



**Commonwealth Edison**

One First National Plaza, Chicago, Illinois  
Address Reply to: Post Office Box 767  
Chicago, Illinois 60690

September 28, 1984

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Byron Station Unit 1  
Completion of Pre-Operational  
Test Program  
NRC Docket No. 50-454

- References (a): January 6, 1984, letter from  
T. R. Tramm to H. R. Denton.
- (b): October 27, 1983, letter from  
T. R. Tramm to H. R. Denton.
- (c): December 22, 1983, letter from  
B. J. Youngblood to D. L. Farrar.
- (d): May 21, 1984, letter from Cordell Reed  
to H. R. Denton.
- (e): September 26, 1984 letter from L. O. DelGeorge  
to J. G. Keppler

Dear Mr. Denton:

At the request of the NRC Region III Staff, this letter is being submitted to state our current expectation relative to the fuel load date for Byron Station Unit 1. We are also providing a status report on construction and testing activities. NRC concurrence is being requested in our plans for resolution of certain preoperational test deficiencies.

As you are aware, the reopened record of the Byron ASLB was closed on August 24, 1984. At a briefing before the NRC Commissioners on April 24, 1984, a representative of the ASLB indicated that a decision would be issued from the Board within six weeks of the close of the record. While that statement was made prior to the issuance of the Appeal Board's decision remanding a portion of the record to the Licensing Board for further hearings, for planning purposes Commonwealth Edison has used a six week period for a supplemental initial decision following the close of the record. Assuming favorable ASLB action, authorization from the ASLB to issue a license would occur on or about October 15, 1984.

As discussed in this letter, we believe the design, construction and testing required to support the issuance of a low-power license and

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fuel loading will be completed before October 15, 1984. Because of the current Licensing Board schedule, it is now clear that the Byron 1 fuel load date will be beyond the previously scheduled target, September 15, 1984.

Byron 1 construction activities are generally complete on plant systems covered by the preoperational testing program described in Chapter 14 of the FSAR and the Technical Specifications. The remaining construction activities involve painting, fireproofing, weld inspections as described in reference (e) of equipment supplied by Systems Control Corporation, plant modifications developed as a result of our initial operating activities, completion of non-essential systems and other minor tasks which were not essential to the conduct of the preoperational testing program. Construction is also being completed on the auxiliary building ventilation system. Completion of that system has been deferred past fuel load as described in reference (b) with NRC approval as documented in reference (c).

All of the preoperational tests described in Chapter 14 of the FSAR have been completed except for the auxiliary building ventilation and containment purge systems which have been deferred with NRC approval as described in References (b) and (c). Attachment A to this letter provides additional details on the tests being deferred. The results of the completed tests have all been reviewed as required by our Startup Manual. Most of the test results have been accepted and the equipment has been turned over to the operating department. In a few cases additional testing is required to clear minor deficiencies identified during the preoperational tests. It appears that not all of the retesting necessary to clear those minor deficiencies will be completed prior to October 15, 1984. The delays are due to a variety of design, delivery and installation problems and scheduling conflicts.

We have determined that resolution of each of these minor test deficiencies can be safely deferred to a later point in the fuel load and startup sequence. Deadlines for resolution of each of those minor deficiencies have been set accordingly. Attachment B to this letter lists the deficiencies we plan to defer past fuel load if the Byron 1 operating license is issued on October 15, 1984. In all cases, the results of the preoperational test have been evaluated and approved by our Project Engineering Department. In no case does the deferral of the resolution of a test deficiency degrade the capability of a system required by Technical Specifications to handle an accident condition. Our conclusion that the uncompleted testing has no impact on plant safety is based on the Final Safety Analysis Report (FSAR) and associated design basis, and the Byron Final Draft Technical Specifications dated August 28, 1984. The list in Attachment B will be updated if the operating license is not issued by October 15 or if any of these activities are completed earlier than expected.

Our evaluation of the deferral of completion of these segments of the pre-operational test phase has concluded that they can be safely

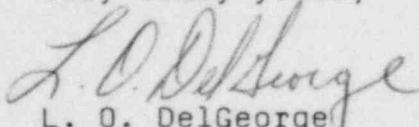
deferred for the limited periods proposed. This is based on our determination that during fuel loading and startup testing, the reactor operating conditions and fission product inventory are such that sufficient capability is provided:

- (a) for maintaining the reactor in a cold shutdown condition,
- (b) to comply with safety limits or limiting conditions for operation that will be included in the facility's Technical Specifications.
- (c) to ensure the required safety features,
- (d) to ensure support for the required features in the accident analyses of the facility, and
- (e) to process, store, control, or limit the release of radioactive materials.

Because the incomplete pre-operational tests represented in Attachment B are not prerequisites to the start-up tests as described in Chapter 14, we expect to initiate the Start-Up Test phase in conjunction with completion of the remaining pre-operational testing. Appropriate interim technical specifications or license conditions are being or have been prepared where necessary. Those requests are being submitted separately. With NRC concurrence in our plan for resolution of the minor test deficiencies identified in Attachment B, we see no obstacle in terms of preoperational testing to loading fuel at Byron 1 as soon as the operating license is issued.

If there are any questions on this matter, please contact this office. We are available to meet with members of your staff at any time in order to provide additional information which may be required as a result of your review of this request.

Very truly yours,



L. O. DelGeorge  
Assistant Vice President

Attachments

cc: J. G. Keppler - R III (1/wl)  
NRC Senior Resident Inspector - Byron (1/wl)

ATTACHMENT A

PRE-OPERATIONAL TEST PROGRAM DEFERRALS

<u>Test</u>	<u>Test Sections</u>	<u>Justification</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>	<u>Status</u>
VA 84.11 Auxiliary Building Ventilation	ALL	OPERABILITY of Exhaust Filter System not required at Fuel Load  Bases: Fission product inventory and resultant gaseous effluent are within radiological release limits up to an equivalent of ten full power days of operation, not exceeding 2% of full power. Additional detail contained in reference (b).	Modes 1, 2, 3, and 4	Ten full power days of operation, not exceeding 2% of full power.	Under Construction
VQ 94.10 Primary Containment Purge	ALL	Operation of containment purge is not required at Fuel Load.  Bases: Each purge supply and exhaust isolation valve shall be OPERABLE per requirements of Tech Spec Section 3.6.1.7. Additional detail contained in reference (b).	Modes 1, 2, 3, and 4	Operation above 5% power.	In Retest

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ATTACHMENT B

TESTING DEFICIENCIES TO BE COMPLETED AFTER FUEL LOAD

<u>Test</u>	<u>Description</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>
PR 60.10 Process Radiation Monitoring - BIP	Flow to JPR06J (Failed Fuel Radiation Monitor) not demonstrated.  STATUS: Piping modifications complete, retest requires operating plant conditions.	N/A	Initial Criticality (Mode 2)  BASIS: Failed fuel element not a probable occurrence until Initial Criticality.
	JPR28J and 2PR28J (Aux. Bldg. Vent. Radiation Monitors) pump trip on high/low vacuum not demonstrated.  STATUS: Controller software has been modified and loaded into system. Software demonstration in process.	Mode 6	Initial Criticality (Mode 2)  BASIS: Fission product inventory and resultant gaseous effluent are within radiological release limits up to an equivalent of ten full power days of operation, not exceeding 25% of full power. Additional details contained in reference (b).
	JPR11J (Cont. Atmosphere Radiation Monitor) Interlock with JPS36J (Cont. Air Sampling Panel) does not function properly.  STATUS: Controller software modification is being evaluated.	Mode 4	Initial Criticality (Mode 2)  BASIS: Fission product inventory is trivial. Grab samples performed in accordance with requirements of Tech Spec Section 3.4.6.1.

# ATTACHMENT B

## TESTING DEFICIENCIES TO BE COMPLETED AFTER FUEL LOAD

<u>Test</u>	<u>Description</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>
VC 85.10 Control Room Ventilation	Control room boundary differential pressure of 1/8 in. W.G. not achieved.  STATUS: 1/8 in. W.G. differential pressure with respect to ambient has been established during operation of redundant Train B. Train A balancing damper adjustments in process. A 1/8 inch W.G. differential relative to auxiliary building surrounding areas requires the auxiliary building ventilation system (VA). See reference (b).	Mode 6	For Train A, 1/8 inch W.G. differential with respect to ambient will be complete prior to initial criticality (Mode 2). For Train A and B, 1/8 inch W.G. differential with respect to surrounding areas will be obtained prior to accumulating 10 effective full power days at power levels not exceeding 25% power.  BASIS: Fission product inventory is trivial in comparison to the inventories employed by PSAR Safety Analysis, and therefore, will not threaten Control Room habitability. See reference (b).
EF 26.10	Test Section 9.13. VA (Aux. Bldg. Vent.) equipment actuation from relay K6U2 Train B not performed	Mode 4	25% Power [See Ref. (b) & (c)]
	Test Section 9.18. VA (Aux. Bldg. Vent.) equipment actuation from Relay K6U1 Train A not performed	Mode 4	25% Power [See Ref. (b) & (c)]
	Test Section 9.42. VA (Aux. Bldg. Vent.) equipment actuation from Relay K6U2 Train A not performed	Mode 4	25% Power [See Ref. (b) & (c)]
	Test Section 9.47. VA (Aux. Bldg. Vent.) equipment actuation from Relay K6U1 Train B not performed	Mode 4	25% Power [See Ref. (b) & (c)]
	STATUS: VA (Aux. Bldg. Vent.) equipment has not completed pre-operational testing.		

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## TESTING DEFICIENCIES TO BE COMPLETED AFTER FUEL LOAD

<u>Test</u>	<u>Description</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>
MS 51.10 Main Steam MSIV's	MSIV's (JMS001A-U) drift open  STATUS: End of cycle position switches have been adjusted, retest remains.	Mode 3	Initial Criticality (Mode 2)  BASIS: Fission product inventory and resultant effluent are within radiological release limits up to an equivalent of 10 full power days of operation not exceeding 25% power. Additional details are contained in reference (b).
VO 86.10 Diesel Generator Ventilation	IVED1C flow low (VD/VE/VX integrated test) IVED2C flow low (VD/VE/VX integrated test) IVED5C flow low (VD/VE/VX integrated test) IVED2C motor current high (VD/VE/VX integrated test) IVED3C motor current high (VD/VE/VX integrated test) IVED3C flow low (VD/VE/VX integrated test) IVED4C flow low (VD/VE/VX integrated test)  STATUS: Fan blade pitch and balancing dampers have been adjusted, retest remains.	Mode 2 Mode 2 Mode 2 Mode 2 Mode 2 Mode 2 Mode 2	Initial Criticality (Mode 2) Initial Criticality (Mode 2) Initial Criticality (Mode 2) Initial Criticality (Mode 2)  Initial Criticality (Mode 2) Initial Criticality (Mode 2) Initial Criticality (Mode 2)  BASIS: Sufficient capability exists to maintain temperature of affected areas within the temperature limits of Tech Spec Section 3.7.12.
PR 60.15 Process Radiation Monitoring-Loop 5	Flow to JPR07J (BIRS Chiller) not demonstrated  STATUS: Modification to location of sample probe in process.	Mode 1	Power Operation (Mode 1)  BASIS: Fission product inventory is trivial. Grab samples will be performed.
PR 60.12 Process Radiation Monitoring-Loop 2	Flow to JPR08J (Steam Gen. Blowdown Radiation Monitor) below acceptance criteria.  STATUS: Modifications complete, retest requires operating plant conditions.	N/A	Initial Criticality (Mode 2)  BASIS: Fission product inventory is trivial. Grab samples performed.

ATTACHMENT B

TESTING DEFICIENCIES TO BE COMPLETED AFTER FUEL LOAD

<u>Test</u>	<u>Description</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>
SI 73.13	ISI8948A leakage $\leq$ 1 gpm not demonstrated at 2235 psig RCS pressure.	Mode 2	Initial Criticality (Mode 2)
	ISI8948B leakage $\leq$ 1 gpm not demonstrated at 2235 psig RCS pressure.	Mode 2	Initial Criticality (Mode 2)
	ISI8948C leakage $\leq$ 1 gpm not demonstrated at 2235 psig RCS pressure.	Mode 2	Initial Criticality (Mode 2)
	ISI8948D leakage $\leq$ 1 gpm not demonstrated at 2235 psig RCS pressure.	Mode 2	Initial Criticality (Mode 2)
	<p>STATUS: Modifications performed and components tested at 820-825 psig, retest requires operating plant conditions.</p> <p>BASIS: Leakage <math>\leq</math> 1 gpm demonstrated at 820-825 psig. Valves shall be demonstrated OPERABLE prior to entering Mode 2 per requirements of Tech Spec Section 4.4.6.2.2. Tech Spec Section 4.4.6.2.2.</p>		
FC 31.10 Fuel Pool Cooling	Spent fuel pool gate seals leak	Irradiated Fuel Storage	Storage of irradiated fuel assemblies in fuel storage pool.
	Spent fuel pool level switch setpoints incorrect STATUS: Modifications on gates and level switch complete, retest requires fuel pool to be filled.	Irradiated Fuel Storage	Storage of irradiated fuel assemblies in fuel storage pool.
EM 28.12 Pipe Vibration	Unacceptable vibration during Unit 2 Fuel Pool cooling mode	Irradiated Fuel Storage	Storage of irradiated fuel assemblies in fuel storage pool.
	Unacceptable vibration during Unit 1 Fuel Pool cooling mode STATUS: Modifications on snubbers and restraints complete, retest requires fuel pool to be filled.	Irradiated Fuel Storage	Storage of irradiated fuel assemblies in fuel storage pool.



ATTACHMENT B

TESTING DEFICIENCIES TO BE COMPLETED AFTER FUEL LOAD

<u>Test</u>	<u>Description</u>	<u>Tech Spec Applicability</u>	<u>Completion Required Prior To</u>
WU 115.10 Control Room Chilled Water	OWU01CA temporary control tubing	Mode 6	Initial Criticality (Mode 2)
	OWU01CA high condensor pressure	Mode 6	Initial Criticality (Mode 2)
	Valve UWU144A does not maintain proper pressure	Mode 6	Initial Criticality (Mode 2)
	OWU01CA reset control relay actuation	Mode 6	Initial Criticality (Mode 2)
	OWU01CA amperage meter requires recalibration	Mode 6	Initial Criticality (Mode 2)
	OFI-SX084 requires recalibration	Mode 6	Initial Criticality (Mode 2)
	OWU01CA vibration readings required	Mode 6	Initial Criticality (Mode 2)
	OWU01CA cooling coil inlet pressure load	Mode 6	Initial Criticality (Mode 2)
	Condenser cooling water control valve (USX064A) response	Mode 6	Initial Criticality (Mode 2)
	ESF Relay (R4AX) not installed	Mode 6	Initial Criticality (Mode 2)
	Reset control contact to ESD Relay (R4AX) not installed	Mode 6	Initial Criticality (Mode 2)
	STATUS: Modification nearly complete. Retest remains.		
	BASIS: Train B operable and therefore, control room air temperature able to be maintained at less than or equal to 90°F.		
VP 93.10 Containment Ventilation	Differential pressure indicators which provide indication of fan flow read lower than expected.	Mode 4	Hot Standby (Mode 3)
	STATUS: Relocation of pressure taps in progress.		
			BASIS: sufficient capability exists to maintain primary containment average air temperature within the temperature limits of Tech Spec 3.6.1.5.