July 23, 1987

Docket Nos. STN 50-454
and STN 50-455

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Butterfield:

DISTRIBUTION

Dockets Files	JPartlow
NRC & Local PDRs	TBarnhart (4)
PD III-2 Rgd. File	Wanda Jones
GHolahan	EButcher
CVogan	FBurrows
LOlshan	RSamworth
OGC-Bethesda	ACRS (10)
DHagan	GPA/PA
EJordan	PD III-2 Plant File

The Commission has issued the enclosed Amendment No. 9 to Facility Operating License No. NPF-37 and Amendment No. 9 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your applications transmitted by letters dated September 10, 1986, supplemented October 7, 1986 and March 5, 1987.

These amendments revise the Administrative Controls section to reflect a new organization and add requirements that the High Energy Line Break isolation sensors be operable.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

/s/
Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects - III, IV,
V and Special Projects

Enclosures:
1. Amendment No. 9 to NPF-37
2. Amendment No. 9 to NPF-66
3. Safety Evaluation

cc: w/enclosures
See next page

* Previously Concurred

LA:PD III-2	PM:PD III-2	OGC	D:PD III-2
CVogan	*LOlshan:bj	*MKarman	MMiller
7/ /87	6/17/87	6/25/87	7/27/87

8708050388 870723
PDR ADOCK 05000454
P PDR

Docket Nos. STN 50-454
and STN 50-455

Mr. Dennis L. Farrar
Director of Nuclear Licensing
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Farrar:

DISTRIBUTION

Dockets Files	JPartlow
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Project Directorate III-2
Division of Reactor Projects - III, IV,
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LA:PD III-2	PM:PD III-2	OGC	D:PD III-2
CVogan	LOlshan:bj	MR[illegible]	Muller
6/ /87	6/17/87	6/25/87	6/ /87

Mailed memo to E. Jordan STATE before issuance.

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Atomic Power Distribution
Westinghouse Electric Corporation
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Pittsburgh, Pennsylvania 15230

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 23, 1987

Docket Nos. STN 50-454
and STN 50-455

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Butterfield:

The Commission has issued the enclosed Amendment No. 9 to Facility Operating License No. NPF-37 and Amendment No. 9 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your applications transmitted by letters dated September 10, 1986, supplemented October 7, 1986 and March 5, 1987.

These amendments revise the Administrative Controls section to reflect a new organization and add requirements that the High Energy Line Break isolation sensors be operable.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
1. Amendment No. 9 to NPF-37
2. Amendment No. 9 to NPF-66
3. Safety Evaluation

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See next page

cc:
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Westinghouse Electric Corporation
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-454

BYRON STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 9
License No. NPF-37

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 10, 1986, supplemented October 7, 1986; and March 5, 1987 comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-37 is hereby amended to read as follows:

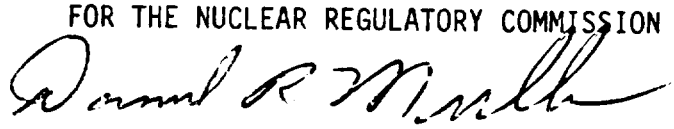
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P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 9 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 23, 1987

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-455

BYRON STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 9
License No. NPF-66

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment by Commonwealth Edison Company (the licensee) dated September 10, 1986, supplemented October 7, 1986; and March 5, 1987 comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 9 and revised by Attachment 2 to NPF-60, and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-37, dated February 14, 1985, are hereby incorporated into this license. Attachment 2 contains a revision to Appendix A which is hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 23, 1987

ATTACHMENT TO LICENSE AMENDMENT NOS. 9 AND 9

FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

DOCKET NOS. STN-50-454 AND STN 50-455

Revise Appendix A as follows:

Remove Pages	Insert Pages
-	3/4 3-80
-	3/4 3-81
B 3/4 3-5*	B 3/4 3-5*
B 3/4 3-6	B 3/4 3-6
6-1	6-1
6-2	6-2
6-3	6-3
6-4	6-4
6-5a*	6-5a*
6-6	6-6
6-7	6-7
6-8	6-8
6-9	6-9
6-10*	6-10*
6-11*	6-11*
6-12	6-12
6-13	6-13
6-14	6-14
6-15	6-15
6-16	6-16

* Overleaf pages added for convenience

INSTRUMENTATION

HIGH ENERGY LINE BREAK ISOLATION SENSORS

LIMITING CONDITION FOR OPERATION

3.3.3.11 The high energy line break instrumentation shown in Table 3.3-14 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3.-14.

ACTION:

a. With the number of OPERABLE auxiliary steam isolation instruments less than the Minimum Channels OPERABLE as required by Table 3.3-14, restore the inoperable instruments(s) to OPERABLE status within 7 days, or suspend the supply of auxiliary steam to the Auxiliary Building, or establish a continuous watch in the affected area(s) until the inoperable sensors are restored to OPERABLE status.

b. With the number of OPERABLE steam generator blowdown line isolation instruments less than the Minimum Channels OPERABLE as required by Table 3.3-14, restore the inoperable instrument(s) to OPERABLE status within 7 days, or limit the total steam generator blowdown flow rate to less than or equal to 60 gpm or establish a continuous watch in the affected area(s) until the inoperable sensors are restored to OPERABLE status.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.12 Each of the above high energy line break isolation instruments shall be demonstrated OPERABLE by the performance of an ANALOG CHANNEL OPERATIONAL TEST AND CHANNEL CALIBRATION at least once per 18 months.

Table 3.3-14

HIGH ENERGY LINE BREAK INSTRUMENTATION

Isolation Function	Instrument Channel	Minimum Channels Operable	Applicable Modes
1. Auxiliary Steam Isolation	OTS-AS031A OTS-AS032A	1	*
	OTS-AS031B OTS-AS032B	1	*
	OTS-AS031C OTS-AS032C	1	*
	OTS-AS031D OTS-AS032D	1	*
	OTS-AS031F OTS-AS032F	1	
2. Steam Generator Blowdown Line Isolation	TS-SD045A TS-SD045B	1	1, 2, 3, 4
	TS-SD046A TS-SD046B	1	1, 2, 3, 4
	TS-SD045C TS-SD045D	1	1, 2, 3, 4
	TS-SD046C TS-SD046D	1	1, 2, 3, 4

*Required when auxiliary steam is being supplied, from any source, to the Auxiliary Building.

SEISMIC INSTRUMENTATION (Continued)

The response spectrum analyzer computes the response spectrum of the event for two sensor locations, compares it to the design response spectra of the plant, and indicates whether the event exceeded the operating basis earthquake criteria or the safe shutdown earthquake criteria.

This instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquake," April 1974.

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data are available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR Part 50.

3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, Revision 3, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," May 1983 and NUREG 0737, "Clarification of TMI Action Plan Requirements," November 1980.

3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the detection instrumentation ensures that both adequate warning capability is available for the prompt detection of fires and that Fire Suppression Systems, that are actuated by fire detectors, will discharge extinguishing agents in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program. The zone designations given in Table 3.3-11 are from electrical schematic diagrams.

BASES

Fire detectors that are used to actuate Fire Suppression Systems represent a more critically important component of a plant's fire protection program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of operable fire detectors must be greater.

The loss of detection capability for Fire Suppression Systems, actuated by fire detectors represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

3/4.3.3.8 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the Reactor Coolant System and avoid or mitigate damage to Reactor Coolant System components. The allowable out-of-service times and Surveillance Requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The Alarm/Trip Setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The Alarm/Trip Setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20.

3/4.3.3.11 HIGH ENERGY LINE BREAK ISOLATION SENSORS

The OPERABILITY of the high energy line break isolation sensors ensures that the capability is available to promptly detect and initiate protective action in the event of a line break. This capability is required to prevent the potential for damage to safety-related systems and structures in the auxiliary building.

6.1 RESPONSIBILITY

6.1.1 The Station Manager, Byron Station, shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Engineer (or during his absence from the control room, a designated individual) shall be responsible for the control room command function. A management directive to this effect, signed by the Assistant Vice President and General Manager-Nuclear Stations shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

OFFSITE

6.2.1 The offsite organization for unit management and technical support shall be as shown in Figure 6.2-1.

UNIT STAFF

6.2.2 The unit organization shall be as shown in Figure 6.2-2 and:

a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1; and

b. At least one licensed Operator shall be in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Operator shall be in the control room;

c. A Radiation Chemistry Technician,* qualified in radiation protection procedures, shall be on site when fuel is in the reactor;

d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation;

e. A site Fire Brigade of at least five members* shall be maintained onsite at all times. The Fire Brigade shall not include the Shift Engineer, and the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency; and

*The Radiation Chemistry Technician and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

UNIT STAFF (Continued)

f. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., licensed Senior Operators, licensed Operators, health physics personnel, equipment operators, and key maintenance personnel.

The amount of overtime worked by Unit staff members performing safety-related functions shall be limited in accordance with the NRC Policy Statement on working hours (Generic Letter No. 82-12).

6.2.3 ONSITE NUCLEAR SAFETY GROUP (ONSG)

FUNCTION

6.2.3.1 The ONSG serves as an independent safety engineering group and shall function to examine plant operating characteristics, NRC issuances, industry advisories, REPORTABLE EVENTS and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety. The ONSG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Manager of Nuclear Safety, and the Station Manager, Byron Station.

COMPOSITION

6.2.3.2 The ONSG shall be composed of at least four, dedicated, full-time engineers located on site.

RESPONSIBILITIES

6.2.3.3 The ONSG shall be responsible for maintaining surveillance of plant activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

RECORDS

6.2.3.4 Records of activities performed by the ONSG shall be prepared, maintained, and forwarded each calendar month to the Manager of Nuclear Safety, and the Station Manager, Byron Station.

6.2.4 SHIFT TECHNICAL ADVISOR

The Station Control Room Engineer (SCRE) may serve as the Shift Technical Advisor (STA) during abnormal operating or accident conditions. During these conditions the SCRE or other on duty STA shall provide technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering and plant analysis with regard to the safe operation of the unit.

*Not responsible for sign-off function.

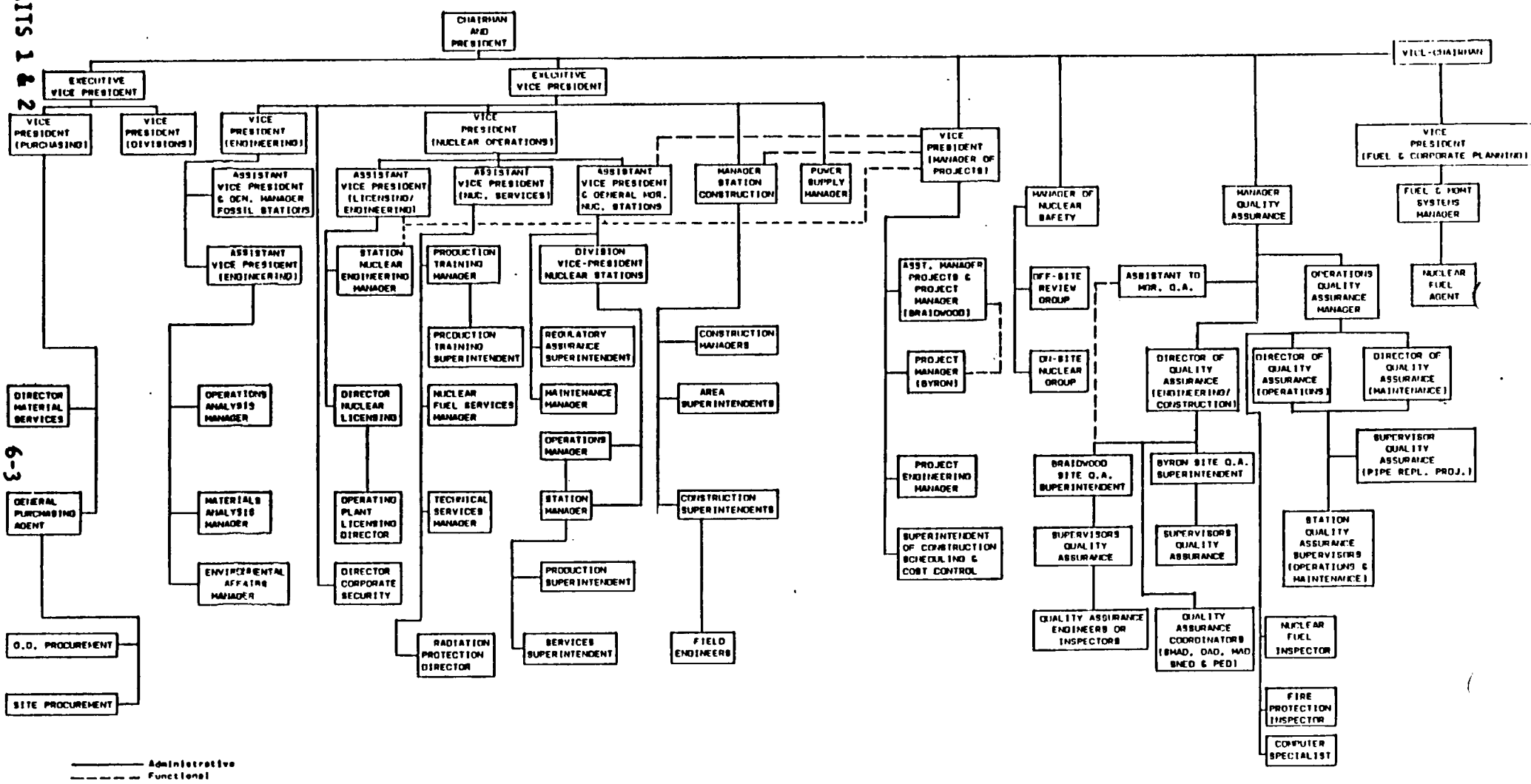


Figure 6.2-1
OFFSITE ORGANIZATION

BYRON STATION

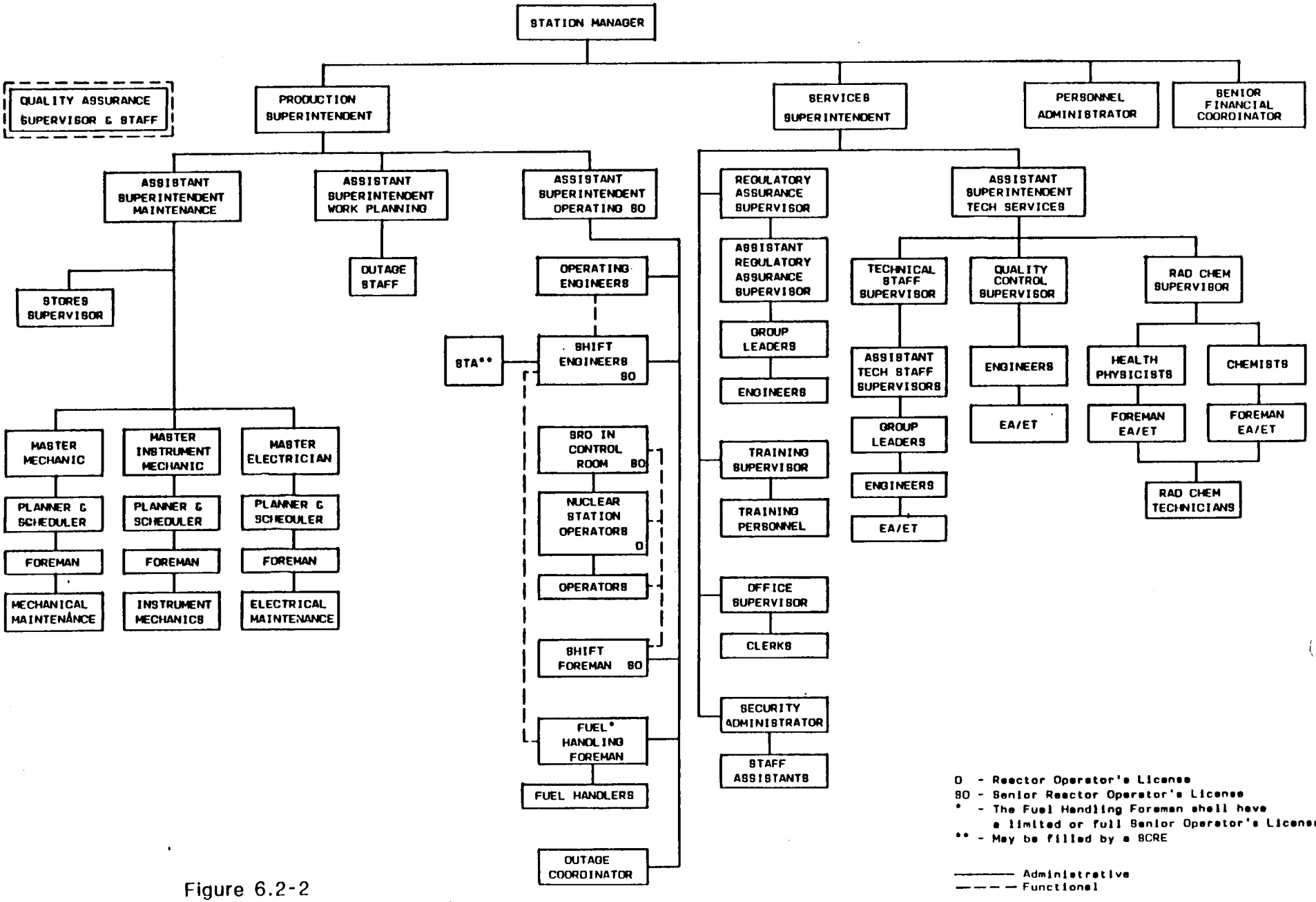


Figure 6.2-2
UNITS 1 & 2 ORGANIZATION

*TABLE 6.2-1a

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODES 1, 2, 3 & 4	MODES 5 & 6
SE	1	1
SF	1	None
RO	2	1
AO	2	1
SCRE	1	None

or, whenever a SCRE (SRO/STA) is not included in the shift crew composition, the minimum shift crew shall be as follows:

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODES 1, 2, 3 & 4	MODES 5 & 6
SE	1	1
SF	1	None
RO	2	1
AO	2	1
STA	1	None

SE - Shift Supervisor (Shift Engineer) with a Senior Operator license on Unit 1
SF - Shift Foreman with a Senior Operator license on Unit 1
RO - Individual with a Reactor Operator license on Unit 1
AO - Auxiliary Operator
SCRE - Station Control Room Engineer with a Senior Reactor Operator's License on Unit 1
STA - Shift Technical Advisor

The Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1a for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1a. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the control room while the Unit is in MODE 1, 2, 3 or 4, an individual with a valid Senior Operator license shall be designated to assume the control room command function. During any absence of the Shift Supervisor from the control room while the Unit is in MODE 5 or 6, an individual with a valid Operator license shall be designated to assume the control room command function.

*Table 6.2-1a will be replaced by Table 6.2-1 when Unit 2 receives an operating license.

6.2.4 SHIFT TECHNICAL ADVISOR (Continued)

To assure capability for performance of all STA functions:

(1) The shift foreman (SRO) shall participate in the SCRE shift relief turnover.

(2) During the shift, the shift engineer and the shift foreman (SRO) shall be made aware of any significant changes in plant status in a timely manner by the SCRE.

(3) During the shift, the shift engineer and the shift foreman (SRO) shall remain abreast of the current plant status. The shift foreman (SRO) shall return to the control room two or three times per shift, where practicable, to confer with the SCRE regarding plant status. Where not practicable to return to the control room, the shift foreman (SRO) shall periodically check with the SCRE for a plant status update. The shift foreman (SRO) shall not abandon duties original to reactor operation, unless specifically ordered by the shift engineer.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, except for the Rad/Chem Supervisor or Lead Health Physicist, who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, for a Radiation Protection Manager. The licensed Operators and Senior Operators shall also meet or exceed the minimum qualifications of the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the unit staff shall be maintained under the direction of the Production Training Department and shall meet or exceed the requirements and recommendations of Section 5 of ANSI/ANS 3.1-1978 and Appendix A of 10 CFR Part 55 and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, and shall include familiarization with relevant industry operational experience identified by the Department of Nuclear Safety.

6.5 REVIEW INVESTIGATION AND AUDIT

The Review and Investigative Function and the Audit Function of activities affecting quality during facility operations shall be constituted and have the responsibilities and authorities outlined below.

6.5 REVIEW INVESTIGATION AND AUDIT (Continued)

OFFSITE

6.5.1 The Supervisor of the Offsite Review and Investigative Function shall be appointed by the Manager of Nuclear Safety responsible for nuclear activities. The audit function shall be the responsibility of the Manager of Quality Assurance and shall be independent of operations.

a. Offsite Review and Investigative Function

The Superintendent of the Offsite Review and Investigative Function shall: (1) provide directions for the review and investigative function and appoint a senior participant to provide appropriate direction, (2) select each participant for this function, (3) select a complement of more than one participant who collectively possess background and qualifications in the subject matter under review to provide comprehensive interdisciplinary review coverage under this function, (4) independently review and approve the findings and recommendations developed by personnel performing the review and investigative function, (5) approve and report in a timely manner all findings of non-compliance with NRC requirements to the Station Manager, Assistant Vice President and General Manager - Nuclear Stations, Manager of Quality Assurance, and the Vice President - Nuclear Operations. During periods when the Supervisor of Offsite Review and Investigative Function is unavailable, he shall designate this responsibility to an established alternate, who satisfies the formal training and experience for the Supervisor of the Offsite Review and Investigative Function. The responsibilities of the personnel performing this function are stated below. The Offsite Review and Investigative Function shall review:

1) The safety evaluations for: (1) changes to procedures, equipment, or systems as described in the safety analysis report, and (2) tests or experiments completed under the provision of 10 CFR 50.59 to verify that such actions did not constitute an unreviewed safety question. Proposed changes to the Quality Assurance Program description shall be reviewed and approved by the Manager of Quality Assurance;

2) Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10 CFR 50.59;

3) Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;

4) Proposed changes in Technical Specifications or this Operating License;

OFFSITE (Continued)

5) Noncompliance with Codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures, or instructions having nuclear safety significance;

6) Significant operating abnormalities or deviation from normal and expected performance of plant equipment that affect nuclear safety as referred to it by the Onsite Review and Investigative Function;

7) All REPORTABLE EVENTS;

8) All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components;

9) Review and report findings and recommendations regarding all changes to the Generating Stations Emergency Plan prior to implementation of such change; and

10) Review and report findings and recommendations regarding all items referred by the Technical Staff Supervisor, Station Manager, Assistant Vice President and General Manager - Nuclear Stations, and Manager of Quality Assurance.

b. Audit Function

The audit function shall be the responsibility of the Manager of Quality Assurance independent of the Production Department. Such responsibility is delegated to the Director of Quality Assurance (Operations) and the Director of Quality Assurance (Maintenance).

Either shall approve the audit agenda and checklists, the findings and the report of each audit. Audits shall be performed in accordance with the Company Quality Assurance Program and Procedures. Audits shall be performed to assure that safety-related functions are covered within the period designated below:

1) The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months;

2) The adherence to procedure, training, and qualification of the station staff at least once per 12 months;

3) The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or methods of operation that affect nuclear safety at least once per 6 months;

4) The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months;

OFFSITE (Continued)

5) The Facility Emergency Plan and implementing procedures at least once per 12 months;

6) The Facility Security Plan and implementing procedures at least once per 12 months;

7) Onsite and offsite reviews;

8) The Facility Fire Protection programmatic controls including the implementing procedures at least once per 24 months by qualified QA personnel;

9) The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year;

10) The Radiological Environmental Monitoring Program and the results thereof at least once per 12 months;

11) The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months;

12) The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months; and

13) The performance of activities required by the Company Quality Assurance Program for effluent and environmental monitoring at least once per 12 months.

Report all findings of noncompliance with NRC requirements and recommendations and results of each audit to the Station Manager, Manager of Nuclear Safety, the Assistant Vice President and General Manager - Nuclear Stations, Manager of Quality Assurance, the Vice Chairman, and the Vice President - Nuclear Operations.

c. Authority

The Manager of Quality Assurance and the Manager of Nuclear Safety report to the Chairman and President. Either the Manager of Quality Assurance or the Manager of Nuclear Safety has the authority to order unit shutdown or request any other action which he deems necessary to avoid unsafe plant conditions.

OFFSITE (Continued)

d. Records

1) Reviews, audits, and recommendations shall be documented and distributed as covered in Specification 6.5.1a. and 6.5.1b.; and

2) Copies of documentation, reports, and correspondence shall be kept on file at the station.

e. Procedures

Written administrative procedures shall be prepared and maintained for the offsite reviews and investigative functions described in Specification 6.5.1a. and for the audit functions described in Specification 6.5.1b. Those procedures shall cover the following:

1) Content and method of submission of presentations to the Supervisor of the Offsite Review and Investigative Function,

2) Use of committees and consultants,

3) Review and approval,

4) Detailed listing of items to be reviewed,

5) Method of: (1) appointing personnel, (2) performing reviews, investigations, (3) reporting findings and recommendations of reviews and investigations, (4) approving reports, and (5) distributing reports, and

6) Determining satisfactory completion of action required based on approved findings and recommendations reported by personnel performing the review and investigative function.

f. Personnel

1) The persons, including consultants, performing the review and investigative function, in addition to the Supervisor of the Offsite Review and Investigative Function, shall have expertise in one or more of the following disciplines as appropriate for the subject or subjects being reviewed and investigated:

a) Nuclear power plant technology,
b) Reactor operations,
c) Utility operations,
d) Power plant design,
e) Reactor engineering,
f) Radiological safety,
g) Reactor safety analysis,

OFFSITE (Continued)

h) Instrumentation and control,
i) Metallurgy, and
j) Any other appropriate disciplines required by unique characteristics of the facility.

2) Individuals performing the Review and Investigative Function shall possess a minimum formal training and experience as listed below for each discipline.

a) Nuclear Power Plant Technology

Engineering graduate or equivalent with 5 years experience in the nuclear power field design and/or operation.

b) Reactor Operations

Engineering graduate or equivalent with 5 years experience in nuclear power plant operations.

c) Utility Operations

Engineering graduate or equivalent with at least 5 years of experience in utility operation and/or engineering.

d) Power Plant Design

Engineering graduate or equivalent with at least 5 years of experience in power plant design and/or operation.

e) Reactor Engineering

Engineering graduate or equivalent. In addition, at least 5 years of experience in nuclear plant engineering, operation, and/or graduate work in nuclear engineering or equivalent in reactor physics is required.

f) Radiological Safety

Engineering graduate or equivalent with at least 5 years of experience in radiation control and safety.

g) Reactor Safety Analysis

Engineering graduate or equivalent with at least 5 years of experience in nuclear engineering.

OFFSITE (Continued)

h) Instrumentation and Control

Engineering graduate or equivalent with at least 5 years of experience in instrumentation and control design and/or operation.

i) Metallurgy

Engineering graduate or equivalent with at least 5 years of experience in the metallurgical field.

3) The Supervisor of the Offsite Review and Investigative Function shall have experience and training which satisfy ANSI N18.1-1971 requirements for plant managers.

ONSITE

6.5.2 The Onsite Review and Investigative Function shall be supervised by the Station Manager.

a. Onsite Review and Investigative Function

The Station Manager shall: (1) provide directions for the Review and Investigative Function and appoint the Technical Staff Supervisor, or other comparably qualified individual as the senior participant to provide appropriate directions; (2) approve participants for this function; (3) assure that at least two participants who collectively possess background and qualifications in the subject matter under review are selected to provide comprehensive interdisciplinary review coverage under this function; (4) independently review and approve the findings and recommendations developed by personnel performing the Review and Investigative Function; (5) report all findings of noncompliance with NRC requirements, and provide recommendations to the Assistant Vice President and General Manager - Nuclear Stations and the Supervisor of the Offsite Review and Investigative Function; and (6) submit to the Offsite Review and Investigative Function for concurrence in a timely manner, those items described in Specification 6.5.1a which have been approved by the Onsite Review and Investigative Function.

b. Responsibility

The responsibilities of the personnel performing this function are:

1) Review of: (1) station specific portions of all procedures required by Specification 6.8.1 and changes thereto, (2) all programs required by Specification 6.8.4 and changes thereto, and (3) any other proposed procedures or changes thereto as determined by the Station Manager to affect nuclear safety;

2) Review of all proposed tests and experiments that affect nuclear safety;

ONSITE (Continued)

3) Review of all proposed changes to the Technical Specifications;

4) Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety;

5) Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Assistant Vice President and General Manager - Nuclear Stations and to the Supervisor of the Offsite Review and Investigative Function;

6) Review of all REPORTABLE EVENTS;

7) Performance of special reviews and investigations and reports thereon as requested by the Supervisor of the Offsite Review and Investigative Function;

8) Review of the Station Security Plan and implementing procedures and submittal of recommended changes to the Assistant Vice President and General Manager - Nuclear Stations;

9) Review of the Emergency Plan and station implementing procedures and submittal of recommended changes to the Assistant Vice President and General Manager - Nuclear Stations;

10) Review of Unit operations to detect potential hazards to nuclear safety;

11) Review of any accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the Assistant Vice President and General Manager - Nuclear Stations and the Supervisor of the Offsite Review and Investigative Function; and

12) Review of changes to the PROCESS CONTROL PROGRAM, the OFFSITE DOSE CALCULATION MANUAL, and the Radwaste Treatment Systems.

c. Authority

The Technical Staff Supervisor is responsible to the Station Manager and shall make recommendations in a timely manner in all areas of review, investigation, and quality control phases of plant maintenance, operation, and administrative procedures relating to facility operations and shall have the authority to request the action necessary to ensure compliance with rules, regulations, and procedures when in his opinion such action is necessary. The Station Manager shall follow such recommendations or select a course

ONSITE (Continued)

of action that is more conservative regarding safe operation of the facility. All such disagreements shall be reported immediately to the Assistant Vice President and General Manager - Nuclear Stations and the Supervisor of the Offsite Review and Investigative Function.

d. Records

1) Reports, reviews, investigations, and recommendations shall be documented with copies to the Assistant Vice President and General Manager - Nuclear Stations, the Supervisor of the Offsite Review and Investigative Function, the Station Manager, and the Manager of Quality Assurance.

2) Copies of all records and documentation shall be kept on file at the station.

e. Procedures

Written administrative procedures shall be prepared and maintained for conduct of the Onsite Review and Investigative Function. These procedures shall include the following:

1) Content and method of submission and presentation to the Station Manager, Assistant Vice President and General Manager - Nuclear Stations, and the Supervisor of the Offsite Review and Investigative Function,

2) Use of committees,

3) Review and approval,

4) Detailed listing of items to be reviewed,

5) Procedures for administration of the quality control activities, and

6) Assignment of responsibilities.

f. Personnel

1) The personnel performing the Onsite Review and Investigative Function, in addition to the Station Manager, shall consist of persons having expertise in:

a) Nuclear power plant technology,
b) Reactor operations,
c) Reactor engineering,
d) Chemistry
e) Radiological controls,
f) Instrumentation and control, and
g) Mechanical and electrical systems.

ONSITE (Continued)

2) Personnel performing the Onsite Review and Investigative Function shall meet minimum acceptable levels as described in ANSI N18.1-1971, Sections 4.2 and 4.4.

6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and

b. Each REPORTABLE EVENT shall be reviewed by the Onsite Review and Investigative Function and the results of this review shall be submitted to the Offsite Review and Investigative Function and the Assistant Vice President and General Manager - Nuclear Stations.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Assistant Vice President and General Manager - Nuclear Stations and the Offsite Review and Investigative Function shall be notified within 24 hours;

b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the Onsite Review and Investigative Function. This report shall describe: (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence;

c. The Safety Limit Violation Report shall be submitted to the Commission, the Offsite Review and Investigative Function and the Assistant Vice President and General Manager - Nuclear Stations within 14 days of the violation; and

d. Critical operation of the Unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix A, of Regulatory Guide 1.33, Revision 2, February 1978,

PROCEDURES AND PROGRAMS (Continued)

b. The emergency operating procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Section 7.1 of Generic Letter No. 82-33;

c. Plant Security Plan implementation,

d. Radiological Emergency Response Plan implementation,

e. PROCESS CONTROL PROGRAM implementation,

f. OFFSITE DOSE CALCULATION MANUAL implementation, and

g. Quality Assurance Program implementation for effluent and environmental monitoring.

6.8.2 Each procedure of Specification 6.8.1 above, and changes thereto, shall be reviewed prior to implementation as set forth in Specification 6.5 above.

6.8.3 Temporary changes to procedures of Specification 6.8.1 above, may be made provided:

a. The intent of the original procedure is not altered;

b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Operator license on the Unit affected; and

c. The change is documented, reviewed by the Onsite Review and Investigative Function, and approved by the Station Manager within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Reactor Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the recirculation portion of the Containment Spray System, Safety Injection System, Chemical and Volume Control System, and RHR System. The program shall include the following:

1) Preventive maintenance and periodic visual inspection requirements, and

2) Integrated leak test requirements for each system at refueling cycle intervals or less.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-37

AND AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-66

COMMONWEALTH EDISON COMPANY

BYRON STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-454 AND STN-50-455

TAC NOS.: 62730, 64884, 64885

1.0 INTRODUCTION

By applications dated September 10, 1986, supplemented October 7, 1986; and March 5, 1987; Commonwealth Edison Company (the licensee) requested amendments to the Technical Specifications for Byron Station, Units 1 and 2. The September 10, 1986 letter proposed changes to the Administrative Controls section to reflect a new organization and the March 5, 1987 letter proposed requirements that the High Energy Line Break isolation sensors be operable.

The licensee's submittal of October 7, 1986 was made to correct the original submittal and did not contain any substantive changes.

2.0 DISCUSSION AND EVALUATION

2.1 New Organization

The September 10, 1986 and October 7, 1986 letters provided several title changes with no changes as to the duties performed under the poistions, corrected some inappropriate names, corrected two typographical errors, and made minor revisions to the organization charts. We have reviewed these changes and concluded that they are administrative in nature and are acceptable.

2.2 High Energy Line Break Isolation Sensors

By letter dated February 6, 1987, we approved the design of the system proposed by the licensee to mitigate the effects of High Energy Line Breaks (HELB) in either the Auxiliary Steam System or the Steam Generator Blowdown System.

By letter dated March 5, 1987, the licensee, in response to our verbal request, proposed changes to the Technical Specification to include operability requirements for the HELB isolation sensors. The proposed Technical Specifications require that each sensor be tested and calibrated at least once per 18 months, and specify compensatory measures that must be taken if the number of sensors is less than the

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minimum required in Table 3.3-14. We have reviewed these Technical Specifications and find that they are similar to Technical Specifications for other systems of similar safety significance. Therefore, we conclude that they are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of the facilities components located within the restricted areas as defined in 10 CFR 20. The staff has determined that these amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 23, 1987

PRINCIPAL CONTRIBUTORS:

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