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An Exelon Company

April 19, 2006
5928-06-20442

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

THREE MILE ISLAND UNIT I (TMI UNIT 1)
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289

SUBJECT: BIENNIAL 10 CFR 50.59 AND COMMITMENT REVISION REPORT FOR 2004 AND 2005

Enclosed are the 2004-2005 Biennial 10 CFR 50.59 and Commitment Revision Report as required by 10 CFR 50.59 (d)(2) and SECY-00-0045 (NEI 99-04).

There are no regulatory commitments contained in this transmittal.

If you have any questions or require additional information, please contact Adam Miller, of Regulatory Assurance, at 717-948-8128.

Sincerely,

Glen E. Chick
Plant Manager

GEC/awm

Enclosure

cc: Administrator, Region I
TMI-1 Senior Resident Inspector
File 06019

IE47

THREE MILE ISLAND
UNIT 1
DOCKET NO. 50-298
BIENNIAL 10CFR 50.59 AND COMMITMENT REVISION REPORT

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BIENNIAL 10CFR 50.59 REPORT

JANUARY 1, 2004 THROUGH DECEMBER 31, 2005

10CFR50.59 EVALUATION SUMMARIES

Modifications

Title: AH-E-1's Condensate Flow Switch Removal (ECR 04-00601)

Year Implemented: 2002

Evaluation Number: SE-000823-022

Brief Description: Remove from service AH-FS-241 A/B/C, RB Coolers Excessive Condensate flow switches. These flow switches are the input for Main Alarm Panel (MAP) alarm, B-2-8, "RB Clrs Excessive Condensate."

Summary of Evaluation:

The sensing lines for the flow switches have become clogged with boron and rust making the switches inoperable. AH-FS-241 A/B/C are used to monitor reactor coolant leakage inside containment. Other means are available to detect this leakage so plant operations and its design bases is not impacted. Only two methods for leak detection are required and this commitment is still met by the remaining instrumentation. The safety analysis in the UFSAR does not use AH-FS-241 A/B/C indications to mitigate the consequences of an accident.

AH-FS-241 A/B/C can be removed from service without impacting the ability to detect a RCS leak. There are three other means available and compliance with Tech. Spec. 3.1.6 and its bases is not compromised. An evaluation was performed because components with a design function described in the UFSAR is being removed from the plant. There is no impact on the frequency of occurrence or the consequences of any accident or malfunction. The change removes the flow switches and plugs the drain piping in accordance with applicable codes and standards. This change can be made without prior NRC approval.

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Title: Thermal-Hydraulic Analysis for TMI-1 SFP (ECR TM-05-00617)

Year Implemented: 2005

Evaluation Number: TM-05-00617

Brief Description: This change documents the new analysis of the Spent Fuel Pool (SFP) temperatures associated with core offload scenarios based on

cooling water temperature and the design assumptions of the rerack project. This 50.59 review evaluates the new analysis.

Summary of Evaluation:

The new analysis is intended to provide a more accurate determination of the SFP temperatures during core offload in order to allow the capability to offload earlier, conditional to system parameters, to support shorter refueling outage duration.

The new analysis more accurately determines the bulk temperature of the SFP in relation to offload times and cooling water conditions based on updated methodology and more specific correlations (vs. worst case conditions). The new analysis allows earlier offload start times based on cooling system conditions.

The analysis is implemented without adversely affecting SFP design requirements as specified in the UFSAR per the original rerack analysis. This analysis provides bounding criteria to ensure that no systems, structures, or components relevant to spent fuel pool cooling or fuel handling during offload are impacted.

Procedure Changes

Title:	Procedure change to address fire mitigation.
Year Implemented:	2005
Evaluation Number:	SE-000733-008
Brief Description:	This change adds preemptive actions to prevent multiple high impedance fault (MHIF) from causing a loss of 1B Engineered Safeguards (ES) Motor Control Center (MCC) in the event of a fire in Control Building on elevation 305 (CB-FA-1).

Summary of Evaluation:

The loss of 1B ES MCC in the event of a fire in CB-FA-1 could result in loss of all plant remote indication and control, as documented in Issue Report 327038. The recovery of 1B or 1D Vital buses, after a loss of 1B ES MCC in a fire in CB-FA-1 cannot be accomplished as described in the current procedure revision. The inverter cannot be started without DC power, as documented in Issue Report 328623.

Safety related electrical loads on 1B ES MCC, which are not essential to achieve safe shutdown for a fire in CB-FA-1 (i.e. not credited in Fire Hazards Analysis

Report (FHAR) Attachment 3-5), are disabled in order to prevent a fault due to the fire in CB-FA-1 from causing the loss of 1B ES MCC. This procedure revision provides a method to prevent loss of 1B ES MCC in the event of a fire in CB-FA-1. This approach is contingent upon completion of the new actions before a MHIF condition occurred. The time between event recognition and potential MHIF is not known. This approach is an interim risk reduction measure and does not provide a permanent design solution. The affected procedure section provides a method to achieve safe shutdown with a fire in CB-FA-1. The safe shutdown equipment relied upon for a fire in CB-FA-1 is not adversely affected by this procedure change. This change can be made without prior NRC approval.

NOTE: This interim condition was resolved by a revised MHIF event analysis issued in the fall of 2005. The procedure revision addressed in this 50.59 evaluation was superceded at that time.

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Title:	Procedure revision to "Loss of Control Building Cooling"
Year Implemented:	2005
Evaluation Number:	SE 000826-016
Brief Description:	This change provides an allowable operating time, without Control Building ventilation or cooling.

Summary of Evaluation:

Entry into this abnormal operating procedure, and plant shutdown, are required for conditions where cooling of safety related Control Building areas may be inadequate. The procedure directs mitigation actions or plant shutdown within a timeframe supported by analysis to ensure the operability of safety related equipment with the plant operating.

Analysis was performed to demonstrate that safety related equipment operability would not be affected before five hours after a loss of all forced flow, and before eight hours after a loss of both chillers. This period will be used to determine and correct the cause of a loss of Control Building ventilation or loss of both chillers. If ventilation (or a chiller) cannot be restored, a reactor shutdown shall be initiated and the reactor shall be in cold shutdown in 48 hours in accordance with the applicable Technical Specification.

The procedure change does not involve any change to the systems, structures, or components associated with the Control Building Ventilation Systems, or an UFSAR described design function.

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Title:	480-Volt Engineered Safeguards (ES) Bus Cross-Tie
Year Implemented:	2005
Evaluation Number:	PC 18967
Brief Description:	Establishes procedure to cross tie 480-Volt ES Buses, during plant shutdown, if both trains of ES power cannot be restored after a Loss of Offsite Power (LOOP).

Summary of Evaluation:

The abnormal event procedure for "Loss of Station Power," OP-TM-AOP-020 was revised, and two new Emergency Support Procedures to cross tie the ES power trains at the 480V level were created to provide direction for this activity. A 50.59 evaluation was required because the UFSAR stated that the buses would only be cross-tied for maintenance. The use of a bus cross tie has the potential to impact the reliability of the Emergency Diesel Generator (EDG) or ES bus by exceeding the equipment load limits.

The emergency diesel and ES power train load limits will not be exceeded. The cross tie will only be closed if the diesel load is less than 2300 kW. The cross tie overload protection will open the cross tie breakers if the load is greater than 650 kW. The emergency diesels are rated for continuous operation at 3000 kW and short-term operation at 3300 kW. All large loads on the buses being energized through the cross tie will be positively controlled by procedure steps before the cross tie is closed to prevent automatic loading. If an ES actuation occurs while the primary ES 4160 V bus is supplied by either emergency diesel, then the cross tie breakers will open to ensure that the primary ES power train can support its ES loads without challenging the EDG load limit.

The loads on the ES train being energized will be reduced to ensure the cross tie overload protection is not challenged. The loads have been reduced to less than 400 kW. Additional loads of up to 250 kW are permitted but only when necessary for event mitigation. The maximum load permitted by the procedure is less than 650 kW. The cross tie is rated for 650 kW.

The cross tie overload protection coordinates with the primary ES bus feeder breaker so that a fault on the secondary ES power train will be isolated without affecting the primary ES power train.

These procedures will only be performed when the reactor is shutdown and one of ES 4160 V AC buses cannot be energized from either the normal or emergency source.

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BIENNIAL COMMITMENT REVISION REPORT

JANUARY 1, 2004 THROUGH DECEMBER 31, 2005

Letter Source: IE Information Notice 81-05

Exelon Tracking No.: 1981T0024

Nature of Commitment: Modification of operations procedure to lock closed the station battery disconnect switches when the reactor is critical.

Summary of Justification:

The purpose of the original commitment was to provide a second barrier to prevent inadvertent opening of a battery disconnect switch during periodic battery surveillance when the reactor is critical. Applying tamper seals will provide the equivalent second barrier and meets the intent of the original commitment.

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Letter Source: TMI-1 Inspection Report 1986-06

Exelon Tracking No.: 1988T0075

Nature of Commitment: Ensure proper logging of thermal cycles on the High Pressure Injection (HPI) nozzles.

Summary of Justification:

The commitment, 1988T0075, references procedure 1202-8, "CRD Equipment Failure." Procedure 1202-8 has been deleted and replaced by several other procedures. None of these procedures address events, which require thermal cycle log entries or have any effect on HPI nozzle thermal cycles.

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Letter Source: 5211-84-2072, "Control of Heavy Loads"

Exelon Tracking No.: 1984T0055

Nature of Commitment: The development of an annual crane operator retraining program.

Summary of Justification:

ANSI B30.2 1976 and subsequent 2001 edition do not require annual training retraining. Training needs analysis is used to address training requirements. In addition, review of NUREG 0612, Control of Heavy Loads at Nuclear Power Plants, identified it does not impose qualification requirements beyond ANSI B30.2.

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End of Commitment Revision Report

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