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U.S. Nuclear Regulatory Commission
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Subject: **Presentation Material (Non-proprietary) for NRC-GEH ESBWR
Setpoint Methodology Meeting Held March 18, 2008**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) non-proprietary presentation material associated with the NRC-GEH ESBWR meeting regarding GEH setpoint methodology held March 18, 2008.

If you have any questions or require additional information, please contact me.

Sincerely,

James C. Kinsey
Vice President, ESBWR Licensing

DO68
NRO

Enclosure:

1. GEH Presentation Material (Non-proprietary) for NRC-GEH Meeting regarding GEH Setpoint Methodology - March 18, 2008

cc:

AE Cubbage	USNRC (with enclosure)
GB Stramback	GEH/San Jose (with enclosure)
RE Brown	GEH/Wilmington (with enclosure)
DH Hinds	GEH/Wilmington (with enclosure)

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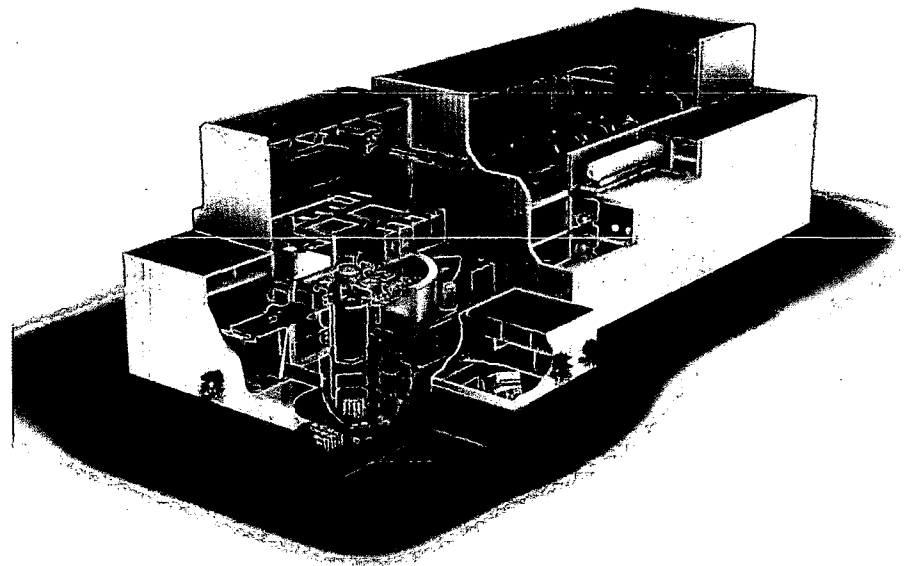
Enclosure 1

**GEH Presentation Material (Non-proprietary) for
NRC-GEH Meeting regarding GEH Setpoint Methodology –
March 18, 2008**

GE Hitachi
Nuclear Energy

ESBWR Technical Specifications

Implementation of LSSS and Allowable Values



March 18, 2008



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ESBWR Technical Specification & LSSS

Agenda: March 18, 2008

- **Current ESBWR Docketed Position (Pre-RAI)**
- **Consistency with NRC Guidance**
- **Compliance with Regulations**
- **Setpoint Control Program Implementation (Utility)**
- **Summary GEH Position and Path Forward**



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Summary GEH Path Forward

Technical Specifications & Setpoint Control Program

- **Allowable Value - Single Column Format**
 - Used for OPERABILITY Determination
 - Minimize Unnecessary License Amendments
 - The Right Presentation for GEH Methodology
- **Comply Regulations**
- **Consistent – NRC Guidance Issued**
- **Consistent – Existing Precedents**
- **Safety Maintained - Automatic Protective Action Assured**



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ESBWR Technical Specification Position (Pre-RAI)

- **Setpoint Methodology –NEDE-33304P** [MFN 07-535: 10-23-2007]
 - No ‘Methodology’ RAIs || One Graded Approach RAI
 - Addresses RIS 2006-017 Issues
 - Reset to NTSPF Required at Each Calibration
 - Performance Monitoring Within AFT Required
 - Protects Safety - Conservative Compared to Method 3
- **Setpoint Control Program (SCP)** [MFN 07-536: 11-12-2007]
 - TS Required Calculation of NTSP_(s) per NEDE-33304
 - Documentation of NTSP_(s), AVs, AFTs, & ALTs Required
- **TS & Bases for AV Format** [MFN 07-015, S02: 01-18-2008]
 - Allowable Value - Single Column Format



ESBWR TS Consistency With NRC Guidance

- **ESBWR Consistent with August 23, 2005 NRC Position**

“Since 10 CFR 50.36 requires that the LSSS be included in the TS, **either** the limiting TSP value **or** a ***reference to the method for determining the limiting TSP value*** needs to be specified in the TS”

- ESBWR Presents Second Option (since Revision 2)
 - TS 5.5.11, “SCP,” Requires Applying GEH Methodology
- Second Option is Consistent with COLR-Related Limits
 - STS Examples of LSSS Values That Reference COLR

- **NRC Review Has Supported ESBWR Presentation**

- No RAIs on Revisions 2 or 3
- NRC (Kobetz) Letter July 25, 2007 Endorses ESBWR TS



ESBWR TS Consistency With NRC Guidance

- **Reg Guide 1.105, Rev 3, Dated 1999**
 - Referenced in 2007 SRPs for “New Plant” Licensing
 - Allowance for Alternative Definitions of LSSS
 - LSSS Focus: “*threshold for protective system action*”
- **Meets RIS 2006-017 “Reset” & “Performance Monitoring”**

**ESBWR TS 5.5.11, Setpoint Control Program,
& AV – Single Column Format
Meets NRC Guidance**



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ESBWR TS Compliance With 50.36(d) Regulation

- **Definition of “Setting” || Setting ‘Lifecycle’**

As-Left Setting: Establishes the last known adjusted 'setting'
– Calibration "reset" point

As-Found Setting: Establishes the existing 'setting' at a point
in time – Compared to the “Limiting” value (AV) to evaluate
OPERABILITY and instrument performance trending

- **Limiting Safety System Setting**

Limiting Point of Automatic Protective Action that will correct
the abnormal situation before a safety limit is exceeded

**SCP Implementation of “Settings”
Meets 50.36(d) LSSS**



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Roll Up

- **ESBWR TS 5.5.11, Setpoint Control Program (SCP)**
 - LSSS Controlled Within Technical Specifications
 - Each LSSS Function Required Channel Calibration is Tied to Conformance with TS 5.5.11, SCP
 - Setpoint Methodology (NEDE-33304P) Imposed by TS
 - Documentation of NTSP(s), AVs, AFTs, & ALTs Required
 - Setpoint Methodology Revisions Require NRC Approval
- **Precedent: LSSS Related Values Controlled in COLR**



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ESBWR Setpoint Control Program Implementation

Utility Experience with Setpoint Control Program

PRESENTATION: Chris Kerr – Exelon



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Conclusion GEH Path Forward

Technical Specifications & Setpoint Control Program

- **Allowable Value - Single Column Format**
 - Used for OPERABILITY Determination
 - Minimize Unnecessary License Amendments
 - The Right Presentation for GEH Methodology
- **Comply Regulations**
- **Consistent – NRC Guidance Issued**
- **Consistent – Existing Precedents LSSS-COLR**
- **Safety Maintained - Automatic Protective Action Assured**
 - Reset TS Required
 - Performance TS Required
 - SCP Implementation Protects Safety Limit



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Chris Kerr – Exelon: SCP Implementation

- **Operating Fleet Experience with Setpoint Control Programs**
- **Plans for Implementation of ESBWR Setpoint Control Program (SCP)**

ESBWR Setpoint Control Program Implementation

- **Operating Fleet Experience with Setpoint Control Programs**
 - Exelon has been an active member of the NEI Setpoint Methods Task Force (SMTF) and the development of TSTF 493
 - Clinton Power Station (CPS) successfully obtained NRC approval for a significant setpoint LAR on 9/27/05
 - The revised TS were based on the NRC generic Setpoint RAI applied to a single column AV TS format
 - CPS TS Bases specify Nominal Trip Setpoints as LSSS for setpoints changed by LAR
 - AV Continues to be Single Column TS (NTSP in ORM)
 - The revised Tech Specs, along with Exelon procedures assure instrument operability, adequate performance monitoring and configuration control:
 - ✓ CC-AA-103-2001 Setpoint Control Program
 - ✓ ER-AA-520 Instrument Performance Trending
 - ✓ LS-AA-120 Issue Identification
 - ✓ LS-AA-105 Operability Determinations

Operating Fleet Experience with SCPs

- CPS Tech Specs added 2 Notes to Surveillance Requirements (SR) for setpoints associated with LSSS to address 3 issues;
 - IF As-Found (AF) below AV, BUT outside As-Found-Tolerance (AFT), evaluation required before return to service
 - AF shall be reset to within As-Left-Tolerance (ALT) of Actual Trip Setpoint (ATSP is more conservative than LTSP)
 - LTSP and methodology to determine LTSP, AFT, & ALT shall be specified in a document controlled under 10 CFR 50.59 (e.g. TRM)

Operating Fleet Experience with SCPs

- **IF As-Found (AF) below AV, BUT outside As-Found-Tolerance (AFT), evaluation required before return to service**
 - Exelon procedure ER-AA-520, “Instrument Performance Trending” provides direction for addressing AF values for all instrument surveillances
 - ✓ Procedure is used in conjunction with all surveillance tests
 - Any instrument with an AF outside of its AFT requires generation of a Condition Report (CR)
 - All CRs require work group supervisor review AND operations review if condition potentially affects equipment operability
 - Operations evaluates instrument acceptability based on available data (e.g., ability to recalibrate to within ALT)

Operating Fleet Experience with SCPs

- **As-Found (AF) shall be reset to within As-Left-Tolerance (ALT) of Limiting Trip Setpoint (LTSP)**
 - All Exelon instrument surveillance procedures require reset of all AFs to within the ALT

Operating Fleet Experience with SCPs

- **LTSP and methodology to determine LTSP, AFT, & ALT shall be specified in a document controlled under 10 CFR 50.59 (e.g., TRM)**
 - CPS Operational Requirements Manual (ORM) contains the NTSPs (LTSP) of applicable Tech Spec Allowable Values (AVs)
 - ORM references the applicable setpoint calculations and methodology as specified in CPS procedure NSED-S-CI-01.00
 - Changes to ORM requires 50.59 screening
 - Setpoint calculations determine NTSP, AFT, ALT and AV
 - Changes to setpoint calculations are controlled in accordance with the Configuration Control process
 - Configuration Control process requires 50.59 screening for all configuration changes

ESBWR Setpoint Control Program Implementation

- **Plans for ESBWR Setpoint Control Program (SCP)**
 - Surveillance requirements previously discussed will be applicable to all LSSS
 - ✓ No differentiation between SL-LSSS and Non SL-LSSS
 - Instrument is inoperable if the AF is outside the AV
 - Changes to the AV require a License Amendment
 - As-Found values outside of the expected AFT range are evaluated before returning the instrument to service in accordance with Tech Spec SCP requirements
 - ✓ The Corrective Action Program and Operability Determination Process would be tools to support the SCP
 - LTSP (NTSP), AFT, ALT and setpoint methodology are contained in documents controlled by the Tech Spec SCP
 - Changes to methodology will require NRC Approval