



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

March 1, 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 REQUEST RV-01. (CAC NOS. MF8500 AND MF8501)

Dear Mr. Hanson:

By letter dated October 17, 2016, as supplemented by letter dated February 9, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML16292A488 and ML17044A008, respectively), Exelon Generation Company, LLC (EGC, the licensee) submitted a request to the U.S. Nuclear Regulatory Commission (NRC) for the use of an alternative to certain American Society of Mechanical Engineers Code (ASME Code) for Operation And Maintenance Of Nuclear Power Plants (OM Code) requirements 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), the licensee requested to use the proposed alternative Relief Request (RR) RV-01, Utilization of ASME Code Case OMN-1, "Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants" on the basis that the alternative provides an acceptable level of quality and safety:

The NRC staff has reviewed the subject request, as supplemented, and concludes, as set forth in the enclosed safety evaluation (SE), that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(1). The NRC staff further concludes that the licensee is in compliance with the ASME Code requirements and the proposed alternative described in RR RV-01 provides an acceptable level of quality and safety for all active ASME Code Class 1, 2, and 3 motor operated valves (MOVs) scoped into the LSCS IST program.

Therefore, the NRC authorizes the licensee's proposed alternative in the RR RV-01 for the fourth 10-year IST interval at LSCS, Units 1 and 2, currently scheduled to start on October 12, 2017, from certain IST requirements of the ASME OM Code as discussed in Section 3.2 of this SE.

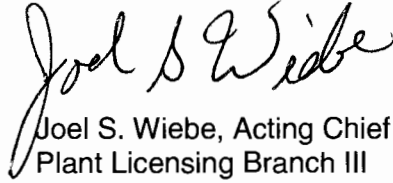
All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable.

B. Hanson

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

Sincerely,

A handwritten signature in black ink that reads "Joel S. Wiebe". The signature is written in a cursive style with a large, looping initial "J".

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

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST RV-01 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. MF8500, AND MF8501

1.0 INTRODUCTION

By letter dated October 17, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16292A488) and supplement letter dated February 9, 2017 (ADAMS Accession No. ML17044A008), Exelon Generation Company, LLC (EGC; the licensee), submitted alternative relief request (RR) RV-01 to the U.S. Nuclear Regulatory Commission (NRC or Commission). The licensee requested alternative test plans in lieu of certain inservice testing (IST) requirements of the 2004 Edition through 2006 Addenda of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) for the IST programs at LaSalle County Station (LSCS), Units 1 and 2, during the fourth 10-year IST program interval.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.55a(z)(1), the licensee requested to use proposed alternative RR RV-01 on the basis that the alternative provides an acceptable level of quality and safety.

2.0 REGULATORY EVALUATION

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 incorporated by reference in the regulations. Exceptions are allowed where alternatives have been authorized by the NRC pursuant to paragraphs 10 CFR 50.55a(z)(1) and 10 CFR 50.55a(z)(2).

In proposing alternatives relief, the licensee must demonstrate that: (1) the proposed alternatives provide an acceptable level of quality and safety (10 CFR 50.55a(z)(1)) or (2) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety (10 CFR 50.55a(z)(2)). Section 50.55a allows the NRC to authorize alternatives from the ASME OM Code requirements upon making necessary findings.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the licensee to request and the Commission to authorize the alternative requested by the licensee.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Alternative Relief Request (RR RV-01)

3.1.1 ASME Code Component(s) Affected

All active ASME Class 1, 2, and 3 motor operated valves (MOVs) scoped into the LSCS IST program subject to diagnostic testing per Generic Letter (GL) 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," and that cannot be classified as Skid Mounted.

3.1.2 Applicable Code Edition and Addenda

The fourth 10-year interval of the LSCS, Units 1 and 2, IST program is based on the ASME Code and ASME OM Code-2004 Edition with Addenda through Omb-2006.

3.1.3 Applicable ASME OM Code Requirements:

ISTC-3100, "Preservice Testing" (a), states that: "Any valve that has undergone maintenance that could affect its performance after the preservice test shall be tested in accordance with ISTC-3310."

ISTC-3310, "Effects of Valve Repair, Replacement, or Maintenance on Reference Values" states, in part, that: "When a valve or its control system has been replaced, repaired, or has undergone maintenance that could affect the valve's performance, a new reference value shall be determined or the previous reference value be reconfirmed by an IST run before it is returned to service or immediately if not removed from service."

ISTC-3510, "Exercising Test Frequency" states, in part, that "Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months."

ISTC-3521, "Category A and Category B Valves" states, in part, that active Categories A and B valves be exercised during cold shutdowns if it is not practicable to exercise the valves at power or that active Category A and B valves be exercised during refueling outages if it is not practicable to exercise the valves during cold shutdowns.

ISTC-3700, "Position Verification Testing" states, in part, that: "Valves with remote position indicators shall be observed locally at least once every 2 years to verify that valve operation is accurately indicated."

ISTC-5121, "Valve Stroke Testing," paragraph (a), states that: "Active valves shall have their stroke times measured when exercised in accordance with ISTC-3500."

ASME OM Code Case OMN-1, "Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor (LWR) Power Plants," (2006 Addenda) provides periodic exercising and diagnostic testing for use in assessing the

operational readiness of MOVs. Regulatory Guide (RG) 1.192 allows licensees to implement ASME Code Case OMN-1, Revision 0, in accordance with the provisions in the RG as an alternative to the ASME OM Code provisions for MOV stroke-time testing in the ASME OM Code 1995 Edition through 2000 Addenda.

ASME OM Code Case OMN-1, Section 3.3, Inservice Test, paragraph (b), states, in part, that "Inservice tests shall be conducted in the as-found condition."

ASME OM Code Case OMN-1, Section 3.4, "Effect of MOV Replacement, Repair, or Maintenance" states, in part, that "Deviations between the previous and new inservice test values shall be identified and analyzed."

ASME OM Code Case OMN-1, Section 6.3, Evaluation of Data, states, in part, that "Evaluations shall determine the amount of degradation in functional margin that occurred over time."

ASME OM Code Case OMN-1, Section 6.4, Determination of MOV Functional Margin, requires testing or analytical methods to ensure adequate margin exists between valve-operating requirements and the available actuator output capability to satisfy the acceptance criteria for MOV operational readiness (only requested for the Quarter-Turn MOVs specified by Equipment Part Number in Section 5 of this RR).

3.1.4 Reason for Request (As submitted)

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(1), an alternative is proposed to the requirement to perform quarterly stroke time testing (ISTC-5120) and biennial position verification testing (ISTC-3700) as defined in the ASME OM Code. An additional alternative is proposed to the ASME Code Case OMN-1 requirements in: (1) Section 3.3(b) for testing in the as-found condition; (2) Section 3.4 to analyze deviations between previous and new ISIs; (3) Section 6.3 to determine the amount of degradation in functional margin overtime; and (4) Section 6.4 to determine the MOV functional margin for the specified quarter-turn valves. The basis of the request is that the alternative testing would provide an acceptable level of quality and safety. Specifically, this request is for all active ASME Code Class 1, 2, and 3 MOVs scoped into the LSCS IST program subject to diagnostic testing per GL 96-05, and cannot be classified as Skid Mounted.

3.1.5 Proposed Alternative (As submitted)

[Regulation] 10 CFR 50.55a(a) states, in part, that Regulatory Guide (RG) 1.192, Revision 1, "Operation and Maintenance Code Case Acceptability, ASME OM Code," dated August 2014, has been approved for incorporation by reference by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 10 CFR Part 51.

In RG 1.192, it states within Table 2, "Conditionally Acceptable OM Code Cases," that the alternative rules of ASME Code Case OMN-1, "Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants," 2006 Addenda, when applied in conjunction with the provisions for leakage rate testing in ISTC-3600, may be applied with the following provisions:

1. The adequacy of the diagnostic test interval for each MOV must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of ASME OMN-1.
2. When extending exercise test intervals for high risk MOVs beyond a quarterly frequency, licensees must ensure that the potential increase in core damage frequency and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement.
3. When applying risk insights as part of the implementation of OMN-1, licensees must categorize MOVs according to their safety significance using the methodology described in Code Case OMN-3, "Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants," with the conditions discussed in RG 1.192 or use other MOV risk ranking methodologies accepted by the NRC on a plant- specific or industry-wide basis with the conditions in the applicable safety evaluations.

This conditional acceptance of Code Case OMN-1 per RG 1.192 is applicable in lieu of the provisions for stroke-time testing in subsection ISTC of the 1995 Edition up to and including the 2006 Addenda of the ASME OM Code.

Compliance with [Implementation of] RG 1.192 Conditions

The licensee proposes to use the requirements of Code Case OMN-1 for MOV stroke-time and position verification testing.

The LSCS MOV testing program was developed utilizing GL 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," and GL 96-05. The continued implementation of Code Case OMN-1 will continue to reconcile and consolidate testing within the IST program and eliminate unnecessary testing that provides minimal information about MOV operational readiness.

As part of the LSCS commitment on MOV periodic verification testing made in response to GL 96-05, LSCS is participating in the Joint Owners' Group (JOG) program for MOV periodic verification. The JOG program is described in Topical Report (TR) MPR-1807, Revision 2, and was accepted by the NRC in an October 1997 SE as an industry-wide response to GL 96-05 with certain conditions and limitations.

LSCS implementation and compliance with the above-identified provisions (Items 1, 2, and 3) of Code Case OMN-1 are detailed below:

1. During the initial implementation, testing intervals for LSCS MOVs identified in the IST program did not exceed three refueling cycles (i.e., a nominal 6 years). The proposed alternative under the section "Compliance with RG 1.192 Conditions," Bullet 1, was intended to address LSCS's initial implementation of OMN-1.

It is acceptable to evaluate diagnostic test intervals for extension for applicable MOVs up to the OMN-1 maximum allowable IST interval of 10 years in accordance with OMN-1, Section 3.3.1, paragraph c, which states, "The maximum inservice test interval shall not exceed 10 yr [years]." Code Case OMN-1, paragraph 6.4.4, "Determination of MOV Test Interval," specifies that calculations for determining MOV functional margin shall be evaluated to account for performance-related degradation. LSCS uses the JOG recommendations for setting test frequencies based on margin and safety significance, which is used to meet this OMN-1 provision.

Since the initial implementation, LSCS has completed evaluations in accordance with EGC procedure ER-AA-321-1006, "Inservice Testing of Motor Operated Valves," to extend the IST interval to 10 years for MOVs 2E12-F017A, 2E12-F027A, 2E12-F008, and 2E12-F009. The frequency extensions for these MOVs have not been formally changed to date. These evaluations are documented in LSCS Engineering Change Evaluations 405245 Revision 0 and 400070 Revision 0. All other LSCS MOVs identified in the IST program currently have a testing interval of not later than 5 years or three refueling outages (whichever is longer). EGC plans to extend testing intervals for additional LSCS MOVs as allowed by OMN-1.

2. LSCS will exercise medium and low safety significance MOVs at least once every refueling cycle as required in Code Case OMN-1, Section 3.6.1. LSCS continues to test high risk MOVs quarterly (where it is not practical to exercise a valve during plant operations, the valve will be exercised in cold shutdown or refueling outages per Code Case OMN-1, Section 3.6.1). When extending the exercise test frequency intervals for high risk MOVs beyond a quarterly frequency, LSCS shall ensure that any potential increase in the core damage frequency and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement. Upon extension of these frequencies, the IST program will be appropriately revised.
3. MOVs modeled in the probabilistic risk assessment (PRA) will undergo a risk ranking evaluation in order to categorize and rank individual MOVs as to their relative importance to reactor safety and preventing a large off-site release of radioactivity. The importance measures used to rank the MOVs include Fussell-Vesely Importance and Risk Achievement Worth. Based on the risk ranking criteria, the MOV is categorized by High, Medium, and Low Safety Significance. This information is available in the PRA analysis.

Alternatives to Code Case OMN-1

With LSCS compliance with [implementation of] the above provisions as stipulated in RG 1.192, EGC requests relief from the following OMN-1 sections and proposes the following alternatives for LSCS.

- OMN-1, Section 3.3, Inservice Test, paragraph (b), requires inservice testing to be conducted in the as-found condition.
- OMN-1, Section 3.4, Effect of MOV Replacement, Repair, or Maintenance, requires deviations between the previous and new inservice tests values shall be identified and analyzed.
- OMN-1, Section 6.3, Evaluation of Data, requires evaluations to determine the amount of degradation in functional margin that occurred over time.
- OMN-1, Section 6.4, Determination of MOV Functional Margin, for the quarter-turn valves specified.

Alternative to Code Case OMN-1, Section 3.3(b)

By general expectation, LSCS performs “as-found” testing to the extent practicable, with few exceptions such as corrective maintenance.

LSCS MOV periodic verification tests are conducted in an “as-found” condition in order to monitor for potential degradation following the last test and/or periodic maintenance. Certain pre-cursors may not allow for as-found data to be collected. These exceptions include interim corrective maintenance or valve design modifications that are scheduled during the in-service periodic verification surveillance interval. As-found testing shall only be waived provided that an engineering justification is documented in the MOV evaluation. In these circumstances, engineering justification will weigh the relative value for the as found data obtained on a case-by-case basis.

Not performing as-found testing is justified by the manner in which LSCS determines MOV functional margin and test interval. Unlike the example for determining test interval given in Code Case OMN-1, Section 6.4.4, LSCS uses a process which is less dependent on as-found testing. When pre-service testing is performed, a degradation factor is applied to extrapolate the appropriate test frequency based upon a calculated decline in functional margin over time. Random selections of valves are as-found tested and test results are used to validate degradation assumptions per JOG guidelines. This sample as-found testing is applied to computational methods to ensure that the functional margin is adequate over the testing interval. Therefore, EGC requests relief from the requirement of Code Case OMN-1, Section 3.3(b), for always performing as-found testing.

Alternative to Code Case OMN-1, Section 3.4

Section 3.4 requires identifying and analyzing deviations between previous and new test values. As described above, LCSC uses a process that is less dependent on as-found testing. Specifically, as-found testing is applied to computational methods to ensure that the functional margin is adequate over the testing interval. Therefore, a specific analysis addressing the deviations between the previous and new tests is not required. Therefore, the licensee requested relief from the requirement of Code Case OMN-1, Section 3.4, for always identifying and analyzing deviations between previous and new test values.

Alternative to Code Case OMN-1, Section 6.3

Section 6.3 requires performing evaluations to determine the amount of degradation in functional margin over time. When pre-service testing is performed, a degradation factor is applied to extrapolate the appropriate test frequency based upon a calculated decline in functional margin over time. Random selections of valves are as-found tested and test results are used to validate degradation assumptions per JOG guidelines. This sample of as-found testing is applied to computational methods to ensure that the functional margin is adequate over the testing interval. Therefore, EGC requests relief from the requirement of Code Case OMN-1, Section 6.3, for performing evaluations to determine the amount of degradation in functional margin over time.

Alternative to Code Case OMN-1, Section 6.4

Section 6.4, Determination of MOV Functional Margin, requires, in part, that the Owner shall demonstrate that adequate margin exists between valve-operating requirements and the available actuator output capability to satisfy the acceptance criteria for MOV operational readiness. LSCS has identified several quarter-turn MOVs that operate under low differential pressure conditions, such as air dampers and isolation valves. In closure of GL 89-10 at LSCS, these quarter-turn valves were accepted without diagnostic testing based on analytical methods. These valves operate under low differential pressure and have significant margin. These valves are as follows:

1(2)VG001	Standby Gas Treatment Equipment Train Inlet Damper
1(2)VG003	Standby Gas Treatment Equipment Train Outlet Damper
1(2)VQ037	Primary Containment Purge Air Filter Unit Upstream Isolation Valve
1(2)VQ038	Primary Containment Purge Air Filter Unit Downstream Isolation Valve
1(2)VP113A/B	Drywell Cooler Inlet Inboard Isolation Valve
1(2)VP114A/B	Drywell Cooler Outlet Inboard Isolation Valve

These MOVs will continue to be stroke-time and position verification tested in accordance with ASME OM Code, Subsection ISTC, requirements. These valves will also undergo actuator inspections and motor current signature traces from the motor control center to ensure proper operation. The motor current signature traces provide the ability to detect degradation of the valve. These testing requirements will provide assurance that the valves will be capable of performing their safety functions. Therefore, EGC requests relief from the requirements of OMN-1, Section 6.4, for determination of the MOV functional margin for the quarter-turn MOVs identified above.

Technical Positions

The following positions describe how LSCS interprets and complies with the various Code Case OMN-1 requirements:

1. Code Case OMN-1, Section 3.1, Design Basis Verification Test, allows the use of testing that was conducted prior to the implementation of Code Case OMN-1 if it meets the requirements of the code case. LSCS intends to utilize the testing performed under GL 89-10 to satisfy the requirement for a

one-time test to verify the capacity of each MOV to meet its safety-related design requirements.

2. Code Case OMN-1, Section 3.2, Preservice Test, requires that each MOV be tested during the preservice test period or before implementing IST. LSCS intends to utilize the testing performed under GL 89-10 to satisfy the requirement. LSCS will perform a new preservice test when an MOV undergoes maintenance or modification that could affect its performance.
3. Code Case OMN-1, Section 3.3, Inservice Test, paragraph (b), states, in part, that "Inservice tests shall be conducted in the as-found condition." Maintenance activities, such as stem lubrication, shall not be conducted if they might invalidate the inservice test results. At LSCS, the frequency of stem lubrication and periodic MOV verification testing differ considerably, and the times at which these activities are optimally performed do not coincide. As part of the GL 96-05 program, as-found data has been collected for a sample population of MOVs under various lubrication conditions. The results from this as-found data were used to create stem factor variability assumptions that are used to estimate the effect of stem lubrication on stem performance over the entire lubrication cycle. As described above, relief has been requested from Code Case OMN-1, Section 3.3(b), as it applies to IST being conducted in the as-found condition. With this relief, if testing were to occur directly following maintenance such as a stem lube, test results would not be invalidated as methods used to analyze the test results take into consideration testing under these circumstances. Therefore, the intent of Code Case OMN-1, Section 3.3(b) is that testing is to be performed under conditions that will not hinder the ability to determine applicable functional margins and determine operational readiness is maintained utilizing methods previously described.
4. Code Case OMN-1, Section 3.3(c) requires the IST program to include a mix of static and dynamic MOV performance testing. LSCS will utilize the JOG program's mix of static and dynamic MOV performance testing to satisfy this requirement. Additionally, LSCS will utilize the existing engineering standards, which are consistent with the JOG standards, to conduct evaluations to alter the mix of required MOV performance testing, when applicable, in order to meet this requirement.
5. Code Case OMN-1, Section 3.3.1, Inservice Test Interval, paragraph (b), requires MOV IST to be conducted every two refueling cycles or 3 years (whichever is longer) until sufficient data exists, from an applicable MOV or MOV group, to justify a longer test interval. LSCS has sufficient MOV testing data to justify its current testing frequencies, and, therefore, meets this requirement.
6. Code Case OMN-1, Section 6.4.4, Determination of MOV Test Interval, requires that calculations for determining MOV functional margin be evaluated to account for anticipated time-related changes in performance (i.e., account for potential performance-related degradation). LSCS will

utilize the JOG process for setting test frequencies, which is based on margin and safety significance to meet this requirement.

7. According to Table 2 of RG 1.192, the only testing that is described within ISTC that will need to continue to be performed with the adoption of Code Case OMN-1 is that of leakage testing as described by ISTC-3600. Therefore, position verification testing as described in ISTC-3700 need not be performed per the frequency requirements of ISTC. However, LSCS will continue to perform position verification testing at a frequency consistent with JOG guidelines during MOV diagnostic testing.

3.1.6 Duration of Proposed Alternative

Relief is requested for the fourth 10-year IST interval for LSCS, Units 1 and 2, beginning October 12, 2017, and ending October 11, 2027.

3.2 NRC Staff Evaluation

Application of code cases is addressed in 10 CFR 50.55a(b)(6) through reference to RG 1.192, which lists acceptable and conditionally acceptable code cases for implementation in IST programs. The current version RG 1.192 Revision 1, Table 2, conditionally approves the use of Code Case OMN-1 and states that the code is applicable to the 2006 Addenda of the ASME OM Code.

LSCS will be using ASME OM Code Case OMN-1, 2006 Addenda, for the upcoming fourth IST test interval and requests alternatives to the requirements of Sections 3.3(b), 3.4, 6.3 and 6.4.

Section 3.3(b) of OMN-1 states, in part, that "Inservice tests shall be conducted in the as-found condition." In lieu of this requirement, the licensee proposes not to perform as-found testing in all situations at LSCS. For those conditions that as-found testing cannot be performed, the licensee proposes to perform as-found testing on a sample population of MOVs under various lubrication conditions and use the data to compute a degradation factor over time. This factor will be used to validate non as-found tested MOVs operational readiness over their established IST interval. The intent of the as-found IST is to detect and monitor the degradation or rate of changes of a component after a period of operation or standby conditions. The NRC staff recognizes that not all valves can be tested in a true as-found condition. For those MOVs that cannot be as-found tested, LCSC shall provide an engineering justification documented in the MOV evaluation. The NRC staff considers the licensee's approach to conduct sample as-found testing on a sample population of MOVs under various lubrication conditions and use the data to compute an overall degradation factor to be an acceptable alternative. This method is also an acceptable alternative for meeting the requirements of Sections 3.4 and 6.3 because it provides an acceptable level of quality and safety.

Section 6.4 states, in part, that: "The Owner shall demonstrate that adequate margin exists between the valve operating requirements and the available actuator output capability to satisfy the acceptance criteria for MOV operational readiness." LCSC has identified several quarter turn MOVs that operate under low differential pressure conditions. In lieu pf performing dynamic testing to measure actual margin, these MOVs will continue to be stroke-time and position verification tested in accordance with ASME OM Code, Section ISTC, requirements. In addition, periodic actuator inspections and motor current signature traces will provide the ability

to monitor potential degradation of the MOV assembly. The NRC staff has determined that the proposed alternative provides an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff finds that the proposed alternative described in alternative RR RV-01 provides an acceptable level of quality and safety for all active ASME Class 1, 2, and 3 MOVs scoped into the LSCS IST program. 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).

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

Therefore, the NRC authorizes the licensee's proposed alternatives in the RR RV-01 from certain IST requirements of the ASME OM Code, for the fourth 10-year IST interval at LSCS, Units 1 and 2, currently scheduled to start on October 12, 2017.

Principle Contributor: Michael Farnan, NRR

Date of issuance: March 1, 2017

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 REQUEST RV-01. (CAC NOS. MF8500 AND MF8501) DATED MARCH 1, 2017

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***via memorandum**

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