

**PARTICLE PHYSICS DIVISION OPERATING MANUAL
REVIEW AND APPROVAL RECORD**

PARTICLE PHYSICS DIVISION SELF ASSESSMENT PLAN (SAP)

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**Particle Physics Division Self Assessment Plan (SAP)
Table of Contents**

Contents:

- 1. Purpose and Scope.....**
- 2. Responsibilities.....**
 - 2.1 PPD Division Head.....**
 - 2.2 Line Organization**
 - 2.3 PPD ES&H Group**
- 3. Instructions**
 - 3.1 Elements of the PPD ES&H Self-Assessment Program**
 - 3.2 Documentation and Reporting.....**
 - 3.3 Schedules.....**
 - 3.4 Auditor Qualifications**
 - 3.5 frESHTRK Procedures.....**
- 4. References.....**
- 5. Appendix A- PPD ES&H Group - Inspection and Testing.....**

PPD SELF ASSESSMENT PLAN (SAP)

1. **Purpose and Scope**

The purpose of the Particle Physics Division (PPD) Environment, Safety, and Health (ES&H) Self-Assessment Program (SAP) is to implement the requirements of Fermilab ES&H Manual (FESHM) chapter 1010.1 and, in so doing, evaluate objectively the various components of the ES&H program within the Division. ES&H performance shall be measured against contractual requirements (i.e., the Work Smart Set FESHM chapter 1070) and performance measures, internal (PPD) ES&H-related policies and procedures, and any other requirement deemed applicable and appropriate by the Division Head. The SAP contributes to the performance assessment function of the Integrated ES&H Management System, thereby facilitating continuous improvement of the PPD ES&H program.

2. **Responsibilities**

2.1 **Division Head or designee:**

- Approves this procedure and reviews it triennially for adequacy.
- Provides an annual report to the Laboratory Director and the ES&H Director on the results of the self-assessment program, including those actions identified in the Annual ES&H Plan.
- Approves subject matter and scope for tripartite assessments and communicates them to the ES&H Section.
- Provides personnel who are appropriately experienced, trained, and impartial to participate in assigned tripartite assessments. In the event that the knowledgeable individuals in the division are not sufficiently independent of the activities being assessed, the Division Head will secure the participation of independent and impartial employees from another Division/Section. The Division Head may also provide personnel for tripartite teams assessing other organizations as requested.
- Conducts periodic walkthrough inspections of PPD spaces.

2.2 **Line Organization:**

- When requested, participate directly in periodic Division Head walkthroughs, ES&H walkthroughs of PPD areas, DOE Inspections, etc.
- When requested, supply personnel to participate as team members on tripartite assessment teams.
- Cooperate fully with auditors assessing their activities.

- Develop corrective actions in response to assessment findings related to activities under their purview and complete them in a timely manner.
- Assist the ES&H Group in analyzing the root cause of any assessment findings given a risk assignment of 1 or 2 by an auditor (or the ES&H Section, in the case of an external assessment) in order to ensure that corrective actions will be effective.
- Assist the ES&H Group in writing up lessons learned from assessment findings having a risk assignment of 1 or 2 in order to share information across the Laboratory.

2.3 PPD ES&H Group:

- Assist the Division Head in carrying out his/her responsibilities under FESHM chapters 1010.1 and 1010.2.
- Participate in Highly Protected Risk (HPR) inspections.
- Serve as tripartite assessment team members or coordinators.
- Enter assessment findings and corrective action plans into frESHTRK; close findings when corrective actions are completed.
- Prepare or assist in the preparation of lessons learned in response to significant findings.
- Advise division and department management on methods for improving the safety of their processes.
- Audit line organizations' ES&H performance.

3. Instructions

3.1 Elements of the PPD ES&H Self-Assessment Program

3.1.1 Assessments by the Particle Physics Division Head

The Particle Physics Division Head is continually engaged in scheduled and ad hoc informal assessments of Division performance. The Division Head may also commission reviews on an *ad hoc* basis to examine specific problems - ES&H or programmatic - which may arise. The degree of formality accorded such assessments is dependent upon the subject of the review and is determined by the Division Head, as is the level of documentation required. The Division Head also conducts periodic (approximately weekly) walkthrough inspections of PPD areas. As needed, he/she involves other division management in these walkthroughs. The walkthroughs focus on facility condition and work practices of PPD personnel.

3.1.2 Management Audits

Managers in PPD routinely conduct audits of work performed by individuals under their supervision. These audits are designed to help managers integrate safety management into the overall management program and strengthen communication between leadership and field workers.

3.1.3 Tripartite Assessments

A tripartite assessment is an audit of an organizational unit that brings together three groups: DOE-FSO, ES&H Section and division/section personnel. Tripartites are scheduled and conducted in accordance with FESHM chapter 1010.1.

3.1.4 Internal Assessments by the PPD ES&H Group

The PPD ES&H Group conducts numerous inspection and test activities relating to the potential hazards within the Division's areas and activities. These inspections and tests are integral to maintaining the safe operation of the Particle Physics Division complex and are performed in accordance with practices developed within the group. They are listed in Appendix A for reference; they may not require tracking in frESHTRK, but rather incorporate their own means of resolving discrepancies identified during their performance.

In addition, more formal audits are conducted on an as-needed basis to supplement tripartite assessments, HPR inspections, DOE inspections, and division head walkthroughs. They are conducted by the PPD ES&H Group and are primarily functional audits of ES&H specialty disciplines or programs within PPD to verify that applicable elements of each program have been developed, documented, and effectively implemented throughout the Division and to determine ways to improve implementation of sound ES&H practices within the Division.

The Head of the PPD ES&H Group or the Senior Safety Officer determines the need for these types of audits in consultation with his/her staff. PPD ES&H personnel conduct these assessments, though they may request the assistance of PPD or other Division/Section personnel, Fermilab ES&H Section professionals, or subcontracted consultants. The results of individual assessments are entered into frESHTRK for tracking.

3.1.5 Highly Protected Risk (HPR) Inspections

ES&H inspections of buildings conducted by the Laboratory's Fire Protection Engineer with the intent of identifying potential hazards to property whose dollar or programmatic value dictates that it be in the best-protected class of industrial risks. The inspections focus on fire prevention practices and procedures, quality of construction, fire

detection and suppression systems, verification of testing and maintenance of fire protection systems and equipment, and general review of processes and activities occurring within the building, including basic housekeeping. Other ES&H issues that are identified incidental to the inspections are also noted and entered into frESHTRK if the inspectors deem appropriate.

3.2 Documentation and Reporting

The level of documentation required for the various elements of the SAP vary based on the type of assessment.

Division Head walkthroughs are typically informal affairs and are reported to the SSO for entry into frESHTRK after they are complete. Any findings identified are also entered into frESHTRK by the PPD Senior Safety Officer.

HPR inspection results are documented and tracked via frESHTRK.

Results of ES&H Group functional audits are also entered into frESHTRK per FESHM chapter 1010.1. The format and content of these reports are either determined by precedent within the division for that type of report or are established at the discretion of the lead auditor. Requirements for format and content of tripartite self-assessment reports are contained in FESHM 1010.1.

Division ES&H Plans and annual reports to the Director follow the most current format and content guidance available from the Director's Office.

Findings of all assessments are entered into frESHTRK. Within 90 days of closure of the finding(s) defined as Category 1 or 2, a visual verification occurs by the SSO. Ten percent of closed findings in a Category 3 or 4 will be verified. Verifications will be put in writing in a Validation Assessment.

3.3 Schedules

The Division Head schedules his walkthroughs. He may invite other managers to participate (deputy head, department head, area expert, etc.).

Tripartite Assessments are scheduled pursuant to the process outlined in FESHM Chapter 1010.1. HPR inspections are scheduled pursuant to FESHM Chapter 6015.

The schedules for the PPD ES&H Group inspections and tests listed in Appendix A are determined by the Head of the PPD ES&H Group or the PPD Senior Safety Officer. The nominal frequency of these activities is shown in Appendix A. ES&H Group audits of PPD ES&H programs are scheduled by the PPD Senior Safety Officer once a need is identified.

The schedule of activities of the PPD SAP may be adjusted by up to two calendar quarters if conflicts arise from or because of programmatic operations

or other reasons. When anticipated, such delays are to be reported to the Division Head.

3.4 Auditor Qualifications

Appropriate levels of experience, training, and independence for participants in ES&H self-assessments will be determined by the Division Head, in consultation with the PPD Senior Safety Officer. An individual will not be assigned to lead an assessment until he/she has participated in at least two prior assessments as a team member.

3.5 frESHTRK Procedures

The ES&H Group will enter the following into frESHTRK:

- Observations made during Division Head walkthroughs when deemed worthy of reporting and tracking by the Division Head
- Results of assessments conducted by the ES&H Group
- Corrective actions in response to any assessment findings entered into frESHTRK
- Results of tripartite ES&H assessments for which PPD supplied the lead auditor

Entries shall be made consistent with the formatting guidance in FESHM chapter 1010.1.

The ES&H Group will also close findings in frESHTRK when the responsible individual reports that the corrective actions have been completed.

The ES&H Group will periodically review the contents of frESHTRK to check on the appropriateness and status of follow-up actions and to identify trends.

4. References

Fermilab ES&H Manual Chapter 1010.1, ES&H Self-Assessment Program

Fermilab ES&H Manual Chapter 1010.2, frESHTRK Procedures

Fermilab ES&H Manual Chapter 1010.3, frESHTRK Procedures, Risk Assignment

APPENDIX A: PPD ES&H GROUP INSPECTIONS AND TESTINGRadiation Safety

- Nuclear materials inventory
- Snoop Surveys
- Source Inventory and Use
- Postings

Environmental Protection

- Chemical storage and Satellite (waste) Accumulation Area inspections
- Chemical inventory (annual)
- Oil storage area inspections (monthly)

Safety and Health/Building Management

- Eyewash/Emergency Shower inspections (weekly)
- Emergency & Exit lights
- Fire Systems
 - Sprinkler systems
 - Fire door inspection (annual)
 - Safe egress
- AED inspections (monthly)
- MINOS underground stored Ocenco escape pack inspections (quarterly)
- Asbestos inspections and air monitoring (annual)
- High Noise Area monitoring and inspection (as needed)
- Review of confined spaces (as needed)
- Project/job reviews (ad hoc)
- IH Assessments (ad hoc)
- Exhaust hood surveys (annual)
- Negative assessment sampling for lead
- Negative assessment sampling for beryllium

