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

February 22, 2017

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

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, RELIEF FROM THE REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME CODE) FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (OM CODE) REGARDING RELIEF REQUESTS RP-02, AND RP-03, PROPOSED ALTERNATIVES TO VARIOUS INSERVICE TESTING REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (OM CODE) (CAC NOS. MF8494, MF8495, MF8496, AND MF88497)

Dear Mr. Hanson:

By letter dated October 17, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16292A488), Exelon Generation Company, LLC (EGC, the licensee) submitted relief requests (RRs) to the U.S. Nuclear Regulatory Commission (NRC) for the use of alternatives to certain American Society of Mechanical Engineers Code (ASME Code) for Operation And Maintenance Of Nuclear Power Plants (OM Code) for the fourth 10-year inservice testing (IST) Interval at LaSalle County Station, Units 1 and 2 (LSCS).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(z)(1) and 10 CFR50.55a(a)(z)(2), the licensee requested the following RRs to use proposed alternatives on the basis that the alternative provides an acceptable level of quality and safety:

- Relief Request (RR) RP-02, Water Leg Pump Comprehensive Test - Proposed Alternative In Accordance with 10 CFR 50.55a(z)(2)
- RR RP-03, Utilization of ASME Code Case OMN-21, "Alternative Requirements for Adjusting Hydraulic Parameters to Specified Reference Points - Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1)"

The NRC staff has reviewed the subject request, and as set forth in the enclosed safety evaluation (SE) concludes that:

(1) For alternative request RP-02, the proposed alternative provides reasonable assurance that the affected components are operationally ready, complying with the specified ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2).

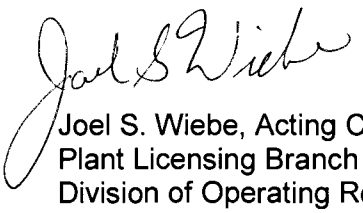
(2) For alternative requests RP-03, the proposed alternative provides an acceptable level of quality and safety and the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(1).

Therefore, the NRC authorizes the licensee's proposed alternatives from certain IST requirements of the ASME OM Code as discussed in Section 3.1 and Section 3.2 of the SE for the fourth 10-year IST interval for LSCS, Units 1 and 2, which is scheduled to begin on October 12, 2017.

All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests remain applicable.

Please contact the Project Manager, Bhalchandra K. Vaidya at (301)-415-3308, if you have any questions.

Sincerely,



Joel S. Wiebe, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosure:
As stated

cc w/encl: Distribution via Listserv

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUESTS RP-02 AND RP-03 ALTERNATIVE FOR

THE FOURTH 10-YEAR INSERVICE TESTING INTERVAL

OPERATING LICENSE NOS. NPF-21 AND NPF-18

LASALLE COUNTY STATION, UNITS 1 AND 2

EXELON GENERATION COMPANY, LLC

DOCKET NOS. 50-373 AND 50-374

CAC NOS. MF 8494, MF 8495, MF8496, AND MF8497

1.0 INTRODUCTION

By letter dated October 17, 2016 (Agencywide Document Access and Management System (ADAMS) Accession No. ML16292A488), Exelon Generation Company, LLC (EGC), the licensee, submitted requests for relief (RRs) RP-02 and RP-03 to the U.S. Nuclear Regulatory Commission (NRC), proposing alternatives to certain requirements of the American Society of Mechanical Engineers (ASME Code) for Operation and Maintenance of Nuclear Power Plants (OM Code), for the inservice testing (IST) program at LaSalle County Station (LSCS), Units 1 and 2 for the fourth 10-year IST program interval, which is scheduled to begin on October 12, 2017.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, paragraph 50.55a(z)(2), the licensee requested to use the proposed alternatives in RP-02 on the basis that the OM Code requirements present a hardship without a compensating increase in the level of quality and safety. And pursuant to 10 CFR Part 50, paragraph 50.55a(z)(1), the licensee requested to use the proposed alternatives in RP-03 on the basis that the alternatives provide an acceptable level of quality and safety.

2.0 REGULATORY EVALUATION

Inservice testing (IST) of the ASME Code Class 1, 2, and 3 components performed in accordance with 10 CFR 50.55a(f), "Inservice testing requirements," requires, in part, that IST of certain ASME Code Class 1, 2, and 3 components must meet the requirements of the ASME OM Code and applicable addenda, except where alternatives have been authorized pursuant to paragraphs 10 CFR 50.55a(z)(1) or 10 CFR 50.55a(z)(2).

10 CFR 50.55a(z), states, in part, that alternatives to the requirements of 10 CFR 50.55a(f) may be authorized by the NRC if the licensee demonstrates that: (1) the proposed alternative provides an acceptable level of quality and safety, or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. In accordance with 10 CFR 50.55a(z)(2), RR RP-02 stated that the OM Code requirements present a hardship without a compensating increase in the level of quality and safety. In accordance with 10 CFR 50.55a(z)(1), RR RP-03 stated that the proposed alternatives would provide an acceptable level of quality and safety.

Based on the above, and subject to the NRC's findings with respect to authorizing the proposed alternatives to the ASME OM Code given below, the NRC staff concludes that regulatory authority exists for the licensee to request and the Commission to authorize the alternatives requested by the licensee.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Alternative Request RP-02

Applicable Code Edition and Addenda

The LSCS fourth 10-year IST interval is scheduled to begin on October 12, 2017. The applicable ASME OM Code Edition for the LSCS 10-year IST program interval is the 2004 Edition with addenda through OMb-2006.

Code Requirements

The licensee requested relief from the following OM Code requirements:

ISTB-3000, General Testing Requirements; Table ISTB-3000-1, Inservice Test Parameters, specifies the parameters to be measured during inservice testing (i.e., Flow Rate, Q).

ISTB-3510, General, *(a) Accuracy,* states, in part, "Instrument accuracy shall be within the limits of Table IST13-3510-1."

Table ISTB-3510-1, Required Instrument Accuracy, specifies the required instrument accuracies for the Comprehensive and Preservice Tests (%), for various test parameters (e.g., 0.5 percent for differential pressure, 2 percent for flow rate).

ISTB-3300, Reference Values, paragraph (e) states, "Reference values shall be established in a region(s) of relatively stable pump flow." Subparagraph (e)(1) states, "Reference values shall be established within ±20 percent of pump design flow rate for the comprehensive test."

ISTB-5123, Comprehensive Test Procedure, paragraph (e) states, in part, "All deviations from the reference values shall be compared with the ranges of Table ISTB-5121-1."

ISTB-5110, Preservice Testing, paragraph (a) states, in part, "in systems where resistance can be varied, flow rate and differential pressure shall be measured at a minimum of five points."

Table ISTB-5121-1, Centrifugal Pump Test Acceptance Criteria, specifies the centrifugal pump test acceptance criteria (e.g., acceptable, alert and required action ranges) for the various pump test parameters (i.e., flow rate, differential pressure and vibration) during the comprehensive pump test.

Relief was requested for the following pumps:

Pump	Description	Class	Category	Unit
1E22-C003	HPCS Water Leg Pump	2	Group A	1
1E21-C002	LPCS Water Leg Pump	2	Group A	1
1E12-C003	RHR Water Leg Pump	2	Group A	1
1E51-C003	RCIC Water Leg Pump	2	Group A	1
2E22-C003	HPCS Water Leg Pump	2	Group A	2
2E21-C002	LPCS Water Leg Pump	2	Group A	2
2E12-C003	RHR Water Leg Pump	2	Group A	2
2E51-C003	RCIC Water Leg Pump	2	Group A	2

Reason for Request

The licensee states:

> Pursuant to 10 CFR 50.55a, "Codes and standards," paragraph (z)(2), an alternative is proposed to the following requirements as defined in the ASME OM Code: 1) To measure flow during comprehensive and preservice testing; 2) for the instrument accuracy required in comprehensive and preservice tests; 3) to test within ±20% of the pump design flow for comprehensive tests; and 4) the comprehensive pump test acceptance criteria. The basis of the request is that these requirements present a hardship without a compensating increase in the level of quality and safety. Specifically, this request is for the pumps listed [above].
>
> The primary purpose of the pumps listed [above] is to maintain the High Pressure Core Spray (HPCS), Low Pressure Core Spray (LPCS), Reactor Core Isolation Cooling (RCIC), and Residual Heat Removal (RHR) pump discharge lines filled to limit the potential for water hammer upon associated pump initiation. Once the supported pump (e.g., HPCS, RHR, etc.) is in operation, the associated water leg pump serves no further safety related function. The amount of flow delivered by each water leg pump is dependent upon each supported system's leakage rate. Each water leg pump is capable of delivering approximately 50 gallons per minute (gpm). None of the listed water leg pumps have instrumentation installed in the discharge line for measuring flow rates.

While flow measurement instrumentation is provided downstream of the water leg pump's branch connection to its associated support system, during power operation, the water leg pump is unable to generate sufficient pressure to flow through the associated flow element into the reactor vessel. Additionally, the flow measurement instrumentation associated with these lines, which is designed to measure flow developed by the HPCS (0-8000 gpm), LPCS (0-10,000 gpm), RHR (0-10,000 gpm), or RCIC (0-700 gpm), is not capable of measuring such small flows developed by a water leg pump (i.e., approximately 50 gpm).

The application of temporary flow instrumentation (ultrasonic) cannot be utilized, as there is not a run of piping long enough to allow for an accurate measurement. System modifications to provide for test measuring locations for flow instrumentation places undue burden on LSCS without demonstrating any increase in the level of plant safety. These pumps are in continuous operation and pump performance is continuously monitored by a low-pressure alarm on each HPCS, LPCS, RHR, and RCIC pump discharge header.

Quarterly Group A testing, as modified by LSCS pump relief request RP-01, will continue to be performed during the stipulated conditions that: 1) the RCS pressure is greater than the discharge pressure of the associated water leg pump; and 2) the supported system pump is not in operation during the testing of the associated water leg pump.

Comprehensive pump testing requires that the pump parameters be measured while the pump is operating at a flow rate within 20% of the pumps design flow. These water leg pumps do not have a safety related design flow rate. These water leg pumps operate in a "keep ready" mode, maintaining the support system piping pressurized with water, which is dependent upon each individual system's leakage rate.

The remaining differences between the comprehensive pump or preservice pump testing and Group A testing is the accuracy of the instruments used in measuring the differential pressure (Table ISTB-3510-1, 2% for Group A tests versus 1/2% for comprehensive and preservice tests) as well as the acceptance criteria associated with the pump's differential pressure (Table ISTB-5121-1, 0.90 to $1.10\Delta P_r$ for Group A tests versus 0.90 to $1.03\Delta P_r$ for comprehensive tests, with 0.93% alert limit).

These water leg pumps are tested quarterly by isolating them from their support system piping and measuring their pressure and vibration parameters as they pump system fluid through a minimum flow orifice in the minimum flow line. As there is no flow measurement taken as a result of the system configuration, variation of the system resistance is not used.

The utilization of more accurate test instrumentation and acceptance criteria under these conditions would result in a hardship without a compensating increase in the level of quality and safety.

Proposed Alternative

The licensee states:

> Exelon Generation Company, LLC (EGC) will continue to monitor the subject pumps for degradation by measuring and recording pump inlet pressure, discharge pressure, (from which differential pressure is calculated), and vibration. The differential pressure and vibration data will be trended as directed by ISTB-5121, Group A Test Procedure, as amended by Relief Request RP-01. These measurements are taken quarterly, during normal plant operation, when the supported system's pump is not in operation and RCS [reactor coolant system] pressure is greater than the water leg pump's discharge pressure. Measurement and trending of these parameters under these stated conditions will provide satisfactory indication of operational readiness as well as the ability to detect potential degradation. In addition, the main emergency core cooling system (ECCS) pump headers each have a low pressure sensor, which continuously monitors the operability of the respective water leg pump and alarms upon reaching its low set-point. The LSCS Technical Specification (TS) Surveillance Requirements (i.e., TS SR 3.5.1.1, TS SR 3.5.2.3, and TS SR 3.5.3.1) also verify operability of the water leg pumps by verifying the associated system is sufficiently filled with water.
>
> Vibration measurements will continue to be obtained under normal operating conditions and evaluated in accordance with ISTB-5121(d) and ISTB-5121(e), Group A testing. The differential pressure across the pump will also continue to be determined quarterly through plant procedures utilizing each pump's minimum flow line in accordance with ISTB-5121(c) and ISTB-5121(e). Differential Pressure and vibration will continue to be trended. In addition, operability of these pumps is verified through the continuous monitoring of the HPCS, LPCS, RHR, and RCIC pump discharge line pressures that are monitored in the control room by alarm.

NRC Staff Evaluation

OM Code requires that each water leg pump be comprehensively tested by operating the pump at a specified reference point and recording the measured flow, differential pressure, and bearing vibration for comparison with the ASME OM Code acceptance criteria. The design of the HPCS, LPCS, RHR, and RCIC water leg pumps does not enable a comprehensive test to be readily performed in accordance with the ASME OM Code. The necessary flow instrumentation is not installed in the systems and a plant modification would be necessary to install the flow instrumentation, which would be a hardship to the licensee. Temporary ultrasonic flow instrumentation cannot be used because there is not a run of piping long enough to allow for an accurate measurement. The licensee proposes to monitor the pumps for mechanical degradation with vibration monitoring, and for hydraulic degradation by measuring and recording pump inlet pressure and discharge pressure, and calculating differential pressure. The vibration and differential pressure data will be trended as directed by ISTB-5121 (Group A Test Procedure) as amended by RR RP-01. In addition, the operability of the water leg pumps will be monitored continuously via low-pressure sensors in the main ECCS pump headers and their respective alarms. The LSCS TS surveillance requirements (SR) (i.e., TS SR 3.5.1.1, TS

SR 3.5.2.3, and TS SR 3.5.3.1) also verify operability of the water leg pumps by periodically verifying the associated systems are sufficiently filled with water.

While the proposed IST would not be as complete as it would be if the ASME OM Code requirements for a comprehensive pump test were imposed, 10 CFR 50.55a does include provisions for hardships due to design limitations, as the initial imposition of the ASME OM Code requirements was subsequent to the design and construction of a number of nuclear plants, including LSCS. For the water leg pumps, which are continuously operating pumps, the safety function is to keep the ECCS pump discharge header piping in a filled condition to prevent water hammer upon the start of the main ECCS pump. The actual output and hydraulic performance of the water leg pumps are not critical to the safety function, as long as the pumps are capable of maintaining the piping full of water. Each ECCS pump discharge header piping has a low pressure sensor. An alarm would promptly alert plant operators whenever the water leg pumps do not maintain the piping pressure to a set alarm level. In addition, vibration data will be indicative of levels trending toward unacceptable values and should allow time for the licensee to take corrective actions before the pumps fail. The proposed alternative provides a reasonable assurance of operational readiness of the water leg pumps because (1) differential pressure and bearing vibration are measured and trended, (2) alarms are present which provide a continuous monitoring of degradation in the pressure of the ECCS pump discharge header piping, and (3) TS surveillance is performed periodically to ensure that the ECCS headers are filled. Accordingly, after reviewing the licensee's proposed alternative, the NRC staff concludes that requiring compliance with the specified ASME OM Code requirement at LSCS would not result in a compensating increase in the level of quality and safety.

3.2 Licensee's Alternative Request RR RP-03

Applicable Code Edition and Addenda

The LSCS fourth 10-year IST interval is scheduled to begin on October 12, 2017. The applicable ASME OM Code Edition for the LSCS 10-year IST program interval is the 2004 Edition with addenda through OMb-2006.

Code Requirements

The licensee requested relief from the following OM Code requirements:

ISTB-5121, Group A Test Procedure, paragraph ISTB-5121(b) states, in part, that "The resistance of the system shall be varied until the flow rate equals the reference point. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point."

ISTB-5122, Group B Test Procedure, paragraph ISTB-5122(c) states, "System resistance may be varied as necessary to achieve the reference point."

ISTB-5123, Comprehensive Test Procedure, paragraph ISTB-5123(b) states, in part, that "The resistance of the system shall be varied until the flow rate equals the reference point. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point."

ISTB-5221, Group A Test Procedure, paragraph ISTB-5221(b) states, in part, that "The resistance of the system shall be varied until the flow rate equals the reference point. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point."

ISTB-5222, Group B Test Procedure, paragraph ISTB-5222(c) states, "System resistance may be varied as necessary to achieve the reference point."

ISTB-5223, Comprehensive Test Procedure, paragraph ISTB-5123(b) states, in part, that "The resistance of the system shall be varied until the flow rate equals the reference point. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point.

ISTB-5322, Group B Test Procedure, paragraph ISTB-5322(c) states, "System resistance may be varied as necessary to achieve the reference point."

ISTB-5323, Comprehensive Test Procedure, paragraph ISTB-5323(b) states, "The resistance of the system shall be varied until the discharge pressure equals the reference point. The flow rate shall then be determined and compared to its reference value."

Relief was requested for the following pumps:

Pump Groups (Units 1 & 2)	Description	Pump Type	Code Class	OM Code Category
0DG01P 1DG01P 2DG01P	Diesel Generator Cooling Water Pumps	Centrifugal	3	Group A
1FC03PA 1FC03PB 2FC03PA 2FC03PB	Fuel Pool Emergency Make-Up Pumps	Centrifugal	3	Group B
1E22-C001 2E22-C001	High Pressure Core Spray (HPCS) Pumps	Vertical Line Shaft Centrifugal	2	Group B
1E22-C002 2E22-C002	HPCS Diesel Generator Cooling Water Pumps	Centrifugal	3	Group A
1E21-C001 2E21-C001	Low Pressure Core Spray Pumps	Vertical Line Shaft Centrifugal	2	Group B
1E12-C002A 1E12-C002B 2E12-C002A 2E12-C002B	Residual Heat Removal (RHR) Pumps	Vertical Line Shaft Centrifugal	2	Group A
1E12-C002C 2E12-C002C	RHR (LPCI) Pumps	Vertical Line Shaft Centrifugal	2	Group B
1E12-C300A	RHR Service Water Pumps	Centrifugal	3	Group A

1E12-C300B 1E12-C300C 1E12-C300D 2E12-C300A 2E12-C300B 2E12-C300C 2E12-C300D				
1E51-C001 2E51-C001	Reactor Core Isolation Cooling Pumps	Centrifugal	2	Group B
1C41-C001A 1C41-C001B 2C41-C001A 2C41-C001B	Standby Liquid Control Pumps	Reciprocating Positive Displacement	2	Group B

Reason for Request

The licensee states:

> Pursuant to 10 CFR 50.55a, "Codes and standards," paragraph (z)(1), an alternative is proposed to the pump testing reference value requirements of the ASME OM Code. The basis of the request is that the proposed alternative would provide an acceptable level of quality and safety. Specifically, this alternative is requested for all inservice testing of IST Program pumps for LSCS, Units 1 and 2, as listed [above].
>
> For pump testing, there is difficulty adjusting system throttle valves with sufficient precision to achieve an exact flow rate, differential pressure, or discharge pressure during subsequent IST tests. Section ISTB of the ASME OM Code does not allow for variance from a fixed reference value for pump testing. However, NUREG-1482, Revision 2, Section 5.3, acknowledges that certain pump system designs do not allow for the licensee to set the flow at an exact value because of limitations in the instruments and controls for maintaining steady flow.
>
> ASME OM Code Case OMN-21, "Alternative Requirements for Adjusting Hydraulic Parameters to Specified Reference Points," provides guidance for adjusting reference flow, differential pressure (ΔP), or discharge pressure to within a specified tolerance during pump inservice testing. The Code Case states that:
>
> "It is the opinion of the Committee that when it is impractical to operate a pump at a specified reference point and adjust the resistance of the system to a specified reference point for either flow rate, differential pressure or discharge pressure, the pump may be operated as close as practical to the specified reference point with the following requirements. The Owner shall adjust the system resistance to as close as practical to the specified reference point where the variance from the reference point does not exceed + 2% or - 1% of the reference point when the reference point is flow rate, or + 1% or -2% of the reference point when the

reference point does not exceed + 2% or - 1% of the reference point when the reference point is flow rate, or + 1% or -2% of the reference point when the reference point is differential pressure or discharge pressure."

Proposed Alternative

The licensee states:

> Exelon Generation Company, LLC (EGC) seeks to perform future inservice pump testing in a manner consistent with the requirements as stated in ASME OM Code Case OMN-21. Specifically, testing of all pumps identified in Table RP-03 will be performed such that the flow rate is adjusted as close as practical to the reference value and within proceduralized limits of +2% / -1 % of the reference flow rate or alternatively the differential pressure or discharge pressure is adjusted as close as practical to the reference value and within proceduralized limits of +1 % / -2% of the reference discharge pressure or differential pressure.
>
> LSCS plant operators will continue to strive to achieve the exact test reference values (flow, differential pressure, or discharge pressure) during testing. Typical test guidance will be to adjust the reference parameter (i.e., flow, differential pressure, or discharge pressure) to the specific reference value with additional guidance that if the reference value cannot be achieved with reasonable effort the test will be considered valid if the steady state flow rate is within the proceduralized limits of +2% / -1 % of the reference value or the steady state discharge pressure or differential pressure is within the proceduralized limits of +1 % / -2% of the reference value.

NRC Staff Evaluation

An inquiry was submitted to the ASME OM Code to determine what alternatives may be used when it is impractical to operate a pump at a specified reference point for either flow rate, differential pressure, or discharge pressure. ASME Code Case OMN-21 was developed to provide guidance on alternatives. The guidance in Code Case OMN-21 states that when it is impractical to operate a pump at a specified reference point for either flow rate, differential pressure or discharge pressure, the pump may be operated as close as practical to the specified reference point with the following requirements. Code Case OMN-21 specifies that the variance from the reference point shall not exceed +2 percent or -1 percent of the reference point when the reference point is flow rate, or +1 percent or -2 percent of the reference point when the reference point is differential pressure or discharge pressure.

Code Case OMN-21 was approved by the ASME Operation and Maintenance Standards Committee on April 20, 2012, with the NRC representative voting in the affirmative. The licensee proposes to adopt Code Case OMN-21. The applicability of Code Case OM-21 is the ASME OM Code 1995 Edition through the 2011 Addenda. The NRC staff notes that the language from Code Case OMN-21 has subsequently been included in the ASME OM Code, 2012 Edition.

The NRC staff notes that in certain situations, it is not possible to operate a pump at a precise reference point. The NRC staff has reviewed the alternatives proposed in ASME OM Code

Case OMN-21 and found that the proposed alternatives are reasonable and appropriate when a pump cannot be operated at a specified reference point. Operation within the tolerance bands specified in ASME OM Code Case OMN-21 provides reasonable assurance that licensees will be able to utilize the data collected to detect degradation of the pumps. Based on the NRC staff's review of ASME OM Code Case OMN-21 and the licensee's commitment to use the bands specified in ASME OM Code Case OMN-21 for flow rate, the NRC staff concludes that implementation of the alternatives contained in ASME OM Code Case OMN-21 is acceptable for the pumps listed above. Therefore, the NRC staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff determines that for alternative request RR RP-02, the proposed alternative provides reasonable assurance that the affected components are operationally ready. The staff concludes that complying with the specified ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2). Therefore, the NRC staff authorizes alternative request RR RP-02 for LSCS for the fourth 10-year IST program interval which is scheduled to begin on October 12, 2017.

As set forth above, the NRC staff determines that for alternative requests RP-03, the proposed alternatives provide an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(1) for alternative request RR RP-03. Therefore, the NRC staff authorizes alternative request RR RP-03 for LSCS for the fourth 10-year IST program interval which is scheduled to begin on October 12, 2017.

All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests remain applicable.

Principal Contributor: John Billerbeck, NRR/EPNB

Date of issuance: February 22, 2017.

LASALLE COUNTY STATION, UNITS 1 AND 2, RELIEF FROM THE REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME CODE) FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (OM CODE) REGARDING RELIEF REQUESTS RP-02, AND RP-03, PROPOSED ALTERNATIVES TO VARIOUS INSERVICE TESTING REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (OM CODE) (CAC NOS. MF8494, MF8495, MF8496, AND MF88497 DATED

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(*) No Substantial change from SE Input Memorandum

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