



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

July 17, 2012

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: BYRON STATION, UNIT NOS. 1 AND 2, AND BRAIDWOOD STATION,
UNITS 1 AND 2 – SUPPLEMENTAL INFORMATION NEEDED FOR
ACCEPTANCE OF REQUESTED LICENSING ACTION RE: AMENDMENT
REGARDING DIESEL GENERATOR STEADY STATE MAXIMUM FREQUENCY
AND ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE CHANGE
TRAVELER, TSTF-501 (TAC NOS. ME8543, ME8544, ME8545, AND ME8546)**

Dear Pacilio:

By letter dated May 1, 2012, Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request (LAR) for Byron Station, Unit Nos. 1 and 2 and Braidwood Station, Units 1 and 2 (Byron and Braidwood). The proposed LAR would modify Technical Specification (TS) 3.8.1, "AC [alternating current] Sources – Operating," to lower the high end of the allowed range for steady state diesel generator (DG) frequency. The proposed LAR will also align TS 3.8.1 with TS 3.8.3, "Diesel Fuel Oil," fuel volume requirements and permit fuel consumption calculations to utilize the high end of the range for steady state DG frequency.

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this LAR. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including TSs) must fully describe the changes requested and following, as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the NRC staff to make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that Exelon supplement the application to address the information requested in the enclosure in 13 days from the date of this letter. This will enable the NRC staff to begin its detailed technical review. If the

M. Pacilio

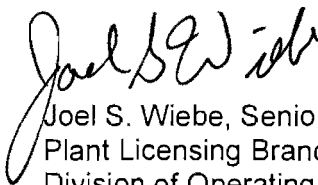
- 2 -

information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with your staff on June 27, 2012.

If you have any questions, please contact me at (301) 415-6606.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel S. Wiebe". The signature is fluid and cursive, with the first name "Joel" being the most prominent.

Joel S. Wiebe, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456, STN 50-457,
STN 50-454 and STN 50-455

Enclosure:
Supplemental Information Request

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED

AMENDMENT REQUEST

EXELON GENERATION COMPANY, LLC

BYRON STATION, UNIT NOS. 1 AND 2

BRAIDWOOD STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-456, STN 50-457, STN 50-454 and STN 50-455

- (1) Provide details on performance capabilities of accident mitigation equipment (pumps, motors, valves, etc.) when the emergency diesel generator is operating at the lower end of the allowable voltage and frequency bands during design basis events.
- (2) The LAR states that Byron and Braidwood units are currently in compliance with Regulatory Guide (RG) 1.9, Revision 3. This revision of the RG has relaxed requirements for diesel generator (DG) voltage and frequency tolerances during DG load sequencing. Verify that motor operated valve performance is not adversely impacted (accident analyses) at the lower end of the technical specifications allowable frequency coupled with the frequency/voltage variations allowed in RG 1.9, Revision 3.
- (3) The upper end of allowable voltage for steady state operation is 4580V. Verify that voltage spikes observed during full load rejection testing at given power factor and initial voltage of 4580V will not adversely impact the DG or any other safety grade equipment.
- (4) The lower end of the allowable voltage is 3950V. Verify that the minimum voltage observed during load sequencing or large motor starts will not adversely impact equipment that was running with DG nominal voltage at 3950V.
- (5) The torque speed curves of induction motors are dependent on system frequency. Verify that DG loading is within the capabilities of the DG at the onset of an event when the pumps may be operating at run out conditions and during steady state conditions with the DG operating at upper end of allowable voltage and frequency.

Enclosure

information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with your staff on June 27, 2012.

If you have any questions, please contact me at (301) 415-6606.

Sincerely,

/ RA /

Joel S. Wiebe, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456, STN 50-457,
STN 50-454 and STN 50-455

Enclosure:
Supplemental Information Request

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC

Branch Reading File
RidsAcrsAcnw_MailCTR Resource
RidsNrrDeEeeb Resource
RidsNrrDorlDpr Resource
RidsNrrPMJWiebe Resource

RidsNrrDorl Resource
RidsRgn3MailCenter Resource
RidsOgcRp Resource
RidsNrrDorlLpl3-2 Resource
RidsNrrLASRohrer Resource

ADAMS Accession No. ML12195A147

| | | | |
|--------|--------------------|--------------------|----------------|
| OFFICE | NRR/DORL/LPL3-2/PM | NRR/DORL/LPL3-2/LA | NRR/DE/EEEE/BC |
| NAME | JWiebe | SRohrer | JAndersen |
| DATE | 7/17 /12 | 7/ 16 /12 | 7/ 17 /12 |
| OFFICE | NRR/DORL/LPL3-2/BC | NRR/DORL/LPL3-2/PM | |
| NAME | JZimmerman | JWiebe | |
| DATE | 7/17 /12 | 7/ 17 /12 | |

OFFICIAL RECORD COPY