

**Appendix D-3**  
**Fire Protection**  
**Advanced-Level Training**

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## Introduction

Completion of the Fire Protection Inspector Technical Proficiency Training and Qualification Journal (C-7) is strongly recommended before beginning activities or courses in this advanced-level training. You may complete the General Proficiency requirements contained in Appendix B and the Technical Proficiency requirements in C-7 together with requirements in this training standard. The courses and the OJT activity listed in this standard are voluntary and are not required for certification as a fire protection inspector.

## Objectives of Advanced-Level Training

The objective of this new training standard is to provide advanced-level training in fire protection and to assist inspectors in preparation to evaluate reactor facilities that have transitioned to National Fire Protection Association (NFPA) 805 "Performance-Based Standard for Fire protection for Light Water Reactor Electric Generating Plants."

## Required Training Courses:

The first four courses listed below give instruction and training in the inspection of plants that have transitioned to NFPA 805. The remaining courses give additional training in classical fire protection.

1. NRC/EPRI NUREG/CR-6850 Training. All three modules
  - Module 1 PRA/HRA
  - Module 2 Electrical Analysis
  - Module 3 Fire Analysis
2. System Analysis Program for Hands-On Integrated Reliability Evaluation (SAPHIRE) Basics (P-201)
3. System Modeling Techniques for PRA (P-200)
4. Human Reliability Assessment (P-203)
5. NFPA National Fire Alarm Code Seminar (NFPA 72)
6. NFPA Installation of Sprinkler Systems Seminar (NFPA 13)
7. NFPA Fire Pumps Seminar (NFPA 20)
8. NFPA Sprinkler Hydraulics Seminar
9. NFPA Inspection, Testing and Maintenance of Water Based Fire Protection Systems Seminar (NFPA 25)
10. NFPA e-Learning Series "Fire Stopping Series" Introduces the essential of fire stopping and the applicable codes and criteria. Covers fire stopping materials, system selection, installation, and inspection.

Schedule of classes for the NFPA Seminars can be found at <http://www.nfpa.org/images/ProDevCatalog.pdf>

Schedule of classes for the NFPA e-learning series can be found at <https://nfpa.nextlms.com/lms/index.php?mode=coursecatalog&submode=production>

Other online Fire Protection courses are available at:

University of Maryland

<http://www.fpe.umd.edu/grad/grad-online-learning.html>

Oklahoma State University

<http://ce.ceat.okstate.edu/currentcourses.asp>

Worcester Polytechnic Institute

<http://cpe.wpi.edu/Individual/Distance/fire.html>

**Fire Protection Inspector On-the-Job Activity**

## Advanced Fire Protection Training

**TOPIC:** (OJT-FP-1) Fire Protection Inspection

**PURPOSE:** The purpose of this activity is to acquaint you with the fire protection inspection process by having you participate in an inspection of a reactor facility that has transitioned to NFPA 805.

### COMPETENCY

**AREAS:** TECHNICAL AREA EXPERTISE

**LEVEL OF EFFORT:** 40 hours

### EVALUATION

**CRITERIA:** At the completion of this activity, you should understand the regional fire protection inspection process for a plant that has transitioned to NFPA 805.

1. Explain the objectives of the Triennial Fire Protection Inspection for a plant that has transitioned to NFPA 805.
2. Explain the difference between the Triennial Fire Protection Inspection for a plant that has transitioned to NFPA 805 compared to one that has not transitioned.
3. Explain the regulatory requirements and licensing basis against which post fire safe shutdown capability is assessed.

**TASKS:** The activities listed below shall be performed under the guidance of a subject matter expert.

1. Accompany a team of regional inspectors during a fire protection inspection at a plant that has transitioned to NFPA 805.
2. Discuss the evaluation criteria with a subject matter expert.
3. Prior to the inspection, review any documents the team leader deems necessary.
4. Participate with the inspection team leader and the regional senior risk analyst in the selection process to determine which fire areas or zones are to be inspected in this particular inspection.
5. Review NFPA 805 "Performance Based Standard for Fire Protection for Light Water Reactor Electric generating Plants" 2001 Edition.
6. Any other task given by the inspection team leader.

**DOCUMENTATION:** Fire Protection Inspector Advanced-Level Signature Card OJT-FP-1.

## Fire Protection Inspector Advanced-Level Signature Card

| Inspector Name: _____  | Employee Initials/<br>Date | Supervisor's Signature/<br>Date |
|--|----------------------------|---------------------------------|
| <b>Training Courses for Fire Protection Inspector</b>  |                            |                                 |
| NRC/EPRI NUREG/CR-6850 Training. All three modules<br>Module 1 PRA/HRA<br>Module 2 Electrical Analysis<br>Module 3 Fire Analysis |                            |                                 |
| System Analysis Program for Hands-On Integrated Reliability Evaluation (SAPHIRE) Basics (P-201)                                  |                            |                                 |
| System Modeling Techniques for PRA (P-200)   |                            |                                 |
| Human Reliability Assessment (P-203)   |                            |                                 |
| National Fire Protection Association National Fire Alarm Code Seminar (NFPA 72)  |                            |                                 |
| National Fire Protection Association Installation of Sprinkler Systems Seminar (NFPA 13)   |                            |                                 |
| National Fire Protection Association Fire Pumps Seminar (NFPA 20)  |                            |                                 |
| NFPA Sprinkler Hydraulics Seminar  |                            |                                 |
| NFPA Inspection, Testing and Maintenance of Water Based Fire Protection Systems (NFPA 25)  |                            |                                 |
| NFPA e-Learning Series "Fire Stopping Series"  |                            |                                 |
| <b>On-the-Job Training Activity</b>  |                            |                                 |
| OJT-FP-1 Participate in a Regional Fire Protection Inspection of a plant that has transitioned to NFPA 805                       |                            |                                 |

Supervisor's signature indicates successful completion of all required courses and activities listed in this training standard.

Supervisor's Signature \_\_\_\_\_ Date: \_\_\_\_\_

## Form 1: Fire Protection Inspector Advanced-Level Equivalency Justification

|  |   |
|--|---|
| <b>Inspector Name:</b> _____   | Identify equivalent training and experience for which the inspector is to be given credit |
| <b>Training Courses for Fire Protection Inspector</b>  |   |
| NRC/EPRI NUREG/CR-6850 Training. All three modules<br>Module 1 PRA/HRA<br>Module 2 Electrical Analysis<br>Module 3 Fire Analysis |   |
| System Analysis Program for Hands-On Integrated Reliability Evaluation (SAPHIRE) Basics (P-201)                                  |   |
| System Modeling Techniques for PRA (P-200)   |   |
| Human Reliability Assessment (P-203)   |   |
| National Fire Protection Association National Fire Alarm Code Seminar (NFPA 72)  |   |
| National Fire Protection Association Installation of Sprinkler Systems Seminar (NFPA 13)   |   |
| National Fire Protection Association Fire Pumps Seminar (NFPA 20)  |   |
| NFPA Sprinkler Hydraulics Seminar  |   |
| NFPA Inspection, Testing and Maintenance of Water Based Fire Protection Systems (NFPA 25)  |   |
| NFPA e-Learning Series "Fire Stopping Series"  |   |
| <b>On-the-Job Training Activity</b>  |   |
| OJT-FP-1 Participate in a Regional Fire Protection Inspection of a plant that has Transitioned to NFPA 805                       |   |

Supervisor's signature indicates successful completion of all required courses and activities listed in this training standard.

Supervisor's Signature \_\_\_\_\_ Date \_\_\_\_\_



Revision History Sheet for IMC 1245 Appendix D-3

| Commitment Tracking Number | Issue Date            | Description of Change  | Training Needed | Training Completion Date | Comment Resolution Accession Number |
|----------------------------|-----------------------|--|-----------------|--------------------------|-------------------------------------|
| N/A                        | 07/08/09<br>CN-09-017 | Initial issuance.<br>Completed 4 year<br>historical CN review. | None            | N/A                      | ML091590710                         |
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