

**Thomas Jefferson Site Office
Annual Assessment Report**

Fiscal Year 2010



**Scott Mallette, Acting Manager
Thomas Jefferson Site Office
Office of Science**

Issued: October 2010

Table of Contents

	<u>Page</u>
Acronyms.....	iii
1.0 INTRODUCTION	1
2.0 CONDUCT OF BUSINESS	1
3.0 FY 2010 SUMMARY ASSESSMENT AND FY 2011 CHALLENGES	2
APPENDIX A – FY 2010 KEY OBJECTIVES, PERFORMANCE MEASURES, TARGETS, AND RESULTS	A-1
APPENDIX B – FY 2010 ANNUAL INTEGRATED SAFETY MANAGEMENT DECLARATION AND EFFECTIVENESS REVIEW SUMMARY REPORT.....	B-1

Acronyms

AHA	Activity Hazard Analyses
APP	Annual Performance Plan
ARRA	American Recovery and Reinvestment Act
ASE	Accelerator Safety Envelope
BNL	Brookhaven National Laboratory
CAP	Corrective Action Plan
CAS	Contractor Assurance System
CATS	Corrective Action Tracking System
CEBAF	Continuous Electron Beam Accelerator Facility
CFR	Code of Federal Regulations
CM	Configuration Management
CRAR	Continuity Readiness Assurance Report
DDFO	Deputy Director for Field Operations
DOE	U.S. Department of Energy
DOECAP	DOE Consolidated Audit Program
EMS	Environmental Management System
ES&H	Environment, Safety, and Health
FEOSH	Federal Employee Occupational Safety and Health
FPD	Federal Project Director
FRAM	Functions, Responsibilities, and Authorities Manual
FTE	Full-Time Equivalent
FY	Fiscal Year
GPP	General Plant Project
HSS	Office of Health, Safety, and Security
HQ	Headquarters
IDP	Individual Development Plan
IPR	Independent Project Review
ISC	Integrated Service Center
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
JSA	Jefferson Science Associates, LLC
M&O	Management and Operating
NLSL	National Synchrotron Light Source
OAPP	Operational Awareness Program Plan
OFI	Opportunity for Improvement
ORPS	Occurrence Reporting and Processing System
PD	Program Description
PEMP	Performance Evaluation and Measurement Plan
PEP	Project Execution Plan
PSOP	Project Specific Oversight Plan
QUAL	Qualification
SAD	Safety Assessment Document
SC	Office of Science
SCMS	Office of Science Management System
SME	Subject Matter Experts

SOTR	Subcontracting Officer Technical Representative
TEDF	Technology and Engineering Development Facility
TJNAF, JLab, or Laboratory	Thomas Jefferson National Accelerator Facility or Jefferson Laboratory
TJJO	Thomas Jefferson Site Office
TQP	Technical Qualification Program
UIM	Utilities Infrastructure Modernization

1.0 INTRODUCTION

The purpose of this Thomas Jefferson Site Office (TJSO) Annual Assessment Report is to provide an assessment of Site Office performance against each of the goals and objectives established for Fiscal Year (FY) 2010. Any FY 2010 major areas of concern and associated corrective actions are included, as well as noteworthy accomplishments and challenges anticipated for FY 2011.

2.0 CONDUCT OF BUSINESS

The TJSO provides the U.S. Department of Energy (DOE) and the Office of Science (SC) on-site presence at the Thomas Jefferson National Accelerator Facility (TJNAF or Jefferson Lab). The TJSO is a DOE line management organization reporting to the Office of Science Deputy Director for Operations (DDFO, SC-3). The TJSO is responsible and accountable for the management of the Jefferson Lab contract and oversight of the operational and management performance.

The Jefferson Lab prime contract was awarded in FY 2006 to Jefferson Science Associates, LLC (JSA). JSA is jointly owned by Southeastern Universities Research Association and CSC Applied Technologies, LLC (also known as the Computer Science Corporation, North American Public Sector's Applied Technology Group). An extension of the contract was granted this year to FY 2015. TJSO manages this contract through the efforts of a variety of TJSO subject matter experts (SMEs) and support provided through the SC Integrated Service Center (ISC). These efforts are described using four core functions:

- Setting Expectations: Establishing and communicating expectation requirements to guide contractor planning and conduct of work activities;
- Monitoring Performance: Monitoring contractor operations, work activities, and deliverables to ensure that the Department and contract expectations and requirements are being met;
- Facilitating Performance: Maintaining ongoing DOE federal employee activities required for efficient contractor performance, including providing support and guidance; and
- Providing Feedback: Developing and communicating performance results from monitoring processes to the contractor to improve performance.

A "Sense of the Laboratory" is needed to ensure a level of detail and understanding is available to the Site Office and SC management on the performance, programs, operations, and conditions of the Laboratory. This information is used to assess the Laboratory and its associated management and operating (M&O) contractor performance against SC expectations and to identify issues, make decisions, and where appropriate, provide direction.

The Site Office supports the Nuclear Physics Program as an on-site program representative and provides assistance with specific program liaison and management functions as required. Program liaison and management includes becoming familiar with program activities occurring at the site, including scope, schedule, and cost; and obtaining an understanding of program relationships, site resources, and capabilities necessary to support program activities. This function supports the identification of potential site issues and/or concerns that may affect the ability to complete program requirements.

Section 3.0 provides a summary assessment of FY 2010 accomplishments and FY 2011 challenges. Appendix A provides a performance assessment for each FY 2010 measure and target.

Appendix B is the FY 2010 Annual Integrated Safety Management Declaration and Effectiveness Review Summary Report.

3.0 FY 2010 SUMMARY ASSESSMENT AND FY 2011 CHALLENGES

In summary, the Site Office achieved 100 percent of the measures established for FY 2010. The FY 2011 TJSO Annual Performance Plan (APP) objectives, measures, and targets were established based upon an assessment of performance and progress achieved during FY 2010, any new programmatic needs, and DDFO guidance, goals, and objectives.

Noteworthy accomplishments in FY 2010 include:

- The 12 GeV upgrade project, a \$310M, six-year project that will double the beam energy of Continuous Electron Beam Accelerator Facility (CEBAF), is 30.2 percent complete (July 2010), and construction is 21.5 percent complete (July 2010).
- Approval of CD-3B for the Technology and Engineering Development Facility (TEDF) project; project is proceeding on schedule and within cost.
- CD-1 review was completed August 25, 2010, and approval of CD-1 for the Utilities Infrastructure Modernization (UIM) project is planned in the first quarter of FY 2011.
- DOE extended JSA's M&O contract for operation of the TJNAF to 2015 in support of the Laboratory's mission.
- DOE obligated 100 percent of American Recovery and Reinvestment Act (ARRA) project funding by the end of FY 2010, and TJSO/JLab have effectively maintained internal controls over Recovery Act funding.
- Initiated implementation of SC contractor assurance process improvements at JLab (H Clause added to M&O contract).
- All General Plant Projects (GPPs), including ARRA GPPs, are proceeding satisfactorily (\$10M GPP projects completed by first quarter of FY 2011).
- Established initial goals to support Executive Order 13514, *Federal Leadership and Environmental, Energy, and Economic Performance*.
- Completed corrective actions from the June 2008 Office of Health, Safety, and Security (HSS) Environment, Safety, and Health (ES&H) Inspection. Scheduled actions were completed on time, and effectiveness reviews will be completed during FY 2011.
- Endorsed the Annual Laboratory Plan, and partnered with the Laboratory to implement the mission readiness concept.
- The July 2009 Procurement Management Review identified seven commendable practices, six suggestions, and three findings related to TJSO operations. All TJSO actions were fully implemented and closed by TJSO during the second quarter of FY 2010.

Looking ahead, the TJSO FY 2011 Annual Performance Plan builds on FY 2010 performance and incorporates the DDFO'S FY 2011 goals. Key challenges include:

- Ensuring programs and projects are conducted safely, securely, and efficiently, using sound management practices. The TJSO will ensure that each project has a Project Specific Oversight Plan and that appropriate staffing resources are applied to accomplish project milestones.
- Ensuring that the 6 GeV research program continues to support the DOE SC mission and strategic goals. The TJSO will work to address this challenge by continuing to effectively manage the management and operating contract. In addition, the Site Office will continue close coordination

with and support of the Office of Nuclear Physics in furthering the science mission at the Thomas Jefferson National Accelerator Facility.

- Ensuring, within TJSO's control, that projects adhere to cost schedule and performance targets (e.g., 12 GeV upgrade, TEDF, UIM). The TJSO will address this challenge by ensuring use of good project management principles including monitoring the status of project deliverables and cost and engaging in ongoing communications with the contractor. In addition, federal project directors and acquisition professionals will maintain their certifications and meet continuing education requirements.
- Pursuing enhanced partnership initiatives between TJSO, the Laboratory, and other stakeholders. A number of activities have been identified in the FY 2011 APP to describe how this challenge will be met.
- Ensuring an effective Contractor Assurance System (CAS) is maintained. The FY 2011 APP identified initiatives to further advance the CAS implementation.
- Ensuring the Site Sustainability Plan supports the goals and strategies of the DOE Strategic Sustainability Performance Plan and contributes to the metrics for greenhouse gas emissions. The TJSO will work to address this challenge through collaborative engagement with Jefferson Laboratory, the DOE National Laboratory complex, and associated Headquarters Program Offices.
- Maintaining ongoing work and addressing new initiatives with current staffing levels presents a challenge to the Site Office. TJSO is currently understaffed by three Full-Time Equivalents (FTEs) (20 percent). TJSO will work to mitigate this challenge by ensuring that staff stays current on qualification and certification requirements and by utilizing the ISC to provide additional SME and technical support, as needed. TJSO will be re-evaluating skills mix in FY 2011 to determine the specific skills required.

**APPENDIX A – FY 2010 KEY OBJECTIVES,
PERFORMANCE MEASURES, TARGETS, AND
RESULTS**

FY 2010 KEY OBJECTIVES, PERFORMANCE MEASURES, TARGETS, AND RESULTS

Table 1 – Thomas Jefferson Site Office (TJSO) Fiscal Year (FY) 2010 Performance Assessment

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
TJSO Internal Operations	1.1.1	Prepare the FY 2010 TJSO Annual Performance Plan.	Issue the FY 2010 Annual Performance Plan, incorporating Deputy Director for Field Operations (DDFO) Goals and Objectives.	Goal 1. Improve Our Operations	10/1/09	Completed. Issued October 1, 2009.
TJSO Internal Operations	1.1.2	Conduct an assessment of FY 2009 TJSO performance against performance plan.	Issue the FY 2009 Annual Assessment Report.	Goal 1. Improve Our Operations	11/1/09	Completed. Issued November 1, 2009.
TJSO Internal Operations	1.1.3	Update staffing analysis.	Submit FY 2012 Program Direction budget request and justification.	Goal 1. Improve Our Operations	5/1/10	Completed. FY 2012 Program Direction budget request submitted March 31, 2010.
TJSO Internal Operations	1.1.4	Maintain effective TJSO management systems and procedures that are consistent with Office of Science	Management systems and standard operating plans and procedures are implemented.	Goal 1. Improve Our Operations	9/30/10	Completed. Contractor Assurance System (CAS) changes and H-Clause considerations have been incorporated into the revision of the TJSO Operational Awareness

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
		Management System (SCMS) procedures and field office roles, responsibilities, authorities, and accountabilities.				Program Plan. SCMS changes are being monitored by multiple Site Office staff, increasing the likelihood that flow-down to local procedures is being captured.
TJSO Internal Operations	1.1.5	Implement TJSO Corrective Action Plan (CAP) in response to the June 2008 Office of Health, Safety, and Security (HSS) Environment, Safety, and Health (ES&H) inspection.	CAP is implemented on schedule. Conduct effectiveness reviews, as appropriate.	Goal 1. Improve Our Operations	9/30/10	Completed. Effectiveness review of HSS Finding D-1 CAP completed by Oak Ridge Office on April 1, 2010, and accepted by TJSO Manager on April 2, 2010.
TJSO Internal Operations	1.1.6	Revise TJSO oversight model consistent with U.S. Department of Energy (DOE) and Office of Science (SC) performance management and state guidance.	Issue updated Operational Awareness Program Plan.	Goal 1. Improve Our Operations	9/30/10	Completed.

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
Business/ Contract Management	1.2.1	Ensure Contractor Assurance System is in place.	Facilitate implementation in accordance with Headquarters' (HQ) guidance.	Goal 2. Improve Our Laboratories	9/30/10	Completed. Contractor has CAS in place and functioning. Contractor Assurance System H Clause was placed in the contract on January 29, 2010 (Mod 097). Discussions with the Lab continue on development of an updated CAS Program Description.
Program and Project Management, and Federal Stewardship	1.2.2	Ensure Thomas Jefferson National Accelerator Facility (TJNAF) site planning and infrastructure supports mission accomplishment.	Approve the Infrastructure portion of the Annual Laboratory Plan and facilitate implementation of the Mission Readiness concept.	Goal 2. Improve Our Laboratories	9/30/10	Completed. September 2010 Mission Readiness Peer Review was completed with a successful outcome. Mission infrastructure needs were addressed in FY 2012 budget submittal. The infrastructure portion of the Annual Laboratory Plan has been endorsed by the Site Office.
Program and Project Management, and Federal Stewardship	1.2.3	Ensure infrastructure modernization project proposals are well justified and developed.	Facilitate continued development and appropriate review of the Continuous Electron Beam Accelerator Facility (CEBAF) Center	Goal 2. Improve Our Laboratories	9/30/10	Completed (Ongoing). Utilities Infrastructure Modernization (UIM) Project received CD-0 on September 18, 2009; CD-1 review completed and final approval is scheduled for the first

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
			Expansion and Renovation Project and the Utilities Infrastructure Modernization Project.			quarter of FY 2011. Conceptual Design for the UIM project completed. CEBAF Center Expansion and Renovation Project (Total Estimated Cost: \$91M) FY 2012 budget data sheet not submitted since project moved to ~FY 2016 by SC HQ.
Business/ Contract Management	1.3.1	Implement contract reform and other initiatives applicable to field elements.	Implement in accordance with HQ guidance.	Goal 3. Bring Order to Chaos	9/30/10	Completed (Ongoing). Reduced Performance Evaluation and Measurement Plan (PEMP) notable outcomes to significant few. Implementing CAS principles through the Site Office and within the Lab.
TJSO Internal Operations	1.3.2	Support DOE and SC corporate needs and initiatives.	Participate in non-TJNAF program and project reviews, and similar activities (e.g., accelerator safety working group, project reviews).	Goal 3. Bring Order to Chaos	9/30/10	Completed. The following support to DOE and SC corporate activities was provided: October 2009, National Synchrotron Light Source (NSLS)-II Bi-Annual Project Review (Lehman) – Brookhaven National Laboratory (BNL) (J. May) November 19-20, Oak Ridge

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
						<p>National Laboratory, Modernized Laboratory Facility, CD-2 Independent Project Review (IPR) (R. Korynta)</p> <p>January 25-28, BNL Integrated Science Building CD-2b IPR (R. Korynta)</p> <p>January 26-27, Brookhaven Renovate Science Labs CD-3 (P. Hunt)</p> <p>February 2-4, Energy Solutions Bear Creek DOE Consolidated Audit Program (DOECAP) Audit (P. Hunt)</p> <p>February 8-15, DOE Review of the NSLS-II Project at BNL (J. May)</p> <p>March 23-25, Clean Harbors DOECAP Audit Deer Park (P. Hunt)</p> <p>April 6-8, Energy Solutions DOECAP Audit Clive Utah (P. Hunt)</p> <p>May 16-19, Holifield Radioactive Ion Beam Facility Review (M. Epps)</p>

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
						<p>June 15, BNL Integrated Science Building CD-3b IPR (desk top) (R. Korynta)</p> <p>June 28-29, Berkeley BELLA CD (P. Hunt)</p> <p>July 25-August 6, SLAC National Accelerator Facility Quality Assurance Review (S. Neilson)</p> <p>July 26-30, CD-1 Lehman Review of the Facility for Rare Isotope Beams (P. Hunt)</p> <p>August, FY 2011 Modernization Projects CD-1 IPR (Germantown) (R. Korynta)</p> <p>August 9-12, National Stellerator Test Experiment Upgrade Project Review at Princeton Plasma Physics Laboratory (R. Korynta)</p> <p>August 10, NSLS-II Mini Project Review (Lehman) – BNL (J. May)</p> <p>September 10, STAR Detector Major Item of Equipment Project Review (Nuclear Physics) – BNL (J. May)</p>

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
Program and Project Management, Federal Stewardship and TJSO Internal Operations	1.4.1	Establish a TJSO-TJNAF Integrated Assessment Schedule for FY 2010.	Schedule issued.	Goal 4. Help Our Laboratories Be Successful	10/1/09	Completed.
Program and Project Management, and Federal Stewardship	1.4.2	Maintain effective levels of oversight and cognizance of JLab activities to maintain a “Sense of the Laboratory” to assist in ensuring an effective oversight and feedback mechanism.	ORION entries document “Sense of the Laboratory” activities.	Goal 4. Help Our Laboratories Be Successful	9/30/10	Completed for FY 2010. Progress is ongoing.
Program and Project Management, and Federal Stewardship	1.4.3	Ensure programs and projects are conducted using sound management practices.	Maintain awareness and oversight of American Recovery and Reinvestment Act, 12 GeV Upgrade, Technology and Engineering Development Facility, and other projects to ensure they are in	Goal 4. Help Our Laboratories Be Successful	9/30/10	Completed. Federal Project Directors (FPDs) conduct regular meetings and reviews with lab. Site Office management meets with FPDs at least monthly. FPDs certifications continue to be kept current.

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
			compliance with DOE guidance and orders, achieving their baselines; and take corrective actions, as appropriate.			
Business/ Contract Management	1.4.4	Maintain oversight of TJNAF closure of HSS ES&H findings from June 2008 ES&H inspection, and provide guidance as appropriate.	Conduct oversight and effectiveness reviews of CAP actions, as appropriate.	Goal 4. Help Our Laboratories Be Successful	9/30/10	Completed (Ongoing). HSS Finding C-1 Material Handling CAP effectiveness review conducted November 2009 and closed on January 25, 2010. D-3 Effectiveness Review performed March 1-3, 2010, and the report was accepted by TJSO and posted to the DOE Corrective Action Tracking System (CATS) system for closure on March 30, 2010. Remainder of Lab CAP actions are on schedule.
Program and Project Management, and Federal Stewardship	1.4.5	Conduct walkthroughs, reviews, evaluations, and assessments of the	ORION entries record federal stewardship activities as they are planned, executed, and	Goal 4. Help Our Laboratories Be Successful	9/30/10	Completed for FY 2010. Progress is ongoing.

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
		contractor in programmatic and operational areas to ensure the adequacy of the contractor's management and administrative systems to manage the program work. Coordinate DOE and external reviews, evaluations, and inspections of the Laboratory.	completed.			
Program and Project Management, and Federal Stewardship	1.4.6	Establish a risk-based assessment planning guide with the Laboratory.	Reach agreement with the Laboratory.	Goal 4. Help Our Laboratories Be Successful	9/30/10	Completed. The Laboratory shared their risk-based assessment planning tool and procedure in July 12, 2010, including risk-based assessment frequency determinations for functional areas outside of ES&H. The FY 2011 Integrated Assessment Schedule applied partnering principles, risk-based considerations, and was finalized September 21, 2010.

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
Business/ Contract Management	1.5.1	Establish FY 2010 TJNAF PEMP.	Incorporate PEMP into contract Appendix B.	Goal 5. Evaluate Our Contractors Fairly	10/1/09	Completed.
Business/ Contract Management	1.5.2	Perform an FY 2009 end-of-year evaluation of TJNAF contractor performance.	Complete evaluation report and transmit to contractor.	Goal 5. Evaluate Our Contractors Fairly	12/31/09	Completed.
Business/ Contract Management	1.5.3	Perform a FY 2010 mid-year evaluation of TJNAF contractor performance.	Complete evaluation and transmit to contractor.	Goal 5. Evaluate Our Contractors Fairly	5/31/10	Completed.
Business/ Contract Management	1.5.4	Establish FY 2011 TJNAF PEMP.	Submit draft PEMP to SC-HQ.	Goal 5. Evaluate Our Contractors Fairly	9/1/10	Completed.
TJSO Internal Operations	2.3.1	Ensure adequate training and development so that the TJSO staff has the required skills to perform their assignments	Implement TJSO Technical Qualification Program (TQP) for identified positions. Complete individual	Functional Area 3. Internal Operations	9/30/10	Completed (Ongoing). All TQP participants are on schedule for completion of their qualification requirements. All IDPs completed for 2010.

TJSO Functional Area	Objective Number	Objective	Measure	SC FY 2010 Performance Goals & Objectives DDFO Crosswalk (Ref. 7/29/2010 Memo from G. Malosh to Distribution)	Target	Assessment
		and to be prepared for the future.	development plans (IDPs) in accordance with DOE guidance. TJSO management and staff jointly review IDPs for career and skills development. Look for ad-hoc opportunities during the year for staff developmental assignments.			

**APPENDIX B – FY 2010 ANNUAL INTEGRATED
SAFETY MANAGEMENT DECLARATION AND
EFFECTIVENESS REVIEW SUMMARY REPORT**

**FY 2010 Annual Integrated Safety Management Declaration
and Effectiveness Review Summary Report**

1.0 Executive Summary

In accordance with U.S. Department of Energy (DOE) Manual 450.4-1, *Integrated Safety Management System (ISMS) Manual*, the Thomas Jefferson Site Office (TJSO) conducted an Integrated Safety Management (ISM) annual effectiveness review of TJSO and Jefferson Science Associates, LLC (JSA), for the Thomas Jefferson National Accelerator Facility (TJNAF). The objective of the review was to provide a “snapshot” evaluation of the overall effectiveness of ISMS implementation.

In summary, the review indicates that JSA and TJSO are executing an effective ISM Program. Areas for improvement remain in each organization; however, there were no implementation gaps or breakdowns that indicate the ISMS programs are unsatisfactory.

2.0 Introduction/Background

The effectiveness reviews were conducted using assessment reports of TJSO and JSA, including self-assessments and external assessments related to ISMS. As such, it represents a “look-back” of all events, assessments, operational awareness activities, and trends. This summary report includes two attachments:

- Attachment 1 contains TJSO’s ISM effectiveness review of JSA.
- Attachment 2 contains the ISM effectiveness review of TJSO.

In addition to the above mentioned DOE reviews, JSA performed a review entitled, the *FY 2010 ISMS Effectiveness Review (MSA-2010-15)*, which was submitted to TJSO via letter H. Montgomery to S. Mallette, “Annual Integrated Safety Management (ISM) Expectations and Declarations,” dated August 6, 2010. The JSA’s overall conclusion was that the ISM system is effective. The contractor identified ISM strengths such as: consolidation of the Lab’s work planning/control/authorization process with activity hazard analyses, issues management, event investigation and reporting, forklift operations, Environmental Management System, the assessments program, and safety metrics. The contractor also identified and scheduled the following opportunities for improvement: Environment, safety, and health (ES&H) training improvements (evaluating effectiveness of training, reviewing/revising SAF100, and investigating causes behind the training completion rates), issues management, and the timeliness of self-assessment reports.

The next JSA declaration and effectiveness review is to be issued to TJSO no later than August 1, 2011. This is necessary so that the results of JSA’s and TJSO’s ISM effectiveness reviews are in alignment with the end of year Performance Evaluation and Measurement Plan evaluation. The next JSA ISM Program Description is due to TJSO by December 31, 2010, if an update is warranted. Except as noted above, TJSO’s expectations regarding annual ISM deliverables have been conveyed to JSA via J. Turi to C. Leemann letter, subject: “Annual Integrated Safety Management (ISM) Expectations and Approval of Jefferson Laboratory ISM Program Description (PD),” dated March 27, 2008.

3.0 Integrated Safety Management Declaration

TJSO concludes that ISM is being effectively implemented by JSA at TJNAF, and areas needing improvement have been identified and are being addressed. The areas needing improvement are summarized below and are discussed in detail in Attachment 1.

TJSO has reached an overall conclusion that ISM is effectively implemented within the Site Office, and areas needing improvement have been identified and are being addressed. The areas needing improvement are summarized below and are discussed in detail in Attachment 2.

4.0 Conclusions

4.1 JSA: ISM is being effectively implemented by JSA at TJNAF. Vulnerabilities identified in the *FY 2009 ISM Effectiveness Review* have been deemed to be progressing to adequate performance. The previous year's vulnerabilities and status are detailed in Attachment 1.

Areas warranting improvement include the following:

- Configuration Management (CM).
- Improvements are still warranted in dispositioning corrective actions with defensible, objective evidence to support corrective action closure.
- Recurrence of struck utilities during new construction activities.

4.2 TJSO: ISM is being effectively implemented by TJSO. Areas warranting improvement include the following:

- Completion of Fiscal Year (FY) 2009 corrective actions regarding inspection/replacement of chairs in the TJSO Conference Room (L207 of Continuous Electron Beam Accelerator Facility Center)
- Improve or revise the Contractor Assurance System oversight data collection process

APPENDIX B
ATTACHMENT 1

TJSO EVALUATION OF JSA PERFORMANCE
AND ISM SYSTEM EFFECTIVENESS



Department of Energy
Thomas Jefferson Site Office
12000 Jefferson Avenue, Suite 14
Newport News, Virginia 23606

September 27, 2010

Dr. Hugh E. Montgomery
President and Laboratory Director
Jefferson Science Associates, LLC
Thomas Jefferson National Accelerator Facility
12000 Jefferson Avenue
Newport News, VA 23606

Dear Dr. Montgomery:

FY 2010 ANNUAL INTEGRATED SAFETY MANAGEMENT DECLARATION AND EFFECTIVENESS REVIEW

Enclosed is Thomas Jefferson Site Office's (TJSO) FY 2010 Annual Integrated Safety Management (ISM) assessment of Jefferson Science Associates, LLC (JSA). The enclosed report has been reviewed by your staff, and comments have been addressed. In summary, we have concluded that ISM is being effectively implemented at the Thomas Jefferson National Accelerator Facility.

Looking ahead to next year, the next JSA declaration and effectiveness review will need to be issued no later than August 1, 2011. This is necessary so that the results of JSA's and TJSO's ISM effectiveness reviews are in alignment with the end of year PEMP evaluation. The next JSA ISM Program Description is due to TJSO by December 31, 2010, if an update is warranted. Except as noted above, TJSO's expectations regarding annual ISM deliverables have been conveyed to JSA via J. Turi to C. Leemann letter, subject: "Annual Integrated Safety Management (ISM) Expectations and Approval of Jefferson Laboratory ISM Program Description (PD)," dated March 27, 2008.

If you have any questions pertaining to this subject, please contact David Luke of my staff at extension 7139 or myself.

Sincerely,

Signature on File

Scott J. Mallette, Acting Manager
Thomas Jefferson Site Office

Enclosure

cc w/encl:

M. Dallas	M. Logue
S. Smith	W. Rainey
B. Lenzer	TJSO staff

**TJJO FY 2010 Annual Integrated Safety Management (ISM) Assessment
of Thomas Jefferson National Accelerator Facility (TJNAF)**

Executive Summary and ISM Declaration

TJJO concludes that ISM is being effectively implemented by Jefferson Science Associates, LLC (JSA) at Thomas Jefferson National Accelerator Facility (TJNAF). There were no implementation gaps or breakdowns that indicate the ISMS programs are not satisfactory; however, areas warranting improvement were identified as noted below.

The Laboratory has experienced more TRC and DART cases this fiscal year compared to last; however, this increase is related to some degree by the added risk and labor-hours from the dramatic expansion in construction activities. It is evident that the Lab has instituted processes to monitor safety related performance indicators for the purpose of detecting trends and mitigating recurrence. Furthermore, the Laboratory has taken steps to better train and orient the influx of construction contractors, while also improving the safety skills of SOTR's and ES&H staff through periodic training on construction safety topics. Improvements are noted in the dissemination and use of the Lab's trend analysis data, and its ability to organize investigations, and develop practical corrective actions.

There was a significant increase in construction activity during the fiscal year, affecting virtually all Lab operations. At any time up to five major construction projects were underway at the facility. The 12 GeV Upgrade (12 GeV) Project and Technology and Engineering Development Facility (TEDF) project have been performing commendable construction safety practices, consistent with ISMS principles and core functions. The main construction activities include infrastructure upgrades, Hall D Complex, Central Helium Liquefier (CHL) building addition, and the North Access and South Access building additions, plus various ARRA GPP constructions. With respect to the ISMS Core Functions, the projects have demonstrated effectiveness in implementing ISM Core Functions.

ISM areas warranting improvement include:

- Improvements are still warranted in dispositioning corrective actions with defensive, objective evidence to support corrective action closure
- Configuration Management (CM)
- Recurrence of struck utilities during new construction activities

Introduction/Background

In accordance with DOE M 450.4-1, *Integrated Safety Management System (ISMS) Manual*, the Thomas Jefferson Site Office (TJJO) conducted an annual Integrated Safety Management (ISM) effectiveness review of JSA for the Thomas Jefferson National Accelerator Facility. The objective of the review was to provide an evaluation of the overall effectiveness of ISM implementation for FY 2010. This effectiveness review included but was not limited to reviewing assessment reports, surveillances, critique write-ups, quarterly PEMP feedback and a

review of trending data collected over the year. As such, it represented a “look-back” of all events, assessments, operational awareness activities, and trends.

JSA’s annual self-ISM effectiveness review, *The FY 10 ISMS Effectiveness Review*, was submitted to TJSO via letter H. Montgomery to S. Mallette, “Annual Integrated Safety Management (ISM) Expectations and Declarations,” dated August 6, 2010. The JSA’s overall conclusion was that the ISM system is effective. The contractor identified ISM strengths such as consolidation of the Lab’s work planning/control /authorization process with activity hazard analyses, issues management, event investigation & reporting, forklift operations, EMS, the assessments program, and safety metrics. The contractor has identified and scheduled the following opportunities for improvement: ES&H training improvements (evaluating effectiveness of training, reviewing/revising SAF100, and investigating causes behind the training completion rates), issues management, and the timeliness of self-assessment reports.

Status of Issues identified in the previous year ISM Effectiveness Review

FY 2010 Issues/Concerns	Current Status
Transparency of Operations and Contractor Assurance System	This issue has been addressed, although problems at a lesser frequency occurred as noted below. The Laboratory has viable electronic records systems, which permit review of assessment schedules, assessment reports, investigation reports, training records, procedures, and many other tools that facilitate the evaluation of CAS performance. However, there were cases where fact-finding meetings were not convened promptly (i.e., fiber optic utility strike fact-finding convened after sub-tier contractor left the site), and where TJSO was not invited to fact-finding meetings (snow event, CEBAF fire department response). Additionally, the posting of some assessment reports has been less than timely (i.e., Waste Acid MSA, joint assessment). In the latter case, the Lab acknowledged this shortcoming in their FY 2010 ISM Effectiveness Review as an OFI.
Material Handling Program	This issue has been addressed. The Effectiveness Review effort linked to HSS Finding C-1 was accepted by the Site Office to satisfactorily address deficiencies in the forklift operation program. Additionally, the construction activities evaluated by TJSO during the FY have largely reflected careful consideration and planning related to lifting activities. The one recordable injury that was affiliated with material handling was more attributed to misjudgment on the location where a load was placed and the manner in which the rigging was removed as opposed to inappropriate handling of a suspended load.

FY 2010 Issues/Concerns	Current Status
Accelerator Safety - Non-conservative Determinations Regarding Accelerator Safety Envelope (ASE) Violations and Unreviewed Safety Issues (USIs)	This issue has been addressed. In FY 2010, accelerator operations personnel have consistently demonstrated conservative judgment in self-identifying ASE violations USIs.
Accelerator Safety - Reliability of the Personnel Safety System (i.e., safety interlocks, sweep process, etc.)	This issue has not been addressed and has been rolled into Jefferson Lab’s configuration management (CM) effort, currently under development. TJSO has added a PEMP Notable Outcome measure to add significance to CM and will evaluate progress throughout the year.
Accelerator Safety - Progress on the Actions Required from the TJSO SAD-ASE Approval Letter dated April 14, 2009.	This issue has been addressed. JLab-CATS is now tracking these actions based upon a schedule that was developed to assure submittal of FSAD Revision 7 to TJSO by February 2012.
Accelerator Safety - Verification of Implementation of the ASE	This issue has been addressed via a joint JLab/TJSO assessment discussed later in this report.
Management of Pressure Vessel Inspection Records	<p>This issue has been addressed.</p> <p>A joint assessment of the Laboratory’s Pressure Safety documentation was originally scheduled to be performed in April 2010. Assessment planning meetings were held between the Lab and Site Office, but prior to commencement of this review, TJSO identified that the Lab’s QACI had performed a review of the same topic in between July 2009 and March 2010 [report IA-2010-12 signed final March 2010]. The assessment report indicated the pressure safety documentation process was working sufficiently; therefore re-assessing this same topic as an MSA was deemed not to be value-added. The joint assessment was revised by the Engineering Division to perform an electronics design MSA instead, with TJSO shadowing.</p> <p>TJSO’s appraisal of the pressure design packages referenced within the Lab’s report [IA-2010-12] included examples from a variety of different work groups and included examples where design modifications were processed. The scope and rigor of this Independent Assessment is considered acceptable.</p>
Fire Protection	This issue has been addressed. The few remaining corrective actions from the 2008 TJSO assessment are being implemented on time and monitored through the PEMP process.

FY 2010 Issues/Concerns	Current Status
Event Investigation and Reporting Program (2008 HSS Programmatic Finding)	<p>Adequacy determination pending issuance of effectiveness review report. A JLab effectiveness review, with TJSO shadowing, was conducted to validate closure of this programmatic Finding. A draft report is forthcoming. The conduct of this effectiveness review included sufficient inquiry to probe the effectiveness of the corrective actions. The team was organized into two groups so that attention could be applied to interviewing staff, and reviewing documentary evidence separately. Information obtained from these two groups were then evaluated together to help reinforce the conclusions reached by the team.</p> <p>JSA is to be commended for the successful implementation of a much improved Event Investigation and Reporting Program (HSS D4). The recent effectiveness review was the culmination of a two year effort at greater transparency and cooperation between JSA and the Site Office. This type of relationship and the work it produces benefits the entire site and TJSO wishes to encourage more of the same.</p>
Assessments Program (2008 HSS programmatic Finding)	<p>Adequacy determination Effectiveness Review was conducted in September 2010. TJSO comments on the CRAD/LOI's have been reviewed and dispositioned.</p>
Issues Management Program (2008 HSS Programmatic Finding)	<p>This issue has been addressed. An effectiveness review of the improvements to the Issues Management Program was conducted. The review identified 1 finding and 5 observations. The finding was related to a failure to follow the Issues Management Procedure with respect to tracking low significance issues. The observations were related to lack of clarity in the implementing procedures and lack of understanding by staff who implement those procedures. A corrective action plan has been put in place and is being tracked in JLab CATS.</p>

Core Function #1: Define the Scope of the Work (met)

Configuration Management

Background: Due to a variety of problems and events that occurred during FY 2009, a multi-disciplinary JLab team reviewed CM as it applied to Jefferson Lab safety systems. The subsequent report, *Configuration Control for Jefferson Lab Safety Systems*, dated December 2009, identified that significant CM weakness existed. The major categories of weaknesses identified were a systematic lack of communication regarding change status; traceable information was not available, including drawings, specs, etc.; and that formal requirements documents did not exist for most systems. Nine recommendations were included in the report. Three initial focus areas were identified that include lifting equipment, pressure safety, and the accelerators' Personnel Safety System.

Furthermore, during the February-March 2010 joint review, *Accelerator Internal Safety Review* (MSA 2010-06), numerous CM issues were identified, including not maintaining as-built drawings current with actual configuration, engineering data stored in personal files, and reliance on the recollections of individuals to provide system history such as the reasons for earlier changes. The report concluded that a contributing factor might be that there is no Lab standard or clear expectation for the Lab. Substantial CM recommendations were documented in the report, all of which have been loaded into JLab CATS with owners assigned.

In response to CM concerns and taking into account that the issue has already been extensively studied, TJSO has added a Notable Outcome to the 2010 PEMP that focuses on the need to begin implementation, with discrete and measurable milestones, of a Jefferson Lab Configuration Management (CM) process/program that would ensure systems and facilities, using a graded approach, are consistently managed such that as-built drawings, system requirements, and actual field configuration are in alignment with each other, documented, and accurate.

TJSO expects the JLab CM process to extend beyond the initial three focus areas targeted in the December 2009 JLab CM study to include all significant JLab buildings, systems, and processes. The CM program should also address the CM Observations from the MSA 2010-06 assessment and the results of the 2010 digging permit investigation.

JLab Engineering Division currently has the lead in formalizing CM, which at first will only apply to the Engineering Division. The first of three phases of a Conduct of Engineering (CoE) Manual should be out for internal review by the end of FY 2010 and will focus on requirements development, document management, and CM. Although specific FY 2011 milestones regarding CM improvements have not been agreed upon yet, it is anticipated that Lab-wide CM will be addressed in FY 2011.

Projects

Each conventional construction subcontract utilized detailed drawings and specifications to define the scope of the work for the subcontractors for the 12 GeV Project. The subcontractors then in turn developed a detailed resource-loaded schedule that logically laid out work to be

performed to meet the contractual requirements. TJSO staff has reviewed the contractual documentation, including the drawings and specifications that were provided to the prime subcontractor.

Core Function #2: Analyze the Hazards (met)

Safety Assessment Document/Accelerator Safety Envelope (SAD-ASE)

A joint Jefferson Lab/TJSO assessment was conducted to verify the ASE's credited controls were in place and effective. The assessment took place between February and March so that operations could be observed while the accelerator was running and during a "down" maintenance period. No Findings were identified; however, thirty-one Opportunities for Improvement (OFI's) were noted in the final report. The OFIs included worker awareness regarding credited controls, lack of labeling of credited controls, insufficient ASE/FSAD training for system owners, inconsistent basic safety knowledge/awareness among tunnel workers, formal flow down of requirements from the ASE to lower level work processes and documents, configuration management and preventive maintenance program development.

Projects

The preliminary hazard analysis was completed for the Utilities Infrastructure Modernization (UIM) Project and an independent project review was performed in August for Critical Decision (CD)-1. The project received recognition for appropriately covering the hazards to the extent possible at this stage of the project. There were no recommendations for improvement. The hazard analysis will be updated and refined prior to CD-2. The project also received recognition for addressing the principles and functions of the DOE Integrated Safety Management System.

Daily task hazard analyses were performed prior to the start of construction activities for the Technology and Engineering Development Facility (TEDF) project. An independent project review was performed in July for the TEDF project. The TEDF project was recognized for the Hazards Analysis Report appropriately addressing the project hazards. Comments from the review stated that the Hazards Analysis Report identified a wide variety of construction and operational hazards, and clearly defined Federal OSHA and DOE safety regulations for safety requirements. The TJNAF ESH&Q Division and the Project Office reviewed the Mortenson (and its subcontractors') construction safety plans to ensure that the requirements of 10 CFR 851 are properly addressed. TJNAF and Mortenson are well prepared to implement a construction safety program.

For all 12 GeV conventional construction work activities to be performed by any level subcontractor, Activity Hazard Analyses (AHAs) were developed and approved by the JSA Subcontracting Officer Technical Representative (SOTR). The AHAs evaluated the work activities and identified the hazards to performing the work and mitigation actions to ensure the work was performed safely. TJSO staff have reviewed the approved AHAs and observed effective implementation through field walkthrough observations.

Core Function #3: Develop and Implement Hazard Controls (met)

Fire Protection

The fire protection program continues to improve. A substantial number of corrective actions were closed regarding the 2008 DOE fire protection assessment. Only a few remain and are on schedule. The Lab has hired a second fire protection engineer in FY 2010 and plans to hire a third who will focus on fire suppression design work. A Lab self-assessment is currently underway. In FY 2011, DOE will be conducting the triennial fire protection review, which will include determining if the substantial corrective actions from the previous DOE review were effective.

Radiation Protection

The Lab performed well in a DOE radiation protection program assessment that was conducted in FY 2010. There were two Findings, six observations, and two notable practices. A significant issue was numerous posting and labeling weaknesses. A 2007 peer review of JLab also noted numerous posting and labeling weaknesses. Due to the repetitive and programmatic nature of this Finding, the Lab has committed to enter this Finding into the Office of Enforcement's Noncompliance Tracking System.

Projects

For the 12 GeV project, the task specific AHAs identified the work controls to mitigate hazards associated with performing specific tasks. All workers involved with specific work activities were required to review and sign the AHAs for that specific work activity. TJSO staff have reviewed approved AHAs and observed effective implementation through field walkthrough observations.

Core Function #4: Perform Work within Controls (met)

Accelerator Work Control Reviews

Throughout the year, TJSO conducted walkthroughs to observe planned and ongoing work and work areas. TJSO also reviewed maintenance schedules, procedures, accelerator (and other area) task lists, such as ATList, FEList, etc., and conducted informal interviews with field workers and line management. TJSO observed that work performed by JLab was planned and completed in accordance with the principals of ISM.

Environmental

Environmental issues associated with construction work resulted in two regulatory noncompliances. The first was caused by the failure of a construction best management practice, which resulted in an illicit discharge (i.e., leaking of contaminated groundwater from a feed to a holding tank). The second noncompliance was damage to a monitoring well from a construction activity, which resulted in the subsequent failure to sample and provide results as required by a

state-issued environmental permit. In response to these issues, notable event investigations were conducted and corrective actions generated to prevent recurrence.

The Environmental Management System (EMS) underwent a significant overhaul during this fiscal year. The number of significant environmental aspects was reduced from over one hundred to a list of five. JLab benchmarking with other DOE programs helped to streamline the system. The EMS is effectively implemented within the ISM.

Industrial Safety

Industrial safety is well integrated across all site activities; this includes both operational activities and other construction projects. Members of the ESH&Q staff routinely interacted with management and workers of all the various projects and operations to ensure awareness of site activities and prospective hazards.

In FY 2010, there were numerous utility strikes during digging work involving both known and unknown lines. The causes were often failure to follow procedures and limitations of the detection equipment. A series of corrective actions has been initiated by the Lab including benchmarking their process against other DOE facilities, adding SMEs to the location process to address unknown utilities/equipment limitation causes, requiring SOTRs (or qualified designee) to provide direct oversight of location and excavation activities, and increased working awareness training. The Lab also concluded that these events should be grouped together and classified as a Recurring ORPS (Management Concern). At this time, TJSO believes that JLab has implemented adequate processes to address the situation. TJSO will be continuing to monitor this situation very closely as construction continues.

Projects

An independent project review was performed in July for the TEDF project. Comments from the review were that industrial safety was well integrated across all site activities; this included both operational activities and other construction projects. Members of the Lab ESH&Q staff routinely interact with management and workers of all the various projects and operations to ensure awareness of site activities and prospective hazards.

The TEDF Project Execution Plan (PEP) was approved by the Associate Director, Office of Safety, Security and Infrastructure, Office of Science, DOE, on November 9, 2009. The PEP identified that the TJNAF ESH&Q Division has approximately 0.75 FTEs per year to the TEDF project for design review, oversight, approval of general contractor and subcontractor safety plans, and safety advice to project management. The PEP identified the federal project director as the primary point of contact for the TJSO ES&H oversight activities that ensure TJNAF ESH&Q oversight is effective and conducted in accordance with the TJNAF and TEDF Project Specific Oversight Plan established prior to the start of construction.

The DOE TJSO TEDF Project Specific Oversight Plan (PSOP) was approved February 11, 2010, by the TJSO Manager. The purpose of the PSOP was to establish a DOE oversight plan for the protection of the public, workers and environment during construction of the TEDF, and it

described the planned federal construction oversight on all aspects of the project primarily during project new construction, renovation activities, and commissioning.

For the 12 GeV Project, work activities were performed within the bounds of the AHAs and were only performed by qualified and trained workers. TJSO staff, through field walkthrough observations, has observed proper performance of work and have verified that the work is being performed by qualified and trained workers.

Core Function #5: Provide Feedback and Continuous Improvement (met)

Environmental

JSA and TJSO environmental oversight was increased, and findings from environmental inspections are now tracked in the JSA corrective actions tracking system.

A good deal of effort was expended during this fiscal year to determine TJNAF's impact on greenhouse gas emissions. The baseline inventory for emissions was established based on 2008 emissions. One area is needed for further evaluation: the impact of fugitive emissions from detectors and other associated equipment used in the experimental end stations.

Lessons Learned Program

The Laboratory's Lessons Learned Program has sustained admirable performance relative to its peers. JLab participation and Lesson Learned sharing in the monthly Operating Experience Coordinators teleconferences has been consistently strong, especially for the size of this facility. The number of internally distributed Lessons Learned is impressive, and the maturity of the program is further reflected in the number of Lesson Learned being submitted to the DOE system. Of the 36 Lessons Learned distributed in-house during FY 2010, six were suggested topics from TJSO. This is considered a clear example of partnering between the Lab and Site Office, using existing systems and processes.

Issues Management

Continuous improvement performance is dependent upon the functionality of issue management processes. Examples of inappropriate and unsupported closure of JLab CATS corrective actions was identified in the FY 2009 end of year PEMP evaluation by TJSO, with additional examples cited in FY 2010 within the PEMP 1st Quarter feedback. The Laboratory has identified initiatives to improve the performance on corrective action closure, but it is too early to determine if these initiatives have been implemented or sustained. It is important that the Laboratory's issues management process include expectations on clear, objective evidence to support the closure of JLab CATS entries, using a graded approach on the risk/significance.

The recurrent ORPS determination for utility strikes during excavation activities is noted by the Site Office. The corrective actions tied to this recurrent ORPS have been classified in the JLab CATS system as external (DOE) commitments, whereby requiring TJSO approval for closure of these findings in JLab CATS. This mechanism for CATS closure concurrence was initiated by

the Laboratory through its own accord, and was not prompted by TJSO suggestion or direction. This sort of transparency and willingness to incorporate independent verification is indicative of a maturing issues management system.

Projects

The TEDF project communicated status through biweekly, monthly, and quarterly performance project reviews. Observations were routinely documented through implementation of the DuPont STOP program. Lessons learned were documented and shared through the JLab's Lessons Learned system.

For the 12 GeV Project, JSA conducted weekly and monthly progress meetings with all of their prime subcontractors. A main topic at the meetings was safety performance, where JSA provided feedback to the subcontractors so that they may improve on the forthcoming work activities. In addition, the 12 GeV Safety Manager and Safety Field Representative conducted frequent walkthroughs and observations of work activities and provided real-time feedback to the construction subcontractors. TJSO had observed this process through periodic attendance at the progress meetings and participation on field walkthroughs. Overall, while there have been some safety incidents and non-compliances identified by JSA and TJSO, the 12 GeV construction activities have demonstrated that JSA has effectively implemented ISM with the 12 GeV conventional construction subcontractor activities.

APPENDIX B
ATTACHMENT 2

TJSO SELF-EVALUATION OF PERFORMANCE
AND ISMS EFFECTIVENESS SUMMARY

**TJSO SELF-EVALUATION OF PERFORMANCE
AND INTEGRATED SAFETY MANAGEMENT SYSTEM (ISMS)
EFFECTIVENESS SUMMARY**

The Thomas Jefferson Site Office (TJSO) expended significant effort in the following areas during Fiscal Year (FY) 2010: 1) construction oversight and 2) performing oversight to ensure the findings from the FY 2008 HS-64 Environment, Safety, and Health (ES&H) inspection were adequately addressed. These efforts and other efforts are discussed below. Integrated Safety Management (ISM) is being effectively implemented by TJSO; however, opportunities for improvement (OFIs) were identified and include:

- OFI-1: Completion of FY 2009 corrective actions regarding inspection/replacement of chairs in the TJSO Conference Room (L207 of Continuous Electron Beam Accelerator Facility [CEBAF] Center).
- OFI-2: Improve or revise the Contractor Assurance System (CAS) oversight data collection process.

1. EVALUATION OF THE FIELD WORK PLANNING AND CONTROL PROCESS (*pertaining to Site Office conduct of work*):

- **TJSO Training:** Significant progress on completion of technical qualification (qual) cards occurred in FY 2010, with four individuals now complete. A qual card was developed for the new accelerator operations position that was filled last year. The remaining three individuals are expected to complete their qual cards in FY 2011. Additionally, three TJSO staff members attended a lab-sponsored, multi-day root cause analysis course (TapRoot).
- **TJSO Staffing:** TJSO is not currently at full staffing levels. The TJSO Site Manager retired, and this position has not been filled. The Deputy Site Manager is currently fulfilling both the deputy and Site Manager roles. In addition, two other technical staff are needed to achieve adequate Site Office staffing levels. Staffing needs have been identified as a FY 2011 challenge. The Site Office will re-evaluate staffing skill mix to determine the optimum staffing mix and a resolution will be pursued.
- **TJSO Internal Processes:**
 - Revisions to the TJSO Quality Assurance Program Plan and Operating Awareness Program Plan (OAPP) have been completed. Changes to the OAPP were largely to reflect H-Clause changes and transitional emphasis on the CAS.
 - In FY 2009, all procedures were reviewed and revised accordingly to ensure alignment with Office of Science Management System. TJSO policy requires a review of Site Office procedures at least every three years. It was determined that a comprehensive review in FY 2010 was unnecessary. TJSO made selected procedural updates as needed.
 - The first TJSO Continuity Readiness Assurance Report (CRAR) was developed and issued, as required by U.S. Department of Energy (DOE) Order 150.1. The CRAR documented the readiness of the Site Office continuity program based on planning and preparedness activities, including evaluations and improvements. No weaknesses were identified.

- A scheduled self-assessment of the TJSO Federal Employee Occupational Safety and Health (FEOSH) Program was cancelled due to competing priorities. This activity will be rescheduled at a later date. Periodic program review is required; however, a set frequency is not mandated by the Code of Federal Regulations (CFR).
- TJSO Issues Management:
 - The FY 2009 TJSO ISM effectiveness review identified that there was an opportunity for improvement regarding TJSO follow-up on previously identified issues. Since that time, the number of open issues in ORION has remained unchanged; however, upon trying to close many of the standing open findings, it was identified that the Laboratory had either not closed the issue as stated or objective evidence was lacking to support closure. These instances were brought to the attention of the Laboratory's Associate Director for ES&H and Quality Assurance and reiterated in the Performance Evaluation and Measurement Plan feedback. The Lab proposed to help improve this condition by generating very clear closure documentation criteria for JLab Corrective Action Tracking System (CATS) entries.
 - A TJSO quality assurance self-assessment was performed in FY 2010. All of the OFIs have been entered into the TJSO tracking system and are listed below:
 - Findings generated by different TJSO functional area owners are not consistently being itemized in ORION to permit trending or tracking for issue closure.
 - All self-assessment reports should include a section that itemizes gaps or findings and the proposed disposition. This should elevate visibility and promote the generation of corrective actions and closure tracking through established processes.
 - Ensure future updates to the TJSO OAPP include at least a cursory description of the process to be used for conducting quarterly trending.
 - Within Standard Operating Plan and Procedure 4.2, the instructions in Section 6, *Records*, should be revised to reflect what requirements are necessary to support records generated from executing the procedure.
 - Federal Project Directors should develop a process to allow TJSO technical staff an opportunity to review a prospective list of project-related systems to determine which, if any, warrant independent DOE design review.
- TJSO Direct Support Service Contractors: TJSO effectively implemented the requirements of 10 CFR 851 in the operations of the four TJSO contractors who perform services in support of JLab operations. No personal injuries were sustained by contractor employees or others as a result of TJSO support service contractor operations. Home and work safety pamphlets were shared with service contractors and were distributed at routine meetings by the TJSO Contracting Officer. Due to the dynamic nature of the construction work occurring at TJNAF, frequent communications have taken place, both formally and informally, with TJSO direct support grounds-keeping contractors.

- FEOSH:
 - Unannounced inspections were conducted and included individual interviews with each staff member. There were no safety-related events involving TJSO staff or support contractors. In consultation with the Oak Ridge Human Resources Department, a written description of the relationship and services available from the JLab Clinic was created for TJSO staff. Additionally, a new employee orientation/in-processing form was created to help identify TJSO staff responsibilities and resources for new employees.
 - All corrective actions related to a TJSO incident involving a defective office chair have not been completed regarding the aging chairs in Conference Room L207. In FY 2009, a TJSO staff member experienced minor back strain when attempting to move an office chair that unexpectedly separated. The defective chair was removed, which abated the immediate situation; however, completion of the corrective action to prevent recurrence is pending resolution until the remaining chairs in Conference Room L207 have undergone inspection and replacement, as needed. This condition and preventive action will be tracked in TJSO's SharePoint action tracker to help ensure it is properly processed (OFI-1).
 - In FY 2009, a condensate catch pan and drain hose were found to pose an ongoing leakage and moisture problem in a TJSO staff member's office. This problem was not abated in a timely manner and resulted in an open FEOSH finding. After follow-up in FY 2010, the issue was abated and the FEOSH finding was resolved.

2. EVALUATION OF FIELD ASSURANCE SYSTEM REGARDING ISM PERFORMANCE
(conducted throughout the year):

- Operational awareness (i.e., day-to-day oversight):
 - FY 2010 comparison to FY 2009:
 - Number of Walkthrough Entries in FY 2010 = 195 [FY 2009 = 175]
 - Number of Walkthrough Issues in FY 2010 = 68* [FY 2009 = 127]
 - *Note: The decline in these FY 2010 numbers may be attributed to a progressive trend to track issues identified during joint walkthroughs in the Lab's system, thereby avoiding duplicate accounting in ORION.
 - Additionally, operational awareness consisted of attending critiques. This included ensuring that a thorough critique was held and that the critique was evaluated from a CAS perspective. This normally consisted of discussions being held with the critique leader and providing feedback regarding the conduct of the critique. The critique process is relatively new, and TJSO provided substantial input into the development of the process in FY 2010. Conduct and participation of critiques were a focus area in FY 2010. Most events were critiqued, and TJSO was invited to attend (and attended) the vast majority of them.
 - Other operational awareness activities consisted of shadowing Laboratory assessments, attending operational meetings, reviewing CAS dashboards, and closure of findings.
- Formal assessments: Analysis of the JLab/TJSO Integrated Assessment Schedule revealed the following data:

- Formal Assessment Numbers
 - Total number of formal assessments scheduled: 26 (includes 4 joint assessments with Lab)
 - Number of assessments fully completed: 10 (7 more in progress)
 - Number of assessments cancelled: 4
 - Assessments not started or indeterminate: 5
- In addition to the formal assessments identified above, the Site Office was responsible for coordinating and/or directly observing effectiveness reviews conducted by the Lab to close out findings from the 2008 ES&H Inspection performed by the Office of Health, Safety, and Security (HSS). Four effectiveness reviews were conducted, and the reviews were deemed acceptable by DOE. Feedback from the Laboratory during out-briefs included favorable comments from the JLab team leaders relative to the contributions provided by DOE observers.
- TJSO created a Contractor Assurance System Evaluation Form in FY 2009 with the intent of consolidating data for year-end performance evaluations. The instructions and expectations furnished to the TJSO staff on using these forms are located in the OAPP and were included in the OAPP refresher training. Upon retrieving the CAS Evaluation Forms entered into ORION in FY 2010, only four forms were processed to date. The current awareness or general participation in using CAS Evaluation Forms has not been realized. TJSO will continue to monitor the use of the new CAS form and will improve or revise this oversight data collection process as needed (OFI-2).
- As discussed in last year's ISM review, a continuing focus area for FY 2010 was ensuring proper rigor is applied to the credited controls defined in the Accelerator Safety Envelope (ASE). As a result, a joint JLab/TJSO accelerator safety assessment was conducted in February and March 2010, which verified that the ASE credited controls were in place, effective and that associated surveillances were properly administered. Although no findings were issued, thirty-one opportunities for improvement were identified concerning insufficient ASE/Final Safety Authorization Document training for system owners, inconsistent basic safety knowledge/awareness among tunnel workers, lack of labeling of credited controls, configuration management problems, and general absence of flow down of ASE requirements to lower-level documents, operations, and systems.
- Trend Analysis, TJSO Oversight: The information below was extracted from the Site Office's assessment records in ORION. Site Office assessment activities and findings (issues) during FY 2008 and FY 2009 are furnished for relative comparison. An analysis of trends between quarters within a fiscal year has been deemed impractical.
 - FY 2010 Walkthrough Issue Breakdown:
 - P-3s = 48* [FY 2009 = 92, FY 2008 = 205]
 - P-2s = 28 [FY 2009 = 35*, FY 2008 = 67]
 - P-1s = 0 [FY 2009 = 0, FY 2008 = 0]
 - Proficiencies = 9 [FY 2009 = 18, FY 2008 = 31]
 - P-2s still OPEN in the system = 23 (essentially unchanged from FY 2009)
 - Average number of issues per walkthrough in FY 2010 = 0.35*

- [FY 2009 = 0.72, FY 2008 = 0.87]

*Note: The decline in these FY 2010 numbers may be attributed to a progressive trend to track issues identified during joint walkthroughs in the Lab's system, thereby avoiding duplicate accounting in ORION.

3. RESULTS OF FIELD ISM-RELATED PERFORMANCE AGAINST THE FY 2010 SAFETY OBJECTIVES, MEASURES, AND COMMITMENTS

See discussion in Appendix A of the Annual Assessment Report.

4. ANNUAL EVALUATION OF THE FIELD ISMS DESCRIPTION

The TJSO ISM System Description was reviewed on August 31, 2009. Currently, an update is not necessary; however, due to changes in the oversight approach for the Contractor's Assurance System, a change may be warranted in FY 2011.

5. ANNUAL EVALUATION OF THE FIELD FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES MANUAL (FRAM)

The TJSO FRAM was revised in May 2008 to address a new staff hire and responsibilities. The FRAM will be updated in FY 2011 to reflect changes in the Site Office.