

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-254/81-04; 50-265/81-04

Docket No. 50-254; 50-265

License No. DPR-29; DPR-30

Licensee: Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

Facility Name: Quad-Cities Nuclear Power Station, Units 1 and 2

Inspection At: Quad-Cities Site, Cordova, Illinois

Inspection Conducted: February 23-27, 1981

Inspectors: *J. A. Grobe*
J. A. Grobe

3/30/81

K. R. Baker
K. R. Baker

3/30/81

Approved By: *C. C. Williams*
C. C. Williams, Chief,
Plant Systems Section

3/31/81

Inspection Summary

Inspection on February 23-27, 1981 (Report No. 50-254/81-04; 50-265/81-04)

Areas Inspected: Routine, unannounced inspection to review the implementation of the licensee's housekeeping program and fire prevention/protection program including review of fire fighting equipment and systems, fire prevention and protection administrative controls and general employee, contractor and fire brigade training. The inspection involved 35 inspector-hours onsite by one NRC inspector including 0 inspector-hours onsite during offshifts.

Results: Of the three areas inspected, no apparent items of noncompliance were identified in one area; four apparent items of noncompliance were identified in two areas (open fire barrier penetration - paragraph 2; failure to follow welding procedure - paragraph 3; failure to follow radiation control procedure - paragraph 3; failure to follow housekeeping procedure - paragraph 3).

8105080457

DETAILS

1. Persons Contacted

*N. J. Kalivianakis, Plant Superintendent
*R. L. Bax, Assistant Superintendent of Maintenance - Fire Marshall
*J. R. Wunderlich, Technical Staff
*R. A. Flessner, Technical Staff
*K. J. Hansing, Lead Quality Assurance Engineer
T. B. Pettit, Maintenance Foreman - Assistant Fire Marshall
J. B. Heilman, Quality Assurance Engineer
H. K. Huisingh, Training Instructor
E. E. Cole, Training Instructor
F. J. Geiger, Training Supervisor
D. L. Gilbert, Engineering Assistant - Instrumentation
P. Skiermont, Radiation Protection Foreman
A. P. O'Horo, Rad/Chem Technician
D. G. Vanpelt, Master Electrician
*D. F. Thayer, Maintenance Staff Assistant
I. Frischkorn, Stationmen Foreman
G. J. Demos, Stationmen Foreman

*Denotes those persons in attendance at the exit interview on February 27, 1981.

2. Fire Protection Equipment and Systems

a. Manual Fire Fighting Equipment

The inspector examined the licensee's manual fire fighting equipment including selected hose and standpipe stations, fire extinguishers, self-contained breathing apparatus, protective clothing, AFFF foam and applicators and other equipment available for fire fighting. The equipment availability was reviewed using commitments contained in the Fire Protection Safety Evaluation Report (FPSER) issued July 27, 1979 with supporting licensee transmittals, the fire hazards analysis and the plant technical specifications.

(1) Areas of Inspection

(a) Procedures

<u>Number</u>	<u>Title</u>	<u>Dates</u>
QMS 100-1	Monthly Fire Inspection	
QMS 100-S1	Checklist for Procedure QMS 100-1	6/80, 11/80, 12/80
QMS 100-S2	" " " "	" " "

QMS 100-S13	" " " "	1/80, 2/80, 3/80 4/80, 5/80, 6/80, 7/80, 8/80, 9/80, 10/80, 11/80, 12/80
QMS 100-S26	" " " "	5/80, 11/80, 12/80
QMS 100-S27	" " " "	" " "
QMS 100-S28	" " " "	" " "
QMS 100-6	Annual Fire Hose Inspection	
QMS 100-S14	Checklist for Procedure QMS 100-6	10/80
QMS 100-9	Fire Hose Hydrostatic Test Procedure	
QMS 100-S19	Group B Checklist for Procedure QMS 100-9	9/80
QMS 100-15	CO ₂ Hose Reel Functional Test	
QMS 100-S24	Checklist for Procedure QMS 100-15	10/80 (Unit 1)
QOS 4100-3	Monthly Fire Protection System Inspection	
QOS 4100-S2	Checklist for Procedure QOS 4100-3	11/80, 12/80 1/81, 2/81
QRP 100-17	Self-Contained Breathing Apparatus Monthly Inspection	7/80, 8/80 9/80, 10/80 11/80, 12/80, 1/81, 2/81
	Annual Fire Extinguisher Tags	1980

(b) Plant Tours

The inspector examined manual fire fighting equipment during tours of the following areas:

Screenhouse
Unit 1 Reactor Building
Unit 2 Reactor Building
Turbine Building
Plant Yard

(2) Findings

(a) Violations

No apparent items of noncompliance were identified in this area.

(b) Fire Protection Modifications

The following modifications identified in the FPSER appear to have been satisfactorily completed:

- 3.1.6 Foam Suppression Systems: Manual Equipment
- 3.1.7 Portable Extinguishers
- 3.1.12 Protective Clothing
- 3.1.13 Air Breathing Equipment

(3) Discussion

- (a) Unresolved Item (50-254/81-04-01; 50-265/81-04-01)
 The fire hoses listed below located in the radwaste building, off gas filter building, resin solidification building, and maximum recycle area had their last hydrostatic test between five to twelve years ago. The NRC position on frequency for hydrostatic testing of interior hoses important to safety is testing on three year intervals.

<u>Hose Station Number</u>	<u>Years Overdue for Hydrostatic Test Based on 10 CFR 50 Appendix R Requirements</u>
----------------------------	--

3-1-1F-3	2
3-2-9F-3	7
3-3-11F-3	8
3-7-12F-3	3
3-7-15F-3	8
3-2-2F-22	9
3-1-1F-14	9
3-1-3F-20	2
3-2-4F-20	2

During the inspection the inspector expressed concern that the pressure boundary integrity of these hoses may be degraded. A determination of the acceptability of these hoses will be made after more information is obtained concerning licensee commitments in this area.

- (b) The inspector expressed the following concerns to the licensee either during the inspection or at the exit interview:

1. Fire hose station 2-2-43F-2 had been apparently accidentally omitted from checklist QMS 100-S19 for surveillance procedure QMS 100-9.

The licensee indicated that this station would be added to the checklist. The inspector verified that the hose station had received the required surveillance.

2. The following carbon dioxide fire extinguishers located in the plant are one year overdue for hydrostatic testing:

2-2-45-2	1-2-39-6	1-2-8-2
2-1-35-2	1-2-42-6	1-2-9-2
1-1-13-2	1-3-48-6	1-2-4-2
	2-2-42-2	

The licensee has the extinguishers scheduled for testing this year.

3. Hose station 2-4-5F-6S was partially obstructed from use by a large roll of rubber hose. The licensee indicated that obstruction would be eliminated.

b. Automatic Fire Detection, Suppression and Emergency Systems

The inspector examined the licensee's automatic fire detection, suppression and emergency systems including the fire water system, cardox system, foam system, detection system, penetration fire barriers, fire doors, and emergency lighting. These systems were reviewed using commitments and requirements in the FPSER with supporting licensee transmittals, the fire hazards analysis, and the plant technical specifications.

(1) Areas of Inspection

(a) Procedures

<u>Number</u>	<u>Title</u>	<u>Dates</u>
QMS 100-8	Semi Annual Exterior Hose Cabinet Flush and Valve Cycle Test	
QMS 100-S17	Checklist for Procedure QMS 100-8	5/80, 10/80
QMS 200-2	Semi Annual Inspection and Test of Emergency Light Power Packs	
QMS 200-S1	Checklist for Procedure QMS 200-2	7/80, 2/81
QMS 100-7	Annual Interior Fire System Flush and Valve Cycle Test	
QMS 100-S15	Checklist for Procedure QMS 100-7	11/80
QMS 100-S16	Checklist for Procedure QMS 100-7	11/80
QMS 100-10	Annual Sprinkler Header and Nozzle Inspection	
QMS 100-S21	Checklist for Procedure QMS 100-10	3/80
QMS 100-16	Annual Transformer Deluge Systems Flush	
QMS 100-S25	Checklist for Procedure QMS 100-16	7/80, 8/80, 10/80
QMS 100-17	Fire System Flow Test	
QMS 100-S3	Checklist for Procedure QMS 100-	8/80
QMS 100-18	Sprinkler Air Flow Test	8/80
QMS 100-12	Deluge Sprinkler System Functional Test	
QMS 100-S5	Checklist for Procedure QMS 100-12	10/80 (Unit 1)
QMS 100-13	Wet Pipe Sprinkler System Functional Test	
QMS 100-S6	Checklist for Procedure QMS 100-13	10/80 (Unit 1)

<u>Number</u>	<u>Title</u>	<u>Date</u>
QMS 100-11	Diesel Fire Pump Battery Inspection	
QMS 100-S22	Checklist for Procedure QMS 100-11	10/80
QMS 100-14	Diesel Fire Pump Inspection	
QMS 100-S23	Checklist for Procedure QMS 100-14	10/80
QOS 4100-1	Monthly Diesel Fire Pump Test	
QOS 4100-S1	Checklist for Procedure QOS 4100-1	10/80, 11/80, 12/80, 1/81
QOS 4100-2	Annual Water and Sprinkler System Valve Operability	
QOS 4100-S12	Checklist for Procedure QOS 4100-2	5/79, 10/80
QOS 4100-4	Monthly Fire Suppression Valve Position Inspection	
QOS 4100-S3	Checklist for Procedure QOS 4100-4	3/80, 4/80, 5/80, 6/80, 7/80, 8/80, 9/80, 10/80, 11/80, 12/80, 1/81
QOS 4100-5	Fire Protection Weekly Inspection	
QOS 4100-S4	Checklist for Procedure QOS 4100-5	10/80 - 1/81 (weekly)
QOS 4100-6	Fire Suppression Water System Functional Test	
QOS 4100-S10	Checklist for Procedure QOS 4100-6	10/80
QOS 4100-7	Diesel Fire Pump Capacity Test	10/80
QTS 170-1	Surveillance of Penetration Fire Stops	
QTS 170-S1	Checklist for Procedure QTS 170-1	1978, 1979
QIS 56-1	Records Storage Building Semi Annual Fire Inspection	
QIS 56-S1	Checklist for Procedure QIS 56-1	4/80, 10/80
QIS 57-1	Cable Spreading Room/HVAC Fire Protection Surveillance Procedure	
QIS 57-S1	Checklist for Procedure QIS 57-1	4/80, 10/80
QIS 57-S2	" " " "	" "
QIS 57-S3	" " " "	" "
QIS 57-S4	" " " "	" "
QIS 57-S5	Checklist for Procedure QIS 57-1	4/80, 10/80
QIS 57-S6	" " " "	" "
QIS 57-S7	" " " "	" "
QIS 58-1	Standby Diesel Generator Cardox Fire Protection Test Procedure - Semi Annual	
QIS 58-S1	Checklist for Procedure QIS 58-1	4/80, 10/80
QIS 58-S2	" " " "	" "
QIS 58-S3	" " " "	" "
QIS 59-1	Standby Diesel Generator Cardox Fire Protection Test Procedure - Outage	
QIS 59-S1	Checklist for Procedure QIS 59-1	10/80 (Unit 1)
QIS 59-S2	" " " "	10/80 (Unit 1)
QIS 59-S3	" " " "	10/80 (Unit 1)

(b) Plant Tours

The inspector examined automatic fire detection, suppression, and emergency systems during tours of the following areas:

Screenhouse
Unit 1 Reactor Building
Unit 2 Reactor Building
Turbine Building

(2) Findings

(a) Violations

Noncompliance (50-254/81-04-02; 50-265/81-04-02)

Technical Specification 3.12.F.1 states:

"All penetration fire barriers protecting safety related areas shall be intact except as stated in Specification 3.12.F.2."

Technical Specification 3.12.F.2 states:

"With one or more penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within one hour if the area on either side of the affected penetration contains equipment required to be operable."

Contrary to the above, during plant tours, the inspector observed one penetration fire barrier which was not intact with no apparent fire watch in the area.

A penetration in the three-hour rated fire barrier between the Unit 1 and Unit 2 Reactor Buildings on the 595' level above the fire door was open and unattended.

(b) Fire Protection Modifications

The following modification identified in the FPSER appears to have been satisfactorily completed:

3.1.3 Yard Hydrants: Semi Annual Surveillance

(3) Discussion

(a) Unresolved Item (50-254/81-04-03; 50-265/81-04-03)

The inspector observed apparent breaches in the three hour rated fire barrier separating the Unit 1 and 2 Cable Tunnels from the Auxiliary Electric Equipment

Room and the Turbine Building 595' level. These breaches were various unrated personnel hatches for the tunnels that were open and unsupervised and an equipment penetration, covered by unrated metal floor plates which had been partially removed.

During the inspection, the inspector expressed concern that the fire barrier may be degraded by these penetrations. A determination of the adequacy of this barrier will be made after more information is obtained.

(b) The inspector expressed the following concerns to the licensee either during the inspection or at the exit interview:

1. The post indicator isolation valve on the main floor in the Turbine Building for the hose and standpipe stations servicing that area was not supervised electronically or with tamper indicating seals.
2. The emergency lighting battery inspections had not been completed in 1980. The 1981 inspection was in progress during the inspection and appeared to be nearing satisfactory completion.

3. Fire Protection and Prevention Administrative Controls

a. Emergency Response Procedures

The inspector examined the licensee's fire emergency response procedures and fire fighting strategies. The procedures and strategies were reviewed using the requirements contained in the license and FPSER with supporting licensee transmittals and the NRC guidance document, "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance."

(1) Areas of Inspection

(a) Procedures

<u>Number</u>	<u>Title</u>
QEP 340-5	Station Fire Fighting
QAP 1170-3	Fires

(b) Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
Form 86-9963	Reports of Fires	1980
QEP 340-S1	Fire Drill	1980
	Worksheets	

(2) Findings

No apparent items of noncompliance were identified in this area.

(3) Discussion

(a) Unresolved Item (50-254/81-04-04; 50-265/81-04-04)

Amendment No. 52 issued July 27, 1979 to License No. DPR-29 and Amendment No. 49 issued July 27, 1979 to License No. DPR-30 states:

"The licensee is required to implement the administrative controls identified in Section 6 of the SE. The administrative controls shall be in effect immediately . . . "

Section 6.0 of the FPSE states:

"Our review is based on this information [letters from the licensee dated April 24, 1978, July 27, 1978 and November 30, 1970] and our understanding that the licensee meets or will meet the specific guidance found in "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance."

Paragraph d of Attachment No. 5 to "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance" describes the minimum subjects to be included in the fire fighting strategies established for all safety related areas and areas presenting a hazard to safety related equipment.

Paragraph g of the same attachment identifies the subjects to be included in procedures for coordinating fire fighting activities involving offsite fire departments.

Section 6.5 of the FPSE concerning fire fighting procedures states:

"The licensee has provided an adequate description of its current fire fighting procedures, those under development and those planned to be developed in the near future. Fire fighting procedures/plans are established to cover such items as . . . coordination of fire fighting activities with offsite fire departments, strategies for fighting fires in all safety related areas and areas presenting hazard to safety related equipment."

Contrary to the above, the licensee has not developed and implemented fire fighting strategies and procedures for coordinating fire fighting activities involving off-site fire departments.

The licensee takes issue with this position on the basis of two sets of handwritten notes from an exit interview at the conclusion of the NRR fire protection review team site visit on August 24, 1978. These notes indicate that the proposed licensee program as it is presently implemented was acceptable.

This issue has been forwarded to IE Headquarters for review and resolution.

- (b) During the inspection, the inspector discussed with the licensee various merits of the different approaches to developing and utilizing fire strategies or pre-plans and provided contacts with other licensees who have developed strategies. The licensee indicated that he would consider these recommendations.

Also, after reviewing the fire reports from 1980, the inspector expressed concern to the licensee that the contractor training in fire emergency response did not appear to be effective. On one occasion, a contractor did not report a fire to the control room, resulting in the fire siren not being sounded. This caused some confusion in the fire fighting response. The licensee acknowledged this concern.

b. Ignition Source Controls

The inspector examined the licensee's program for controlling ignition sources. These administrative controls were reviewed using the requirements contained in the license and FPSEER with supporting licensee transmittals and the NRC guidance document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance."

(1) Areas of Inspection

(a) Procedures

<u>Number</u>	<u>Title</u>
QMP 100-3	Fire Prevention for Welding and Cutting
QAP 200-13	Station Housekeeping

(b) Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
QMP 100-S1	Welding and Cutting Permit	12/80
Form 86-9963	Reports of Fires	1980

- (c) The inspector toured the plant on two occasions to observe the implementation of the licensee's ignition source controls. The following areas were toured:

Unit 1 Reactor Building
Unit 2 Reactor Building
Turbine Building

(2) Findings

Noncompliance (50-254/81-04-05; 50-265/81-04-05)

Technical Specification 6.2.A.11 states:

"Detailed written procedures . . . shall be prepared . . . and adhered to . . . fire protection program implementation."

Maintenance Procedure QMP 100-3, Fire Prevention for Welding and Cutting, paragraph F.1.a states:

"Areas where . . . welding . . . shall be kept clean and all accumulation of trash, rags, etc. shall be removed."

Paragraph F.1.b states:

"All . . . cable in trays . . . subject to damage or ignition . . . shall be covered with suitable noncombustible materials."

Paragraph F.3.a states:

"One or more individuals in each work area shall be designated to watch for potential fire or smoldering. . ."

Contrary to the above, during a plant tour the inspector observed a contractor welder in the Unit 2 Cable Tunnel performing welding operations above safety related cabling without a fire watch in the immediate area. Trays of safety related cabling were not covered with suitable noncombustible materials and were being exposed to potential damage or ignition.

During another plant tour, the inspector observed a contractor welder on the 643' level of the Unit 2 Reactor Building welding

within fifteen feet of four bags of flammable resins. At the time of the observation, the welders fire watch was forty feet away performing grinding operations.

In review of the ten fire reports from 1980, the inspector noted that four of these fires were caused by welding or torch cutting operations where the workers had not followed the procedures for performing their work. None of these fires resulted in major damage.

Noncompliance (50-254/81-04-06; 50-265/81-04-06)

Technical Specification 6.2.B states:

"Radiation control procedures shall be maintained . . and adhered to."

Radiation Protection Procedure QRP 100-1, Radiation Control Standards, paragraph 15.C.6.e states:

"Do not eat, smoke, drink, or chew in controlled areas."

The licensee has defined the Unit I and Unit II cable tunnels as controlled areas.

Contrary to the above, the inspector observed many cigarette butts scattered throught the Unit 1 and Unit 2 cable tunnels and an empty beer can in the Unit 1 cable tunnel.

(3) Discussion

The inspector discussed ignition source control problems with the licensee during the inspection. The inspector suggested a possible method of upgrading contractor awareness of plant ignition control procedures by expanding the hot work permit sheet to include specific requirements that the supervisor, worker or fire watch would have to read and initial. The licensee indicated that he would consider this recommendation.

c. Combustible Materials Controls

The inspector examined the licensee's program for controlling combustible materials and transient fire loads. The program was reviewed using the requirements contained in the licensee and FPSEER with supporting licensee transmittals and the NRC guidance document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance."

(1) Areas of Inspection

(a) Procedures

<u>Number</u>	<u>Title</u>
QAP 200-13	Station Housekeeping Organization
QAP 600-8	Storage of Chemicals
QMP 100-3	Fire Prevention for Welding and Cutting
QAP 600-9	Storage of Resins

(b) Plant Tours

The inspector examined the plant combustible control practices during two plant tours of the following areas:

Screenhouse
Unit 1 Reactor Building
Unit 2 Reactor Building
Turbine Building

(2) Findings

Noncompliance (50-254/81-04-07; 50-265/81-04-07)

Technical Specification 6.2.A.11 states:

"Detailed written procedures . . . shall be prepared . . . and adhered to . . . fire protection program implementation."

Administrative Procedure QAP 200-13, Station Housekeeping Organization, paragraph C.3 states:

"The working department or support group is responsible for returning all areas affected by their work to normal acceptable cleanliness when work is finished. This includes:

- a. Removing all combustible material and debris from the work area.
- b. Returning excess material and equipment to the normal storage area.
- c. Removing all tools, equipment and material from the area when the job is complete."

Paragraph C.5 states:

"The Stationmen do routine housekeeping to assure that normal acceptable cleanliness is maintained. This includes timely removal and emptying of trash collection containers and cleaning of floors. The Stationmen clean areas as assigned and requested by Station Management to maintain adequate cleanliness. Where material or equipment exists that cannot be handled or controlled by other departments, the Maintenance Department or any other department may be called on for support."

Paragraph C.6 states:

"The foreman of the stationmen performs periodic inspections of the plant to ensure that cleaning is being performed sufficiently to prevent the following:

- a. Accumulation of debris and combustible material in the plant.
 - (1) The Fire Marshall shall be notified if there is an increase in the probability of a fire in a given area.
- b. Development of unsafe conditions due to lack of cleanliness such as oil spills.
- c. Accumulation of tools, material or equipment in non-storage areas."

Contrary to the above, the inspector toured safety related areas and observed unacceptable housekeeping practices which have the potential to degrade the safe operation of the plant. Unacceptable accumulations of combustible materials were observed in the following areas:

Unit 2 Spent Fuel Pool Cooling Equipment Area
Unit 2 Reactor Building 643' Level Sample Station Area
Unit 2 Cable Tunnel
Unit 2 Control Rod Drive Hydraulic Equipment Area
HPCI 250V DC Bus 2A Area
Auto Blowdown Panel 2202-32 Area
1/2 Diesel Generator Room
Turbine Building Main Floor 4kV Switchgear Area
Auxiliary Electric Equipment Room
Unit 1 Cable Tunnel

(3) Discussion

The inspector discussed housekeeping problems with the licensee who indicated that he would consider implementing a weekly tour of all plant areas by plant personnel to control accumulations of combustible materials.

d. Fire Protection Audits and Inspections

The inspector examined the licensee's program for auditing and inspecting the fire protection and prevention program through the quality assurance organization and off-site organizations. The program was reviewed using the requirements in the plant technical specifications.

(1) Areas of Inspection

Quality Assurance Audit Report - April, 1980

Training/Qualifications Checklist

Fire Protection Checklist

Fire Protection Consultant Inspection Report - November, 1979

Fire Protection Consultant Inspection - November, 1980

(2) Findings

No apparent items of noncompliance were identified in this area.

4. Fire Protection and Prevention Training

a. General Employee and Contractor Training

The inspector examined the licensee's fire protection and prevention training program for general employees and contractors. The training was reviewed using the guidelines contained in the Commonwealth Edison Company Nuclear Fire Protection Program.

(1) Areas of Inspection

General Employee Training Program Lesson Plans

General Employee and Contractor Training Records

(2) Findings

No apparent items of noncompliance or deviations were identified in this area.

(3) Discussion

The fire protection and prevention topics discussed in the general employee and contractor training include classes of fires, hot work permits, housekeeping, and the fire emergency siren recognition and response.

b. Fire Brigade Training

The inspector examined the licensee's program for fire brigade training including initial classroom training and retraining,

fire fighting practice sessions, fire drills, and actual fire fighting. The training program was reviewed using the requirements contained in the license and FPSE with supporting licensee transmittals, the NRC guidance document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance" and the Commonwealth Edison Company Nuclear Fire Protection Program.

(1) Areas of Inspection

Fire Brigade Classroom Training Lesson Plans
Fire Brigade Initial Training Records
Fire Brigade Requalification Training Records
Fire Fighting Practice Session Records
Fire Drill Worksheets
Fire Report Forms

(2) Findings

No apparent items of noncompliance were identified in this area.

(3) Discussion

(a) Unresolved Item (50-254/81-04-08; 50-265/81-04-08)

Amendment No. 52 issued July 27, 1979 to License No. DPR-29 and Amendment No. 49 issued July 27, 1979 to License No. DPR-30 states:

"The licensee is required to implement the administrative controls identified in Section 6 of the SE. The administrative controls shall be in effect immediately . . ."

Section 6.0 of the FPSE states:

"Our review is based on this information [letters from the licensee dated April 24, 1978, July 27, 1978, and November 30, 1978] and our understanding that the licensee meets or will meet the specific guidance found in "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance."

Section 6.2 of the FPSE states:

"The Fire Brigade Training Program consists of . . . fire drills. The Fire Brigade Training Program includes . . . periodic fire drills, and critiques to assess brigade effectiveness."

Paragraph 3.0.e of Attachment No. 2 to "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance" concerning fire drills states:

"The drills should be performed at regular intervals but not to exceed three months for each fire brigade. At least one drill per year should be performed on a "back shift" for each fire brigade. A sufficient number of these drills, not less than one for each fire brigade per year, shall be unannounced, to determine the fire readiness of the plant fire brigade leader, brigade, fire protection systems and equipment."

The NRC fire drill position is further clarified in 10 CFR 50 Appendix R, effective February 19, 1981, paragraph III.1.3.b. which states"

"Drills shall be performed at regular intervals not to exceed three months for each shift fire brigade. Each fire brigade member should participate in each drill, but must participate in two drills per year."

Contrary to the above, the licensee conducted only six fire drills in 1980 and had five fires with fire brigade response. After compiling the attendance records, the inspector identified that seventy-six percent of the fire brigade members had attended fewer than the minimum acceptable number of fire drills according to 10 CFR 50 Appendix R (see table below). These attendance figures exclude two actual fires where specific attendance was not recorded; only the number of responding brigade members was recorded.

<u>WORKER CLASSIFICATION</u>	<u>PERCENT OF FIRE BRIGADE⁺</u>		<u>ATTENDING</u>	
	<u>ZERO DRILLS*</u>	<u>ONE DRILL*</u>	<u>TWO DRILLS</u>	<u>THREE DRILLS</u>
Equipment Attendants	23% (7)	52% (16)	19% (6)	6% (2)
Rad/Chem Technicians	68% (15)	27% (6)	5% (1)	0% (0)
Rad Waste Foremen	0% (0)	20% (1)	80% ()	0% (0)
Shift Foremen	38% (3)	25% (2)	37% (3)	0% (0)

*Workers attending fewer than two fire drills per year are not considered qualified for fulfilling the minimum fire brigade staffing requirements under the new fire protection rule, 10 CFR 50 Appendix R.

+The numbers in parenthesis indicate the actual number of fire fighters in each category.

The licensee takes issue with this position on the basis of two sets of handwritten notes from an exit interview at the conclusion of the NRR fire protection review team site visit on August 24, 1978. These notes indicate that the proposed licensee program as it is presently implemented was acceptable.

This issue has been forwarded to IE Headquarters for review and resolution.

- (b) The inspector reviewed the training lesson plans for fire brigade initial training and retraining. These classroom training lesson plans appear acceptable.

The inspector reviewed the fire brigade training records for approximately twenty percent of the fire brigade leaders and members including employees from the following job categories:

- Shift Foreman (2 of 8)
- Radwaste Foreman (1 of 5)
- Equipment Attendant (7 of 31)
- Rad/Chem Technician (4 of 22)

Of those records reviewed, all persons had received the initial fire brigade training and at least quarterly retraining in 1980. All persons had attended at least one hands-on fire fighting practice session in 1980 with 10 of 14 attending two practice sessions.

5. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on February 27, 1981. The purpose and scope of the inspection was summarized and the findings were discussed.