Appendix B

Performance Measures

for
Fermi National Accelerator Laboratory

FY2005

Section I: PREAMBLE

Performance Measures

PREAMBLE

This Appendix sets forth the procedure to be used in the evaluation of Fermi National Accelerator Laboratory performance as required by Part I, Section H, Clause H.14 - Use of Objective Standards of Performance, Self Assessment and Performance Evaluation, and as referenced in Part II, Section I, Clause I.81A - Total Available Fee: Base Fee Amount and Performance Fee Amount, of the Contract. The procedure described in this Appendix utilizes, to the extent possible, a set of "objectives", "indicators", "measures", and “metrics" against which the Department of Energy (DOE) will assess Fermi National Accelerator Laboratory's performance for each area identified herein.

Section II of this Appendix, Performance Based Management Guidelines, sets forth guidelines on the use of the performance objectives, indicators, measures, and metrics.

For the period October 1, 2004, through September 30, 2005, the Parties have agreed to evaluate the laboratory activities identified in Sections III and IV of this Appendix. These sections reflect that DOE will evaluate the Contractor in two broad areas ("Performance Areas"), namely Critical Outcomes (Performance Area 1) and Self-Assessment (Performance Area 2). The Critical Outcomes consist of Performance Measures with fee-bearing incentives. The Self-Assessment consists of non-fee-bearing performance criteria and a plan for the laboratory to perform its self-assessment of management systems.

This Appendix organizes the four Critical Outcomes into two categories: Science Programs (A) and Operations Management (B-D). DOE will rate Science Programs and Operations Management separately for the purpose of determining the Contractor’s performance and determining fee earned by the Contractor. DOE will use the ratings received for Critical Outcomes to determine the Contractor’s fee earned in a given performance period. However, DOE reserves its rights specified elsewhere in this Contract, including those in Part I, Section H, Clause H.14 - Use of Objective Standards of Performance, Self-Assessment and Performance Evaluation, and those in Part II, Section I, Clause I.81A – Total Available Fee: Base Fee Amount and Performance Fee Amount, and Clause I. 83 - Conditional Payment of Fee, Profit, or Incentives.

Section III lists the performance objectives, indicators, measures, and metrics for Performance Area 1, Critical Outcomes. Section IV presents the self-assessment criteria for Performance Area 2, Self-Assessment, as well as the laboratory self-assessment plan.

Attachment 1 provides the schedule for performing the evaluation of the laboratory. The parties intend to adhere to this schedule although either party may request to alter the proposed schedule.

Attachment 2 establishes the maximum performance fee earnable by the Contractor, as well as the potential reductions to the performance fee, based on the individual ratings in the Performance Area of Critical Outcomes.

The Parties agree to work together to clarify and improve, when necessary, the process to be used to measure and validate the level of performance attained. In particular, the Parties agree to:

a. check the validity of each respective performance objective, indicator, measure, and metric as an accurate and meaningful reflector of performance and replace them with more appropriate performance objectives, indicators, measures, and metrics, if necessary;

b. consider adding to or subtracting from the complement of performance objectives, indicators, measures, and metrics in order to track performance objectives more meaningfully and accurately; and

c. consider adding or subtracting performance measures as appropriate in response to the evolving requirements of DOE; in particular, the Parties undertake to replace requirements contained in DOE Directives whenever feasible by performance measures.

The Parties acknowledge that continued changes in the Department's Directives system are occurring, and that implementation of this performance-based contract may require changes to: 1) refine selected performance objectives, indicators, measures, and metrics; 2) implement data collection and reporting mechanisms; and 3) establish benchmarks against which to set targets for performance improvement and/or measurement.

The Parties will use the evaluation period to assure the implementation, testing, and refining of systems and processes. The DOE will use the results of these performance measures, the Contractor's self-assessment of overall performance and other inputs, such as DOE's day-to-day operational awareness, General Accounting Office or Inspector General reviews, or for-cause reviews, as appropriate to evaluate the Contractor's performance for each performance period.

Attachments:
Attachment 1: Typical Evaluation Schedule
Attachment 2: Performance Fee

Section II: PERFORMANCE-BASED MANAGEMENT GUIDELINES

1. The purpose of these Guidelines is to institutionalize a performance-based management system that encourages and rewards excellence, continuous improvement, cooperation and timely communication.

2. In keeping with the objectives set forth above, any performance-based management contract must begin with the establishment of contract performance objectives, indicators, measures, and metrics, which may be linked to pre-established performance incentives that, if achieved, will:

    a. enhance the laboratory's ability to accomplish its mission for the Department;

    b. drive cost-effective performance improvements, focusing on efficient system performance while maintaining appropriate internal controls;

    c. allow for meaningful trend and rate of change analysis, when possible; and

    d. encourage benchmarking initiatives as a means of incorporating industry business standards, and "best practices" that are meaningful, appropriate, and consistent with Departmental requirements and deemed to reflect overall successful operations. "Best practices" should include cost/risk/benefit analysis.

3. Performance-Based Contract Measures (PBCMs) which include Critical Outcome and Self-Assessment measures should be constructed to:

    a. drive improvements;

    b. focus on effectiveness of systems; and

    c. maintain an appropriate level of internal controls.

    PBCMs should incorporate "best practices" and reflect the DOE's and the Contractor's judgment as to the key performance elements which will enhance the fulfillment of the Department's mission objectives. Each Division and Section of Fermilab shall participate in the development of performance measures. The Performance Measures for the Performance Areas of Critical Outcomes and the Self-Assessment are incorporated into Sections III and IV of this Appendix B. Performance Measures for Critical Outcomes are tied to performance fee. The quality of the self-assessment will be considered with the overall evaluation of the Contractor’s performance.

4. PBCMs are composed of five tiers for Critical Outcome measures:

    a. Critical Outcome: A long-term or constant area or activity that is mutually important to both the DOE and Fermilab, and which has high priority.

b. Objective: Statements of desired outcomes for an organization or activity.

c. Indicator: Areas of performance to be measured.

d. Measure: A quantitative or qualitative characterization of performance.

e. Metric: A result, output, or characteristic of the activity to be evaluated.

5. Adjectival Ratings are as follows:

a. Outstanding (4.0 – 3.5): Significantly exceeds the standards of performance; achieves noteworthy results.

b. Excellent (2.5 – 3.4): 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.

c. Good (1.5 – 2.4): Meets the standard of performance; deficiencies do not substantively affect performance.

d. Marginal (0.5 – 1.4): Below the standard of performance; deficiencies are serious and may affect overall results; management attention and corrective action are required.

e. Unsatisfactory (<0.5): Significantly below the standard of performance; deficiencies are serious, may affect overall results, and urgently require senior management attention.

6. PBCMs should reference industry standards, best practices, or other standards, which are meaningful, appropriate, and consistent with DOE requirements, rather than trying to develop standards arbitrarily. To this end, benchmarking initiatives are strongly encouraged. When establishing benchmarks and setting targets the parties should consider the return on the cost required to make further improvements.

7. The methodology for measuring performance will be established by mutual agreement of the parties (except as may be otherwise specified in this contract) prior to the start of the performance period.

8. The parties acknowledge that the performance levels achieved against the specific performance objectives, indicators, measures, and metrics, which are established in the contract for the Critical Outcomes and directly linked to contract fee, are the primary but not the sole criteria for determining the Contractor's final performance ratings and fee earned in any given performance period.

When determining the Contractor's final performance ratings and fee earned in any given performance period for the Performance Measures in the Critical Outcomes, the Contracting Officer also will consider:

1) laboratory performance in the Self-Assessment; and

2) any other relevant information directly related to the Performance Measures in the Critical Outcomes that is deemed to have had an impact (either positive or negative) on the Contractor's performance. The Contracting Officer also will consider relevant information available from other sources, including but not limited to, the Contractor's Self-Assessment, DOE's day-to-day operational awareness, annual business reviews, (if applicable) Inspector General reviews, General Accounting Office (GAO) audits, for cause reviews, etc. The Contracting Officer also will consider the Contractor cooperation, interaction, and responsiveness to DOE throughout the performance period. This evaluation process does not impact DOE's rights under Part II, Section I, Clause I.83 - Conditional Payment of Fee, Profit, or Incentives.

Should the Contracting Officer contemplate considering other relevant information in establishing the final performance rating for either the Critical Outcomes or Self-Assessment for the performance period, the Contracting Officer will give the Contractor written notice specifying such information at the appropriate and reasonable time, the reasons for considering it relevant and significant, and the intended effect on the performance rating for the year. The Contractor will receive the opportunity to respond in writing to the Contracting Officer's intended action and, if the Contractor requests, in a meeting with the Contracting Officer.

9. The Contracting Officer will review, approve and periodically verify how the Contractor collects, compiles and scores its performance against the measures established annually and incorporated into the contract as Section III of this Appendix.

10. PBCMs are to be developed in a team approach involving appropriate representatives from the Fermi Site Office, Chicago Office, DOE Headquarters, Universities Research Association, Inc., and Fermi National Accelerator Laboratory.

11. Failure to include a specific objective and/or measure in the contract in Section III does not eliminate the need for the Contractor to comply with any contractual requirements, and failure to comply may result in the Contracting Officer modifying the performance rating achieved.

12. The Director of the Office of Science (SC-1) has the primary responsibility for evaluating Science Programs' performance, but input also will be sought from cognizant DOE Assistant Secretaries, Office Directors and Program Managers. The Contracting Officer has the primary responsibility for evaluating the Operations Management performance in accordance with the objectives, indicators, measures, and metrics of Performance Area 1, Operations Management, B through D, and Performance Area 2, Self-Assessment. However, the Contracting Officer shall inform SC-1 of any issues or concerns that should be considered when evaluating the Contractor's performance in Science Programs. This is especially important in those areas where operational performance could have a significant impact on the Contractor's ability to conduct successful research for the Department. The Contractor has primary responsibility to compile the data necessary to document its performance against all measures.

13. If, for reasons beyond the Contractor's control, certain data input may not be available to meet the appraisal schedules outlined in Attachment 1 to this Appendix, the evaluation shall proceed according to schedule for measures which have complete data. Final ratings shall not be determined until all ratings are completed. A final assessment report with final adjectival ratings will only be issued when sufficient data are available to evaluate the Contractor's performance against all measures.

14. The Contractor and DOE have agreed to specific weights for the Performance Areas of Science Programs and Operations Management (75% and 25%, respectively). In addition, within each of these areas, individual measures will have metrics established to gauge laboratory performance. If the Parties cannot reach agreement on either the individual metrics or the specific weights for the evaluation criteria, the Contracting Officer shall have the unilateral right to establish such weights and/or metrics.

15. In the event the Contracting Officer determines it necessary to exercise the right set forth in 14 above, the Contracting Officer will notify the Contractor in writing of the intended decision. The final weightings and/or metrics will be issued to the Contractor within 10 working days of the aforementioned written notice.

16. The Contractor shall have the ability to earn an annual performance fee as described in Attachment 2 of this Appendix.

Section III: PERFORMANCE AREA 1 - CRITICAL OUTCOMES

PERFORMANCE AREA 1: CRITICAL OUTCOMES		
	I. Science Programs	**Weight**
A	Science	**75%**
A.1	Quality of Research	30%
A.2	Successfully and Safely Construct and Operate Research Facilities	25%
A.3	Provide Effective and Efficient Research Program Management for a World Class Research Program	15%
A.4	Relevance to DOE Missions and National Needs	5%
	II. Operations Management	**25%**
B	Leadership	7%
C	Mission Support	9%
D	Self Assessment	9%
	Total	**100%**

I. Science Programs – 75%

A. Science

CRITICAL OUTCOME: Advance the understanding of the fundamental nature of matter and energy by conducting research at the frontier of high-energy physics and related disciplines.

Objective A .1 Quality of Research - Advancement in the understanding of the fundamental nature of matter and energy.

Indicator A.1.1 Success in producing original, creative scientific output that advances fundamental science and opens important new areas of inquiry.

Measure A.1.1.1 Results of program peer reviews reveal sustained progress.

Metric A.1.1.1.1 Office of Science evaluation with input from the URA Visiting Committee(s).

Indicator A.1.2 Success in achieving sustained progress and positive impact on the field.

Measure A.1.2.1 The results of reviews and evaluations indicate the laboratory programs have a sustained impact on the scientific field.

Metric A.1.2.1.1 Office of Science evaluation with input from the URA Visiting Committee(s).

Indicator A.1.3 Recognition from the scientific community, including awards, peer-reviewed publications, citations, and invited talks.

Measure A.1.3.1 Research output produced is recognized by the scientific community.

Metric A.1.3.1.1 Office of Science Evaluation.

Objective A.2 Successfully and safely construct and operate research facilities.

Indicator A.2.1 Construction and commissioning of new facilities on time and within budget; achievement of facility performance specifications and objectives.

Measure A.2.1.1 DOE approved project baselines defined by the Project Execution Plan are met.

Metric A.2.1.1.1 Performance against the following DOE-approved project baselines, as evaluated by the DOE Project Director using input from reviews and

assessments. The projects included are:

- NuMI construction project;
- Run IIb CDF and D-Zero Detector construction projects;
- U.S. LHC Accelerator construction project;
- U.S. LHC CMS Detector project.

Measure A.2.1.2 Meets the approved Run II Luminosity Upgrade Plan baselines for FY2005.[1]

Metric A.2.1.2.1 Office of Science evaluation with input from the Fermi Site Office.

Indicator A.2.2 Reliability of operations and adherence to planned schedules for accelerator run hours and delivered integrated and peak luminosity.

Measure A.2.2.1 Performance against DOE-approved goals for accelerator and experimental facilities operations.

Metric A.2.2.1.1 Average of CDF and DZero delivered integrated luminosity as reported by the Accelerator Division during the fiscal year. (Unit of measure is pb^{-1})

Outstanding	Excellent	Good	Marginal	Unsatisfactory
>425	425-350	349-277	276-203	<203

Metric A.2.2.1.2 Average of CDF and DZero integrated luminosity for seven contiguous days during the fiscal year. (Unit of measure is pb^{-1})

Outstanding	Excellent	Good	Marginal	Unsatisfactory
>20	20-16	>16-12	>12-8	<8

<u>Objective A.3</u> Provide for effective, efficient and safe program management for a world class research program.

Indicator A.3.1 The extent to which effective management programs safely support the research program.

Measure A.3.1.1 Optimal use of personnel, facilities and equipment.

Metric A.3.1.1.1 Office of Science evaluation.

[1] If the accelerator performance follows the design plan for FY 2005, the average weekly integrated luminosity at the end of the fiscal year will reach 17.4 pb^{-1} per week, and the base goal is 12.9 pb^{-1} per week. Outstanding performance for the best 7-day period in FY 2005 would be an integrated luminosity of 20 pb^{-1}, which is 15% over the design average and 55% over the base average. The performance standard of 20 pb^{-1} per week is also about 50% more than the corresponding number for FY 2004.

Measure A.3.1.2 Effectiveness of communicating technical results to maximize the value of research results and gain appropriate recognition for DOE and the laboratory.

Metric A.3.1.2.1 Office of Science and FSO evaluation.

Measure A.3.1.3 Planning for future physics program.

Metric A.3.1.3.1 Office of Science and FSO evaluation.

Indicator A.3.2 Protect the safety and health of the Fermilab workforce, subcontractors, the community, and the environment in all SC program activities. Sustain excellence in safety, health and environmental protection. Performance against agreed upon metrics, as set forth below. [2]

Measure A.3.2.1 Combined Total Recordable Case Rate (TRCR) for Fermilab employees and subcontractor workers for the performance period (October 1, 2004 – September 30, 2005).[3]

Metric A.3.2.1.1

Outstanding	Excellent	Good	Marginal	Unsatisfactory
<1.1	1.1-2.0	>2.0-2.9	>2.9-3.5	>3.5
0-29[4]	30-52	53-76	77-91	>91

Measure A.3.2.2 Combined Days Away, Restricted, Transferred (DART) for Fermilab Employees and subcontractor workers for the performance period (October 1, 2004 – September 30, 2005).[5]

Metric A.3.2.2.1

Outstanding	Excellent	Good	Marginal	Unsatisfactory
<0.5	0.5-1.0	>1.0-1.6	>1.6-2.0	>2.0
0-13 [6]	14-27	28-43	44-60	>60

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[2] For the DART and TRCR, the metric is the rate. The numbers of cases are provided for illustration purposes.
[3] The TRCR goal for "Outstanding" in FY2005 is set to be consistent with the downward trend established by Fermilab over the past six years. The downward trend line supports achievement of a 2005 goal of 1.1 consistent with the SC 25th percentile goal taken from private industry.
[4] Number of cases per year which correspond to the associated rating.
[5] The DART goal for "Outstanding" in FY2005 is set to be consistent with the downward trend established by Fermilab over the past six years. The downward trend line supports achievement of a 2005 goal of 0.5 consistent with the SC 25th percentile goal taken from private industry.
[6] Number of cases per year which correspond to the associated rating.

Measure A.3.2.3 Effectively manage the control of radioactive materials and exposures to ionizing radiation.

Metric A.3.2.3.1 Reportable occurrences of Fermilab-based occupational external radiation doses, unplanned radiation exposures, intakes of radioactivity, skin contamination, or the uncontrolled release of radioactive materials as defined in the Work Smart Standard, FESHM Chapter 3010.

Outstanding	Excellent	Good	Marginal	Unsatisfactory
0-1	2-3	4	5	>5

Metric A.3.2.3.2 Reviews that result in innovations or improvements that can credibly improve the control of radiation exposures. (For each review conducted, one point will be credited. An additional point will be awarded for each significant action identified and implemented.)

Outstanding	Excellent	Good	Marginal	Unsatisfactory
>10	9-10	7-8	5-6	<5

Objective A.4 Establish relevance to DOE missions and national needs.

Indicator A.4.1 The laboratory successfully contributes to DOE missions and programs of national importance.

Measure A.4.1.1 Contributions to the goals and objectives of the strategic plans of DOE and other national programs.

Metric A.4.1.1.1 Office of Science evaluation.

Measure A.4.1.2 Productive interaction with other scientific programs.

Metric A.4.1.2.1 Office of Science evaluation.

Measure A.4.1.3 Effective use of research facilities that serve the needs of the users.

Metric A.4.1.3.1 Office of Science evaluation with input from the URA Visiting Committee(s).

Weightings for Science	
Measure	**Weight, %**
A.1 Quality of Research	**30**
A.2 Successfully and Safely Construct and Operate Research Facilities	**25**
A.3 Provide Effective, Efficient and Safe Research Program Management for a World Class Research Program	**15**
A.4 Relevance to DOE Missions and National Needs	**5**
Total	**75**

II. Operations Management – 25%

B. Leadership

CRITICAL OUTCOME: Provide the leadership to ensure operational excellence and foster responsible stewardship of the DOE resource.

Objective B.1 URA provides the integrated management and leadership necessary to enhance the operations and management processes that are necessary to ensure execution of the Fermilab mission in a safe, effective, and efficient manner.

Indicator B.1.1 URA directs management reviews that result in an overall assessment of key Fermilab operations functions and management systems.

Measure B.1.1.1 Management systems and processes, including a review of each operational area are accomplished at least once every three years.

Metric B.1.1.1.1 DOE evaluation with input from reviews done within the performance period, such as peer reviews for operations, projects, and programs.

Measure B.1.1.2 Management effectively resolves important issues arising during the year.

Metric B.1.1.2.1 DOE evaluation, with input from reviews done within the performance period and from operational awareness activities.

Indicator B.1.2 URA management promotes flow down and implementation of Integrated Safety Management System (ISMS) principles to all levels; and promotes operational and management system excellence.

Measure B.1.2.1 Management proactively identifies and addresses opportunities for improvement.

Metric B.1.2.1.1 DOE evaluation, with input from reviews done within the performance period and from operational awareness activities.

Measure B.1.2.2 Management responds appropriately to recommendations made by review teams.

Metric B.1.2.2.1 DOE evaluation, with input from reviews done within the performance period and from operational awareness activities.

Weightings for Leadership	
Indicator	**Weight, %**
B.1.1	**3.5**
B.1.2	**3.5**
Total	**7**

C. Mission Support

CRITICAL OUTCOME: Manage and enhance business and management systems, work processes, and facility support to provide an effective and efficient work environment that enables the execution of Fermilab's mission.

Objective C.1 Establish and maintain a dependable facilities base from which particle physics and other Fermilab programs can be safely accomplished without interruption.

Indicator C.1.1 The infrastructure is maintained to support operations in a safe, environmentally responsible, and cost-effective manner.

Measure C.1.1.1 Maintenance is performed as scheduled.

Metric C.1.1.1.1 Scheduled hours vs. total hours, measured as a percentage.

Outstanding	Excellent	Good	Marginal	Unsatisfactory
> 80%	80 - 70%	<70 - 60%	<60 - 55%	< 55%

Measure C.1.1.2 Initiate Whitestone's Maintenance and Repair System (MARS) Program in at least forty buildings by 9/30/05.

Metric C.1.1.2.1 Number of buildings placed on the MARS program.

Outstanding	Excellent	Good	Marginal	Unsatisfactory
>40	36	32	28	<28

Measure C.1.1.3 Level of maintenance investment in real property assets. The MII is calculated by dividing the total annual contractor funded maintenance for active conventional facilities by the Replacement Plant Value (RPV) from FIMS for these same facilities. Multiplying this decimal number by 100 expresses the index as a percentage.

MII = (Annual Contractor Maintenance / RPV) x 100 [7]

Metric C.1.1.3.1 .Amount invested in maintenance expressed as a percentage of RPV

Outstanding	Excellent	Good	Marginal	Unsatisfactory
≥ 2.0%	<2.0-1.8%	<1.8-1.5%	<1.5-1.3%	<1.3%

[7] The RPV to be used for this metric is $518,339,183 from July 2004.

Conventional Facilities - Conventional facilities are defined as buildings and utilities identified in the DOE Facility Information Management System (FIMS). Specifically excluded from this MII RPV are OSF category 3000 assets (tunnels and accelerators) and Site Prep Grading and Landscaping RPV's. Note that items classified as personal property or items inventories as "capital equipment" are not part of real property assets.

Contractor Funded Maintenance - maintenance funding from laboratory overhead or space charges used to sustain property and equipment in a condition suitable for its designated purpose.

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; repair work to restore damaged or worn-out property to a normal operating condition is included. 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.

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 extends the service life and therefore is capitalized thereby increasing the assets RPV. Replacements of a nominal value that are expense funded and do not result in a capitalized improvements may be included in the contractor funded maintenance since these items may be considered necessary to continue normal operation on an assets original life cycle. An example of this could be infant mortality during startup or commissioning operations.

Indicator C.1.2 Infrastructure project milestones, as approved in Construction Directives, are completed as scheduled for the following categories of projects:

Measure C.1.2.1 General Plant Projects (GPP);
In-House Energy Management (IHEM);
Accelerator Improvement Projects (AIP).

Metric C.1.2.1.1 For the performance period (October 1, 2004 through September 30, 2005) the percentage of milestones completed (number of milestones completed/number of milestones planned), as documented in Construction Directives.

Outstanding	Excellent	Good	Marginal	Unsatisfactory
> 90%	90 - 81%	<81 - 71%	<71 - 60%	< 60%

Objective C.2 Insure that the procurement function at the laboratory supports the mission of the laboratory by acquiring necessary goods and services in the most effective and efficient manner.

Indicator C.2.1 Subcontracts and procurements are placed with high performing vendors that aid in the furtherance of the laboratory's procurement goals and accomplishment of the lab's mission at the lowest life cycle cost.

Measure C.2.1.1 Evaluation of the Procurement Department's performance in accordance with DOE-approved Procurement Balanced Scorecard.

Metric C.2.1.1.1 Numerical results of the Procurement Balanced Scorecard

Outstanding	Excellent	Good	Unsatisfactory
100-92	91-83	82-80	<80

Objective C.3 Fermilab computing systems support the accelerator and the CDF/DZero experiments.

Indicator C.3.1 The cyber security program assures that computer systems are continuously available to support operations.

Measure C.3.1.1 Any downtime attributable to successful outside attacks on the Fermilab computing systems is minimized.

Metric C.3.1.1.1 Amount of time that the Tevatron does not run as scheduled or CDF/DZero experiments cannot take data that is attributable to a successful cyber attack.

Outstanding	Excellent*	Good	Unsatisfactory
0hrs	<20hrs	≤ 40hrs	>40hrs

*<20 hours represents less than 1% of scheduled runtime for 2004 (2270 hours)

Indicator C.3.2 The cyber security program assures that data recorded by experiments are not destroyed.

Measure C.3.2.1 Any irrecoverable loss of experiment data attributable to successful outside attacks on the Fermilab computing systems is minimized.

Metric C.3.2.1.1 Amount of experiment data that is irrecoverably lost attributable to a successful cyber attack.

Outstanding	Excellent	Good	Unsatisfactory
0 TB[8]	<1 TB	≤ 2 TB	>2 TB

[8] Terabyte (TB). A terabyte of data is 2 to the 40th power (1,099,511,627,776) bytes. This is approximately 1.1 trillion bytes.

Weightings for Mission Support		
Objective	**Indicator**	**Weight, %**
C.1	**C.1.1**	**3**
	C.1.2	**1**
C.2	**C.2.1**	**2**
C.3	**C.3.1**	**1.5**
	C.3.2	**1.5**
Total		**9**

D. Self-Assessment

CRITICAL OUTCOME: The management system self-assessment process will evaluate Fermilab's ability to meet critical outcomes and meet performance objectives, measures and expectations, and to control its processes.

Objective D.1 Self-assessment is utilized as a management tool in the operation of the laboratory.

Indicator D.1.1 A management system self-assessment utilizing peer reviews as an assessment tool is undertaken for all laboratory organizational elements.

Measure D.1.1.1 The laboratory will perform a credible annual self-assessment.

Metric D.1.1.1.1 DOE evaluation of the quality of the Self-Assessment against the following criteria:

- Description of the program/project/activity and its status;
- Basis for determining performance, e.g., procedures, business systems, records, tracking/trending, performance reviews, statistics, etc.;
- Identification of successes;
- Identification of weaknesses and needs for improvement; and
- Identification of the path forward (e.g., plan, schedule) to address needs.

Weightings for Self-Assessment		
Objective	**Indicator**	**Weight, %**
D.1	**D.1.1**	**9**
Total		**9**

Section IV: PERFORMANCE AREA 2 - SELF-ASSESSMENT

Self-Assessment Criteria

Preamble

An effective performance-based management system should be established which: 1) institutionalizes an internal Self-Assessment Program; 2) fosters assessment of existing internal systems, policies, and procedures; and 3) encourages continuous improvement. This Self-Assessment is in addition to the development of specific contract performance measures directly tied to incentives. The laboratory will accomplish a management systems assessment every year. These assessments will be accomplished by the Divisions/Sections and must be fully documented with supporting data and the results forwarded to the person responsible for completing the lab-wide management system Self-Assessment Report at the end of the reporting period. In the case of Divisions/Sections that also have metrics related to the assessment, the results for these metrics must be included as part of the assessment for the reporting period. The management systems to be assessed for the reporting period will be identified at the beginning of the reporting period and the resultant list submitted to DOE by letter.

Each Division and Section of the laboratory will monitor continuously the agreed-upon performance measures and produce both a mid-year progress report with narrative comment on each measure by the responsible party and a year-end self-assessment of performance with detailed narrative on each measure assessed by the responsible party. The mid-year and year-end submittals to DOE will be a consolidated report for each of the areas to be assessed. The Contractor's Self-Assessment Program shall be developed in formal agreement with the Contracting Officer and provide for the following:

1. An assessment of performance against objectives, indicators, measures and metrics which have been identified under the category of "Critical Outcomes";

2. An assessment of performance of management systems identified within this Appendix B, addressing the following general elements:

    a. Description of relevant programs/projects/activities and their status;
    b. Basis for determining performance, e.g., procedures, business systems, records, tracking/trending, performance reviews, statistics, etc.;
    c. Identification of successes;
    d. Identification of weaknesses and needs for improvement; and
    e. Identification of the path forward (e.g., plan, schedule) to address needs;

3. An assessment of overall operations for:

a. Compliance with the prime contract, law, or other DOE, Federal, and State requirements (such as regulations, directives, etc.) as may be applicable pursuant to the terms of the prime contract;

b. The adequacy and the degree to which internal policies, procedures, and controls are implemented and are being met;

4. Identification of improvement opportunities and improvement plans. As a result of the year-end assessment, a list of opportunities for improvement will be identified and actions for implementation scheduled for the next reporting period. Achievement of all implementation actions will automatically become a metric for the subsequent reporting period;

   Assessment of the overall program once per year using the Administrative Peer Review process. The process shall consist of the following elements:

   1) The Sections will present their year-end Functional Assessment to the Administrative Peer Review Committee;

   2) The Committee will evaluate the presentations and feed back to the Sections;

   3) The Committee will split into sub-committees to investigate areas they select based on the Sections' presentations;

   4) The goal of the sub-committees will be to evaluate the functions of the Divisions and Sections each year;

   5) The Administrative Peer Review Committee will include its report in the year-end report to DOE;

   6) The Divisions will continue to utilize their long-standing system of peer review for all significant projects and operations;

   7) Divisions and Sections will assess indicators and metrics listed in the categories "Contractual Performance Indicators" as appropriate in addition to their functional assessment.

Self-Assessment Plan

FERMILAB MANAGEMENT SYSTEMS TO BE ASSESSED

Human Resources
- Compensation
- Benefits
- Employment
- Equal Opportunity/Counseling
- Diversity
- Training
- Workforce Planning

Procurement

Property

Management Information Systems (MIS)
- Business Computing Systems

Financial Systems
- Budget
- Accounting

Support Services Systems
- Legal
- Fleet Management and Maintenance
- Telecommunications
- Visual Media
- Distribution
- Warehousing

ES&H

Quality Assurance

Emergency Management Systems

Security
- Foreign Visits & Assignments
- Safeguards
- Property Protection

Project Management Systems

Infrastructure
- Land Management

- Architecture and Engineering (Facilities Engineering Services Section)
- Routine Maintenance
- Energy Conservation

Programmatic Operations and Maintenance
- Accelerator Operations/Maintenance
- Detector Operations/Maintenance
- Engineering (accelerators/detectors)
- Magnet Design, Construction & Testing

User Support Systems
- Accommodations
- Visas

Scientific Computing
- Hardware Management
- Software Management
- Network Management

Stakeholder Communications

Balanced Scorecards
- Human Resources
- Property
- Procurement

Attachment 1

TYPICAL EVALUATION SCHEDULE

07/01/2004	Functional area experts from both DOE and the Contractor develop proposed version of PBCMs.
09/01/2004	Proposed PBCMs due to the Fermi Site Office Manager.
10/01/2004	DOE transmits final PBCMs to the Contractor and the evaluation period starts.
05/15/2005	The Contractor reports to DOE on mid-year status.
09/30/2005	The evaluation period ends.
10/01/2005	The Contractor initiates the tabulation process.
11/15/2005	The Contractor submits to DOE its Self-Assessment based on the PBCMs.
01/31/2006	DOE develops a draft report and transmits it to the Contractor.
02/15/2006	The Contractor submits comments on the draft report to DOE.
03/15/2005	DOE transmits the final report to the Contractor.