U.S. DEPARTMENT OF ENERGY
THOMAS JEFFERSON SITE OFFICE

INTEGRATED SAFETY MANAGEMENT SYSTEM PROGRAM DESCRIPTION

Revision 0

Prepared By: Steve J. Neilson

Approved: _____
James A. Turi, Manager
Thomas Jefferson Site Office

Date Issued: November 1, 2007

ATTACHMENT 2 – TJSO PROCEDURE CONCURRENCE & APPROVAL RECORD

TJSO PROCEDURE CONCURRENCE & APPROVAL RECORD

Procedure Title: Integrated Safety Management System Program Description

Procedure No.: 4.9 Rev.: 0 Retire: _____

Reason for Revision or Retirement: N/A. New - driven by DOE M 450.4-1

	Name (Print)	Initials & Date
Procedure Developer	Steve Neilson	11-1-07
SOPP Coordinator	Monique Perry	11-1-07

Requested Review Completion Date: 11-7-07

	Concurrence Req'd (Y or N)	Initials & Date
Other Relevant TJSO staff members →	N/A	
(TJSO staff members who use or whose work is directly influenced by the procedure)	This doc References standing procedures/doc's	
DEPUTY TJSO MANAGER	Y	11/01/07

APPROVED: _____ DATE: 11/1/07
TJSO Manager

TABLE OF CONTENTS

INTEGRATED SAFETY MANAGEMENT SYSTEM PROGRAM DESCRIPTION

1.0 OBJECTIVE

The Thomas Jefferson Site Office (TJSO) Integrated Safety Management System (ISMS) Program Description (PD) is describes how TJSO accomplishes the requirements identified in the DOE Directive governing field element ISMS program, specifically DOE Manual 450.4-1, Chapter II. The TJSO ISMS PD describes how TJSO works in a safe and environmentally responsible manner, and is integrated with quality assurance and other processes for planning, conducting, and evaluating work, and for providing feedback. The ISMS PD is accomplished by standing documents (TJSO Standard Operating Plans and Procedures (SOPPs) that support the TJSO ISMS program. The provision of this ISMS PD is subordinate to and consistent with the Office of Science Management System (SCMS) programs.

2.0 SCOPE

The TJSO ISMS PD describes the roles and responsibilities assigned to, and performed by TJSO management and staff. The ISMS PD also provides an overview of TJSO's approach to providing oversight of the Thomas Jefferson National Accelerator Facility's (TJNAF) ISMS program. In accordance with the requirements in the DOE ISMS Manual, the ISM PD must also integrate Quality Assurance (QA) and Environmental Management System (EMS); therefore, all references to ISMS also include consideration of these programmatic functions.

TJSO functions are "non-operational" work activities as defined in DOE M 450.4-1. That is, they do not include hands-on work but rather work activities such as defining work scope, allocating resources, review and approving program documents (e.g., accelerator safety analysis, accelerator safety envelope, contractor annual ISMS declaration), and conducting operational awareness activities (e.g., surveillances, walkthroughs). While these activities are non-operational, they do include hazards associated with typical office environments, travel, and inspection of industrial work places (e.g., repetitive motion activities; uneven walking surfaces; climbing; excessive noise; chemicals, electricity, radiation, and other industrial hazards).

3.0 REFERENCES

3.1 (SOPP 1.1) TJSO Contract Management Plan
3.2 (SOPP 1.2) TJSO Inclusion of DOE Directives into Jefferson Laboratory Performance-Based Contracts
3.3 (SOPP 2.1) TJSO Employee Concerns Program
3.4 (SOPP 3.1) TJSO Shutdown and Restart Authority
3.5 (SOPP 3.2) TJSO Accelerator Safety Document Review
3.6 (SOPP 4.1) TJSO Annual Performance Plan
3.7 (SOPP 4.2a) TJSO Standard Operating Plans and Procedures (SOPP) System
3.8 (SOPP 4.3) TJSO Self Assessment Program
3.9 (SOPP 4.4) TJSO Training Program and Employee Development
3.10 (SOPP 4.5) TJSO Operational Awareness Program

3.11 (SOPP 4.6) TJSO Quality Assurance Program
3.12 (SOPP 4.7) TJSO Records Management Procedure TJSO FEOSH Program Plan
3.13 (SOPP 4.8) TJSO Federal Employee Occupational Safety and Health Program
3.14 DOE M450.4-1, Integrated Safety Management System Manual
3.15 Office of Science Management System [SCMS homepage]

4.0 RESPONSIBILITIES

4.1 TJSO Manager/Deputy Manager

4.1.1 Responsible for TJSO safety and the implementation of ISMS as it applies to TJSO activities.

4.1.2 Directs the development of, and approves the ISMS PD, and supporting TJSO plans and procedures.

4.1.3 Designates a TJSO ISMS Champion to represent the Site Office and support ISMS implementation.

4.1.4 Conducts an annual TJSO ISMS effectiveness review.

4.1.5 Reviews and approves the contractor's ISMS PD.

4.1.6 Provides direction, guidance, and expectations to the TJNAF contractor on ISMS implementation.

4.1.7 Conducts line oversight and evaluation of the TJNAF contractor's implementation of ISMS.

4.1.8 Carries out other responsibilities identified in Section 3 (f) of the ISM Manual (DOE M 450.4-1).

4.2 TJSO Staff Members

4.2.1 Maintains awareness of ISMS principles and applies those principles in the execution of assigned responsibilities and in the conduct of work.

4.2.2 Recommends to TJSO management and the Site Office ISMS Champion when the standing ISMS PD needs revision, or when new plans and/or procedures (or revisions) should be developed to sustain implementation with requirements and changes prompted through continuous improvement.

4.3 TJSO ISMS Champion (or Alternate)

4.3.1 Assists TJSO management in developing and sustaining ISMS systems.

4.3.2 Represents TJSO on, and participates in the ISM Champions Council activities.

4.3.3 Reviews new and revised TJSO Standard Operating Plans and Procedures (SOPPs) to verify ISMS elements are integrated, as appropriate.

4.3.4 Reviews the TJSO ISMS PD annually and whenever the need arises or requirements have changed.

5.0 IMPLEMENTATION OF INTEGRATED SAFETY MANAGEMENT

5.1 Implementation of ISMS Guiding Principles

As previously discussed, TJSO activities largely consist of contract management and oversight activities. Through the TJSO Annual Performance Plan (APP), the four program management functions performed by the Site Office are: setting expectations, monitoring performance, facilitating performance, and providing feedback.

To ensure there is a consistent level of site access qualifications and training, all TJSO employees, and to a large extent recurring visitors, are put through the same orientation training requirements administered by the Laboratory for their staff. These details are identified in several TJSO implementing procedures, including, but not limited to the Federal Employee Occupational Safety and Health (FEOSH) Program Plan (SOPP 4.8), the Training Program and Employee Development Program (SOPP 4.4), and the Operational Awareness Program (SOPP 4.5). Implementation of ISMS for TJSO work activities is addressed in the sections below. In addition, TJSO plays a critical role in assuring that ISMS is effectively and efficiently implemented at TJNAF. TJSO's oversight in the implementation of ISMS is also addressed below.

5.1.1 Line Management Responsibility for Safety. The TJSO FEOSH Program document (SOPP 4.8), as well as other TJSO SOPP's define line management's (TJSO Manager and Deputy Manager) responsibilities, including safety. A TJSO Functions, Roles, and Authorities (FRA) program document is in development, and will likewise reinforce this responsibility. The pending revision to the TJSO Standard Operating Plans and Procedures (SOPP) System is to include an instruction that each TJSO procedure is to be drafted and reviewed to ensure ISMS (safety) responsibilities are given proper consideration for document integration relative to the ISMS Guiding Principles and Core Functions.

5.1.2 Clear Roles and Responsibilities. Expectations on Site Office staff roles and responsibilities are located in several documents, including the TJSO APP (SOPP 4.1), which provides expectations for staff, both individually and jointly of each procedure. The general format applied to all TJSO implementing procedures, implemented through SOPP 4.2, reserves

Section 4 to defining staff roles and responsibilities, and includes specific examples of how assignments should be worded to impart clarity.

5.1.3 Competence Commensurate with Responsibilities. A foundation for establishing minimal qualification requirements are built into the hiring process and reflected in the Position Descriptions for vacancy announcements. This process is further enhanced in the TJSO Quality Assurance Plan (QAP) (SOPP 4.6). The process through which training expectations are set and training is received is identified in the Training Program and Employee Development Program (SOPP 4.4).

5.1.4 Balanced Priorities. TJSO resources are provided in terms of a Program Direction Budget. TJSO management annually plans the Program Direction Budget and allocates funding among federal salaries and benefits, travel, and other costs. TJSO management has and continues to actively support funding of safety-related equipment (e.g., safety glasses, ergonomic chairs, etc.) for staff as well as sustaining safety certification for ES&H staff (i.e. continuing education requirements for Certified Industrial Hygienist).

5.1.5 Identification of Safety Standards and Requirements. The safety standards and requirements applicable to TJSO employees are clearly identified in the Federal Employee Occupational Safety and Health (FEOSH) Program for TJSO Employees (SOPP 4.8). Since the Site Office is physically located in a Laboratory building, and the safety of TJSO staff is reliant upon the condition of the Laboratory structures, systems, and activities; the contract between DOE and Jefferson Science Associates (JSA) serves as a safety basis for both the Site Office and the Lab. Safety requirements for TJSO staff related to the conduct of oversight activities are identified in the Operational Awareness Program (SOPP 4.5).

5.1.6 Hazard Controls Tailored to Work Being Performed. The analysis of hazards and associated controls for TJSO employees are identified in the FEOSH Program for TJSO Employees (SOPP 4.8). This program establishes a process to periodically assess individual employee workplace hazards, and to identify the corresponding measures to mitigate those hazards. Personal Protective Equipment (PPE) tailored to the work hazard conditions is provided to each employee. The absence of receiving some training will result in loss of access privileges to select areas of the laboratory, or inability to participate in some work activities (i.e., only GERT and Rad Worker I trained personnel may obtain radiation dosimetry, and work under a Radiation Work Permit (RWP) beyond the General Access RWP). In some instances, untrained staff must be under the escort of a trained individual in order to access some parts of the Lab (i.e., R&D Chem Rooms).

5.1.7 Operations Authorization. The responsibility for performing oversight is identified in the Operational Awareness Program (SOPP 4.5). The OA Program also includes specific assignments on the authorization of contractor programs, including ISMS.

5.2 Implementation of ISM Core Functions

5.2.1 Define the Work. Work activities that have a high impact on TJSO mission performance are defined with performance expectations clearly established and documented in a federal Annual Performance Plan (APP). Each Site Office employee provides input to their individual Job Hazard Analysis (JHA) documents, as described in the FEOSH Program (SOPP 4.8). This document is periodically updated and provides details regarding specific job functions, the corresponding hazards, and the controls put in place to address those hazards.

5.2.2 Identify and analyze the hazards. The hazards associated with TJSO activities include those associated with typical office environments (e.g., computer work stations, uneven walking surfaces, inclement weather, use of electrical equipment, and office sanitation) as well as potential hazards associated with visiting DOE contractor facilities. These hazards tend to be static; however, periodic reviews of office spaces are conducted to identify new or developing hazards. Visits to industrial areas or construction sites require additional planning and coordination. These details are provided in the Operational Awareness Program (SOPP 4.5), and the FEOSH Program (SOPP 4.8).

5.2.3 Identify and implement the controls. Controls have been identified for the hazards that the TJSO faces, including, but not limited to safety glasses, ear protection, steel-toed shoes, and hardhats. Ergonomic assessment resources are available through the Lab's medical clinic and board certified Occupational Medicine Physician. Additional information on controls is included in the FEOSH Program (SOPP 4.8).

5.2.4 Perform work safely within controls. Monitoring the performance of work within controls is satisfied largely through self-policing; however, the TJSO FEOSH Program Manager, the TJSO Manager and the TJSO Deputy Manager provide periodic assessments of workspaces and practices.

5.2.5 Feedback and improvement. TJSO conducts program performance reviews against the Site Office's APP objectives (SOPP 4.1), with a report generated from the annual self-assessment. Elements of feedback are integrated into the QAP (SOPP 4.6), the FEOSH Program (SOPP 4.8), and the Operational Awareness Program (SOPP 4.5). In the event safety or other related feedback mechanisms do not work through informal processes, the TJSO Employee Concerns Program (SOPP 2.1) describes

avenues of recourse. TJSO also produces a Quarterly Safety Report (QSR) for SC, demonstrating upward corporate feedback. Actions identified during performance reviews or assessments are formally tracked to closure.

5.3 Integrated Safety Management Oversight

The protection of the public, the workers, and the environment through safety management is a primary responsibility of DOE line management. This responsibility includes planning, direction, and oversight of activities designed to ensure safety in all activities. The TJSO utilizes a combination of the four program management functions (i.e., setting expectations, monitoring performance, facilitating performance, and providing feedback) to accomplish its safety management roles and responsibilities. A key tool used by TJSO to provide direction via the Contract with the Lab. The Contract provides specific direction to the contractor regarding development, implementation, and approval of safety management processes, including the Performance Evaluation and Measurement Plan (PEMP) process that annually tailors specific performance expectations according to changing requirements or performance. The processes used for oversight of the TJNAF Contract and for providing stewardship of the Laboratory are described in the TJSO Contract Management Plan (SOPP 1.1). The key safety management requirements identified in Part II, Section I of the TJNAF Contract, and include the following Clauses:

- I-100, *48 CFR 970.5223-1 Integration of Environment, Safety, and Health into Work Planning and Execution (Dec 2000)*,
- I-91, *48 CFR 970.5204-2 Laws, Regulations, and DOE Directives (Dec 2000)*,
- I-84, *48 CFR 952.242-70 Technical Direction (Dec 2000)*,
- I-76, *48 CFR 970.5203-1 Management Controls (Dec 2000),* and
- I-77, *48 CFR 970.5203-2 Performance Improvement and Collaboration (Dec 2000)*.

In responding to these requirements, the Laboratory Contractor has developed an ISM Program Description, which has been reviewed and approved by TJSO. The Lab's ISM Program Description defines how they implement the Core Functions and Guiding Principles of Integrated Safety Management. Through update of the Contract, annual review and approval of objectives, measures, and commitments, and day-to-day oversight and evaluation of safety performance, the TJSO fulfills its safety management oversight responsibilities. The TJSO utilizes information and data provided in the annual TJNAF Self Evaluation Report, various third party assessments (e.g., TJNAF self-assessments, third part assessments, EPA and other regulator inspections), and performance metrics (e.g., DART, TRC, ORPS) to assist in the evaluation of Laboratory performance related to safety management.

The TJSO tracks its own performance related to meeting these responsibilities through a formal TJSO Annual Performance Plan (APP), electronic tracking system (ORION), and through periodic status reviews. In addition, the TJSO prepares Quarterly Safety Reports (QSRs) for SC and prepares an Annual

Assessment Report (AAR). The Operational Awareness Program is utilized to assure the Contractor is effectively meeting requirements, and assign Work Authorization responsibilities.

5.3.1 Contract Management. The TJSO utilizes the TJNAF Contract to identify specific safety-related requirements that the contractor must adhere to and to set expectations related to safety management. A key contract expectation is the contractor's responsibility to define and document a management approach and system that is satisfactory to DOE. This expectation specifically includes a system of internal management controls, an integrated safety management system, and an assurance process, which reflect an understanding of the risks, maintains mechanisms for eliminating or mitigating risks, and maintains a process to ensure that the objectives of the management systems are being effectively accomplished. TJSO develops specific performance criteria in the PEMP, and monitors and evaluates performance against these criteria throughout the year. The specific contract-related management and oversight processes used by TJSO are described within the TJSO Contract Management Plan (SOPP 1.1), including communications, contract direction, contract modifications, and performance based management (including oversight, evaluation, and fee determination).

5.3.2 Work Authorization. The mandatory authorizations/approvals required by TJSO are identified with the contract requirement and corresponding responsible staff member in the Operational Awareness Program (SOPP 4.5). Additional details can be found in select implementing TJSO documents, such as the Shutdown and Restart Authority procedure (SOPP 3.1). These authorizations are validated through the TJSO oversight/operational awareness functions, and through the review and approval of "Work For Others" documents.

5.3.3 Operational Awareness. Operational Awareness Representatives (OARs), perform contract oversight functions as defined in the Operational Awareness Program (TJSO SOPP 4.5). Oversight performed by OARs provides management with accurate and objective information on the effectiveness of contractor work performance and practices, including implementation of the ISMS. The objectives of the OARs is perform oversight within their assigned technical discipline to:

- Determine whether the contractor is performing work and operating facilities safely.
- Perform assessment and verify the contractor's management system is effectively controlling conduct of operations and implementing ISM objectives, principles, and functions.
- Provide management with timely information concerning facility events, conditions, activities, and operational performance.

- Provide effective lines of communication between DOE and its operating contractors during periods of normal operation and following reportable events.

- Evaluate contractor corrective actions taken in response to events, conditions, and performance issues.

5.3.4 Integration with Key TJSO Programs and Documents. The TJSO ISM Program relies on existing processes and procedures to meet the requirements of ISM. The ISMS Champion will use a cross walk matrix or similar tool to help cross check Site Office procedures against the ISMS Core Functions and Guiding Principles. Integration of ISMS into Site Office procedures is a condition of the document development and approval process. The Standard Operating Plans and Procedures (SOPP 4.2) instructs Site Office staff to evaluate, and insert where appropriate, provisions that impart ISMS Core Functions and Guiding Principles during the document development. This process is further reinforced by including the ISMS Champion (or Alternate) in the approval process of TJSO internal procedures. This management approach provides TJSO with an efficient and effective means for achieving ISMS.

5.3.4.1 The Site Office Quality Assurance Plan (QAP; SOPP 4.6) incorporates ISMS elements consistent with the requirements of DOE's QA Directive.

5.3.4.2 The Site Office implements Environmental Management System (EMS) as a participant within the EMS program administered by the Laboratory. This graded approach is justified by the environmental impacts of activities conducted by the Site Office staff, and the absence of unique or significant waste streams or resource needs. Initial and periodic EMS training requirements are built-in to the Laboratory's general access requirements, to which TJSO is also integrated. Procurement of Site Office equipment and supplies is discussed in Section 5.3 of the QAP (SOPP 4.6). The Site Office has the benefit of the Lab's EMS and Quality Assurance program integration that exists with their procurement program, as Site Office material acquisitions utilize the Lab's managed procurement program. This is not an entirely passive relationship on the Site Office's part, because the Site Office has annual approval authority/responsibility for both the Lab's QA and EMS programs.

In the TJSO framework, ISM is a management system that is applied to all responsibilities, not just safety. For example, oversight of the areas of environmental management and safeguards and security is conducted following the same performance assurance process that is used for safety. In this

way, TJSO uses one management system for all oversight regardless of the functional area, thereby allowing full integration while still achieving effective oversight.

5.4 ISMS Maintenance and Improvement Processes

5.4.1 Contractor and TJSO ISMS Maintenance. The ISMS PDs for the Site Office and the Laboratory will be reviewed at least annually to determine whether updates are needed. If the program descriptions are complete, accurate, and up-to-date, then no annual update will be necessary. A statement to this effect will be included in the annual ISMS summary evaluation. If changes are needed to either the Site Office or Laboratory ISMS program description documents, these will be reviewed by the Site Office Manager before approval.

5.4.2 ISMS Annual Oversight, Effectiveness Reviews and Self-Assessments. Annual reviews of the contractor's ISMS program will be conducted consistent with the oversight approach described in Section 5.4.4 of this document and will be scheduled in accordance with the process identified in the Operational Awareness Program (SOPP 4.5). In addition, TJSO will conduct an ISMS self-assessment as part of the annual evaluation process, and will be identified in the TJSO APP (SOPP 4.1).

5.4.3 ISMS Annual Safety Performance Objectives, Measures and Commitments. TJSO will update safety performance objectives and measures through the TJSO Annual Performance Plan (APP) and the TJNAF PEMP.

5.4.4 ISMS Annual Summary Evaluation Process

5.4.4.1 ISMS Effectiveness Review

Unless there is a determination that a full ISMS verification review is required, an annual ISMS effectiveness review will be conducted by TJSO. The annual ISMS effectiveness review is a review that involves multiple elements, including review against quantitative performance measures in the APP. The APP report generated at the end of each Fiscal Year will reflect the final determination of the TJSO ISMS effectiveness. The effectiveness review is to:

- Determine the effectiveness of the ISMS system in integrating safety into work performance, in supporting the safe performance of work, and in improving safety performance.

- Identify strengths of ISMS implementation for sharing with other DOE elements to aid improvements at other locations.

- Identify weaknesses of ISMS implementation to focus attention on corrective and improvement actions.

- Identify opportunities for improvement in efficiency or effectiveness of the ISMS, and identify actions for continuous improvement.

5.4.4.2 ISMS Verification Review

An ISMS verification review is conducted at the discretion of TJSO management, and may be necessitated by significant program or operational changes, or a loss of confidence in the ISMS program's integrity. Attachment 4 of the DOE M 450.4-1 will be consulted in the preparation of verification audit plans and conduct.

5.4.4.3 Annual ISMS Determinations

A summary determination will be rendered upon the conclusion of the annual ISMS reviews, stating one of the following conditions: "Effective Performance," Needs Improvement," or Significant Weakness." Justification report will be furnished to the Program Secretarial Office each year. The expectations issued by the Site Office in response to ISMS Program weaknesses will be handled in a manner commensurate with the significance and/or extent of condition.

5.5 Change Control

Approved ISMS PDs will be controlled and made available in accordance with TJSO SOPP 4.2. The TJSO ISMS Champion has the lead responsibility for developing revisions to the ISMS PD.