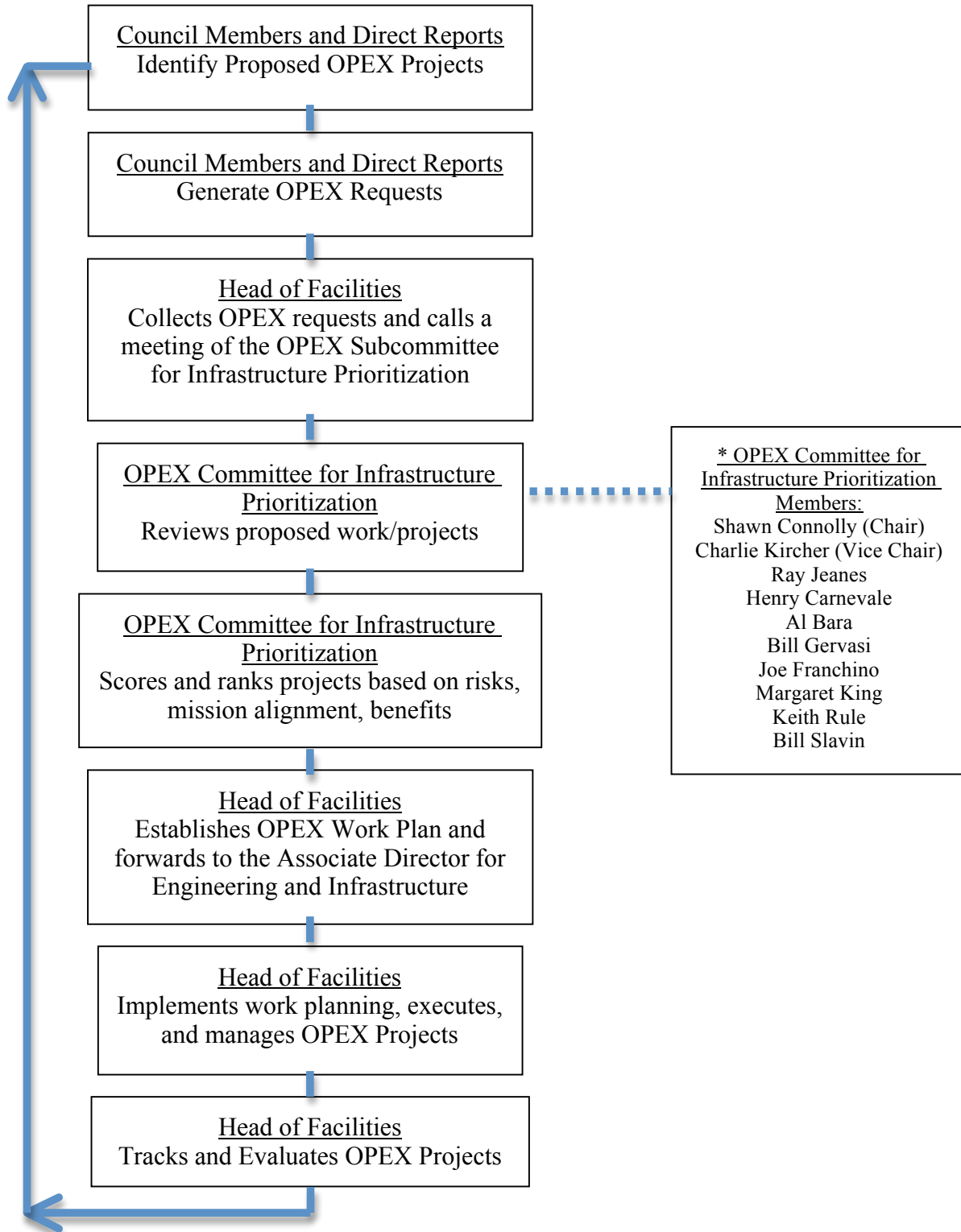
CAMP Risk Ranking Criteria

Attachment 1

II. ENVIRONMENT/WASTE MANAGEMENT RATING CRITERIA SUBCATEGORIES										
Score	Regulatory Compliance	Best Management Practice	Special Action/Team Findings	Technological Base (R&D)	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	Process generates minimum waste using best engineering practices		
20	Consistently in compliance but upcoming problems possible	No inter-divisional 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	Efficient transport/storage; discharge 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 minor deviations	Some minor concerns/recommendations		Develop new approaches, techniques, and methodologies to improve operations	Occasional discharge exceeding material goals		Emissions currently within permitted levels, 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 storage/handling/transport/disposal capacity	Emissions occasionally exceed permitted levels by a small amount			
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 levels by a large amount	Process generates excessive waste	Remedial actions/D&D required by enforce agreements	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 environmental objectives; short-term probability of success and/or low risk	Lack of adequate storage/treatment/handling/transport/facilities			Process generates waste that exceeds regulatory limits	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 civil or criminal problems		Tiger Team Priority 1				Emissions extremely high on occasion (not life threatening)	Process generates excessive waste such that severe environmental impact is inevitable	Remedial actions/D&D required to protect from near-term risks	Actions needed within 1 year to prevent significant risks
80							Emissions dangerously high (life threatening)			

IV. PROGRAMMATIC CRITERIA							
Score	Compliance with Orders Directives, Requirements	Best Management Practices	Technological Base (R&D)	Capability	Capacity	Quality	Physical Condition
10	Exceeds requirements	No concerns		State of the art to meet known future requirements	Exceeds requirements to support mission	Able to meet requirements; minor improvements possible	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 an national objective; long-term probability of success and/or high risk	Process adequate to meet program mission requirements, but improvements warranted	Viable for mission	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/recommendations; 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/recommendations	Develop new methodologies to improve/enhance mission capability and efficiency; intermediate probability of success and/or medium risk	Can meet mission with problems likely	Viable for mission on schedule with overtime; problems moderately likely	Able to meet requirements; many significant improvements required	Fair - occasional substandard 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	On schedule with significant overtime	Unable to meet some requirements	Poor - consistent substandard 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	Inadequate capacity to support minimum requirements of mission	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							

OPEX Project Prioritization Process



* The OPEX Committee is appointed by the Facilities Division Head for the purpose of ranking OPEX projects according to CAMP criteria. The committee shall include the Manager of Building Services, Manager of Maintenance and Operations, engineers and technicians familiar with the major facilities and infrastructure systems at PPPL, and representatives of the ES&H and Environmental Services organizations.