



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

September 1, 2015

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

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR LIMERICK GENERATING STATION,
UNITS 1 AND 2 (REPORT 05000352/2015005 AND 05000353/2015005)**

Dear Mr. Hanson:

On August 11, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of Limerick Generating Station Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2014 through June 30, 2015. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined that overall, Limerick Generating Station Units 1 and 2 operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined the performance at Limerick Units 1 and 2 during the most recent quarter was within the Licensee Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because all inspection findings had very low (i.e., green) safety significance, and all PIs indicated that your performance was within the nominal, expected range (i.e., green). Limerick Generating Station Units 1 and 2 had been in the Regulatory Response Column of the NRC's Reactor Oversight Process Action Matrix until the end of the first quarter in 2015, due to one or more Greater-than-Green finding(s) that resulted in an Action Matrix input to the security cornerstone beginning in the second quarter of 2014. Units 1 and 2 transitioned to the Licensee Response Column at the beginning of the second quarter 2015 after a supplemental inspection for the Greater-than-Green finding was successfully completed on March 20, 2015. The results for this inspection are documented in NRC Supplemental Inspection Report Numbers 05000352/2015405 and 05000353/2015405 (ADAMS Accession No. ML15114A074), and Assessment Follow-Up Letter (ML15114A092). Therefore, the NRC plans to conduct Reactor Oversight Process baseline inspections at your facility.

The enclosed inspection plan lists the inspections scheduled through June 30, 2017. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the second half of the inspection plan are tentative and may be revised at the end-of-cycle performance review. In addition to ROP baseline inspections, the NRC will perform Inspection Procedure (IP) 60855.1, "Operation of an Independent Spent Fuel Storage Installation (ISFSI) at Operating Plants," and Temporary Instruction (TI) TI 2515/190, "Inspection of the Licensee's Proposed Interim Actions as a Result of the Near-term Task Force Recommendation 2.1 Flooding Reevaluation." The NRC provides the inspection plan to allow

for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security-related inspections, which will be sent via separate, non-publicly available correspondence.

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. The onsite portion of the audit was completed at Limerick Generating Station Units 1 and 2, and the information gathered will aid staff in development of the Final Safety Evaluation for the site. After the NRC staff receives the Final Compliance letter for the site, the Final Safety Evaluation will be issued. Then, the NRC staff will confirm through inspections the full implementation of the orders mentioned above performing 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."

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Fred L. Bower, III at (610) 337-5200 with any questions you have regarding this letter.

Sincerely,

/RA/

Michael L. Scott, Director
Division of Reactor Projects

Docket Nos. 50-352, 50-353
License Nos. NPF-39, NPF-85

Enclosure: Inspection/Activity Plan

cc w/encl: Distribution via ListServ

for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security-related inspections, which will be sent via separate, non-publicly available correspondence.

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. The onsite portion of the audit was completed at Limerick Generating Station Units 1 and 2, and the information gathered will aid staff in development of the final Safety Evaluation for the site. After the NRC staff receives the Final Compliance letter for the site, the Final Safety Evaluation will be issued. Then, the NRC staff will confirm through inspections the full implementation of the orders mentioned above performing 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."

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Fred L. Bower, III at (610) 337-5200 with any questions you have regarding this letter.

Sincerely,
/RA/

Michael L. Scott, Director
Division of Reactor Projects

Docket Nos. 50-352. 50-353
License Nos. NPF-39, NPF-85

Enclosure: Inspection/Activity Plan

cc w/encl: Distribution via ListServ

Distribution: See next page

DOC NAME: S:\ROP Assessment Meetings\ROP-16 Mid-Cycle Review\Branch 4\Limerick\ LIM 2015 MC Letter Final.docx
ADAMS Accession No.: **ML15229A053**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP	RI/DRP	
NAME	SRutenkroger/ FLB for via email	PMeier/ PM	FBower/ FLB	MScott/ MLS	
DATE	08/25 /15	08/ 24 /15	08/ 25 /15	08/ 26 /15	

DISTRIBUTION w/encl:

DDorman, RA
DLew, DRA
MScott, DRP
JColaccino, DRP
RLorson, DRS
GSuber, DRS
FBower, DRP
SBarber, DRP
ATurilin, DRP
BLin, DRP
PMeier, DRP
SRutenkroger, DRP, SRI
MFannon, DRP, RI
NEsch, DRP, AA
KMorganButler, RI, OEDO
RidsNrrPMLimerick Res
RidsNrrDorlLpl1-2 Res
ROPreports Resource
DRS Branch Chiefs (6)
N. McNamara, RI, SLO
DTifft, RI. SLO
DScenci, RI, PAO
NSheehan, RI, PAO
RidsNrrDirslpab Res
ROPassessment Res
DRS Branch Chiefs (6)
N. McNamara, RI, SLO
DTifft, RI. SLO
DScenci, RI, PAO
NSheehan, RI, PAO
RidsNrrDirslpab Res
ROPassessment Res

Limerick
Inspection / Activity Plan
07/01/2015 - 06/30/2017

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			CDBI - COMPONENT DESIGN BASIS INSPECTION		7
1, 2	07/06/2015	07/10/2015	IP 7111121	Component Design Bases Inspection	
			71124 - REMP		1
1, 2	07/13/2015	07/17/2015	IP 71124.07	Radiological Environmental Monitoring Program	
			ISFSI - ISFSI LOADING INSPECTION		1
1, 2	07/13/2015	07/17/2015	IP 60855	Operation Of An ISFSI	
1, 2	07/13/2015	07/17/2015	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			TI190 - NTTF 2.1 RECOMMENDATION FLOODING		1
1, 2	09/14/2015	09/18/2015	IP 2515/190	Inspection of Interim Actions of Near-Term Task Force Recommendation 2.1 Flooding Reevaluations	
			7111111B - REQUAL INSP W/ P/F RESULTS		2
1, 2	10/19/2015	10/23/2015	IP 7111111B	Licensed Operator Requalification Program	
			12/7EXAM - INITIAL OL EXAM		4
1	12/07/2015	12/11/2015	U01912	FY16 - LIMERICK INITIAL OPERATOR LICENSING EXAM	
1	01/18/2016	01/22/2016	U01912	FY16 - LIMERICK INITIAL OPERATOR LICENSING EXAM	
			71124 - RADIATION PROTECTION		1
1, 2	09/14/2015	09/18/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2	09/14/2015	09/18/2015	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	09/14/2015	09/18/2015	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	09/14/2015	09/18/2015	IP 71124.04	Occupational Dose Assessment	
1, 2	09/14/2015	09/18/2015	IP 71124.05	Radiation Monitoring Instrumentation	
1, 2	09/14/2015	09/18/2015	IP 71151	Performance Indicator Verification	
			ISFSI - ISFSI CONSTRUCTION INSPECTION		1
1, 2	09/14/2015	09/18/2015	IP 60853	On-Site Fabrication Of Components And Construction On An ISFSI	
			EP - EP EXERCISE		6
1, 2	11/16/2015	11/20/2015	IP 7111401	Exercise Evaluation	
1, 2	11/16/2015	11/20/2015	IP 7111408	Exercise Evaluation – Scenario Review	
			71124.08 - RADWASTE		1
1, 2	01/11/2016	01/15/2016	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			71124 - RADIATION PROTECTION		1
1	02/22/2016	02/26/2016	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	02/22/2016	02/26/2016	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	02/22/2016	02/26/2016	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	02/22/2016	02/26/2016	IP 71124.04	Occupational Dose Assessment	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Limerick
Inspection / Activity Plan
07/01/2015 - 06/30/2017

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			71124 - RADIATION PROTECTION		1
1, 2	02/22/2016	02/26/2016	IP 71124.05	Radiation Monitoring Instrumentation	
			ISI - U1 INSERVICE INSPECTION		1
1	03/28/2016	04/01/2016	IP 7111108G	Inservice Inspection Activities - BWR	
			71124 - RADIATION PROTECTION		1
1, 2	03/28/2016	04/01/2016	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2	03/28/2016	04/01/2016	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	03/28/2016	04/01/2016	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	03/28/2016	04/01/2016	IP 71124.04	Occupational Dose Assessment	
1, 2	03/28/2016	04/01/2016	IP 71124.05	Radiation Monitoring Instrumentation	
			2/6EXAM - LIMERICK INITIAL EXAM		4
1	01/09/2017	01/13/2017	U01940	FY17-LIMERICK INITIAL OPERATOR LICENSING EXAM	
1	02/06/2017	02/10/2017	U01940	FY17-LIMERICK INITIAL OPERATOR LICENSING EXAM	
			TRI FI - TRIENNIAL FIRE PROTECTION		4
1, 2	10/31/2016	11/04/2016	IP 7111105T	Fire Protection [Triennial]	
1, 2	11/14/2016	11/18/2016	IP 7111105T	Fire Protection [Triennial]	
			EP - EP PROGRAM INSPECTION		1
1, 2	11/28/2016	12/02/2016	IP 7111402	Alert and Notification System Testing	
1, 2	11/28/2016	12/02/2016	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1, 2	11/28/2016	12/02/2016	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
			71152B - BIENNIAL PI&R		4
1, 2	11/28/2016	12/02/2016	IP 71152B	Problem Identification and Resolution	
1, 2	12/12/2016	12/16/2016	IP 71152B	Problem Identification and Resolution	
			71124 - RADIATION PROTECTION		1
1, 2	03/06/2017	03/10/2017	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2	03/06/2017	03/10/2017	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	03/06/2017	03/10/2017	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	03/06/2017	03/10/2017	IP 71124.04	Occupational Dose Assessment	
1, 2	03/06/2017	03/10/2017	IP 71124.05	Radiation Monitoring Instrumentation	
			7111108G - U2 INSERVICE INSPECTION		1
2	04/24/2017	04/28/2017	IP 7111108G	Inservice Inspection Activities - BWR	
			71124 - RADIATION PROTECTION		1
1, 2	04/24/2017	04/28/2017	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Limerick
Inspection / Activity Plan
07/01/2015 - 06/30/2017

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
71124 - RADIATION PROTECTION					1
1, 2	04/24/2017	04/28/2017	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	04/24/2017	04/28/2017	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	04/24/2017	04/28/2017	IP 71124.04	Occupational Dose Assessment	
1, 2	04/24/2017	04/28/2017	IP 71124.05	Radiation Monitoring Instrumentation	

This report does not include INPO and OUTAGE activities.
 This report shows only on-site and announced inspection procedures.