VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 23, 2004

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 04-457
NL&OS/ETS R0
Docket No. 50-338
License No. NPF-4

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNIT 1
PROPOSED EMERGENCY TECHNICAL SPECIFICATION CHANGE
ONE TIME EXTENSION OF THE COMPLETION TIME FOR
THE LOW HEAD SAFETY INJECTION (LHSI) TRAIN A

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(5), Dominion requests an emergency amendment of the Facility Operating License, in the form of changes to the Technical Specifications to Facility Operating License Number NPF-4 for North Anna Power Station Unit 1. The proposed change will revise Technical Specification (TS) 3.5.2, "Emergency Core Cooling System (ECCS) - Operating," by adding a Note to the Completion Time to allow a one-time 7-day Completion Time to repair a weld leak that was discovered on the Low Head Safety Injection pump suction piping. Dominion requests that the proposed change be processed as an emergency change to prevent an unnecessary plant transient and unscheduled shutdown of North Anna Unit 1. North Anna Unit 1 entered Condition A of TS 3.5.2 at 1723 hours on July 21, 2004 due to identifying an active leak in a weld on the suction piping of the A train of Low Head Safety Injection pump. The current Completion Time for this Condition is 72 hours.

The proposed change is based on a risk-informed evaluation performed in accordance with Regulatory Guides (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications." A discussion of the proposed Technical Specifications changes is provided in Attachment 1. The marked-up and proposed Technical Specifications pages are provided in Attachments 2 and 3, respectively. The associated Bases changes are being provided for information only and are being implemented in accordance with the Technical Specification Bases Control Program and 10 CFR 50.59.

We have evaluated the proposed Technical Specifications change and have determined that it does not involve a significant hazards consideration as defined in 10 CFR 50.92. The basis for that determination is provided in Attachment 1. We have also determined that operation with the proposed change will not result in any significant increase in the amount of effluents that may be released offsite and no significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed changes. The basis for that determination is also provided in Attachment 1.

In order to avoid an unnecessary plant shutdown, Dominion requests that the proposed Technical Specification change be reviewed and approved by 1700 hours on July 24, 2004. The extended Completion Time will expire upon returning the 'A' train of the Unit 1 LHSI system to operable status or on July 28, 2004 at 1723 hours, whichever occurs first. If you have any further questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,

David A. Christian
Senior Vice President – Nuclear Operations and Chief Nuclear Officer

Attachments

Commitments made in this letter:

The following compensatory measures will be taken to provide additional assurance that public health and safety will not be adversely affected by this request.

- There will be no planned maintenance on either Unit's Emergency Diesel Generators

- There will be no planned maintenance on the Unit 1 "B" LHSI ECCS train and both Unit 1 trains of the Recirculation Spray/Casing Cooling Systems.

- There will be no planned maintenance activities on switchyard/reserve station service transformers.

- There will be no planned maintenance on the Alternate AC Diesel Generator (AAC DG).

- There will be no planned maintenance on the Unit 1 and 2 high head safety injection pumps including the HHSI cross-tie capability.

- There will be no planned testing on the Unit 1 ECCS components that could render them inoperable.

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Subject:
PROPOSED EMERGENCY TECHNICAL SPECIFICATION CHANGE ONE TIME EXTENSION OF THE COMPLETION TIME FOR THE LOW HEAD SAFETY INJECTION (LHSI) TRAIN A

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by David A. Christian who is Senior Vice President – Nuclear Operations and Chief Nuclear Officer of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 23rd day of July, 2004.

My Commission Expires: 3/31/08.

Maggie McClure
Notary Public

(SEAL)

Attachment 1

Discussion of Emergency Technical Specification Change

Virginia Electric and Power Company
(Dominion)
North Anna Power Station Unit 1

Table of Contents

Discussion of Change

1.0 Introduction

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(5), Virginia Electric and Power Company (Dominion) requests an emergency amendment to Facility Operating License Number NPF-4 in the form of a change to the Technical Specifications (TS) for North Anna Power Station Unit 1. The proposed change will revise Technical Specification 3.5.2, Emergency Core Cooling System (ECCS) - Operating, by adding a note to the Completion Time to allow a one-time 7-day allowed outage time to repair a weld leak that was discovered on the Low Head Safety Injection piping. This change should be processed as an emergency change to prevent the shutdown of North Anna Unit 1. The proposed change is based on a risk-informed evaluation performed in accordance with Regulatory Guides (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications."

A TS Bases change, reflecting the proposed change to the Completion Time associated with the Technical Specification change discussed above, is included for information only. The TS Bases will be revised in accordance with the TS Bases Control Program, TS 5.5.13 following NRC approval of the license amendment.

The proposed change qualifies for categorical exclusion from an environmental assessment as set forth in 10 CFR 51.22(c)(9). Therefore, no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change.

2.0 Background

On July 21, 2004, at 1530 hours, personnel discovered a boric acid like substance on the Unit 1 "A" Low Head Safety Injection (LHSI) pump suction piping in the valve pit in two different locations. Samples of the substance were analyzed and they were confirmed to be boric acid. On July 21, 2004, at 1723 hours, engineering inspected the piping and at least one of the boric acid sites was determined to be an active leak. The Unit 1 LHSI pump, 1-SI-P-1A, was declared inoperable. Technical Specification 3.5.2 requires two ECCS trains be OPERABLE. The Completion Time of Required Action A.1 is 72 hours with one or more ECCS trains inoperable.

Liquid penetrant (PT) and ultrasonic (UT) examinations of the welds on the pump suction line were subsequently performed in the locations identified. These examinations showed evidence of two through-wall indications in the 12-inch pipe. These through-wall indications were ground out and resulted in one linear excavation. There is also a subsurface indication on the bottom of the weld that was detected by UT. This indication was removed as well. The remaining small surface indications were determined to not require repair.

In order to return the "A" LHSI train to OPERABLE, repairs must be completed, non-destructive examinations must be performed, and post-maintenance testing must be performed. The location of the piping that requires weld repair is in the valve pit.

Access to the valve pit is a confined space entry by ladder and is approximately 40 feet below ground level. Completion of piping repairs, NDE and post-maintenance testing will extend beyond the current 72 hour Completion Time of Technical Specification 3.5.2. Therefore, a one-time 7-day Completion Time to Required Action A.1 of Technical Specification 3.5.2 is requested to repair the weld leak on the "A" Low Head Safety Injection pump suction piping. The extended Completion Time will expire upon returning the Unit 1 LHSI system to OPERABLE or on July 28, 2004 at 1723 hours, whichever occurs first. This one-time emergency change will prevent an unnecessary shutdown of North Anna Unit 1. Repair activities are encountering difficulties in eliminating the identified flaws causing additional grinding activities and subsequent examinations. Furthermore, radiographic examinations are required by the Code and will extend the required outage time.

The 12-inch line requires repairs at two locations in accordance with the ASME Code. As a contingency plan, an ASME Section XI pipe replacement is being developed. This includes added difficulties in rigging/pipe fit-up and welding time due to the location of the piping in a confined space. Furthermore, this repair will require a minimum of 12 RT exposures to achieve a complete examination.

The proposed one-time Completion Time change in this license amendment request has been evaluated in accordance with Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications." The approach addresses, as documented in this report, the impact on defense-in-depth and the impact on safety margins, as well as an evaluation of the impact on risk. The risk evaluation considers the three-tiered approach as presented by the NRC in Regulatory Guide 1.177. Tier 1, "PRA Capability and Insights," assessed the impact of the proposed Completion Time changes on core damage frequency (CDF), incremental conditional core damage probability (ICCDP), large early release frequency (LERF), and incremental conditional large early release probability (ICLERP). Tier 2, "Avoidance of Risk-Significant Plant Configurations," considers potential risk-significant plant operating configurations, and Tier 3, "Risk-Informed Plant Configuration Control and Management," assess emerging plant conditions. Use of the extended Completion Time will be minimized. Scheduling and performing maintenance and surveillance testing will be controlled in accordance with 10 CFR 50.65(a)(4), Maintenance Rule. Although not required by the PRA analysis, compensatory measures will be established to improve defense-in-depth during the extended Completion Time duration.

As discussed above, the proposed one-time Completion Time change is based on a risk-informed evaluation performed in accordance with RG 1.174 and RG 1.177. The CDF impact and the LERF impact, as well as the ICCDP and ICLERP associated with the proposed Completion Time change are summarized below. These values meet the acceptance criteria in RG 1.174 and RG 1.177 for the proposed change.

3.0 Need for Technical Specification Change

The proposed one-time change to the Completion Time of North Anna Unit 1 Technical Specifications 3.5.2 is needed to avoid the unnecessary shutdown of the plant to complete pipe repair activities. The change averts known risks from complex and error likely plant shutdown and startup evolutions. In addition, the proposed change eliminates the need for preparing, reviewing and approving a Notice of Enforcement Discretion (NOED).

4.0 Description of Proposed Change

4.1 The proposed change will revise the Technical Specifications as follows:

TS 3.5.2 - ECCS-Operating

1. A Note is being added to the Completion Time of Condition A to allow a one-time 7-day allowed outage time to permit repair of the Unit 1 LHSI piping.

TS Bases

A TS Bases change, reflecting the proposed change to the Completion Time associated with the Technical Specification change discussed above, is included for information only. The TS Bases will be revised in accordance with the TS Bases Control Program, TS 5.5.13 following NRC approval of the license amendment.

4.2 Basis for the Technical Specification Change

The proposed one-time Completion Time change from 72 hours to 7 days to permit repair of the Unit 1 LHSI piping is based on a risk-informed analysis performed in accordance with RG 1.174 and RG 1.177.

4.3 System Description

The function of the ECCS is to provide core cooling and negative reactivity to ensure that the reactor core is protected after any of the following accidents.

- Loss of coolant accident (LOCA), coolant leakage greater than the capability of the normal charging system,
- Rupture of a control rod drive mechanism – control rod assembly ejection accident,
- Loss of secondary coolant accident, including uncontrolled steam release or loss of feedwater, and
- Steam generator tube rupture (SGTR).

The ECCS consists of two separate subsystems: the high head safety injection (HHSI) subsystem and the LHSI subsystem. Each subsystem consists of two redundant, 100% capacity trains. The ECCS accumulators and the Refueling Water Storage Tank (RWST) are also part of the ECCS, but are not considered part of an ECCS flow path as described in Technical Specification 3.5.2.

The ECCS flow paths consists of piping, valves, and pumps such that water from the RWST can be injected into the reactor coolant system (RCS) following an accident. The major components of each subsystem are the HHSI pumps and the LHSI pumps. Each of the two subsystems consists of two 100% capacity trains that are interconnected and redundant such that either train is capable of supplying 100% of the flow required to mitigate the consequences of an accident. This interconnecting and redundant subsystem design provides the operators with the ability to utilize components from the opposite trains to achieve the required 100% flow to the core.

The HHSI subsystem consists of three charging pumps providing flow to normal charging, cold legs, hot legs, and seal injection. HHSI pump "C" is a swing pump that can be powered from either safety bus, but needs to be started manually. In addition, there is a unit-to-unit cross-tie between the HHSI systems. For injection, these pumps take flow from the Refueling Water Storage Tank (RWST). The LHSI system consists of two 100% capacity trains, with one LHSI pump per train, providing flow to the cold legs or hot legs. For injection, these pumps take flow from the RWST. During cold leg and hot leg recirculation phase, the LHSI pump suction is transferred to the containment sump. The LHSI pumps then supply flow to the HHSI pumps. In addition, for North Anna Unit 1, there is a cross-tie from the Recirculation Spray System that can provide flow to the LHSI system for long term core cooling.

5.0 Technical Evaluation

5.1 Risk Assessment

A risk-informed evaluation to determine the impact of the proposed change on plant risk was performed in accordance with Regulatory Guides 1.174 and 1.177.

The Tier 1 and Tier 2 results are discussed below. Tier 3 requirements ensure that the risk impact of out-of-service equipment is evaluated prior to performing any maintenance activity and is met by the Maintenance Rule Program as required by 10CFR50.65(a)(4).

The North Anna WinNUPRA N0AA model was used for the calculational results. This model was deemed suitable for use in this risk-informed application since it models the as-built and as-operated plant. The model has undergone a PRA Industry Peer review. A review of the Peer Review Findings and Observations (F&Os) was performed to ensure that none of the F&Os would invalidate the results of this evaluation. Enclosure 1 contains a matrix with the A and B significance level F&Os from the North Anna PRA Peer Review.

5.1.1 Method of Analysis and Results- Tier 1: PRA Capability and Insights

The method of analysis and results for the proposed Completion Time change is discussed below.

In Tier 1, the impact of the Completion Time change of core damage frequency (CDF), incremental conditional core damage probability (ICCDP), large early release frequency (LERF), and incremental conditional large early release probability (ICLERP) is determined.

- ICCDP = [(conditional CDF with the subject equipment out of service) – (baseline CDF with nominal expected equipment unavailabilities)] X (duration of single allowed outage time (AOT) under consideration)

- ICLERF = {(conditional LERF with the subject equipment out of service) – (baseline LERF with nominal expected equipment unavailabilities)} X (duration of single AOT under consideration)

The integrated risks associated with the proposed one-time Completion Time change are as follows:

	With Potential Common Cause	Without Potential Common Cause
ICCDP	4.14E-7	1.92E-7
ICLERP	2.88E-9	2.68E-9

These results are below the RG 1.177 single event limits of 5E-7 for ICCDP and 5E-8 for ICLERP.

In addition, the average annual increase in core damage and large early release frequencies for this one-time Completion Time change are 4.14E-7 and 2.88E-9 per year. These increases in risk are characterized as "very small" in accordance with RG 1.174.

Results are presented with and without common cause vulnerability present. The latter is more applicable, since VT-2 inspections have shown no leakage on the redundant train piping.

The results of the risk evaluations associated with the proposed Completion Time change meet the acceptance criteria in RG 1.174 and RG 1.177.

5.1.2 Tier 2: Avoidance of Risk-Significant Plant Configurations

North Anna Power Station's program for complying with 10 CFR 50.65(a)(4) fully satisfies the guidance in Regulatory Guide 1.177 for Tier 2 Risk-Informed Configuration Risk Management Program (CRMP). The North Anna 10 CFR 50.65(a)(4) program performs full model PRA analyses of all planned maintenance configurations at power in advance using the SCIENTECH Safety Monitor. The PRA model in the SCIENTECH Safety Monitor is a comprehensive, component level, core damage and large early release model.

The North Anna risk-informed CRMP has been previously evaluated by the NRC in its review and approval of the following amendments: 1) 14-day allowed outage time for the emergency diesel generators (Amendment Nos. 214 and 195), 2) RPS/ESFAS analog instrument surveillance interval extension (Amendment Nos. 221 and 202), 3) 14-day allowed outage time for the PORV nitrogen accumulators (Amendment Nos. 214 and 199), and 4) 7-day allowed outage time for the instrument bus inverters (Amendment Nos. 235 and 217). Configurations that approach or exceed the NUMARC 93-01 risk limits (1.0E-6 cumulative increase in core damage probability) are avoided or addressed by compensatory measures per procedure. Historically, North Anna rarely approaches this limit. Emergent configurations are identified and analyzed by the on-shift staff for prompt determination of whether risk management actions are needed. The configuration analysis and risk management processes are fully proceduralized in compliance with the requirements of 10 CFR 50.65(a)(4).

The components in the LHSI system are explicitly included in the 10 CFR 50.65(a)(4) scope and their removal from service is monitored, analyzed, and managed using the Safety Monitor tool. In addition, possible loss of offsite power hazards (grid loading/stability, switchyard or other electrical maintenance, external events such as severe weather) are all included in the Safety Monitor model and are explicitly accounted for in the (a)(4) program. When configuration risk approaches the (a)(4) risk limits, plant procedures direct the implementation of risk management actions in compliance with the regulations. If the configuration is planned, these steps must be taken in advance.

Individually, most fluid system components do not approach the required risk management thresholds of the (a)(4) regulation. While combinations of unavailable equipment and/or evolutions may approach the limits and even require risk management actions, the risks arising from these configurations will be managed in accordance with station procedures.

Dominion concludes that the North Anna risk-informed CRMP provides reasonable assurance that risk-significant plant equipment outage configurations will not occur when any of the components associated with the Technical Specification request are inoperable. The CRMP has provisions for assessing the need for additional actions if additional equipment-out-of-service conditions exist while the plant is in the risk-informed Completion Time. Therefore, Dominion believes that the North Anna CRMP satisfies the intent of Tier 2 to avoid risk-significant plant configurations.

5.1.3. Tier 3: Risk-Informed Plant Configuration Control and Management

North Anna Power Station's program for complying 10 CFR 50.65(a)(4) fully satisfies the guidance in Regulatory Guide 1.177 for Tier 3 Risk-Informed Configuration Risk Management. The North Anna 10 CFR 50.65(a)(4) program performs full model PRA analyses of all planned maintenance configurations at power in advance using the SCIENTECH Safety Monitor. The PRA model in the SCIENTECH Safety Monitor is a comprehensive, component level, core damage and large early release model. The North Anna Regulatory Guide 1.177 Tier 3 Risk-Informed Configuration Management Program has been previously evaluated by the by the NRC in its review and approval of the following amendments: 1) 14-day allowed outage time for the emergency diesel generators (Amendment Nos. 214 and 195), 2) RPS/ESFAS analog instrument surveillance interval extension (Amendment Nos. 221 and 202), 3) 14-day allowed outage time for the PORV nitrogen accumulators (Amendment Nos. 214 and 199), and 4) 7-day allowed outage time for the instrument bus inverters (Amendment Nos. 235 and 217). Configurations that approach or exceed the NUMARC 93-01 risk limits (a 1.0E-6 cumulative increase in core damage probability) are avoided or addressed by compensatory measures per procedure. Historically, North Anna rarely approaches this limit. Emergent configurations are identified and analyzed by the on-shift staff for prompt determination of whether risk management actions are needed. The configuration analysis and risk management processes are fully proceduralized in compliance with the requirements of 10 CFR 50.65(a)(4).

The LHSI system is included in the 10 CFR 50.65(a)(4) scope and removal from service is monitored, analyzed and managed using the Safety Monitor tool. In addition, possible loss of offsite power hazards (grid loading/stability, switchyard or other electrical maintenance, external events such as severe weather) are all included in the Safety Monitor model and are explicitly accounted for in the (a)(4) program. When configuration risk approaches the (a)(4) risk limits, plant procedures direct the implementation of risk management actions in compliance with the regulations. If the configuration is planned, these steps must be taken in advance.

Individually, most fluid system components do not approach the required risk management thresholds of the (a)(4) regulation. While combinations of unavailable equipment and/or evolutions, may approach the limits and even require risk management actions, the risks arising from these configurations will be managed in accordance with station procedures.

5.1.4 External Events

The internal events analysis used for the quantification of the risk impact of the proposed Completion Time change includes internal initiating events and internal flooding. Qualitative assessments were performed for the risk impact of the proposed Completion Time change on seismic, fire, floods and other external events evaluated in the Individual Plant Examination of External Events (IPEEE). The external event analyses have not been updated since completion of the IPEEE, and portions of these analyses were deterministic.

The seismic analysis in the IPEEE used the seismic margins method, which is entirely deterministic. The high confidence of low probability of failure (HCLPF) capacity of the plant was determined to be 0.16g, and was dominated by the overturning moment of large tanks.

The internal fire analysis in the IPEEE used the EPRI FIVE methodology with quantification of the unscreened fire areas. The core damage frequency from internal fires reported in the IPEEE was 4E-6 per year, which is a small fraction of the internal events core damage frequency.

The other events, including high winds, floods, transportation and nearby facility accidents analyses used a screening methodology with quantification of potentially significant events. The only aspect of the other events quantified was the nearby facility accidents analysis. The nearby facility accidents analysis resulted in core damage frequency of 4E-8 per year, which a very small fraction of the internal events core damage frequency.

The following Table provides a summary of the qualitative assessments of the external event analyses for the requested Completion Time change.

External Event Assessment

Completion Time Change - External Event Analysis	Qualitative Assessment
Emergency Core Cooling (ECCS)	
Internal Fire	ECCS was not associated with any vulnerabilities or unique significance in fire events.
Seismic	ECCS is seismically qualified and was not associated with any vulnerabilities or unique significance in seismic events.
High Winds, Floods, Transportation and Nearby Facility Accidents	ECCS was not associated with any vulnerabilities or unique significance in these events

5.1.6 Cumulative CDF and LERF Impact

The previously approved and proposed risk-informed changes at North Anna with their associated estimated increase in core damage risk are provided below.

North Anna Risk-Informed Change	Estimated increase in CDF per year	Estimated increase in LERF per year
Approved 14 day emergency diesel generator allowed outage time extension	1.3E-06	*1.3E-07
Approved 7 day inverter allowed outage time extension	8.1E-08	4.6E-10
Approved reactor protection system and engineered safety features actuation system analog channel surveillance test internal extensions from monthly to quarterly and allowed outage time extensions	3E-09	3E-10
Proposed 7 day emergency core cooling system allowed outage time extension (assuming only one 7 day entry)	4.1E-07	2.9E-09
Cumulative Total	<1.8E-06	<1.4E-07

*LERF was not calculated, but was estimated based on generic 0.1 containment failure probability for large, dry PWRs.

The cumulative estimated increases in risk associated with all the approved and proposed risk-informed changes is less than 1.8E-06 per year for CDF and 1.4E-07 per year for LERF. These increases in risk are considered acceptably small per Regulatory Guide 1.174.

5.1.7 PRA Model

The PRA model utilized for the evaluation of the Completion Time change is applicable to both Units 1 and 2, and the model reflects the as-built, as-operated plant. Furthermore, a program exists to periodically update the internal events PRA model in accordance with the Industry Peer Review guidance in NEI 00-02. Enclosure 1 provides a summary of the Findings and Observations from the North Anna industry peer reviews and how this application is impacted by those peer review comments.

5.2 Defense-In-Depth Assessment

The proposed change to the ECCS Completion Time maintains the system redundancy, independence, and diversity commensurate with the expected challenges to system operation. The opposite train of emergency power and the associated engineered safety equipment remain operable to mitigate the consequences of any previously analyzed accident. Also, for North Anna Unit 1, there is a cross-tie from the Recirculation Spray System that can provide flow to the LHSI system for long term core cooling. In addition to the Technical Specifications, the Work Management Program, and Maintenance Rule (a)(4) Program provide for controls and assessments to preclude the possibility of simultaneous outages of redundant trains and ensure system reliability. The proposed increase in the Completion Time for the ECCS will not alter the assumptions relative to the causes or mitigation of an accident.

The proposed change needs to meet the defense-in-depth principle consisting of a number of elements. These elements and the impact of the proposed change on each follow:

- A reasonable balance among prevention of core damage, prevention of containment failure, and consequence mitigation is preserved.

  The proposed Completion Time change has only a small calculated impact on CDF and LERF. The change does not degrade core damage prevention and compensate with improved containment integrity nor do these changes degrade containment integrity and compensate with improved core damage prevention. The balance between prevention of core damage and prevention of containment failure is maintained. Consequence mitigation remains unaffected by the proposed changes. Furthermore, no new accident or transients are introduced with the requested change and the likelihood of most accidents or transients is not impacted.

- Over-reliance on programmatic activities to compensate for weaknesses in plant design.

  Safety systems will still function in the same manner with the same reliability. Although not required by the PRA analysis, as additional defense-in-depth, the following compensatory measures will be taken to provide additional assurance that public health and safety will not adversely affected by this request.

  - There will be no planned maintenance on either Unit's Emergency Diesel Generators.

- There will be no planned maintenance on the Unit 1 "B" LHSI ECCS train and both Unit 1 trains of the Recirculation Spray/Casing Cooling Systems.

- There will be no planned maintenance activities on switchyard/reserve station service transformers.

- There will be no planned maintenance on the Alternate AC Diesel Generator (AAC DG).

- There will be no planned maintenance on the Units 1 and 2 high head safety injection pumps including the HHSI cross-tie capability.

- There will be no planned testing on the Unit 1 ECCS components that could render them inoperable.

- System redundancy, independence, and diversity are maintained commensurate with the expected frequency and consequences of challenges to the system.

  There is no impact on the redundancy, independence, or diversity of the Unit 1 ECCS or on the ability of the plant to respond to events with diverse systems. The ECCS is a diverse and redundant system and will remain so.

  In addition, ECCS piping will be thoroughly vented following maintenance for the "A" LHSI piping up to and including the HHSI suction piping.

- Defenses against potential common cause failures are maintained and the potential for introduction of new common cause failure mechanisms is assessed.

  Defenses against common cause failures are maintained. The Completion Time extension requested is not sufficiently long to expect new common cause failure mechanisms to arise. In addition, the operating environment for these components remains the same so, again, new common cause failures modes are not expected. In addition, backup systems are not impacted by this change and no new common cause links between the primary and backup systems are introduced. The redundant train of the LHSI system has been evaluated for leakage and the results were satisfactory. Therefore, no new potential common cause failure mechanisms have been introduced by the proposed change.

- Independence of barriers is not degraded.

  The barriers protecting the public and the independence of these barriers are maintained. Multiple systems will not be taken out of service simultaneously that could lead to degradation of these barriers and an increase in risk to the public. In addition, the extended Completion Time does not provide a mechanism that degrades the independence of the barriers; fuel cladding, reactor coolant system, and containment.

- Defenses against human errors are maintained.

No new operator actions related to the one-time Completion Time extension are required to maintain plant safety. No new operating, maintenance, or test procedures have been introduced due to the change. Operating procedures have been modified to reflect the compensatory measures that are being established. The increase in the Completion Time provides additional time to complete troubleshooting and test and repair activities which will lead to improved operator and maintenance personnel performance resulting in reduced system re-alignment and re-assembly errors.

It is concluded that defense-in-depth was not impacted by the proposed changes.

5.3 Safety Margin Assessment

The overall margin of safety is not decreased due to the increased Completion Time for the ECCS since the system design and operation are not altered by the proposed increase in Completion Time.

The safety analysis acceptance criteria stated in the Updated Final Safety Analysis Report (UFSAR) is not impacted by the change. Redundancy and diversity of the ECCS will be maintained. The proposed change will not allow plant operation in a configuration outside the design basis. The ECCS requirements credited in the accident analysis will remain the same. In addition, for North Anna Unit 1, there is a cross-tie from the Recirculation Spray System that can provide flow to the LHSI system for long term core cooling. It was concluded that safety margins were not impacted by the proposed changes.

5.4 Dominant Accident Sequences

The dominant accident sequences were reviewed for the case of one train of the LHSI system unavailable. The results are as follows.

With elevated common cause LHSI vulnerability of the redundant operable train (the RG 1.177 corrective maintenance assumption):

- The top sequence is a small break LOCA with successful RCS cooldown and depressurization, but with failure of LHSI recirculation. The dominant failures are common cause failures of the LHSI pumps or the associated MOV's or check valves. This sequence contributes 42.5% the overall CDF (Sequence CDF = 1.37E-5/yr).

- The next sequence is a small break LOCA with failure of HHSI and either the SI accumulators or LHSI. Failure of the RWST or its common isolation valve causes failure of both LHSI and HHSI. This sequence contributes 7.9% of the overall CDF (Sequence CDF = 2.50E-6/yr).

- The next two sequences include auxiliary building flooding, resulting in failure of the HHSI and component cooling pumps. These failures lead to an unrecoverable seal LOCA. These sequences contribute 5.7% risk each (11.4% total). They are unrelated to the proposed AOT extension.

- There are no other sequences contributing more than 5% the overall CDF.

Without an elevated common cause LHSI vulnerability:

- The small break sequences contribute ~33% of overall CDF.
- Auxiliary building flooding contributes ~30% of overall CDF.
- There are no other sequences contributing more than 8% of overall CDF.

The large break LOCA is not a significant contributor in either case, due to its low initiating event frequency (~4.5E-6/yr). The small break LOCA frequency is ~7E-3/yr.

5.5 Summary

The proposed Completion Time change is based on a risk-informed evaluation performed in accordance with RG 1.174 and RG 1.177. The ICCDP with and without potential common cause vulnerability is 4.14E-7 and 1.92E-7 respectively. The ICLERP with and without potential common cause vulnerability is 2.88E-9 and 2.68E-9, respectively. These results are well below the RG 1.174 limits of 1E-6 for ICCDP and 1E-7 for ICLERP. They are also below the RG 1.177 single event limits of 5E-7 for ICCDP and 5E-8 for ICLERP. The defense-in-depth and safety margin is not impacted by the proposed changes.

6.0 Regulatory Safety Analysis

6.1 No Significant Hazards Consideration

The proposed change will provide a one-time revision the Completion Time of Technical Specification 3.5.2 to allow repair of the Unit 1 LHSI pump suction piping. The proposed change is based on a risk-informed evaluation performed in accordance with Regulatory Guides (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications." Dominion has evaluated whether or not a significant hazards consideration is involved with the proposed changes by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

1. Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed changes do not alter any plant equipment or operating practices in such a manner that the probability of an accident is increased. The proposed changes will not alter assumptions relative to the mitigation of an accident or transient event.

   The ICCDP with and without potential common cause vulnerability is 4.14E-7 and 1.92E-7 respectively. The ICLERP with and without potential common cause vulnerability is 2.88E-9 and 2.68E-9, respectively. These results are well below the RG 1.174 limits of 1E-6 for ICCDP and 1E-7 for ICLERP. They are also below the RG 1.177 single event limits of 5E-7 for ICCDP and 5E-8 for ICLERP.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

   The impact on safety margins is discussed in section 5.3 of this license amendment request. The systems' design and operation are not affected by the proposed changes. The safety analysis acceptance criteria are not altered by the proposed changes.

   Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, Dominion concludes that the proposed change present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

6.2 Environmental Assessment

This amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as follows:

(i) The amendment involves no significant hazards consideration.

As described above, the proposed change involves no significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed change does not involve the installation of any new equipment, or the modification of any equipment that may affect the types or amounts of effluents that may be released offsite. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

(iii) There is no significant increase in individual or cumulative occupation radiation exposure.

The proposed change does not involve plant physical changes, or introduce any new mode of plant operation. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Dominion concludes that the proposed changes meet the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.22 relative to requiring a specific environmental assessment by the Commission.

7.0 Conclusion

The proposed change will allow a one-time revision to the Completion Time for Technical Specification 3.5.2 to allow repair of the Unit 1 LHSI pump suction piping. The risk-informed evaluation concludes that the increase in annual core damage and large early release frequencies associated with the proposed change are less than 7E-7/yr and less than 4E-8/yr, respectively, which are characterized as "very small changes" by RG 1.174. The incremental conditional core damage and large and early release probabilities associated with the proposed change are each within the acceptance criteria in RG 1.177. The proposed change will allow repair of the Unit 1 LHSI pump suction piping without having to shut down the plant since activities will take longer than the current Completion Time. In addition, the proposed extended Completion Time would eliminate the administrative burden of requesting a notice of enforcement discretion for performing pipe repair activities.

The Station Nuclear Safety and Operating Committee (SNSOC) has reviewed the proposed change to the Technical Specifications and have concluded that it does not involve a significant hazards consideration and will not endanger the health and safety of the public.

North Anna PRA Peer Assessment A & B Level F&O Review Summary

The following matrix contains the A and B significance level F&Os from the North Anna PRA Peer Assessment

Element	F/O	Level of Significance	Description	Impact on Application
AS – Accident Sequence Dev	AS-01/ AS-10	B	Containment vulnerability following LOCAs is overly conservative (i.e., core damage assumed if containment integrity lost)	None: Addressed by recent update.
	AS-02	B	LOCA event trees do not have a loss of emergency switchgear cooling (HVAC) top event	None: Do not concur with peer review significance of observation. Concurrent loss of emergency switchgear room cooling function and LOCA is a very low likelihood event based on the lack of common cause contributors and the fact that loss of emergency switchgear room cooling can not be a hidden standby system failure. Further, due to redundancy in emergency switchgear room cooling and the slow heatup which results following cooling failures, there is adequate time to respond to such failures before loss of emergency systems needed for LOCA mitigation.
	AS-06	B	Expand dependency matrix to plant dependencies for IE's and systems	None: Modeling of dependencies for the affected systems in this application are detailed and well documented.

Element	F/O	Level of Significance	Description	Impact on Application
	AS-08	B	Address items for ATWS model	None: ATWS is a small contributor to the overall risk and the recommended changes to the ATWS model would not lead to ATWS becoming a dominant contributor. The observations on the ATWS model pertained primarily to the pressurizer PORVs, which are not included in the systems affected by this application.
	AS-09	B	Enhance documentation of accident sequence development to better characterize the interface with IE's and EOP's	None: Documentation issue; does not impact modeling of the affected systems in this application.
	AS-12/ DA-15	B	Switch to use a 24 hour mission time instead of 6 hours.	None: Applies only to emergency diesel generator mission time. Emergency diesel generators are not included in the systems affected by this application.
DA – Data Analysis	DA-04	B	Justify using data collection dates of 1/1/97 – 12/31/1999	None: Use of different data collection periods for reliability and unavailability data has minimal impact on the results. The plant specific data collection periods are recent enough to ensure the data matches the current plant operation and design.
	DA-08	B	Provide appropriate documentation of equipment boundary and population definition for data and CCF update	None: This observation is limited to documentation issues associated with equipment boundaries. No errors were discovered in the data analysis related to equipment boundaries.

Element	F/O	Level of Significance	Description	Impact on Application
	DA-09	B	Complete plant specific data update.	None: Addressed by recent update.
	DA-12	B	Provide additional CCFs for support systems.	None: Potentially risk significant CCFs were incorporated in the recent update for all the affected systems in this application.
	DA-13	B	Re-evaluate CCF screening criteria.	None: Potentially risk significant CCFs were incorporated in the recent update for all the affected systems in this application.
DE - Dependency	DE-01/ DE-02	B	Minimum volume in the aux bldg internal flooding analysis appears inconsistent.	None: Internal flooding results do not dominate the risk significance of the affected systems in this application.
	DE-03	B	Screening out of turbine bldg for flooding doesn't make sense.	None: Internal flooding results do not dominate the risk significance of the affected systems in this application.
	DE-04	B	Unit 2 CH & CC crosstie was not included in the flood analysis.	None: Internal flooding results do not dominate the risk significance of the affected systems in this application.
HR – Human Reliability	HR-01	A	Review HEP dependencies and provide documentation of results.	None: Addressed by recent update.
	HR-02	A	Review REC screening values and verify appropriateness of leaving them at 0.1.	None: Addressed by recent update.

Element	F/O	Level of Significance	Description	Impact on Application
	HR-03	B	The HRA approach provides a thorough analysis of time but there is little or no evidence of other performance shaping factors.	None: Do not concur with the significance of this observation. The other performance shaping factors are not as important in determining the failure probability. The HRA results have been subject to significant review in past comparisons to NUREG-1150 study for Surry.
	HR-05	B	No evidence that the current HRA, including non-updated and updated HEPs, has been reviewed recently by operations and/or training personnel.	None: Do not concur with the significance of this observation. HRA has been subject to significant review in past comparisons to NUREG-1150 study for Surry.
	HR-06/ HR-11	B	Improve the guidance for HRA.	None: Documentation issue. No technical issues identified which would impact importance of affected systems in this application.
	HR-08	B	Review event trees to identify human actions that need to be modeled.	None: Documentation issue. No technical issues identified which would impact importance of affected systems in this application.
	HR-09	B	No systematic review of indications performed or documented for HEPs.	None: Documentation issue. No technical issues identified which would impact importance of affected systems in this application.
	HR-10	B	Treatment of operator actions for dual unit system support is questionable in some cases.	None: None of the dual unit support actions impacts the affected systems in this application.

Element	F/O	Level of Significance	Description	Impact on Application
IE – Initiating Events	IE-04	B	Include loss of IA as a specific IE.	None: The primary impact of modeling loss of IA as a specific IE would be increased importance of the pressurizer and steam generator PORVs, which are not included in systems affected by this application.
	IE-07	B	Either include additional IE's (MSLB, FWLB, RCS PORV, SRV) in the model or provide rationale for not including.	None: Addressed by recent update.
L2, Cont Perf Analysis	L2-02	B	Update LERF early Cont failure model	None: Current LERF model is conservative.
	L2-03	B	Update LERF PRA to include EOP & SAMG actions	None: Current LERF model is conservative.
	L2-04	B	Provide LERF definition and consistent LERF assignment	None: Current LERF model is conservative. The significance of the observation is mitigated by the reasonableness of the assignments using NUREG/CR-6595 and the WOG LERF definitions.
	L2-06	B	No LERF documentation	None: Documentation issue. Surry documentation was used as surrogate and is applicable to NAPS due to the design similarities.
	L2-09	B	All SGTR sequences should not result in LERF	None: Current LERF model is conservative.

Element	F/O	Level of Significance	Description	Impact on Application
	L2-10	B	Revise bypass screening criteria	None: Affected systems in this application do not impact interfacing system LOCA analysis.
MU, Maint & Update	MU-01	B	Provide enough time & resources to improve Independent Review quality	None: Addressed during recent update.
	MU-02	B	Several AFW components risk significant at other plants are not in final cut set	None: Major AFW components, including the pump are in the cutsets and their risk significance is similar to other PWRs. The absence of individual AFW components or backup systems such as fire water from the cutsets does not significantly impact the risk significance of the affected systems in this application.
	MU-04	B	Maintenance and update procedures may not be sufficient or adequate	None: Observation did not identify any specific areas of the maintenance or update procedures which were inadequate. The observation was based on the large number of other F&Os, which has subsequently been determined to be unrelated to the maintenance and update procedures.
QU, Quantification	QU-02	B	Key limitations missing from quantification documentation	None: Generic data observation addressed during recent model update.
	QU-03	B	PORV logic gate errors in FB1	None: Subsequent review of the feed and bleed fault tree indicates that the existing logic is correct. No change is required.

Element	F/O	Level of Significance	Description	Impact on Application
	QU-04	A	Concern with 3rd highest cut set	None: The numerous observations have either a minimal impact of risk or result in an over-estimation of the risk.
	QU-07	B	Evaluate manual recovery of MS PORVs in SGTR	None: Minor conservatism in the model due to not modeling recovery.
SY, Systems Analysis	SY-01	B	Fails to Run CCF mission time is not applied correctly	None: Addressed by recent update.
	SY-02	B	AFW pump automatic actuation failure w/manual restart not modeled	None: Failure to include manual start of AFW pumps (upon failure of automatic actuation) is a conservatism.
	SY-09	B	HHSI pump restart is not modeled following LOSP	None: Failure of a pump to restart after a LOSP is a small contributor and does not significantly impact affected system risk significance.
	SY-12	B	Replacement Steam Generators not evaluated	None: Impact of steam generator replacement is insignificant in terms of affected system success criteria since the changes to SG overall size and heat transfer capacity were relatively minor. The major impacts of SG replacement are on the timing associated with HRA probabilities, which are expected to be minimal.
	SY-14	B	Incorporate flood scenarios into internal events model	None: There are no dependences between increases in test and maintenance unavailability for the affected systems in this application and the flooding model.

Element	F/O	Level of Significance	Description	Impact on Application
	SY-15	B	CCF models missing for CH-MOV-111B/D and C/E	None: This observation was incorrect. There are CCFs for these MOVs in the FB4 tree.
	SY-19	B	SG PORV capability w/o IA needs additional manual recovery past 5 cycles	None: SG PORVs are not part of any of the affected systems in this application.
TH, Thermal Hydraulic Analysis	TH-04	B	MAAP3B not sufficiently detailed to evaluate peak clad temperature success criteria	None: Only impact of using MAAP3B core damage criteria is the quantification of a few HEP analyses. Systems affected by this application do not use success criteria based on MAAP core damage definition.
	TH-09	B	Uncertain about SBO evaluation of SG overfill on TDAFW pump at 10.4 hrs	None: Uncertainty in time to possible SG overfill and subsequent failure of TDAFW pump is not as important as the peer review indicates. The difference in a few hours is not critical to the results of the PRA or the importance of the affected systems in this application.

Attachment 2

Mark-up of Unit 1 Technical Specification Change

Virginia Electric and Power Company
(Dominion)
North Anna Power Station Unit 1

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS—Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

--------------------------- NOTE ---------------------------
In MODE 3, both safety injection (SI) pump flow paths may be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing per SR 3.4.14.1.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more trains inoperable.	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 4.	6 hours 12 hours
C. Less than 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	C.1 Enter LCO 3.0.3.	Immediately

NOTE
The Completion Time for the July 21, 2004 entry into Condition A for the Unit 1 "A" train of the Low head Safety Injection System is 7 days

BASES

LCO (continued)

The flow path for each train must maintain its designed independence to ensure that no single failure can disable both ECCS trains.

As indicated in the Note, the SI flow paths may be isolated for 2 hours in MODE 3, under controlled conditions, to perform pressure isolation valve testing per SR 3.4.14.1. The flow path is readily restorable from the control room.

APPLICABILITY

In MODES 1, 2, and 3, the ECCS OPERABILITY requirements for the limiting Design Basis Accident, a large break LOCA, are based on full power operation. Although reduced power would not require the same level of performance, the accident analysis does not provide for reduced cooling requirements in the lower MODES. MODE 2 and MODE 3 requirements are bounded by the MODE 1 analysis.

This LCO is only applicable in MODE 3 and above. Below MODE 3, the SI signal setpoint has already been manually bypassed by operator control, and system functional requirements are relaxed as described in LCO 3.5.3, "ECCS—Shutdown."

In MODES 5 and 6, unit conditions are such that the probability of an event requiring ECCS injection is extremely low. Core cooling requirements in MODE 5 are addressed by LCO 3.4.7, "RCS Loops—MODE 5, Loops Filled," and LCO 3.4.8, "RCS Loops—MODE 5, Loops Not Filled." MODE 6 core cooling requirements are addressed by LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation—High Water Level," and LCO 3.9.6, "Residual Heat Removal (RHR) and Coolant Circulation—Low Water Level."

ACTIONS

A.1

With one or more trains inoperable and at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available, the inoperable components must be returned to OPERABLE status within 72 hours. The 72 hour Completion Time is based on an NRC reliability evaluation (Ref. 5) and is a reasonable time for repair of many ECCS components.

(continued)

A note has been added to this Action's Completion Time to permit a one-time extension of the Completion Time to 7 days to effect repairs on the Unit 1 "A" LHSI train

Attachment 3

Proposed Unit 1 Technical Specification Change

Virginia Electric and Power Company
(Dominion)
North Anna Power Station Unit 1

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS—Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

------------------------------ NOTE ------------------------------
In MODE 3, both safety injection (SI) pump flow paths may be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing per SR 3.4.14.1.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more trains inoperable.	A.1 Restore train(s) to OPERABLE status.	------NOTE------ The Completion Time for the July 21, 2004 entry into Condition A for the Unit 1 "A" train of the Low Head Safety Injection System is 7 days ---------------- 72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 4.	6 hours 12 hours
C. Less than 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	C.1 Enter LCO 3.0.3.	Immediately

BASES

LCO (continued)

The flow path for each train must maintain its designed independence to ensure that no single failure can disable both ECCS trains.

As indicated in the Note, the SI flow paths may be isolated for 2 hours in MODE 3, under controlled conditions, to perform pressure isolation valve testing per SR 3.4.14.1. The flow path is readily restorable from the control room.

APPLICABILITY

In MODES 1, 2, and 3, the ECCS OPERABILITY requirements for the limiting Design Basis Accident, a large break LOCA, are based on full power operation. Although reduced power would not require the same level of performance, the accident analysis does not provide for reduced cooling requirements in the lower MODES. MODE 2 and MODE 3 requirements are bounded by the MODE 1 analysis.

This LCO is only applicable in MODE 3 and above. Below MODE 3, the SI signal setpoint has already been manually bypassed by operator control, and system functional requirements are relaxed as described in LCO 3.5.3, "ECCS—Shutdown."

In MODES 5 and 6, unit conditions are such that the probability of an event requiring ECCS injection is extremely low. Core cooling requirements in MODE 5 are addressed by LCO 3.4.7, "RCS Loops—MODE 5, Loops Filled," and LCO 3.4.8, "RCS Loops—MODE 5, Loops Not Filled." MODE 6 core cooling requirements are addressed by LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation—High Water Level," and LCO 3.9.6, "Residual Heat Removal (RHR) and Coolant Circulation—Low Water Level."

ACTIONS

A.1

With one or more trains inoperable and at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available, the inoperable components must be returned to OPERABLE status within 72 hours. The 72 hour Completion Time is based on an NRC reliability evaluation (Ref. 5) and is a reasonable time for repair of many ECCS components.

A note has been added to this Action's Completion Time to permit a one-time extension of the Completion Time to 7 days to effect repairs on the Unit 1 "A" LHSI train.

(continued)