

January 22, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Limerick Generating Station, Units 1 and 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

Subject: Relief Request I3R-13 Associated with Pressure Testing of the Primary
Containment Instrument Gas (PCIG) Piping

Attached for your review is a relief request associated with the third 10-year interval Inservice Inspection (ISI) Program for Limerick Generating Station (LGS), Units 1 and 2. Specifically, this relief request concerns pressure testing of the Primary Containment Instrument Gas (PCIG) piping. The third 10-year interval began on February 1, 2007, and will conclude on January 31, 2017.

We request your approval by January 22, 2011. No regulatory commitments are contained in this letter.

Should you have any questions concerning this letter, please contact Tom Loomis at (610) 765-5510.

Respectfully,

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Pamela B. Cowan
Director – Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Relief Request I3R-13

cc: USNRC Region I, Regional Administrator
USNRC Senior Resident Inspector, LGS
USNRC Project Manager, LGS
R. R. Janati, Bureau of Radiation Protection

Attachment
Relief Request I3R-13

1.0 ASME CODE COMPONENTS AFFECTED

Code Class: 3
Reference: IWD-2500, Table IWD-2500-1
Examination Category: D-B
Item Number: D2.10
Description: Primary Containment Instrument Gas
Component Number: HCC-135, HCC-235

Instrument gas lines HCC-135 between and including valves HV-059-151A, SV-059-150A, 059-1138, 059-1120A-1, 059-1120A-2, and 059-1120A-3. (P&ID ISI-M-59, Sheet 1)

Instrument gas lines HCC-135 between and including valves HV-059-151B, SV-059-150B, 059-1119, 059-1120B-1, 059-1120B-2, and 059-1120B-3. (P&ID ISI-M-59, Sheet 1)

Instrument gas lines HCC-235 between and including valves HV-059-251A, SV-059-250A, 059-2138, 059-2120A-1, 059-2120A-2, and 059-2120A-3. (P&ID ISI-M-59, Sheet 3)

Instrument gas lines HCC-235 between and including valves HV-059-251B, SV-059-250B, 059-2119, 059-2120B-1, 059-2120B-2, and 059-2120B-3. (P&ID ISI-M-59, Sheet 3)

See Enclosure 1 for ISI-M-59, Sheets 1 and 3.

2.0 APPLICABLE CODE EDITION AND ADDENDA

The Limerick Generating Station (LGS), Units 1 and 2 third interval Inservice Inspection (ISI) Program is based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 2001 Edition through the 2003 Addenda with errata. The third ISI interval began on February 1, 2007 and will conclude on January 31, 2017.

3.0 APPLICABLE CODE REQUIREMENTS

Table IWD-2500-1, Examination Category D-B, Item Number D2.10, requires all Class 3 pressure retaining components be subject to a system leakage test with a VT-2 visual examination in accordance with Paragraph IWD-5210. This pressure test is to be conducted once each inspection period.

4.0 REASON FOR REQUEST

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested from the performance of system leakage tests and VT-2 visual examination requirements specified in Table IWD-2500-1 for Class 3 Primary Containment Instrument Gas (PCIG) piping.

The PCIG system is pneumatic; therefore, the Code-required VT-2 visual examination would require the application of a leak detection solution to the subject piping and components. Much of this piping is 20 to 30 feet above floor level and is inaccessible as a result of it being routed through walls, in close proximity to sensitive plant equipment and other equipment obstructions, resulting in an inability to perform a complete VT-2 visual examination of the pressurized piping. A system leakage test and VT-2 visual examination of the Unit 2 PCIG piping, which includes approximately 500 feet of small bore piping, was performed on December 17, 2009. Approximately 39% of the "A" loop and 68% of the "B" loop piping was inaccessible for inspection. No scaffolding was used for this inspection; however, even with scaffolding, 100% inspection could not be obtained. No indications were identified during the VT-2 visual examinations. A walkdown performed on the Unit 1 piping determined that the inaccessible piping configuration for Unit 1 is similar to Unit 2.

5.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

As an alternative to the examination requirements of Table IWD-2500-1, LGS, Units 1 and 2 will perform pressure decay testing once per inspection period, which is equivalent to the Code-required frequency.

The pressure decay test is performed by isolating and pressurizing the associated piping to the nominal operating pressure. The decay in pressure is then monitored through calibrated pressure instrumentation. If the acceptable pressure decay criterion is exceeded, additional investigation is performed to locate the leak.

The proposed pressure decay test will provide the same level of quality and safety as the VT-2 pressure testing required by the Code. The proposed pressure decay test will ensure an acceptable level of system reliability and structural integrity of the piping, which is the intent of the Code-required VT-2 pressure test.

6.0 DURATION OF PROPOSED ALTERNATIVE

Relief is requested for the third 10-year interval of the ISI Program for LGS, Units 1 and 2. The third ISI interval began on February 1, 2007 and will conclude on January 31, 2017.

7.0 PRECEDENTS

Similar relief requests were approved in the following Safety Evaluation Reports:

- 1) Letter from R. Gibbs (U.S. Nuclear Regulatory Commission) to C. Pardee (Exelon Generation Company, LLC), "Clinton Power Station, Unit No. 1 – Proposed Alternative Relief Request to Performance of System Pressure Test on Instrument Air Piping, Second Ten-Year Inservice Inspection Interval (TAC NO. MD4896)," dated December 13, 2007.

Relief Request I3R-13 From Pressure Testing of the Primary Containment Instrument
Gas (PCIG) Piping In Accordance with 10 CFR 50.55a(g)(5)(iii)
(Page 3 of 3)

- 2) Letter from R. Gibbs (U.S. Nuclear Regulatory Commission) to C. Pardee (Exelon Generation Company, LLC), "LaSalle County Station, Units 1 and 2 – Third 10-Year Interval Inservice Inspection Program Plan Request for Relief Nos. I3R-03, I3R-04, I3R-08, I3R-09 and I3R-10 for (TAC NOS. MD5459, MD5460, MD5390, MD5463, MD5464, MD5465, MD5466, MD5467, and MD5468)," dated January 30, 2008 (Relief Request I3R-10).

**Request for Relief I3R-13 From
Pressure Testing of the Primary Containment Instrument Gas (PCIG)
Piping In Accordance with 10 CFR 50.55a(g)(5)(iii)**

Enclosure 1

ISI-M-59, Sheets 1 and 3

CLASSIFICATION	
—	CLASS 1
—	CLASS 1 EXEMPT
—	CLASS 2
—	CLASS 2 EXEMPT
—	CLASS 3
—	CLASS 3 EXEMPT
—	UNCLASSIFIED

ASME SECTION XI NOTES:

- A. FLUID SYSTEMS OR PORTIONS OF SYSTEMS CLASSIFIED AS QUALITY GROUP A, B AND C PER 10010055A, REG. CODE L26 ON THE PSAR ARE COLOR CODED TO REFLECT THOSE CLASSIFICATIONS. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI SHALL APPLY. REFER TO PECO'S INSERVICE INSPECTION, TESTING AND REPAIR/REPLACEMENT PROGRAMS FOR SPECIFIC REQUIREMENTS.
- B. NOT APPLICABLE.
- C. PIPING, VALVES AND EQUIPMENT SHOWN WITH THIS SYMBOL: NOTE C AS WELL AS THEIR SUPPORTS SHALL BE REPAIRED, REPLACED OR MODIFIED IN ACCORDANCE WITH THE ORIGINAL DESIGN REQUIREMENTS AND ASME SECTION XI. THE REQUIREMENTS OF ASME SECTION XI INA-1000 AND INR-1000 SHALL APPLY IN ACCORDANCE WITH PECO'S REPAIR AND REPLACEMENT PROGRAM. PRESERVICE INSERVICE INSPECTION ARE NOT REQUIRED.
- D. FOR VENTS, DRAINS AND TEST CONNECTIONS ON QUALITY GROUP A, B AND C PIPING, THE ASME SECTION XI BOUNDARY DOES NOT INCLUDE THE NIPPLE AND CAP, PIPING DESIGN, FABRICATION, MATERIAL, PROCUREMENT, EJECTION AND TESTING FOR THE NIPPLE AND CAP MAY BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PIPING CLASS DESIGNATION DESIGN CODE 'D' WITH THE FOLLOWING EXCEPTIONS:
 - (1) CLEARING REQUIREMENTS SHALL BE PER THE ORIGINAL CLASS DESIGNATION.
 - (2) WELDING PROCEDURES TO BE USED SHALL BE AS REQUIRED PER THE ORIGINAL CLASS DESIGNATION.
 - (3) COMPONENT SUPPORTS SHALL MEET THE REQUIREMENTS OF NOTE J.
- E. FOR D ACTIVE/D PASSIVE INSTRUMENTATION ATTACHED TO THE PROCESS PIPE, ONLY THE PRESSURE DETACHING WELDS AND COMPONENTS ARE WITHIN THE ASME SECTION XI BOUNDARY. THE QUALITY GROUP CLASSIFICATION ASME CODE CLASS OF THE HALF COUPLING AND WELDS IS THE SAME AS THE PROCESS PIPE, EXCEPT THAT IT IS EXEMPT. SEE NOTES F, G AND H FOR INSTRUMENTATION WITH ROOT VALVES.
- F. LINES FROM ASME CODE CLASS 1, 2 AND 3 QUALITY GROUP A, B AND C PROCESS PIPE TO D PASSIVE INSTRUMENTATION ARE SHOWN BLACK. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI APPLY UP TO AND INCLUDING THE INSTRUMENT VALVE FOR CLASS 1, AND THE ROOT VALVE THROUGH THE INSTRUMENT VALVE. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI APPLY UP TO AND INCLUDING THE INSTRUMENT VALVE. THE ASME CODE CLASS FROM THE PROCESS LINE THROUGH THE ROOT VALVE IS THE SAME AS THE PROCESS LINE, EXCEPT THAT IT IS EXEMPT. THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE IS AS FOLLOWS (REF. SPEC. 8031-M-830, 0000, SH. 17):
 1. ASME CODE CLASS 1 EXEMPT FOR ASME CODE CLASS 1 PROCESS LINE.
 2. ANSI B31.1 QUALITY GROUP D FOR ASME CODE CLASS 2 AND 3 PROCESS LINES, WITH NOTE C APPLICABLE.
- G. LINES FROM ASME CODE CLASS 1, 2 AND 3 QUALITY GROUP A, B AND C PROCESS PIPE TO D ACTIVE INSTRUMENTATION ARE SHOWN WITH COLOR CODING WITH THE COLOR REPRESENTING THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI APPLY UP TO AND INCLUDING THE INSTRUMENT VALVE. THE ASME CODE CLASS FROM THE PROCESS LINE THROUGH THE ROOT VALVE IS THE SAME AS THE PROCESS LINE, EXCEPT THAT IT IS EXEMPT. THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE IS AS FOLLOWS (REF. SPEC. 8031-M-830, 0000, SH. 16):
 1. ASME CODE CLASS 2 EXEMPT FOR ASME CODE CLASS 1 PROCESS LINES.
 2. ASME CODE CLASS 3 EXEMPT FOR ASME CODE CLASS 2 AND 3 PROCESS LINES.
- H. FOR PIPE TO TUBING ADAPTERS SEE DRAWING M-830-0002 SHEET 1 OF 2 IN SPECIFICATION 8031-M-830 FOR THE ADAPTER QUALITY GROUP CLASSIFICATION.
- J. COMPONENT SUPPORTS LOCATED BETWEEN THE SYMBOL AND THE FIRST SECURED ANCHOR OR THE END OF THE CONTINUING PIPING, AS APPLICABLE, SHALL BE REPAIRED, REPLACED OR MODIFIED IN ACCORDANCE WITH THE ORIGINAL DESIGN REQUIREMENTS AND ASME SECTION XI WITH THE EXCEPTION THAT NIS-1705-2 OWNER'S REPORTS AND PRESERVICE/INSERVICE INSPECTIONS ARE NOT REQUIRED. THE REQUIREMENTS OF ASME SECTION XI INA-1000 AND INR-1000 SHALL APPLY IN ACCORDANCE WITH PECO'S REPAIR AND REPLACEMENT PROGRAM. SEE THE APPLICABLE FABRICATION ISOMETRIC DRAWING TO IDENTIFY THE SPECIFIC COMPONENT SUPPORTS.
 - K. NOT APPLICABLE.
 - L. NOT APPLICABLE.
 - M. NOT APPLICABLE.
 - N. NOT APPLICABLE.
 - O. REFER TO THE OIL FOR INSERVICE TEST PROGRAM DESIGN QUALITY INFORMATION IN THE ASME SECTION XI SITEFIELD.

ORIGINAL	
NO. DATE	DESCRIPTION
1	RE-INCORP. ECR LG 94-10553 REV. 0, ADDED NOTE 'D'.
2	REMOVED 1ST CLASSIFICATION REFERENCE FROM NOTES AND COMPONENTS OF 13 & 16.3
TABLE OF ADDITIONS & CHANGES USE ONLY PRINTS, SHOWING LATEST DATE	
MECHANICAL	
ASME SECTION XI BOUNDARY P&ID PRIMARY CONTAINMENT INSTRUMENT GAS (UNIT 1)	
LIMERICK GENERATING STATION PECO ENERGY CO.	
SCALE	DATE
NONE	04/29/90
DRAWN	CHECKED
BECHTEL	BECHTEL
DESIGNED	DESIGNED
BECHTEL	BECHTEL
APPROVED	APPROVED
BECHTEL	BECHTEL
SHEET 1 OF 8031-ISI-M-59 2	

ISI-M-59 (SHT. 1)

CLASSIFICATION	
—	CLASS 1
—	CLASS 1 EXEMPT
—	CLASS 2
—	CLASS 2 EXEMPT
—	CLASS 3
—	CLASS 3 EXEMPT
—	UNCLASSIFIED

ASME SECTION XI NOTES:

- A. FILLED SYSTEMS OR PORTIONS OF SYSTEMS CLASSIFIED AS QUALITY GROUP A, B AND C PER INSPECTION REG. DIV. 1.2 OF THE FAR ARE COLOR CODED TO REFLECT THOSE CLASSIFICATIONS. THE APPLICABLE REQUIREMENTS OF ASME SECTION XI SHALL APPLY, REFER TO REG'S INSPECTION, TESTING AND REPAIR/REPLACEMENT PROGRAMS FOR SPECIFIC REQUIREMENTS.
- B. NOT APPLICABLE.
- C. PIPING, VALVES AND EQUIPMENT SHOWN WITHIN THIS SYMBOL (NOTE C), AS WELL AS THEIR SUPPORTS SHALL BE REPAIRED, REPLACED OR MODIFIED IN ACCORDANCE WITH THE ORIGINAL DESIGN REQUIREMENTS AND ASME SECTION XI. THE REQUIREMENTS OF ASME SECTION XI (9A-1000 AND 9A-1000) SHALL APPLY IN ACCORDANCE WITH PECO'S REPAIR AND REPLACEMENT PROGRAM. PRESERVICE/INSERVICE INSPECTIONS ARE NOT REQUIRED.
- D. FOR VENTS, DRAINS AND TEST CONNECTIONS ON QUALITY GROUP A, B AND C PIPING, THE ASME SECTION XI BOUNDARY DOES NOT INCLUDE THE WELDS AND CAP PIPING DESIGN, FABRICATION, MATERIAL PROCUREMENT, ERECTION AND TESTING FOR THE WELDS AND CAP MAY BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PIPING CLASS DESIGNATION DESIGN CODE "D" WITH THE FOLLOWING EXCEPTIONS:
 - (1) CLEANING REQUIREMENTS SHALL BE PER THE ORIGINAL CLASS DESIGNATION.
 - (2) WELDING PROCEDURES TO BE USED SHALL BE AS REQUIRED FOR THE ORIGINAL CLASS DESIGNATION.
 - (3) COMPONENT SUPPORTS SHALL MEET THE REQUIREMENTS OF NOTE J.
- E. FOR B ACTIVE/DO PASSIVE INSTRUMENTATION ATTACHED TO THE PROCESS PIPE, WELDS TO (1) ONLY THE PRESSURE RETAINING WELDS AND COMPONENTS ARE WITHIN THE ASME SECTION XI BOUNDARY. THE QUALITY GROUP CLASSIFICATION, ASME CODE CLASS OF THE HALF COUPLING AND WELDS IS THE SAME AS THE PROCESS PIPE, EXCEPT THAT IT IS EXEMPT. NOTES F, G AND H FOR INSTRUMENTATION WITH ROOT VALVES.
- F. LINES FROM ASME CODE CLASS 1, 2 AND 3 QUALITY GROUP A, B AND C PROCESS PIPE TO D PASSIVE INSTRUMENTATION ARE SHOWN BLACK. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI APPLY UP TO AND INCLUDING THE INSTRUMENT VALVE FOR CODE CLASS 1, AND THE ROOT VALVE FOR ASME CODE CLASS 2 AND 3. THE ASME CODE CLASS FROM THE PROCESS LINE THROUGH THE ROOT VALVE TO THE INSTRUMENT VALVE IS THE SAME AS THE PROCESS LINE, EXCEPT THAT IT IS EXEMPT. THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE IS AS FOLLOWS (REF. SPEC. 8031-M-850, 9000, SH. 17):
 - 1) ASME CODE CLASS 3 EXEMPT FOR ASME CODE CLASS 1 PROCESS LINES.
 - 2) ANSI B31.1 QUALITY GROUP D FOR ASME CODE CLASS 2 AND 3 PROCESS LINES, WITH NOTE C APPLICABLE.
- G. LINES FROM ASME CODE CLASS 1, 2 AND 3 QUALITY GROUP A, B AND C PROCESS PIPE TO D ACTIVE INSTRUMENTATION ARE SHOWN WITH COLOR CODING, WITH THE COLOR REPRESENTING THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE. THE APPROPRIATE REQUIREMENTS OF ASME SECTION XI APPLY UP TO AND INCLUDING THE INSTRUMENT VALVE. THE ASME CODE CLASS FROM THE PROCESS LINE THROUGH THE ROOT VALVE IS THE SAME AS THE PROCESS LINE, EXCEPT THAT IT IS EXEMPT. THE ASME CODE CLASS FROM THE ROOT VALVE THROUGH THE INSTRUMENT VALVE IS AS FOLLOWS (REF. SPEC. 8031-M-850, 9000, SH. 16):
 - 1) ASME CODE CLASS 2 EXEMPT FOR ASME CODE CLASS 1 PROCESS LINES.
 - 2) ASME CODE CLASS 3 EXEMPT FOR ASME CODE CLASS 2 AND 3 PROCESS LINES.
- H. FOR PIPE TO TUBING ADAPTERS SEE DRAWING M-830-000, SHEET 1 OF 2, IN SPECIFICATION 8031-M-850 FOR THE ADAPTER QUALITY GROUP CLASSIFICATION.
- I. COMPONENT SUPPORTS LOCATED BETWEEN THE SYMBOL (NOTE C) AND THE FIRST SEISMIC ANCHOR OR THE END OF THE CONTINUATION PIPING, AS APPLICABLE, SHALL BE REPAIRED, REPLACED OR MODIFIED IN ACCORDANCE WITH THE ORIGINAL DESIGN REQUIREMENTS AND ASME SECTION XI WITH THE EXCEPTION THAT INS-1/INS-2 OWNER'S REPORTS AND PRESERVICE/INSERVICE INSPECTIONS ARE NOT REQUIRED. THE REQUIREMENTS OF ASME SECTION XI (9A-1000 AND 9A-1000) SHALL APPLY IN ACCORDANCE WITH PECO'S REPAIR AND REPLACEMENT PROGRAM. SEE THE APPLICABLE FABRICATION SYMBOLIC DRAWING TO IDENTIFY THE SPECIFIC COMPONENT SUPPORTS.
- K. NOT APPLICABLE.
- L. NOT APPLICABLE.
- M. NOT APPLICABLE.
- N. NOT APPLICABLE.
- O. REFER TO THE CR FOR INSERVICE TEST PROGRAM DESIGN QUALITY INFORMATION IN THE ASME SECTION XI (57) FIELD.

ORIGINAL					
NO.	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
1	01.23.01	RE-INCORP. ECR LG 94-10553 REV. 0.			
2	01.23.01	REMOVED 1ST CLASSIFICATION REFERENCE FROM NOTES AND COMPONENTS (G-1,3)			
TABLE OF ADDITIONS & CHANGES USE ONLY PRINTS SHOWING LATEST DATE					
MECHANICAL					
ASME SECTION XI BOUNDARY P&ID PRIMARY CONTAINMENT INSTRUMENT GAS (UNIT 2)					
LIMERICK GENERATING STATION PECO ENERGY CO.					
SCALE	DRAWN	ISS	CHECKED	INSPECTED	APPROVED
NAME	BECHTEL	BECHTEL	BECHTEL	BECHTEL	BECHTEL
APPROVED	BECHTEL		APPROVED		
SHEET 3 OF		8031-ISI-M-59		3	