

April 30, 1998

SECY-98-093

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: PROPOSED NRC GENERIC LETTER 98-xx, LOSS OF REACTOR COOLANT INVENTORY AND ASSOCIATED POTENTIAL FOR LOSS OF EMERGENCY MITIGATION FUNCTIONS WHILE IN A SHUTDOWN CONDITION

PURPOSE:

To inform the Commission of the staff's intent to issue the subject generic letter. In the generic letter, the staff asks the licensees of all pressurized-water reactors to make available to the NRC certain information [pursuant to Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR 50.54(f))] regarding the subject matter of this generic letter. This information will enable NRC staff to verify whether addressees comply with NRC regulatory requirements and conform with current licensing bases for their facilities, including the establishment, and conduct of activities affecting quality per Criterion V of Appendix B to 10 CFR Part 50.

A copy of the proposed generic letter is attached (Attachment 1).

DISCUSSION:

The staff issued Information Notice (IN) 95-03, "Loss of Reactor Coolant Inventory and Potential Loss of Emergency Mitigation Functions While in a Shutdown Condition," on January 12, 1995, to alert addressees to an incident at the Wolf Creek nuclear power plant involving the loss of reactor coolant inventory while the reactor was in a shutdown condition. On March 25, 1996, the staff issued a supplement to IN 95-03 that further analyzed the event and provided additional insights. These insights also heightened awareness of the safety significance of similar events.

The draindown event at Wolf Creek represents a shutdown vulnerability that was not recognized earlier. Events of this nature are considered particularly safety significant because loss of coolant can result in a loss of emergency core cooling system capability, and also involves the potential for containment bypass. Another important aspect of this event is the short time available to the operators for taking corrective action.

CONTACT: M. Razzaque, SRXB/DSSA

The staff proposes to issue this generic letter to request that addressees determine if their emergency core cooling systems (ECCSs) are susceptible to common-cause failure as a result of events similar to the Wolf Creek reactor coolant system draindown event of September 17, 1994. If found susceptible, the generic letter requests that information regarding the prevention of such events be made available to NRC. This generic letter was endorsed by the Committee to Review Generic Requirements (CRGR) during its meeting (Number 291) on September 11, 1996. The staff submitted it to the Commission on November 6, 1996 (SECY-96-231). A staff requirements memorandum issued by the Commission on January 22, 1997, directed the staff to allow the public at least 30 days to comment before the generic letter was issued. As a result, a notice of opportunity for public comment was published in the *Federal Register* on February 14, 1997. In response to the substantial public comments received, the staff revised the generic letter and prepared responses to the comments (Attachment 2).

In the attached proposed final generic letter, the staff requests that licensees (1) perform an assessment of whether their ECCSs include certain design features, such as a common ECCS pump suction header, which can render the ECCS susceptible to common-cause failure as a result of events similar to the Wolf Creek reactor coolant system draindown event; and if this susceptibility is found, (2) prepare, with consideration of plant-specific design attributes, a description of the features of their Appendix B quality assurance program that provide assurance that the safety-related functions of the residual heat removal system and ECCS will not be adversely affected by activities conducted at hot shutdown (such as occurred at Wolf Creek). If the assessment performed in response to part (1) of the above requested information reveals that the susceptibility exists, then the result of the assessment must be submitted to NRC. The response to part (2) of the above information request need not be submitted to NRC, but must be kept in a retrievable licensee system that NRC can verify on an as-needed or sample basis. The staff will prepare guidance for the inspectors who will perform these verifications within the currently available resources.

The CRGR reviewed this revised generic letter during its meeting (Number 314) on January 30, 1998, and the staff has incorporated the comments made by the CRGR at that meeting. The CRGR has endorsed the proposed final generic letter without formal review. The Advisory Committee on Reactor Safeguards (ACRS) reviewed this revised generic letter during its 446th meeting on November 6, 1997. An ACRS letter report, dated November 13, 1997, recommended that the proposed final generic letter be promptly issued. The Office of the General Counsel has reviewed this generic letter and has no legal objections to its content.

The staff intends to issue this generic letter approximately 5 working days after the date of this information paper

L. Joseph Callan
Executive Director
for Operations

Attachments:

1. Proposed Generic Letter, "Loss of Reactor Coolant Inventory and Associated Potential for Loss of Emergency Mitigation Functions While in a Shutdown Condition"
2. Public Comment Resolution and Staff Response

CONCURRENCE: PROPOSED NRC GENERIC LETTER 98-XX, LOSS OF REACTOR COOLANT INVENTORY AND ASSOCIATED POTENTIAL FOR LOSS OF EMERGENCY MITIGATION FUNCTIONS WHILE IN A SHUTDOWN CONDITION

\TECH EDIT: R. Sanders				OGC JGoldberg*	D:DRPM JROE*	EDO LJCALLAN	
DATED: 2/4/98	*see previous concurrence			3/16/98	3/19/98	4 /	/98
SRXB:DSSA	SRXB:DSSA	SRXB:DSSA	D:DSSA	ADT:NRR	DD:NRR		
MRAZZAQUE*	RCARUSO*	TCOLLINS*	GHOLAHAN*	BSHERON*	FMIRAGLIA*		
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The Commissioners

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SRXB R/F (GT #970805)

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Attachment 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

April xx, 1998

NRC GENERIC LETTER 98-xx: LOSS OF REACTOR COOLANT INVENTORY AND ASSOCIATED POTENTIAL FOR LOSS OF EMERGENCY MITIGATION FUNCTIONS WHILE IN A SHUTDOWN CONDITION

Addressees

All holders of operating licenses for pressurized-water reactors (PWRs), except those who have permanently ceased operations, and have certified that fuel has been permanently removed from the reactor vessel.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to request that addressees (1) assess the susceptibility of their residual heat removal (RHR) and emergency core cooling (ECC) systems to common-cause failure as a result of reactor coolant system (RCS) draindown while in a shutdown condition, and (2) submit certain information, pursuant to Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR 50.54(f)), concerning their findings regarding potential pathways for inadvertent RCS drain-down and the suitability of surveillance, maintenance, modification and operating practices and procedures regarding configuration control during reactor shutdown cooling. The requested information will enable NRC staff to verify whether addressees comply with NRC regulatory requirements and conform with current licensing bases for their facilities, with regard to prescribing and accomplishing activities affecting quality per Criterion V of Appendix B to 10 CFR Part 50. The staff is specifically concerned about addressees' controls over the conduct of activities during hot shutdown conditions that may affect the safety-related functions of the RHR system and the ECCS, for example, the methods used to verify valve position, the controls in place to assure compliance with plant surveillance, maintenance, modification and operating procedures, and the adequacy of operator training for such activities.

Discussion

The NRC issued Information Notice (IN) 95-03, "Loss of Reactor Coolant Inventory and Potential Loss of Emergency Mitigation Functions While in a Shutdown Condition," on January 12, 1995, to alert addressees to an incident at the Wolf Creek plant involving the loss of reactor coolant inventory while the reactor was in a hot shutdown condition. In that event, operators were attempting to reborate RHR train B, while at the same time maintenance personnel were repacking an RHR train A-to-train B crossover isolation valve. Train B is reborated by recirculating water through a loop that contains the RHR system piping, the refueling water storage tank (RWST), a containment spray pump, a manual RWST isolation valve, and an RHR

system crossover line. When the RWST isolation valve was opened for the reboration process and the train A-to-train B crossover isolation valve was opened for stroke testing, a drain-down path was inadvertently created from the RCS to the RWST.

At Wolf Creek, all RHR and ECC system pump suction lines are tied into a common suction header. When the draindown event occurred, hot RCS water was introduced into this common suction header between the RWST and the RHR and ECC system pumps. This hot water flashed to steam, resulting in a steam/water mixture in the header. Had an ECCS actuation occurred, this mixture would have been introduced into the suction of the ECCS pumps. If operators had not been able to terminate the event, the hot water in the RWST suction piping might have led to steam binding, which could have adversely affected the pumps in both ECCS trains. In addition, water flashing to steam in the header and the RWST could have caused serious mechanical damage to the RHR piping and the RWST as a result of water hammer. Finally, steaming through the RWST establishes a containment bypass path.

The licensee estimated (using actual plant conditions) that for an unmitigated event, the reactor vessel water level could have drained to the bottom of the hot leg within 5 minutes and, as a consequence, RHR pump A would have lost suction, cavitated, and failed. Shortly thereafter, the common ECCS suction header could have reached a 90-percent steam/water ratio. The licensee also estimated that continued boil-off could have caused the pressure vessel water level to drop to the point of core uncovering in less than 1 hour.

Events of this nature are considered particularly significant because they can result in loss of emergency core cooling capability and involve the potential for containment bypass. On March 25, 1996, the staff issued a supplement to IN 95-03 that further analyzed the event. The NRC has also issued a number of other communications describing events at reactor facilities involving inadvertent loss of reactor coolant inventory while the reactor was in a shutdown condition. The Office for Analysis and Evaluation of Operational Data (AEOD) published AEOD/E704, "Discharge of Primary Coolant Outside of Containment at PWRs While on RHR Cooling," in March 1987, which documented six events involving RCS backflow into the RWST. In Generic Letter 88-17, "Loss of Decay Heat Removal (DHR) 10 CFR 50.54(f)," dated October 17, 1988, the NRC requested several actions to address loss-of-DHR events that occurred while reactors were in a shutdown condition. In IN 91-42, "Plant Outage Events Involving Poor Coordination Between Operations and Maintenance Personnel During Valve Testing and Manipulations," dated June 27, 1991, the NRC discussed inadvertent loss-of-inventory events. The AEOD report "Reactor Coolant System Blowdown at Wolf Creek on September 17, 1994," (AEOD/S95-01), dated March 1995, noted 19 events in which RCS water was transferred to the RWST. These events were primarily caused by personnel errors, poor coordination between operations and maintenance personnel, and inadequate procedures associated with the operation of the RHR system in the shutdown cooling mode. The personnel errors were primarily caused by inattention or lack of training; while the procedural deficiencies were related to omissions or lack of specificity in sequential valve operations when conducting tests on the RHR system. On the basis of this history and the potential for containment bypass, the staff has concluded that additional information is required to confirm the adequacy of existing configuration control, operating practices, and training for assuring the safety function capability of the RHR and ECC systems.

Required Information

Within 180 days of the date of this generic letter, addressees are required to perform the

following: (1) an assessment of whether your emergency core cooling systems include certain design features, such as a common pump suction header, which can render the systems susceptible to common-cause failure as a result of events similar to the Wolf Creek RCS drain-down event of September 17, 1994; and if this susceptibility is found, (2) prepare, with consideration of plant-specific design attributes, a description of the features of your Appendix B quality assurance program (for example, the methods used to verify valve position, the controls in place to assure compliance with plant surveillance, maintenance, modification and operating procedures, and the adequacy of operator training for such activities) that provide assurance that the safety-related functions of the RHR system and ECCS will not be adversely affected by activities conducted at hot shutdown (such as occurred at Wolf Creek). Addressees may limit their attention to those surveillance, maintenance, modification and operational activities at hot shutdown during which it is feasible to divert RCS fluid to the RWST, resulting in simultaneous drain-down of the RCS and voiding in the suction header for the RHR and ECC system pumps. Addressees may further limit their response to the consideration of potential configurations and conditions that involve flow paths with pipe diameters equal to or greater than 2 inches. If the assessment performed in response to part (1) of the above requested information does not reveal that a susceptibility exists, then no submittal is necessary.

If the assessment performed in response to part (1) of the above required information reveals that the susceptibility exists, then the result of the assessment shall be submitted in writing, pursuant to 10 CFR 50.54(f) and 10 CFR 50.4, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, signed under oath or affirmation under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, with a copy to the appropriate regional administrator and the appropriate NRC resident inspector. The response to part (2) of the above information request need not be submitted to the NRC. However, responses to parts (1) and (2) of the required information shall be kept in a retrievable licensee system that NRC can verify on an as-needed or sample basis.

Backfit Discussion

This generic letter only requests information from the addressees under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to verify addressee compliance with the Commission's regulations and conformance with the current licensing-basis of their respective facilities relative to the safety-related functions of the RHR and ECC systems, including 10 CFR 50.46 and General Design Criteria 34 and 35 of Appendix A to 10 CFR Part 50, as appropriate, and the requirements of Appendix B to 10 CFR Part 50. With respect to Appendix B to 10 CFR Part 50, the requested information will enable the NRC staff to determine whether adequate control is being exercised over surveillance, maintenance, modification and operational activities conducted at hot shutdown which can adversely affect the safety-related functions of the RHR and ECC systems. No backfit is either intended or approved in the context of issuance of this generic letter. Therefore, the staff has not performed a backfit analysis.

Quality Assurance Criterion V of Appendix B to 10 CFR Part 50 requires that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type

appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Furthermore, licensees' technical specifications include requirements to establish, implement, and maintain written administrative procedures to address startup, operation, and shutdown of a shutdown cooling system. Maintenance and testing activities at Wolf Creek during hot shutdown were carried out contrary to documented procedures and the technical specifications, resulting in RCS drain-down and the potential for common-cause failure of the RHR and ECC system pumps, which could have compromised the ability of the RHR and ECC systems to fulfill their safety functions. Furthermore, the staff has determined that similar loss-of-coolant events while on RHR cooling have occurred at over 19 plants. These events were due to the failure on the part of licensees to either establish adequate procedures or follow procedures and applicable technical specifications. Both of these conditions involve non-compliance with the requirements of Criterion V of Appendix B to 10 CFR Part 50, and, therefore, non-compliance with the current licensing basis for a facility. Since, a relatively large number of the operating PWRs have experienced similar events, the staff believes that additional information is required to confirm the adequacy of existing configuration control practices, operating practices, and training for assuring the safety function capability of the RHR and ECC systems. In accordance with the provisions of 10 CFR 50.54(f), an approved evaluation of the rationale for the information request contained herein is not a prerequisite to issuance of the generic letter because the information being requested is needed by the NRC staff to verify addressee compliance with the current licensing bases of their respective facilities.

Federal Register Notification

A notice of opportunity for public comment was published in the *Federal Register* (62 FR 7075) on February 14, 1997. Comments were received from four nuclear utility companies, the Nuclear Energy Institute, and the Nuclear Utility Backfitting and Reform Group. The staff's evaluation of the comments is available from the NRC Public Document Room. The generic letter has been appropriately revised to reflect the comments received.

Paperwork Reduction Act Statement

This Generic Letter contains information collections that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget, approval number 3150-0011, which expires - September 30, 2000.

The public reporting burden for this mandatory information collection is estimated to average 80 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. The U.S. Nuclear Regulatory Commission is seeking public comment on the potential impact of the information collections contained in the generic letter and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?

2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

Send comments on any aspect of this information collection, including suggestions for reducing the burden, to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail at BJS1@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011), Office of Management and Budget, Washington, DC 20503.

Public Protection Notification

If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

If you have any questions about this matter, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Jack W. Roe, Acting Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

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Attachment:
List of Recently Issued NRC Generic Letters

Attachment 2

PUBLIC COMMENT RESOLUTION AND STAFF RESPONSE

Substantial comments were received from public/industry sources as a result of publishing the proposed Wolf Creek generic letter (GL) in the Federal Register. These comments have been consolidated by the staff, and are presented below. The original letters from the public/industry with their comments are attached herewith.

Comment # 1: [SCE&G/W&S/NEI/TVA/CP&L/BGE] The proposed GL ignores licensee reviews and any action taken regarding previous NRC notifications (IN 95-03 & Supplement, NUMARC 91-06: "Industry Guidelines to Assess Shutdown Management," and Generic Issue 105: "Interfacing System LOCA in LWR"). Corrective actions have been taken in the form of establishing appropriate work controls to preclude valve misoperations during shutdown conditions. We recommend the NRC Resident Inspectors (RI) appraise the operating experience evaluation of the IN and other generic communications, and any utility review/action taken regarding the Generic Issue, instead of issuing a GL. Data collected by this inspection could be added to the next RI's monthly report. These actions would quickly provide the desired information within the time-frame of the initial GL response. It is our belief that the information found in these reviews will resolve any NRC concern. Alternatively, the NRC should provide licensees at least 180 days or until the next refueling outage to respond to the GL.

Some (but not all) PWR plant designs utilize a common ECCS suction header and are potentially susceptible to this type of failure mode given valve misoperations during shutdown. PWR plants are familiar with the sequence of events described in the IN and the AEOD Special Report on the Wolf Creek event. BGE claims that its plant design does not allow one shutdown cooling loop aligned to the RCS with a second loop aligned to the RWST, and that the design also includes separate suction headers from the RWST to the ECCS pumps. As a result, these plants provide an adequate basis for assuring that the ECCS is not subject to common-cause failure in the event of an RCS drain-down while in a shutdown condition. BGE, therefore, claims that the plants having such design should not be subject to the proposed GL. They recommended that NRC further research the appropriate applicability of this concern prior to issuing a GL applicable to all nuclear power plants.

The action requested by the proposed GL represents a major burden on licensees that is neither practical nor necessary. Plant procedures are in place to effect administrative controls addressing normal shutdown and testing valve alignments. Categorization and description of the permutations of valve lineups and potential misoperations that could contribute to RCS draindown events would entail an exhaustive effort with little practical significance. It is certainly important that each outage operation involving these valves be carefully reviewed with regard to draindown potential at the time that the outage work is planned or executed. However, to attempt to accomplish this in advance for all possible combinations is simply not practical. The number of combinations is so high that it would be difficult to guarantee an all-inclusive effort. It is fundamentally more prudent to review these valve lineups and outage operations on a case-by-case basis where the scope can be constrained to practical dimensions, and greater assurance provided of an intensive review.

The information requested in the proposed GL is unnecessarily burdensome in scope and may

require the institution of studies, or other extensive effort to generate the necessary information to respond. We believe that this type of request is unwarranted and that the Staff has not shown that the burden on licensees is justified.

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Response: If the licensees whose plants are susceptible to Wolf Creek like event, have indeed taken corrective actions to protect against the event (as suggested by the comments), then it is not unduly burdensome nor is it unreasonable for NRC to request for this information to be made available in 120 days. Any corrective actions taken are required to be documented and reported to appropriate levels of management in accordance with Section XVI of Appendix B to 10 CFR Part 50. This kind of request for information by NRC is not done routinely, but only in special circumstances such as the Wolf Creek event, which was the most significant precursor event of 1994 with a conditional core damage probability estimated to be 3.0E-3. However, in order to further relax the requirements, the GL has been revised such that it requests information at this time, and no backfitting will be required. Furthermore, the time allowed to prepare the responses has been increased to 180 days. In the revised GL, the staff requests that addressees perform the following: (1) an assessment of whether your emergency core cooling systems include certain design features, such as a common pump suction header, which can render the systems susceptible to common-cause failure as a result of events similar to the Wolf Creek RCS drain-down event of September 17, 1994; and if this susceptibility is found, (2) prepare, with consideration of plant-specific design attributes, a description of the features of your Appendix B quality assurance program (for example, the methods used to verify valve position, the controls in place to assure compliance with plant surveillance, maintenance, modification and operating procedures, and the adequacy of operator training for such activities) that provide assurance that the safety-related functions of the RHR system and ECCS will not be adversely affected by activities conducted at hot shutdown (such as occurred at Wolf Creek).

If the assessment performed in response to part (1) of the above required information reveals that the susceptibility exists, then the result of the assessment must be submitted to NRC. And, if the assessment does not reveal that a susceptibility exists, then no submittal is necessary. However, responses to parts (1) and (2) of the required information shall be kept in a retrievable licensee system that NRC can verify on an as-needed or sample basis.

The staff agrees that the scope of the requested information in the proposed GL was too broad, and that a more focused review would be sufficient to address the issue. Based on the Wolf Creek experience, the staff believes that the configurations, conditions and processes during shutdown which are most risk-significant must be addressed. Hence, the "Required Information" section of the GL has been modified to read: "Addressees may limit their attention to those surveillance, maintenance, modification and operational activities at hot shutdown during which it is feasible to divert RCS fluid to the RWST, resulting in simultaneous drain-down of the RCS and voiding in the suction header for the RHR and ECC system pumps. Addressees may further limit their response to the consideration of potential configurations and conditions that involve flow paths with pipe diameters equal to or greater than 2 inches."

Comment # 2: [NEI/W&S/TVA/CP&L/BGE] Plants have already demonstrated and been licensed on the basis of compliance with GDCs 34 and 35, and design features alone cannot preclude this or similar events. If the intent is to interpret 10CFR50.46 and the relevant GDCs to suggest that design features must be in place to preclude these types of events during shutdown operations, then we believe the proposed GL represents a significant backfit requiring

a regulatory analysis. Further, if the intent is for licensees to investigate and categorize all permutations of valve operations that could lead to this type of event, we believe this represents a significant revision to current practices for regulation relative to outage conditions and should be subject to regulatory analysis.

The particular event described in the proposed GL concerned management of outage activities rather than system design adequacy. We believe that actions requested in the proposed GL are

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inappropriately characterized as compliance exceptions to the backfitting provisions of Section 3

50.109. The requirements of Section 50.46 relate to specific design features of the ECCS, whereas the problem described in the proposed GL relates to "the adequacy of ECCS configuration control and operating practices." The actions requested by the proposed GL more appropriately relate to conduct and coordination of activities while in a shutdown condition. By citing Section 50.46 as the basis for the compliance exception to the backfit provisions of 10CFR50.109, the proposed GL implies that the ECCS must be designed to prevent such scenarios, when licensees generally rely on administrative controls to prevent placing the RCS and ECCS in such a configuration.

According to the NRC's SRP, the ECCS is designed to refill "the vessel in a timely manner for a LOCA resulting from a spectrum of postulated piping breaks within the reactor coolant pressure boundary"(Sec.15.6.5, NUREG-0800, Rev.2, July '81). Even though operator actions may result in a potential pathway for loss of reactor coolant inventory during shutdown conditions, the consequences are not commensurate with a pipe break at full power operations and modifications to the design features of the ECCS may not be the most appropriate corrective actions to address this situation.

The NRC Staff position implied in the proposed GL appears to be a new interpretation of the regulations in Section 50.46 which would be subject to the backfitting provisions of Section 50.109.

Response: The Wolf Creek-like scenario is credible for some PWR plants that utilize a common ECCS suction header. The facility may have been designed in accordance with GDC 34 and 35, as the comments claim, but if Wolf Creek-like event occurs, there exists the potential that the functions as defined in the technical specifications (TS) and GDCs 34 and 35 will be affected for these plants due to common-cause failures of all the RHR and ECCS pumps. The staff is specifically concerned about the quality control of activities (for example, the methods used to verify valve position, the controls in place to assure compliance with the plant operating procedures, and the adequacy of operator training for such activities) conducted during hot shutdown conditions affecting the safety-related functions of the RHR system and the ECCS, as defined in 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 34 and 35, respectively. Criterion V of Appendix B to 10 CFR Part 50 requires that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Furthermore, licensees' TS include requirements to establish, implement and maintain written administrative procedures to address startup, operation and shutdown of a shutdown cooling system. Maintenance and testing activities at Wolf Creek

during hot shutdown resulted in the RCS drain-down and the potential for common-cause failure of the ECCS pumps, which could have compromised the ability of the RHR and ECCS systems to fulfill the safety functions specified in GDC 34 and 35, respectively.

The GL has been revised to request only information from the addressees under the provisions of 10 CFR 50.54(f). In view of the Wolf Creek draindown event, this information is needed to verify licensees' compliance with NRC regulatory requirements and current licensing bases for their facilities as related to the requirements of Criterion V of Appendix B to 10 CFR Part 50, specifically as regards the quality control of activities which can adversely affect the safety-related functions of the RHR and ECC systems, whose requirements are defined in 10 CFR Part 50, Appendix A, GDC 34 and 35.

Comment # 3: [CP&L] Although it appears from the referenced events that the generic letter is

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specifically concerned with susceptibility of PWR ECCSs to common-cause failure, the scope of the requested response is unclear. It is recommended that the generic letter be clarified as to whether it is intended to address common cause failure of PWR ECCSs or susceptibility of PWRs to drain-down events.

Response: The GL has been clarified in the "Required Information" section which states, "Addressees may limit their attention to those surveillance, maintenance, modification and operational activities at hot shutdown during which it is feasible to divert RCS fluid to the RWST, resulting in simultaneous drain-down of the RCS and voiding in the suction header for the RHR and ECC system pumps. Addressees may further limit their response to the consideration of potential configurations and conditions that involve flow paths with pipe diameters equal to or greater than 2 inches."

Comment # 4: [W&S] Management controls for work activities in shutdown operations, when properly implemented, provide a reasonable means of reviewing possible valve combinations that could be inadvertently mispositioned during specific work activities on a case-by-case basis. Licensees have been made aware of the importance of proper administrative controls by the generic communications referenced in the proposed GL. We recommend that the NRC not issue the proposed GL until a backfitting analysis has been completed, justifying the need for the information and any new interpretation of the regulations. If the staff believes that it has additional information or insights useful to licensees, a second supplement to IN 95-03 could be issued rather than the proposed GL.

Response: The GL requirements have been relaxed to request information only, pursuant to 10 CFR 50.54(f), and that backfitting is not required by the GL at this time. However, NRC needs the information, as discussed in the GL, to enable NRC staff to verify whether addressees comply with NRC regulatory requirements and conform with current licensing bases for their facilities, including the establishment of, and conduct of activities affecting quality according to, documented procedures, per Criterion V of Appendix B to 10 CFR Part 50.

Comment # 5: [W&S] In the Statement of Considerations for the revision of Section 50.54(f), the NRC states that "if extensive effort is reasonably anticipated, the request will be evaluated to determine whether the burden imposed by the information request is justified in view of the

potential safety significance of the issue to be addressed..... Requests for information to determine compliance with existing facility requirements..... usually are not made pursuant to 50.54(f)..... The amendment of 50.54(f) should be read as indicating a strong concern on the part of the Commission that extensive information requests be carefully scrutinized by staff management prior to initiating such requests. The Commission recognizes that there may be instances where it is not clear whether a backfit will follow an information request. Those cases should be resolved in favor of analysis" (50 Fed. Reg.38, 112, Sep.20, 1985). We believe this and the language of the rule itself indicate the Commission's original intent that Section 50.54(f) be used only for the most significant issues when the Commission must determine whether or not the license of a facility "should be modified, suspended, or revoked" (10CFR50.54(f)).

Response: 10CFR50.54(f) states: "...Except for information sought to verify licensee compliance with the current licensing basis for that facility, the NRC must prepare the reason or reasons for each information request prior to issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information....."

In view of the fact that the information is needed to verify licensee compliance with the current

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licensing basis for their facilities and that the issue is safety significant, the staff is not required to address, prior to issuance of the GL, the question of imposing burden on respondents to furnish the requested information to the NRC.