



FESHM 1040.1: ES&H SELF-ASSESSMENT PROGRAM

Revision History

| Author | Description of Change | Revision Date |
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| Nancy L. Grossman | <p>Definitions and terms were standardized between each of the FESHM chapters and the CAPA procedure. Particularly Corrective Action, Preventive Action, Root Cause Analysis, ESHTRK became frESHTRK, Causal analysis was replaced with root cause analysis (from our earlier work on the Root Cause Analysis Procedure) and carried forward. We also added reference to (1004.1001 Fermilab Corrective & Preventive Action Procedure) and (1004.1002 Fermilab Root Cause Analysis Procedure) if they were not already present in FESHM chapters.</p> <p>Also added 3903 Contractor Assurance Lessons Learned Program under lessons learned under Responsibilities; and modified the following: “If an assessment results in finding(s) of severity 1 or 2, a root cause analysis will be conducted. If findings of severity 3 or 4 or other opportunities for improvement are identified, the need for root cause analysis will be determined.” under Program Description.</p> | March, 2011 |



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1.0 INTRODUCTION

ES&H Assessments are a means of collecting information about ES&H program performance. Reliable, timely information is important for top level managers to monitor the Laboratory ES&H performance against contractual requirements, raise ES&H awareness among employees, identify lessons learned that can be used to accelerate improvements, to feel confident that vulnerabilities are aggressively sought out and mitigated responsibly, to evaluate how well the Lab is fulfilling all regulatory requirements, to provide data for making risk based decisions on resource allocations and program direction, and to improve the overall laboratory ES&H program.

Fermilab is committed to implementing a strong ES&H Self-Assessment program (SAP) to achieve its goal of no injuries to employees or damage to equipment and the environment. Self-assessments are conducted consistent with the principles and functions of Integrated ES&H Management.

2.0 DEFINITIONS

- **Assessment Plan**
Description of the activities and arrangements for an assessment.
- **Assessment Scope**
Extent and boundaries of an assessment.
- **Assessor**
A person with the competence to conduct an assessment.
- **Audit Criteria**
Specific endpoints that delineate the desired state of the function to be audited. These often are contained in policies, procedures and requirements.
- **Audit Evidence**
Direct observations, reviews of records, results of interviews, and analyses of their inter-relationships.
- **Competence**
Demonstrated personal attributes and demonstrated ability to apply knowledge and skills. Competence may be obtained or improved through training, education or work experience.
- **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 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.
- **DOE Headquarters Reviews**
Reviews conducted by DOE organizations at the headquarters level, i.e., Office of Science. 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.
- **ESH Section Independent Assessments**
Assessments conducted on an as-needed basis by the ESH Section that are scheduled outside the Tripartite Assessment process. Such supplemental assessments may be motivated by an incident, a perceived weakness in an ES&H program, or by a new ES&H requirement.
- **Finding**
A violation of a published standard. Published standards are FESHM chapters, the work smart standard set, and applicable DOE and executive orders.
- **Impartial/Independent**
Someone outside of the scope of the assessment and not directly or indirectly responsible for the work process.
Note: The word “independent” does not necessarily mean external to the organization.
- **Leading/Lagging Indicators**
Anything that can be used to predict future trends. A leading indicator signals a future event and is normally tied to observation of behaviors intended to achieve a particular outcome. A lagging indicator follows an event and is used to confirm that a pattern is occurring.
- **Management Assessment**
A comprehensive, systematic, and periodic review of an organization's activities and results compared to audit criteria.
- **Noteworthy Practice**
A work process that is shrouded in safe work practices, improves productivity and exceeds the spirit and intent of the applicable regulations and standards. Noteworthy practices may include best management practices.
- **Operational Awareness Review**
A review planned and conducted by DOE-FSO. Results of these reviews may be considered when developing Fermilab’s and/or D/S/C 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.
- **Recommendation**
An opportunity for improvement of a work process or practice that does not rise to the level of a finding. May also be referred to as a Best Management Practice.
- **Regulatory Agency Inspections**
Inspection by agencies external to DOE including EPA, IEPA, and USDOT.
- **Root Cause**
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.
- **Tripartite ES&H Assessments**
A major component of Fermilab's ES&H Self-Assessment program. Tripartite assessments are jointly planned and performed by a D/S/C, the ESH Section, and DOE-FSO.

3.0 REFERENCES

- | | |
|---------------------|--------------------------------------------------------------------------|
| (a) ISO 14001 | Environmental management systems- Requirements with guidance for use |
| (b) BSI-OHSAS 18001 | Occupational Health and Safety Management Systems Specifications |
| (c) ISO 19011 | Guidelines for quality and/or environmental management systems auditing. |
| (d) DOE P 226.1 | Department of Energy Oversight Policy |
| (e) DOE O 226.1A | Implementation of Department of Energy Oversight Policy |
| (f) 1004.1001 | Fermilab Corrective & Preventive Action Procedure |
| (g) 1004.1002 | Fermilab Root Cause Analysis Procedure |

4.0 RESPONSIBILITIES

4.1 The Laboratory Director is responsible for:

- Establishing expectations for the self-assessment program to meet the requirements in the references
- Reviewing and accepting the annual self-assessment report and proposed corrective and preventive actions.
- Conducting self-assessment of key aspects of the ES&H program on a triennial basis



4.2 D/S/C Head is responsible for:

- Developing a written internal self-assessment program tailored to the hazards and risks associated with the work of the organization. Self-assessment programs will consist of documented inspections, management assessments and/or walkthroughs, and independent assessments.
- Provide a report to the Laboratory Director and ES&H Director on an annual basis of the results of the self-assessment program, including those actions identified in the Annual ES&H Plan.
- Identifying subjects for Tripartite Assessments based upon input from his/her organization, the ESH Section, and DOE-FSO.
- Providing personnel to participate in the Tripartite Assessment process who are impartial and independent. The D/S/C Head determines the level of experience, competence and training necessary to ensure the capability of the assessor/s assigned.
- Upon request of the Tripartite Assessment team, securing the participation of personnel from another D/S/C if an independent and impartial member of the assessed D/S/C cannot be found.
- Providing a coordinator to assist the Tripartite Assessment team who is not part of the assessment process.
- Developing corrective and preventive actions (1004.1001 Fermilab Corrective & Preventive Action Procedure) in response to assessment findings and entering them into frESHTRK.
- Completing corrective actions in a timely manner.
- Conducting a root cause analysis (1004.1002 Fermilab Root Cause Analysis Procedure) for any assessment findings having a risk assignment of 1 or 2 to assure corrective actions will be effective.
- Developing lessons learned (3903 Contractor Assurance Lessons Learned Program) for any assessment findings having a risk assignment of 1 or 2 in order to share information across the Laboratory.

4.3 D/S/C Coordinator:

- Providing organizational support to the Tripartite Assessment team, including items such as arranging for interviews and securing requested documents.
- Serve as information conduit to the D/S/C Head regarding the planning and progress of the Tripartite Assessment.

4.4 Assessment Lead Assessor:

- Plan and execute the assessment process.
- Conduct an opening and closing meeting with the D/S/C Head of the assessed organization.
- Draft reports with the assistance of the assessing team. Provide a copy to the D/S/C Head for evaluation of factual accuracy. Incorporate comments and prepare the final report for submittal to D/S/C Head.
- Identify any significant findings (those having a risk assignment of 1 or 2 per 1040.2), as soon as possible to the D/S/C Head, so that immediate action can be taken.



4.5 Assessment Team Member:

- Participate in the planning and execution stages of the assessment.
- Provide input to the draft report that includes observations, recommendations, best management practices and findings.
- Participate in the opening and closing meetings with the D/S/C Head of the assessed organization.

4.6 The ES&H Director is responsible for:

- Coordinating the Tripartite ES&H Assessment process. Determining the level of independence and potential external support needed.
- Performing lab-wide assessment against lab-wide contractual ES&H performance measures, with a report to the Director.
- Performing an annual ISM effectiveness assessment, with a report to the Laboratory Director.
- Performing an annual assessment of effectiveness of self-assessment program, based upon input for D/S/Cs.
- Serving as liaison for reviews conducted by DOE or external agencies.
- Conducting special independent reviews or assessments as directed by the Director.
- Arbitrating when the independence and impartiality of a tripartite member is questioned.

5.0 PROGRAM DESCRIPTION

The purpose of an assessment is to determine whether activities and related results conform to planned arrangements and whether these arrangements are implemented effectively and are suitable for achieving the organization's policy and objectives. It is a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.

The principles and function of Integrated ES&H Management should be used as a guide in conducting and reporting self-assessment activities.

Wherever possible, an assessment will be conducted by comparing performance to established objectives and criteria.

Attaining full benefit from assessments for continuous improvement requires that, to the extent appropriate, findings are analyzed for root cause and trends, and action plans be prepared, and tracked until complete. If an assessment results in finding of severity 1 or 2 a root cause analysis will be conducted. If findings of severity 3 or 4 or other opportunities for improvement are identified, the need for root cause analysis will be determined.

Recording and tracking assessments and any subsequent findings in the frESHTRK database are required (See chapter 1040.2 for details). Lessons learned shall be identified and shared with the rest of the Laboratory as appropriate in order to spur improved performance.



5.1 Self-Assessments

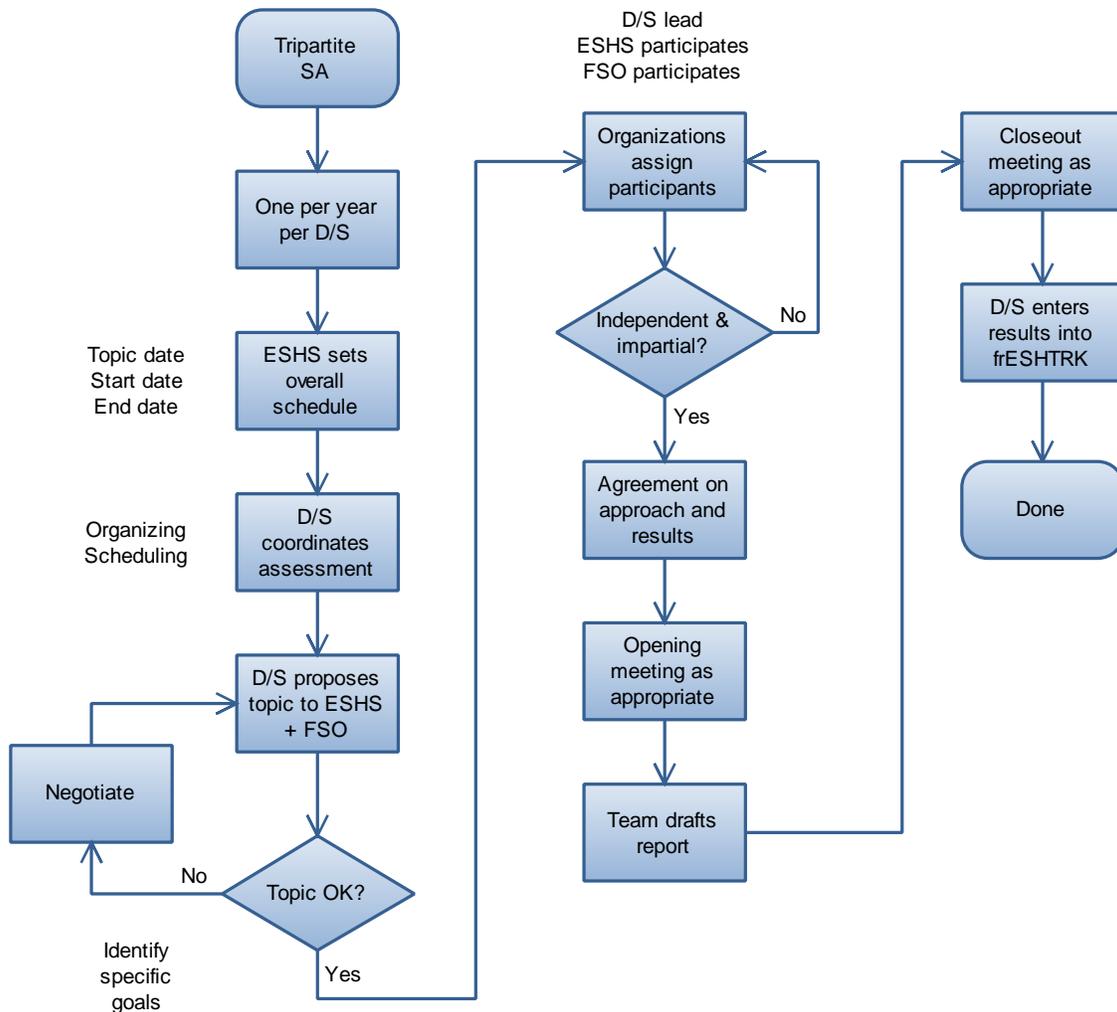
Each D/S/C Head shall establish a written self-assessment program. A roll-up assessment report of the results of these activities, including identification of trends and corrective actions (1004.1001 Fermilab Corrective & Preventive Action Procedure) is to be performed at the end of every fiscal year. A report is due to the ES&H Director, with a copy to the Laboratory Director by September 30th of each year. At a minimum, the following elements will be included in the self-assessment activities:

- OSHA-style inspections - All areas for which the D/S/C Head has responsibility must have documented inspections. The frequency of inspection should be tailored to the level of risk. "Office" areas should be inspected at least biannually, industrial and other technical areas at least quarterly. This could also include Building Manager inspections (see FESHM 5120), and radiological "Snoop Surveys". Completion of the inspection and any findings are to be documented in frESHTRK
- Management Assessments - Activities of the D/S/C Head, or designee, to satisfy himself/herself that the ES&H program has been implemented properly. Such activities may include management walkthroughs, internal team assessments, participation in an ES&H committee, review of appropriate documentation, or regular meetings with staff and workers. These can range from very informal to very formal. The results of those assessments that the D/S/C identifies as "formal" and any findings arising from those assessments are to be documented in frESHTRK.
- Tripartite ES&H Assessments as discussed below.
- Continuous self-assessment of performance against the contractual ES&H performance measures for which a D/S/C contribution can be identified. D/S/C Heads will monitor their performance against these measures and work with the ES&H Director to implement a program to support achieving the Laboratory goals. This is routinely accomplished through establishment of an Annual ES&H Plan.

The written assessment program shall be a controlled document. The written program shall contain a document number, revision number, and issue date.

5.2 Tripartite Assessments

Tripartite assessments involve the partnering of three organizations in evaluating an aspect of ES&H performance within a D/S/C. Those three organizations are the ES&H Section, DOE-FSO, and the D/S/C being evaluated. This approach reduces the need for redundant assessments, allows concentration of expertise, and provides opportunities for operational awareness. In addition, the collaborative style tends to minimize defensive behaviors and focuses the process on the ES&H topic at hand. A diagram of the tripartite assessment process is shown below.



Each D/S/C is expected to complete one tripartite assessment per year. The ES&H Section establishes the annual Lab-wide schedule, while D/S/Cs are responsible for leading the assessments within their organization. The ES&H Section also provides due dates for D/S/Cs to propose topics, as well as dates for the start and completion of assessments. Topics proposed by the D/S/C are reviewed by the ES&H Section and DOE-FSO. If necessary, all three organizations negotiate to establish a mutually agreeable revised topic. Specific assessment goals should be identified to assure the assessment is effective and efficient. Each organization is responsible for assigning someone to participate on the assessment team. Two major considerations for inclusion are expertise in the topic and independence from the particular organization(s) being assessed. Other people within the assessed D/S/C may be called upon to secure documentation and schedule interviews and site visits. Since these individuals are not evaluating their organization's performance



as part of the assessment, they need not be impartial/independent. The details of the assessment approach and interpretation of results are left to the judgment of the assessors. This includes the identification of findings, as well as the need to hold meetings with D/S/C management at the beginning or end of the assessment. Reports are drafted by the team members and results are entered into frESHTRK by the D/S/C leading the review.

5.3 Independent Assessments

At the discretion of the Laboratory Director and/or ES&H Director, an independent assessment may be conducted on an as-needed basis and is scheduled outside the Tripartite Assessment process. Such supplemental assessments may be motivated by an incident, a perceived weakness in an ES&H program, or by a new ES&H requirement. The Laboratory Director or ES&H Director will appoint an assessment lead and team membership. The need for a root cause analysis will be identified.

5.4 Director's Triennial ES&H Assessment

Every three years, the Laboratory Director conducts an 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. The ES&H Director will recommend a topic to the Laboratory Director. The Laboratory Director will appoint an assessment lead and team membership. The need for a formal root cause analysis will be identified.

5.5 External Assessments

On occasion, there may be assessments performed by agencies external to Fermilab. These include DOE-FSO Operational Awareness Reviews, DOE Assessments, and regulatory agency inspections. The ESH Section will coordinate these assessments with the affected organizations, including factual accuracy review of report, and entering of assessment and findings and recommendations into frESHTRK.

The inspections performed by regulatory agencies entities are generally done with minimal notice and the protocol for both the inspection and any corrective and preventive actions is specified by the inspecting agency. All Laboratory personnel are expected to cooperate fully with such inspections. Inspectors from any external regulatory agency should always be directed to begin their inspection by visiting DOE-FSO. All documentation generated in response to such an inspection should be routed through DOE-FSO.

5.6 Fiscal Year Summary Assessment

At the end of the fiscal year, the ES&H Section will perform an assessment of the Laboratory's Integrated ES&H Management System. The purpose of this assessment is to review the results of all the assessments and inspections conducted that year, including QA assessments and external reviews, and identify strengths, weaknesses, and trends within the Laboratory's ES&H programs. This assessment will be documented and the report will be submitted to the Laboratory Director for acceptance. Recommendations for improvement will be identified.

This assessment will serve as the basis for the various required summary assessments, including the Annual Integrated Environment Safety & Health Manual (IESHM) Effective Assessment and assessment against contractual performance measures.



5.7 Other Assessments

At the discretion of the ES&H Director, other assessments may be conducted on an as-needed basis and are scheduled outside the Tripartite Assessment process. Such supplemental assessments may be motivated by an incident, a perceived weakness in an ES&H program, or by a new ES&H requirement. The ES&H Director will appoint an assessment lead and team membership.

5.8 Assessor Competence

The organization that is leading the assessment will assure that the lead assessor is independent of the work being assessed and qualified through training and/or experience to lead the assessment. An individual shall not be assigned to lead an assessment until he/she has participated in at least two prior assessments as a team member.

5.9 Records

Assessment reports shall be entered into frESHTRK. Any other formal records associated with the activities of this chapter shall be kept in a central location for a period of 3 years.