

October 27, 2005

EA-05-159

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION - NOTICE OF VIOLATION
[NRC OFFICE OF INVESTIGATIONS REPORT NO. 3-2005-008]

Dear Mr. Crane:

This refers to information provided by Exelon Nuclear (Exelon) to the U.S. Nuclear Regulatory Commission (NRC) on February 17, 2005, that an engineer at the Byron Station did not perform assigned surveillances of safety-related ventilation systems and the engineer also falsified records associated with those inspections. A summary of the Office of Investigations (OI) report was provided to Exelon on August 18, 2005.

In the letter transmitting the OI report summary, we provided you the opportunity to address the apparent violations identified during the OI investigation by either attending a predecisional enforcement conference (PEC), requesting alternative dispute resolution (ADR), or submitting a written response before we made our final enforcement decision. You did not request a PEC or ADR and on September 16, 2005, Exelon provided a written response to the apparent violations.

Based on the information developed during investigations by Exelon and OI, and the information provided in your September 16, 2005 letter, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in the Exelon and OI investigation reports. In summary, the Byron Station Technical Specifications required field inspection and testing of the high efficiency particulate (HEPA) filters and charcoal absorbers and the verification of flow rates for specified ventilation systems at least once every operating cycle or at least once per 18 months (with a tolerance of plus 25%). From July 13, 2001, to January 13, 2005, an engineer at the Byron Station was assigned to conduct 27 separate

surveillances (inspecting and testing HEPA filters and charcoal absorbers and verification of flow rates) for several ventilation systems including the Control Room Ventilation System, the Non-Accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenums. During the investigation into the matter, the engineer indicated that he did not perform the required surveillances and he entered false information into computerized reports concerning the completion status of the surveillances because he felt overwhelmed by his workload and he did not want to disappoint his managers. The engineer also falsified information on work orders concerning completion of his assigned work, and the engineer signed the name of other individuals to work orders to indicate that his work had been reviewed. Following discovery of the violations, the licensee performed the 27 surveillances that had been assigned to the engineer and the results for 6 of the 27 surveillances failed to meet the Technical Specification-defined acceptance criteria.

The engineer's failure to perform the assigned surveillances of the ventilation systems caused Exelon to be in violation of the Byron Station Technical Specifications. By providing false information regarding the surveillances, the engineer also caused Exelon to be in violation of 10 CFR 50.9, "Completeness and Accuracy of Information." The surveillance information is material to the NRC as the information is used to determine compliance with the Byron Station Technical Specifications. The failure to perform the Technical Specification-required surveillances and the falsification of the surveillance records are deliberate violations and are categorized collectively in accordance with the NRC Enforcement Policy as a Severity Level III problem. The activities of the engineer also placed himself in violation of 10 CFR 50.5, "Deliberate Misconduct."

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$60,000 was considered for this Severity Level III problem.¹ Because this was a deliberate violation, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. Credit was warranted for the *Identification* civil penalty adjustment factor because Exelon identified the violations. Credit was also warranted for the *Corrective Action* adjustment factor for corrective measures that included: (1) taking disciplinary action; (2) improving supervisory oversight in the Plant Engineering Department; (3) adding management and process controls to monitor surveillance testing; and (4) addressing resource management by developing a strategy for personnel changes.

¹ The base civil penalty amount for a Severity Level III problem occurring prior to November 25, 2004, was \$60,000. This amount was increased to \$65,000 on November 26, 2004 (69 Federal Register 206, October 26, 2004, page 62485). Since the period of the violations was from June 13, 2001, to February 24, 2005, the NRC considered the lesser amount, \$60,000, to be the base civil penalty applicable to this enforcement action.

Therefore, to encourage prompt identification and comprehensive correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance was achieved is already adequately addressed on the docket in your September 16, 2005, letter. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, of if you choose to provide additional information, you should follow the instructions specified in the Enclosed Notice.

Please feel free to contact Richard Skokowski, Chief, Reactor Projects Branch 3. Mr. Skokowski can be contacted at (630) 829-9620.

If you disagree with this enforcement sanction you may request ADR with the NRC in an attempt to resolve this issue. Alternative dispute resolution is a general term encompassing various techniques for resolving conflict outside of court using a neutral third party. The technique that the NRC has decided to employ during a pilot program which is now in effect is mediation. Additional information concerning the NRC's pilot program is described in the enclosed brochure (NUREG/BR-0317) and can be obtained at <http://www.nrc.gov/what-we-do/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as an intake neutral. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to respond, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or

safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at www.nrc.gov; select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

Sincerely,

/by Geoffrey E. Grant Acting for/

James L. Caldwell
Regional Administrator

Docket Nos. 50-454; 50-455
License Nos. NPF-37; NPF-66

- Enclosures: 1. Notice of Violation
2. NUREG/BR-0317, "Post-Investigation ADR Program"

- cc w/encl 1: Site Vice President - Byron Station
Plant Manager - Byron Station
Regulatory Assurance Manager - Byron Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission
B. Quigley, Byron Station

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NAME	Weil		Luehman		Berson		Satorius		O'Brien		Grant for Caldwell	
DATE	10/27/05		10/27/05		10/27/05		10/27/05		10/27/05		10/27/05	

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¹Robert Fretz, OE, provided HQ concurrence for OE, NRR and OGC by e-mail dated October 27, 2005.

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Resident Inspector

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R. Paul, RIII:OI

E. Richards, RIII:OI

N. Hane, RIII:OI

R. Skokowski, RIII

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R. Lickus, RIII

J. Lynch, RIII

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NOTICE OF VIOLATION

Exelon Nuclear
Byron Station
Units 1 and 2

Docket Nos. 50-454; 50-455
Licenses Nos. NPF-37; NPF-66
EA-05-159

During an NRC investigation completed on May 11, 2005, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Technical Specification (TS) Surveillance Requirements 3.7.10.2, 3.7.12.2, and 3.7.13.2 provide, in part, that the Control Room Ventilation (VC) Filtration System, the Non-accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenum (FHB) Ventilation System, respectively, be tested in accordance with the Ventilation Filter Testing Program.

Technical Specification 5.5.11, "Ventilation Filter Testing Program," provides, in part, that High Efficiency Particulate Air (HEPA) filters and charcoal absorbers be tested in conformance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1980.

Section C.5 of Regulatory Guide 1.52, Revision 2, March 1978, "Design, Testing and Maintenance Criteria for Post Accident Engineered-Safety-Related Atmosphere Cleanup System Air Filtration and Absorption Units of Light Water Cooled Nuclear Power Plants," provides, in part, that HEPA filter sections should be tested at least once per 18 months.

Section 4 of ANSI/ASME N510-1980, "Testing of Nuclear Air-Cleaning Systems," provides, in part, that field inspection and testing of the air cleaning system are an integral part of the Quality Assurance Program and are conducted at the recommended minimum frequency shown in Table 1. Table 1 of ANSI/ASME N510-1980 provides, in part, that in-place leak tests of HEPA filters and absorbers and laboratory testing of absorbents are conducted at least once every operating cycle.

Byron Station Technical Requirements Manual (TRM) Appendix K, "Ventilation Filter Testing Program," implements the requirements of Byron Station TS 3.7.10.2, 3.7.12.2, 3.7.13.2, Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1980. Section 1.5 Appendix K, "Technical Section Filter Testing, Inspection and Repair," provides, in part, that HEPA filters and charcoal absorber banks are tested and flow rates verified at least once per 18 months (+ 25% tolerance) for the Control Room Ventilation Filtration System, the Non-accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenum Ventilation System.

Contrary to the above, the Control Room Ventilation System, the Non-accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenum Ventilation System were not tested at least once every operating cycle or at least once per 18 months (+ 25% tolerance) in accordance with the Ventilation Filter Testing Program, as evidenced by the following examples:

1. From July 13, 2001, to January 27, 2005, laboratory testing of charcoal filter absorbers was not performed for Train C of the Non-accessible Area Exhaust Filter Plenum Ventilation Filter System as required by TS 5.5.11c, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
 2. From February 4, 2002, to February 19, 2005, flow rate verification and pressurization testing was not performed for Train A of the Control Room Ventilation System as required by TS 5.5.11a, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
 3. From February 11, 2002, to February 23, 2005, flow rate verification and pressurization testing was not performed for Train B of the Control Room Ventilation System as required by TS 5.5.11a, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
 4. From February 12, 2002, to February 24, 2005, bypass leakage testing of the Control Room Ventilation System, Train B, recirculation charcoal absorber bank was not performed as required by TS 5.5.11b, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
 5. From July 7, 2002, to February 24, 2005, bypass leakage testing of the Control Room Ventilation System, Train B, make-up charcoal absorber bank was not performed as required by TS 5.5.11b, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
 6. From October 11, 2002, to January 25, 2005, laboratory testing of charcoal filter absorbers for the Fuel Handling Building Exhaust Ventilation System, Train B, was not performed as required by TS 5.5.11c, a period in excess of one operating cycle or once every 18 months (+ 25% tolerance).
- B. Technical Specification (TS) Surveillance Requirements 3.7.10.2, 3.7.12.2, and 3.7.13.2 provide, in part, that the Control Room Ventilation (VC) Filtration System, the Non-accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenum (FHB) Ventilation System, respectively, be tested in accordance with the Ventilation Filter Testing Program.

Technical Specification 5.5.11, "Ventilation Filter Testing Program," provides, in part, that HEPA filters and charcoal absorbers be tested in conformance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1980.

Section 4 of ANSI/ASME N510-1980, "Testing of Nuclear Air-Cleaning Systems," provides, in part, that field inspection and testing of the air cleaning system are an integral part of the Quality Assurance Program and are conducted at the recommended

minimum frequency shown in Table 1. Table 1 of ANSI/ASME N510-1980 provides, in part, that in-place leak tests of HEPA filters and absorbers and laboratory testing of absorbents are conducted at least once every operating cycle.

Byron Station Technical Requirements Manual (TRM) Appendix K, "Ventilation Filter Testing Program," implements the requirements of Byron Station TS 3.7.10.2, 3.7.12.2, 3.7.13.2, Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1980. Section 1.5 Appendix K, "Technical Section Filter Testing, Inspection and Repair," provides, in part, that HEPA filters and charcoal absorber banks are tested and flow rates verified at least once per 18 months (+ 25% tolerance) for the Control Room Ventilation Filtration System, the Non-accessible Area Exhaust Filter Plenum Ventilation System, and the Fuel Handling Building Exhaust Filter Plenum Ventilation System.

10 CFR 50.9, provides, in part, that information required by the Commission's regulations, orders, or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

10 CFR Part 50, Appendix B, Criterion XVII, provides, in part, that the licensee maintain sufficient records to furnish evidence of activities affecting quality and those records shall include inspection and test records.

Contrary to the above, records of surveillances required by Byron Station TS 3.7.10.2, 3.7.12.2, 3.7.13.2 and 5.5.11 were not complete and accurate in all material respects, as evidence by the following examples:

1. On October 11, 2002, the engineer signed work order (WOP) No. 99267951-01 indicating the surveillance was complete for the Non-accessible Exhaust Filter Plenum HEPA filters. Also on October 11, 2002, the engineer signed the name of another individual to WOP No. 99267951-01 certifying that the completed work was reviewed.
2. On October 11, 2002, the engineer signed WOP No. 99267980-01 indicating verification of total bypass leakage was complete for the Non-Accessible Exhaust Filter Plenum. Also on October 11, 2002, the engineer signed the name of another individual to WOP No. 99267980-01 certifying that the completed work was reviewed.
3. On October 11, 2002, the engineer signed WOP No. 99267982-01 indicating the surveillance was complete for the Non-accessible Exhaust Filter Plenum charcoal absorber. Also on October 11, 2002, the engineer signed the name of another individual to WOP No. 99267981-01 certifying that the completed work was reviewed.

4. On July 29, 2003, the engineer signed WOP No. 00388374-01 indicating testing was complete for the Non-accessible Exhaust Filter Plenum carbon sample. On August 5, 2003, the engineer signed the name of another individual to WOP No. 00388374-01 certifying that the completed work was reviewed.
5. On October 27, 2003, the engineer signed WOP No. 00411597-01 indicating the surveillance was complete for the Fuel Handling Building Exhaust System. Also on October 27, 2003, the engineer signed the name of another individual to WOP No. 00411597-01 certifying that the completed work was reviewed.
6. On November 17, 2003, the engineer signed WOP No. 00442687-02 indicating the surveillance was complete for the Fuel Handling Building Exhaust Ventilation System charcoal absorber. Also on November 17, 2003, the engineer signed the name of another individual to WOP No. 0044-2687-02 certifying the completed work was reviewed.
7. On November 19, 2003, the engineer signed WOP No. 00408798-01 indicating the surveillance of the flowrate and pressure was complete for the Control Room Ventilation System. On November 20, 2003, the engineer signed the name of another individual to WOP No. 00408798-01 certifying the completed work was reviewed.
8. On December 8, 2003, the engineer signed Work Order Package (WOP) No. 00463398-01 indicating the analysis was complete for the Control Room HVAC System carbon sample. Also on December 8, 2003, the engineer signed the name of another individual to WOP No. 00463398-01 certifying the completed work was reviewed.
9. On December 11, 2003, the engineer signed WOP No. 00445743-01 indicating the analysis was complete for the Control Room Recirculation, Train B, carbon sample. Also on December 11, 2003, the engineer signed the name of another individual to WOP No. 00445743-01 certifying the completed work was reviewed.

This information is material to the NRC because the NRC uses the information to determine compliance with the Byron Station Technical Specifications.

This is a Severity Level III problem (Supplements I and VII).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in a September 16, 2005, letter from Exelon Nuclear. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not

accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-05-159," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator and the Enforcement Officer, Region III, and a copy to the NRC Resident Inspector at the Byron Station.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 27th day of October 2005