UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

October 19, 2017

Mr. Bryan C. Hanson
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: NINE MILE POINT NUCLEAR STATION - TEMPORARY INSTRUCTION 2515/191 INSPECTION REPORT 05000220/2017008 AND 05000410/2017008

Dear Mr. Hanson:

The enclosed report documents the inspection results, which were discussed on August 25, 2017, with Mr. Jim Tsardakas, Director Site Training, and other members of your staff. An exit was conducted with Mr. Dennis M. Moore, Regulatory Assurance Manager, via telephone on September 13, 2017, to discuss the final results of the inspection. The results of this inspection are documented in the enclosed report.

The inspection examined activities conducted under your licenses as they relate to the implementation of mitigation strategies and spent fuel pool instrumentation orders (EA-12-049 and EA-12-051) and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans, your compliance with the Commission's rules and regulations, and with the conditions of your operating licenses. Within these areas, the inspection involved examination of selected procedures and records, observation of activities, and interviews with plant personnel.

Based on the results of this inspection, no violations of NRC requirements were identified.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Anne E. DeFrancisco, Acting Chief
Technical Support and Assessment Branch
Division of Reactor Projects

Docket Nos. 50-220 and 50-410
License Nos. DPR-63 and NPF-69

Enclosure:
Inspection Report 05000220/2017008 and
05000410/2017008
w/Attachment: Supplementary Information

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SUBJECT: NINE MILE POINT NUCLEAR STATION - TEMPORARY INSTRUCTION 2515/191 INSPECTION REPORT 05000220/2017008 AND 05000410/2017008 DATED OCTOBER 19, 2017

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REGION I

Docket Nos.	50-220 and 50-410
License Nos.	DPR-63 and NPF-69
Report No.	05000220/2017008 and 05000410/2017008
Licensee:	Exelon Generation Company, LLC (Exelon)
Facility:	Nine Mile Point Nuclear Station, LLC (NMPNS) Units 1 and 2
Location:	Oswego, New York
Dates:	August 21 – 25, 2017
Inspectors:	F. Arner, Senior Reactor Analyst, Division of Reactor Safety (DRS) T. Dunn, Operations Engineer, DRS G. Stock, Resident Inspector, Division of Reactor Projects
Approved by:	Anne E. DeFrancisco, Acting Chief Technical Support and Assessment Branch Division of Reactor Projects

SUMMARY

Inspection Report 05000220/2017008 and 05000410/2017008; 08/21/2017 – 08/25/2017; NMPNS, Units 1 and 2; Temporary Instruction (TI) 2515/191, Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans.

The inspection covered a one week inspection by a senior reactor analyst, an operations engineer, and a resident inspector. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA5 Other Activities

TI 2515/191 – Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/ Multi-Unit Dose Assessment Plans

The objective of TI 2515/191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans," is to verify: (1) that licensees have adequately implemented the mitigation strategies as described in the licensee's Final Integrated Plan (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML15163A097, ML16188A265 and ML16188A271) and the NRC's plant safety evaluation (ADAMS Accession No. ML17009A141); (2) that the licensees installed reliable water-level measurement instrumentation in their spent fuel pools (SFPs); and (3) that licensees have implemented emergency preparedness enhancements as described in their site-specific submittals and NRC safety assessments, including dose assessment capability, enhancements to ensure that staffing is sufficient, and that communications can be maintained during beyond-design-basis external events.

The team verified that plans for complying with NRC Orders EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design Basis External Events," (ADAMS Accession No. ML12054A735) and EA-12-051, "Order Modifying Licenses With Regard to Reliable Spent Fuel Pool Instrumentation," (ADAMS Accession No. ML12056A044) were in place and were being implemented by Exelon. The team also verified that Exelon had implemented staffing and communications plans provided in response to the March 12, 2012, request for information letter and dose assessment information provided per COMSECY-13-0010, "Schedule and Plans for Tier 2 Order on Emergency Preparedness for Japan Lessons Learned," dated March 27, 2013 (ADAMS Accession No. ML12339A262).

The team discussed the plans and strategies with Exelon personnel, reviewed documentation, completed a tabletop exercise involving a beyond design basis event leading to an extended loss of offsite power and, where appropriate, performed plant walk downs to verify that the strategies could be implemented as stated in Exelon's submittals and the NRC staff prepared safety evaluation. For most strategies, this included verification that the strategy was feasible, procedures and/or guidance had been developed, training had been provided to plant staff, and required equipment had been identified and staged. Specific details of the team's inspection activities are described in the following sections. Documents reviewed for each section of this report are listed in the Attachment.

1. Mitigation Strategies for Beyond-Design Basis External Events

a. Inspection Scope

The team examined Exelon's established guidelines and implementing procedures for the beyond-design-basis mitigation strategies. The team assessed how the Exelon staff coordinated and documented the interface/transition between existing off-normal and

emergency operating procedures with the newly developed mitigation strategies. The team selected a number of mitigation strategies and conducted plant walk downs with licensed operators and responsible plant staff to assess: the adequacy and completeness of the procedures; familiarity of operators with the procedure objectives and specific guidance; staging and compatibility of equipment; and the practicality of the operator actions prescribed by the procedures, consistent with the postulated scenarios.

The team verified that a preventive maintenance program had been established for the Diverse and Flexible Coping Strategies (FLEX) portable equipment and that periodic equipment inventories were in place and being conducted. Additionally, the team examined the introductory and planned periodic/refresher training provided to the Exelon staff most likely to be tasked with implementation of the FLEX mitigation strategies. The team also reviewed the introductory and planned periodic training provided to the Emergency Response Organization personnel.

Assessment

Based on samples selected for review, the inspectors verified that Exelon satisfactorily implemented appropriate elements of the FLEX strategy as described in the plant specific submittal(s) and the associated safety evaluation (ADAMS Accession No. ML17009A141) and determined that Exelon was in compliance with NRC Order EA-12-049.

The team verified that Exelon satisfactorily:

- Developed and issued FLEX Support Guidelines (FSGs) to implement the FLEX strategies for postulated external events;

- Integrated their FSGs into their existing emergency operating procedures and off-normal procedures such that entry into and departure from the FSGs are clear when using existing plant procedures;

- Protected FLEX equipment from site-specific hazards;

- Developed and implemented adequate testing and maintenance of FLEX equipment to ensure their availability and capability;

- Trained their staff to assure personnel proficiency in the mitigation of beyond-design-basis events, and;

- Developed procedures to ensure that the necessary off-site FLEX equipment will be available from off-site locations.

The team verified that inspector observations identified during the inspection were entered into Exelon's corrective action program, where appropriate.

b. Findings

No findings were identified.

2. Spent Fuel Pool Instrumentation

a. Inspection Scope

Assessment

Based on samples selected for review, the team determined that Exelon satisfactorily installed and established appropriate operating and maintenance controls for the SFP instrumentation as described in the plant specific submittals and the associated safety evaluation. The team determined that Exelon was in compliance with NRC Order EA-12-051.

The team verified that Exelon satisfactorily:

- Installed the SFP instrumentation sensors, cabling, and power supplies to provide physical and electrical separation as described in the plant specific submittals and safety evaluation;

- Installed the SFP instrumentation display in the accessible location, and environmental conditions as described in the plant specific submittals;

- Trained their staff to assure personnel proficiency with the maintenance, testing, and use of the SFP instrumentation; and,

- Developed and issued procedures for maintenance, testing, and use of the reliable SFP instrumentation.

The team verified that issues identified during the inspection were entered into Exelon's corrective action program.

b. Findings

No findings were identified.

3. Staffing and Communication Request for Information

a. Inspection Scope

Through discussions with plant staff, review of documentation, and plant walk downs, the team verified that Exelon had implemented required changes to staffing, communications equipment, and facilities to support an extended loss of all AC power (ELAP) scenario as described in Exelon's staffing assessment and the NRC safety evaluation. The team also verified that Exelon had implemented dose assessment (including releases from SFPs) capability using site-specific dose assessment software, as described in Exelon's dose assessment submittal.

Assessment

The team reviewed information provided in Exelon's dose assessment submittal and in response to the NRC's March 12, 2012, request for information letter (ML12053A340), and verified that Exelon satisfactorily implemented enhancements pertaining to Near-Term Task Force Recommendation 9.3, response to a large scale natural emergency event that results in an ELAP and impedes access to the site.

The team verified the following:

- Exelon satisfactorily implemented required staffing changes to support an ELAP scenario;
- Emergency preparedness communications equipment and facilities were sufficient for dealing with an ELAP scenario, and;
- Exelon implemented dose assessment capabilities (including releases from SFPs) using Nine Mile Point's site-specific dose assessment software and approach.

The team verified that issues identified during the inspection were entered into Exelon's corrective action program.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On August 25, 2017, the team debriefed the inspection results to Mr. Jim Tsardakas, Director Site Training, and other members of the Nine Mile Point Nuclear Station staff. An exit was conducted with Mr. Dennis M. Moore, Regulatory Assurance Manager via telephone on September 13, 2017, to discuss the final results of the inspection. The team verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel
R. Kreider, Plant Manager
D. Moore, Regulatory Assurance Manager
J. Thompson, Director Site Operations
M. Busch, Director Site Maintenance
M. Khan, Director Site Engineering
R. Pritchard, Regulatory Assurance
J. Tsardakas, Director Site Training
M. Checola, Senior Engineering Analyst
R. Corieri, Senior Design Engineer
B. Balzer, Unit 1 Operations Shift Supervisor
J. Revelle, Operations Support Manager
D. Morley, Senior Design Engineer
K. Yurkon, Site Emergency Planning Manager
W. Revelle, Senior Site Emergency Planning Specialist

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened and Closed
None

Discussed
None

LIST OF DOCUMENTS REVIEWED

Procedures
CC-AA-102, Design Input and Configuration Change Impact Screening, Revision 30
CC-AA-118, Diverse and Flexible Coping Strategies (FLEX) and Spent Fuel Pool Instrument Program Document, Revision 2
CC-NM-118-1002, Congested Area Plan Nine Mile Point Power Station, Revision 001
EP-AA-110-204, NMP Dose Assessment, Revision 001
EP-AA-112-100-F-52, Shift Dose Assessor Checklist, Revision B
EP-AA-112-400-F-62, Dose Assessor Checklist, Revision C
EP-AA-124-F-03, Site and Site-Specific EOF Communications 9.3 and EMNET Satellite Communications Systems Semi-annual Testing and Inventory, Revision B
EPA-15-10, NMP EP Aid, Revision 4
N1-DRP-FLEX-ELEC, Emergency Damage Repair – BDB/FLEX Generator Deployment Strategy, Revision 210
N1-DRP-FLEX-MECH, Emergency Damage Repair – BDB/FLEX Pump Deployment Strategy, Revision 500
N1-EOP-2, RPV Control, Revision 1600
N1-EOP-5, Secondary Containment Control - Flowchart, Revision 01500
N1-IPM-054-003, Fuel Pool Sludge Tank and Surge Tank Level Instrumentation, Revision 00700
N1-SOP-33A.2, Station Blackout/ELAP, Revision 01400
N2-DRP-FLEX-ELEC, Emergency Damage Repair – BDB/FLEX Generator Deployment Strategy, Revision 00200
N2-DRP-FLEX-MECH, Emergency Damage Repair - BDB/FLEX Pump Deployment Strategy, Revision 00300
N2-EOP-SC, Secondary Containment Control - Flowchart, Revision 01200

N2-IPM-SFC-001, Calibration of SFP Instrument Channel Loops 2SFC-LI413A, 2SFC-LI413B, and 2SFC-TI415, Revision 00000
N2-SOP-01, Station Blackout/Extended Loss of AC Power, Revision 01400
N2-SOP-02, Station Blackout/Extended Loss of AC Power Support Procedure, Revision 01100
N2-SOP-03, Loss of AC Power, Revision 01700
N2-SOP-38, Loss of Spent Fuel Pool Cooling, Revision 01100
OP-NM-102-106, Operator Response Time Program at NMP, Revision 007
SA-AA-127, Power Industrial Truck and Motor Vehicle Operation, Revision 13
S-DRP-OPS-005, Use of FLEX Phase 3 SAFER Equipment, Revision 00000
S-DRP-OPS-004, Refueling Diesel Driven Portable Equipment, Revision 00101
S-DRP-COMM, BDBEE Communication Procedure, Revision 00000
S-DRP-HC, DRP Hard Card Procedure, Revision 400
S-DRP-OPS-004, Refueling Diesel Driven Portable Equipment, Revision 101
S-PM-FLEX, FLEX Equipment Inventories and Checklists, Revision 500
S-PM-001, FLEX 3419MX Water Pump Test, Revision 100
S-PM-005, FLEX 3419MX Water Pump Performance Test, Revision 0
TQ-AA-113, ERO Training and Qualification, Revision 030
TQ-AA-150, Operator Training Programs, Revision 14
TQ-AA-174, Industrial Safety Training Program, Revision 4

Calculations
A10.1-A-016, Hydraulic Analysis of NMP2 FLEX Water Makeup to the RPV and SFP, Revision 0
EC-206, 600Vac FLEX Phase II Portable 450kW Diesel Generator Sizing Calculation, Revision 0

Completed Surveillances
S-PM-002, FLEX Diesel Air Compressor Test, performed 5/25/16
S-PM-001, FLEX 3419MX Water Pump Test, performed 5/24/16
S-PM-005, FLEX 3419MX Water Pump Performance Test, performed 9/28/16
S-PM-FLEX, FLEX Equipment Inventories and Checklists, performed 6/23/17

Issue Reports (*NRC Identified)

04045026*	04045085*	04045224*	04045360*	04045375*	04045384*
04045391*	04045397*	04045495*	04045702*	04025063	04020655
04020333	02720765	02720310	02685864	02677933	02673281
02665255	02653462				

Drawings
C18017C-001, ECP-13-001034, Revision 55
C18016C-001, ECP-13-001034, Revision 42

Modifications
ECP-13-000652-015-7-01, Design Consideration Summary Unit 2 Fukushima Spent Fuel Pool Level Monitoring System, Revision 1
ECP-13-000651-015-7-01, Design Consideration Summary Unit 1 Fukushima Spent Fuel Pool Level Monitoring System, Revision 1
ECP-14-000768, Design Consideration Summary ComLabs Unit 2, Revision 2
ECP-14-000767, Design Consideration Summary ComLabs Unit 1, Revision 2

Miscellaneous
Generic Basic FLEX Training (via NANTel) Revision 1
Generic Advanced FLEX Training (via NANTel) Revision 1
Vendor Technical Manual, Power Prime Pumps Operating Manual, N1P24755PUMP001 (N11792), Revision 0

Work Orders

C93170992	C93415260	C93193736	C93193761	C92872111	C92797434
C92754958	C92761893	C92721738			

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ELAP	Extended Loss of all AC Power
FLEX	Diverse and Flexible Coping Strategies
FSG	FLEX Support Guidelines
NRC	Nuclear Regulatory Commission, U.S.
SFP	Spent Fuel Pool
SOP	Special Operating Procedure
TI	Temporary Instruction