



Department of Energy

Fermi Group
Post Office Box 2000
Batavia, Illinois 60510

OCT 02 2000

Dr. Michael Witherell
Director
Fermilab
P. O. Box 500
Batavia, IL 60510

Dear Dr. Witherell:

SUBJECT: FY 2001 FERMILAB CONTRACT PERFORMANCE MEASURES

The subject performance measures that were negotiated with your staff are attached. Department of Energy, Office of Science, has reviewed the performance measures and provided their concurrence. Please review the attached measures as the set of measures against which Fermilab's performance will be assessed and provide any additional comments to our office by October 13, 2000. In addition, please submit Fermilab's proposed project milestones and metrics for Section E, "Infrastructure," Measure 1.1, by October 20, 2000. The final measures will be issued in a contract modification.

Sincerely,

A handwritten signature in cursive script that reads "Jane L. Monhart".

Jane L. Monhart
Fermi Group Manager

Enclosure:
As stated

Cc: F. Bernthal, URA, w/encl.
K. Stanfield, w/encl.
B. Chrisman, w/encl.
B. Grant, w/encl.

Appendix B

Performance Measures

**for
Fermi National
Accelerator Laboratory**

I. PREAMBLE

This Appendix sets forth the performance measures on which an evaluation of Fermi National Accelerator Laboratory's (Fermilab's) performance will be based as required by Articles 6 and 7 of the contract. The procedure described below will utilize a set of measures or indicators, which will evaluate Laboratory performance in several critical areas.

The terms used in this Appendix are defined as follows:

Activity: The functional area or areas in research, engineering, administration or services being evaluated. Such activity may involve several functional areas of the organization.

Objective: Mission or purpose of the activity or activities to be evaluated.

Measure: A result, output, or characteristic of the activity to be evaluated. A Performance Measure is a measure, which relates to the objectives of the activity.

Metric: The measurement units, if quantitative units are suitable, or the subjective group of evaluative descriptors (e.g., 'outstanding,' 'excellent,' 'good,' 'marginal,' and 'unsatisfactory') used to judge the performance measure.

Benchmark: A normally expected value for the measure, usually derived from values found in other institutions or organizations.

Adjective Ratings:

Outstanding: Significantly exceeds the standard of performance; achieves noteworthy results; accomplishes very difficult tasks in a timely manner.

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; assigned tasks are carried out in an acceptable manner--timely, efficient and economical; deficiencies do not substantively affect performance.

Marginal: Below the standard of performance; deficiencies require management attention and corrective action.

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

For the period October 1, 2000, through September 30, 2001, the Parties have agreed to evaluate the individual areas of Laboratory activities identified in Section III. The Contractor will be evaluated

in two broad areas, namely (i) Science Programs and (ii) Operations Management. It is contemplated that this methodology will continue for each subsequent evaluation period under this contract.

The performance objectives and measures are listed in section IV. The Parties agree to complete the ongoing process to establish specific mutually agreed to performance objectives and measures for each performance area.

The schedule for performing the Laboratory evaluation is provided in Section V. It is the intent of the parties to adhere strictly to this schedule, although either Party may propose modifications to it. Article 53, Performance Incentive, provides the financial incentives available to the Contractor based on the evaluations received in each of the Science Programs and Operations Management areas.

The Parties agree to work together to clarify, when necessary, the process to be used to evaluate and verify the measurements described in this Appendix. As described in Article 7, 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 vital 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 expectations.

The Parties acknowledge that in the event of *Force majeure* adjustments to measures may be required for the performance period.

II. PERFORMANCE MEASURES GUIDELINES

- A. Performance-Based Management Measures (PBMM) are to be composed of two tiers:
- Performance Objectives: These broad goals generally reflect the end objectives based on the mission of a function or focus area.
 - Performance Measures: Specific areas of accomplishment, which would characterize achievement of the broad Performance Objectives. These are based on identifying specific accomplishments that satisfy major divisions of responsibility within a function or mission.
- B. The performance evaluation areas for Fermilab are set forth in Section III. This list is the agreed-upon set for the period October 1, 2000, through September 30, 2001, and may be subsequently revised in future years.
- C. PBMMs should be constructed to sustain excellent/outstanding 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 Fermilab functional managers' judgment as to the key performance elements for overall successful operations. "Best practices" should include cost/risk/benefit effectiveness.

Examples of key elements are:

- Quality of product or output
 - Delivery time
 - Cost
 - Cycle time
 - DOE requirements
- D. PBMMs should be quantitatively measurable and allow for meaningful trend and rate of change analysis where possible, and use qualitative metrics in those cases where quantitative measures are uneconomical or will not produce meaningful evaluation results.
- E. PBMMs 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 expectations appropriate consideration should be given to the cost-effectiveness of making further improvements before deciding to raise the expectation level.
- F. 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.
- G. The Contracting Officer shall review, approve and periodically verify how the Contractor collects, compiles and scores the performance ratings in this Appendix.

- H. Management assumptions and definitions shall be documented as part of the development of each PBMM.
- I. The overall set of PBMMs 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.
- J. PBMMs are to be developed in a team approach involving appropriate DOE personnel, e.g., Fermi Group Office, Chicago Operations Office, and HQ, with Contractor Managers. Care should be taken to ensure that Laboratory functional managers have "ownership" of the resulting PBMMs, reflecting their status as those responsible for performance and improvement.
- K. Neither failure to include a Functional Area nor a performance objective in the performance plan precludes the Laboratory from complying with the 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.
- L. The Director of the Office of Science has the primary responsibility for evaluating laboratory scientific research performance and the Contracting Officer has the primary responsibility for evaluating operations performance in accordance with the objectives and measures of this Appendix. The Contractor has the primary responsibility for compiling the data, using the agreed-upon metrics and conducting a self-assessment, which are necessary to evaluate all areas.
- M. 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.
- N. 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 (These system objectives and measures are in addition to the contract performance objectives and measures identified in this Appendix B.);
 - 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

and the adequacy and 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 the effectiveness of systems and maintenance of the appropriate controls.

III. PERFORMANCE AREAS

Functional Area	Weight	Page
Science Programs		
A. Science Review	70%	B-10
B. Tevatron and Experimental Facilities Utilization	30%	B-13
Total for Science Programs	100%	
Operations Management		
Performance Measures		
C. Leadership	10%	B-14
D. Environment, Safety and Health	40%	B-15
E. Infrastructure	50%	B-17
System Assessment Measures		
F. Environment, Safety and Health		B-20
G. Infrastructure		B-23
H. Business		B-27
I. Stakeholder Relations		B-38
Total for Operations Management	100%	

Rating Calculation Method:

Each performance measure is accompanied by a table that translates the Laboratory's level of performance to an adjectival rating, ranging from unsatisfactory to outstanding. An integer will be

assigned to each rating: 0 to unsatisfactory, 1 to marginal, etc. The scores will be then combined for each section using the performance measure weights presented at the end of each section, resulting in a normalized score for each section ranging from 0 to 4. These scores will be combined using the weightings presented above and an overall rating will be assigned based on a rounding of the overall score: rounded 0 (i.e., 0 to 0.499) being unsatisfactory, 1 (i.e., 0.500 to 1.499) being marginal, etc.

D. Environment Safety & Health

Office of Science Expectation: Ensure the safety and health of the workforce and members of the public, and the protection of the environment in all SC program activities.

Objective 1: Conduct all work and manage all Laboratory facilities with distinction, fully integrated with the scientific and technology mission, while being protective of our workers, the public, and the environment.

Measure 1.1: FY01 actions to address Integrated Safety Management System Verification opportunities for improvement be completed by the proposed due dates.

Measure	Outstanding	Good	Unsat.
1.1	100%	50%	0%

Measure 1.2: Injury Cost Index during fiscal year, including both Fermilab and Fermilab's subcontractors. (Note: Values may differ from calendar year injury cost index values.)

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

Where:

D is the number of fatalities.

T is the number of permanent transfers or terminations due to occupational illness or injury.

LWC is the number of lost workday cases.

WDL is the number of days away from work.

WDLR is the number of restricted duty days.

NFC is the number of non-fatal cases without days away from work or restricted workdays.

Measure	Outstanding	Excellent	Good	Marginal	Unsat.
1.2	< 8.1	8.1 - 12.5	12.6-18	18.1 - 23.0	> 23.0

Measure 1.3: Lost Workday Case Rate (number of loss workday cases per 200,000 worker hours) during fiscal year, including both Fermilab and Fermilab's subcontractors. (Note: Values may differ from calendar year injury cost index values.)

Measure	Outstanding	Excellent	Good	Marginal	Unsat.
1.3	< 1.2	1.2 - 1.6	1.7 - 2.3	2.4 - 2.7	> 2.7

Measure 1.4: Total effective dose equivalent (TEDE) received by personnel at Fermilab during the 12-month period measured in person-rem. This measure includes all individuals who have been issued dosimeters. Due to the time required for processing the doses, this measure will cover the 12-month period July 1, 2000 through June 30, 2001.

Measure	Outstanding	Excellent	Good	Marginal	Unsat.
1.4	< 18 Person-rem	18 - 22	23 - 25	26 - 28	> 28

Weightings for ES&H	
Measure	Weight
1.1	35%
1.2	20
1.3	25
1.4	20
Total	100%

System Assessment

The following sections contain System Assessment Performance Measures. Fermilab's year-end assessment shall evaluate the Laboratory's performance on these measures and for each topical area address how effectively systems are working and answer the following questions:

- Are the existing system internal controls adequate?
- Are the existing regulatory reporting and written procedures being followed?
- How does the Laboratory's performance compare with last year's, other DOE laboratories, and industry, as applicable?
- Are the current systems working effectively and what improvements can be made?

The assessment shall address any need for changes in system procedures or practices and the reason(s) for change. It shall discuss the basis for determining the effectiveness of the system and procedures, and identify opportunities for improvement and notable practices.

The Laboratory's performance rating for the incentivized performance measures may be influenced by its performance on these system assessment measures.

F. Environment Safety & Health

Objective 1: Conduct all work and manage all Laboratory facilities with distinction, fully integrated with the scientific and technology mission, while being protective of our workers, the public, and the environment.

Measure 1.1: Environmental Releases

The assessment shall review:

- Hazardous Chemical Reporting (CY 2000 report) under Community Right-to-Know requirements of 40 CFR Part 370;
- Toxic Release Inventory (CY 2000) report to identify routine emissions of hazardous substances, as defined in 40 CFR Part 372;
- FY 2001 monitoring reports for environmental permits (e.g., NPDES DMR reports, etc.) to determine whether permit effluent limitations were exceeded;
- FY 2001 ORPS reports to identify any reported uncontrolled releases of hazardous substances as identified by 40 CFR Part 302 and 40 CFR Parts 116 and 117;

Report: - The purpose of this FY 2001 year-end report is to discuss the number and types of accidental, unexpected, non-permitted releases/spills that exceed a regulatory reporting threshold for Local, State, or Federal regulatory authorities or which exceed permitted release levels. It would include the following:

Any exceedances of permitted effluent levels;
Any ORPS reports associated with spills of chemicals that are reportable under environmental regulations (Federal, State, or Local);
Actions taken to rectify/avoid similar occurrences in the future.

Measure 1.2: Minimize waste and promote recycling

1. Systematically incorporate a routine determination of pollution prevention/waste minimization (P2/WMin) potential/opportunity into work planning (e.g. work permits, project planning, project execution) and experimental review. Each Division/Section will demonstrate its P2/WMin determinations and reasoning therefore for work planning and/or experimental review, with an emphasis on source reduction.
2. Involve lab-wide employees, line management, and experimenters in identifying and proposing viable P2/WMin opportunities for projects, experiments, and routine operations. These opportunities will include Return-on-Investment (ROI)¹ types of projects. Involvement may occur through demonstrated outreach, Divisional/Sectional responsibilities, training, process waste assessments, idea/proposal solicitation, and/or other reasonable means that communicate the management expectation that P2/WMin be a consideration in planning and executing work. Each Division/Section will demonstrate participation and progress annually in a fashion that befits its organizational mission.

Expectations:

1. Identify and implement viable opportunities for pollution prevention and waste minimization.
2. Solicit and implement Return-on-Investment pollution prevention opportunities, with an emphasis on source reduction; the Contractor will track ROI data for all P2/WMin projects.
3. Incorporate pollution prevention into the working culture of laboratory operations and experimentation.

Outstanding:

1. The contractor is using a systematic approach to identify and evaluate P2/WMin opportunities when planning work and experiments. The system may emphasize procedures, training, process waste assessments, and/or other meaningful methods for identifying such opportunities.

¹ For purposes of this performance measure, "Return on Investment" refers to Pollution Prevention/Waste Minimization Projects.

2. The contractor actively encourages Divisions/Sections to pursue and incorporate P2/WMin opportunities into work in progress and into general work practices; 100% of the allocated P2/WM funds are assigned for projects.
3. The contractor has solicited from employees and implemented Return-on-Investment proposals. The selected P2/WMin proposals that have been scheduled for completion within the Fiscal Year have been completed.
4. The contractor has demonstrated through outreach mechanisms that line management and employees have an obligation to consider P2/WMin opportunities.

Excellent:

1. The contractor is using a systematic approach to identify and evaluate P2/WMin opportunities when planning work and experiments.
2. The contractor actively encourages Divisions/Sections pursue and incorporate P2/WMin opportunities into work in progress and into general work practices; at least 80% of the allocated P2/WM funds are assigned for projects.
3. The contractor has solicited P2/WMin proposals from employees; work has commenced on the selected proposals.
4. The contractor has demonstrated through outreach mechanisms that line management and employees have an obligation to consider P2/WMin opportunities.

Good:

1. The contractor has developed a systematic approach to identify and evaluate P2/WMin opportunities when planning work and experiments.
2. The contractor actively encourages Divisions/Sections to pursue and incorporate P2/WMin opportunities into work in progress and into general work practices; at least 60 % of the allocated P2/Wmin funds are assigned for projects.
3. The contractor has solicited P2/WMin proposals from employees and has committed to implementing those that can reasonably be implemented within the next Fiscal Year. The proposals selected have been scheduled.
4. The contractor has demonstrated through outreach mechanisms that line management and employees have an obligation to consider P2/WMin opportunities.

Marginal:

1. The contractor has achieved three of the measures listed for the "Good" rating.

Unsatisfactory:

1. The contractor has achieved fewer than three of the measures listed for the "Good" rating.

V. TYPICAL EVALUATION SCHEDULE

7/1/FY-1	Functional area experts from both DOE and Fermilab develop proposed version of PBMMs.
9/1/FY-1	Prepare PBMMs due to the Fermi Group Manager.
10/1/FY	DOE transmits final PBMMs to Fermilab and evaluation period starts.
5/15/FY	Fermilab reports to DOE on mid-year status.
9/30/FY	Evaluation period ends.
10/1/FY+1	Fermilab initiates tabulation process.
11/15/FY+1	Fermilab submits to DOE its self-assessment based on the PBMMs.
12/15/FY+1	DOE develops draft report and transmits to the Contractor.
1/15/FY+1	Contractor submits comments on draft report.
1/31/FY+1	DOE transmits final report to the Contractor.