

10 CFR 50.55a

RS-06-099

July 11, 2006

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. 50-454 and 50-455

Subject: Response to Request for Additional Information Related to Request for Relief from the ASME OM Code for the Third Inservice Test Interval

- References:
- (1) Letter from D. M. Hoots (Exelon Generation Company, LLC) to USNRC, "Byron Station, Units 1 and 2, Requests for Relief from the ASME OM Code for the Third Inservice Test Interval," dated December 29, 2005
 - (2) USNRC to C. M. Crane (Exelon Generation Company, LLC), "Byron Station, Unit Nos. 1 and 2 - Request for Additional Information Related to Request for Relief from the ASME OM Code for the Third Inservice Test Interval," dated June 13, 2006

In Reference 1, Exelon Generation Company, LLC, (EGC), requested approval of proposed alternatives to the American Society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through 2003 Addenda, for Byron Station, Units 1 and 2. These proposed alternatives are for the Byron Station Third Inservice Testing (IST) interval, which began on July 1, 2006 and will end on June 30, 2016. Specifically, the proposal requested seven relief requests.

In Reference 2, the NRC requested additional information to complete the review of the proposed relief requests. Attachment 1 of this letter provides the requested information.

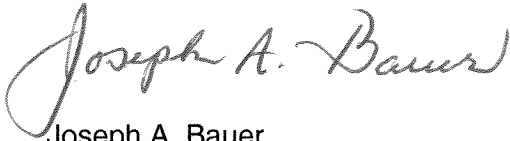
After technical discussions with the NRC, EGC has elected to withdraw two relief requests proposed in Reference 1; RP-4, "Auxiliary Feedwater Essential Service Water Booster Pump Comprehensive Test," and RP-6, "Comprehensive Pump Test Alert Range Frequency."

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Should you have any questions concerning this letter, please contact Mr. John Schrage at (630) 657-2821.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 11th day of July 2006.

Respectfully,

A handwritten signature in cursive script that reads "Joseph A. Bauer". The signature is written in dark ink and is positioned above the printed name and title.

Joseph A. Bauer
Manager, Licensing

Attachment 1: Response to Request for Additional Information
Enclosure A: Component Cooling Water Pump Comprehensive Test Data
Enclosure B: Control Room Chilled Water Pump Comprehensive Test Data

ATTACHMENT 1
Response to Request for Additional Information

Question No. 1

Relief request RP-2 (Category 1.b)

Provide pump data that compares pump performance to the acceptance criteria identified in Table ISTB-5100-1 for the Comprehensive Pump Test for each of the last three cycles.

Response

Comprehensive Pump Test data for the Component Cooling Water pumps is provided in Enclosure A.

Question No. 2

Relief request RP-3 (Category 1.b)

Provide pump data that compares pump performance to the acceptance criteria identified in Table ISTB-5100-1 for the Comprehensive Pump Test for each of the last three cycles.

Response

Comprehensive Pump Test data for the Control Room Chilled Water pumps is provided in Enclosure B.

Question No. 3

Relief request RP-4 (Category 1.b)

Provide pump data that compares pump performance to the acceptance criteria identified in Table ISTB-5100-1 for the Comprehensive Pump Test for each of the last three cycles.

Response

After technical discussions with the NRC, Exelon Generation Company, LLC (EGC) has elected to withdraw Relief Request RP-4, "Auxiliary Feedwater Essential Service Water Booster Pump Comprehensive Test," which was originally submitted in Reference 1.

Question No. 4

Relief request RP-6 (Category 1.b)

Provide discussion on how this relief request provides an acceptable level of quality. The discussion provided describes the proposed alternative, but does not describe how it provides an acceptable level of quality.

Response

After technical discussions with the NRC, EGC has elected to withdraw Relief Request RP-6, "Comprehensive Pump Test Alert Range Frequency," which was originally submitted in Reference 1.

ATTACHMENT 1
Response to Request for Additional Information

Question No. 5

Relief request RV-1 (Category 2.a)

This Relief Request proposes an alternative that would provide an acceptable level of quality and safety for the exercising test frequency of four valves. The discussion provided describes the impracticality of the actions necessary to stroke these valves. Provide a discussion as to how the change of stroking the valves quarterly to stroking them once every 18 months with a 25 percent allowance for flexibility in scheduling provides a similar level of quality and safety. Include information regarding the environmental and chemical effects on the ability to stroke the valves.

Response

The containment recirculation sump isolation valves at Byron Station (i.e., 1(2) SI8811A/B valves) provide an isolation boundary between the suctions of the Residual Heat Removal (RH) and Containment Spray (CS) pumps, and the containment recirculation sumps. A stroke test of these valves requires that the RH and CS pumps, for a given train, be removed from service, and the suction lines drained to prevent water flow from the Refueling Water Storage Tank (RWST) and associated piping into the normally empty containment recirculation sump.

This evolution (i.e., drain, test, refill, and restore the system configuration to normal status) requires approximately 24 hours to complete. In addition, the testing process will render a train of RH and CS inoperable for a period of 24 hours each quarter. Based upon the complexity of the actions that are required to stroke test the valves, as well as the impact upon plant configuration and risk associated with the concurrent inoperability of an RH and CS train, it is not practicable to perform these activities on a quarterly frequency.

American Society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through 2003 Addenda (i.e., ASME OM Code), Section ISTC-3521, "Category A and Category B Valves," paragraph (e) states: "if exercising is not practicable at power or cold shutdowns, it may be limited to full-stroke during refueling outages." The impractical nature of testing these valves during operation provides justification to implement an extended test frequency of once per refueling outage.

The history of both maintenance and In-Service Testing (IST) for all eight of the containment recirculation sump valves at Braidwood Station and Byron Station indicates good materiel condition and acceptable test results (i.e., stroke times). This testing history also demonstrates an acceptable level of quality and safety for an extended test frequency of once per refueling outage, relative to the quarterly frequency.

Based upon the guidance provided in the ASME OM Code, Section ISTC-3521, and the duration of a normal refueling cycle at Byron Station, EGC has requested an alternate test frequency of once per refueling cycle for the containment recirculation sump isolation valves (i.e., once every 18 months with a 25% allowance, as opposed to once per refueling outage).

Since Byron Station operates on an 18-month fuel cycle, the refueling outages are approximately 18 months apart. An 18-month frequency, with a 25% allowance for scheduling

ATTACHMENT 1
Response to Request for Additional Information

flexibility, as described in the Relief Request, provides the same level of quality and safety as once per refueling outage. In addition, the 18-month frequency, with a 25% allowance, will enable Byron Station to optimize the availability of the RH and CS systems by scheduling the stroke tests concurrent with other plant activities.

With respect to specific information regarding the environmental and chemical effects on the ability to stroke the valves, after additional discussion, the NRC indicated that this information was no longer required.

References:

1. Letter from D. M. Hoots (Exelon Generation Company, LLC) to USNRC, "Byron Station, Units 1 and 2, Requests for Relief from the ASME OM Code for the Third Inservice Test Interval," dated December 29, 2005
2. USNRC to C. M. Crane (Exelon Generation Company, LLC), "Byron Station, Unit Nos. 1 and 2 - Request for Additional Information related to Request for Relief from the ASME OM Code for the Third Inservice Test Interval," dated June 13, 2006

Enclosure A
Component Cooling Water Pump Comprehensive Test Data

OCC01P Test Data

Current Reference Value = 105

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
18-Apr-06	5084.0	106.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
17-Jan-06	5125.0	104.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
18-Oct-05	5162.0	106.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
19-Jul-05	5102.0	107.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
18-Apr-05	5148.0	106.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
18-Jan-05	5204.0	106.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
18-Oct-04	5216.0	106.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
20-Jul-04	5113.0	105.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
20-Apr-04	5193.0	104.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
20-Jan-04	5115.0	104.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
04-Dec-03	5120.0	103.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
21-Oct-03	5208.0	102.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
22-Jul-03	5201.0	103.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
21-Apr-03	5210.0	103.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
21-Jan-03	5179.0	104.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
21-Oct-02	5074.0	101.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
07-May-01	5210.0	102.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2

1CC01PA Test Data

Current Reference Value = 103.5

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
21-Feb-06	5115.0	103.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
22-Nov-05	5154.4	99.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
23-Aug-05	5146.0	102.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
23-May-05	5127.0	104.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
22-Feb-05	5178.0	104.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
23-Nov-04	5138.0	103.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
24-Aug-04	5110.0	100.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
27-May-04	5280.0	99.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
23-Feb-04	5280.0	99.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
24-Nov-03	5224.0	99.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
26-Aug-03	5187.0	99.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
27-May-03	5217.0	99.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
24-Feb-03	5197.0	100.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
17-Dec-02	5220.0	101.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
27-Aug-02	5129.0	102.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
09-Oct-01	5132.0	100.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
02-Apr-01	5262.0	97.0	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6
08-Jan-01	5230.0	99.5	96.3 - 106.6	93.2 to < 96.3	< 93.2	> 106.6

Enclosure A
Component Cooling Water Pump Comprehensive Test Data

1CC01PB Test Data

Current Reference Value = 101

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
06-Mar-06	5170.0	101.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
06-Dec-05	5184.0	105.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
06-Sep-05	5203.0	103.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
06-Jun-05	5208.0	105.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
11-Feb-05	5303.0	104.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
07-Dec-04	5170.0	103.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
08-Sep-04	5180.0	103.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
08-Jun-04	5285.0	102.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
08-Mar-04	5292.0	101.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
09-Dec-03	5258.0	97.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
09-Sep-03	4730.0	100.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
09-Jun-03	5192.0	100.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
11-Mar-03	5290.0	100.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
12-Dec-02	4806.0	101.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
09-Sep-02	5256.0	101.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
11-Jul-01	4370.0	102.0	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
09-May-01	4520.0	102.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0
22-Jan-01	4250.0	100.5	93.9 - 104.0	90.9 to < 93.9	< 90.9	> 104.0

2CC01PA Test Data

Current Reference Value = 103

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
25-Apr-06	5200.0	102.5	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
23-Jan-06	5150.0	103.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
24-Oct-05	5330.0	100.5	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
25-Jul-05	5182.0	103.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
26-Apr-05	5318.0	101.5	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
28-Jan-05	5153.0	104.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
27-Jul-04	5150.0	102.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
28-Apr-04	5227.0	99.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
27-Jan-04	5256.0	100.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
28-Oct-03	5215.0	98.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
29-Jul-03	5238.0	101.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
29-Apr-03	5276.0	97.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
25-Jan-03	5252.0	101.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
29-Oct-02	5182.0	97.5	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
30-Jul-02	5296.0	98.5	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1
31-May-01	5155.0	100.0	95.8 - 106.1	92.7 to < 95.8	< 92.7	> 106.1

Enclosure A
Component Cooling Water Pump Comprehensive Test Data

2CC01PB Test Data

Current Reference Value = 105

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
10-Apr-06	5133.0	103.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
12-Jan-06	5120.0	103.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
01-Nov-05	5136.0	107.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
12-Jul-05	5099.0	105.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
12-Apr-05	5114.0	105.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
11-Jan-05	5119.0	106.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
12-Oct-04	5072.0	108.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
15-Jul-04	5170.0	102.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
16-Apr-04	5210.0	100.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
13-Jan-04	5108.0	101.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
14-Oct-03	5212.0	101.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
14-Jul-03	5196.0	101.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
15-Apr-03	5220.0	100.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
09-Jan-03	4612.0	101.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
14-Oct-02	4562.0	101.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
14-May-01	5100.0	102.0	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2
20-Feb-01	4180.0	99.5	97.7 - 108.2	94.5 to < 97.7	< 94.5	> 108.2

Enclosure B
Control Room Chilled Water Pump Comprehensive Test Data

OWO01PA Test Data

Current Reference Value = 63

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
28-Apr-06	570.0	63.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
25-Jan-06	575.0	63.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
26-Oct-05	572.5	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
27-Jul-05	575.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
25-Apr-05	572.0	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
28-Jan-05	574.0	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
28-Oct-04	578.0	61.5	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
29-Jul-04	575.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
27-Apr-04	572.0	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
20-Jan-04	577.0	65.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
20-Oct-03	565.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
25-Jul-03	567.0	60.5	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
05-May-03	565.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
23-Jan-03	573.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
21-Oct-02	572.0	61.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
29-May-01	576.0	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9
05-Mar-01	565.0	62.0	58.6 - 64.9	56.7 to < 58.6	< 56.7	> 64.9

OWO01PB Test Data

Current Reference Value = 62

Test Date	Flow Rate (set)	Differential Pressure	Acceptable Range	Alert Range	Required Action Range - Low	Required Action Range - High
02-May-06	567.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
02-Feb-06	570.0	65.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
01-Nov-05	570.0	65.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
14-Jul-05	565.0	64.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
14-Apr-05	565.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
10-Jan-05	565.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
12-Oct-04	565.0	63.5	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
14-Jul-04	572.0	64.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
13-Apr-04	570.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
03-Jan-04	565.0	64.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
06-Nov-03	567.0	64.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
16-Jul-03	567.0	64.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
14-Apr-03	565.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
13-Jan-03	565.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
07-May-01	572.5	62.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9
23-Jan-01	568.0	63.0	57.7 - 63.9	55.8 to < 57.7	< 55.8	> 63.9