

10CFR50.59(d)(2)

December 21, 2004

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

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: 24-Month 10CFR50.59 Evaluation Summary Report
For the Period July 1, 2002 through June 30, 2004

Attached is the 24-Month 10CFR50.59 Evaluation Summary Report for Limerick Units 1 and 2 for the period of July 1, 2002 through June 30, 2004, forwarded pursuant of 10CFR50.59(d)(2).

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Original signed by

Ron J. DeGregorio
Vice President – Limerick
Exelon Generation Company, LLC

Attachment: Limerick Generating Station 24-Month 10CFR50.59 Evaluation Summary Report, July 1, 2002 through June 30, 2004

cc: S. J. Collins, Administrator Region I, US NRC
S. L. Hansell, USNRC Senior Resident Inspector, LGS

10 CFR 50.59 Evaluation
24-Month Summary Report
Limerick Generating Station
2004

Note: This report summarizes 10 CFR 50.59 Evaluations that were approved between July 1, 2002 and June 30, 2004.

Evaluation number: LG2003E001 Rev.0
 50.59 Reviewer approval date: 3/19/03
 PORC number: 03-009
 PORC approval date: 3/19/03
 Implementing document: ECR 03-00139 Rev.1

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[x]	[]	[]
Complete on:	[]	[x]	[]	[]

Title:

Unit 2 "B" Reactor Recirculation Pump RECW leakage

Description of Activity:

This activity is to isolate the LGS Unit 2 "B" Reactor Recirculation Pump lower seal cooler RECW line to the pump cover and to install electrical jumpers to allow control rod drive (CRD) purge flow to cool the recirculation pump seals following recirc pump shutdown or trip.

Reason for Activity:

During the 2R07 refueling outage at LGS, maintenance personnel identified a Reactor Enclosure Cooling Water (RECW) leak on the LGS Unit 2 "B" Reactor Recirculation Pump (2B-P201). The leak was identified to be on a section of the Unit 2 "B" Reactor Recirculation Pump RECW supply line to the pump cover lower seal cooler. This line provides cooling water to the lower seal cooler at approximately 12 GPM. Maintenance was unable to rework this line to restore it to its original condition; therefore, this line has been isolated from the pump cover. In order to minimize the potential for damage to the pump seals and shaft, the CRD purge flow must be provided to the pump seals following a pump trip. The current design isolates the CRD purge flow by closing valves HV-046-215A/B if both recirc pumps are shutoff. The installed jumpers will keep these valves open to provide cooling flow to the seals.

Effect of Activity:

This activity will eliminate the cooling water that is provided to the LGS Unit 2 "B" Recirculation pump cover lower seal cooler until 2R08. However, cooling water, from CRD purge, to the seals for this pump will still be provided. The net result will be a minor reduction in cooling capacity to the pump, but will not adversely affect pump operation or expected life of the pump.

Summary of Conclusion for the Activity's 50.59 Review:

By isolating the RECW line to the LGS Unit 2 "B" Recirculation pump cover lower seal cooler, a reduction in the total cooling capacity for this pump has resulted. This does not represent an adverse impact to pump operation, since the primary cooling load is accomplished through the heat exchangers surrounding the pump as well as the CRD seal purge injection cooling line. The flow through these heat exchangers will actually be increased as a result of this change, and the net cooling capacity will be slightly reduced. The Unit 2 "B" Reactor Recirculation pump will be capable of performing its intended design function. This change resulted in a 10CFR50.59 Screening. Initially a 10CFR50.59 Evaluation was determined to not be required. However, a revision to the screening has resulted in an Evaluation now being required.

Evaluation number: LG2003E001 Rev.1
 50.59 Reviewer approval date: 3/20/03
 PORC number: 03-011
 PORC approval date: 3/20/03
 Implementing document: ECR 03-00139 Rev.1

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[x]	[]	[]
Complete on:	[]	[x]	[]	[]

Title: Unit 2 "B" Reactor Recirculation Pump RECW leakage

Description of Activity:

Note: LG2003E001 Rev.1 incorporated a revision to Evaluation question #2 that removed reliance on operator actions to restore control rod drive (CRD) seal purge. This operator action is not required to preserve seal integrity.

This activity is to isolate the LGS Unit 2 "B" Reactor Recirculation Pump lower seal cooler RECW line to the pump cover and to install electrical jumpers to allow CRD purge flow to cool the recirculation pump seals following recirc pump shutdown or trip.

Reason for Activity:

During the 2R07 refueling outage at LGS, maintenance personnel identified a Reactor Enclosure Cooling Water (RECW) leak on the LGS Unit 2 "B" Reactor Recirculation Pump (2B-P201). The leak was identified to be on a section of the Unit 2 "B" Reactor Recirculation Pump RECW supply line to the pump cover lower seal cooler. This line provides cooling water to the lower seal cooler at approximately 12 GPM. Maintenance was unable to rework this line to restore it to its original condition; therefore, this line has been isolated from the pump cover. In order to minimize the potential for damage to the pump seals and shaft, the CRD purge flow must be provided to the pump seals following a pump trip. The current design isolates the CRD purge flow by closing valves HV-046-215A/B if both recirc pumps are shutoff. The installed jumpers will keep these valves open to provide cooling flow to the seals.

Effect of Activity:

This activity will eliminate the cooling water that is provided to the LGS Unit 2 "B" Recirculation pump cover lower seal cooler until 2R08. However, cooling water, from CRD purge, to the seals for this pump will still be provided. The net result will be a minor reduction in cooling capacity to the pump, but will not adversely affect pump operation or expected life of the pump.

Summary of Conclusion for the Activity's 50.59 Review:

By isolating the RECW line to the LGS Unit 2 "B" Recirculation pump cover lower seal cooler, a reduction in the total cooling capacity for this pump has resulted. This does not represent an adverse impact to pump operation, since the primary cooling load is accomplished through the heat exchangers surrounding the pump as well as the CRD seal purge injection cooling line. The flow through these heat exchangers will actually be increased as a result of this change, and the net cooling capacity will be slightly reduced. The Unit 2 "B" Reactor Recirculation pump will be capable of performing its intended design function.

Evaluation number: LG2003E002 Rev.0
 50.59 Reviewer approval date: 3/19/03
 PORC number: 03-009
 PORC approval date: 3/20/03
 Implementing document: ECR 03-00158

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[x]	[]	[]
Complete on:	[]	[x]	[]	[]

Title:

2B Residual Heat Removal (RHR) Heat Exchanger Nonconformance – Tube Pitting

Description of Activity:

This activity involves plugging of tubes in the 2B RHR Heat Exchanger (2B-E205) and operating in this condition for Cycle 8. Doing so requires a reduction of the allowable fouling factor described in the UFSAR and implementation of a heat exchanger condition monitoring plan. RHR Service Water flow through the 2B RHR heat exchanger may need to be limited to a lower value, depending on how many tubes are plugged.

Reason for Activity:

During the 2R07 refueling outage at LGS, nondestructive examination revealed pitting on the inside wall of 2B RHR heat exchanger tubes. To assure that no tube leak will develop during the next operating cycle (Cycle 8), a number of tubes greater than the 5% design allowance will be plugged. To compensate for the reduction in heat transfer surface area, a lower fouling factor of 0.0015 must be assumed when evaluating the performance of the heat exchanger. The design fouling factor is 0.0025 and 5% of the tubes is 27 tubes of the 530 total number of tubes. A maximum of 198 tubes may be plugged if the fouling factor is maintained at or below 0.0015.

Effect of Activity:

Increasing the number of plugged tubes in the 2B RHR heat exchanger beyond 5% reduces the heat removal capacity of the heat exchanger below that described in the UFSAR. To temporarily correct this, the allowable fouling factor will be decreased below the value currently described in the UFSAR. Effectively, the heat exchanger must be maintained cleaner than assumed in the design basis analyses described in the UFSAR. By doing so, the heat exchanger is capable of removing sufficient heat such that it will continue to perform all of its required design basis functions.

Summary of Conclusion for the Activity's 50.59 Review:

Because the allowable fouling factor described in the UFSAR must be decreased (a non-conservative change) and the number of plugged tubes must be more than the design basis allowable number, it can be determined that this activity constitutes an adverse effect on design functions without performing a 50.59 Screening. Therefore, in accordance with LS-AA-104, a 50.59 Evaluation has been prepared, and no 50.59 Screening has been prepared.

Although the heat transfer surface area of the 2B RHR heat exchanger has decreased as a result of the tube plugging, the required heat removal capability still exists with administrative controls placed on the cleanliness and lay-up condition of the heat exchanger. Furthermore, the method of plugging tubes with unacceptable pitting and the condition monitoring plan provide reasonable assurance that the RHR Service Water System will limit the possibility of any radioactive material release to the environment. These conclusions are supported by engineering evaluations and calculations documented in ECR 03-00158 (interim nonconformance disposition), calculation LM-0637 and Condition Report 0149191.

Evaluation number: LG2003E003 Rev.0
 50.59 Reviewer approval date: 7/23/03
 PORC number: 03-020
 PORC approval date: 7/30/03
 Implementing document: ECR 01-01233 Rev.0

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[]	[x]	[]
Complete on:	[]	[]	[x]	[]

Title:

Evaluation of GE SIL 636 Impact – Unconservative Reactor Decay Heat Values

Description of Activity:

General Electric issued SIL 636 Revision 1 advising BWR owners that decay heat curves based on the ANSI/ANS-5.1-1979 Decay Heat Standard as used by GE may be non-conservative. The evaluation of the impact of SIL 636 is documented in ECR 01-01233. In addition, the value of 8.0 BTU/hr-ft-F for thermal conductivity of AL-6XN tube material used in the Unit 1 RHR heat exchangers is non-conservative and is reduced to 6.8 BTU/hr-ft-F.

Reason for Activity:

Many of the design basis analyses performed by General Electric that are based on decay heats from ANS-5.1-1979 did not include the effects of actinides and activation products. Previous evaluations concluded that the impacts from these sources were negligible. However, current evaluations conclude that the contribution of actinides and activation products, collectively, may have a non-negligible impact on the total decay heat for long-term calculations. Analyzed events potentially impacted are the suppression pool response for LOCA, ECCS pump NPSH, shutdown cooling, alternate shutdown cooling, station blackout, fire safe shutdown, and ATWS. In addition, including 2σ uncertainty for plant events further increases the values for decay heat to be used in the containment analyses.

The thermal conductivity of 8.0 BTU/hr-ft-F for AL-6XN tube material used in the Unit 1 RHR heat exchanger analyses is applicable to a metal temperature of 212F. However, typical average metal temperature in the heat exchanger tubes is approximately 150F. At this temperature, a value of 6.8 BTU/hr-ft-F for thermal conductivity is appropriate.

Effect of Activity:

Including the actinide and activation product decay heats per SIL 636 does not measurably increase the decay heat for the time period from shutdown to about 1000 seconds. However, for time periods greater than 1000 seconds, the decay heat (including

the 2σ uncertainty) could increase by as much as 10%. The impact of the decay heat increase is offset by existing conservatisms used in the affected plant analyses and maintaining the RHR heat exchangers in a cleaner operating condition. For example, most of the analyses performed in support of the power rerate project used a reactor power of 110% of original licensed power when only 105% was required to support the rerate licensed power increase. The increase in the decay heat rates and added uncertainty utilizes the margin inherent in the 5% power differential and also requires a nominal increase in RHR heat exchanger performance to maintain peak suppression pool temperatures within those determined for the power rerate project, thereby, assuring that design and licensing limits for containment response for the affected events are not exceeded.

Reducing the thermal conductivity from 8.0 to 6.8 BTU/hr-ft-F for AL-6XN material reduces the heat transfer capability of the Unit 1 RHR heat exchangers. This impact of this change is managed by allowing a smaller fouling factor and/or lower number of plugged tubes to satisfy heat transfer requirements.

Summary of Conclusion for the Activity's 50.59 Review:

The increase in decay heat rates results in an element of an analysis that is considered an adverse change and requires a 50.59 evaluation. The available margin (power level) from the power rerate analyses and requirements to maintain the RHR heat transfer capability assure that containment design parameters are not exceeded. Therefore, prior NRC approval is not required.

The reduction in thermal conductivity for AL-6XN tube material is also a change to the facility. Since the impact on the heat exchanger is minimal (less than 4%) and the Unit 1 RHR heat exchangers can still perform their design function, prior NRC approval is not required.

Evaluation number: LG2003E004 Rev.0
 50.59 Reviewer approval date: 12/15/03
 PORC number: 03-029
 PORC approval date: 12/15/03
 Implementing document: ECR 02-00731 Rev.0

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[]	[x]	[]
Complete on:	[x]	[]	[]	[]

Title:

DC MOV Margin Improvement – HV-055-1(2)F042

Description of Activity:

Limerick Generating Station's GL96-05 response and NRC RIS 2001-15 commits to the use of the BWROG methodology to address actuator torque capability and stroke time issues on DC MOVs. Use of the methodology extends the maximum expected stroke times for several valves required to transfer the suction source for the HPCI and RCIC systems from the Condensate Storage Tank (CST) to the Suppression Pool.

Transfer of the HPCI and RCIC pump suction source from the CST to the Suppression Pool requires the HPCI F041 and F042 valves and RCIC F029 and F031 valves to open, and the HPCI F004, and the RCIC F010 valves to close. With the use of the BWROG methodology, analysis indicates that the HPCI valves are marginally capable of repositioning in sufficient time to prevent cavitation of the HPCI pump prior to completing the suction transfer. In addition, implementation of the methodology impacts the existing battery calculations and electrical load profiles. A modification to the HPCI system logic, configuration and equipment is required to ensure that the system is capable of meeting its design and safety requirements under degraded voltage conditions.

In order to maintain the HPCI pump suction automatic transfer feature, this activity changes the HPCI pump suction from the suppression pool primary containment isolation valve (PCIV), HV-055-1(2)F042 from a normally closed to a normally open valve. This change requires the elimination of two interlocks. The first interlock automatically closes the HPCI CST Isolation Valve, HV-055-1(2)F011 when the F042 valve is fully open. The second interlock prevents the CST Suction Valve, HV-055-1(F)F004 from opening when the F042 valve is fully open. The protection provided by these interlocks is maintained by the redundant interlocks on the HPCI Pump Suction from the Suppression Pool Valve, HV-055-1(2)F041, which are not affected by this activity. The change in interlocks requires a revision to UFSAR Table 6.2-26, UFSAR Section 6.3.2.2.1, UFSAR Section 7.3.1.1.1.1.3, UFSAR Section 7.3.1.1.1.1.5, UFSAR Section 7.3.1.1.1.1.7, calculation M-55-33, and engineering analysis LEAM-0001 to reflect the changes to system alignment and logic.

In order to restore margin to the battery calculations, after the F042 is normally open, this activity requires the replacement of the motor operator and motor gearing for the HPCI Pump Suction From the Suppression Pool PCIV, HV-055-1(2)F042. This replacement ensures that the performance of the HPCI F042 valve during a Loss of Coolant Accident (LOCA) concurrent with a Loss of Offsite Power (LOOP) will continue to be enveloped by the existing DC battery load profiles. To support the motor replacement, electrical calculations LE-0052, LE-0053, and LE-0104, and mechanical calculations P1-24-053, 2-18-58, and LM-0473 are revised.

This activity also requires revision to the existing PRA model and requires changes to the Design Basis Documentation, Critical Control Room Drawings, Environmental Qualification Program Documentation for the HPCI F042 valve operator, Dynamic Qualification Program Documentation for the HPCI F042 valve operator, ASME IST bases documentation, the Motor Operated Valve (MOV) Program, ASME Section XI In-Service Testing Requirements, design quality fields in the Component Records List, and safety-related Bills of Material.

Reason for Activity:

This activity is required to restore margin to the HPCI system to ensure that the system remains capable of meeting its design, performance, and safety requirements under degraded voltage conditions. The changes to the system configuration and logic ensure that the HPCI system is capable of meeting the design requirements of UFSAR Section 6.3, which requires the HPCI system to support automatic transfer of the HPCI Pump suction from the Condensate Storage Tank to the Suppression Pool. The replacement of the motor operator and gearing is required to ensure that the performance of the HPCI Pump Suction From the Suppression Pool PCIV is bounded by the existing DC battery loading analyses under all accident conditions, including a Loss of Coolant Accident concurrent with a Loss of Offsite Power (LOCA/LOOP).

Effect of Activity:

This activity ensures that the HPCI system is capable of meeting its design, performance and safety requirements under all normal and accident conditions and assuming degraded voltage conditions exist. This activity ensures that the HPCI system maintains the capability to automatically swap from the condensate storage tank to the suppression pool under all conditions. In addition, this activity ensures that the battery load profile for the F042 valve remains bounded by the existing design analyses. This activity has no effect on the automatic or manual isolation signals features for the HPCI F042 valves.

Summary of Conclusion for the Activity's 50.59 Review:

Since this activity changes the normal configuration of a safety-related primary containment isolation valve, and this activity modifies interlocks described in the UFSAR, it can be determined that this activity constitutes an adverse effect on design functions without performing a 10CFR50.59 screening. Therefore, in accordance with

LS-AA-104, a 50.59 evaluation has been prepared and no 50.59 screening has been prepared.

Although this activity modifies interlocks mentioned in the UFSAR, changes the normal position of the HPCI Pump Suction from the Suppression Pool PCIV (HV-055-1(2)F042), and replaces the F042 valve motor and gearing, this change does not prevent the LGS Emergency Core Cooling Systems or Primary Containment from meeting their design bases. The function performed by the F042 valve interlocks is maintained by the redundant interlocks on HV-055-1(2)F041, and by check valve, HV-055-1(2)F045. The normally open position of the F042 valve is allowed per the general design criteria, SRP, SER, and UFSAR and maintains the ability of the HPCI system and Primary Containment to function as described in the UFSAR. The motor and gearing change ensure that the F042 valve performance remains bounded by the existing battery loading analysis. This activity does not create any new failure modes or effects for the LGS ECCS. The basis for this conclusion is supported by the evaluation and design analyses performed to support ECR 02-00731.

All evaluation questions have been answered "No;" therefore, a license amendment and NRC approval are not required to support this activity.

Evaluation number: LG2004E001 Rev.0
 50.59 Reviewer approval date: 2/2/04
 PORC number: 04-004
 PORC approval date: 2/6/04
 Implementing document: ECR 03-00295 Rev.0

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	[]	[]	[x]	[]
Complete on:	[x]	[]	[]	[]

Title:

Design Analysis of DC MOVs for NRC RIS2001-15

Description of Activity:

This activity provides a design analysis of forty-four DC Motor Operated Valves (MOVs) in HPCI / RCIC, in response to an open industry issue in the GL96-05 commitment. All valves in the scope of this evaluation are in the GL89-10 valve program. DC MOV design concerns are discussed in NRC RIS2001-15. The analysis uses the BWROG DC MOV method that is endorsed in the NRC regulatory issue summary. The station inputs and vendor review per the BWROG method together provide the analysis of the DC MOV torque and stroke time capabilities under degraded voltage and elevated ambient temperatures. All evaluated valves have acceptable torque capability, and most meet existing stroke time limits. Based on the evaluation of DC MOV stroke times under worst-case accident conditions, three valve families do not meet the UFSAR maximum stroke times. Those valves are: RCIC injection valves, HV-049-*F013, RCIC minimum flow valves, HV-049-*F019, and HPCI minimum flow valves, HV-055-*F012. HV-049-*F013 maximum stroke time will be changed from 15 seconds to 23 seconds. HV-049-*F019 maximum stroke time will be changed from 5 seconds to 8 seconds. HV-055-*F012 maximum stroke time will be changed from 10 seconds to 15 seconds. These times are contained in system response time descriptions and in Table 6.2-17, Containment Penetration Data. ECR LG03-00295 evaluated longer stroke times for forty-four valves, and a change to the maximum stroke time values in the UFSAR for three valve families. HPCI and RCIC system response time limits in the Technical Specifications and the UFSAR are not changed.

In addition, DC system loads tabulated in UFSAR section 8.3 tables are changed by the longer stroke times of the forty-four valves. The DC system continues to be designed and tested to support the safety related loads as previously evaluated in the UFSAR.

Reason for Activity:

Performance of this analysis is part of Limerick's GL96-05 commitment.

Effect of Activity:

The equipment being analyzed support HPCI and RCIC system operation to provide safety related cooling water to the reactor pressure vessel after a plant transient, on a small line break loss of coolant accident, station blackout, or fire safe shutdown event. Some of the system valves also provide a reactor coolant pressure boundary function and / or a primary containment isolation function. The BWROG method provides an assessment of valve operating force functional capability and stroke time under assumed conditions that exist during their operation. System maximum response times and some valve maximum response times are listed in the UFSAR. HPCI system response time is also listed in the Technical Specifications. A few UFSAR valve response time limits are affected by this analysis. The capability of the HPCI and RCIC valves to operate is implied in the requirement for system operability and system response times, when no valve specific stroke time limits are listed. The Technical Requirements Manual (TRM) lists closure times for those valves that are primary containment isolation valves.

This activity evaluates existing plant DC motor operated valve performance integrated with the post-modification configuration of HPCI suction valves, HV-055-*F042. The justification for the design change to HPCI F042 is evaluated separately under ECR 02-00731. This evaluation shows that the HPCI and RCIC DC valve capability and stroke time supports system operation and response limits. Specific valve isolation capability and stroke time is evaluated for primary containment isolation valves listed in TRM Table 3.6.3-1.

The DC system load profile is evaluated for the limiting event of DBA LOCA with LOOP. The safety related batteries must support the load of these valves during a DBA LOCA/LOOP scenario, station blackout, small line break LOCA, and fire safe shutdown, and battery loading has been evaluated per the UFSAR requirements.

Summary of Conclusion for the Activity's 50.59 Review:

HPCI and RCIC DC valves are capable of operating under design basis conditions, using the BWROG method. Bounding stroke times have been determined and UFSAR and the Technical Specification system response times continue to be met. UFSAR maximum stroke times for three valves can be increased without exceeding system response times. The longer valve stroke times affect system response time only slightly and the margin to the system response time limit is reduced slightly. All HPCI and RCIC primary containment isolation valves that are DC powered meet isolation times in the TRM. Battery load profiles tabulated in Section 8.3 tables of the UFSAR also change. The batteries continue to be designed and tested to a load profile that exceeds actual battery load. A 50.59 evaluation was processed to document the changes to the UFSAR stroke time limits of three valve families and the battery load tables.

Evaluation number: LG2004E002 Rev.0
 50.59 Reviewer approval date: 5/3/04
 PORC number: 04-015
 PORC approval date: 5/3/04
 Implementing document: ECR 04-00264
 CY-LG-120-1102

	Unit 1	Unit 2	Units 1 & 2	Common
Unit applicability:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Complete on:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Title:

Use of Spray Pond spray networks and RHRSW for Spray Pond cooling and chemistry control

Description of Activity:

This activity will allow for the use of the Ultimate Heat Sink (UHS) spray networks with the Residual Heat Removal Service Water (RHRSW) system to control chemistry and temperature in the Spray Pond. These functions are in addition to those currently described in the UFSAR (e.g., testing, suppression pool cooling). The LGS UFSAR will be revised in accordance with LS-AA-107 and CC-AA-104, accordingly. The Technical Specification Bases may, if necessary, be revised in accordance with LS-AA-101 and CC-AA-104. It has been determined without completing a Screening that an Evaluation is necessary for this activity due to the potential adverse effects of increased challenges to equipment on UFSAR described design functions. The use of RHRSW and the sprays for these additional purposes and the associated document revisions are covered by this review.

Reason for Activity:

This 50.59 review is being performed to evaluate the use of the spray networks for Spray Pond cooling and chemistry control. The LGS UFSAR and Tech Spec Bases do not currently describe this use. (Reference: CR 196953 and CR 194031). UFSAR Section 9.2.3.2, System Description states that the "RHRSW system is available for normal shutdown or emergencies, and does not operate during normal power generation, except that, if necessary, the RHRSW system can be used in conjunction with the RHR system suppression pool cooling mode to maintain the suppression pool below specified temperature limits." In addition, under the System Description for the Ultimate Heat Sink, UFSAR Section 9.2.6.3.1, states that the "Spray Pond is normally in a standby mode, and except for periodic testing, is only used for cool down and shutdown operations, or during emergency or accident situations. Tech Spec Bases 3/4.7.1 states "RHRSW is a manually operated system used for core and containment heat removal."

Use of the spray networks is necessary for cooling of the Spray Pond. This activity supports the Tech Spec requirement, 4.7.1.3, which requires the Spray Pond to be less than or equal to 88 degrees F. In addition, the use of the spray networks for chemistry concerns protects equipment cooled by the RHRSW and ESW systems. Use of the spray networks promotes aeration and mixing of the Spray Pond, resulting in less stratification of the Spray Pond and overall chemistry improvement.

Effect of Activity:

UHS spray network and RHRSW will be operated for reasons other than currently described in the LGS UFSAR. This will result in:

Better spray pond chemistry control

Ensured compliance with TS 4.7.1.3 and Bases

Summary of Conclusion for the Activity's 50.59 Review:

This activity is safe, and will not affect the ability of safety related systems to perform their required functions, or satisfy NRC requirements. This activity does not require a revision to the LGS Technical Specifications or Operating License because 1) there is no restriction in the Operating License or Technical Specifications for operation of the RHRSW spray network for Spray Pond cooling and Spray Pond chemistry control purposes, 2) required Surveillance Testing can be performed, and 3) Operability of Technical Specification SSC is not affected.

This activity is within the current licensing design basis. The systems will be operated more frequently, but in the manner described in the UFSAR. The UFSAR does, however, require revision.

Based on existing internal operating experience and maintenance history of affected SSCs, this activity will not result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety. This activity is not an initiator of an accident or malfunction since: 1) it is a mitigating system and 2) no design or operating parameters are being altered by this activity.