UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

July 12, 2012

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Office (CNO), Exelon Nuclear
4300 Warrenville Road
Warrenville, IL 60555

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR EXELON GENERATION COMPANY, LLC REGARDING BRAIDWOOD STATION [TAC NO(S) ME9010 / ME9011, BRAIDWOOD - NOED NO. 12-3-001 – TS 3.7.9 ULTIMATE HEAT SINK AVERAGE WATER TEMPERATURE LIMIT]

Dear Mr. Pacilio:

By your letter dated July 10, 2012, you requested that the U.S. Nuclear Regulatory Commission (NRC) exercise discretion to not enforce compliance with the actions required in Technical Specification (TS) 3.7.9, "Ultimate Heat Sink – Operating" Required Action A.1, for Braidwood Station. The letter documented information previously discussed with the NRC in a telephone conference on July 7, 2012, at 4:30 p.m. (All times discussed in this letter refer to Central Daylight Time)

On July 7, 2012, at 3:56 p.m., the plant was implementing TS 3.7.9 involving Surveillance Requirement (SR) 3.7.9.2 that verifies average water temperature of the Ultimate Heat Sink (UHS) to be less than or equal to 100 degrees Fahrenheit (ºF). Temperature of the UHS, measured at the discharge of the running essential service water (SX) pumps exceeded 100ºF, which required both units shut down to Mode 3 per Required Action A.1 within 6 hours.

You requested that a Notice of Enforcement Discretion (NOED) be granted pursuant to the NRC's policy regarding exercise of discretion for an operating facility, as set forth in Section 3.8 of the NRC's Enforcement Policy, to allow an extension of TS 3.7.9 Required Action A.1 completion time by 18 additional hours and to increase the limit on the average water temperature of the UHS requirement in SR 3.7.9.2 from less than or equal to 100ºF to less than or equal to 102ºF for a period of 24 hours (i.e. effective until July 8, 2012 at 3:56 p.m.). Enforcement discretion was requested to provide sufficient time for UHS water temperatures to subside following a sustained period of hot weather.

This letter documents our telephone conversation on July 7, 2012, at 4:30 p.m., when we orally granted enforcement discretion. We understand that the condition causing the need for this NOED no longer exists causing you to exit from this NOED on July 8, 2012, at 3:55 a.m.

The principal NRC staff members who participated in that telephone conference included Steven Reynolds, Director, Division of Reactor Safety, Region III (RIII); Eric Duncan, Branch Chief, Division of Reactor Projects, RIII; Steven Orth, Enforcement/Investigations Officer, RIII; Nick Valos, Senior Reactor Analyst, RIII; Alex Garmoe, Braidwood Resident Inspector, RIII; Louise Lund, Deputy Director, Division of Operator Licensing (DORL), Nuclear Reactor Regulation (NRR); James Andersen, Branch Chief, Electrical Engineering Branch, NRR; Greg Casto, Branch Chief, Balance of Plant Branch, NRR; John Thorp, Branch Chief, Instrumentation & Controls Branch, NRR; Eva Brown, Senior Project Manager, NRR; Matthew Hamm, Reactor Systems Engineer, NRR; Michael Mahoney, Project Manager, NRR; Samuel Miranda, Senior Reactor Systems Engineer, Reactor System Branch, NRR; Gerard Purciarello, Senior Reactor System Engineer, NRR; Richard Stattel, Senior Electronics Engineer, Instrumentation & Controls Branch, NRR; Sheldon Stuchell, Senior Project Manager, Licensing Processes Branch, NRR; and See-Meng Wong, Senior Reactor Analyst, PRA Operations Support Branch, NRR.

You stated that from July 4, 2012, through July 6, 2012, prolonged hot weather in the area resulted in sustained elevated UHS temperatures. High temperatures during the daytime in conjunction with the little cooling at night and little precipitation resulted in elevated water temperatures in Braidwood Station's UHS. You also stated that there were no controllable measures that could be taken to immediately reduce the temperature of the UHS, in that, reduction of the heat input by derating the units would have a negligible short-term effect on the temperature of the UHS. At the time, you asserted that weather forecasts and lake temperature modeling indicated that the UHS temperature excursion above 100ºF would end prior to midnight Saturday, July 7, 2012, due primarily to environmental temperature moderating to the mid 80ºF range and an increase in local wind.

Exelon requested this NOED after consideration of the safety significance and potential consequences of extending the TS completion time and operating at an elevated average UHS temperature. Exelon staff performed a risk assessment of operating Braidwood during the 18-hour period of this NOED with an elevated UHS temperature of up to 102ºF. This assessment concluded that this NOED would result in no net increase in radiological risk to the public. You also stated that the requested NOED meets criteria specified in Section B of the Inspection Manual Part 9900 for an operating plant. This request is based on the avoidance of an undesirable transient caused by the shutdown of the reactor as a result of forcing compliance with Technical Specifications and thus minimizes potential safety consequences and operational risks associated with a plant shutdown. This assessment was independently corroborated by NRC analysts.

To further mitigate risk, Braidwood Station committed to implement a series of compensatory actions for the duration of the enforcement discretion period. These actions include:

- No additional equipment included in the Station Configuration Risk Management Program would be removed from service for planned maintenance activities until the NOED condition was exited, with the exception of the below-listed equipment.

  Equipment that would remain removed from service were as follows:
  - Auxiliary Building Exhaust Fan, 0VA02CA
  - Auxiliary Building Ventilation Damper, 0VA305Y
  - Unit 1 Station Air Compressor, 1SA01C

- No switchyard work beyond that necessary to clear any emergent fault.

- The following systems would be protected in accordance with procedure WC-AA-101, "On-line Work Control Process," and OP-AA-108-117, "Protected Equipment Program," to limit the impact to Unit operation following a loss of condenser initiating event:
    - Circulating Water pumps and flow path
    - Condenser Air Removal (steam jet air ejectors and vacuum hogging pumps)
    - Support systems for the above (power, cooling controls)

  In addition, the following protected equipment is already protected or would be protected to maintain defense in depth and would remain so for the duration of the NOED:
    - Offsite Power Line 0103 and 0104
    - 1A Containment Chiller
    - 2B Containment Chiller
    - Unit 1 and 2 Spent Fuel Pool Cooling
    - All SX pumps and flow paths
    - All Component Cooling Water pumps and flow paths
    - All Auxiliary Feedwater pumps and flow paths

- Ventilation equipment, with the exception of 0VA02CA and 0VA305Y (which were already removed from service), would remain available.

- Operational risk activities on both units would not be allowed during the duration of the NOED condition.

- SX pump discharge temperatures would be monitored every hour on each running SX pump locally using precision temperature instrumentation. This would be controlled via Operations Standing Order.

- Unit 2 Refueling Water Storage Tank water temperature would be monitored every six hours to ensure it remains less than or equal to 95^{o}F via Operations Standing Order.

- Both Chemical and Volume Control letdown heat exchangers would be online for each unit.

- Nuclear Oversight would implement oversight of the NOED activities.

On the basis of the staff's evaluation of your request, we have concluded that granting this NOED is consistent with the Enforcement Policy and staff guidance, and has no adverse impact on public health and safety or the environment. Therefore, it is our intention to exercise discretion to not enforce compliance with TS 3.7.9 Required Action A.1 for the period from July 7, 2012, at 9:56 p.m. until July 8, 2012, at 3:56 p.m. provided that the average temperature of the UHS remains below 102ºF. The enforcement discretion granted was modified from the licensee's request since the licensee had already entered TS 3.7.9 Condition A when the NOED request was officially made. This modification was communicated to the licensee during the telephone conference on July 7, 2012.

In addition, as discussed on July 7, 2012, the NRC staff agreed with Exelon's determination that a follow-up TS amendment was not needed because the conditions requiring the requested NOED were not typical and had not occurred in the past 12 years since a license amendment was implemented to increase the UHS temperature limit to 100ºF. Currently available equipment margins and in one case operational compensatory actions were required to support operation of the UHS up to 102°F. Imposing these reduced margins and operational compensatory actions as design basis conditions was not supportive of maintaining operational margins.

As stated in the Enforcement Policy, action will be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/

Gary Shear, Acting Director
Division of Reactor Projects, Region III

Docket Nos. 50-456 and 50-457
License Nos. NPF-72 and NPF-77

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In addition, as discussed on July 7, 2012, the NRC staff agreed with Exelon's determination that a follow-up TS amendment was not needed because the conditions requiring the requested NOED were not typical and had not occurred in the past 12 years since a license amendment was implemented to increase UHS temperature to 100ºF. Currently available equipment margins and in one case operational compensatory actions were required to support operation of the UHS up to 102°F. Imposing these reduced margins and operational compensatory actions as design basis conditions was not supportive of maintaining operational margins.

As stated in the Enforcement Policy, action will be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/
Gary Shear, Acting Director
Division of Reactor Projects, Region III

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