

SOUTHEASTERN UNIVERSITIES RESEARCH ASSOCIATION



December 3, 2003

James Turi, Manager
Department of Energy Site Office
Thomas Jefferson National Accelerator Facility
12000 Jefferson Avenue
Newport News, VA 23606

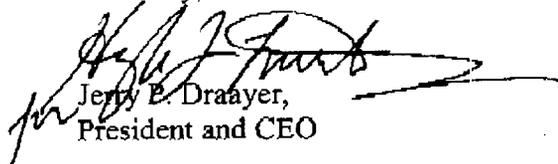
Dear Mr. Turi:

I am hereby transmitting the Jefferson Lab's Self Assessment of Contract Performance for the fiscal year 2003 as required under the terms of SURA's contract with the Department of Energy for the management and operation of the Thomas Jefferson National Accelerator Facility (the Jefferson Lab).

SURA believes this self assessment provides a fair evaluation of the accomplishments of the Jefferson Lab, as measured by the results of performance measures and peer reviews, and that it identifies appropriate areas for improvements in performance in the fiscal year 2004. SURA is grateful to the Director, management and staff of the laboratory for the accomplishments of the Jefferson Lab during the past fiscal year and particularly for the high level of scientific output and recognition for that output achieved during the fiscal year 2003.

SURA appreciates the support that Jefferson Lab has received from the Site Office and the Office of Science in advancing the laboratory's contributions to science and looks forward to a continuation of that support.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry E. Draayer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.
Jerry E. Draayer,
President and CEO

Cc (without attachment) Christoph Leemann
Donald Lehman
Stephen Wallace
June Matthews

FY03 JEFFERSON LAB
SELF-ASSESSMENT OF
CONTRACT PERFORMANCE



Thomas Jefferson National Accelerator Facility

DIRECTOR'S OVERVIEW

The qualitative and quantitative metrics and peer reviews mandated by the Jefferson Lab performance-based contract provide an essential and valuable tool to assess Laboratory performance and guidance towards further improvement. I am pleased that the Lab has again earned an "Outstanding" rating based on their assessments. In the coming years, Laboratory management and staff will strive to continually achieve an outstanding level of performance, not only in the scientific arena but in all aspects of our work, particularly with regard to operational efficiency, safety, and business systems generally.

The Laboratory continues to deliver forefront experimental results. The 2003 Science and Technology (S&T) Review Panel evaluated Jefferson Lab's overall performance Outstanding (94.7%). Notable among the areas evaluated was the Nuclear Physics Research Program, which received an Outstanding rating for "...the quality of the results that continue to come from the three halls and for the strong theory group that is making significant contributions...". Results such as the nucleon form factors ("shape of the proton") and the discovery of the pentaquark received attention from the national media, including scientific journals and popular press. Although Jefferson Lab operations fully met the numerical goals of the contract, the S&T Panel noted that the Laboratory could reach higher performance and user satisfaction levels through additional attention on machine operations, and recognized the formation of the Jefferson Lab Research and Operations Committee (JROC) as a means to improve machine availability for physics research. Lab management recognizes the legitimacy of these concerns about machine operations. The scientific case for the 12 GeV Upgrade has been further strengthened over the past year and its importance to the community and its technical readiness have become a matter of record. The Laboratory and its user community are delighted to see the 12 GeV Upgrade among the near-term priorities of the Office of Science's 20-year facilities plan and stand ready to begin work on a Conceptual Design Report (CDR) as soon as CD-0 is granted.

The S&T Panel also recognized the advances made by the FEL and commended the Lab on securing a solid near term future based on Navy-funded technology development and operational exploration, as well as gaining acknowledgement by the recent BESAC subcommittee on future facilities that the FEL holds promise for important basic research.

Jefferson Lab has an unqualified commitment to the successful completion of the Spallation Neutron Source. Jefferson Lab cryomodules, as completed today, exceed performance specifications significantly, and the Lab is working aggressively towards enhancing cavity processing yields. Jefferson Lab is working collaboratively with others in the community who hope to benefit from Jefferson Lab's expertise in the area of SRF and related accelerator technologies, and Laboratory management will focus on meeting all expectations for Jefferson Lab as the U.S. center of SRF technology.

We continue to improve and refine our business practices. A favorable peer review of the Administration division, and the new Offices of the CFO and CIO, resulted in high marks. A recent Office of Science review of property management and purchase card systems, although not part of this assessment, will guide us to improved processes. Most importantly, I am committed to strengthen safety culture at Jefferson Lab, to meet the expectations of significantly reduced injury and lost time

statistics, and to eliminate the potential for serious injury. This will be an area of particular attention in the upcoming year.

The Laboratory has developed a vision in step with the goals of the Office of Science and the Department of Energy. We see a 20 to 30 year future clearly outlined with the current 6 GeV Program, the 12 GeV Upgrade, and eventually the electron-light ion collider (ELIC). We envision strong connections between experiment, theory, and computer simulation, and have taken the appropriate first steps, particularly in the area of scientific staffing. As the U.S. center for RF superconductivity (SRF) we will contribute at the leading edge of this technology and contribute to the broad scientific agenda as proposed by DOE. We will be working with BES/BESAC to bring to fruition the FEL's potential for unique fundamental research.

I view it as crucial for the realization of this vision, that we not only excel in science and technology, but also demonstrate excellence in safety, security, and business systems. The Laboratory leadership is committed to this goal and uses assessments such as the present one as key input.

Overview of FY03 Appendix B Performance Measures Scoring By Performance Area

Appendix B Performance Measures and Their Key Indicators

Section	Description	Key Indicator	Point Value
1	Outstanding Science and Technology	Peer Review	625
2	Corporate Citizenship – Public Outreach Corporate Citizenship – Tech Transfer	<ul style="list-style-type: none"> • Public Participation • Non-DOE Investment in Jefferson Lab Initiatives 	75
3	Quality Performance in Environment, Health, and Safety	<ul style="list-style-type: none"> • Cost of Injuries • Environmental Permit Exceedences 	100
4	Business & Administrative Practices	Peer Review	100
5	Responsible Institutional Management	Peer Review	100
6	Project Management	Schedule Performance	35*
Total Point Value			1035

Total Score - Appendix B Performance Measures

Section	Description	Point Value	Points Awarded	Percent of Assigned Pts	Adjectival Rating
1	Outstanding Science and Technology	625	602.4	96.4%	Outstanding
2	Corporate Citizenship	75	73.6	98.1%	Outstanding
3	Quality Performance in Environment, Health, and Safety	100	97.9	97.9%	Outstanding
4	Business & Administrative Practices	100	94.4	94.4%	Outstanding
5	Responsible Institutional Management	100	93	93%	Outstanding
6	Project Management	45	45	100%	Outstanding
Total FY03 Score Appendix B		1045	1006.3	96.3%	Outstanding

Details of Scores By Performance Measure

1. Outstanding Science and Technology						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
1.0	Peer Review	355	336.2	355	94.7%	Outstanding
Subtotal Peer Review		355	336.2	% of Points Assigned = 94.7%		Outstanding
1.1 Reliable Experimental and Accelerator Operations						
1.11	Delivered Physics Research Operations	100	100	6019.5 Hours	6646.3 Hours	Outstanding
1.12	Accelerator Downtime	40	40	<15%	15%	Outstanding
1.13	Experimental Equipment Availability Hall A Hall B Hall C	20	20	78.4% Total 77.5% 80.0% 77.5%	89.6% Total Hall Availability	Outstanding
1.14	Effectiveness of the Scheduling Process	20	19.2	10,172.8	9,765.5	Outstanding
1.15	Overall Operations Effectiveness	20	20	30 weeks	30.4	Outstanding
Subtotal Reliable Experimental And Accelerator Operations		200	199.2	% of Points Assigned = 99.6%		Outstanding
1.2 Production of Scientific and Technical Manpower						
1.21	Number of Student Years Per Year on Jefferson Lab Related Research or Technical Activities	20	19	1,075	1019.7	Outstanding
1.22	Number of Advanced Degrees Per Year Based on Jefferson Lab Research	35	35	53	85	Outstanding
1.23	Number of Advanced Degrees Per Year Granted by Minority Universities and Based on Jefferson Lab Research	5	5	6	11.7	Outstanding
1.24	Participation of Students From Groups Traditionally Underrepresented in Physical Science and Engineering Fields	10	8	35%	23.6%	Good
Subtotal Production of Scientific and Technical Manpower		70	67	% of Points Assigned = 95.7%		Outstanding
TOTAL OUTSTANDING SCIENCE AND TECHNOLOGY		625	602.4	% OF ASSIGNED PTS = 96.4%		Outstanding

2. Corporate Citizenship						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
2.1 Public Outreach and Improved Scientific Literacy						
2.11	Public Participation	20	20	80,000	99	Outstanding
2.12	Public Visibility	7	7	400	1087	Outstanding
	(a) Number of Articles (b) Citations Mentioning DOE	3	3	100%	100%	Outstanding
2.13	Customer Satisfaction	5	4.6	100%	92%	Outstanding
Subtotal Public Outreach and Improved Scientific Literacy		35	34.6	% of Points Assigned = 98.9%		Outstanding
2.2 Technology Transfer						
2.21	Non-DOE investment in Jefferson Lab initiatives (including direct dollars, manpower costs, and contributions in-kind)	20	20	2 – 2.5% of JLab ops budget	11.3%	Outstanding

2. Corporate Citizenship						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
2.22	Intellectual property generation as indicated by the annual number of (a) Patent applications (b) Patents awarded (c) License agreements	10	10	5 or 1 or 2	20 5	Outstanding
2.23	Benefit to partners based on customer surveys *This indicator is measured by the results of an annual survey of partners, which will be conducted by the Technology Transfer Office after 10/01/03.	10	9*	5.0	4.5* Projected Scores	Outstanding
Subtotal Tech Transfer		40	39	% of Points Assigned = 97.5%		Outstanding
TOTAL CORPORATE CITIZENSHIP		75	73.6	% OF ASSIGNED PTS = 98.1%		Outstanding

3. Quality Performance in Environment, Health, and Safety						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
3.0a	Occupational Injury Cost Index	35	35	50% Better than DOE lab average	100%	Outstanding
3.0b	Environmental Exceedences	20	20	4 Times as good as the DOE complex average	0 NOVs	Outstanding
Subtotal Quality Performance in Environment, Health and Safety		55	55	% of Points Assigned = 100%		Outstanding
Secondary Indicators						
3.1	Lost Work Day Case Rate	15	13.7	50% Better than DOE lab average	91%	Outstanding
3.2a	Reportable Radiation Exposures	4	4	Satisfactory ALARA program; no exposures >80% of ORPS threshold	100%	Outstanding
3.2b	Hazardous Substance Exposures	4	4	No exposures above OSHA action level	100%	Outstanding
3.3	Solid Waste Recycled	6	6	Exceed FY94 baseline ratio (0.021) by 44%	R=0.13	Outstanding
3.4a	Radioactive Waste Generation	4	3.8	≥.90 of radioactive waste generated for useful purposes	95%	Outstanding
3.4b	Pounds of Hazardous Waste Produced	4	4	≤0.25	R=0.1	Outstanding
3.5	(Peer Review of the Radiological Control Program – Even Years) (Peer Review of Emergency Management Program – Odd Years)	4	4	Appropriate program = 100	99%	Outstanding

3. Quality Performance in Environment, Health, and Safety						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
3.6	“Highly Protected Risk” Rating for High-Value Facilities	4	3.4	All facilities meet highly protected risk designation	93%	Excellent
Subtotal Secondary Indicators		45	42.9	% of Points Assigned = 95.3%		Outstanding
TOTAL QUALITY PERFORMANCE EH&S		100	97.9	% OF ASSIGNED PTS = 97.9%		Outstanding

4. Quality of Business and Administrative Practices						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
4.0	Peer Review	70	65.5	100%	93.6	Outstanding
Subtotal Peer Review		70	65.5	% of Points Assigned = 93.6%		Outstanding
4.1 Facilities Management						
4.11	% of overrun on all projects > \$100K	1	1	≤ 8%	5.53%	Outstanding
4.12	Variance of scheduled completion time for projects > \$100K	1	.9	≤ 1.10	1.12	Excellent
4.13	% of scheduled preventive maintenance tasks completed by their scheduled due dates	1	1	≥ 94%	98.8%	Outstanding
4.14	% of Planned Facility Condition Assessments Completed	2	2	≥94%	100%	Outstanding
4.15	% of Indirect Projects Completed from the Planned Project List	1	1	≥94%	94%	Outstanding
Subtotal Facilities Management		6	5.88	% of Points Assigned = 98%		Outstanding
4.2 Property Management & Protection						
4.21a	% of value of property located during the inventory cycle: Capital Property (Odd Years)	2	1.6	≥99%	98.4%	Good
4.21b	% of value of property located during the inventory cycle: Sensitive Property	2	2	≥99%	99.7%	Outstanding
Subtotal Property Management & Protection		4	3.6	% of Points Assigned = 90%		Outstanding
4.3 Financial Management						
4.31	Number of CAS violations	1	1	0	0	Outstanding
4.32	Dollar % of invoices deemed unallowable	1	1	≤1%	0	Outstanding
4.33	% of vendor invoices paid with discounts lost	1	1	≤1%	0.1%	Outstanding
4.34	% of annual actual cost variance from budget for each overhead pool	1	1	≤3%	2.44%	Outstanding
4.35	Number of occurrences that Cost Management Report had to be resubmitted to Contracting Officer – DOE Site Office	1	1	0	0	Outstanding
4.36	Number of audit errors in travel expense reports	1	1	≤2%	0	Outstanding
Subtotal Financial Management		6	6	% of Points Assigned= 100%		Outstanding
4.4 Procurement						
4.41	Average procurement cycle time	3	3	<11 days	5.34	Outstanding

4. Quality of Business and Administrative Practices						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
4.42	% of total available purchasing dollars awarded to: small business concerns, small women-owned business concerns, and small disadvantaged business concerns	SB 1	1	≥50%	64.6%	Outstanding
		WO 1	1	≥6%	12.0	Outstanding
		SD 1	1	≥6%	11.8	Outstanding
Subtotal Procurement		6	6	% of Points Assigned = 100%		Outstanding
4.5 Human Resources and Services						
4.51a	% of action oriented diversity commitments as established in the Affirmative Action Plan	1	1	≥ 90%	100%	Outstanding
4.51b	Representation of protected classes within each EEO-1 category	1	.9	100% Maintained	18 of 20 Maintained	Excellent
4.52	Sustainable EEOC charges	1	1	0 Charges	0Charges	Outstanding
4.53	Compensation positions aligned with market practices	1	1	± 3% of Market Average	1.9%	Outstanding
4.54	% of 3-year rolling average of annual increases in premium cost relative to market	1	.8	≥ 5% Below Market Data	-4.2%	Excellent
4.55	% of current year's papers written by JLab staff or Users placed online	1	1	≥ 97%	100	Outstanding
Subtotal Human Resources and Services		6	5.7	% of Points Assigned = 95%		Outstanding
4.6 Cyber Security						
4.61	Cyber Security Review (5pts, held every 3 years, next one in '05)	N/A	0	>90%	N/A	N/A
4.62	Number of times JLab computer systems were compromised or used to attack other systems	2	1.7	≤ 1	2	Excellent
Subtotal Cyber Security		2	1.7	% of Points Assigned = 85%		Excellent
TOTAL BUSINESS & ADMIN PRACTICES		100	94.4	% OF ASSIGNED PTS = 94.4%		Outstanding

5. Responsible Institutional Management						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
5.0	Responsible Institutional Management Peer Review	100	93	100	93	Outstanding
TOTAL INSTITUTIONAL MANAGEMENT		100	93	% OF ASSIGNED PTS = 93%		Outstanding

6. Project Management						
PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating*
6.1	Schedule Performance SNS	35	35	≤ One month behind schedule	1.7 months ahead of schedule	Outstanding
6.2	Schedule Performance on the CEBAF Center Addition (N/A because of delay in funding)	10	10	≤ One month behind schedule	Milestones met	Outstanding
TOTAL PROJECT MANAGEMENT		45	45	% OF ASSIGNED PTS = 100%		Outstanding

Total Appendix B Score on Performance Measures				
	Point Value	Points Awarded		Adjectival Rating*
TOTAL APPENDIX B SCORE	1045	1006.3	% OF ASSIGNED PTS = 96.3%	Outstanding

Adjectival Ratings are assigned as follows:

<u>Adjectival Rating</u>	<u>% of Points</u>
Outstanding	90% to 100%
Excellent	80% to < 90%
Good	70% to < 80%
Marginal	60% to < 70%
Unsatisfactory (Poor)	50% to < 60%
Unsatisfactory (Failing)	<50%

Accuracy at the one decimal point level is to be retained for both percentages and points assigned.

1. Outstanding Science and Technology

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL OUTSTANDING SCIENCE AND TECHNOLOGY	625	602.4	% OF ASSIGNED PTS = 96.4%	Outstanding

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.0	Peer Review	355	336.2	355	94.7%	Outstanding
Subtotal Peer Review		355	336.2	% of Points Assigned = 94.7%		Outstanding

Discussion

The experimental program at Jefferson Lab continues in steady state operation, with all three halls in production running at design specification. Following PAC24, the complete approved experimental program broken down by subject and hall is:

Topic	Number of Experiments	Hall A	Hall B	Hall C
Nucleon and Meson Form Factors and Sum Rules	24	11	4	9
Few Body Nuclear Properties	29	18	6	5
Properties of Nuclei	28	7	11	10
* N and Meson Properties	44	6	30	8
Strange Quarks	18	4	12	2
Total	143	46	63	34

The Lab believes that this approved program represents some of the best nuclear physics that will be done anywhere in the next decade. The program to date is having a major impact on our understanding of the basic quark structure of matter, and the portion of the program that has been approved but not yet run is of uniformly high quality as a consequence of both the outstanding capabilities of the accelerator and experimental equipment and the intense competition for beam time.

As of the end of FY03, we have completed data-taking for roughly 71% of the program approved to date (though analysis of the data is not as far along). Full data is at hand for 82 of the 143 approved experiments, and significant portions of the needed data have been obtained for 24 more. We were gratified to see that the Science and Technology Peer Review Panel agrees with our assessment of the significance of this program, unanimously endorsing it as outstanding.

The Review Panel identified as particularly noteworthy this year the results on: the neutron spin structure function, A_1^n ; the neutron electric form factor; the hadron-parton duality that indicate higher twist effects are small; and the intriguing results from CLAS on short range correlations in nuclei. The Panel (and we) are looking forward to data from the continuation of the program using the base equipment in the halls and from the enhanced capabilities associated with three major installation experiments planned for the near future: the forward angle measurements of the strange quark form factor of the proton by the G0 experiment; the measurement of the neutral pion lifetime by the PrimeX

experiment; and the next generation of high-resolution hypernuclear spectroscopy that will be made possible by the installation (probably in early FY05) of the new HKS spectrometer.

Other achievements of significance in the nuclear physics program included: a year of three-hall operation with good accelerator and high hall availability and a multiplicity of 2.39; the continued delivery of >5 GeV beam for physics; and the development of the unique beam structure required for the G0 experiment. The large backlog of experiments (~5.2 years in Hall A, 4.4 years in Hall C and 3.8 years in Hall B at the present, 30 week/year level of operations) continues to be a concern. Progress has been made toward reducing it through a thoughtful review of scientific priorities via the PAC jeopardy process, and this avenue will continue to be pursued. However, the preferred solution would be increased weeks of accelerator operations and increased availability, both of which are difficult in times of tight resources. The additional operating funds required to have a significant (~15% increase) impact on overall scientific throughput are relatively modest.

We are delighted that the Panel found our vision for the science, accelerator technology development, and long-term directions of the Lab to be well focused, and share their concern on the lack of CD-0 for the first major step toward the future – the 12 GeV Upgrade. The Upgrade is clearly an essential component of the Laboratory's future. We are also pleased that the Panel recognized that we have successfully maintained and developed the science program without a chief scientist. We share the high priority they give to filling that position as quickly as possible; an offer has been made to a distinguished scientist, and we anticipate his joining the Laboratory next Spring. In the interim we have strengthened the high-level science advice available to the Laboratory for long-range planning through the establishment of a Scientific Policy Advisory Group. It has had two meetings to date, and has already proven to be a useful forum for discussing the Lab's future.

While we recruit a new Chief Scientist, the Theory Group has continued to function effectively under the leadership of current Lab staff. Rocco Schiavilla's leadership was recognized as outstanding by the FY03 Scientific Peer Review Panel. The theory program was recognized by the Panel as "strong, diverse, and balanced". The group has also been strengthened over the past two years by the addition of a distinguished visiting theorist position: both Yuri Semenov and Stan Brodsky spent extended periods at Jefferson Lab in that position. We are pleased that the Panel strongly supported the theory group's effort to establish an analysis center for the spectroscopy program.

Accelerator operations in FY03 continued to receive an outstanding rating based on the contract performance metrics, but the accelerator availability for experiments was lower than desired due to a combination of increasing demands on beam parameters (particularly the time structure and helicity reversal requirements of the G0 experiment) and the installation and commissioning of a new-style (7-cell cavity) cryomodule. While the combination of physics and accelerator operations exceeded the key goal for delivered physics research operations for the year, the margin was reduced compared to the past few years, and some experiments had to move off the floor without having achieved all of their research goals. We share the Panel's view that efficient operations of the accelerator and experimental equipment is the Lab's highest priority, and have already developed a strategy for enhancing accelerator availability. The strategy includes: a long-range planning role for the Jefferson Lab Research Operations Committee (JROC), the implementation of a long-term maintenance plan (that is being finalized in coordination with DOE), a further strengthened role for the Center for

Advanced Studies of Accelerators (CASA), and a more formalized review of beam requirements by the Nuclear Physics Experiment Scheduling Committee.

The Accelerator R&D program was recognized as outstanding. Of particular note were the demonstration of energy recovery using CEBAF (an important step in investigating the possibilities of novel electron colliders for the Lab's future) and the SRF Institute's work in developing cryomodules for the Upgrade while simultaneously fulfilling responsibilities for SNS. The efforts of CASA to help with accelerator operations were also (appropriately) appreciated by the Panel, and enhanced involvement in preparation for future changes and enhancements to CEBAF was recommended.

The Panel recognized the outstanding success of the FEL program represented by the beginning of commissioning of the 10 kW IR (1 kW UV) upgrade and the effort to secure operations funding for the program through the Office of Naval Research. The interest in high-power, short-pulse light in the terahertz and far infrared regimes that was highlighted by BESAC opens the possibility for future Basic Energy Sciences operations funding through DOE; this is an avenue to be pursued vigorously as we continue to work with the potential user community for this facility to identify the best science that can be done using the FEL's unique beam characteristics and to make the case for operations support.

Finally, we are delighted that the Panel recognizes the enthusiasm of our user community for the 12 GeV Upgrade as evidenced by their strong involvement in the preparation of the pCDR. The community's efforts on graduate education were noted as a success. The concerns of the user community regarding CD-0 for the Upgrade project and the Chief Scientist are shared by Lab management, and have already been discussed above. Also, as noted by the Panel, we are making excellent progress on the CEBAF Center Addition project, which will address many of our users' concerns about office space.

Looking ahead, we have found setting overall priorities for FY04 within our continuing financial constraints exceedingly difficult. The highly desirable increase represented in the President's budget request for FY04 is, at the time of this writing, still not realized as the budget for FY04 has not been passed. Despite this situation, we began FY04 with a plan to increase beam operations from the 30-week level of FY03 to 32 weeks. Unfortunately the beamtime lost due to the impact of Hurricane Isabel (about 6 weeks) will be difficult to recover, and the net result is likely to be a lower level of total operations for the year (26-28 weeks). We also remain concerned that rising maintenance costs for aging equipment may make maintaining this level of operation difficult, and have submitted a long-term maintenance plan to DOE that will address this problem. We are in the final stages of developing the enhanced capability necessary for running the G0 experiment (with its unique high polarization, high bunch charge, and 32 nsec time structure) while simultaneously meeting any anticipated needs for low current running in Hall B and high current running in Hall A (both with standard time structure).

The challenges of extracting physics results from the data taken using the CLAS detector in Hall B are a major focus of the Physics Division. Over the past year we developed a proposal to create an Excited Baryon Analysis Center to focus this effort and move it forward, and we are anxious to begin this effort as quickly as possible.

In FY04, we will continue to maximize productivity through careful internal prioritization and resource allocation. While we remain unable to invest adequately in advanced accelerator research and development at our present funding level, we recognize that it will be essential to remedy this problem soon in preparation for the 12 GeV Upgrade. It is also clearly of interest to the larger physics community to see the Lab's Accelerator Physics and SRF expertise strengthened with stabilized funding; we will work with DOE to plan for a long-term solution to this funding problem.

We will also continue to pursue the development of the scientific case for the energy upgrade by building on our earlier work, on our evolving understanding of the underlying physics issues, and on the results of the ongoing research program. In FY03 there was a major effort (including a PAC review) to develop a draft pre-Conceptual Design Report (pCDR) for the Upgrade that refines and expands the physics case for the project and documents the experimental equipment design plans. In FY04 we will complete the review of the draft and publish the pCDR so that we will be in a position to produce a fully-developed Conceptual Design Report as quickly as possible after CD-0 has been granted, and then begin the difficult job of prioritizing the scientific goals of the project.

In summary, the Lab found the concrete observations of the Science and Technology Peer Review Panel to be consistent with our own assessment of the Lab's performance. We believe this Review was constructive, useful, and accurate in its observations. The full report of the Review of Science and Technology is included in this document as Attachment A.

Principal Areas of Emphasis for FY04

- Complete the recruiting of the identified Chief Scientist candidate.
- Deliver G0 beam for the first production run of the experiment, and simultaneously deliver "normal" beams to the other two halls.
- Continue to manage the approved experiment backlog toward a goal of ~3 years/hall.
- Continue development work toward the prototyping of the final "next generation" cryomodule appropriate for the 12 GeV upgrade.
- Further strengthen the science case for BES funding of research using the upgraded FEL.
- Continue close interactions and involvement with the nuclear physics user community.
- As soon as funding permits, create an Excited Baryon Analysis Center to optimize the physics output from the CLAS detector.
- Following CD-0 for the 12 GeV project, develop a CDR for upgrading CEBAF and its ancillary experimental areas to 12 GeV capability.
- Continue to fulfill all obligations to the SNS project.
- Participate as requested in RIA R&D.

1.1 Reliable Experimental and Accelerator Operations

Introduction

The overall performance of the accelerator and experimental equipment continues to be a major achievement. In FY03 we were again able to exceed the key “bottom line” metric of delivered physics research, however by a smaller margin (10.4%) than in previous years. This was due to the continued high availability of the experimental equipment, and making a significant effort to increase multiplicity – the average number of halls simultaneously taking beam. The accelerator availability for physics research (which measures the fraction of time that the users are happy with the beam) was not as good as in previous years due to the complexity of the beams needed for the experimental program.

Operation in the first half of the year was for the G0 experiment that needed special beam conditions (one bunch every sixteen buckets). This required the acquisition of a Ti-Sapphire laser capable of delivering the required 31.2 MHz beam structure. The unusual bunch structure – the first time that CEBAF had delivered anything other than 499 MHz bunch trains – created problems for the beam diagnostics as well as bunch formation in the injector. It proved possible to create the G0 bunch conditions using strong longitudinal focusing in the injector to counter the strong space-charge forces. However, these conditions were not fully compatible with the bunches required for Halls A and B which have lower space charge forces, so a compromise had to be found. Eventually, the G0 experiment got excellent results, albeit with significant impact on the availability of acceptable beam conditions for the other two halls.

A new cryomodule was constructed, successfully tested, and installed in CEBAF in position SL21 during the long maintenance period in February 2003. This cryomodule, the first of a new type with seven-cell cavities and a reduced cold mass, initially had some teething troubles, creating fast beam instabilities that were difficult to identify and fix. Eventually, the problems were traced to the stub tuners used to optimize the impedance match. When the stub tuners were retracted, the module started to work reliably, and SL21 is currently the cryomodule in the accelerator with the highest gradients (up to 60 MV total acceleration). As this cryomodule is one of the early prototypes of the 12 GeV modules, the experience gained was invaluable.

The performance measures continue to be extremely useful both to management and the users. The main challenges in FY04 will be the enhancement of accelerator availability, the second G0 experimental run, and the extremely demanding hypernuclear experiment in Hall A, presently scheduled to run partially concurrently with the G0 experiment, that requires a very small energy spread ($<2.5 \times 10^{-5}$).

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.11	Delivered Physics Research Operations	100	100	6,019.5	6,646.3	Outstanding

Discussion

This "bottom line" metric compares the number of delivered hours of physics research operations for which both beam and experimental equipment are simultaneously available to the number of hours that would be delivered if the goals for beam and experimental equipment availability, multiplicity (average number of halls in simultaneous use), and operations schedule were all met.

This is the sixth year we have used this metric, and we continue to believe that it represents the overall productivity of the facility and provides a firm basis for many detailed operational decisions by keeping focus on the overall physics output. As noted above, this year we exceeded our goal by only 10%, compared to 29.9% in FY02 and 19% in FY01. Because just reaching the goal means that some experiments do not obtain all the data they anticipated (due to fluctuations in accelerator and hall availability experiment-by-experiment that are averaged in the overall metric) we will be working hard to enhance this margin in FY04. Implementation of the long-range maintenance plan (which requires adequate funding) will be essential to this effort.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.12	Accelerator Downtime	40	40	<15%	15%	Outstanding

Discussion

Accelerator downtime is the time during which the accelerator although scheduled for machine development or physics running is able to support neither machine development nor the research program of a least one hall.

This was the first year for this new “Accelerator Downtime” metric that has become a complex-wide standard at DOE. Our downtime was 15%. Installation of a new design cryomodule and the difficult beam requirements of the G0 experiment increased downtime beyond what our user community has come to expect. We will work to improve on this performance in FY04; implementation of the long-range maintenance plan will be essential to this effort as well.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.13	Experimental Equipment Availability Hall A Hall B Hall C	20	20	78.4% Total 77.5% 80.0% 77.5%	89.6% Total Availability 90.7% 87.9% 90.5%	Outstanding

Discussion

This metric compares the average availability of experimental equipment in the three halls during the year to the average if the availability goal in each hall is met. The averages are weighted by the hours of operation in each hall.

Hall availability was simply outstanding in all three halls in FY03. This was accomplished despite Hall B suffering slightly (particularly in the fourth quarter) from wire chamber problems associated with aging. We are working to upgrade all the electronics on the wire chambers affected as a preventive maintenance effort this year, but have some concern that this year’s problem may be an indicator that similar problems will develop in more of the experimental apparatus, all of which is roughly the same age. The Hall A program was affected by delays in the delivery of the septum magnets. Nevertheless, several high priority experiments were completed in Hall A, and Hall B finished the second half of the g7 run, completed a major portion of the g2 run group, and finished running the e1 experiment (one of the largest efforts in the hall). Several experiments using the base equipment were completed in Hall C along with the commissioning of the G0 experiment.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.14	Effectiveness of the Scheduling Process	20	19.2	10,172.75	9,765.5	Outstanding

Discussion

Because Jefferson Lab is a user facility, it is important that experiments begin when they are scheduled. Many users, especially those from abroad, may need to plan their travel well in advance of their actual arrival at the Lab.

This metric is a measure of how closely the average start of experiments matches the scheduled start as given in the "firm" operations schedule. In FY03 most experiments began very nearly at the scheduled time earning a rating of "Outstanding" and 19.2 of 20 possible points. The exception involved delays in the Hall A program necessitated by the late delivery and then technical problems associated with the Hall A septum magnets.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.15	Overall Operations Effectiveness	20	20	30 Weeks	30.4 Weeks	Outstanding

Discussion

This metric is the ratio of total time the accelerator is operating for physics to the operating time set in the annual negotiation of the Lab's operations budget.

In FY03 the number of weeks of operation slightly exceeded the goal. Typically we schedule slightly more total operations than our goal to provide a modest margin for problems. This year there were no major problems that stopped operations completely, so we were able to exceed this metric.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
	Subtotal Reliable Experimental And Accelerator Operations	200	199.2	% of Points Assigned = 99.6%		Outstanding

Changes for FY04

All of the metrics in this section are valid measures of performance and should be retained in FY04.

1.2 Production of Scientific and Technical Manpower

Introduction

Jefferson Lab remains committed to increasing production of scientific and technical manpower by continuing to engage students in a broad range of research projects. Our continued success is indicated, as in previous years, by data gathered primarily through the Jefferson Lab Users Group Survey. In this year's survey, we again provided respondents with an easy means of submitting a "no students" reply by promptly returning the electronic mail survey with that two-word phrase in the subject heading. As in the past, many users replied to our initial request within hours of our sending it out. In addition to our e-mail survey, we ran a crosscheck of respondents against a list of known users and known Jefferson Lab graduate students and consulted Laboratory staff who oversee the work of students in order to enhance the statistical reliability.

In FY04, we will continue to improve our database of users and students. We will contact users throughout the year and encourage them to track and report these data. As in the past, we must work to ensure that users do not overlook the production of advanced degrees that were granted earlier in the same fiscal year. In FY04 we intend to improve the quality of information in our databases and user reports to minimize follow-up contacts.

Jefferson Lab continues to be strongly involved with the development of research programs and the corresponding production of advanced degrees at Historically Black Colleges and Universities (HBCUs) and at Minority Educational Institutions (MEIs). Advanced degrees awarded based on Lab research have increased significantly over the past few years among the seven HBCUs and MEIs with which we have memoranda of understanding (MOU). During the past fiscal year, Jefferson Lab maintained MOUs with the following HBCUs and MEIs:

- Florida International University
- Hampton University
- Norfolk State University
- North Carolina A&T
- North Carolina Central University
- New Mexico State University
- University of Texas at El Paso

Table 1.2-1 shows the number of advanced degrees granted by these institutions since FY97. Although the absolute numbers are small, they represent a disproportionate fraction of U.S. minority degrees awarded in nuclear physics and reflect an upward trend in the participation of minority students in physics research at Jefferson Lab. Because the degree "pipeline" remains well supplied with minority students, we feel confident that the drop in minority advanced degrees between FY02 and FY03 is not significant. In FY02 there were an unusually large number of these degrees granted; in FY03 the number was smaller than usual. The varying number of years required to earn an advanced degree and the statistics of small numbers result in these year to year differences. Such fluctuations support the decision to report a three-year average for this metric.

Table 1.2-1 Advanced Degrees Awarded by Minority Institutions

	FY97	FY98	FY99	FY00	FY01	FY02	FY03
MS	3	3	3	0	1	6	1
PhD	1	1	1	2	3	6	0
Total	4	4	4	2	4	12	1

Principal Areas of Emphasis for FY04

- We will continue our practice of interviewing each arriving graduate student and conducting follow-up interviews with a majority of those already on site. In addition, we will take advantage of a variety of activities organized under the Jefferson Lab Student Affairs Office to facilitate and enhance the student experience at Jefferson Lab and encourage the research effort at the Lab to become more efficient at production of trained manpower in physics and related technical fields.

- We will likewise continue to expand involvement and opportunities—intellectual, social, and recreational—for students during their tenure at Jefferson Lab. Laboratory management has supported use of the Residence Facility Great Room for graduate student meetings, and in the past fiscal year we set aside a dedicated space for a graduate student meeting room. Comfortable furniture and facilities for table-soccer and table tennis were installed in that room. We continue our monthly schedule of seminars presented by the students in addition to other activities that serve to welcome and integrate new students into the student community.
- Jefferson Lab has been actively producing data from the three experimental halls for several years, allowing timely progress in PhD studies. In addition, many theory graduate students are closely associated with the Laboratory. In FY04 we will further publicize these unique opportunities both in the United States and throughout the world.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.21	Number of Student Years Per Year on Jefferson Lab Related Research or Technical Activities	20	19	1,075	1019.7	Outstanding

Discussion

This performance measure is based on a Weighted Student Involvement Index (WSII) defined by:

$$WSII \text{ (Weighted Student Involvement Index)} = 1(HSS) + 2(UGS) + 4(GS)$$

where HSS = High School Students, UGS = Undergraduate Students, and GS = Graduate Students.

The FY03 score is $WSII = 1.1 + 2 \times 34.1 + 4 \times 237.6 = 1019.7$

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.22	Number of Advanced Degrees Per Year Based on Jefferson Lab Research	35	35	53	85	Outstanding

Discussion

In FY03, there were 35 advanced degrees (10 Masters and 25 PhDs) awarded that were based on Jefferson Lab research. This performance measure is based on a Composite Degree (CD) Index defined by: $CD \text{ (Composite Degrees)} = 1(MD) + 3(PHD)$

where MD = Number of awarded Master's degrees and PHD = Number of awarded PhDs

The FY03 CD score is: $CD = 10 + 3(25) = 85$

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.23	Number of Advanced Degrees Per Year Granted by Minority Universities and Based on Jefferson Lab Research	5	5	6	11.7	Outstanding

Discussion

In FY03, we report one Master's degree awarded by a minority institution. This stands in marked comparison to FY02 when six PhDs and six Master's degrees were awarded by minority institutions based on Jefferson Lab research. We feel that this fluctuation in these small variables gives ample justification to the decision made two years ago to evaluate this datum based on a three-year average.

The score of this performance measure for FY03 is based on the following equation:

$$\text{CDM (Composite Degrees Minority)} = (\text{MD}_y + \text{MD}_{y-1} + \text{MD}_{y-2} + 3(\text{PHD}_y + \text{PHD}_{y-1} + \text{PHD}_{y-2}))/3$$

where MD = Number of awarded Master's degrees and PHD = Number of awarded PhDs and y is the current year.

In FY03 no PhDs were granted and one MS degree was granted by minority institutions.

$$\text{FY03 CDM} = (1 \times (1 + 6 + 1) + 3 \times (0 + 6 + 3))/3 = 35/3 = 11.7$$

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
1.24	Participation of Students From Groups Traditionally Underrepresented in Physical Science and Engineering Fields	10	8	35%	23.6%	Good

Discussion

The Minority Weighted Student Involvement Index for women and underrepresented minorities is: Determine the percent of students at all levels participating in Jefferson Lab based research and technical activities who are women or underrepresented minorities.

$$\text{Participation} = P = \left\{ \begin{array}{l} \text{Number of research students who are female,} \\ \text{African American, Hispanic, or Native American} \\ \text{Total number of research students} \end{array} \right\}$$

Students who qualify for more than one category can be counted more than once. In order to correct for this bias, each match will be treated as a distinct individual, thereby ensuring that whatever number is added to the numerator also will be added to the denominator.

For FY03, the Jefferson Lab User Liaison Office had registered a total of 254 active, badged graduate students engaged in Jefferson Lab research efforts on site. Of the 254,

40 were female,

8 were Hispanic, and

13 were African American.

Four were both female and minority and thus to be included in the denominator as described above.

$$\text{Thus, Participation } P = \frac{40 + 8 + 13}{254 + 4} = 23.6\%$$

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Production of Scientific and Technical Manpower	70	67	% of Points Assigned = 95.7%	Outstanding

Changes for FY04

We believe that the performance measures in this section continue to be valid indicators of performance in the area of Scientific and Technical Manpower production. Therefore, the metrics and goals should be unchanged in FY04.

2. Corporate Citizenship

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL CORPORATE CITIZENSHIP	75	73.6	% OF ASSIGNED PTS = 98.1%	Outstanding

Public Outreach

Jefferson Lab's approach to strong community relations and public outreach efforts starts with top management and is based on involvement by the Lab's leadership and staff in the community. The Director serves on a regional economic development board called the Hampton Roads Partnership that serves a multi-city area. Other Lab staff are actively involved with and serve as members of committees and boards including: the Jefferson Center for Research and Technology Committee, the United Way of Virginia, the Cooperating Hampton Roads Organization for Minorities in Engineering, the Newport News Environmental Commission, the Newport News Chamber of Commerce Business and Education Council and the Hampton Roads Research Partnership.

Through these interactions with city officials, state delegates, local business leaders, and the citizens of the community, the Jefferson Lab communicates information to the community and obtains feedback to both strengthen its involvement with the community and to educate and inform the public of Lab activities. The Lab has a strong sense of community, and takes its role as a responsible community member most seriously. Consistent community involvement provides a forum for community members to ask questions and raise concerns, which allows the Lab to be proactive, accurate, and responsible when dealing with issues that could impact the public.

Jefferson Lab's Corporate Citizenship activities illustrate the continued diligence of the entire staff in engaging the public in a variety of science education and awareness activities and events including: conducting tours and public outreach events—including the very popular biennial open house; giving public lectures to civic groups; and inviting the public to the Lab for guest speaker presentations. These efforts involve the community at Jefferson Lab and result in continued goodwill.

2.1 Public Outreach and Improved Scientific Literacy

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.11	Public Participation	20	20	80,000	99,431	Outstanding

Discussion

Contributions to the Commonwealth and the nation's science education and literacy are being made by Jefferson Lab, as evidenced in Public Participation metrics. The centerpiece is the Lab's K-12 science education program, Becoming Enthusiastic About Math and Science, most often referred to as BEAMS. The BEAMS program serves all sixth, seventh, and eighth grade students and teachers from two local schools with the most "at-risk" students. Students and teachers visit Jefferson Lab for two to five days of hands-on math and science activities conducted by Lab scientists, engineers, and technicians. This continued interaction has yielded measurable results, increasing test scores of these students in the Virginia Standards of Learning tests in math and science.

During the summer of 2003, 24 middle school science teachers participated in the Lab's Physics Enrichment for Science Teachers (PEST) program, a four-week mini-course in physics, taught by physics professionals including staff scientists. Additional activities in science education included classroom visits; Physics Fest days (field trips to the Lab); supporting science and high technology high school and college internships; participating as local and regional science fair judges; spring and fall Science Series presentations; and participation in the Department of Energy's Science Bowl. The students from the Virginia team went on to win the national championship for the second year in a row. During FY03, Jefferson Lab served more than 15,200 students. In addition, the Lab provided in-service activities, which include access to the Lab's expertise and equipment, to more than 2,300 teachers.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.12	Public Visibility					
	(a) Number of Articles	7	7	400	1087	Outstanding
	(b) Citations Mentioning DOE	3	3	100%	100%	Outstanding

Discussion of 2.12a-b

Public visibility and awareness of the Department of Energy and Jefferson Lab continue to be reinforced through the use of the media and interactions with the public. Local and regional news articles covering events related to Jefferson Lab included breast cancer biopsy technology, public lectures, and our science program. On the national and international front, the two major Lab physics stories made their way around the world including two *New York Times* articles, and articles in *USA Today*, *Science*, *Science News*, *The Economist*, *Physics Today*. Website coverage spanned Russia, India, Germany, and England. Sponsorship by the Department of Energy at a science journalist website called EUREKALERT! continues to give Jefferson Lab news strong exposure nationally and internationally and reflects well in the scores.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.13	Customer Satisfaction	5	4.6	100%	92%	Outstanding

Discussion

The Lab's FY03 activities included a public open house in April 2003. More than 5,000 members of the community attended this Saturday event to participate in hands-on activities, including those from regional museums and universities, tour seldom-opened facilities and talk to scientists about their work. This event is popular with the public and requests continue that we hold this event more frequently. The Lab also conducted over 30 tours—attended by over 1,000 people—for industry and government officials and professional organizations, and provided speakers for civic groups as requested. Customer satisfaction ratings of public tours and student interactions were outstanding, with the negative comments most often being expressions of disappointment when specific areas of the accelerator site were closed for tours due to the running of experiments.

Description	Point Value	Points Awarded	Adjectival Rating
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Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Public Outreach and Improved Scientific Literacy	35	34.6	% of Points Assigned = 98.9%	Outstanding

Changes for FY04

All performance measures for Public Outreach and Improved Scientific Literacy have been reviewed. These metrics are being exceeded by so large a margin that the Lab proposes the scores from the last four years be averaged to set new goals. The new metrics would be as follows:

FY04 Corporate Citizenship

- Public Participation hours: 90,000
 - Public 4,000
 - Parents, students and teachers 86,000
- Public Visibility 900

Principal Areas of Emphasis for Public Outreach in FY04:

- Participation in the 2004 Virginia State Fair
- Continued emphasis of media coverage in trade and technical journals
- Continued recruitment of excellent science series speakers from a broad spectrum of science interests
- Enhanced science education activities for students and participation in the DOE Science Bowl for the State of Virginia

2.2 Technology Transfer

To underscore the importance of Jefferson Lab's technology transfer program all technology transfer functions were consolidated under the Chief Technology Officer (CTO) during FY03. Technology transfer plays a critical role in supporting the Lab's existing science programs (NP and FEL), developing new Lab programs responsive to DOE and national needs (SNS, RIA, LQCD), meeting technology transfer mandates, and building relationships with the community and region to support economic development. This consolidation of technology transfer functions positions the Lab to most effectively grow, develop, and transfer its technologies.

The primary focus of Jefferson Lab's FY03 technology transfer program was on the unique opportunity the FEL represents as a tool for both basic and applied science. The FEL team spent most of FY03 disassembling the 1 kW FEL and assembling the upgrade machine. Commissioning of the upgraded FEL is progressing well; the new FEL lased soon after turn-on. Commissioning will systematically increase output power to 10 kW in the infrared and 1 kW in the ultraviolet. The Office of Naval Research and the Air Force Research Laboratory fund this work. In addition, an interagency agreement between the DOE and the U.S. Army has funded a CRADA with AES, Inc. to build a terahertz (THz) beam line for studies of land mine detection. The FEL is a very strong source of THz far-infrared radiation.

A secondary focus of the technology transfer program continues to be medical imaging, which derives from the Lab's core competency in detector technology. Two noteworthy collaborations in this area

are currently underway. (1) The Lab continues its partnership with a small business and several research hospitals to further the development of a scinti-mammography medical imaging device that has demonstrated improvements in early breast cancer detection. (2) The Lab is collaborating with Oak Ridge National Laboratory and the Johns Hopkins University to develop instrumentation that will allow bio-medical researchers to study small animals with nuclear medicine imaging techniques while they are awake and unrestrained. This novel technology should offer neural scientists the opportunity to use conscious mice to study neural processes in real-time and over an extended period. In addition, the Lab has initiated a partnership with the University of Florida and the University of South Florida to develop a next-generation medical imaging device, an effort funded through the US Army.

As described in the discussion under Public Outreach above, the Lab continues its active role in local, regional, and state organizations promoting economic development through partnerships and other technology transfer activities. In addition to the participation described in that section, the Lab Director and the Chief Technology Officer serve in organizations such as the Hampton Roads Technology Council, the Peninsula Alliance for Economic Development, the Virginia Research and Technology Advisory Commission, and the Newport News Economic Development Authority.

In FY03 Jefferson Lab hosted two high profile meetings focusing on technology development and transfer. In October 2002, the annual meeting of the American Industrial Forum, which included R&D Officers from 30 major US corporations, highlighted industrial applications of the FEL. And in June 2003, Jefferson Lab hosted the 3rd Anniversary Meeting of the Hampton Roads Research Partnership Board of Directors (presidents of eight local universities and directors of NASA and Jefferson Lab). A thorough study of successful multi-institutional, multi-disciplinary research organizations; analysis of local research strengths; and a plan to aggressively and dramatically increase the amount of federal R&D funding coming into the region were presented at the meeting.

The Lab's performance generating, protecting, and transferring intellectual property again earned a rating of Outstanding. Eighteen invention disclosures were made, twenty patent applications were authorized, and five patents were awarded in FY03. The Lab also continues to participate in the DOE's SBIR program with three currently active partnerships and participation in the Commonwealth of Virginia's SBIR/STTR Annual Conference for small businesses. Three CRADAs were active in FY03. The total amount of "funds in" to Jefferson Lab as a result of technology transfer activities was \$9.2M, slightly more than 11.3% of Jefferson Lab's annual operating budget of \$81.2M.

We believe that the performance measures of this section remain valid indicators of the Lab's performance in technical transfer and should remain unchanged. The performance goals likewise are appropriate and should remain unchanged for FY04.

Principal areas of emphasis for technology transfer in FY04 will include:

- Commissioning the 10 kW IR FEL Upgrade.
- Re-starting the FEL User program after commissioning of the upgraded FEL is complete.
- Continued nurturing and growth of medical imaging technology.
- Responding to homeland security requests with Jefferson Lab technologies as appropriate.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
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PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.21	Non-DOE investment in Jefferson Lab initiatives (including direct dollars, manpower costs, and contributions in-kind)	20	20	2 – 2.5% of JLab ops budget	11.3%	Outstanding

Discussion

Non-DOE investment far exceeded the 2.5% goal. DoD was the chief source of Non-DOE funds as shown in the following table:

FEL USAF/AFRL IA – UV	\$2,283.1M
NNHRA Welfare to Work Agreement	5.1
FEL Sharing – Virginia	479.2
FEL USN/ONR IA – P2 (171)	233.9
FELUSN/ONR IA - CM/Com/Wig(171C)	1,206.4
FEL USN/ONR IA – FY03 (171G)	3,999.5
FEL DOD JTO IA – Mirror (171E)	402.9
FEL DOD JTO IA – Laser P2 (171H)	81.4
FEL DOD JTO IA – Mirror P2 (171 I)	192.1
FEL DOD JTO IA – Lethality (171 J)	122.9
FEL DOD JTO IA – Optical Damage (171K)	31.9
MIT WFO Beam Dumps	16.7
NSU NASA WFO Support	11.4
Dilon CRADA Funds In	.1
AES CRADA Funds In – JLab	74.0
AES CRADA Funds In – Sub cont.	85.8
AMAC CRADA Funds In	<u>10.9</u>
Total	\$9,237.3M

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.22	Intellectual property generation as indicated by the annual number of (c) Patent applications (d) Patents awarded (e) License agreements	10	10	5 or 1 or 2	20 5	Outstanding

Discussion

The Lab’s performance in this area was very strong.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
2.23	Benefit to partners based on customer surveys	10	9*	5.0	4.5* Projected Score	Outstanding

Discussion

FY03 Jefferson Lab
 Self-Assessment of Contract Performance



*This indicator is measured by the results of an annual survey of partners, which will be conducted by the Technology Transfer Office after 10/01/03. The results of the survey will be included in the final version of the report.

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Technology Transfer	40	39	% of Points Assigned = 97.5%	Outstanding

3. Environment, Health and Safety

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL QUALITY PERFORMANCE EH&S	100	97.9%	% OF ASSIGNED PTS = 97.9%	Outstanding

Although Jefferson Lab's EH&S program, as measured by the metrics in this section, is rated "Outstanding" with an overall score of 97.9 points out of 100, there is one area in which the Lab's performance is not as strong as we would like: lost workday case (LWC) rate. Jefferson Lab's LWC rate has plateaued. While other Office of Science labs have driven their LWC rates down over the past five years, Jefferson Lab's rate has stayed around 1.0. Jefferson Lab's rate, which was one of the best among the Science labs, is now slightly worse than average.

Jefferson Lab is committed to improving performance on this metric and recommends that in FY04 it become a key indicator worth 25 points rather than being a secondary indicator worth 15 points. This focus on the LWC or DART (Days Away, Restricted or Transferred) as it is also known, is consistent with the importance Office of Science gives this measure of safety performance.

Key Indicators

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.0a	Occupational Injury Cost Index	35	35	50% better than DOE lab average	100%	Outstanding

Discussion

The FY03 SURA staff overall accident experience as measured by DOE's Injury Cost Index compared very favorably to that of other DOE research laboratories. The Jefferson Lab result was 4.1; the DOE research laboratory average was 10.4. The FY03 result is also a major improvement over the FY02 value of 17.7 that was driven by a single back injury that resulted in many weeks of lost and restricted time.

Because of Office of Science focus on Total Recordable Case (TRC) and DART rates, we recommend that this metric be replaced in FY04 with a TRC metric that compares Jefferson Lab's TRC rate for employees and non-construction subcontractors to goals set relative to the OSHA 2001 rates for SIC 873 (Research and testing organizations). We also recommend that the TRC metric be worth 25 points.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.0b	Environmental Exceedences	20	20	4 times as good as the DOE complex average	100%	Outstanding

Discussion

As measured by the number of environmental exceedences, the Lab's environmental program is functioning well. In FY03 no environment permit Notices of Violation were issued to Jefferson Lab.

Because this measure remains a valid indicator of the health of the Lab's environmental program, we recommend that it be unchanged next year.

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Key Indicators for Quality Performance in EH&S	55	55	% of Points Assigned = 100%	Outstanding

Secondary Indicators

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.1	Lost Work Day Case Rate	15	13.7	50% better than DOE lab average	91%	Outstanding

Discussion

The Lab's FY03 measure for injuries resulting in one or more lost, restricted, or transferred workdays (1.0) was slightly higher than the average (0.9) for all DOE research laboratories. Increased attention to occupational injury case management by Lab Medical Services is an area of emphasis for FY04.

Because of Office of Science focus on Total Recordable Case (TRC) and Days Away, Restricted or Transferred (DART) rates, we recommend that this metric be elevated to the status of key indicator along with the TRC metric. The metric should be modified to compare the Jefferson Lab rate to goals set relative to the OSHA 2001 rates for SIC 873 (Research and testing organizations) rather than to other DOE labs. We recommend that this metric be worth 25 points.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.2a	Reportable Radiation Exposures	4	4	Satisfactory ALARA program; no exposures >80% of ORPS threshold	100%	Outstanding

Discussion

Jefferson Lab's ALARA-based radiation protection program is very effective. There were no FY03 Jefferson Lab radiation exposures requiring special reporting under the DOE occurrence reporting thresholds. The ALARA (As Low As Reasonably Achievable) program, which yearly results in no measurable doses for the large majority of our badged employees and users, is rated better than satisfactory.

Because this measure remains a valid indicator, we recommend that it be used again in FY04. The only change would be to reference the revised reporting thresholds contained in the new ORPS.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.2b	Hazardous Substance Exposures	4	4	No exposures above OSHA action level	100%	Outstanding

Discussion

The Lab hazardous materials program operated effectively through the year. There were no FY03 Jefferson Lab exposures to hazardous substances or chemicals requiring special reporting under either OSHA or DOE occurrence reporting thresholds.

Because this measure remains a valid indicator, we recommend that it be used again in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.3	Solid Waste Recycled	6	6	Exceed FY94 baseline ratio (0.021) by 44%	R=0.13	Outstanding

Discussion

Strong recycling efforts by the Facilities Management Division along with broad staff support for recycling resulted in the strong FY03 result. Recycling bins, now conveniently located across the Lab complex, are widely used. FY03 recycling totaled 43.5 tons compared to the FY02 total of 40.6, a 7% increase. In FY03 285.1 tons of waste were sent to the landfill. Recycling 40.6 tons corresponds to a performance level (fraction of waste recycled) of 0.13, which exceeds the goal of 0.03.

Because this measure remains a valid indicator, we recommend that it be unchanged in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.4a	Radioactive Waste Generation	4	3.8	≥ .90 of radioactive waste generated for useful purposes	95%	Outstanding

Discussion

There were no radioactive waste shipments from Jefferson Lab in FY03. Jefferson Lab, like other electron accelerators, produces little radioactive waste compared to proton accelerators for instance. Contemplating years in which there would be no radioactive waste shipments, the SURA/DOE contract assigns a score of 95% for such years.

Because this measure remains a valid indicator, we recommend that it be used again in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.4b	Ratio of pounds of hazardous waste produced to pounds that would have been produced without countermeasures	4	4	≤0.25	R=0.1	Outstanding

Discussion

Hazardous waste and division EH&S staff emphasized reduction of hazardous waste in FY03 and their efforts resulted in a rating of outstanding for this metric.

Because this measure remains a valid indicator, we recommend that it be used again in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
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PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.5	(Peer Review of the Radiological Control Program – Even Years) (Peer Review of Emergency Management Program – Odd Years)	4	4	Appropriate program = 100	99	Outstanding

Discussion

The biennial Emergency Management Peer Review was held August 6-7, 2003. In its report, the Peer Review Panel stated: “We believe the Jefferson Lab continues to have a very strong emergency management program supported by management and dedicated professionals. We observed a breadth and depth to the program as evidenced by the presentations and discussions with staff.... It is obvious that the Jefferson Lab culture encourages and supports safety and emergency preparedness. You have an outstanding program (99%) and you continue to improve upon it.”

A copy of the Emergency Management Peer Review Report is included in this document as Attachment A. The FY03 score of 99, which converts to a score of 100% of available points, reflects continued improvement since the 2001 Peer Review score of 98.

Because the two peer reviews conducted by experts are valid indicators of the health of the emergency management and radiation control programs, we recommend that they continue to be used as performance measures.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
3.6	“Highly Protected Risk” Rating for High-Value Facilities	4	3.4	All facilities meet highly protected risk designation	93	Excellent

Discussion

The August 2002 evaluation review of Jefferson Lab high-value facilities received a score of 93 or 86% of available points. A fire protection engineer associated with SURA’s fire and property insurance broker conducted the review. Remediation activities began in Hall A, the only facility not meeting the designation in FY03, and will be completed prior to the next HPR assessment, which is to be conducted in FY04.

Because this measure remains a valid indicator, we recommend that it be used again in FY04.

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Secondary Indicators	45	42.9	% of Points Assigned = 95.3%	Outstanding

4. Quality of Business and Administrative Practices

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL BUSINESS AND ADMINISTRATIVE PRACTICES	100	94.4	% OF ASSIGNED PTS = 94.4%	Outstanding

The Administration Division comprises the Division Office, Facilities Management, Business Services, Division Environmental Health and Safety, and Human Resources (including Medical Services). The key indicator for assessing the Division's performance for FY03 was the annual Peer Review of business and administrative practices. The FY03 Peer Review Panel was highly complimentary of the Administration Division, describing the level of support provided to the Lab as "exceptional" and awarding an "Outstanding" rating for overall performance. In order to better match the Laboratory's new organization (October 2002), the scoring point distribution method changed significantly in 2003: the Administration Division was scored as a whole, as were the new offices of Chief Financial Office and Chief Information Office. The report cited several noteworthy achievements and practices: the Lab's safety culture with its expectation of zero accidents and continuous improvement; the practice of HR staff meeting their Lab customers at their locations; the completion of the site-wide Condition Assessment Survey along with the strategic facilities plan; and the RecruitMax resume tracking system.

Secondary indicators, as defined in Appendix B, of the SURA/DOE contract assess performance in specific areas and provide a more in-depth evaluation of each of the Administration Division departments. The results of the FY03 Appendix B metrics are consistent with, and supportive of, the findings of the Peer Review Panel. These results and any accompanying narrative follow departmental overviews below.

Facilities Management

As part of the revised organizational structure, at the beginning of FY03, Plant Engineering changed its name to Facilities Management, to reflect the broader site-stewardship responsibilities of the department. Facilities Management is responsible for performing or specifying performance of all Jefferson Lab maintenance, property, construction, security, and emergency management services. Contracted services include: security guard force, refuse collection and disposal, and pest control, as well as maintenance of grounds and mechanical, electrical (high and low voltage), fire protection, and HVAC control systems. The majority of contracted services are awarded through firm-fixed-priced contracts, and the Lab's Facilities Management staff monitors the outsourced services to ensure quality.

Using DOE's Federal Information Management System (FIMS), Facilities Management tracks and reports on all Jefferson Lab leased or owned buildings, trailers, and other structures including roads, sidewalks, and grounds. All replacement plant values for facilities were reviewed and updated during FY03 and maintenance costs (required, actual, and deferred) were established and entered by the FIMS Initiative due dates.

Major projects completed in FY03 include VARC and CEBAF Center lighting improvements, a new VARC HVAC system, and upgraded CEBAF HVAC controls.

Despite a six-month delay in starting the design due to the FY03 Budget Continuing Resolution, the design of CEBAF Center Addition, Phase I reached the 60% mark by the end of FY03. A site-wide storm drainage master plan for storm water management associated with future developments was completed and design of a retention pond and other stormwater management improvements has begun.

Jefferson Lab continues to do an outstanding job managing personal property; the loss rate is very low. Computers and equipment valued at over \$67,288 were donated to 12 local schools this past year under the Computers for Learning/Donation Program. Over 84 tons of materials were designated for re-use. A total of \$106,191 of equipment from on-site and \$28,644,406 from other agencies was reutilized.

Jefferson Lab continues to maintain a flexible security response consistent with the nationwide Homeland Security Advisory System. All Lab staff received the annual integrated security management awareness briefings and on-going training and Facilities Management staff quickly implemented security enhancements required by DOE in response to national security alerts. A Foreign Visit and Assignments (FV&A) Program was established at the Lab in response to increased world-wide terrorism.

Business Services

Beginning in FY03 Business Services' scope of responsibility changed, with the movement of financial responsibilities to the Chief Financial Officer and the assumption by Business Services of responsibilities for the Staff Services Group, the Technical Stockroom, and Electronic Equipment Pool (E-Pool).

Accomplishments for Business Services in FY03 included "Outstanding" ratings on all Appendix B contract performance measures and the Administrative Peer Review; refurbishment of the rooms at the SURA Residence Facility which is managed by Staff Services; selection of the Business Services Vendor Database as the MIS group's initial database for conversion to a Web based application; and attainment of all socio-economic goals.

Administration Division Environment, Health, and Safety

Focus on subcontractor EH&S performance continued, with Workers' Compensation experience ratings included in the criteria used in best-value subcontract awards. A vendor's Workers' Compensation experience rating has proven to be an excellent measure of its commitment to safety.

SURA/Jefferson Lab's own Workers' Compensation experience rating continued its recent favorable downward trend. For FY03, it was 0.59; "par" for our peer group is 1.00. This is indicative of a sustained pattern of injury prevention by the entire Lab and good case-management practices by Medical Services.

Highly Protected Risk (HPR) status is unchanged from 93% (Excellent) in 2002. Because of the wooden cable spools, needed as delay lines, which hang on its shield hut walls, Hall A is the only Lab area not fully meeting HPR criteria. Fire resistive material is being installed over the spools. When this work is complete, Hall A will meet HPR criteria.

The 2003 Emergency Management Peer Review had a very successful outcome. The Lab earned a rating of “Outstanding” with a numerical score of 99%. Per the panel’s report, “We believe the Jefferson Lab continues to have a very strong emergency management program supported by management and dedicated professionals. We observed a breadth and depth to the program as evidenced by the presentations and discussions with staff.”

The panel pointed to a number of innovations and improvements since the 2001 review, and made special mention of Jefferson Lab’s continued excellent partnership with the local emergency response and planning community.

In the Medical Services area, a medical records and medical program audit performed by the OSHA Occupational Medicine office in August 2003 produced very favorable results.

Jefferson Lab Medical Services responded to an international outbreak of Severe Acute Respiratory Syndrome (SARS) by assisting management to develop procedures related to employee travel to and from affected areas. Medical Services also provided two lectures (one by the doctor and one by a nurse) about the disease and Jefferson Lab policies, and provided travel medicine consultations for all employees planning travel to affected areas.

Medical Services presented an Ergonomics Fair to employees in the VARC building and provided ergonomics assessments to several work groups and individual employees.

Medical Services participated in the Emergency Management Peer Review by providing insight about emergency procedures in place at Jefferson Lab. In addition, three lectures were offered on hydrofluoric acid (HF), lead, and electrical safety to Applied Research Center (ARC) staff.

Human Resources

Human Resources (HR), which now includes Medical Services as well as the more traditional HR functions of employment, compensation and benefits, employee relations, and training and performance, was both stable and highly productive during FY03. The newly appointed Associate Director of Administration (October 2002) served as Acting Director of HR throughout FY03 and, supported by a strong HR management and staff team, maintained a trend of continuing accomplishments including:

- Developed Lab-wide staffing plan to assist in workforce planning.
- Implemented a special DOE salary adjustment for physicists to improve the Lab’s market position.
- Reviewed and commented on all staff performance appraisals before delivery to employees.
- Implemented Costpoint HRIS and RecruitMax Applicant Tracking Systems.
- Migrated two additional EH&S training courses to the web.
- Updated the annual security awareness briefing.
- Received outstanding or excellent results on all performance metrics.

Future Administration Division Improvement Goals and Initiatives

- Update security related portions of the EH&S and Administrative Manuals.
- Expand preventive maintenance program to other facilities maintenance areas.
- Complete CEBAF Center Addition in FY06.
- Implement a consolidated Facilities Management Work Control and Reporting System.
- Continue the planning required to identify space and facility changes needed to support the scientific programs.
- Conduct a refresher safety review for long time service subcontractor personnel.
- Evaluate current technical stockroom inventory management and tracking system, and make appropriate recommendations for improvements.
- Roll out the new Web based Vendor Portal/Database, including site-wide training.
- Work with Property Management to examine the process and procedures associated with Government Furnished Property and Contractor Acquired Property.
- Continue to implement and improve the Foreign Visit and Assignments program.
- Deploy Integrated Management Training Program.
- Evaluate RecruitMax effectiveness and customer satisfaction.
- Create online training modules for bloodborne pathogens and any other relevant training classes.
- Formalize a travel medicine program for the Lab.
- Identify candidates for streamlining vendor payments, with a focus on invoice-less payments to e-commerce vendors.
- Recommend workforce planning strategies based on programmatic needs.
- Plan and implement approved revisions to the Lab's Performance Management System.
- Develop and implement a Lab-wide employee recognition program.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.0	Peer Review	70	65.5	100%	93.6%	Outstanding

Discussion

2003 Peer Review Results

Key Measure by Group	Available Points	Points Achieved	Adjectival Rating
Admin Division	40	38	Outstanding
CIO	15	14	Outstanding
CFO	15	13.5	Outstanding
Total Peer Review	70	65.5	Outstanding

Consistent with the 2002 reorganization, the Administration Division as a whole was given a single rating. The Chief Information Office and the Chief Financial Office were rated separately.

The Administration Peer Review, a performance metric in the SURA/DOE Contract, is conducted as a two day, on-site panel review. The FY03 review, conducted in March 2003, focused on the Administration Division but included the Chief Information Office and the Chief Financial Office. The

six-member review panel included representatives from the scientific community, the DOE, other DOE Laboratories, and representatives with expertise in specific functional areas.

The review panel was charged to determine the quality of standards adopted and pursued; evaluate the effectiveness of all units to carry out their responsibilities in a cost-effective, efficient and responsive manner; identify business units that merit special recognition; and determine aspects of any department's performance that warrant attention for improvement.

During the review, the panel met with and/or received presentations from SURA, the DOE site office, the Laboratory Director, the Associate Directors, the CIO, the acting CFO, the heads of Business Services, Human Resources and Facilities Management within the Administration Division, and key Lab managers from the operating divisions. Supporting documentation, such as departments' Line Self Assessments, also was made available to the panel. The scores for FY03 are indicated in the table above, and the full report of the FY03 Administrative Peer Review Panel is attached (see Attachment B). The cumulative score of 65.5 (93.6% of available points) correlates to an adjectival rating of "Outstanding."

The Administrative Peer Review remains the key indicator of the quality of the Lab's business and administrative practices. No change is recommended.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
Subtotal Peer Review		70	65.5	% of Points Assigned = 93.6%		Outstanding

4.1 Facilities Management

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.11	% of overrun on all projects > \$100K	1	1	≤ 8%	5.5%	Outstanding

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.12	Variance of scheduled completion time for projects > \$100K	1	.9	≤ 1.10	1.12	Excellent

Discussion of 4.11 and 4.12

FY03 ratings are based on the following projects: VARC and CEBAF Center Lighting Modifications; End Station Generators; Modification to Computer Center A/C & Electricity Distribution; VARC A/C Modifications; CEBAF Center HVAC Controls Upgrade; Acid Storage Building Addition and ESR Cooling Tower. End Station Generator and ESR Cooling Tower whose delivery schedule was very aggressive, were the two projects that caused the most schedule variance.

These performance measures are valid indicators and should be retained. Moving them to Section 6 (Project Management) is being discussed with the Site Office. Performance on the following projects will likely impact these metrics in FY04:

- Central Chiller
- Test Lab Chiller
- Site Stormwater Drainage (Retention Pond)
- North Connector Road
- Accelerator Service Building Re-roofing

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.13	% of scheduled preventive maintenance tasks completed by their scheduled due dates	1	1	≥ 94%	98.8%	Outstanding

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.14	% of Planned Facility Condition Assessments Completed	2	2	≥94%	100%	Outstanding

Discussion of 4.13 and 4.14

Of 40,808 preventive maintenance actions scheduled, only 472 were deferred or rescheduled resulting in a score of 98.8% of scheduled preventive maintenance tasks completed on time.

As planned condition assessments for the Test Lab and EEL buildings, a total of 148,803 SF, were completed and documented during the fiscal year. The building area assessed was just under the planned goal of one third per year (156,469 SF). Because of staff workload a consultant was used to perform the work. We are pleased with the level of documentation developed and plan to use a consultant again next year.

Replacing metric 4.13 with the Real Property Management (DOE 0430.1B) measure for Asset Condition Index is being discussed with the Site Office. Metric 4.14 should remain unchanged.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.15	% of Indirect Projects Completed from the Planned Project List	1	1	≥94%	94%	Outstanding

Discussion

A total of 17 indirect projects were identified following the establishment of FY03 funding in March 2003. A project to make numerous asphalt road repairs was added and an interior painting project was deleted. One project was rescheduled due to Lab operations and a second was delayed due to a weather delay on another project.

This metric remains valid and should be used next year.

Description	Point Value	Points Awarded	Adjectival Rating
Subtotal Facilities Management	6	5.88	% of Points Assigned = 98%
			Outstanding

4.2 Property Management & Protection

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.21a	% of value of property located during the inventory cycle: Capital Property (Odd Years)	2	1.6	≥99%	98.4%	Good

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.21b	% of value of property located during the inventory cycle: Sensitive Property	2	2	≥99%	99.7%	Outstanding

Discussion of 4.21a and 4.21b

Locating accelerator equipment is the biggest capital property inventory challenge. Improving our performance in this area will require both better communication with accelerator staff and more effective training on inventory tracking.

Note that the stores inventory was dropped from this performance area after negotiations with the Site Office. The remaining two metrics are valid indicators of the Lab's performance in property management and protection and should be retained in the FY04 Appendix B. Capital property is valued at over \$29M and sensitive property at over \$9M.

Description	Point Value	Points Awarded	Goal	Adjectival Rating
Subtotal Property Management and Protection	4	3.6	% of Points Assigned = 90%	Outstanding

4.3 Financial Management

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.31	Number of CAS violations	1	1	0	0	Outstanding

Discussion

There were no violations of Cost Accounting Standards during this period.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.32	Dollar % of invoices deemed unallowable	1	1	≤1%	0	Outstanding

Discussion

The internal audit report indicated no findings and as of this date, the Inspector General's Office has not responded with any findings.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
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PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.33	% of vendor invoices paid with discounts lost	1	1	≤1%	0.1%	Outstanding

Discussion

Discounts were lost on only two of the 1997 eligible invoices.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.34	% of annual actual cost variance from budget for each overhead pool	1	1	≤3%	2.44%	Outstanding

Discussion

The variance from budget on the G&A overhead pool was 2.44% and thus met the measure of <3%.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.35	Number of occurrences that Cost Management Report had to be resubmitted to Contracting Officer – DOE Site Office	1	1	0	0	Outstanding

Discussion

There were no Cost Management Reports (533M) re-submitted during FY03.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.36	Number of audit errors in travel expense reports	1	1	≤2%	0	Outstanding

Discussion

There were no expense reports audited that contained an error exceeding \$100.

The metrics in the financial management section taken together are valid indicators of performance in this area and should be used again next year.

Description	Point Value	Points Awarded	Adjectival Rating
Subtotal Financial Management	6	6	% of Points Assigned = 100%
			Outstanding

4.4 Procurement

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.41	Average procurement cycle time	3	3	<11 days	5.34	Outstanding

Discussion

Procurement cycle time is a key indicator for procurement effectiveness, not only from the standpoint of customer satisfaction but also because it directly relates to the overall productivity of the procurement process.

We recommend retaining this metric but changing the target time from 11 days to 10.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.42	% of total available purchasing dollars awarded to: small business concerns, small women-owned business concerns, and small disadvantaged business concerns	SB 1	1	≥50%	64.6%	Outstanding
		WO 1	1	≥6%	12.0	Outstanding
		SD 1	1	≥6%	11.8	Outstanding

Discussion

Again in FY03, all Small Business Program goals for FY03 were exceeded. As in past years, this was only possible through an extensive and well-supported collaborative effort involving Business Services staff and Laboratory customers. Such collaboration is vital to the continued success of this socio-economic program.

This metric is a valid indicator of the Lab's performance relative to DOE's Small Business Program goals and should be used next year. However, based on the types of purchases planned for next year we recommend changing the small business goal from 50 to 48% and the women-owned business goal from 6 to 5%. The disadvantaged business goal should remain at 6%.

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Procurement	6	6	% of Points Assigned = 100%	Outstanding

4.5 Human Resources and Services

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.51a	% of action oriented diversity commitments as established in the Affirmative Action Plan	1	1	≥ 90%	100%	Outstanding

Discussion

We continued a strong focus on outreach to community organizations and minority recruiting sources, adding websites and organizations as we became aware of them. We were pleased to participate in five career fairs and conferences during the year. All eight diversity commitments were met.

Diversity Commitment	Accomplishments
1. Unless limited by budget constraints, Division HR Administrators will participate in at least three job/career fairs with high female/minority representation.	<ul style="list-style-type: none"> HR Administrators participated in a Career Day at Christopher Newport University in October 2002; Newport News Redevelopment & Housing Authority Job Fair, October 2002; National Society of Black Physicists, Atlanta, GA, February 2003; Norfolk State University Career Day, March 2003; and Armed Forces Career Fair, Hampton, VA, April 2003.

Diversity Commitment	Accomplishments
<p>2. The EEO/AA Coordinator and Division HR Administrators will provide continuing assistance to Lab management in integrating the Lab's minority and female goals into their staffing plans.</p>	<ul style="list-style-type: none"> • HR Administrators personally distributed Affirmative Action Plan copies to hiring managers in their specific divisions. Areas of underutilization were discussed and emphasized, together with other details of affirmative action achievements and goals. • These discussions have resulted in much greater consideration of the Lab's affirmative action goals in hiring decisions.
<p>3. In partnership with the Newport News Redevelopment Housing Authority (RHA), Jefferson Lab will continue to support the Welfare to Work Program by providing training to program participants, typically females, to prepare them to enter the workforce with a skill.</p>	<ul style="list-style-type: none"> • In partnership with the RHA, Jefferson Lab continues to support the Welfare to Work Program by providing training to program participants. One trainee completed her training as an Administrative Assistant in March 2003 and is now gainfully employed as the Visitor Center Receptionist at the Hampton History Museum. The knowledge and experience she gained while at JLab was utilized to obtain this position. We are scheduled to start the next trainee on September 29, 2003 and are working with the Accelerator Division to place this individual with an Administrative Assistant, since she is also expressing a strong desire to be an Administrative Assistant/Receptionist. • In conjunction with the Hampton Roads Workforce Association, we are hoping to be able to implement a proposed JLab Vocational Training Program in the near future. This program will provide unpaid training to RHA selected participants that will give them an opportunity to acquire marketable skills.
<p>4. SURA's Small Business Representative will support the Lab's Small Business and Small Disadvantaged Business Subcontracting plan by contacting minority and small business trade associations and business development organizations, as well as attending small and minority business procurement conferences and trade fairs.</p>	<ul style="list-style-type: none"> • SURA attends the DOE Annual Small Business Conference/Trade Show, as well as the Virginia Minority Supplier Development Council annual trade show in Richmond, VA. • The SURA Small Business Manager is on the executive board of the Virginia Minority Supplier Development Council.
<p>5. The minority and female recruiting sources previously identified, as well as newly identified sources, will be contacted for SURA/Jefferson Lab job opportunities.</p>	<ul style="list-style-type: none"> • We continue to target job fairs and job boards that will increase the applicant pool of females and minorities and plan involvement as budget allows. Equal Opportunity Publications, Inc., IMDiversity.com, iHispanic, BestJobsVirginia, and CareerBuilder Network were contacted for information and pricing. In addition, we continue working with local agencies such as Virginia Employment Commission (VEC), colleges/universities, etc. • We have spoken with the Society of Hispanic Professional Engineers (SHPE) and will consider participating in one of their career fairs in the future. • We provided JLab literature to a recent Regional Leadership Conference of the National Society of Black Engineers (NSBE) in Norfolk. • We are attempting to make contact with the Society of Women Engineers (SWE) and Association for Women in Computing (AWC).

Diversity Commitment	Accomplishments
<p>6. Jefferson Lab will continue to advertise job vacancies, including targeted advertising and the Internet to increase our pool of qualified minorities and females, particularly for technical positions.</p>	<ul style="list-style-type: none"> As in the previous year, the Lab utilized the services of The Ad Club to produce and place our recruitment ads, focusing both on appropriate placement and our desire for qualified females and minorities. We added a customization this year to our Applicant Tracking System (RecruitMax) to make referral source a required field for candidates. This helps us gather more accurate data on most effective sources. The Referral Source Effectiveness Report from RecruitMax shows that generally our own JLab webpage is generating the most candidate response. Other online job boards, such as CareerBuilder, are the second most effective, followed by newspaper and publication advertising. This information assists us in determining where best to spend our recruiting dollars.
<p>7. A salary equity review will be conducted to identify any salary alignment disparities for females and minorities.</p>	<ul style="list-style-type: none"> As part of the Lab's annual compensation review, salary adjustment funds were distributed with alignment issues as a concern. As a result of the distribution of these funds, increases in base salaries for minorities in FY03 were 0.33% compared to 0.47% for non-minorities. However, a comparison of increases from salary adjustment funds for the past three years (FY01, FY02 and FY03) reveals that minorities' base salaries increased an average of 0.70% per year compared to 0.50% for non-minorities. Also as a result of the distribution of salary adjustment funds, increases for females in FY03 were on average 0.39% compared to 0.46% for males. However, comparing females with males for the past three years indicates that increases from salary adjustment funds average .60% for females versus .40% for males. In FY03 special salary adjustments were implemented for physicists. As a result of the distribution of these funds, increases to base salaries were 5.73% for minorities compared to 3.92% for non-minorities and 6.99% for females compared to 3.99% for males.
<p>8. The Employment Staff will continue to utilize formal (associations) and informal (employees and colleagues) networks to locate qualified minorities and females for open positions.</p>	<ul style="list-style-type: none"> We continue to work with various divisions here at the Lab on HR participation in any upcoming minority/female conferences, special events, etc. to broaden our outreach efforts. In addition, we continue to network with local Historically Black Colleges and Universities (HBCUs), Virginia Employment Commission, and various local/national agencies such as National Society for Black Physicists, National Technical Association, etc. to establish a more visible presence for Jefferson Lab.

This measure is a valid indicator of diversity performance and should remain unchanged in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.51b	Representation of protected classes within each EEO-1 category	1	.9	100% Maintained	18 of 20 Maintained	Excellent

Discussion

There were only two job categories in which we did not maintain our representation: female managers and female scientists. We are very much aware of our underutilization in the female manager category and are focusing heavily on ways to increase utilization. Underutilization in female scientists, however, is unique and we expect this is a temporary situation related to hiring cycles. We are pleased that we maintained representation in minority managers and slightly increased that representation. Of

particular note was an increase in female computing from 26.8% at the end of FY02 to 31.4% at 9/30/03.

Job Category	Minority %			Female %				
	Availability	Representation 9/30/03* 9/30/02*		Assessment	Availability	Representation 9/30/03* 9/30/02*		Assessment
1A Officials	10.7	11.1	14.3	Fully Utilized	32.1	33.3	42.9	Fully Utilized
1B Managers	12.7	9.0	8.8	<i>Maintained</i>	28.7	21.8	25.0	<i>Not Maintained</i>
1C Buyers	19.8	20.0	18.2	Fully Utilized	59.4	70.0	54.5	Fully Utilized
2A Administrators	14.5	17.8	20.0	Fully Utilized	46.6	78.3	85.0	Fully Utilized
2B Scientists	11.5	21.3	22.4	Fully Utilized	14.4	12.5	14.1	<i>Not Maintained</i>
2C Computing	15.7	17.6	16.1	Fully Utilized	30.6	31.4	26.8	Fully Utilized
2D Engineering	12.8	15.8	14.2	Fully Utilized	8.5	10.4	10.5	Fully Utilized
3 Technicians	16.9	18.3	19.5	Fully Utilized	18.0	17.6	16.8	Fully Utilized
5 Office/Clerical	25.0	35.5	34.0	Fully Utilized	87.7	95.3	95.0	Fully Utilized
6 Skilled Trades	23.5	26.3	20.0	Fully Utilized	2.7	21.1	13.3	Fully Utilized

Legend: **Maintained:** Underutilized but maintained/increased representation.
Not Maintained: Underutilized and representation decreased.
Fully Utilized: Achieved/maintained full representation.

*Adjusted for voluntary separations

This metric should be retained in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.52	Sustainable EEOC charges	1	1	0 Charges	0 Charges	Outstanding

Discussion

The Lab continues its proactive approach to internal investigation and resolution of issues with the result that again this year there were no sustainable charges.

This metric remains a valid measure of performance and should be retained in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.53	Compensation positions aligned with market practices	1	1	± 3% of Market Average	1.9%	Outstanding

Discussion

This compensation metric aligns with the Lab's mid-market compensation philosophy. The Lab implemented a 3.0% merit increase program and focused equity adjustments to target job groups and positions. Also, in response to market lag for scientists, a special adjustment fund was negotiated with DOE. In FY03 a 3.0% market adjustment for scientists was implemented.

This metric remains a valid measure of compensation performance and should be retained in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.54	% of 3-year rolling average of annual increases in premium cost relative to market	1	.8	≥ 5% Below Market Data	-4.2%	Excellent

Discussion

For the 2003 benefits premium year, we negotiated reasonable rates for all medical insurance programs in spite of increasing rates nationally. Overall, for FY03 we experienced an increase of 9% in premium rates. This increase was significantly below market movement. The three-year trend in benefit premium increases has been below market.

This valid measure of performance should be retained for FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.55	% of Current Year's Papers Written by JLab Staff or Users Placed Online	1	1	≥ 97%	100	Outstanding

Discussion

Papers include those published in a journal or proceedings or presented at a conference as well as technical notes. During FY04 all papers written by researchers employed at Jefferson Lab and those written by Lab users based on research done at Lab were put online.

This metric remains a valid measure of performance and should be retained in FY04.

Description	Point Value	Points Awarded	Goal	Adjectival Rating
Subtotal Human Resources and Services	6	5.7	% of Points Assigned = 95%	Outstanding

4.6 Cyber Security

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.61	Cyber Security Review (5pts, held every 3 years, next one in '05)	N/A	0	>90%	N/A	N/A

Discussion

Next review to be held in FY05.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
4.62	Number of times JLab computer systems were compromised or used to attack other systems	2	1.7	≤ 1	2	Excellent

Discussion

There were two root compromises during FY03 and no instances of Jefferson Lab computer systems used to attack other systems.

This is a valid metric and should be used next year.

Description	Point Value	Points Awarded		Adjectival Rating
Subtotal Cyber Security	2	1.7	% of Points Assigned = 85%	Excellent

5. Responsible Institutional Management

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL INSTITUTIONAL MANAGEMENT	100	93	% OF ASSIGNED PTS = 93%	Outstanding

Responsible Institutional Management (IM) is assessed via a biennial peer review, which looks at how Jefferson Lab is managed and at how Lab management plans and prepares for the future of the Laboratory. Categories assessed include strategic planning, managerial effectiveness, and organizational culture. The FY02 IM Review was the first since the change in Lab leadership and recent organizational changes made to better align the Lab for the future.

Summary of 2002 Institutional Management Review

The biennial IM review held October 22-23, 2002, was chaired by Dr. Charles Shank, Director at Lawrence Berkeley National Laboratory and included Dr. John Armstrong, retired VP of IBM, Bruce Chrisman, Fermilab AD for Administration and Chair of the FY02 Administrative Practices Peer Review, Dr. Charles Glashauser of Rutgers University, Dr. Walter Henning, Scientific Director of GSI Darmstadt, Dr. Donald Langenberg, Chancellor Emeritus of the University of Maryland system, Mr. Mike Telson, Director of National Laboratory Affairs for the University of California's Washington office, and Dr. Brad Tippens, Program Manager for Hadron Nuclear Physics in the Office of Science and Chair of the FY02 Science and Technology Peer Review. The review consisted of Lab presentations, reports from the user community and from panel chairs from the Science and Technology and Administrative Practices reviews, a tour of the facilities, and an opportunity to interact with staff.

The panel described Jefferson Lab as a "very impressive institution which is well managed and has a clear vision of its future" and rated performance as "Outstanding," with the Lab receiving 93 out of 100 available points. In the area of strategic planning, the panel felt that the Lab presented an "impressive roadmap for the future building on core competencies... and extraordinary contributions to science." Their primary suggestions in this area had to do with establishing a user base for the FEL as a scientific tool. In the area of managerial effectiveness, the panel recognized that the leadership transition at the Lab had been smooth and effective, and it stated that the recent reorganization had been well thought out and focused. The panel felt that Lab management was utilizing its funding effectively and was acting proactively in identifying and addressing challenges. Organizational culture was judged outstanding, reflecting an organization doing a great job but still making real moves to improve. Jefferson Lab's outreach programs, particularly its education outreach efforts, were singled out as noteworthy and of real benefit. The math and science education programs were seen to be "without peer among the national laboratories" and "outstanding models worthy of national attention and emulation."

Many specific practices and initiatives in each of the review categories are mentioned favorably in the full text of the report, which also includes an assessment of the areas on which management has focused since the previous review. The panel's suggestions, along with management's planned focus

areas were documented in the Principal Areas of Emphasis for FY03 and progress has been made in several of these areas.

Update on Focus Areas

The IM panel suggested and management agreed that the primary challenges include securing sustained, sufficient funding; beginning the 12 GeV project; and building an accelerator R&D program that is beneficial to Jefferson Lab and the Office of Science as well as other accelerator-based research. Ensuring a stable funding profile for the FEL and developing a strong user base for its science, and capitalizing on strong public outreach programs including education were also mentioned as areas for focus by Lab management.

Jefferson Lab management has worked on securing sustained, stable funding by supporting efforts in Congress to increase the Office of Science budget, and we have begun working internally to identify areas where increased efficiency in our processes would yield additional resources for the science program. Lab management has also begun a process to identify and prioritize specific areas of operation that would benefit from additional investment, as funds become available.

Jefferson Lab and its user community continue to work tirelessly toward a timely start of the 12 GeV Upgrade both with the DOE and concerned stakeholders. We are also working actively within the Lab and Office of Science community to continue to develop our expertise in SRF and advanced accelerator systems such as Energy Recovered Linacs and to apply that expertise to new and anticipated facilities for science. Jefferson Lab has established a stable source of Navy funding for FEL-related R&D and is currently working out details with the Navy program office. Jefferson Lab also made a presentation to BESAC during the preparation of their 20-year facilities plan and several scientific avenues for the FEL were seen as promising and we are working with the community to further identify and articulate the case for FEL science.

Principal Areas of Emphasis for FY04

- Continue to build on the outstanding NP research program which is at the forefront of the field and ensure commensurate reliable operations, theory support, and lattice QCD initiative.
- Realize the 12 GeV Upgrade on the shortest practical time scale.
- Continue delivery on Lab commitments to the SNS project.
- Deliver the 10kW upgrade FEL; build on BESAC findings to develop a scientific user community for the FEL leading to a funding stream for operations.
- Strengthen the culture of performance, particularly safety, while maintaining cost-effective, value added service to staff and users.
- Strive for increased efficiencies and strengthen accountability in the organization.
- Develop and implement a focused accelerator R&D program to advance the state of the art for Jefferson Lab's future and for the benefit of other scientific facilities.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
5.0	Responsible Institutional Management Peer Review					
	• Strategic Planning	40	37	100	93	Outstanding
	• Managerial Effectiveness	40	36			
	• Organizational Culture	20	20			

Discussion

The IM Peer Review continues to be a valid indicator of performance. We recommend that this metric be retained in FY04.

6. Project Management

Introduction

Description	Point Value	Points Awarded		Adjectival Rating
TOTAL PROJECT MANAGEMENT	45	45	% OF ASSIGNED PTS = 100%	Outstanding

Jefferson Lab's rating of "Outstanding" (35 out of 35 points) does not fully capture its performance on its two major projects: the Spallation Neutron Source (SNS) and the CEBAF Center Addition.

The DOE and Jefferson Lab selected for the metric the SNS milestone set specified by ORNL, which emphasizes procurement. Jefferson Lab reached those milestones an average of 1.7 months early, which qualifies for "Outstanding". In addition, the dollar-weighted SNS Project Control system also shows Jefferson Lab's part of the SNS project as less than one month behind schedule, which also satisfies the definition of "Outstanding". The detailed picture is that the procurements are ahead of schedule while Jefferson Lab cryomodule assembly labor is behind schedule - cryomodule production yield is not as high as planned. The Lab identified this issue in May, 2003 and proposed increasing the assembly effort, but the proposal was rejected by ORNL because an FY04 BA shortage was forcing SNS to slow down the project overall, delaying cryomodule installation by five months. Therefore the lower production yield will not impact the overall schedule. Still Jefferson Lab is working to increase its cryomodule production yield.

Because of CEBAF Center Addition funding delays that resulted from the continuing resolution under which DOE and the Lab operated for the first part of FY03, the milestones contemplated in the metric could not be established early in the year. Therefore performance on this project could not be measured by the agreed metric and the 10 points assigned were eliminated. However, even with the delays resulting from Hurricane Isabel, this project was within a week of its target dates at the end of FY03. It is important that the milestones required by this metric be chosen early in FY04.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
6.1	Schedule Performance SNS	35	35	≤ one month behind schedule	1.7 months ahead of schedule	Outstanding

Discussion

Jefferson Lab, one of the six partner labs building the SNS in Oak Ridge, Tennessee, is responsible for the SRF cryomodules and the cryogenic system. Jefferson Lab's SNS metric is based on the SNS "early finish" schedule milestones, which finishes the Linac and provides 1 GeV beam 18 months prior to CD-4. We were able to hold our part of the project schedule baseline.

FY03 was the third full year the Lab was involved in the SNS partnership; our formal involvement started in February 2000. We completed the first six medium-beta cryomodules and tested three; all the cavities reached >150% of their design gradients, at the required quality factor. The fundamental power coupler program is in mass production with 26 couplers processed ready for cavity string assembly.

All the production cryomodule part procurements are in place and 90% costed.

The electro-polish system was installed, and commissioned; the first electro-polished cavity reached 144% of spec.

All of the refrigeration hardware has been installed. The purifier is in operation. The warm compressors are being commissioned. The 4.5 K coldbox is being checked out.

Transfer line fabrication and installation was completed.

Principle Areas of Emphasis for FY04

- Production of 5 medium-beta cryomodules
- Production of 7 high-beta cryomodules
- Refrigerator commissioning
- LINAC cooldown

Level	Act Id	Description	Plan 03 Target	Actual	Projected	Delta Months
3	SL1200SC85	IPL - BOD 600 MeV Linac Tunnel	04-Nov-02	04-Nov-02	04-Nov-02	NA
3	SL1200SC22	IPL - BOD Cryo Building	25-Oct-02	06-Dec-02	06-Dec-02	NA
3	SL15060100	805MHz Cavity Electropolishing Sys Operational	19-Mar-03	30-Apr-03	30-Apr-03	-1.4
4	SL1001CV35	Deliver Last M-B Cavity	26-Mar-03	10-Apr-03	10-Apr-03	-0.5
4	SL11040007	START PRODUCTION Hi-Beta CM	03-Jul-03	02-Jun-03	02-Jun-03	1.0
5	SL11030535	Deliver HB Stands	16-Sep-02	31-Oct-02	31-Oct-02	-1.5
5	SL1001FP35	Deliver 3 MB FP Couplers for CM 5	15-Oct-02	02-Dec-02	02-Dec-02	-1.6
5	SL10020135	Deliver Last MB Mechanical Prod Tuner	05-Mar-03	05-Dec-02	05-Dec-02	3.0
5	SL10020435	Deliver Last MB Mag Shield	27-Nov-02	20-Dec-02	20-Dec-02	-0.8
5	SL10030335	Deliver Last Set of MB End Cans	12-Feb-03	20-Dec-02	20-Dec-02	1.8
5	SL14021035	Deliver Last Valves	09-Jan-04	31-Jan-03	31-Jan-03	11.3
5	SL11060235	Deliver HB Installation Equip.	28-Jan-04	24-Feb-03	24-Feb-03	11.1
5	SL10020635	Deliver Last MB Thermal Shield 2002	14-May-03	28-Feb-03	28-Feb-03	2.5
5	SL10020835	Deliver Last MB Space Frame	08-May-03	28-Feb-03	28-Feb-03	2.3
5	SL10030235	Deliver Last Set of MB Vacuum Tanks	10-Apr-03	28-Feb-03	28-Feb-03	1.3
5	SL12020117	IPL - 4 MW Power Available in CHL	02-Dec-02	28-Feb-03	28-Feb-03	NA
5	SL14071035	Deliver Beamline Assy. Components	28-Apr-03	28-Feb-03	28-Feb-03	1.9
5	SL12020137	IPL - 6 MW Power Available in CHL	06-Mar-03	30-Jun-03	30-Jun-03	NA
5	SL1101FP35	Deliver 1st 4 HB FP Couplers	30-Apr-03	30-Jun-03	30-Jun-03	-2.0
5	SL12040335	Deliver 80K Purifiers	10-Jan-03	21-Apr-03	21-Apr-03	-3.3
5	SL12020127	IPL - 2 MW Cooling Water Available in CHL	02-Dec-02	30-Jun-03	30-Jun-03	NA
5	SL12020147	IPL - 4 MW Cooling Water Available in CHL	02-Dec-02	28-Feb-03	28-Feb-03	NA

FY03 Jefferson Lab
Self-Assessment of Contract Performance



Level	Act Id	Description	Plan 03 Target	Actual	Projected	Delta Months
5	SL1101TI23	Start of FY 03 HB Prod He Vessels	07-Apr-03	11-Feb-03	11-Feb-03	1.8
5	SL12020635	Deliver 2.1K Cold Box & Compressor	19-Jun-03	30-Jul-03	30-Jul-03	-1.3
5	SL10060101	IPL - Start Install. Linac M-B CM	04-Sep-03	01-Jul-03	01-Jul-03	2.1
5	SL11030335	Deliver Last Set of HB End Cans	16-Jan-04	16-Jun-03	16-Jun-03	7.0
Total Month						1.74

Milestones proposals tying schedule performance to cryomodule completion or delivery to the SNS site are being discussed with the Site Office.

PM	Description	Point Value	Points Awarded	Goal	Raw Score	Adjectival Rating
6.2	Schedule Performance on the CEBAF Center Addition (N/A because of delay in funding)	10	10	≤ one month behind schedule	Milestones met	Outstanding

Discussion

Funds received on March 1 and 31, 2003 allowed the project, which had been on hold because of the FY03 Budget Continuing Resolution, to proceed. The milestone dates in the project plan were met. However as of September 30, 2003 the project was one week behind schedule due to Hurricane Isabel, which closed the Lab and left the subcontractor without electricity. The design is 60% complete.

A proposal to add a CEBAF Center Addition cost performance metric in FY04 is under discussion with the Site Office.