NMPC-FPQAP-1
REVISION 03

FIRE PROTECTION QUALITY ASSURANCE PROGRAM NINE MILE POINT

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NIAGARA MOHAWK POWER CORPORATION

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Niagara Mohawk Power Corporation
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NIAGARA MOHAWK POWER CORPORATION

FIRE PROTECTION
QUALITY ASSURANCE PROGRAM
NINE MILE POINT

Summary of Changes

Refer to Page 5

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TABLE OF CONTENTS

INTRODUCTION AND SCOPE

The Niagara Mohawk Power Corporation Nuclear Division Fire Protection Program is comprised of the components, procedures and personnel utilized in carrying out all activities of fire protection associated with the nuclear power plants, including activities and systems such as fire prevention, detection, annunciation, control, confinement, suppression, smoke removal, extinguishment, administrative procedures, fire department organization, inspection and maintenance, training, quality assurance, testing and control of combustibles.

This Fire Protection Quality Assurance Program (FPQAP) fulfills the Quality Assurance criteria discussed in Branch Technical Position APCSB 9.5-1, Appendix A, dated August 23, 1976, ensuring that the guidelines for design, procurement, installation and testing, and the administrative controls for the fire protection systems for safety-related areas of the plant are satisfied. It applies to organizations involved in performing and monitoring these activities.

In the event of conflict between this document and related commitments contained in the NMPC Quality Assurance Topical Report (QATR-1) or the Nine Mile Point Unit 1 UFSAR and Unit 2 USAR, the latter shall take precedence.

PURPOSE: The purpose of this policy is to summarize the Company's position governing Quality Assurance responsibilities and accountabilities.

POLICY: The Company policy regarding Quality Assurance matters is that:

1. Organizations with quality-affecting responsibilities shall be structured, managed and operated in compliance with approved Quality Assurance Programs, procedures and instructions in direct support of generation, transmission and distribution projects and operations to achieve the following objectives:

   - To strive to perform assigned work correctly the first time.
   - To provide facilities which are designed, constructed, tested and operated to high standards of excellence, with high assurance against failure or malfunctions, and without undue risks to the health and safety of the public.
   - To ensure early and timely identification and resolution of actual and potential problem areas in design, procurement, construction, testing, operations, maintenance and modification of facilities.
   - To comply effectively with government regulations and established NMPC policies and procedures, applying a systematic, disciplined and uniformed approach to Quality Assurance.

2. Accountability for the quality of generation, transmission and distribution structures, systems, components and services rests with the organizations and persons performing the quality attaining functions of design, construction and operation.

3. Accountability for determining that the generation, transmission and distribution structures, systems, components and services do, in fact, meet the stated requirements rests with the organizations and persons performing quality verification functions, such as design review, document review, inspection, surveillance and audits.

AUTHORIZED: James A. Perry — QA. — 6/17/88
Signature — Department — Date

APPROVED: E. M. Edris — 6/18/88
President

The following table reflects the changes made to Niagara Mohawk's Fire Protection Quality Assurance Plan (FPQAP-1) and incorporated into Revision 3.

PAGE	SECTION	SUMMARY OF THE CHANGE	REASON FOR CHANGE/BASIS
3	Introduction and Scope	Revised first paragraph.	Clarified the first paragraph to fully describe the Fire Protection Program Scope.
3	Introduction and Scope	Removed references to "Safety-Related" portions of Fire Protection Systems	No systems are designated "Safety-Related".
9	1.0	Changed section title from "Organization" to "Overview"	More correctly describes this section.
9	1.1	Added "Fire Control" and "Smoke Removal" and Replaced "housekeeping" with "Control of Combustibles and Ignition Sources"	Expanded program definition.
9, 10	1.2	Revised section title from "Implementation" to "Organization" and revised to reflect only the main administrative structure of Niagara Mohawk's fire protection program.	The fire protection programs implementation responsibilities are delineated in implementing procedures as listed in section 1.3 Implementation.
11	Figure 1.1	Revised organization and section numbers.	Reflects present NMPC Nuclear organization, responsibilities and single points of accountability.
12	1.3	New "Implementation" section to reference implementing procedures.	Referenced implementing procedures
12	2.0	Deleted paragraph 2.3. Transferred information to paragraph 1.3	Eliminates redundancy.
12	2.1	Deleted, "uses a graded approach to apply appropriate criteria from 10CFR50, Appendix B, to Fire Protection systems or activities." Added,"applies the criteria from attachment 6, "Quality Assurance,"to the Nuclear Regulatory Commission's June 14,1977, transmittal,"Nuclear Plant Fire Protection Functional Responsibilities,Administrative Controls and Quality Assurance" and NRC Generic Letter 82-21."	Clarified source documents of requirements for the FPQAP.

PAGE	SECTION	SUMMARY OF THE CHANGE	REASON FOR CHANGE/BASIS
13	3.2	Added "Applicable work documents invoke design documents as necessary to ensure proper fabrication, inspection and testing."	Revised paragraph 3.2 Design Information to clarify use of design documents as inputs to work documents.
13	3.5	Deleted "under the direction and guidance of a Fire Protection Engineer (qualified) and Quality Assurance Personnel"	Implementing procedures dictate the review requirements and the level of design inputs required.
13	4.0	Rewrote section 4.0, Added "such as Underwriters' Laboratories or Factory Mutual, will be procured with the required listing mark.", Added "General use items not procured specifically for fire protection applications may be used in fire protection applications. This includes items such as standard hardware items and gaskets.", Added "Technical changes to procurement documents are processed in a manner commensurate with that used for the original."	Clarified procurement document control.
14	5.0	Deleted "by personnel designated by the relevant document."	Specified in implementing procedures.
14	6.0	Deleted the requirement for Fire Protection Qualified Contractors List (FPQCL),and inserted language which served as the basis for the FPQCL.	This allows a broader base of suppliers,while maintaining requirements for a listing mark (U.L. or F.M.)or some method of supplier qualification or source surveillance.
14	6.0	Incorporated section" 7.0 Material Control" into section "6.0 Control of Purchased Material, Equipment and Services".	Consolidation of sections.
15	7.0	Renumbered section from 8.0 to "7.0 Inspection and Surveillance"	Consolidation of sections.
15	7.1	Deleted general information and gave more details of scope of inspections,surveillances,and overcheck inspections.	The general information is contained in implementing procedures.

PAGE	SECTION	SUMMARY OF THE CHANGE	REASON FOR CHANGE/BASIS
15	7.2	Deleted ", except as noted in Paragraph 8.1 above, relating to Preventative Maintenance and Operational Inspections/Tests."	These are covered within specific implementing procedures for preventative maintenance.
16	7.4	Deleted "Quality Assurance/Quality Control" and "overcheck inspections and NDE" Added "inspection and or surveillance activities"	Requires personnel to meet QATR-1 qualification criteria.
		Deleted Figure 8-1.	Inspection and Surveillance responsibilities are specified by implementing procedures.
16	8.0	Renumbered section from 9.0 to "8.0 Test and Test Control"	
16	8.1	Deleted last sentence.	QA performs audits and surveillance of all areas.
16	9.0	Renumbered section from 11.0 to "9.0 Inspection, Test and Operating Status"	Consolidation of sections.
16	10.0	Deleted "Inspection." Added "Surveillance" and "Results."	Clarification
17	11.0	Renumbered section from 12.0 to "11.0 Nonconforming Materials, Parts or Components/Corrective Action"	Consolidation of sections.
17	11.1	Added "and to assure that corrective actions are taken"	Incorporates section 13.0 from Revision 2.
17	11.3	Deleted "disposition." Added "Corrective action taken."	Incorporates section 13.0 from Revision 2.
17	11.0	Incorporated section 13.0 Corrective Action into section "11.0 Nonconforming Materials, Parts or Components/Corrective Action"	Consolidation of sections.
17	12.0	Renumbered section from 14.0 to "12.0 Records"	Consolidation of sections.
17	12.2	Deleted "nonconformance and corrective action reports" Added "Deviation/Event Reports"	Change combines nonconformances and corrective actions into one reporting system.

PAGE	SECTION	SUMMARY OF THE CHANGE	REASON FOR CHANGE/BASIS
17	13.0	Renumbered section from 15.0 to "13.0" and revised title from audits to "QA Audit Program."	Clarification
18	13.2	Deleted the first paragraph of 15.2 that included the three bullets showing audit program frequencies. Added "Fire Protection Program Audits are performed per the requirements of the applicable Technical Specifications: Unit-1 6.5.3.8.g, 6.13.1 and 6.13.2 and Unit-2 6.5.3.8.k, 6.5.3.8.l, and 6.5.3.8.m."	These frequencies are defined in applicable Technical Specification sections.
18	13.3	Added "and the Safety Review and Audit Board (SRAB)."	The audits are performed for the Safety Review and Audit Board.
		Deleted Attachment 1	Incorporated into section 1.1.
		Deleted Attachment 2	Section 6 was revised to delete the FPQCL and incorporated the root requirements for the list.
		Changed "shall be" to "is" or "are" throughout.	Better wording for program level document. No change in intent.

1.0 OVERVIEW

1.1 Policy

Niagara Mohawk Power Corporation (NMPC), Nuclear Strategic Business Unit, is responsible for establishing and implementing a Fire Protection Program for Nine Mile Point Nuclear Station. This program encompasses the following:

a. Fire Prevention

b. Fire Detection and Annunciation

c. Fire Control

d. Fire Confinement

e. Fire Suppression

f. Fire Extinguishment

g. Smoke Removal

h. Administrative Procedures

i. Fire Brigade Organization

j. Inspection, Maintenance and Modifications

k. Testing

l. Training

m. Control of Combustibles and Ignition Sources

n. Quality Assurance

o. System and Facility Design

1.2 Organization

1.2.1 Vice President, Nuclear Generation has the overall responsibility for the Fire Protection Program at Nine Mile Point Nuclear Station.

1.2.1.1 Plant Managers ensure compliance with the Fire Protection Program including the requirements for administrative controls, Unit Fire Department staffing, personnel training and the operation, maintenance and surveillance of fire protection systems and components.

1.2.2 Vice President, Nuclear Engineering assigns responsible engineers to perform the Appendix R and Fire Protection reviews of input for impact determination to the Fire Protection Program, including Fire Protection Program Manager.

1.2.2.1 Fire Protection Program Manager provides organization, direction and guidance concerning the implementation of the Fire Protection Program and the approach to be taken regarding fire protection issues as they relate to the overall performance and adequacy of the Nuclear Fire Protection Program.

Maintains cognizance of regulatory positions and trends, determine adequacy of programs to satisfy regulatory and program requirements and commitments and develop programs to resolve deficiencies, insure auditability and implement corrective actions to maintain acceptable levels of fire protection within the nuclear facilities.

1.2.3 Vice President, Nuclear Quality Assurance has responsibility for conducting QA surveillances and audits of Fire Protection Program implementation and the maintenance and update of this Fire Protection Quality Assurance Program document.

1.2.4 Vice President, Nuclear Support has responsibility for providing licensing support for Fire Protection issues, addressing fire incidents in Emergency Preparedness Procedures, and developing and implementing the Fire Protection training programs necessary to satisfy the requirements of the Fire Protection Program, including coordination of required Fire Brigade practice drills.

1.2.5 The Safety Review and Audit Board is responsible for providing an oversight review of the adequacy of the Fire Protection Program.

1.2.6 The Manager, Meter and Laboratory, reports to the Director, System Electric Operations. The staff includes Supervisor, Standards Laboratory, who is responsible for maintaining a facility for calibrating reference standards and for calibration and maintenance of portable measuring and testing equipment.

1.2.7 The Risk Management Department has responsibility for assuring adequate fire protection for company facilities and fire personnel training; to verify appropriate measures are taken to prevent or limit losses from any perils resulting from Nuclear Operations; and for all matters relating to insurance of our facilities.

FIGURE 1.1

FIRE PROTECTION QUALITY ASSURANCE PROGRAM RESPONSIBILITY MATRIX

REQUIREMENT	NMPC DEPARTMENT						
Branch Technical Position 9.5-1 Appendix A	FPQAP Section	Nuclear Generation	Nuclear Engineering	Nuclear Support	Nuclear Quality Assurance	Meter and Laboratory	Risk Management
Organization	1.0	P	S	S	S	S	S
Quality Assurance Program	2.0	S	S	S	P	S	S
Design	3.0	S	P	S	S	S	S
Procurement Document Control	4.0	S	S	P	S	S	S
Instructions, Procedures & Drawings	5.0	P	S	S	S	S	S
Control of Purchased Material, Equipment & Services	6.0	S	S	P	S	S	S
Inspection and Surveillance	7.0	P	S	S	S	S	S
Test & Test Control	8.0	P	S	S	S	S	S
Inspection, Test & Operating Status	9.0	P	S	S	S	S	S
Measuring and Test Equipment	10.0	P	S	S	S	S	S
Nonconforming Material, Parts or Components/Corrective Action	11.0	P	S	S	S	S	S
Records	12.0	P	P	S	S	S	S
QA Audit Program	13.0	S	S	S	P	S	S

Procedure Coverage Required

P - Primary Responsibility S - Support Responsibility

1.3 Implementation

The Fire Protection Program is implemented in accordance with the requirements and responsibilities as delineated in Figure 1-1 and in the following documents:

a. Nuclear Division Directives

b. Nuclear Interface Procedures

c. Nuclear Engineering Procedures

d. Generation Administrative Procedures

e. Nuclear Support Procedures

f. Nuclear Quality Assurance Procedures

g. Meter and Laboratory Procedures

2.0 QUALITY ASSURANCE PROGRAM

2.1 The Fire Protection Quality Assurance Program (FPQAP) under the administration of the NMPC NQA organization applies the criteria from Branch Technical Position APCSB 9.5-1, Appendix A, dated August 23, 1976.

2.2 The FPQAP includes policies, procedures and other documents that implement the provisions of this document. Fire Protection activities are performed under suitably controlled conditions. These conditions include the preparation and use of procedures, use of appropriate equipment, maintenance of proper environmental conditions, assignment of appropriately qualified personnel and assurance that applicable requirements have been met.

3.0 DESIGN CONTROL

3.1 General

Design control for fire protection systems, equipment and components that are not classified as safety-related are performed in accordance with this document.

3.2 Design Information

Design information (such as drawings, specifications and standards) is maintained to ensure that items are designed to the applicable requirements. Applicable work documents invoke design documents as necessary to ensure proper fabrication, inspection and testing.

3.3 Modification Control

Design document changes, including field changes and design deviations, are subject to the same level of control, review and approval that was applied to the original design document. Modifications are performed in accordance with the current plant modification program.

3.4 Design Documents

Quality standards are specified in the design documents. Appropriate fire protection codes and standards are incorporated in the design documents. Deviations and changes from these design documents are controlled and require approval of the specifying organization.

3.5 New Designs and Plant Modifications

New designs and plant modifications are controlled and reviewed by qualified personnel to assure inclusion of appropriate fire protection requirements. These reviews are performed by selected personnel in accordance with implementing procedures.

4.0 PROCUREMENT DOCUMENT CONTROL

Items are procured as specified in design documents. Items specified as requiring a listing by an industry organization, such as Underwriters' Laboratories or Factory Mutual, will be procured with the required listing mark. Design, test, inspections and documentation requirements are included in procurement documents as necessary to assure that the item will perform its intended function. Personnel preparing procurement requirements incorporate these requirements. Input from a fire protection engineer is obtained, as necessary, to accurately define the requirements.

Technical changes to procurement documents are processed in a manner commensurate with that used for the original.

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

Inspections, tests, administrative controls, fire drills and training required by the Fire Protection Program are accomplished in accordance with approved instructions, procedures or drawings.

6.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

Assurance that an item will perform its intended function is obtained using one or a combination of the following methods:

a. When an item is listed by an industry recognized testing laboratory, it is verified that the appropriate label is applied.

b. Supplier qualification may be performed to establish that a supplier has the necessary controls in place to assure the items comply with procurement requirements.

c. Source surveillance/inspection and/or receipt inspection is performed on selected attributes which provide confidence that the item is satisfactory.

d. Post-installation testing of an item for critical characteristics which provide confidence that the item will perform its intended function.

General use items not procured specifically for fire protection applications may be used in fire protection applications. This includes items such as standard hardware items and gaskets.

The attributes which require verification are selected by an engineering evaluation. Sample plans may be used which are commensurate with the application of the item.

The above functions are performed in accordance with procedures which govern these activities.

After acceptance, items are controlled to prevent degradation during storage. Where specific applications are identified, controls are used to prevent misapplication.

7.0 INSPECTION AND SURVEILLANCE

7.1 General Requirements

A program for inspection and surveillance of activities affecting fire protection is established to verify conformance to documented installation drawings and test procedures. The program includes inspection and surveillance of:

a. Installation, maintenance and modification of fire protection systems.

b. Emergency lighting and communication equipment.

c. Penetration seals and fire retardant coating.

d. Cable routing.

e. Fire barriers

f. Emergency breathing apparatus and auxiliary equipment.

7.2 Independence of Inspection and Surveillance Personnel

Inspection and surveillance activities are performed and documented by individuals other than those who performed the work.

7.3 Inspection and Surveillance Procedures

Inspection and surveillance procedures, instructions or checklists provide the following:

a. Identification of characteristics and activities to be inspected and surveilled.

b. Identification of the individuals or groups responsible for performing the inspection and surveillance operation.

c. Acceptance and rejection criteria.

d. A description of the method of inspection and surveillance including any special equipment necessary to perform the task.

e. Requirements for documentation of inspection and surveillance results.

f. Sampling inspection criteria.

7.4 Personnel Qualifications

Personnel performing inspection and surveillance activities shall meet applicable qualification criteria as set forth in QATR-1.

8.0 TEST AND TEST CONTROL

8.1 General

A test program is established and has been implemented to ensure that test requirements are satisfied and that systems conform to design and licensing documents, as applicable.

The tests are performed in accordance with written test procedures, at a frequency specified by the test program.

8.2 Test Results

Test results are documented, evaluated and their acceptability determined by a qualified individual or group.

9.0 INSPECTION, TEST AND OPERATING STATUS

Measures are established to provide for the identification of items that have satisfactorily passed required tests and inspections. These measures include provisions for identification by means of tags, labels, documents directly traceable to the affected items, or similar temporary markings to indicate completion of required inspections and tests. Operating status may also be indicated by any of the foregoing means, consistent with plant operating procedures.

10.0 CONTROL OF MEASURING AND TEST EQUIPMENT

Validity of inspection, surveillance and test results is assured through the use of appropriate measuring and test equipment of the range, validity and type necessary to determine conformance to requirements. At intervals established to ensure continued validity, measuring devices are verified or calibrated, if appropriate, against certified standard that have a known, valid relationship to national standards.

11.0 NONCONFORMING MATERIALS, PARTS OR COMPONENTS/CORRECTIVE ACTION

11.1 General

Conditions adverse to fire protection such as failures, malfunctions, deficiencies, deviations, defective components, uncontrolled combustible material and nonconformances are promptly identified, reported and corrected.

11.2 Identification/Control of Nonconformance

Measures are established to control materials, parts or components that do not conform to specified requirements and to assure that corrective actions are taken.

The identification (tagging or marking), documentation, segregation, review, disposition and notification to the affected organization of nonconforming materials, parts or components is procedurally controlled.

11.3 Documentation

Documentation describes the condition adverse to fire protection, the nonconforming item, and records the corrective action taken.

12.0 RECORDS

12.1 Records

Records are prepared and maintained according to procedures to furnish evidence that the criteria enumerated in this program are met for activities affecting the Fire Protection Program.

12.2 Records Control

Records are identifiable and retrievable. The records should include results of inspections, surveillances, tests, reviews and audits; Deviation/Event Reports; construction, maintenance and modification records; and certified manufacturers data, as applicable:

12.3 Record Retention

Record retention requirements are established by applicable procedures.

13.0 QA AUDIT PROGRAM

13.1 General

QA Audits are conducted and documented to verify compliance with the Fire Protection Program.

13.2 Audit Program

Fire Protection Program Audits are performed per the requirements of the applicable Technical Specifications: Unit 1, Section 6.5.3.8.g, 6.13.1 and 6.13.2 and Unit 2, Sections 6.5.3.8.k, 6.5.3.8.l and 6.5.3.8.m.

Fire protection audits may be combined during a specific audit period provided the scope of the audit clearly indicates the required audit attributes, team composition and results based on the type of audit. (Reference NRC Generic Letter 82-21, "General Scope of Fire Protection Audits and Composition and Qualification of Auditors," for guidance regarding audit team participation and audit scope).

13.3 Audit Results

Audit results are documented and reviewed with management having responsibility in the area audited and the Safety Review and Audit Board (SRAB).