

Appendix B

FY 2005

Performance- Based Evaluation Plan

**Princeton Plasma
Physics Laboratory**

A Department of Energy National Laboratory



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I. PREAMBLE

This Appendix sets forth the Performance-Based Contract Measures (PBCMs), which include Performance Measures (PMs) on which an evaluation of Princeton Plasma Physics Laboratory (PPPL's) annual performance will be based as required by Clauses H.14 and H.15 of the contract. The procedure described in this Appendix, to the extent possible, will use a set of objective measures or indicators, which will evaluate Laboratory performance in several critical areas.

The Adjectival Ratings used in this Appendix are defined as follows:

Outstanding: Significantly exceeds the standard of performance; achieves noteworthy results.

Excellent: Exceeds the standard of performance; although there may be room for improvement in some elements, better performance in all other elements more than offsets this.

Good: Meets the standard of performance. Any deficiencies do not substantively affect the finding of acceptable performance.

Marginal: Below the standard of performance, deficiencies are serious and may affect overall results; management attention and corrective action are required.

Unsatisfactory: Significantly below the standard of performance; deficiencies are serious, may affect overall results, and urgently require senior management attention.

The guidelines for using performance measures are set forth in Section II of this Appendix.

For this evaluation period, the Parties have agreed to evaluate six functional areas of Laboratory activities identified in Section III: **Science and Technology; Environment, Safety and Health; Infrastructure; Business Operations; Stakeholder Relations; and Laboratory Self-Assessment.**

The performance objectives and measures for these six functional areas are listed in Section III.

The Parties agree to work together to clarify, when necessary, the process to be used to evaluate and verify the measures and expectations described in this Appendix. As described in Clause H.14, the Parties also agree to a reassessment of these performance measures prior to the beginning of each evaluation period. In particular, the Parties agree to:

- Check the validity of each measure as an accurate reflection of performance of that activity and to replace it with a more appropriate measure or measures, if necessary.
- Consider adding to or subtracting from the complement of measures to track performance objectives.
- Consider adding or subtracting measures as appropriate in response to the evolving requirements of DOE; in particular, the Parties shall undertake to replace requirements contained in DOE Directives whenever feasible by performance benchmarks or targets.

The Parties recognize that the evaluation period will also be used to assure that systems and processes are implemented, tested, evaluated, and refined. Where performance benchmarks have been established based on prior experience, performance objectives and targets will be set at the beginning of the evaluation period and tracked throughout the evaluation period. The Department will use the results of these performance measures along with other inputs to evaluate the Contractor's performance for each evaluation period. In other functional areas, performance measures may be identified and tracked during the evaluation period for the development of performance expectations, if appropriate, in subsequent fiscal years.

II. PERFORMANCE-BASED EVALUATION GUIDELINES

- A. The purpose of these guidelines is to institutionalize a performance-based evaluation and management system that encourages and rewards effective organizations that seek continuous improvement by identifying and implementing opportunities for improvement, demand excellence, effectively use self-assessment, continuous improvement, cooperation, and timely communication.
- B. Performance Measures (PMs) are composed of these elements:
- **Activity/Functional Area:** The strategic areas of mission accomplishment in the areas of Science and Technology; Environment, Safety, & Health; Infrastructure; Business Operations; Stakeholder Relations; and Laboratory Self-Assessment.
 - **Objective:** A statement of desired outcomes for an organization or activity.
 - **Measure:** A quantitative or qualitative method for characterizing performance.
 - **Expectation:** The desired condition or target level of performance for each measure.
 - **Benchmark:** A standard or point of reference for measurement. By providing ranges or averages, benchmarks enable an organization to compare performance in certain key areas with other organizations.
- C. The functional areas to be evaluated for The Princeton Plasma Physics Laboratory are set forth in Section III. This list is the agreed-upon set for the period ***October 1, 2004 through September 30, 2005***, and will remain the same for each subsequent fiscal year unless specifically revised by modification to this Contact.
- D. PMs are tools to be constructed to sustain excellent performance and to drive performance improvement with the focus on effectiveness of systems and maintenance of the appropriate internal controls. They should incorporate "best practices" and reflect the DOE and the Princeton Plasma Physics Laboratory functional managers' judgment as to the key performance elements for overall successful operations. "Best practices" should include cost/risk/benefit effectiveness. Examples of key performance elements are:
- Quality of product
 - Timely delivery
 - Cost optimization
 - Cycle time optimization
 - Meeting DOE requirements
- E. PMs should be quantitatively measurable and allow for meaningful trend and rate of change analysis where possible, and use qualitative expectations in those cases where quantitative measures are uneconomical or will not produce meaningful evaluation results.
- F. PMs may reference industry business standards that are meaningful, appropriate and consistent with DOE requirements rather than arbitrary standards. To this end, benchmarking initiatives are encouraged. In adopting benchmarks and setting targets, appropriate consideration should be given to the cost-effectiveness of making further improvements before deciding to raise the target level.
- G. The relative weight and the methodology for measuring each functional area shall be established prior to the start of the performance measurement period and rating weights shall be assigned at the performance objective and measure level as agreed to mutually by the Contractor and the Contracting Officer.
- H. The Performance-Based Management System required by Clause H.15 of the contract is defined in this Appendix which describes the methodology the Contractor will use to collect, compile and score the data tracked for performance ratings and its self-assessment.
- I. Management assumptions and definitions shall be documented as part of the development of each PM.

- J. The overall set of PMs should properly characterize the Laboratory's level of performance over time. Care should be taken to develop supporting measures for key processes that are limited to a set which can be effectively managed. Careful consideration should be given to resource commitments as they relate to the administration of the contract.
- K. PMs are to be developed in a joint cooperative manner with a team approach involving appropriate DOE personnel and Contractor Managers. Care should be taken to ensure that Laboratory functional managers have "ownership" of the resulting PMs, reflecting their status as those responsible for performance and improvement.
- L. Failure to include a functional area or a performance objective in the performance plan does not eliminate the need for the Contractor to comply with any contractual requirements in the area of performance, and failure to comply may result in the Contracting Officer overriding the performance rating of a functional area.
- M. The Associate Director of the Office of Fusion Energy Sciences has the primary responsibility for evaluating laboratory scientific research performance as defined by Measures A-1 to A-4 and the Contracting Officer has the primary responsibility for evaluating operations performance and the areas addressed by the remaining Measures. The Contractor has the primary responsibility for compiling the data, using the agreed-upon expectations, and conducting a self-assessment, which are necessary to evaluate all areas.
- N. For reasons beyond the Contractor's control, certain data may not be available in time to meet the appraisal schedules outlined in this Appendix. The evaluation shall proceed according to schedule for these measures with complete data. The evaluation report will be amended to incorporate the completed data, as these become available. Final ratings shall not be determined in an area until all sub-measures within that area are completed. A final assessment report with final adjectival ratings will not be issued until sufficient data are available to evaluate the Contractor's performance using all measures.
- O. In addition to the development of specific contract performance objectives and measures, an effective performance based management system should also establish and institutionalize an internal Contractor Self-Assessment Program, which fosters assessment of existing internal systems, policies, and procedures and encourages continuous improvement. The Contractor's internal self-assessment program shall provide for the following:
 - an assessment of performance against objectives, measures and expectations which have been identified by mutual agreement between the Parties as being measures or indicators of system performance.
 - an assessment of overall operations in functional areas or activities mutually agreed upon for:
 - Compliance with contract, law or other DOE and Federal requirements (such as regulations, directives, etc.) as may be applicable pursuant to terms of the prime contract;
 - The adequacy and the degree to which internal policies procedures and controls are implemented and are being met;
 - Identification of improvement opportunities and improvement plans; and
 - Development of meaningful performance indicators that sustain excellent/ outstanding performance and drive performance improvement with the focus on effectiveness of systems and maintenance of the appropriate controls.
 - an effective Self-Assessment and Corrective Action Program rely on certain organizational characteristics that provide support and enhance program effectiveness. These characteristics, common among highly effective organizations, are as follows:
 - A laboratory culture exists that encourages employees (and subcontractors) to actively participate in the self-assessment and corrective action process. Management fosters this environment by communicating the importance and interactive nature of these programs in improving laboratory performance. Self-critical behaviors and an absence of defensiveness thrive in this environment.

- Management demonstrates ownership for the self-assessment and corrective action programs by directing, prioritizing, and sufficiently staffing program activities to ensure safe and reliable laboratory operations.
 - Laboratory employees recognize that minor problems are often precursors to more significant events, and they identify undesirable behaviors and deficient processes from these minor problems.
- P. The Contracting Officer shall issue a written evaluation of the Laboratory’s annual performance thirty (30) days after receipt of the Contractor’s written Self-Assessment Report. The self-assessment report is due November 15th of each year for the preceding fiscal year. The Parties acknowledge that the performance levels achieved against the specific performance objectives and measures established in this Appendix are the primary, but not the sole criteria, for determining the Contractor’s final performance evaluation and rating. The Contracting Officer shall also consider other relevant information, which is deemed to have had an impact (either positive or negative), on the Contractor’s performance, not measured by performance indicators. Other relevant information, that may be used by the Contracting Officer, may become available from a number of different sources including, but not limited to, the Contractor’s self-assessment, DOE’s day-to-day operational awareness, annual business review, (if applicable), Inspector General reviews and audits, General Accounting Office (GAO) audits, other Federal and state regulator inspections, for cause DOE reviews, etc., as well as Contractor cooperation, interaction, and responsiveness to DOE throughout the performance period.
- Q. Fee is dependent on the Contractor’s performance. Fee is earned in its fixed amount with an overall adjectival rating of EXCELLENT (80 points or better) or OUTSTANDING.

OVERALL ADJECTIVAL RATING	POINT RANGE
OUTSTANDING	90 TO 100
EXCELLENT (Cut off for Fee)	80 TO 89
GOOD	70 TO 79
MARGINAL	60 TO 69
UNSATISFACTORY	0 TO 59

III. ANNUAL PERFORMANCE EVALUATION – FUNCTIONAL AREAS/ ACTIVITIES

Functional Area/Activity	Weight
A. Science and Technology	60
B. Environment, Safety and Health	10
C. Infrastructure and Maintenance	10
D. Business Operations	10
E. Stakeholder Relations – Communications and Trust	4
F. Laboratory Self-Assessment	6
Total	100%

Objective Performance Measure Rating Calculation Method:

Objective performance measures have expectations. Each performance expectation is accompanied by a table that translates the Laboratory's level of performance to an adjectival rating, ranging from unsatisfactory to outstanding. As a general rule, for outstanding performance 100% of the available points will be awarded. Excellent performance is awarded 90% of the available points. Good performance will receive 80% of the available points. Marginal performance is given 60% of the available points and no points are awarded for unsatisfactory performance.

Other Methods of Evaluation:

Science:

Scientific inquiry is best conducted in a system utilizing review by scientific peers. This approach has proven worthwhile in influencing the direction of, and establishing standards for scientific research. A peer review process will be used to evaluate the science programs at the DOE Laboratories. The following review procedures constitute the peer review process for determining the quality and productivity of the scientific research at PPPL.

1. The Associate Director of the Office of Fusion Energy Sciences has the primary responsibility for evaluating laboratory scientific research performance (Measures A-1 to A-4). In carrying out this responsibility, the Associate Director is likely to request assistance from the DOE Program Manager under whose jurisdiction the scientific program falls.
2. In performing this evaluation, the Associate Director of the Office of Fusion Energy Sciences utilizes a variety of different reviewers and reviews, including:
 - The Program Manager's annual program review using independent scientific experts,
 - Reviews of relevant laboratory activities conducted, as requested, for the Secretary of Energy, or for different Secretarial Officers, and
 - Reviews performed by the Contractor.
3. The Contracting Officer has the primary responsibility for evaluating the areas addressed by all of the other measures.
4. Results of the reviews are documented, as appropriate.
5. The reviews are available for use by other DOE groups reviewing the same projects.

All Other Functional Areas:

Management of the Princeton Plasma Physics Laboratory cannot be measured by purely quantitative performance measures. The best way to evaluate the overall operations management performance is with a complementary set of qualitative and quantitative performance measures. This approach is implemented in the following sections. The following procedures constitute the review process for determining the quality of Laboratory business management:

1. The Princeton Site Office (PSO) Manager has the primary responsibility to evaluate the overall business management performance, thereby assisting the PPPL in maintaining high standards and achieving objectives by identifying strengths, weaknesses, and areas of concern.
2. The PSO Manager's evaluation of the following qualitative performance measures is based on consideration of input from as many informed sources as possible that interface with the Laboratory, specifically: the PSO staff, the CH support groups, the HQ functional units, the

Office of Inspector General, Laboratory self-assessments and customer surveys, and external agency audits of the Laboratory.

3. Results of the reviews are documented, as appropriate, and include ratings for each measure and expectation.

Calculation of Overall Rating

The scores will be combined for each section and an overall rating will be assigned using the assigned weights and the judgment of the Contracting Officer. Payment of the Fixed Fee is determined by the contractor's performance. Fixed fee is earned with an overall adjectival rating of EXCELLENT or better. Fee is not earned with an overall numerical rating of less than 80.

A. Science and Technology

Weight: 60%

Develop and deliver the fundamental science and leading edge technologies that are critical to the Office of Science's mission and the national fusion program, and improve delivery systems to reduce costs while maintaining excellence in science.

Objective A: Science: Advancement in the understanding of the fundamental nature of plasma physics and fusion energy.

Measure A-1: Quality of Research

Reviewers will evaluate the overall quality of the research performed. Depending on the nature of the program, reviewers will consider the following:

- **Science:** Success in producing original, creative scientific output that advances fundamental science and opens important new areas of inquiry; success in achieving sustained progress and impact on the field; and recognition from the scientific community, including awards, peer-reviewed publications, citations, and invited talks.
- **Technology:** Whether there is a solid technical base for the work; the intrinsic technical innovativeness of the research; the importance of contributions made to the scientific and engineering knowledge base underpinning the technology program; and recognition from the technical community.

Measure A-2: Relevance to DOE Missions and National Needs

Reviewers will consider whether the research fits within and advances the missions of DOE; contributions to U.S. leadership in the international scientific and technical communities; contributions to the goals and objectives of the strategic plans of DOE and other national programs; and the extent of productive interaction with other science and technology programs. Depending on the nature of the program, reviewers will consider the following:

- **Science:** The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry; the degree of industrial interest in follow-on development of current research results; and the effective use of national research facilities that serve the needs of a wide variety of scientific users from industry, academia, and government laboratories.
- **Technology:** The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy; the extent to which expected benefits justify the program's risks and costs; and, where appropriate, the degree of industrial interest, participation, and support.

Measure A-3: Success in Constructing and Operating Research Facilities

Reviewers will consider whether the construction and commissioning of new facilities is on time and within budget; whether facility performance specifications and objectives are achieved; the reliability and safety of operations; adherence to planned schedules; and the cost-effectiveness of maintenance and facility improvements. Reviewers of user facilities will also consider whether the user access program is effective, efficient, and user-friendly; the quality of the proposal evaluation process; the strength and diversity of user participation; the productivity of the research supported, both in science and technology; and the level of satisfaction among user groups. Four

points of the score for this measure will be based on the achieved operation time of the major national fusion facilities as a percentage of the total planned and funded operation time. Another four points of the score for this measure will be based on the cost weighted mean percent variance from established cost and schedule baselines for major construction, upgrade or equipment projects.

Expectation A-3.1:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Operating Time	>90%	>85-90%	>80-85%	>70-80%	<70%
points	4	3.6	3.2	2.4	0

Expectation A-3.2:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Cost Index*	+/- 10%	+/- 12%	+/-15%	+/-20%	>+/- 20%
points	4	3.6	3.2	2.4	0

Measure A-4: Effectiveness and Efficiency of Research Program Management

Reviewers will consider the quality of research plans; whether technical risks are adequately considered; whether use of personnel, facilities, and equipment is optimized; success in meeting budget projections and milestones; the effectiveness of decision-making in managing and redirecting projects; success in identifying and in avoiding or overcoming technical problems; the effectiveness with which technical results are communicated to maximize the value of the research results and to gain appropriate recognition for DOE and the Laboratory; effectiveness in developing, managing, and transferring to industry intellectual property and technical know-how associated with research discoveries; and, the degree to which customer and stakeholder expectations are consistently met.

Measure A-5: Contractor (University) Strategic Guidance:

Objective: Princeton University proactively provides appropriate, timely, and effective strategic guidance and direction to PPPL concerning the Science and Technology Programs and Operations.

Measure: Princeton University is actively involved in the PPPL institutional planning process and provides guidance on expectations.

Princeton University is involved in the identification of issues with the science and technology programs at PPPL.

Princeton University is involved in the identification of issues with the operation of the Laboratory.

Expectation: For Outstanding Performance, all of the following must be achieved:

1. Princeton University proactively provides strategic guidance to PPPL prior to the beginning of the fiscal year.
2. Significant issues impacting the overall performance of the Laboratory are identified by Princeton University and strategic guidance provided to PPPL.

Assumptions: Guidance and direction is strategic in nature, which implies it is at a high-level. The guidance/direction is timely, appropriate to the issue, and effective.

Measure A-6: Contractor (University) Oversight and Management

Objective: The University will establish an effective review process for key PPPL management systems and processes.

Measure: The University will conduct reviews and provide an overall assessment of key PPPL management systems and processes on an annual basis. This assessment should feed

the development of strategic guidance and refine performance measures. The University will review the quality of the PPPL self-assessment and issue direction, as appropriate.

Expectation: For Outstanding Performance, all of the following must be achieved:

1. The University will perform annual reviews of key PPPL management systems and processes.
2. Based on the reviews, the University will identify any significant issues.
3. The University will provide expectations on resolving the significant issues.
4. The University performs follow-up status on significant issues.
5. The University will review the quality of the PPPL self-assessments, identify any significant issues and provide guidance, as appropriate.

A. Weightings for Science and Technology			
Measure/Expectation	Functional Activity	Weight	Max. Points
A-1	Quality of Research	20	20
A-2	Relevance to DOE Missions and National Needs	10	10
A-3	Constructing and Operating Research Facilities	2	2
A-3.1	Operating Time	4	4
A-3.2	Cost Performance on Projects	4	4
A-4	Research Program Management	10	10
A-5	University Strategic Guidance	5	5
A-6	University Oversight and Management	5	5
Total		60%	60

B. Environment, Safety and Health

Weight: 10%

The PPPL has the responsibility to protect the environment and guarantee the safety and health of its workers and the public. By implementing and maintaining a viable Integrated Safety Management (ISM) System, PPPL shall ensure that Environment, Safety and Health (ES&H) functions and activities become an integral and visible part of the work planning and execution process. To help fulfill this responsibility, objectives for the PPPL are established. The purpose of these objectives is to: 1) establish expectations for PPPL personnel behaviors and attitudes in the conduct of their daily work activities, and 2) set ES&H operational performance levels.

Objective B-1: Empowerment and training of workers and implementation of ISM Processes to prevent serious work-related injuries and fatalities and to minimize exposures to radiation. The Department's Safety and Health objectives are to 1) reduce work-related injuries and illnesses to zero, and 2) build worker and public trust.

Measure B-1.1: Injury Cost Index during fiscal year, including both the PPPL and the PPPL's subcontractors. (Note: values may differ from the calendar year injury cost index.)

Cost Index = $100(1,000,000 D + 500,000 T + 2,000 LWC + 1,000 WDL + 400 WDLR + 2,000 NFC)$ divided by total hours worked.

Where:

- D = number of fatalities.
- T = number of permanent transfers or terminations due to occupational illness or injury.
- LWC = number of lost workday cases.
- WDL = number of days away from work.
- WDLR = number of restricted duty days.
- NFC = number of non-fatal cases without days away from work or restricted workdays.

Expectation B-1.1:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Cost Index*	10.4 or less	14.7 or less	23.5 or less	35.3 or less	>35.3
points	2	1.8	1.6	1.2	0

* Numbers selected on data from the results for the last six years from 10 science Laboratories. "Outstanding" is based on the actual record (second best value) and "good" is based on the mean of all ten scores. "Excellent" is one third the difference between "outstanding" and "good" added to the "outstanding" number. "Marginal" is one and one half times good.

Measure B-1.2: Days Away, Restricted, or Transferred (DART) Rate = this includes cases involving days away from work, restricted work activity, and transfers to another job and is calculated based on $(N/EH) \times (200,000)$ where N is the number of cases involving days away and/or job transfer or restriction, EH is the total number of hours worked by all employees during the calendar year, and 200,000 is the base for 100 full-time equivalent employees.

Expectation B-1.2:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
DART Rate*	.5 or less	.6 or less	.8 or less	1.2 or less	>1.2
points	2	1.8	1.6	1.2	0

* Numbers selected are from the proposed multiyear quantitative safety targets calculated by SC-80 based on the Director of Science's interim goal of achieving the 25th percentile by FY 2005 of the Standard Industrial classification 873, Research, Development and Testing Services. The interim FY 2005 goal is .50 cases per 100 FTEs. The ultimate goal is to achieve the 10th percentile by FY 2007

Measure B-1.3: The PPPL Total Recordable Case (TRC) is the number of OSHA recordable injuries/illnesses x 200,000 (100 employees working 40 hours per week for 50 weeks per year)/ the actual number of hours worked.

Expectation B-1.3:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Recordable cases*	1.1 or less	1.22 or less	1.80 or less	2.20 or less	>2.20
points	2	1.8	1.6	1.2	0

* Numbers selected are from the proposed multiyear quantitative safety targets calculated by SC-80 based on the Director of Science's interim goal of achieving the 25th percentile by FY 2005 of the Standard Industrial classification 873, Research, Development and Testing Services. The interim FY 2005 goal is 1.10 cases per 100 FTEs. The ultimate goal is to achieve the 10th percentile by FY 2007

Measure B-1.4: Total Effective Dose Equivalent (TEDE) received by personnel at the Princeton Plasma Physics Laboratory during the fiscal year measured in person-rem. This measure includes all individuals who have been issued dosimeters. Note: Doses may differ from calendar year doses. The collective TEDE is based on the annual radiological goal established per the PPPL ALARA Plan.

Expectation B-1.4:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
TEDE (person-rem)	15% below goal	10% below goal	Within +/- 10% of the goal	10-20% over the goal	More than 20% above goal
points	2	1.8	1.6	1.2	0

Objective B-2: Measurement of the environmental performance and awareness of ongoing research activities at PPPL. These activities include, but are not limited to, waste operations, general maintenance programs, construction projects and the general conduct of operations at PPPL. The Department's Environment objective is to eliminate unplanned releases of hazardous materials and other impacts to the public and environment.

Measure B-2: This Performance Indicator (PI) will be based on the number of environmentally related incidents that occurred during the fiscal year and the corresponding severity of each

incident.

$$PI = (I_1 \times WF_n) + (I_2 \times WF_n) + (I_3 \times WF_n) + \text{etc.}$$

Where:

- I_n = one incident. Incidents would include spills or releases of hazardous, radioactive and/or regulated substances; improperly packaged, stored or shipped hazardous, radioactive and/or regulated waste.
- WF_n = weighing factor (severity) of one incident is as follows:
 - $WF = 1$: Minor Incident, Resulting in greater than \$5,000.00 of costs, but less than \$20,000.00 of costs of materials, labor, services, G&A, etc. to resolve spills or releases that are not considered reportable to NJDEP; or incidents that pose no threat to worker safety.
 - $WF = 2$: Moderate Incident, Resulting in more than \$20,000 of costs to resolve; spills or releases that are reportable to NJDEP; an environmental incident reported as “off-normal” in ORPS; or an incident that has posed a potential threat to worker safety; and
 - $WF = 5$: Major Incident, Resulting in more than \$100,000 of costs to resolve; reportable spills or releases that have migrated off-site; an environmental incident that posed a clear and direct threat to worker safety; or an environmental incident that posed a potential or direct threat to public safety.

Expectation B-2:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
PI	0	1-4	5-8	9-12	>12
points	2	1.8	1.6	1.2	0

B. Weightings for Environment Safety & Health			
Expectation	Functional Activity	Weight	Max. Points
B-1.1	Injury Cost Index	2%	2
B-1.2	Days Away, Restricted, or Transferred (DARTS)	2%	2
B-1.3	Total Recordable Cases (TRC)	2%	2
B-1.4	Total Effective Dose Equivalent (TEDE)	2%	2
B-2	Environmental Performance Indicator (PI)	2%	2
Total		10%	10

C. Infrastructure and Maintenance

Weight: 10%

Be the steward of the government-owned real property assets entrusted to PPPL by ensuring that the research program and infrastructure needs are met to allow for continued laboratory operations in a safe, environmentally responsible, and cost effective manner.

Objective C-1: Projects shall be managed efficiently, completed on time, within budget, and meet baseline scope requirements. Uncosted carryovers are minimized.

Measure C-1.1: Completion of milestones, per approved Construction Directives and/or project baseline documentation, for the following types of projects:

- General Plant Project (GPP)
- In-House Energy Management (IHEM)
- Line Item Construction Projects
- Fabrication of Major Items of Capital Equipment
- New Strategic Laboratory Infrastructure Projects (SLI)

Expectation C-1.1:

Number of Milestones Completed on Time
Total Number of Milestones Scheduled for Completion

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
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Milestone Completion	≥ 0.9	$< 0.9 - 0.8$	$< 0.8 - 0.7$	$< 0.7 - 0.65$	< 0.65
Points	2	1.8	1.6	1.2	0

Measure C-1.2: Project Cost Compliance

Cost Compliance =
$$\frac{\text{Sum of Budgeted Cost of Work Performed}}{\text{Sum of Actual Costs of Work Performed}}$$

Expectation C-1.2:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Project Cost Compliance	≥ 0.9	$< 0.9 - 0.8$	$< 0.8 - 0.7$	$< 0.7 - 0.65$	< 0.65
Points	2	1.8	1.6	1.2	0

Objective C-2: Energy Use Reductions and Greenhouse Gas reductions show continuous improvement and are on target toward meeting the DOE energy efficiency leadership goals consistent with DOE O430.2A.

Measure C-2: Total building energy consumption declines consistent with planned site growth and operations. Reduce building energy consumption by 30% in FY2005 vs FY1985 Baseline. (Ultimate goal is 35% reduction by 2010.)

Expectation C-2: A straight-line comparison shall be made to determine actual percent reduction achieved each year.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Efficient Operations	$\geq 110\%$	$\geq 100\%$	$\geq 90\%$	$\geq 75\%$	$< 75\%$
Points	2	1.8	1.6	1.2	0

Objective C-3: Resources are being effectively allocated to address ES&H, Programmatic, and Operational considerations based on a risk-based prioritization model.

Measure C-3: A process for allocating resources shall be implemented and a risk based prioritization plan shall be provided to DOE/PSO. Plan shall include a realistic funding scenario for progressive elimination of risk.

Expectation C-3:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Resource Allocation Completed	By 1/15 ea FY	By 2/15 ea FY	By 3/15 ea FY	By 4/15 ea FY	After 4/15 ea FY
Points	2	1.8	1.6	1.2	0

Objective C-4: Maintenance of active conventional facilities against DOE corporate maintenance investment goals.

Measure C-4: Maintenance Investment Index (MII) defined as total contractor funded maintenance for active conventional facilities divided by replacement value of these facilities.

Expectation C-4:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
MII FY05*	1.7	1.6	1.5	1.4	< 1.4
Points	2	1.8	1.6	1.2	0

- * Numbers selected are from the proposed multiyear quantitative MII targets calculated by SC-80 based on the Director of Science's interim goal of achieving 1.7% by FY 2005. The ultimate goal is to achieve 2.0% by FY 2006.

Maintenance is the day-to-day work that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose. Maintenance costs and work do not include the following:

- Regularly scheduled janitorial work such as cleaning;
- Work performed in relocating or installing partitions, office furniture, and other associated activities;
- Work usually associated with the removal, moving, and placement of equipment;
- Work aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from or significantly greater than those originally intended;
- Improvement work performed directly by in-house workers or in support of construction contractors accomplishing an improvement;
- Work performed on special projects not directly in support of maintenance or construction; and
- Non-maintenance roads and grounds work, such as grass cutting and street sweeping.

DOE Maintenance includes all of the following activities, which may be funded with expense or capital (GPP/line items) funds:

- **Maintenance** is the upkeep of property and equipment, work necessary to realize the originally anticipated useful life of a fixed asset. Maintenance includes periodic or occasional inspection; adjustment; lubrication; and cleaning (non-janitorial) of equipment; replacement of parts; painting; resurfacing; and other actions to assure continuing service and to prevent breakdown. Maintenance does not prolong the design service life of the property or equipment, nor does it add to the asset's value. However, lack of maintenance can reduce an asset's value by leading to equipment breakdown, premature failure of a building's subsystems, and shortening of the asset's useful service lifetime. (Generally Expense funded)
- **Repair** is work to restore damaged or worn-out property to a normal operating condition. Repairs are curative, while maintenance is preventive. (Generally Expense funded)
- **Replacement** of an item that is part of the permanent investment of plant and equipment is an exchange or substitution of one fixed asset for another having the capacity to perform the same function. Replacement may arise from obsolescence, cumulative effect of wear and tear throughout the anticipated service lifetime, premature service failure, or destruction through exposure to fire or other hazard. In contrast to repair, replacement generally involves a complete identifiable item of investment (i.e., a major building component or subsystem). When major building subsystems fail, a building owner may sometimes have a choice of repair or replacement of that subsystem. Replacement is typically funded in maintenance and repair budgets. (Generally Capital funded) *Note: Does not include total renovations or new buildings to replace old buildings.*

C. Weightings for Infrastructure and Maintenance			
Expectation	Functional Areas	Weight	Max. Points
C-1.1	Project Management Milestones	2%	2
C-1.2	Project Cost Compliance	2%	2
C-2	Energy Use Reductions	2%	2
C-3	Resource Allocations	2%	2
C-4	Maintenance Investment Index (MII)	2%	2
Total		10%	10

D. Business Operations **Weight: 10%**

Use efficient and cost effective management systems and approaches to guide decision making, streamline and improve operations, align resources and reduce costs, improve the delivery of products and services and evaluate performance.

Objective D-1: Effective internal controls that maintain accuracy of financial data, safeguard DOE assets, and prevent fraud, waste, abuse, and unallowable costs.

Measure D-1.1: The number of material findings resulting from audits, reviews, or other assessments, or appraisals which highlight weakness in the Laboratory business and management control structures for which Laboratory management acknowledges or the Contracting Officer has directed corrective action must be taken. This measure is limited to **Budgeting** activities. (Note: a material finding, which is not corrected within 45 days, results in an unsatisfactory rating, unless the allowable remediation time is extended by the Contracting Officer).

Expectation D-1.1: Material findings are minimal and corrective actions are taken on all findings within 45 days. Note: a material finding is a failure or shortcoming which produces an error or misstatement that is sufficiently large as to influence a financial statement reader’s judgment of a given situation.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No. of Material Findings-Budget	0	1	2	3	4
Points	1	.9	.8	.6	0

Measure D-1.2: The number of material findings resulting from audits, reviews, assessments, or appraisals which highlight weakness in the Laboratory business and management control structures for which Laboratory management acknowledges or the Contracting Officer has directed corrective action must be taken. This measure is limited to **Accounting** activities. (Note: a material finding, which is not corrected within 45 days, results in an unsatisfactory rating, unless the allowable remediation time is extended by the Contracting Officer).

Expectation D-1.2: Material findings are minimal and corrective actions are taken on all findings within 45 days. Note: a material finding is a failure or shortcoming which produces an error or misstatement that is sufficiently large as to, influence a financial statement reader’s judgment of a given situation.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No of Material Findings Accounting.	0	1	2	3	4
Points	1	.9	.8	.6	0

Measure D-1.3: This measure consists of the number of material findings resulting from Balanced Score Card self assessment, audits, reviews, for cause assessments, or appraisals which highlight weakness in the Laboratory business and management control structures for which Laboratory management acknowledges or the Contracting Officer has directed corrective action must be taken. This measure is limited to **Procurement** activities. (Note: a material finding, which is not corrected within 45 days, results in an unsatisfactory rating, unless the allowable remediation time is extended by the Contracting Officer).

Expectation D-1.3: Material findings are minimal and corrective actions are taken on all findings within 45 days. Note: a material finding is a failure or shortcoming which produces a breach of a contractual requirement or a serious lack of internal controls sufficiently large as to, influence an independent reviewer’s judgment of a given situation.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No of Material Findings Procurement.	0	1	2	3	4
Points	1	.9	.8	.6	0

Measure D-1.4: The number of material findings resulting from Balanced Score Card self assessment, audits, reviews, for cause assessments, or appraisals which highlight weakness in the Laboratory business and management control structures for which Laboratory management acknowledges or the Contracting Officer has directed corrective action must be taken. This measure is limited to **Property Management** activities. (Note: a material finding, which is not corrected within 45 days, results in an unsatisfactory rating).

Expectation D-1.4: Material findings are minimal and corrective actions are taken on all findings within 45 days. Note: a material finding is a failure or shortcoming which produces a breach of a contractual requirement or a serious lack of internal controls sufficiently large as to, influence an independent reviewer's judgment of a given situation.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No of Material Findings Property.	0	1	2	3	4
Points	1	.9	.8	.6	0

Objective D-2: Security is necessary to provide a computing and communications environment that is secure, yet open for interaction to effectively perform the contract's scope of work and conduct the Laboratory's business.

Measure D-2: Continue to implement and improve the Laboratory's security program, according to DOE guidelines and directives, and as documented in PPPL's Approved Site Security Plan (SSP).

Expectation D-2: The number of material findings resulting from audits, reviews, or other assessments, or appraisals not previously identified in a Laboratory self-assessment and for which the Laboratory management acknowledges or the Contracting Officer has directed corrective actions must be taken. A material finding is one which, if not corrected, would result in the probable loss of property or mission essential data, or one that leaves the site unreasonably vulnerable to intrusion. (Note: A material finding not corrected within 30 days or a later date approved by the CO results in an unsatisfactory rating.)

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No. of Material findings	0	1	2	3	4
Points	1	.9	.8	.6	0

Objective D-3: Management of cost effective personnel **wage/salary increase fund.**

Measure D-3: Wage/salary merit increases provided to PPPL staff will be based on the merit increase percentage for each University staff. The measure will be the merit increase percentage for the Laboratory staffs as compared to the corresponding University staff.

Expectation D-3:

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Increases	>1/2% below	1/2% below to equal	>equal-1/4% above	>1/4-1% above	>1% above
Points	1	.9	.8	.6	0

Objective D-4: Management of **Intellectual Property** Inventions

Measure D-4: Timely submission of invention disclosures.

Expectation D-4: Timeliness of Invention Disclosure submissions

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Average Time for submittal	0-2 months	>2-4 months	>4-5 months	>5-6 months	>6 months
Points	1	.9	.8	.6	0

Objective D-5: Strengthen commitment and accountability to **maintaining a diverse workforce.**

Measure D-5: Increase diversity in the workforce by building non-traditional recruiting networks and resources to source candidates (e.g. student and professional organizations, Historically Black Colleges and Universities and Minority Serving Institutions, special publications and temporary workers). Where opportunities exist, identify a diversified pool of candidates that will serve as a feeder for regular employment searches.

Expectation D-5: The percentage of woman and underrepresented minorities in the applicant pools for regular positions.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
% of Pool	>20%	15%-20%	15%-10%	<10%	0%
Points	1	.9	.8	.6	0

Objective D-6: Cyber Security is necessary to provide a computing and communications environment that is secure, yet open for interaction to effectively perform the contract's scope of work and conduct the Laboratory's business.

Measure D-6: Continue to implement and improve the Laboratory's computer security program, according to DOE guidelines and directives, and as documented in PPPL's Approved Cyber Security Protection Plan (CSPP).

Expectation D-6: Number of material findings resulting from audits, reviews, or other assessments, or appraisals not previously identified in a Laboratory self-assessment and for which the Laboratory management acknowledges or the Contracting Officer has directed corrective actions must be taken. A material finding is one which, if not corrected, would result in the probable loss of sensitive or mission essential data, the corruption of data, or one that leaves the system unreasonably vulnerable to intrusion. (Note: A material finding not corrected within 45 days or a later date approved by the CO results in an unsatisfactory rating.)

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
No. of Material findings	0	1	2	3	4
Points	2	1.8	1.6	1.2	0

D. Weightings for Business Operations			
Measure	Functional Activity	Weight	Max. Points
D-1.1	Budget Management	1%	1
D-1.2	Accounting Management	1%	1
D-1.3	Procurement Management	1%	1
D-1.4	Property Management	1%	1

D-2	Security	1%	1
D-3	Wage/Salary Increase Fund	1%	1
D-4	Management of Intellectual Property	1%	1
D-5	Maintaining a Diverse Workforce	1%	1
D-6	Cyber Security	2%	2
Total		10%	10

E. Stakeholder Relations - Communications and Trust **Weight: 4%**

The Laboratory will maintain the foundation of trust and confidence it has built by: cultivating existing relationships and building partnerships with key stakeholders, elected and appointed officials, business, civic leaders, educators, and other constituencies; effectively communicating the Laboratory's scientific initiatives and accomplishments; working to fulfill the education mission shared with DOE to increase public understanding of science.

Objective E-1: Community, Education, Government and Public Affairs Management (CEGPA). The Laboratory is expected to incorporate into CEGPA plans, programs and processes public relations best practices and the results of laboratory-based formative and evaluative research. The Laboratory will strive to reach, measure, and maximize relationships with "science interested and attentive" publics and policy makers and establish a long-term planning process that builds upon the advances in management and communication it achieves each year to inform these publics about the Laboratory's research and science initiatives.

Measure E-1: The Laboratory will integrate its community, education, government and public affairs activities to align with supporting the science priorities and initiatives as identified in the DOE SC strategic Plan, the SC facilities plan, and the laboratory's institutional planning. Using a team approach that includes representatives from the above groups, strategic plans will be updated or written and then implemented as these initiatives develop.

Expectation E-1: Achievement of significant goals and/or milestones as identified in the DOE-approved CEGPA plan for the performance period. The number of missed or late FY milestones will be subtracted from the total number of FY planned milestones. The difference will be divided by the total number of FY milestones and multiplied by 100 to determine the percentages of milestones achieved.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
% milestones achieved	100%	>90%	>80%	>75%	□70%
Points	2	1.8	1.6	1.2	0

Measure E-2: An independent third-party review team, the Communications and Trust Advisory Panel, will evaluate the results of meeting the above objective. The individuals on the panel are recognized as experts in the field of public affairs, community, communications and web design.

Expectation E-2: The program will be measured against the nationally recognized Baldrige Criteria for Approach, Development and Results.

E. Weightings for Stakeholder Relations – Communications and Trust			
Expectation	Functional Activity	Weight	Max. Points
E-1	Plan Milestones Achieved	2%	2
E-2.	Peer Review	2%	2
Total		4%	4

F. Laboratory Self-Assessment Program

Weight: 6%

PPPL will create a culture that encourages self-critical, candid, and objective evaluation of performance against the System Assessment Measures (SAMs) contained in the PPPL Self Assessment Program, industry standards of excellence, and contractual requirements. Problems are identified in a viable self-assessment program and solved in a viable corrective action program.

This section provides principles for effective self-assessment and corrective action programs that promote improvement in contractor performance. In highly effective organizations, managers and workers seek continuous improvement by identifying and implementing opportunities for improvement. In these organizations, the need for improvement is driven from within rather than by external factors or influences. Self-assessment and corrective action programs are vehicles for identifying and implementing change. Successful programs begin with an organizational culture that encourages self-critical, candid, and objective evaluation of performance against contractual requirements, best practices, and industry standards of excellence. Contractor management reinforces a questioning attitude within the workforce, promotes a safety-conscious work environment, and encourages the discovery and reporting of areas of improvement. Managers avoid a punitive approach to errors made in good faith or reacting defensively to suggestions for improvement. Working together, managers and employees are accountable for aggressively identifying problems, correcting performance shortfalls, and striving for continuous improvement in processes and activities.

The purpose of the Contractor **Self-Assessment Program** is to promote continuous improvement in its Science and Technology; Environment, Safety and Health; Infrastructure; Business Operations; and Stakeholder Relations. Current performance is compared to management expectations, industry standards of excellence, and regulatory requirements to identify areas needing improvement. The self-assessment program strives to identify low-level precursor issues or trends for early resolution before more significant problems occur that can adversely affect performance.

The quality of self-assessment results directly affects the Contractor's ability to improve performance. Therefore, it is important that skilled, knowledgeable employees conduct self-assessments, using proven methods and the highest standards of performance as a guide.

An effective self-assessment program embodies the following principles:

1. The self-assessment program is formally defined. It includes guidance for both ongoing and periodic focused self-assessments.
2. People with the necessary expertise conduct self-assessment activities.
3. The self-assessment process measures performance against management expectations, Laboratory System Assessment Measures (SAMS), high industry standards, operating experience, and regulatory requirements.
4. Each laboratory organizational unit routinely conducts its own self-assessments of programs, processes, and performance.
5. Independent oversight groups periodically evaluate programs, processes, and performance.
6. Teams or individuals conducting self-assessments communicate closely with those being assessed to help ensure understanding of and ownership for the results.
7. Laboratory Management verifies that the issues are promptly entered into the corrective action program or other tracking system for resolution.
8. Self-assessment results are communicated to affected groups and individuals.
9. Program effectiveness is periodically reviewed; using a combination of ongoing and periodic focused reviews, and is adjusted as necessary.

The objective of a **Corrective Action Program** is to identify, document, evaluate, and trend problems and to develop and implement appropriate actions to correct problems identified in the Laboratory Self-Assessment Program. The program is a vital tool for improving safety, reliability, accountability and performance, as well as for helping prevent events.

Management promotes the corrective action process, supporting and encouraging effective problem identification and correction. Self-assessments are a means of problem identification and are an important part of the corrective action program. Problems identified by other means are also entered into the program.

The following principles are embodied in successful corrective action programs:

1. Management encourages employees at all levels in the organization to identify and report a broad range of problems.
2. Management formally defines problem reporting criteria, the problem reporting system(s) to be used, the desired level(s) of problem evaluation, and the timeliness of corrective actions.
3. New problems reported in the corrective action program are screened promptly for their effect on safety, reliability, operability, and reportability.
4. Problems are evaluated, commensurate with their significance, to determine the cause(s).
5. Individuals trained in root cause analysis techniques evaluate significant problems using structured root cause methodology to identify root and contributing causes and corrective actions to prevent recurrence.
6. Management ensures that corrective actions are approved, prioritized, and completed in a timely manner consistent with their significance.
7. Employees who identify problems receive prompt feedback about corrective actions.
8. Problems and associated causes are trended to identify repeat occurrences, generic issues, and vulnerabilities at a low level before significant problems result.
9. Corrective actions designed to prevent recurrences of significant problems are checked for effectiveness.

The overall corrective action program is periodically monitored and assessed for effectiveness.

Objective F-1: Create, define, document, and conduct a **Self-Assessment Program** to promote continuous improvement in Science; Environment, Safety, and Health, Infrastructure; Business Operations; and Stakeholder relations.

Measure F-1: PPPL is to conduct a Self-Assessment in accordance with its DOE approved procedure based upon Institute of Nuclear Power Operations (INPO) Principles for effective Self-Assessment and Corrective Action and the content of this Appendix.

Expectation F-1: Conduct an annual self-assessment and submit it to DOE in accordance with the requirements contained in this Appendix.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
SA Program submitted to DOE:	by 11/15	by 11/30	By 12/15	by 12/31	after 12/31
Points	3.5	3.25	3.0	2.5	0

Objective F-2: Create, define, document, and conduct a **Corrective Action Program** to identify, document, evaluate, and trend problems and implement appropriate actions to correct problems.

Measure F-2: PPPL is to develop and effectively implement a DOE approved Corrective Action Program that tracks and trends corrective actions on a monthly basis.

Expectation F-2: PPPL implements a well defined and documented Corrective Action Program.

Category	Outstanding	Excellent	Good	Marginal	Unsatisfactory
CAP implemented:	by 6/15	by 7/30	by 8/15	by 9/30	CAP unacceptable
Points	2.5	2.25	2.0	1.5	0

F. Weightings for Laboratory Self-Assessment Program			
Expectation	Functional Activity	Weight	Max. Points

F-1	Self-Assessment Program	3.5%	3.5
F-2	Corrective Action Plan	2.5%	2.5
Total		6%	6

G. Annual Tabulation of Functional Areas/Activities Ratings

Category/Functional Activity	Measure/Expectation	Maximum Points	Earned Points
A. Science and Technology			
Quality of Research	A-1	20	
Relevance to DOE Missions and National Needs	A-2	10	
Constructing and Operating Research Facilities	A-3	2	
Operating Time	A-3.1	4	
Cost Performance on Projects	A-3.1	4	
Effectiveness and Efficiency of Research Program Management	A-4	10	
University Strategic Guidance	A-5	5	
University Oversight and Management	A-6	5	
Subtotal		60	
B. ES&H			
Injury Cost Index	B-1.1	2	
Days Away, Restricted, or Transferred (DART)	B-1.2	2	
Total Recordable Cases (TRC)	B-1.3	2	
Total Effective Dose Equivalent (TEDE)	B-1.4	2	
Environmental Performance Indicator (PI)	B-2	2	
Subtotal		10	
C. Infrastructure and Maintenance			
Completion of milestones	C-1.1	2	
Project Cost Compliance	C-1.2	2	
Building Energy Consumption	C-2	2	
Risk Based Prioritization Plan	C-3	2	
Maintenance Investment Index (MII)	C-4	2	
Subtotal		10	
D. Business Operations			
Number. of Material Findings-Budget	D-1.1	1	
Number of Material Findings-Accounting	D-1.2	1	
Number of Material Findings-Procurement	D-1.3	1	
Number of Material Findings-Property	D-1.4	1	
Security	D-2	1	
Personnel Wage/Salary Increase Fund	D-3	1	
Invention Disclosure Submissions	D-4	1	
Maintaining a Diverse Workforce	D-5	1	
Cyber Security	D-6	2	
Subtotal		10	
E. Stakeholders Relations - Communications and Trust			
Plan Milestones Achieved	E-1	2	
Peer Review	E-2	2	
Subtotal		4	
F. Lab Self-Assessment			
Self-Assessment Program	F-1	3.5	
Corrective Action Program	F-2	2.5	
Subtotal		6	
Total		100	