

Memorandum

August 25, 2008

To: Bruce Chrisman
From: William Griffing *WGriffing*
Subject: Revised FESHM Chapter 6015 – Highly Protected Risk Inspection Program

FESHM Chapter 6015, Highly Protected Risk Inspection Program, was revised to promote the efficiency of the HPR program. Inspection reports containing only the results of the inspection will be sent to the div/sec for action. A historical living file will be retained by ESH reflecting the history of the building and the results of each inspection.

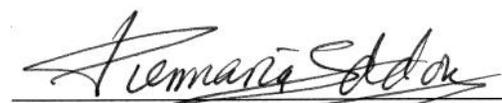
After final approval, please return this approval page to Elizabeth Bancroft at MS119 for posting on the web.

Encl.

Recommended for Approval:


Bruce Chrisman 8/29/08
Date

Approved:


Piermaria Oddone 9/12/08
Date

HIGHLY PROTECTED RISK INSPECTION PROGRAM

INTRODUCTION

The 6000 series of the Fermilab Environment, Safety, and Health Manual chapters describe the organization and structure of the Laboratory Fire Protection Program, incorporates the requirements of DOE Order 420.1, and complies with applicable laws, regulations, and the Work Smart set of ES&H standards included in the DOE contract.

This program is to provide an inspection methodology of all FNAL facilities consistent with the best protected class of industrial risks ("Highly Protected Risk") and a method by which the facility data and inspection results are recorded and retained.

DEFINITIONS

ESHTRK- Environmental, Safety and Health Tracking System

Finding - A violation of a published standard. Published standards are FESHM chapters, the work smart standard set, and applicable DOE and executive orders (See FESHM 1040.1).

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 (See FESHM 1040.1).

Facility File - The master historical/ living document reflecting all changes to the building. Retained on the ESH Server.

Fire Protection Engineer (FPE) - trained and educated professional responsible for overseeing the overall implementation and development of the Fermilab fire protection systems.

Highly Protected Risk - a facility that is characterized by a level of fire protection of the best protected class of industrial risks.

Inspection Report – A report of the items identified during the HPR inspection. Serves as the support document to ESHTRK entries. The document identifying issues requiring the Div/Sec to address, and is to be used to provide a response back within the allotted time frame.

RESPONSIBILITIES

The Division/Section (D/S) Heads are responsible for assuring that findings identified through the HPR Inspection process are addressed in a timely manner.

The Senior Safety Officer (SSO) or designee is responsible for:

- Facilitating the conduct of HPR inspections
- Coordinating the response to issues identified during the inspection as identified in the Inspection Report.
- Only when required, updating the contents of the facility file and returning the report to ES&H within the allocated time period.

The Building Manager (FESHM 2050) is responsible for carrying out the responsibilities assigned to him/her in FESHM 2050 as they may be required in the HPR inspection process.

The Environment, Safety and Health Section (ESH) – Safety and Environmental Protection (SEP) Emergency Planner is responsible for:

- Developing and issuing a yearly schedule of buildings requiring an HPR inspection. Specific dates and times will be individually coordinated with the D/S SSO.
- Drafting HPR Inspection report and as required providing the Facility Filet for review and revision by D/S SSO.
- Provide ESH Admin with copy of completed inspection Report and necessary information to enter findings into ESHTRK.
- Entering into ESHTRK reports with no findings as evidence of the conduct of the inspection.

The ESH-SEP Fire Protection Engineer is responsible for:

- Conducting the HPR Inspections
- Identifying possible solutions to findings for the D/S to consider

PROGRAM ELEMENTS

The HPR program encompasses all aspects of fire protection at the Laboratory. The program includes inspection of fire prevention practices and procedures, quality 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.

Highly Protected Risk – Facility Inspections

Fermilab maintains facilities that are characterized as a “best protected” class of industrial risk (Highly Protected Risk), equipped with an appropriate level of fire protection. The frequency of inspection depends on the mission criticality of the facility to the Laboratory. The loss of those facilities that would have an adverse impact on the Laboratory would have a higher frequency of inspection. The inspection schedule ranges from annually to once every 5 years. The ES&H-SEP FPE oversees the inspection process and maintains the inspection schedule. Nexus report format may be found at Appendix A.

Scheduling of Inspections

Prior to the beginning of the new calendar year, the ESH-SEP Emergency Planner will identify all building schedule for inspection during the upcoming year. This list will include the date of the last inspection to be used as a benchmark for scheduling purposes. Coordination with the D/S SSO will occur arranging the specific date and time of inspection for a facility.

Conduct of Inspection

On the date and time specified, the ES&H inspectors will meet the D/S representatives. It is recommended that someone familiar with the building and its operation accompany the D/S representatives and the inspectors. If there is a previous HPR inspection on file, the document will be used by the inspectors to spot check previous findings and to record new items.

During the inspection the ES&H Inspectors will be accompanied by a D/S representative and/or building representative. DOE-FSO may elect to accompany the inspectors for select buildings.

Violation of life, health, safety orders, codes, or acceptable practices will be recorded by the inspection team. If the violation can be immediately corrected, then a comment on the correction will be annotated next to the finding.

Pictures will be taken of violations of life, health, or safety orders, codes or of acceptable practices. Pictures will be provided to the D/S, electronically, upon request.

The ESH inspectors will use the previous HPR inspection report to spot-check earlier findings and their status.

At the conclusion of the inspection, the Inspector will debrief all parties as to items found during the inspection which will require attention.

Reporting

The ESH-SEP Emergency Planner will include the addition of the findings and recommendations of the recent inspection to the Facilities File. Items will be annotated with the year of inspection followed by the sequence number of the item, (i.e. 06-01 inspection year 2006 and the first item recorded).

Information no longer valid will be struck through and current information included. If a finding is removed, the date of removal and reason for removal will precede the finding, which will now be struck through.

Processing of the Inspection Report

Within 48 hours of the date of the inspection, an Inspection Report will be electronically transmitted to the division/section SSO for action and to the D/S Head.

This report will identify only the current finding, recommendations and if there are any open findings from the last inspection with a "Respond by (date)".

D/S will be afforded four (4) weeks to take corrective action on the deficiencies and report the same back to the Emergency Planner.

In the event there is significant change to the facility, contents or its mission, ES&H will provide to the D/S a copy of the Facility File (less all historical references), including the current findings and recommendations for updating.

Upon receiving the Inspection Report, the affected D/S will:

1. Review each finding and provide an action as to how this item is being addressed. Valid responses are: Garbage can emptied; Work Order 12344 issued. A response from the division/section stating that the "Problem corrected" means the problem has been abated or corrected and the issue no longer exists. A response of "Problem corrected" because a work order has been issued is not acceptable, as the problem is still there, the appropriate response would be "Work Order 123 issued."
2. If it is noted during the inspection that there has been significant changes to: facility description- interior furnishing and decorations, occupancy characteristics, property value, alarm, detection and suppression systems, interior and exterior features. The ESH will provide a copy of the Facility File, less any of the historical strikethroughs, to the Division/Section for updating. Estimated building values maybe obtained from FESS and the Real Property Value (RPV) spreadsheet. Contents of the building will be made on the "best guess" on the part of the D/S; these values combined with the provided formula will determine the values and potential dollar loss. This update also includes updating the status any previous finding that was pending since the last inspection.
3. Division/Section corrections and update comments are to be added to the report using a contrasting color. The document will be returned electronically, using the file name as was originally sent with the addition of the division/section author's initials as the first two characters of the file name.
4. The SSO may request additional time from ESH to complete this report.
5. If this process involves the Facilities File, the D/S will review and update the contents of the document in addition to addressing the current issues.

Upon receiving the inspection report from the D/S the ESH Emergency Planner will:

- 1) Will review the document for content and corrective actions. D/S responses will be placed into the facility file for historical tracking. The document be labeled as FINAL REPORT and will be published in a PDF format and retained in the ESH HPR files under the Div/Sec and Year inspection was completed.
- 2) If there are any findings that have not been addressed, the SSO will be contacted for a risk code value to each open finding.
- 3) All items which were identified during the inspection, ESH will enter these into ESHTRK. Items that have been addressed either by physical correction or the assignment of a work order number will be automatically closed.
- 4) Items in which action is pending (i.e. work order to be issued or for other reasons) will be placed into ESHTRK with a corresponding risk rating. Code rating of 1 or 2 will cause immediate notification to the Directorate and will require a formal causal analysis (see 1040.2). Findings assigned a risk code of 3, 4 or 5 do not require causal analysis.
- 5) All ESHTRK items will be assigned to the division/section head for action, they may choose to reassign responsibility for the action to someone else.

If the report is not received from the D/S within the stated period the ESH Emergency Planner will:

- 1) Mark the report as final with a cover note that no response had been received from the D/S.
- 2) All findings will be placed into ESHTRK with an appropriate Risk Code and assigned to the D/S head for action.
- 3) Report will be transmitted to the D/S Head and SSO.

ESHTRK Tracking

ESH will input all Inspection Report findings into ESHTRK. The Inspection Report will be used as the support document for the ESHTRK entries.

The Subject line will begin with HPR followed by Div/Sec, FIMS number and the Building Name (e.g. HPR FE FIMS 203 CUB).

For findings that have been corrected (immediate correction, work order 123 issued, etc) the item will be closed out.

For items in which future or pending corrective action is planned or that have not been addressed, the finding will be entered with an appropriate risk code. These findings will be assigned to the D/S head for action. The D/S Head may reassign this to someone else in their organization for action.

If the item is found to be the responsibility of another Div/Sec, ESH can be requested to reassign the finding as appropriate.

All inspection findings will be tracked through ESHTRK for trending analysis patterns, at a minimum of quarterly.

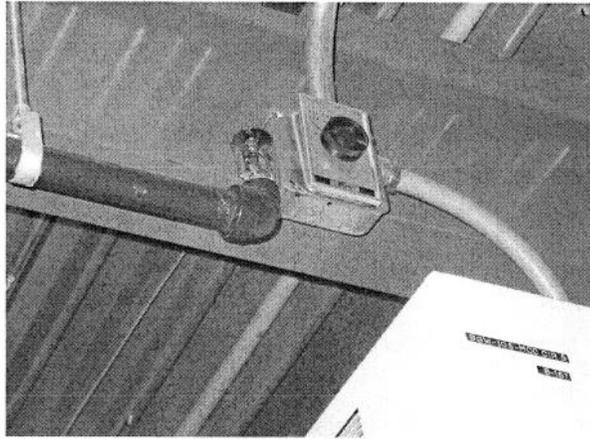
Maintenance of Records

Facility Reports will be maintained in a PDF format on the ES&H Shared Volume/Fire Protection/Active Inspections, in the appropriate Division/Section CY folder.

Division/section responses will be filed by CY under a separate cover from the final report. Working documents will be filed under a third separate cover. The Inspection Report will serve as the support document to any ESHTRK entries.

Photographs

Photographs will be maintained on the ESH HSTG Server by year and D/S. Each picture will be named with the D/S name, building name, and the nature of problem. Division/Section may request copies of pictures taken during the inspection. Only pictures of the requestor's D/S will be released.



AD- BGW-sprinkler.jpg

Translates to Accelerator Division, Booster Gallery West issue with the sprinkler head.

Validation of Corrective Actions

All reported corrective actions are subject to an unannounced inspection/validation by the ES&H Fire Protection Engineer for quality assurance purposes.

APPENDIX A NEXUS REPORT OUTLINE

INTRODUCTION

Beginning in 1992, Fermilab contracted to have all real property accessed to determine the degree of compliance with the applicable fire and life safety standards. The intent of this report is to outline the obvious deficiencies or deviations from the codes and standards.

STANDARDS AND CODES

At the time of the original inspection the applicable portions of the following documents were used to originally evaluate the facility:

- a. DOE 6430.1A General Design (4/6/89)
- b. DOE Fire Protection Resource Manual
- c. DOE 5480.7A, Fire Protection (1/93)
- d. NFPA codes and standards including NFPA 101-1991 and NFPA 101M-1988. NFPA codes and standards available on 12/31/93 were used.
- e. The 1991 editions of the Uniform Building Code and Uniform Fire Code. The editions of the Uniform Building Code which the buildings were originally built under.
- f. Factory Mutual Loss Prevention Data Sheets. Data sheets available at Fermilab were used.

REPORT OUTLINE

1.0 PURPOSE

2.0 STANDARDS AND CODES

- 3.0 EVALUATION INPUT DATA
- 4.0 FACILITY DESCRIPTION
 - 4.1 CONSTRUCTION
 - 4.2 INTERIOR FINISH, FURNISHINGS AND DECORATIONS
 - 4.3 OCCUPANCY CHARACTERISTICS
 - 4.4 FACILITY CRITICALITY
 - 4.5 FACILITY VALUE
 - 4.6 MPFL AND MCFL
- 5.0 ALARM AND DETECTION SYSTEM DESCRIPTION
- 6.0 FIRE SUPPRESSION SYSTEM DESCRIPTION
 - 6.1 EXTERIOR FEATURES
 - 6.2 INTERIOR FEATURES
- 7.0 FIRE HAZARD DESCRIPTION AND EVALUATION
 - 7.1 EXTERIOR HAZARD DESCRIPTION AND EVALUATION
 - 7.2 INTERIOR HAZARD DESCRIPTION AND EVALUATION
- 8.0 LIFE SAFETY EVALUATION
 - 8.1 OCCUPANCY SEPARATION
 - 8.2 OCCUPANT LOAD
 - 8.3 NUMBER AND ARRANGEMENT OF EXITS
 - 8.4 EXIT CAPACITY
 - 8.5 TRAVEL DISTANCE, DEAD ENDS AND COMMON PATH OF TRAVEL
 - 8.6 EGRESS FIRE BARRIER EVALUATION
 - 8.7 EXIT MARKING AND LIGHTING
 - 8.8 EMERGENCY PLANNING
- 9.0 FINDINGS
 - Items identified as a result of an HPR inspection which will require correction.
- 10.0 RECOMMENDATIONS

Items identified as a result of an HPR inspection that may be implemented by the division/section.