



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

June 29, 2009

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:

FINAL REPORT OF THE THOMAS JEFFERSON SITE OFFICE ASSESSMENT OF HALL A, WORK PLANNING AND CONTROL PROGRAM

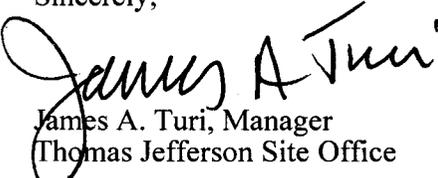
The attached report covers the Department of Energy (DOE) Thomas Jefferson Site Office (TJSO) Site Office's assessment of Hall A's Work Planning and Control Program, conducted March 16-April 17, 2009. We are committed to improving the quality of these reviews, and we encourage the Lab to provide feedback on ways to improve the efficiency and utility of these assessments.

For all Findings identified in the report, the Laboratory is expected to submit to the Site Office a corrective action plan by July 30, 2009. Corrective action plans are to minimally identify each Finding, a brief description of the actions taken or planned, and reference to the Laboratory's Corrective Action Tracking Systems (CATS) entry number. Please notify the Site Office upon closure of each Finding, or if deviation from the original corrective action commitments are anticipated (i.e., significant change in scope or time to closure, etc.).

Within the corrective action plan, please include the disposition or proposed course of action for each Observation identified in the report. It is expected that the Laboratory enter Observations into an issues management system in a timely manner to satisfy tracking and trending requirements

If there are questions pertaining to this assessment, please contact Michael Epps of my staff at extension 5848.

Sincerely,


James A. Turi, Manager
Thomas Jefferson Site Office

Enclosure

cc w/enclosure:

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**U.S. Department of Energy
Thomas Jefferson Site Office**

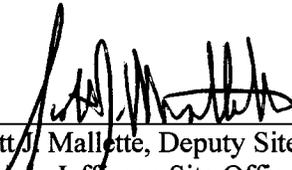


FINAL REPORT

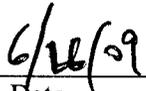
**Assessment of Hall A Work Planning
and Control Program**

APRIL 2009

Approval



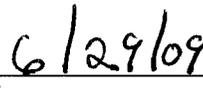
Scott J. Mallette, Deputy Site Manager
Thomas Jefferson Site Office



Date



Michael A. Epps, Team Leader
Accelerator Operations Projects
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Thomas Jefferson Site Office



Date

Joseph J. May, Team Member
12 GeV Federal Project Director
Thomas Jefferson Site Office

Date

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LIST OF ACRONYMS

ANSI	American National Standards Institute
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
FIND	Finding
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
O	Observation
OSHA	Occupational Safety and Health Administration
P	Priority
PRO	Proficiency
TJNAF	Thomas Jefferson National Accelerator Facility or Jefferson Lab (also referred to as JLab)
TJSO	Thomas Jefferson Site Office
WP/C	Work Planning and Control

1.0 ASSESSMENT SUMMARY

The U.S. Department of Energy (DOE) Thomas Jefferson Site Office (TJSO) has established an Integrated Assessment Schedule and assessment objectives for fiscal year 2009. One of these objectives is to perform an assessment of the Work Planning and Control Program at the Thomas Jefferson National Accelerator Facility (TJNAF). The purpose of the assessment was to evaluate the implementation of the Integrated Safety Management (ISM) requirements for work planning and control in Hall A. The review was conducted between March 16 and April 17, 2009.

This assessment team identified the following key results:

- ISM implementation in Hall A was validated. The team was able to confirm that Hall A has an effective Work Planning and Control Program.
- Personnel who perform work in Hall A are sufficiently trained, and properly supervised. Work activities in Hall A are well planned, documented and executed.
- The Hall A work activities that the team observed demonstrated a good safety culture and sound ISM principals.

The team identified 4 Pro ficiencies, 0 P1 or P2 Findings, and 2 Observation.

2.0 PURPOSE, SCOPE AND PERFORMANCE CRITERIA

In accordance with U.S. Department of Energy (DOE) Order 226.1A, *Implementation of Department of Energy Oversight Policy*, the Thomas Jefferson Site Office (TJSO) performs oversight of the Thomas Jefferson National Accelerator Facility (TJNAF) operations. This surveillance is being conducted to evaluate how well contractor staff implements the Integrated Safety Management requirements for work planning and control at TJNAF.

This review is being conducted to assess the following core functions of Integrated Safety Management for Hall A at the TJNAF:

- Define the Scope of Work
- Analyze the Hazards
- Develop and Implement Hazard Controls
- Perform Work Within Controls

Performance criteria are defined as the requirements documents and standards that are applicable to the activity and scope being assessed. A list of the performance criteria is provided in the approved review plan.

3.0 DEFINITIONS

Any issues noted during the conduct of the assessment were categorized as Findings (FIND) or Observations (O). Proficiencies (PRO) were also noted. Findings represent lack of adherence to a requirement. There are three levels of negative performance observations, based on the respective priority (P).

- P1 Finding - Findings of major significance. (Examples include imminent threats to worker protection, public safety, or environmental quality or the presence of a major risk or vulnerability). Such findings can be a systematic breakdown in, or a failure to implement, a major work control element necessary for safety, quality, or the environment or a significant noncompliance with requirements.
- P2 Finding - Findings that represent a nonconformance, deviations, and/or deficiencies in the implementation of requirements, procedures, standards, and/or regulatory requirements.
- P3 Finding - Observations that the assessor deems to be an isolated, minor, quick fix or nonadherence to best practices/internal procedures/accepted standards.

Proficiency (PRO) - A performance item that exhibits a level of performance deemed worthy of communicating to other organizations because it is innovative or may be indicative of the highest level of excellence. Formerly-used terms that meant essentially the same thing were Noteworthy Practice and Strength.

4.0 ASSESSMENT METHODS

The team reviewed Hall A from March 16 – April 17, 2009. The team members reviewed pertinent documents (maintenance schedules, standard operating procedures (SOPs), task hazard analysis (THAs), Accelerator Task List (ATLis), etc.) observed work, conducted informal interviews during the assessment. Lists of the documents reviewed, interviews conducted, and work activities observed are provided in Appendix A.

5.0 SUMMARY OF RESULTS

Define the Scope of Work

Requirement	Yes	No	Comment
Are managers and subject matter experts actively involved in the definition of projects to ensure allocation of resources can be addressed?	X		
Is the work observed adequately bounded by approved work packages, procedures, and permits?	X		

Requirement	Yes	No	Comment
Have adequate personnel and equipment resources been identified for the performance of work, including operations, maintenance, and ES&H support?	X		
Do work-planning processes provide for early involvement of workers and ES&H staff to fully define the work and allow effective identification of hazards? Are specific thresholds identified for involvement of ES&H personnel in the hazard analysis process?	X		
Is worker input integrated into planning activities?	X		

Analyze the Hazards

Requirement	Yes	No	Comment
Do institutional level ES&H procedures effectively address the hazard analysis process at the working level and are the procedures properly implemented?	X		
Are thresholds identified within the hazard analysis process to trigger appropriate involvement of safety and health professionals as required by 10CFR851?	X		
When work scope and technical work document tasks are changed, are the hazard assessments reviewed for impact?	X		
Are workers involved in the hazard analysis process?	X		

Develop and Implement Controls

Requirement	Yes	No	Comment
Are standardized hazard controls developed and used in an appropriately graded approach based on project/work complexity and risk, performance frequency, and hazard analysis results?	X		

Requirement	Yes	No	Comment
Are the knowledge, skills, and abilities of the work force considered when selecting the form of controls?	X		
Are the types of controls (engineering, administrative, and personal protection equipment) applied in the correct sequence and with an appropriate technical basis?	X		
Do controls sufficiently provide notification and afford protection to co-located workers who may either be present or traverse the areas potentially impacted by the activity?	X		
Are workers and appropriate environment, safety, and health professionals included on planning teams and involved in hazard control development? Are minimum thresholds identified, based on the hazards and risks, which require the involvement of ES&H and waste management personnel and subject matter experts when developing work packages and during work activities?	X		
Are workers involved in the development of controls?	X		

Perform Work Within Controls

Requirement	Yes	No	Comment
Are work activities formally scheduled on the plan of the day, or equivalent mechanisms, to facilitate notification to affected personnel, resolution of scheduling conflicts, identification of resources and support required, prioritization with other work, and availability of required facilities and systems?	X		
Are pre job briefings appropriately performed and effective in communicating work scope, prerequisites (including training), hazard control requirements, and permit requirements to all workers? Are job specific and area hazards adequately communicated to all workers before the start of work?	X		

Requirement	Yes	No	Comment
Is proper authorization obtained to perform the work (e.g., project work or work package approval) and immediately prior to start of work (work release - facility/building conditions adequate to start work)?	X		
Do personnel adhere to postings, work control documents, procedures, and permits, including working within defined scopes, instructions and hazard controls, and completing required documentation?	X		
Are workers knowledgeable of activity/project level instructions and are they competent so the work is performed as described in the work documents?	X		

6.0 PROFICIENCIES, FINDINGS AND OBSERVATION

Proficiencies

PRO-1: Work planning efforts were excellent and conducted well in advance of the task. No action or response is required. [ISM Core Function 1. Define the Scope of Work]

PRO-2: All work observed in Hall A was developed, reviewed, updated, approved and scheduled by the appropriate personnel prior to performing the work. The procedures, hazard analysis and documentation located on the Hall A Technical page were organized, relevant and up to date. No action or response is required. [ISM Core Function 1. Define the Scope of Work, Core Function 2. Analyze the Hazards and Core Function 3. Develop and Implement Hazard Controls]

PRO-3: Hall A and JLab personnel conducted all observed work activities in a professional manner with an appropriate level of emphasis on ISM. No action or response is required. [ISM Core Function 4. Perform Work Within Controls]

PRO-4: No accidents or injuries occurred during the maintenance period. No action or response is required.

Findings

No P1 or P2 findings were identified during this assessment.

Observations (FIND-P3)

O-1: Hard hats should be worn in Hall A at all times.

O-2: Use of Hall A List (HAList) was observed to be minimal. It is recommended that the appropriate JLab personnel assess the best way to utilize this work planning and control tool.

7.0 CONCLUSION

The assessment team validated the Integrated Safety Management implementation in Hall A. The team was able to confirm that Hall A has an effective Work Planning and Control Program. All work observed in Hall A in association with this assessment was completed safely and in accordance with the principals of ISM.

Appendix A – Documents Reviewed and Activities Observed

Documents Reviewed, Interviews Conducted, and Activities Observed**Records Reviewed**

- HAList
- Hall A Maintenance schedule
- Dipole power supply maintenance procedure
- Q1 Flow switch test procedure
- Vacuum pump oil change procedure
- Q2 cryo leak repair procedure
- Pol 3He coil install/removal procedure
- Hall A Lift plans
- Installation of the Hall A cryo target window assembly
- Move BB magnet to stand procedure
- Crane lift task hazard analysis
- Elevated work in Hall A
- Hall A Standard equipment hazards
- JLab Safety Incentive Program

Interviews Conducted

No formal interviews were conducted during this assessment. Informal question and answer sessions were conducted with Hall A and JLab personnel while observing work activities where appropriate.

- Hall A Work Coordinator
- Survey and Alignment Group Leader
- Physics Division Associate Director
- Hall A Staff Scientist
- Hall A Technicians

Activity Observations

- Observation of ongoing repair and maintenance activities including:
- Target Survey and Alignment
- Compton Chicane Laser Upgrade
- Moeller Power Supply Reconnection
- Standard crane lift preparations

Appendix B – List of Proficiencies, Findings and Observations

List of Proficiencies, Findings and Observations

Proficiencies (PRO):

PRO-1: Work planning efforts were excellent and conducted well in advance of the task. No action or response is required. [ISM Core Function 1. Define the Scope of Work]

PRO-2: All work observed in Hall A was developed, reviewed, updated, approved and scheduled by the appropriate personnel prior to performing the work. The procedures, hazard analysis and documentation located on the Hall A Technical page were organized, relevant and up to date. No action or response is required. [ISM Core Function 1. Define the Scope of Work, Core Function 2. Analyze the Hazards and Core Function 3. Develop and Implement Hazard Controls]

PRO-3: Hall A and JLab personnel conducted all observed work activities in a professional manner with an appropriate level of emphasis on ISM. No action or response is required. [ISM Core Function 4. Perform Work Within Controls]

PRO-4: No accidents or injuries occurred during the maintenance period. No action or response is required.

Findings (FIND):

No findings were identified during this assessment.

Observations (FIND-P3)

O-1: Hard hats should be worn in Hall A at all times.

O-2: Use of Hall A List (HAList) was observed to be minimal. It is recommended that the appropriate JLab personnel assess the best way to utilize this work planning and control tool.