FESHM 12030: iTRACK PROCEDURES AND RISK ASSIGNMENT

Revision History

Author	Description of Change	Revision Date
Rafael Coll	This chapter combines FESHM 1010.2 and FESHM 1010.3 into one chapter and replaces frESHTRK with iTRACK as the sole issues management system for Fermilab. FESHM chapters on frESHTRK Procedures 1010.2 and 1010.3 are cancelled upon publication of this chapter.	November 2013

TABLE OF CONTENTS

1.0 INTRODUCTION

iTrack is a database primarily used to document the observation and facilitate the resolution of issues of any nature arising from business activities. Only issues found during the performance of these activities need to be entered not the performance of the activity itself. A characteristic of the iTrack system is the reminder feature that automatically alerts responsible employees when an issue has gone beyond the completion date.

Experience has shown that the number and nature of issues are such that they cannot all be addressed rapidly and completely using available resources. Therefore, it is prudent first to address those presenting the greatest risk. This Chapter describes the activities suitable for iTrack and describes procedures for assigning risk values to projects and iTrack findings and for applying these values toward the control of hazards. In addition, this risk assignment methodology may also be used in the implementation of FESHM Chapters 2010 and 8070.

This chapter follows Fermilab's policy on issues management as well as implementing procedures.

2.0 DEFINITIONS

- Best Practice

The best way to do something: the most effective or efficient method of achieving an objective or completing a task.

- Corrective Action

Action to eliminate the cause of a detected nonconformity or other undesirable situation.
Note: There can be more than one cause for nonconformity. Corrective action is taken to prevent recurrence whereas preventive action is taken to prevent occurrence.

- Director's Triennial ES&H (Environment, Safety & Health assessments)

Assessment whose purpose is to determine how well the Laboratory is meeting its goals to maintain a safe work place, protect the environment, strive for the highest quality work, and comply with Laboratory requirements.

- Department of Energy (DOE) Headquarters Reviews

Reviews conducted by DOE organizations at the headquarters level, i.e., Office of Science or Environment, Safety, and Health. The methods for conducting these reviews and the handling of any associated corrective and preventive actions that result from them are established by the sponsoring Office.

- Division/Section/Center/ Head/Project Manager (D/S/C/P) Internal Assessment

An assessment conducted entirely by D/S/C/P personnel and reported internally to the head of the D/S/C/P to measure the degree of compliance with DOE orders, FESHM or other directives from agencies of the federal and State government.

- D/S/C/P Walkthrough

A less formal assessment conducted by senior management personnel.

- Environment, Safety, Health and Quality (ESH&Q) Section Independent Assessments

Assessments conducted on an as-needed basis by the ESH&Q Section that are scheduled outside the Tripartite Assessment process. Such supplemental assessments may be motivated by an incident, a perceived weakness in quality, an ES&H program, or by a new requirement.

- Formal ES&H investigation

Investigations required by Fermilab's Work Smart set of standards, including Computerized Accident Investigation Reporting System (CAIRS) and Occurrence Reporting and Processing System (ORPS) investigations, as well as formal internally initiated investigations**.**

- Hazard Severity

An assessment of the worst potential consequence, defined by degree of injury, occupational illness, environmental impact, or property damage that is likely to occur as the result of a deficiency. This determination is subjective in nature.

- Highly Protected Risk (HPR) Inspections

ES&H inspections of buildings conducted by the Fire Protection Engineer and members of the assessed organization.

- Incident/Accident

Work related event(s) in which an injury or ill-health (regardless of severity) or fatality occurred, or could have occurred.

Notes: (1) An accident is an incident which has given rise to an injury, ill health or fatality.

(2) An incident where no injury, ill health, or fatality occurs may also be referred to as a "near-miss", "near-hit", "close call", or "dangerous occurrence".

(3) An emergency situation is a particular type of incident.

- Lessons Learned (LL)

A "good work practice" or innovative approach that is captured and shared to promote repeat application. A lesson learned may also be an adverse work practice or experience that is captured and shared to avoid recurrence.
Note: Consult FESHM 12010 for a description of the lessons learned program and implementation procedures.

- Mishap Probability

The probability that a hazard will result in an incident based on an assessment of such factors as location, exposure, and affected population. This determination is subjective in nature.

- Notable

Worthy of note: significant, interesting, or unusual enough to deserve attention or to be recorded.

- DOE Reviews

A review planned and conducted by DOE-FSO (Fermi Site Office). Results of these reviews may be considered when developing Fermilab's and/or D/S/C/P self-assessment reports. Findings from these reviews are formally transmitted to the Laboratory along with requests for corrective and preventive actions that must be addressed.

- Preventive Action

Action to eliminate the cause of a potential nonconformity or other undesirable potential situation.
Note: There can be more than one cause for a potential nonconformity. Preventive action is taken to prevent occurrence whereas corrective action is taken to prevent recurrence.

- Regulatory Agency Inspections

Inspection by agencies external to DOE including State and Federal agencies such as EPA, IEPA, and USDOT.

- Risk Assessment Code

The degree of risk associated with a deficiency that combines the elements of hazard severity and mishap probability.

- Root Cause Analysis

An identified reason for the presence of a defect or problem. The most basic reason, which if eliminated, would prevent recurrence. The source or origin of an event. Root cause is also known as the system cause.

- Third Party Audits/Assessment

Audits and/or assessments performed on the organization by agencies external to Fermilab.
Note: Does not include those already defined above

- Tripartite Assessment

A major component of Fermilab's ES&H self-assessment program. The Tripartite assessment is performed and planned jointly by a D/S/C, the ESH&Q Section, and the DOE-FSO and led by a member of the organization being assessed.

3.0 RESPONSIBLILITIES

3.1 ESH&Q Section Head

- Managing the iTrack database and providing training for its use.
- Ensuring that the results of assessments conducted by organizations external to Fermilab are entered.
- Entering the results of the HPR Inspections into iTrack.
- Entering actions required by LL reviews into iTrack if it is determined that they are applicable to one or more internal organizations.
- Performing a quarterly review of the contents of iTrack to check on the appropriateness and status of follow-up actions and to identify trends and lessons learned. Categories of findings will be examined to determine the need for root cause analysis.
- Reviewing trending and analyses to determine if associated programs need to be redirected, to verify that root causes are being adequately addressed, and lessons generated.

3.2 Division/Section/Center Heads and Project Managers (D/S/C/P)

- Entering the results of their internal assessments and inspections, including all findings (open and closed), into iTrack.
- Entering the results into iTrack of the Tripartite ES&H assessments that were led by the D/S/C/P including corrective and preventive actions.
- Implementing corrective and preventive actions for issues and closing them out in iTrack.
- Entering lessons learned corrective and preventive actions into iTrack, if applicable.

- Periodically reviewing the contents of iTrack to check on the appropriateness and status of follow-up actions, and to identify trends.

- Verifying that corrective and preventive actions were implemented as reported. All findings with a Risk Code of 1 or 2 will have their corrective and preventive actions verified within 90 days of reported closure. Ten percent of the findings with a Risk Code of 3 will have their corrective and preventive actions verified. Documentation of the verification process shall be done annually through iTrack.
  Note: Findings with risk code 4 or 5 are considered de minimus and do not need verification.

4.0 PROGRAM DESCRIPTION

iTrack is a database that is used at Fermilab primarily to support performance monitoring and follow-up of associated issues regardless of discipline. Although issue tracking systems are often viewed as large "to do lists,**"** they can also provide valuable information about the status of associated programs. In particular, iTrack plays a key role in monitoring the status of Fermilab's self-assessment program and other issues.

For consistency, iTrack calls business activities that generate issues "reviews", and also calls all issues or findings "items". The Technical Appendix contains the list of business activities called "Review Categories" in iTrack that can generate issues.

5.0 PROCEDURES

5.1 iTrack uses

Although this system can be used to assign corrective and preventive actions down organizational lines, it must not be used to assign work across D/S/C/P lines, unless negotiated with the other D/S/C/P head in advance.

- Mandatory for all ES&H assessments (external and internal) when issues are identified. In order to provide a standardized mechanism for measuring progress in completing assessments, internal ES&H assessments must be entered, including opportunities for improvement, findings, and recommendations. These would include but is not limited to external DOE or regulatory agency reviews, ES&H Tripartite, the Laboratory Director's Triennial ES&H Assessment.

- Mandatory for investigations and inspections where issues are identified with a risk code of 1 or 2. The reports and any associated findings shall be entered. Examples include D/S/C/P walkthroughs, Occurrence Reporting and Processing System (ORPS), Computerized Accident Investigation Reporting System (CAIRS), Highly Protected Risk Inspections, and internal assessments and inspections.

- Optional for investigations and inspections where issues are identified with risk codes 3, 4 or 5.

- Mandatory for all drill critique findings and findings associated with emergency events. *Note: This includes recommended actions that result from a critique conducted after the Emergency Operations Center (EOC) activation.*

- Mandatory for actions to be taken as a result of non-conformances from ESH&Q independent assessments, self-assessments, management assessments, Department Head Management tours, Directorate tours, internal audits, Science & Technology (S&T) reviews, and project reviews.

- Mandatory for actions to be taken as a result of non-conformances from third party audits/assessments.

- Mandatory for actions to be taken resulting from the application of lessons learned received from sources such as internal, external from other federal agencies, private industry, industry groups or those that are DOE generated.

- Mandatory for tracking, resolution and disposition of S/CI parts, components and materials.

- Recommended for all other situations where the non-confidential tracking of issues and associated follow-up is desirable including recommendations and opportunities for improvement assigned from audits, assessments, reviews, etc. iTrack can accommodate the tracking of a wide variety of issues and follow-up data, and its use is strongly encouraged. However, personnel related issues such as attendance problems should be avoided since access to records across organizational lines is discouraged.

5.2 Assessment Response Process

- Although access to view the contents of iTrack is encouraged, data entry is generally limited to a small number of people within each D/S/C/P. These individuals should be familiar with the detailed functioning of the database.

- Findings are not entered into iTrack until they have been validated by the assessed organization. If the risk code is 1 or 2 the finding shall be validated immediately so that corrective and preventive action can be quickly implemented. See the Technical Appendix for instructions on assigning risk codes to items entered into iTrack.

5.3 Risk assessment

Each validated hazard that cannot be immediately corrected shall be entered into iTrack and assigned a Risk Assessment Code by the D/S/C/P leading the review. Risk Assessment codes may apply to all items entered into iTrack, however, it is only mandatory for safety related items and items found to have potential risks associated with them. The process for assigning Risk Assessment Codes is described in the Technical Appendix to this Chapter. This assures that concurrence is achieved between the assessing organization and the assessed D/S/C/P regarding the assignment of Risk

Assessment Codes. Risk assessment codes 1 and 2 must be entered; however, risk assessment codes 3, 4 and 5 are optional at the discretion of the person making the entries in iTrack.

5.3.1. Phased implementation

The Risk Assessment Codes identify five levels of risk (see below). In general, items should be addressed in order of highest to lowest risk. D/S/C/P may wish to establish specific internal guidelines for addressing this matter. However, it is recognized that there may be occasional exceptions to dealing with deficiencies in rank order due to resource limitations and scheduling difficulties. Whenever a Risk Assessment Code of 1 or 2 is entered, iTrack sends an automatic e-mail message to the ESH&Q Section Head, the Chief Operating Officer, D/S/C/P heads and senior safety officer(s) of the responsible organization(s). Immediate measures shall be taken to reduce the risk associated with such findings.

Risk assessment code	Adjective rating
1	Critical
2	Serious
3	Moderate
4	Minor
5	Negligible

5.3.2. Risk assignment changes

Senior Safety Officers, division/section/center heads and project managers are free to change risk assignments for findings resulting from internal division/section/center/project assessments. However, changes to the risk assignments for external findings require concurrence from the ESH&Q Section Head. Such revisions may be sought because of disagreement with reviewer-assigned values or because of actual changes in the level of risk (e.g., due to progress in addressing the finding). Each request to change a risk assignment should include the finding number, a justification, and the name of a person most familiar with the risk associated with the finding. The changes shall be communicated in writing to the responsible division/section/center head(s).

5.4 Qualifications to perform risk assignment

Personnel conducting reviews should be familiar with the Technical Appendix to this Chapter.

5.5 Root Cause Analysis

An ES&H finding entered into iTrack that has an associated risk code of 1 or 2 requires a root cause analysis to assure that the corrective and preventive actions will be effective in preventing recurrence. The Chief Operating Officer is automatically notified of all Codes 1 or 2 entries. During the quarterly review for trends, all findings shall be examined as a group to determine if there is a need for further formal casual analysis.

6.0 References

Director's Policy on Issues Management

7.0 Technical Appendix

iTrack PROCEDURES
DETERMINING THE RISK ASSESSMENT CODE FOR A FINDING

1. Estimate the Hazard Severity as High, Medium, Low, or Minimal using Table 1 below. Consider the worst potential consequence that is likely to occur as a result of the deficiency.

2. Estimate the Mishap Probability as A, B, C, or D using Table 2 below. This should be based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population. Other circumstantial factors that should be considered include the following:

   - Number of workers exposed.
   - Frequency of exposure or duration of employee overexposure to contaminants.
   - Employee proximity to the hazardous conditions.
   - Use of appropriate personal protective equipment (PPE).
   - Medical surveillance program.
   - Other pertinent working conditions.

3. Use Table 3 to determine the Risk Assessment Code from the Hazard Severity and Mishap Probability estimated above. For example, a Hazard Severity of Medium and a Mishap Probability of C will yield a Risk Assessment Code of 3.

TABLE 1.
HAZARD SEVERITY

Severity	People	Environment	Compliance	Property
High	Death from injury or illness; injuries involving permanent disability; or chronic irreversible illnesses.	Permanent or long-term loss of a public resource (e.g., drinking water, air, stream, or river).	N/A	Loss of a facility.
Medium	Injuries or temporary, reversible illnesses resulting in hospitalization of a variable but limited period of disability.	Seriously impair the functioning of a public resource.	Major noncompliance that exposes the Lab to significant potential fines and penalties.	Major property damage.

Low	Injuries or temporary, reversible illnesses not resulting in hospitalization and requiring only minor supportive treatment.	Isolated and minor, but measurable, impact(s) on some component(s) of a public resource.	Major noncompliance with the Lab's Work Smart set.	Minor property damage.
Minimal	N/A	N/A	Marginal noncompliance with the Lab's Work Smart set.	N/A

TABLE 2.
MISHAP PROBABILITY

Probability	Description
A	Likely to occur immediately or within a short period of time
B	Probably will occur in time.
C	May occur in time.
D	Unlikely to occur.

TABLE 3.
RISK ASSESSMENT CODE

	Probability			
Severity	**A**	**B**	**C**	**D**
High	1	1	2	3
Medium	1	2	3	4
Low	2	3	4	5
Minimal	3	4	5	5

iTrack PROCEDURES
REVIEW CATEGORIES IN ITRACK

Assurance Council (AC): Regular recurring meeting consisting of Management System Owners; purpose is to identify and track Contractor Assurance System (CAS) issues.

D/S/C Head Management Tour: Tours of facilities, processes, procedures, etc. executed by Division / Section / Center heads.

DOE Review: Fermi Site Office (FSO) reviews including process and procedure reviews, etc. (excluding project reviews, see "Projects").

DOE Tour: FSO inspections, including building inspections, walk-throughs, etc.

Department head Management Tour: Tours of facilities, processes, procedures, etc. executed by Department heads.

Directorate Tour: Tours of facilities, processes, procedures, etc. executed by the Director.

External Review: Reviews or audits conducted by State or Federal Regulatory bodies, and registrars.

Financials: Financial audits that are conducted by internal financial personnel or by external institutions, e.g. KPMG audit, and financial issues found through other methods, e.g. process reviews, etc.

HPR Inspections: Internal Fire safety inspections and Highly Protected Risk (high value buildings) inspections conducted to ensure appropriate level of fire protection.

Incident/Near Miss: Incident and near miss investigations and analysis lead by SSOs.

Internal Audits: Consists of internal audits of lab accounts, records, and internal accounting policies and controls executed by Internal Audit Services.

Internal Review: Consist of Independent Assessments, Management Assessments, Project Assessments, Self-Assessments, and all ES&H reviews conducted internally (can be conducted by another group internally but not by external registrars or 3rd parties).

Investigative: Complaint responses and accident investigations, including CAIRS, ORPS, and NTS.

Lessons Learned: Internal or external lessons learned where actions (corrective actions or other actions) are necessary to be taken by the Laboratory.

Projects: Reviews of projects conducted by DOE, Lehman review, CD reviews, etc.

Quality Assurance: Reviews or assessments of projects, processes, procedures, policies, etc. conducted by the Quality organization.

Science & Technology: Reviews conducted on the performance of a facility with focus on science and technology outputs, called S&T reviews, e.g. review of laboratory scientific user facilities.

Subcontractor Field Inspection/Audit: Task Managers and Construction Coordinators reviews or audits of outside contractors.

Suspect/Counterfeit: Suspect or Counterfeit items found at Fermilab or within the DOE Complex where actions (corrective actions or other actions) are necessary to be taken by the Laboratory.

Tripartite: Collective yearly review by the FSO, ESH&Q, and representative from each Division/Section.