DOE Office of Science

FY 2009

Performance Evaluation of Fermi Research Alliance, LLC

for the

Management and Operation of the Fermi National Accelerator Laboratory

December 2009

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I. OVERALL SUMMARY RATING/FEE

Performance-Based Score and Adjectival Rating:

The basis for the evaluation of Fermi Research Alliance, LLC, (the Contractor) management and operations of the Fermi National Accelerator Laboratory (the Laboratory) during FY 2009 centered on the Objectives found within the following Performance Goals:

1.0 Provide for Efficient and Effective Mission Accomplishment

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

3.0 Provide Effective and Efficient Science and Technology /Program Management

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

Each Performance Goal was composed of two or more weighted Objectives and most Objectives had a set of performance measures, which assisted in determining the Contractor's overall performance in meeting that Objective. Each of the performance measures identified significant activities, requirements, and/or milestones important to the success of the corresponding Objective. The following describes the methodology utilized in determining the Contractor performance rating.

Each Objective within a Goal was assigned a numerical score by the evaluating office. Each evaluation measured the degree of effectiveness and performance of the Contractor in meeting the Objective and was based on the Contractor's success in meeting the set of Performance Measures/Targets identified for each Objective as well as other performance information available to the evaluating office from other sources to include; but not limited to, the Contractor's self-evaluation report, operational awareness (daily oversight) activities, "For Cause" reviews (if any), other outside agency reviews (OIG, GAO, DCAA, etc.) and the annual 2-week review (if needed). If no performance measures/targets were utilized, the description of the general expectations for the success of the objective was utilized as the baseline of the effectiveness and performance of the Contractor in meeting the corresponding Objective and in determining the score assigned. The Goal score was then computed by multiplying the numerical score by the weight of each Objective within a Goal. These values were then added together to develop an overall score for each Goal. This score was then compared to Table A to determine the overall grade for each Goal. A set of tables is provided at the end of each Performance Goal section of this document to assist in the calculation of Objective scores to the Goal score. The raw score (rounded to the nearest hundredth) from each calculation was carried through to the next stage of the calculation process. The raw score for Science and Technology and Management and Operations was rounded to the nearest tenth of a point for utilization in determining fee as discussed below. A standard rounding convention of x.44 and less rounds down to the nearest tenth (here, x.4), while x.45 and greater rounds up to the nearest tenth (here, x.5).

Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**

Table A. FY 2009 Contractor Letter Grade Scale

Based on the evaluation of Fermi Research Alliance, LLC, performance against the Goals and Objectives contained within the FY 2009 Performance Evaluation and Measurement Plan (PEMP), the scores and corresponding grades awarded for each are provided within Table B below. Specific information regarding the Contractor's performance in meeting each of the Goals and their corresponding Objectives is provided within Section II of this report.

S&T Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
1.0 Mission Accomplishment	3.6	A-	25%	0.91	
2.0 Design, Fabrication, Construction and Operations of Facilities	3.6	A-	50%	1.80	
3.0 Science and Technology Research Project/Program Management	3.6	A-	25%	0.91	
				Total Score	**3.6**
M&O Performance Goal	**Numerical Score**	**Letter Grade**	**Weight**	**Weighted Score**	**Total Score**
4.0 Leadership and Stewardship of the Laboratory	3.4	B+	25%	0.85	
5.0 Integrated Safety, Health, and Environmental Protection	3.3	B+	25%	0.83	
6.0 Business Systems	3.4	B+	25%	0.85	
7.0 Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio	3.6	A-	15%	0.53	
8.0 Integrated Safeguards and Security Management and Emergency Management Systems	3.1	B+	10%	0.31	
				Total Score	**3.4**

Table B. FY 2009 Contractor Evaluation Score Calculation

Performance-Based Fee Earned:
Utilizing Table B, above, the scores for each of the Science and Technology (S&T) Goals and Management and Operations (M&O) Goals were multiplied by the weight assigned and these were summed to provide an overall score for each. The percentage of the available performance-based fee that was earned by the Contractor was determined based on the overall weighted score for the S&T Goals (see Table B) and then compared to Table C below. The overall numerical score of the M&O Goals from Table B was then utilized to determine the final fee multiplier (see Table C), which was utilized to determine the overall amount of performance-based fee earned for FY 2009 as calculated within Table D. Based on the overall performance within the S&T and M&O Goals, the Contractor is awarded $3,337,000 in performance based fee for FY 2009.

Overall Weighted Score from Table A	Percent S&T Fee Earned	M&O Fee Multiplier
4.3	100%	100%
4.2		
4.1		
4.0	97%	100%
3.9		
3.8		
3.7	94%	100%
3.6		
3.5		
3.4	91%	100%
3.3		
3.2		
3.1		
3.0	88%	95%
2.9		
2.8		
2.7	85%	90%
2.6		
2.5		
2.4	75%	85%
2.3		
2.2		
2.1		
2.0	50%	75%
1.9		
1.8		
1.7	0%	60%
1.6		
1.5		
1.4		
1.3		
1.2		
1.1		
1.0 to 0.8	0%	0%
0.7 to 0.0	0%	0%

Table C. - Performance-Based Fee Earned Scale

Overall Fee Determination	
Percent S&T Fee Earned from Table C	94%
M&O Fee Multiplier from Table C	1
Overall Earned Performance-Based Fee	$3,337,000

Table D. – Final Percentage of Performance-Based Fee Earned Determination

Performance Fee and Rating Adjustment Factor:

No issue or concern which necessitated a performance fee and/or rating adjustment factor occurred in FY 2009. Therefore, this section is not applicable to the FY 2009 performance evaluation of the Laboratory.

II. PERFORMANCE GOALS, OBJECTIVES, AND MEASURES/TARGETS

1.0 Provide for Efficient and Effective Mission Accomplishment

The Contractor produces high-quality, original, and creative results that advance science and technology; demonstrates sustained scientific progress and impact; receives appropriate external recognition of accomplishments; and contributes to overall research and development goals of the Department and its customers.

The weight of this Goal is 25%.

The Provide for Efficient and Effective Mission Accomplishment Goal measured the overall effectiveness and performance of the Contractor in delivering science and technology results which contributed to and enhanced the DOE's mission of protecting our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge by supporting world-class, peer-reviewed scientific results, which were recognized by others.

The combined scores of each objective in 1.0 rolled up to an overall letter grade of A- (with a numerical score of 3.6).

Performance Summary:

The Tevatron continues to produce the most important results on the energy frontier, and the Laboratory is vital to the Compact Muon Solenoid (CMS) efforts at the Large Hadron Collider (LHC). The Laboratory plays important leadership roles in Superconducting Radio Frequency and the International Linear Collider (ILC).

The Science Education office at Fermilab has dedicated itself to program and process improvement, both of which are most evident by the overall quality of the intern and educator research products and other program requirements.

Objectives:

1.1 Science and Technology Results Provide Meaningful Impact on the Field

Fermilab conducts a broad program of research supported by the high energy physics program. The largest and strongest of these programs is in proton accelerator-based research. Fermilab scientists maintain and operate the experiments at the Tevatron collider -- which currently defines the Energy Frontier -- with high efficiency. They also have leading roles in analyzing the data collected, and results from the Tevatron experiments generate a lot of community interest and are shaping early analyses at the next-generation LHC. Fermilab scientists also have prominent roles in the CMS experiment at the LHC. Fermilab scientists also play central roles in operating and planning neutrino experiments. One reviewer commented at the recent Office of High Energy Physics (OHEP) proton program review: "The Tevatron and its experiments CDF and D0 are outstanding in all respects." Another reviewer observed: "Fermilab research staff have made, and will continue to make, a leading contribution to the U.S. effort in CMS".

Other important programs include theory, non-accelerator research and the related programs in SRF technology and the ILC R&D program. The Laboratory Theory groups (HEP, Particle Astrophysics and Cosmology) conduct research in all thrusts of the Theory Research Program. The group rated outstanding in the lab-wide theory program review last year, and was singled out as the only lab theory group that aligns well with the lab's experimental programs as well as the national HEP objectives. Research in dark energy, cosmic rays and dark matter is strong. The lab is investigating several initiatives in new areas of particle astrophysics and cosmology but it is not clear yet what impact these efforts would have on the overall program. The Laboratory is

responsible for U.S. superconducting R&D related to the ILC. The work in cavity processing, gradient improvement and cryomodule design and production have received strong peer reviews.

The detector R&D program did not fare as well in a recent review conducted by OHEP. Resources devoted to the overall detector R&D effort were thought to be relatively large compared to other labs, with fewer high-impact results. Reviewers were particularly concerned about the relatively large liquid argon detector development program where they felt that Fermilab was not taking proper advantage of former and current R&D being carried out in the US and abroad. The effort on silicon detectors, however, was found to be excellent.

The education office specifically targets undergraduate pre-service teachers and has structured an effective program that takes advantage of their unique resources such as the Lab's Teacher Resource Center and the Eisenhower National Clearinghouse Demonstration Site to encourage individual teacher development, as well as motivating ongoing development as the undergraduate moves into the classroom.

DOE Office of High Energy Physics Score for Objective 1.1: A- (3.6)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 1.1: A- (3.6)

1.2 Provide Quality Leadership in Science and Technology

The Laboratory staff leads important areas including design, fabrication, installation, and operation of large detector components for accelerator-based detectors, physics analysis, and computing in support of proton experiments. The Laboratory plays a pivotal role in the U.S. CMS collaboration and has exercised strong leadership in many technical and scientific areas of this large international collaboration. Fermilab staff also led many areas of planning and design of future U.S. - based neutrino facilities and experiments. One reviewer observed: "Fermilab's past contributions to neutrino physics have been outstanding, and its current program is excellent."

The Fermilab theory group has significant interaction with the experimentalists at Fermilab and contributes strongly to the overall HEP program at the lab. Many members of the group are recognized leaders in their respective areas of expertise and give many invited talks at national and international conferences. They also organize many workshops that attract physicists worldwide to visit the Laboratory. They have mentored many postdocs who later became leaders in the field. Some members of the group have received prestigious prizes and awards for their contributions to the field.

Fermilab staff manages much of the worldwide ILC project. The Laboratory has major leadership roles and excelled in cryomodule development, conventional facilities studies, and high gradient cavity development.

The education office consists of a highly motivated, well managed team that works continually to integrate science education and workforce development into the research mission of the lab.

DOE Office of High Energy Physics Score for Objective 1.2: A (3.8)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 1.2: A- (3.5)

1.3 Provide and Sustain Outputs that Advance Program Objectives and Goals

The recent review of proton accelerator-based research at Fermilab yielded an excellent evaluation. Staff is responsive to review recommendations and headquarters guidance.

Cavity and cryomodule research and development has made steady progress and is positively reviewed.

The Laboratory makes every effort to maintain an alumni connection with the interns/educators in their program in an effort to develop and encourage persistent learners in high-energy physics. The education office is very willing to help current and former interns with access to research, teaching materials and support in how best to communicate complicated information about physics to students.

DOE Office of High Energy Physics Score for Objective 1.3: A- (3.5)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 1.3: A- (3.6)

1.4 Provide for Effective Delivery of Products

The SRF program at Fermilab has had to develop a large infrastructure from scratch over the last several years. This year's review of the lab has found that to be successful. The US CMS Tier 1 center participated in a major data challenge this year in preparation for the start of LHC data and performed excellently.

Fermilab is one of the best in class with excellent "informal education" on their web page. It is segmented by target audiences i.e., educator recourses, students K- 12 student and core science concepts are reinforced through multiple methods such as workshops, puzzles/games, reference material, and hands-on activities. The Laboratory has extensive science education opportunities and uses multiples avenues throughout the Laboratory to deliver the greatest learning impact. These include facility tours, workshops, seminars and web based classroom projects.

DOE Office of High Energy Physics Score for Objective 1.4: A- (3.5)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 3.1: A (3.8)

Science Program Office[2]	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of High Energy Physics					
1.1 Impact	A-	3.6	30%	1.08	
1.2 Leadership	A	3.8	30%	1.14	
1.3 Output	A-	3.5	20%	0.70	
1.4 Delivery	A-	3.5	20%	0.70	
				Overall HEP Total	3.6
Office of Workforce Development for Teachers and Scientists					
1.1 Impact	A-	3.6	25%	0.90	
1.2 Leadership	A-	3.5	30%	1.05	
1.3 Output	A-	3.6	30%	1.08	
1.4 Delivery	A	3.8	15%	0.57	
				Overall WDTS Total	3.6

Table 1.1 – 1.0 Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of High Energy Physics	A-	3.6	99.9%	3.60	
Office of Workforce Development for Teachers and Scientists	A-	3.6	0.1%	0.00	
				Performance Goal 1.0 Total	3.6

Table 1.2 – Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 1.3 – 1.0 Goal Final Letter Grade

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Research Facilities

The Contractor provides effective and efficient strategic planning; fabrication, construction and/or operations of Laboratory facilities; and is responsive to the user community.

The weight of this Goal is 50%.

The Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Research Facilities Goal measured the overall effectiveness and performance of the Contractor in planning for and delivering leading-edge specialty research and/or user facilities to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measured the Contractor's innovative operational and programmatic means for implementation of systems that ensures the availability, reliability, and efficiency of these facilities; and the appropriate balance between R&D and user support.

The combined scores of each objective in 2.0 rolled up to an overall letter grade of A- (with a numerical score of 3.6).

Performance Summary:

The Tevatron delivered another record year of integrated luminosity and the NuMI beam met its goals. The MINERvA and Dark Energy Survey Projects were on time and on schedule, while NOvA suffered some schedule delays that have been corrected.

Objectives:

2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs

The Laboratory had one project in FY 2009 that was beyond CD-0 and had not yet reached CD-2, the Accelerator Project for the Upgrade of the LHC. This project is being done in collaboration with Brookhaven National Laboratory. The project is making satisfactory progress and a CD-1 review is planned for December 2009.

There are two projects being planned that did not receive CD-0 in FY 2009. These are the Long Baseline Neutrino Experiment (LBNE) and the Muon to Electron Conversion Experiment (Mue2e). For both experiments, the Laboratory has provided essential input to OHEP for the preparation of the Mission Need Statements. This input has included a work plan to develop the needed material for a CD-1 review of the Long Baseline Neutrino Experiment developed in collaboration with Brookhaven National Laboratory.

DOE Office of High Energy Physics Score for Objective 2.1: B+ (3.4)

2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)

The Laboratory has three projects that are beyond Critical Decision (CD)-2 in FY 2009. They are MINERvA, NOvA, and the Dark Energy Survey. MINERvA has a TPC below $20 million and does not report earned value. There has been good progress over the year and when a problem arose with the production of tracking modules at collaborating universities, the lab took effective steps to solve the problem. The Dark Energy Survey has made good progress all year maintaining a green rating in Project Assessment Reporting System (PARS) and receiving a good evaluation during the annual progress review.

The NOvA Project suffered from some schedule delays this year and was rated yellow in PARS for several months. The project failed to properly address a delay in funding for the far detector building in their earned value system. The delay was only for a couple months and had no real effect on the project, but it did cause a decrease in the schedule performance index, which required intervention by the Office of Science. A more fundamental problem was a failure to properly allocate needed engineering for the accelerator portion of the project. The lab has addressed this, and we do not expect it to continue to be a problem.

DOE Office of High Energy Physics Score for Objective 2.2: B (3.0)

2.3 Provide Efficient and Effective Operation of Facilities

The Tevatron delivered another record performance in FY 2009. The integrated luminosity delivered to CDF and D-Zero for FY 2009 was 1900 pb-1 compared to 1786 pb-1 in FY 2008. This was done in fewer weeks in FY 2009, which unlike FY 2008 had a maintenance shutdown. NuMI met its Joule goal with 2.0E20 protons on target in FY 2008. This performance was achieved despite a six-month long continuing resolution, which constrained the lab's flexibility considerably for six months.

DOE Office of High Energy Physics Score for Objective 2.3: A (4.0)

2.4 Utilization of Facility to Grow and Support the Laboratory's Research Base and External User Community

Not Applicable to this Contract.

Science Program Office	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of High Energy Physics					
2.1 Provide Effective Facility Design(s)	B+	3.4	25%	0.85	
2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components	B	3.0	25%	0.75	
2.3 Provide Efficient and Effective Operation of Facilities	A	4.0	50%	2.00	
2.4 Utilization of Facility to Grow and Support the Laboratory's Research Base and External User Community	N/A	N/A	N/A	N/A	
				Overall HEP Total	3.6

Table 2.1 – 2.0 Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of High Energy Physics	A-	3.6	100%	3.60	
				Overall Program Office Total	3.6

Table 2.2 – Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 2.3 – 2.0 Goal Final Letter Grade

3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management

The Contractor provides effective program vision and leadership; strategic planning and development of initiatives; recruits and retains a quality scientific workforce; and provides outstanding research processes, which improve research productivity.

The weight of this Goal is 25%.

The Provide Effective and Efficient Science and Technology Research Project/Program Management Goal measured the Contractor's overall leadership in executing S&T programs. Dimensions of program management covered included: 1) providing key competencies to support research programs to include key staffing requirements; 2) providing quality research plans that take into account technical risks and identify actions to mitigate risks; and 3) maintaining effective communications with customers to include providing quality responses to customer needs.

The combined scores of each objective in 3.0 rolled up to an overall letter grade of A- (with a numerical score of 3.6).

Performance Summary:

Fermilab provides a vision for the intensity frontier of the P5 roadmap, while still maintaining efficient operation of the user facility.

The education office has dedicated itself to providing extensive science education and utilizes multiple opportunities to deliver the greatest learning impact. The education office teaches science and method on how best to teach science through mentor intensive research, collaboration with other students and teachers, seminars, "fun" learning, etc. The education staff is creative, dedicated, disciplined and by maintaining an interactive relationship with current and previous program participants, extends the mentor relationship to promote ongoing learning.

The education office has done an excellent job of advancing the mentor culture at Fermilab. By hosting mentor workshops, supporting students and teachers in their lab research, ensuring positive research relationships between mentor and intern, and providing technical and administrative support so the interns can work effectively, the staff has creative a very productive and rich environment for science education.

Objectives:

3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Fermilab continues to lead the implementation of the High Energy Physics Advisory Panel (HEPAP)/P5 roadmap. Many of the major new initiatives called for in this strategic vision are on the Intensity Frontier, and Fermilab has sponsored workshops and developed collaborations on related physics topics and technology development. While doing this, the lab has continued to run the Tevatron effectively and efficiently, achieving new record luminosity totals. The lab has also helped to develop the case for an extended run of the Tevatron through FY 2011.

The Laboratory education office instills in its interns and educators the brilliance and rewards of pursuing science education and then transferring knowledge (teaching) to others.

DOE Office of High Energy Physics Score for Objective 3.1: A (3.9)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 3.1: A- (3.6)

3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

The lab has procedures in place to provide oversight of the whole Project Management program. Project Management groups are used to coordinate work on projects across the Laboratory, and regular peer reviews are used to evaluate their various programs. The lab has undertaken a comprehensive study of the staff's skills and their match to the future program. However, the lab is stretched thin and may find it difficult to manage all of its programs as well as it would like. Integration of mid-level lab management into budget and planning continues to make progress.

The education group develops and shares generously with others labs best practices for multiple approaches for communicating and equipping educators to teach very complicated science.

DOE Office of High Energy Physics Score for Objective 3.2: B+ (3.4)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 3.2: A- (3.6)

3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Communications with headquarters at a high level are regular and very effective. Headquarters is quickly notified when problems develop. The lines of communications between the lab and office for different areas of responsibility have been formalized and are regularly updated.

The education office is very responsive to the HQ program office and is a trusted advisor on adjusting program requirements that improve the overall quality of the program and are in keeping with well accepted practices in the various research divisions.

DOE Office of High Energy Physics Score for Objective 3.3: A- (3.6)

DOE Office of Workforce Development for Teachers and Scientists Score for Objective 3.3: A- (3.5)

Science Program Office[1]	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of High Energy Physics					
3.1 Effective and Efficient Stewardship	A	3.9	40%	1.56	
3.2 Project/Program Planning and Management	B+	3.4	40%	1.30	
3.3 Communications and Responsiveness	A-	3.6	20%	0.72	
				Overall HEP Total	3.6
Office of Workforce Development for Teachers and Scientists					
3.1 Effective and Efficient Stewardship	A-	3.6	20%	0.72	
3.2 Project/Program Planning and Management	A-	3.6	40%	1.44	
3.3 Communications and Responsiveness	A-	3.5	40%	1.40	
				Overall WDTS Total	3.6

Table 3.1 – 3.0 Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of High Energy Physics	A-	3.6	99.9%	3.60	
Office of Workforce Development for Teachers and Scientists	A-	3.6	0.1%	0.00	
				Overall Program Office Total	3.6

Table 3.2 – Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 3.3 – 3.0 Goal Final Letter Grade

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

The Contractor's Leadership provides effective and efficient direction in strategic planning to meet the mission and vision of the overall Laboratory; is accountable and responsive to specific issues and needs when required; and corporate office leadership provides appropriate levels of resources and support for the overall success of the Laboratory.

The weight of this Goal is 25%.

The Provide Sound and Competent Leadership and Stewardship of the Laboratory Goal measured the Contractor's Leadership capabilities in leading the direction of the overall Laboratory. It also measured the responsiveness of the Contractor to issues and opportunities for continuous improvement and corporate office involvement/commitment to the overall success of the Laboratory.

The combined scores of each objective in 4.0 rolled up to an overall letter grade of B+ (with a numerical score of 3.4).

Objectives:

4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.6).

Effective development and implementation of Laboratory Vision and Business Plans (both strategic and annual).
Fermilab has consistently taken a strong lead in developing strategic plans for future U.S. leadership in high energy physics. The Laboratory Business Plans and Strategic Plans have maintained excellent alignment with OHEP's national priorities and gained widespread community support. During FY09, the Lab management endorsed the P5 roadmap and began the difficult task of turning a very high level strategic plan into a technically workable near term plan for execution. The Lab leadership has done an excellent job in presenting the strategic need to run the Tevatron in FY11, while at the same time developing and explaining a robust high intensity program. They continue to develop the OHAP (Organization and Human Asset Plan) as a tool to analyze and guide the evolution of the workforce needed to carry out the strategic plan. A number of task forces were commissioned for various critical skills, in particular, engineering and project management, to support the process.

Establish strategic partnerships and communications that effectively support the Laboratory vision, plans, and mission accomplishments.

Fermilab leadership has worked effectively in maintaining, developing, and strengthening strategic partnerships in support of the labs' and OHEPs' long-range plans. The Laboratory is working to form strong collaborations for potential future projects. International relationships, which will be critical to the success of any large future efforts, are being regularly nurtured. Fermilab leadership is adept at working in the international arena, analyzing impacts of other international facilities/experiments on the U.S. Program, and developing strong international collaborations to support future U.S. efforts. The lab's efforts promoting the U.S. role in the LHC have been excellent, especially during the examining and repairs from the issues in the accelerator in September of 2008.

Communication and outreach activities continue as key strengths of the Laboratory. Fermilab's policy of transparency in communications serves the Laboratory and OHEP well. *Fermilab Today* and *Symmetry* continue to be top-notch publications for a wide variety of venues, including the local community and policy makers. Fermilab has a good rapport with the local community that has been nurtured through various outreach efforts.

Identify all major Laboratory costs in elements including (but not limited to) labor, labor overhead, operating, capital and construction. The structure and associated baseline Cost of Doing Business (CODB) reports shall be detailed such that the Laboratory and FSO have a common understanding of how obligations under the M&O contract are costed, and can ascertain the drivers that affect the Laboratory's incurrence of costs in various elements.

For the "Cost of Doing Business" initiative, Fermilab worked with FSO to refine the reporting and analysis of this information in order to reach a better common understanding of costs. The quarterly reports are submitted on time with a detailed CFO analysis. A Cost Savings Study was completed and delivered to FSO on time with later updates provided in July 2009.

4.2 Provide for Responsive and Accountable Leadership throughout the Organization

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.3).

Leadership proactively identifies and addresses opportunities for improvement.

The Laboratory Leadership has proactively identified various opportunities for improvement. Highlights of some of the notable efforts are provided below.

The Assurance Council, which meets twice a month, systematically tracks outcomes and actionable recommendations from all reviews (in a database), prepares corrective action plans and closes concerns. As an advisor to the Laboratory Director, the Council follows improvement activities and alerts the Director when concerns arise. This year, the Council positively influenced additional attention and resources to the development of the lab-wide Earned Value Management System (EVMS). The Council also emphasized the need to move quicker on the lab-wide Integrated Quality Assurance Program development and implementation. The Assurance Council includes the FRA Board Secretary, which creates a strong link to the FRA Board Chair, and increases corporate awareness of issues and the ability to provide timely corporate support when needed.

The Lab Leadership recognized the challenge brought on by the Recovery Act and proactively prepared for anticipated American Recovery and Reinvestment Act (ARRA) funds. The Lab was ready to move quickly in support of the Administration's goals. The Lab ARRA website is doing an excellent job of capturing progress on projects and making it visible to the public.

The Lab undertook a major realignment of the Information Management functions under a newly-established Chief Information Officer (CIO) position. This reorganization is affording the consolidation of some IT services and costs and is facilitating better implementation of lab-wide computer management and security controls.

Laboratory leadership did not recognize impacts of shutdown resource constraints on project schedules and the resultant EVMS implications. Work has been significant towards EVMS certification, which is almost complete.

The Lab recognized the need for focus groups in response to an APS Diversity Study; this resulted in a significant study of all lab wide issues and has created a number of management improvement initiatives.

Leadership's response to Laboratory issues and review team recommendations is timely, and immediate mitigating actions were identified and implemented as appropriate. Leadership maintains cognizance of corrective action plans, ensure timely and effective implementation of corrections.

The Laboratory faced significant challenges this year; including workforce planning, quality assurance, a Continuing Resolution, and safety performance.

Progress on the development of a robust Laboratory-wide Quality Assurance Program (QAP) is increasing. The Laboratory team made significant progress in delivering on commitments made in the December 2006 Corrective Action Plan (CAP). An assessment of the Integrated Quality Assurance (IQA) Program in September 2009 documented the soundness of the currently developing effort. With the support of the Laboratory Director, the Laboratory-wide QA program is finally moving forward into the initial stages of implementation.

Another challenge for the leadership was sustaining the Laboratory's excellent safety performance from the prior year. Safety performance at Fermilab began to decline in FY2009. The TRC and DART rates were studied and each individual case was analyzed. A number of immediate responses were executed by the lab in order to try to prevent further injury. A comprehensive new communication initiative called "Take Five" was started and the ESH Management Team began benchmarking with other successful DOE sites.

The Lab responded well to FY09 budget uncertainties after a constrained FY08 budget and long Continuing Resolution (CR). In particular, the NOvA project was kept viable and restarted quickly when a favorable FY09 budget and ARRA funds were received.

After the initial EVMS certification efforts identified some opportunities for improvement, the lab proactively advanced EVMS Certification by devoting resources to quickly implement a Time and Labor System.

4.3 Provide Efficient and Effective Corporate Office Support as Appropriate

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.3).

Corporate Leadership directs independent peer reviews of Laboratory management systems and processes that result in an effective overall assessment of key Laboratory administrative and operations support functions and management systems.

Independent assessments commissioned by the Board focus, in part, on key issues raised by DOE through performance feedback. The FRA Visiting Committee for Fermilab Scientific Programs completed a successful review in April 2009. The FRA Visiting Committee review of Fermilab Administration and Operations Support was completed in August 2009. The FRA Visiting Committees provided quality recommendations for improvement. The Board tracked progress on these recommendations at subsequent meetings. Administrative and Operations Visiting Committee Chairs incorporate DOE input; and past history shows that review recommendations have ultimately helped to drive Laboratory improvements.

Corporate Leadership provides timely and effective policy guidance and oversight, facilitates corporate reach back and provides vital resources to effectively addressing emerging issues and facilitates a process of continuing improvement.

The FRA Board has helped to shape the Laboratory's multi-pronged strategic plan and address critical issues. The Board continues to attract high-quality members to serve on the Board. The Board has helped to drive improvements in key areas, such as Quality Assurance and Human Resources. Overall, the Board of Directors continues to focus on the important strategic and operational issues facing the Laboratory. University of Chicago (UChicago) representatives are involved in contractor assurance oversight and regularly participate in Fermilab Assurance Council meetings in an ex-officio capacity. FRA has continued to support regular meetings with Lab management and senior DOE Officials. In addition, FRA representatives are members of the DOE National Laboratory Contractors Group, created by DOE Secretary Steve Chu. The Committee submitted a set of recommendations to the Secretary in August 2009 regarding ways to improve the overall operation of the National Labs and the relationship between DOE and its contractors.

Corporate Leadership maintains cognizance of significant commitments made and assures their timely accomplishment and acts as an effective advocate for the Laboratory.

FRA is delivering on contractual commitments that will enhance the Laboratory, such as the management dashboard development, increased joint appointments, financial support for joint research and education, scholarship and tuition support, and annual support of the Strategic Laboratory Leadership training program (which has far exceeded original commitment). All commitments are being tracked in FRA's issues management system and have been assigned to Board Committees for monitoring and oversight.

Corporate leadership continues to stimulate joint efforts between Fermilab and Argonne through the Lab Collaboration Council. FRA is drawing on expertise in both laboratories to serve on key operational assessments as independent reviewers. The two laboratories are discussing a number of potential cost-cutting collaborative efforts. The Lab Collaboration Council was officially established on June 13, 2007, and continues on at present with routine meetings of the Fermilab and Argonne Deputies for Operations. The majority of operational improvements have been in the area of sharing of best practices and expertise (e.g., safety, management dashboard, travel, and participation on review teams).

FRA is strategically employing joint appointments, especially with local universities, to strengthen the HEP program. The Strategic Laboratory Leadership Program, which trains promising scientific and operational managers from Fermilab and Argonne in conjunction with the University of Chicago, Graduate School of Business, ran another successful program in FY2009.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
4.0 Effectiveness and Efficiency of Contractor Leadership and Stewardship					
4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	A-	3.6	35%	1.26	
4.2 Provide for Responsive and Accountable Leadership throughout the Organization	B+	3.3	35%	1.16	
4.3 Provide Efficient and Effective Corporate Office Support as Appropriate	B+	3.3	30%	0.99	
				Performance Goal 4.0 Total	**3.4**

Table 4.1 – 4.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 4.2 – 4.0 Goal Final Letter Grade

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

The Contractor sustains and enhances the effectiveness of integrated safety, health and environmental protection through a strong and well deployed system.

The weight of this Goal is 25%.

The Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection Goal measured the Contractor's overall success in preventing worker injury and illness; implementation of ISM down through and across the organization; and providing effective and efficient waste management, minimization, and pollution prevention.

The combined scores of each objective in 5.0 rolled up to an overall letter grade of B+ (with a numerical score of 3.3).

Objectives:

5.1 Provide a Work Environment that Protects Workers and the Environment

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.4).

Combined Days Away, Restricted, Transferred (DART) for Fermilab employees and subcontractor workers for the performance period (October 1, 2008 - September 30, 2009).

For the performance period, there were twelve injuries that resulted in either restricted work activity or days away from work. This equates to a rate of 0.64, which is significantly more than the target rate of 0.25. Types of DART cases included back strain, deep tissue contusion, fall on ice resulting in medical treatment and lost time, goose attack, shoulder strain, and knee strain. The Laboratory determined the DART cases displayed a lack of employee awareness and infrastructure problems. In response, the Laboratory engaged several ideas to help reduce the injury rate. Examples include Take 5 for Goal 0, Glove Campaign, Summer ES&H Fair, Accelerate to a Healthy Lifestyle exercise program, Benchmarking exercises, and increased communication in scheduling meetings on prevention techniques.

Combined Total Recordable Case Rate (TRCR) for Fermilab employees and subcontractor workers for the performance period (October 1, 2008 – September 30, 2009).

For the performance period, there were 25 injuries that resulted in medical treatment beyond first aid. This equates to a rate of 1.22, which is significantly more than the target rate of 0.65. Types of TRC cases included DART cases, detailed above, lacerations requiring medical treatment, hearing loss, finger fracture, and insect bites requiring prescription medication. In response, the Laboratory started their Take Five campaign as described above and is in the process of putting together a PPE campaign with specific emphasis on gloves. This effort will consist of educating employees about the recent rash of lacerations as well as stocking appropriate gloves in the stockroom so they are readily available. Other initiatives include poster campaigns and signs at the Laboratory entrances that raise employee awareness of ES&H. Also, the Director addresses ES&H at the All Hands Meetings he has with the Laboratory employees, users, and contractors.

Reporting of non-compliances with 10 CFR 835, 10 CFR 850 and 10 CFR 851 into the ORPS/NTS tracking system is done in a timely manner, including corrective action follow-up and closure tracking.

There have been six Occurrence Reporting and Processing System (ORPS) occurrences entered thus far during the reporting period. Of those, 100 percent were entered within 20 days of recognition, thus exceeding the goal. ORPS occurrences are usually entered much earlier than the 20 day goal.

All corrective actions associated with the entries made into the Non-compliance Tracking System (NTS) have been completed or are scheduled for completion and are currently on schedule. In addition, events, incidents, injuries, and near misses are analyzed every quarter to identify programmatic trends. No such trends have been identified during this performance period. This exceeds the goal of 90 percent.

Innovations or improvements that can credibly improve the control of future radiation exposures are documented. One point will be credited for each identification. An additional point will be awarded for implementation of the identified improvement.

FSO reviewed entries in the As Low As Reasonably Achievable (ALARA) Opportunities for Improvement database to confirm that Fermilab had documented the number of innovations needed to meet this goal. Some of the opportunities identified and implemented included reduction in intensity prior to shutdown activities, reduced intensity startup, elimination of unnecessary ALARA steps based on actual situations, and MINERvA mapper modifications.

All work involving significant potential for radiation exposure to the workforce is subjected to an ALARA Radiological Work Permit review.

Through September 3, 2009, 949 anticipated radiation exposure tasks were reviewed. The Laboratory identified 139 jobs whereby a collective dose greater than 100 person-mrem was anticipated. Additionally, the Laboratory identified 30 jobs where a collective dose of greater than 200 person-mrem was anticipated. One hundred percent of the tasks identified for which the Total Effective Dose Equivalent (TEDE) exceeded 100 person-mrem, were reviewed in accordance with the Fermilab ALARA program.

Recognizing the recent changes in the Laboratory's electrical safety program, all energized electrical work on AC power distribution systems over 50 volts is to be performed under a rigorous review process requiring approval by the Fermilab Chief Operating Officer.

It is evident that Fermilab's policy against working on energized power distribution systems has permeated throughout the Laboratory. No electrical work permits were submitted to the Chief Operating Officer (COO) seeking permission to perform manipulative energized work on power distribution systems. Improved job planning was responsible for assuring that work on power distribution systems that in the past may have occurred on energized systems, no longer is necessary or justifiable. The Electrical Safety Subcommittee has developed policy and guidance on electrical utilization equipment which has been published in FESHM 5041. This is an area in which little program guidance is available in NFPA 70E. With these improvements to Fermilab's Electrical Safety Program, the requirements established in 10 CFR 851 are achieved as well.

Analyze OSHA-recordable injuries for human performance issues.

There were 25 recordable injuries and a causal analysis was done for each of the 25 recordable injuries. The analyses identified a variety of causal and contributing factors that included: communications, human performance and management problems. Additionally, the Injury Illness Subcommittee reviews each injury case and discusses causes and corrective actions. Last year the Fermilab Computerized Accident/Incident Reporting System (CAIRS) database was upgraded to provide a field for accident investigators to enter the results of their causal analysis. This assures that the causal analysis results are entered into Fermilab CAIRS before being submitted into the DOE CAIRS System. All of the injury

cases were analyzed for causal analysis, thus exceeding the goal of 95 percent. FSO participates on the Injury Illness Subcommittee in the analysis and categorization of work related injuries and illnesses.

Perform a series of division/section assessments on the implementation of the 10 CFR 851 standard for the Laboratory and subcontractor staff.

This year the Laboratory committed to perform four assessments on the implementation of the 10 CFR 851 standards (These areas include Hazard Identification and Assessment, Management Responsibilities, Industrial Hygiene, and Hazard Prevention and Abatement). All four of these assessments have been completed with FSO participation. Although minor gaps have been identified, it is important to note that the Laboratory's program is in compliance with the elements of 10 CFR 851.

Enhance the oversight of corrective actions and closure of items from the Fermilab Site Office Operational Awareness reviews.

During this performance period there were five FSO Reviews conducted within the area of ES&H. These reviews included: Injury/Illness Recordkeeping, Fall Protection Effectiveness Review, Radioactive Materials (Tracking, Managing, and Storage), Contractor Assurance System (CAS), and Accelerator Safety. The Laboratory has submitted a corrective action plan for each of the FSO reviews. Actions for the injury/illness review have been completed. The Laboratory is on track to complete all corrective actions associated with the other reviews.

Fully implement improvements to the CAS that were identified in the February 27, 2008, FSO CAS Report. This includes completing any actions remaining for FY 2008 and those scheduled for completion during the performance period.

Many of the findings identified in the FSO CAS Report have been addressed and those that remain open will be closed before the end of the calendar year. Failure to fully implement all of the corrective actions stemmed from a reorganization of the ES&H Section as well as lack of IT support for the section. A follow-up FSO CAS review, completed in April 2009, demonstrated that some of the CAS findings from the December 2008 review were completed while others needed additional work to consider them fully implemented. There were four findings associated with the April 2009 review. While the Laboratory made procedural changes to the CAS Program and considered these findings corrected, there was inadequate verification that the procedural changes were implemented in the field.

5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.5).

Safety-related training for line managers and staff is well-developed, and required training is identified in Individual Training Needs Assessments (ITNAs) for all managers and staff.

Laboratory senior management gives the completion of the Individual Training Needs Assessments (ITNAs) and required ES&H training a high level of attention. Most Laboratory Division/Sections (D/Ss) managers review the status of the ITNAs during their regularly scheduled internal staff meetings. During the contract year of October 1, 2008 through September 30, 2009, thus far, 2,207 of the Laboratory's 2,122 employees (95.5 percent) had an ITNA performed for them. The ITNA completion rate is tracked on the Leading/Lagging indicators table which is discussed with senior Laboratory managers at the Weekly Scheduling Meeting.

Employee required safety training is reviewed annually and when employees accept new positions. Employee ITNAs are reviewed and when necessary revised by the employee's supervisor at the start of work.

Staff demonstrates cognizance and engagement in the safety program through participation in the Laboratory Safety Committee (LSC) and its various Subcommittees. The LSC meets on a monthly basis to discuss issues of ES&H import. Activity reports from the subcommittees are provided at these meetings to inform and engage the committee members. Minutes are also posted on the ES&H website for all to view.

100 percent of the scheduled LSC meetings were held on a monthly basis and all of the minutes were posted within 10 working days of the meeting. There are thirteen technical subcommittees that report to the LSC and each of those subcommittees are made up of technical experts and interested "citizens". The LSC meets on a monthly basis and is provided with updates from the subcommittees on the status of their activities. FSO staff attends these meetings on a regular basis.

An open reporting culture is maintained at the Laboratory while appropriately responding to ESH&Q incidents. FSO and the Laboratory will meet on a monthly basis to optimize communication between the two organizations on ESH&Q topics. Agenda items will include: new DOE initiatives and status of action items associated with them; current DOE-SC action items and requests; recent non-routine events; lessons learned from various sources, and opportunities for program improvements.

92 percent of the meetings were conducted. While FSO and Fermilab maintain continuous communication, these meetings are particularly useful in focusing on higher level issues and assuring that progress continues to address those issues. The monthly meetings also provide time for uninterrupted discussions about timely topics. Topics ranged from standing agenda items such as progress on performance measures, to the status of implementation of 10 CFR 851; ISO 14001 and OHSAS 18008 registration activities. Minutes of each meeting are kept, distributed, and posted on docdb.

Fermilab senior management clearly demonstrates their commitment to strong safety performance.

The Laboratory Director conducted 12 facility walkthroughs in eleven months, speaking to over 100 employees individually. Numerous facilities were toured that included space in all of the Divisions and Sections and one construction site. The Deputy Laboratory Director also accompanied the Director on several of these walkthroughs. Positive feedback was received by Laboratory employees and scientists. It was an excellent opportunity for the Director to connect with the general population in the field and emphasize his commitment to safety at the Laboratory.

The Laboratory Director and D/Ss heads routinely discuss ES&H elements/issues in the sections of the Fermilab Electronic Newsletter, *Fermilab Today.* Several of the D/S/Cs also publishes their own internal newsletters on a monthly or quarterly basis contain ES&H topics. In tow of the operating divisions, a newsletter is sent electronically with a statement about safety. The *Fermilab Today* newsletter frequently contains a safety tip of the week. This tip is often written by the Associate Head of the ES&H Section.

During this fiscal year, a new communication tool was launched, the Take Five for Goal Zero campaign. In this case, both the Laboratory Director and the ES&H Director had articles in the *Fermilab Today* rolling out the new initiative. There is a web page of tools associated with this campaign linked from the Fermilab webpage.

In June 2009, the Laboratory hosted its inaugural Summer ES&H Fair. This fair was held in the atrium of Wilson Hall. There were a number of tables and experts on site promoting various ES&H topics. Specific items were given away at each table and larger items were raffled off throughout the fair. This initiative was well received by the Laboratory employees.

FSO is on distribution of many of these electronic newsletters and supports the ES&H emphasis contained within them. FSO also supports the other initiatives such as the periodic ES&H fairs and the Take Five campaign, and recognizes them as positive actions to improve the Laboratory's ES&H Program.

Fermilab divisions and sections maintain their organizational ES&H Plans as a grass-roots foundation of the Fermilab ES&H program.

At the end of the calendar year 2008, all of the Divisions and Sections at the Laboratory turned in the results of their CY 2008 ES&H Plan. In addition, each Division and Section provided to the Director their updated ES&H Plan for CY 2009. This calendar year Fermilab's divisions and sections planned over 50 specific actions. Some of the categories included: environmental initiatives, communication, procedures and documentation improvements, inspections, feedback, suggestions/recognition, HPI/Causal Analysis Training, and off the job safety.

Fermilab will continue to strongly support the Highly Protected Risk (HPR) Inspection Program as a foundation of the Fermilab safety program.

Eighty-three buildings were scheduled for Highly Protected Risk inspections during FY 2009, and all of them have been completed. The findings resulting from the inspections represent very low level hazards and in many cases resulted in immediate abatement. The results of these inspections are trended quarterly and will be reviewed for lesions learned and/or opportunities for improvement. Recently, improved communication of the inspection results to senior D/S managers has been implemented and should provide increased management attention to identified issues. FSO frequently participates on these inspections and finds them to be effective tools in maintaining solid fire protection and emergency planning programs.

Develop a Laboratory policy for the implementation of the applicable requirements of the National Environmental Policy Act (NEPA).

On March 3, 2009, DOE FSO formally issued the *Report on Lessons Learned from NOvA Experience with the DOE NEPA Process*, to the DOE Chicago Office and the Office of Science. As a result, in the first quarter of 2009, a web based primer on NEPA and Environmental Assessment (EA) preparations entitled "NEPA NOTES" was developed and posted on the ES&H website. In addition, an article entitled *From Oil Spill to Environmental Law* was published on March 30, 2009 in the *Fermilab Today* that discussed the origins of NEPA and provided an overview and links to additional resources including the above mentioned primer. The Laboratory has formalized the appointment of a central point of contact (P.O.C.) for all NEPA activities.

5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention

The Laboratory earned an overall letter grade for this objective of B (with a numerical score of 3.0).

Success in minimizing waste generation from major Fermilab programmatic and support activities.

The Laboratory has completed an environmental review of 59 projects during FY09. This accounts for 100 percent of all projects, exceeding the expectation.

The criteria used to subject projects to the Environmental Review Form were not provided or explained. Nevertheless, the process of subjecting projects to environmental review involved employees in identifying potential environmental impacts related to their work and thereby expanded employee involvement in and awareness of environmental issues. These results are underlying expectations for

this Objective. Awareness and commitment are essential not only to growing but to perpetuating a culture environmental stewardship. DOE believes the Laboratory is making good progress in this area.

Using the Environmental Review process has identified projects with potential environmental impacts or waste minimization opportunities. The Laboratory making the Environmental Review Form available to all Divisions and Sections presents a strong opportunity to use the process lab-wide; however making it available does not ensure the process is utilized. Work may remain to integrate the tool into routine work planning. Follow-up efforts will likely be necessary to implement this process fully at a law-wide level. Identifying a path forward and assigning responsibilities to achieve this result would optimize the chance of success.

Successful User involvement in environmental planning, minimizing waste generation, and avoiding adverse environmental effects from experimental activities.

Based upon the information provided, the Contractor exceeded this Target's expectation that 95% of proposed experimental work involving the User community will undergo environmental review by achieving 100%. This accomplishment advances underlying expectations for the overall Objective, which are to engage employees in environmental stewardship and to integrate sustainable practices (e.g., waste reduction efforts) in work activities.

On the other hand, involving Users themselves in environmental stewardship also was an expectation for this Measure. The Contractor's accounting of its performance does not identify how the User community became involved in the environmental review process; however, DOE understands that a former experimenter, now review coordinator, has taken the initiative to identify for the Users those environmental aspects the experiment review committee considers important to address in the descriptions of experimental setups.

This effort to assist the Users is evolving and informal. Nevertheless, DOE considers that the subject matter experts from the experiment review committee providing the experimenters with a list of environmental review topics is a significant step forward in communicating expectations and motivating critical environmental thinking at the outset of experiment planning.

Successful lab-wide implementation of an Environmental Management System, as demonstrated by performing opportunity assessments that evaluate the potential to improve specific environmental aspects.

The Laboratory has demonstrated repeated success in implementing the Environmental Management System (EMS) objectives at Fermilab. Although implementation may be uneven in some organizations, external and internal reviews have identified robust and consistent efforts to use sound environmental practices, correct weaknesses, and identify opportunities for improvement. A DOE audit in April 2009 enabled the Department to declare that Ferial is in compliance with ISO 14001, and during the same month concluded that Fermilab complied with the standard with no major non-conformances. Two internal tripartite assessments preformed in FY 2009 in the Technical and Particle Physics Divisions also addressed EMS practices particular to those organizations. These Divisions are using the results of these assessments to direct their EMS efforts.

The DOE received a Violation Notice from the Illinois Environmental Protection Agency (IEPA) issued September 24, 2009, which detailed that an unpermitted substance (chromium) had been stored as a component in a small volume of mixed waste at the Fermilab hazardous waste storage facility. The governing IEPA permit does not include chromium. DOE notes that the Laboratory immediately began steps to dispose of the waste. DOE also notes that the remaining inspection results found Fermilab to be in compliance with the permit.

The Environmental Protection Subcommittee continues outstanding efforts to keep environmental programs current, on track, and compliant with regulatory requirements. DOE has observed the team

approach to tackling issues and communicating environmental information lab-wide. Twice-monthly meetings and work assignments have helped to keep information current and progress on track. The Subcommittee members developed the Environmental Management Program tools now relied upon to describe and define environmental aspects at Fermilab. Division and Sections continue to strengthen the capabilities of the Environmental Officers by defining their roles and responsibilities, and the Environmental Officers have responded with assertive efforts to meet those expectations.

The Laboratory remains open to continual improvements in its safety and environmental programs, including the potential benefits of obtaining certification in international standards.

Fermilab has maintained its registrations in ISO 14001 and OHSAS 18001 without major non-conformances throughout the performance period. Proactive efforts to improve the ES&H program and support these registrations include not only completing the Fermilab ES&H Manual (FESHM) Chapter 3020, "Incident Investigation and Analysis" and evolving the Lessons Learned program, but also efforts to identify and implement objectives and targets for internal Environmental Management Program descriptions that can help define and execute these programmatic initiatives and measure progress. The Environmental Protection Subcommittee, composed of members from Fermilab Divisions and Sections, has demonstrated a collaborative commitment to sound environmental practices as well as cross-communications that strengthen Laboratory efforts to maintain these certifications and demonstrate continuous improvement.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection					
5.1 Provide a Work Environment that Protects Workers and the Environment	B+	3.4	35%	1.19	
5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management	A-	3.5	35%	1.23	
5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention	B	3.0	30%	0.90	
				Performance Goal 5.0 Total	**3.3**

Table 5.1 – 5.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 5.2 – 5.0 Goal Final Letter Grade

6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

The Contractor sustains and enhances core business systems that provide efficient and effective support to Laboratory programs and its mission(s).

The weight of this Goal is 25%.

The Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s) Goal measured the Contractor's overall success in deploying, implementing, and improving integrated business systems that efficiently and effectively support the mission(s) of the Laboratory.

The combined scores of each objective in 6.0 rolled up to an overall letter grade of B+ (with a numerical score of 3.4).

Objectives:

6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.5).

Effective Cash and Debt Management Practices. (Vendors are paid on time.)

The Laboratory's invoices show that 98.9 percent of standard purchase orders and 99.4 percent of Ordering Agreements are being paid on time, which exceeds the target. It is noted that the percentage of standard purchase orders being paid on time improved from 98.7 percent in FY 2008 to 98.9 percent in FY 2009 and ordering agreements improved from 98.9 percent in FY 2008 to 99.4 percent FY 2009.

According to the Laboratory, all payments to major vendors were made on time for the first eleven months of FY 2009, and they expected no change for the final month of September. Also, it is noted that payments to major vendors were made on time in FY 2008.

Effective Budget Management (Budget Formulation).

As noted in Fermilab's comments, the FY 2011 budget submission was completed, compliant with DOE guidance, and was submitted on time in accordance with the due date of April 15, 2009.

The DOE Annual Budget Validation Review was not performed in FY 2009. However, based on previous years' Budget reviews, no exceptions have been taken.

Effective Budget Management (Budget Execution).

Of the $332 million in costs reported in FY09, only 0.4 percent required B&R category reclassification after costs were first reported.

All transfers between B&R's were identified by Laboratory employees in their normal course of business. Further, the FY 2009 OMB A-123 Internal Control Assessment found no deficiencies involving internal controls to proper costing practices.

Cost for the Laboratory did not exceed total budget authority provided in the contract at any time during FY 2009.

Number of material findings resulting from financial audits, reviews, and other assessments or appraisals which highlight weakness in the Laboratory business and management control structure.

There were no material findings resulting from financial audits, reviews, or other assessments or appraisals indicating material weakness in the Laboratory's business and management control structure. DOE has reviewed Erroneous Payment reports for the year. The Erroneous Payment report is an OMB Circular A-123 requirement in which Field Offices have to monitor the Laboratory's number of payments and dollar amount of erroneous payments made for payroll, travel, and vendor/contractors. When the number of erroneous payments exceeds 1.50 percent of total payments, a corrective action plan has to be submitted. For the first nine months of FY 2009, Fermilab has made $216,359,168 of payments with only $19,343 being classified as erroneous. This equates to 0.01 percent, which is well within the threshold of 1.50 percent.

6.2 Provide an Efficient, Effective, and Responsive Acquisition Management System(s)

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.3)

Evaluation of the Procurement function in accordance with the DOE-approved Procurement Balanced Scorecard.

Procurement operations real time customer feedback addressed their effectiveness in providing quality material and services in a timely manner. The Laboratory procurement's customer perspective for FY2009 equated to a value of 94%. This response is within the national target of ≥92%.

The internal business perspective assures that customer requirements and expectations are understood, and that the appropriate procurement processes are in place to support customer needs. As measured through the sub-elements of effective internal controls and supplier management (on-time deliveries), use of effective competition and alternative procurement approaches, timely support and good corporate citizenship (socioeconomic goal achievement) through purchasing, the Laboratory received a score of 45 out of 50 potential points.

The Laboratory met the 100% local target for employee satisfaction and exceeded the 98% national target by 2% for employee alignment with organizational goals.

The Laboratory, for every dollar spent to purchase an item, expends 16 cents to do so. This is a one cent increase from FY08, but remains below the target by 6 cents for the Fiscal Year. Thus, the Laboratory's procurement efficiency exceeds expectations of fewer than 22 cents per dollar expended.

The overall target was exceeded in that the Laboratory achieved 95 of the 100 points available.

The Laboratory successfully meets Acquisition Management M&O contract requirements

The Laboratory continues to improve the level of quality and timeliness of documents submitted requiring review and/or approval by the Fermi Site Office. New procedures have been implemented with Fermilab procurement that requires added management review of these requests prior to submittal to FSO for procurement packages and advance notifications.

Fermilab also performed a self-assessment of Procurement's internal controls to assess compliance with established policies and procedures. Activities spanning the entire procurement life cycle (from sourcing through subcontractor evaluation) were reviewed, including all purchase orders priced at $50,000 or more that were awarded in FY09. A checklist that thoroughly covers required purchase order activities was utilized. Compliance was 2% above the BSC internal control target. The assessment confirmed that Fermilab's procurement files and documentation exceeded the established expectation.

Also, Fermilab conducted a separate BSC review of ARRA funded awards. Approximately 25 purchase orders totaling $425,335.00 were reviewed for compliance with the ARRA guidelines. All ARRA funding was segregated; no ARRA funding was allowed for P-card purchases; all ARRA work was fixed-price; and all requisitions with ARRA funds are currently identified in the procurement system as "STI" to indicate the use of ARRA funds. All applicable ARRA terms and conditions have been added to awards with ARRA funds.

The Laboratory demonstrates a commitment to process improvements in the Acquisition Management System.

In FY09, the Laboratory implemented two procurement areas for process improvement. The first was increasing the Sole Source Justification Limit from $2,500 to $5,000 to lower the transaction volume for sole source purchases under the small purchases threshold. The dollar level was benchmarked against other DOE Laboratories along with their internal transaction volume. This improvement allows the procurement staff the ability to spend more time leveraging and negotiating higher dollar value acquisitions. The second improvement was the automation of advance notifications for sole source actions over $100,000 to more efficiently expedite these requests through the Fermilab Site Office which increases the time available for the Laboratory to completely execute the awards.

The target has been met. However, further improvements are needed in the level of quality in the documents received.

6.3 Provide an Efficient, Effective, and Responsive Property Management System(s)

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.6)

Evaluation of the Property function in accordance with the DOE-approved Property Balanced Scorecard.

Fermilab has achieved a high level of performance against their FY 2009 BSC, which is in line with previous results. Outside of the BSC elements, the Laboratory uses excess property as feasible; is very proactive on supporting the DOE Energy-Related Laboratory Equipment (ERLE) Grant Program; has a long standing effort on recycling of electronic components of surplus property; and supports property training initiatives, which is important for the long term ongoing performance in property management. Also, in FY 2009, Fermilab was awarded the Federal Electronics Challenge Bronze Level Award for their work on recycling and reusing computers and other electronics throughout FY 2008. This was a repeat award for the Laboratory.

The Laboratory will provide effective management and oversight of the Fleet Management function.

The Fermilab Fleet Management Program operates in an efficient and effective manner, and scored highly against their respective criteria of the Property Balanced Scorecard. Through their proactive outreach, Fermilab was able to obtain 24 new vehicles through The American Recovery and Reinvestment Act of 2009, thus aiding the Laboratory in their goal of transforming the vehicle fleet to 100 percent Alternative Fueled Vehicles.

The National Safety Council Fleet Perfect Record Award continues to be achieved by the Laboratory since its initial award in November 2007.

Year end results for Fleet Utilization are expected to be at 98 percent, exceeding the 93 percent requirement. In addition, the Laboratory exceeded annual petroleum consumption reduction requirements and alternate fuel increased usage requirements contained in Executive Order 13423, Strengthening Federal Environmental, Energy and Transportation Management Efficiency. The requirement set forth for FY 2009 was two percent, and the Laboratory achieved a reduction of ten percent.

During FY 2008, a lapse occurred in the submittal of final SF-91, Motor Vehicle Accident Reports, to DOE-FSO. In FY 2009, there were several instances of this lapse occurring after comments had been provided to the Laboratory. On the whole, this deficiency has decreased and currently is operating smoothly.

6.4 Provide an Efficient, Effective, and Responsive Human Resources Management System and Diversity Program

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.3).

Development of a succession plan to ensure continuous quality leadership at the Laboratory.

This measure is significant to Fermilab in assuring that staffing resources are available to assume Laboratory's leadership roles in the future. Research was conducted by the Laboratory to identify best practices. Discussions were held with ten national laboratories and two corporations. All key personnel (Associate Laboratory Directors) were interviewed. The results of the interviews were summarized and a succession plan process was drafted and sent to the Laboratory Director. The plan includes: purpose, elements, the FY 2010 succession planning process, discussion guidelines for succession planning meetings, and planning forums.

At this time the draft plan/process has not been approved by the Laboratory Director for implementation.

The Laboratory will increase the effectiveness of recruiting and performance reviews to improve productivity through the use of Roles, Responsibilities, Authorities and Accountabilities (R2A2) documentation.

The Laboratory developed an R2A2 format, conducted an analysis of positions, and ascertained the number of R2A2s required. Of the 18 that will be written, eight (44 percent) have been complete.

The driver leading to the development of the R2A2's was the proposal submitted to DOE by FRA during the competition process. The implementation was chartered by the Laboratory's Workforce Development and Resource Section (WDRS), which contains Fermilab's Human Resources Department. It is intended to document, generically in nature, the roles, responsibilities, authorities, and accountabilities (starting from the top Laboratory positions down to the non-exempt employees) usually identifying one R2A2 per position. Exceeding the target is not of such a major significance that a grade above the B+ level is warranted.

The Laboratory will incorporate scientific hiring procedures into Human Resource employment processes.

The intent of this measure was to loop scientific hiring into existing WDRS processes and procedures. Completing this goal was a significant culture change for the scientific community at the Laboratory since the hiring of scientific personnel was done outside of the published HR hiring protocols. A Task Force, comprised of scientists who hire scientists at all levels, was established and procedures governing the Task Forces were developed that incorporate WDRS hiring practices into the process of hiring scientific personnel. As a result of WDRS participation in the scientific recruitment process, the efficiency of the scientific hiring process at the Laboratory has improved. The outcome resulted in training of 95 percent of scientific managers and application of the new procedures to 100 percent of open scientific procedures. It also indicates value-added services are now a part of the scientific hiring process.

The Laboratory will staff the Director's Diversity Council which will work to strengthen the diversity of Laboratory personnel and improve the retention of diversity candidates.

All Diversity Council Committees have been staffed. A total of 72 (3.7 percent) of all Laboratory employees participate in the Diversity Council committees. The composition of the committee includes 9.7 percent of all women and 11.6 percent of all minorities, currently.

The major Diversity Council committees will make viable and beneficial recommendations to improve the Laboratory's ability to attract and retain top quality employees.

The Laboratory established two employees' resource groups – Globe and Unity Coat. Diversity Council committees organized several events including the Diversity Fair, International Human Rights Month, Black History Month, and Asian Heritage Month. A Mentoring Program was established as proposed by the Committee for Hiring and Retaining Technical Staff. An on-line mentoring tool called Fermilablink was set up and is available to all employees. A recruiting DVD is currently being produced.

6.5 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.3).

Internal Audits are conducted in accordance with applicable auditing standards.

The Laboratory successfully passed DOE-Office of Inspector General's (OIG) tests of Internal Audit's implementation of the Annual Allowable Cost Audit, including compliance with Professional Audit Standards and implementation of the Team Mate automated work paper system. The Laboratory also worked with Management, the DOE Site Office and OIG representatives to promptly address the DOE-OIG's expectation regarding statistical evaluation of questionable costs.

The Laboratory successfully passed DOE-OIG's tests of the Cooperative Audit Strategy across the complex including general audit management, planning and implementation of the Internal Audit Program. These additional accomplishments resulted in an increased effectiveness of IA through peer interaction and use of professionally accepted quality standards. The Fermilab Internal Audit Group served as Team Members during the Sandia National Laboratory Internal Audit Peer Review. Internal Audit's effectiveness is monitored through verbal and written communications with the Fermi Research Alliance Board of Directors Audit Committee. Fermilab IA serves as a member of the Contractors Internal Audit Directors (CIAD) Professional Standards Subcommittee – Working behind the scenes to promote adoption of The Institute of Internal Auditors (IIA) Quality Assurance Manual (QAM) for conduct of peer reviews across the complex. FRA's Internal Audit (IA) will be the first site where the IA's new QAM will be used by CIAD to conduct a review. Fermilab increased interaction and information sharing with IA at Argonne. IA serves as instructor for Fermilab's Management Practices training program to convey the purpose of the IA function to new supervisors.

As a result of external reviews, surveys and inspections, FSO is unaware of any deficiencies that would preclude efficient and effective Internal Audit and Oversight. Furthermore, we have no reason to disagree with the Laboratory's ability to conduct Internal Audits in accordance with applicable auditing standards.

Contractor's success in meeting Internal Audit and Oversight management goals and expectations.

Planned audits and substitutions were completed as agreed. An additional audit (FRA, LLC Annual Allowable Costs) is being completed. OMB Circular A-123 Testing was performed to facilitate timely Management reporting to the DOE. Unexpected high priority Financial Management Assurance internal control testing was done to facilitate Management reporting to the DOE. An evaluation of the supplemental life accounting error was completed to provide Fermilab Management with suggestions to

strengthen controls. A review of personal Conflict of Interest Statements was performed. Fiscal year end audit assistance was provided to facilitate KPMG's independent external audit. Fermilab Internal Audit led the coordination and expeditious completion of year end inventory counts.
Progress continued to be made tracking and closing internal audit findings in a timely manner. IA actively pursued opportunities to promptly close findings during fieldwork.

The FY09 Annual Internal Audit Plan was completed, and the FY 2010 Annual Internal Audit Plan was submitted and approved. In addition, there are no known audit findings that have not been tracked and/or resolved by the Laboratory.

Contractor's success in meeting Information Technology management goals and expectations.

One Information Technology (IT) project met the target criteria of schedule, budget and technical milestones achievement in the approved IT project plan over $500K. However, this project was only partially completed due to a redirection of resources needed to plan and execute the furlough program.

By the end of this performance period, demonstrate implementation of an approved Fermilab Integrated Quality Assurance Program (IQAP) and effective compliance with DOE Order 414.1C, Quality Assurance.

Fermilab Office of Quality and Best Practices has provided routine presentations on the status of the QA implementation. All milestones identified on the approved schedule have been met, including gap analysis and writing of the Corrective Action Plan.

The Laboratory's success in meeting business system Information Technology management goals and expectations.

The target for this measure was that Business System Information Technology Projects in excess of $500,000 achieve 90 percent of specified milestones in the project plans. One Business Systems IT project was above this dollar threshold in 2009; the Fermilab Time and Labor (FTL) Project. In February, the MIS department came into the Computing Division. As a result of the review conducted by the new management, a decision to implement central authentication of users was decided upon, thus requiring the schedule and technical milestones to be adjusted. The FTL Project has been deployed for all exempt employees, and deployment for non-exempt employees is planned through mid FY 2010.

The Laboratory provides effective tactical business system IT planning in support of the Laboratory's missions and goals.

The FY 2010 Strategic Plan was developed in concert with the Computing Division's strategic planning and budget process. This was to be put in place by September 30, 2009, and has therefore met this expectation.

The business system IM products and services meet customer requirements.

A customer service survey of 15 to 20 "key" business customers was conducted by the Computing Division. This survey resulted in a rating of 4.75 out of 5 (5=excellent) for FY 2008. The rating for 2009 is expected to be approximately the same.

The business system IM program provides cost effective products and improved services.

The target for this measure was the business system IM projects being completed as identified in the IM plans and demonstrating measurable improvement and cost-effective services and products. Twelve of the 22 projects originally scheduled for the year were completed. This was due in part to a reprioritization of these projects and other work that was conducted after the MIS department was added to the Computing Division.

The Laboratory effectively prepares for and successfully follows a DOE Earned Value Management System Certification process in coordination with and subject to support from the DOE Office of Engineering and Construction Management, Program/PSO and Site Office. This measure supports meeting the objective to employ an EVMS that is compliant with ANSI/EIA-748-A-1998 per Doe Order 413.3A requirements.

Following implementation of the FRA EVMS and preparations that included training of project managers and staff, FRA/Fermilab completed the EVMS Readiness Assessment with DOE-Office of Engineering and Construction Management (DOE-OECM) January 9, 2009. DOE-OECM conducted an on-site certification review May 11-15 2009, resulting in only three corrective action requests. FRA/Fermilab developed a Corrective Action Plan (CAP) and submitted it to OECM, which accepted the CAP in June 2009. All corrective actions have been implemented in accordance with target completion dates that communicated to OECM. The corrective actions included FRA's voluntary advancement of the roll-out plan for the Fermilab Time and Labor System, which helped implement one of the corrective actions as soon as practical, which was October 1, 2009. Follow-up review will be scheduled with OECM, once the required auditable monthly "evidence files" are received by OECM, which will require up to three additional months beyond October 1, 2009.

6.6 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.2).

The Laboratory will timely report new inventions to DOE, filing U.S. and where appropriate, foreign patent applications to create intellectual property assets.

Currently, Fermilab has not received any income from licensing agreements.

Fermilab is advised to review their internal procedures for the processing of CRADA's Preaward to determine if they are conducive to efficient management of this critical step in the CRADA process.

The Fermilab Today is a key communication tool for the Laboratory to communicate with the surrounding communities. It is updated on a daily basis with news and information that reaches 5,000 subscribers outside of all Laboratory employees. In addition, Fermilab manages the production of "Symmetry" Magazine and the online "Symmetry Breaking". They also have responsibility for the US LHC website, the Interactions.org website, and the new Quantum Diaries website.

Fermilab has made a point to include the local communities in planning the Laboratory's future through public participation in the Citizen Task Force. They have established an ARRA website to inform the public of progress on implementing the portion of the ARRA funds assigned to Fermilab.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)					
6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)	A-	3.5	19%	.67	
6.2 Provide an Efficient, Effective, and Responsive Acquisition Management System(s)	B+	3.3	19%	.63	
6.3 Provide an Efficient, Effective, and Responsive Property Management System(s)	A-	3.6	19%	.68	
6.4 Provide an Efficient, Effective, and Responsive Human Resources Management System	B+	3.3	19%	.63	
6.5 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	B+	3.3	19%	.63	
6.6 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets	B+	3.2	5%	.16	
				Performance Goal 6.0 Total	**3.4**

Table 6.1 – 6.0 Goal Performance Rating Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 6.2 – 6.0 Goal Final Letter Grade

7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

The Contractor provides appropriate planning for, construction and management of Laboratory facilities and infrastructures required to efficiently and effectively carry out current and future S&T programs.

The weight of this goal is 15%.

The Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs Goal shall measure the overall effectiveness and performance of the Contractor in planning for, delivering, and operations of Laboratory facilities and equipment needed to ensure required capabilities are present to meet today's and tomorrow's complex challenges.

The combined scores of each objective in 7.0 rolled up to an overall letter grade of A- (with a numerical score of 3.6).

Objectives:

7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.6).

Effectiveness and efficiency of maintenance activities to maximize the operational life of facility systems, structures, and components (scheduled hours vs. total hours, measured as a percentage).

The target established for this measure is greater than 80 percent scheduled maintenance hours as a percentage of total maintenance hours. Fermilab's performance for FY 2009 was 90 percent (this includes only an estimate of performance for September). This is well above the target goal and justifies the Laboratory has exceeded their requirement.

Demonstrated efficient and effectiveness for recapitalization and acquisition of required facilities and infrastructure to support the mission readiness of Laboratory programs and performance of maintenance.

Fermilab developed a Mission Readiness Process and completed a Mission Readiness Baseline Review. The Laboratory also participated in Mission Readiness Peer Reviews at ORNL and PNNL. Also, the Laboratory continues funding maintenance at approximately two percent of replacement plant value. The Utilities Upgrade, which will fund needed repairs to the Industrial Cooling Water and High Voltage Electrical Systems, received CD-0 approval.

For the performance period, the percentage of milestones completed (number of milestones completed/number of milestones planned), as documented in Construction Directives for General Plant Projects, In-House Energy Management and Accelerator Improvement Projects (AIP).

Fermilab completed all 12 planned milestones for small projects. This exceeds the target set forth in the measure.

In support of the goals of the Department of Energy's Transformation Energy Action Management (TEAM) initiative, the goals and objectives contained in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management; the Contractor shall cooperate with FSO personnel to provide full and open access to the maximum extent practicable to NNSA/DOE-contracted Energy Service Companies (ESCOs) under Energy Savings Performance Contracts (ESPC), to facilitate on-site assessments of opportunities to improve the Site's energy efficiency, including water reduction and renewable energy improvements, and shall provide advisory assistances in reviewing ESCO recommendations as directed by the Contracting Officer. The Contractor shall ensure ESCO personnel are granted access pursuant to contractual requirements; monitor ESCO activities to ensure that site safety and security requirements are adhered to; promptly provide information requested by ESCO personnel to assist them in developing viable recommendations; and, when directed by the Contracting Officer, assist the Site Office in the monitoring and execution of ESPC projects.

Approval of the FY 2008 Executable Plan was received by the milestone date of December 31, 2008, meeting the target goal. Fermilab has also completed 100 percent of the actions identified for FY 2009 in the Executable Plan on schedule, exceeding the expectation of 90 percent.

7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to Support Future Laboratory Programs

The Laboratory earned an overall letter grade for this objective of A- (with a numerical score of 3.5).

Percent of new GPP projects that were identified in the Laboratory's facilities and infrastructure planning documents at least one year before the authorization was approved. This shall exclude programmatic projects that have arisen out of rapidly changing program requirements as described by the Laboratory and agreed to for exclusion by the Fermilab Site Office.

Seven of eight new General Plant Projects started in FY 2009 and were identified at least one year before the authorization was approved. This is 88 percent, which exceeds the target of 80 percent.

Amount of Scheduled Tevatron run time lost due to a failure of the electrical distribution system that is under the control of the Laboratory Infrastructure Management Group. Failure of the electrical distribution system will immediately shut down the Tevatron. Therefore, maintaining this system is critical.

Fermilab achieved a downtime of 0.8 percent downtime under the control of the Laboratory Infrastructure Management Group, which greatly exceeded their measure of achieving less than five percent (this includes an estimate for the remainder of September).

Amount of scheduled Tevatron run time lost due to a failure of the industrial water cooling system that is under the control of the Laboratory Infrastructure Management Group. Failure of the industrial water cooling system will shut down the Tevatron within a very short period of time. The Tevatron can not run without cooling. Therefore, maintaining this system is critical.

Fermilab did not incur any downtime due to the industrial cooling systems under the control of the Laboratory Infrastructure Management Team in FY 2009. This greatly exceeds expectations.

The Laboratory's Internet bandwidth is maintained or improved to accommodate strategic research collaborations requiring extensive computation resources and transfer of large data sets.

Fermilab maintained the internet bandwidth at 85 Gb/s supporting the data movement requirements of the experiments and thus meeting the target of this measure.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs					
7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs	A-	3.6	60%	2.16	
7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to Support Future Laboratory Programs	A-	3.5	40%	1.40	
				Performance Goal 7.0 Total	**3.6**

Table 7.1 – 7.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 7.2 – 7.0 Goal Final Letter Grade

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

The Contractor sustains and enhances the effectiveness of integrated safeguards and security and emergency management through a strong and well deployed system.

The weight of this Goal is 10%.

The Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems Goal measured the Contractor's overall success in safeguarding and securing Laboratory assets that supports the mission(s) of the Laboratory in an efficient and effective manner and provides an effective emergency management program.

The combined scores of each objective in 8.0 rolled up to an overall letter grade of B+ (with a numerical score of 3.1).

Objectives:

8.1 Provide an Efficient and Effective Emergency Management System

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.2).

Complete corrective actions for reviews in accordance with approved Corrective Action Plans.

During FY 2009, no Laboratory emergency management findings were identified during Tripartite assessments. The continued reduction in the number and severity of the findings indicates a maturation of the emergency response program. There was evidence in ESHTRK of notes from Particle Physics and Technical Division on their participation in tornado drills.

Employee and Management awareness of their Emergency Management responsibilities.

On November 5, 2008, the EOC was assembled to handle a power loss to the site. The Laboratory reviewed the timeline, procedures, and processes. Procedures were then updated as necessary. Additionally, members of the EOC staff have been officially assembled in order to address, in a planning format, the upcoming H1N1/flu season.

Fermilab was required to conduct at least two facility drills per occupied building during FY 2009. As of September 21, 2009, the Laboratory had completed 114 out of 128 drills. Verification has taken place that the remaining drills were completed within the time frame of the performance period. In addition, eight fire drills and 12 tornado drills were also completed in non-required buildings.

FSO and Fermilab Senior Safety Officers review Division/Section/Centers' Local Area Emergency Plans (LAEPs) during their regular Tripartite assessments. FSO has found that they are up to date and meet all requirements.

8.2 Provide an Efficient and Effective System for Cyber-Security

The Laboratory earned an overall letter grade for this objective of B (with a numerical score of 3.0).

Amount of time that the Tevatron does not run, or CDF/D0 experiments cannot take data, or business systems are unable to operate, that is attributable to a successful cyber attack.

The Laboratory reported that no downtime of the Tevatron, CDF/D-Zero experiments, or business systems could be attributed to a cyber attack. This performance substantially exceeds the goal of less than 20 hours of time lost.

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

The target for this measure was less than or equal to 1 TB of data. The Laboratory reported that no experiment data was irrecoverably lost as a result of a cyber attack, exceeding expectations.

Ability to complete planned cyber-security actions per established schedule.

The Laboratory completed all actions associated with the Plans of Actions and Milestones on or ahead of schedule. This performance meets the expectations.

Continuous monitoring is performed annually by the Laboratory and reported to the DOE Designated Approval Authority (DAA).

Fermilab assessed 98 percent of the moderate level controls on each of its NIST systems categorized as having moderate impact, exceeding the target of 90 percent, and will report the results to the DAA.

The Laboratory and Computer Security staff maintains awareness of their Cyber-Security responsibilities.

Ninety percent of Fermilab Computer Security Staff, Desktop Administrators, System Administrators, and computer users completed role-specific computer security training this fiscal year, meeting the expectations for this target.

8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, Classified Matter, and Property

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.4).

Nuclear Materials are accounted for and controlled in accordance with all relevant procedures.

The quarterly Transmission of Nuclear Material Balance Reports for March, June, and September indicated there were no nuclear material transactions in 2009. In September 2009, FSO, with the DOE Headquarters SC Senior Nuclear Safety Advisor, visited the Low Level Waste Handling Building (LLWHB, Site 40) to pull randomly selected sealed radioactive sources from their storage locations. There were no discrepancies identified between the listed and observed seal sources in this storage location.

Employees, management and users maintain awareness of the Fermilab's designated Property Protection Areas (PPAs) and their associated security responsibilities related to PPAs access and wearing of badges.

Uniformed security officers conducted walkthroughs of all PPAs over a designated seven day period in each quarter of the performance period. A variety of facility concerns were noted and promptly

addressed by the Locksmith. Overall, the results for FY 2009 were 99.7 percent. This exceeds the performance expectation.

The Laboratory will perform the necessary interface activities with the current DOE prime security contractor.

Fermilab staff participated in regular staff meeting with the protective services contractor. The Laboratory also provided vehicles for the contractor and has instituted controls that appear to have been successful in reducing unexpected downtime. Fermilab staff was supportive of DOE during preparations for a protective services contract extension. Minimal success in supporting the overall improvement of the protective services contractor performance was achieved primarily due to a lack of commitment on behalf of the protective services contractor site manager. The Laboratory is also making progress toward video surveillance, guard tour tracking system, and WDRS security improvements.

8.4 Provide an Efficient and Effective System for the Protection of Classified and Sensitive Information

The Laboratory earned an overall letter grade for this objective of B+ (with a numerical score of 3.2).

Provides an effective system for protection of any sensitive and technology transfer information and export control items.

The Fermilab Business Services Section (BSS) Property and Inventory Control Department maintains a list of all high risk/export controlled property (258 items). The Property Office is currently in the process of verifying 100 percent of all the high risk/export controlled property. There have been no adverse events involving protection of these assets. Fermilab does not have sensitive technology transfer information.

Provides information to employees regarding their responsibilities in support of the counterintelligence (CI) program.

The CH-CI approved annual training memorandum was sent to all Laboratory employees on August 11, 2009.

All approved hosts of Unclassified Foreign Visits and Assignments' (UFVA's) receive annual training. The CI training is in need of updating and is awaiting a draft script from the DOE CH Office of CI. The Laboratory has been working with DOE-CH-CI to determine the number of additional hosts needed and have agreed that the new hosts will be the audience for the new training video. A recent DOE-CH Security review was conducted and no deficiencies were identified with the Fermilab UFVA Program.

Recent examples show that two UFVAs were not recognized or processed as being from a country sponsoring terrorism until after they were physically present at the Laboratory; which directly prevented the CFO from the ability to conduct adequate review or provide counsel in the process of determining visit authorization.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)					
8.1 Provide an Efficient and Effective Emergency Management System	B+	3.2	40%	1.28	
8.2 Provide an Efficient and Effective System for Cyber-Security	B	3.0	40%	1.20	
8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, Classified Matter, and Property	B+	3.4	10%	.34	
8.4 Provide an Efficient and Effective CI System for the Protection of Classified and Sensitive Information	B+	3.2	10%	.32	
				Performance Goal 8.0 Total	**3.1**

Table 8.1 – 8.0 Goal Performance Rating Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 8.2 – 8.0 Goal Final Letter Grade