

# MSPI Margin Management Assessment and Plant Specific Training

*The Office of Assessment and Recovery*



## Mitigating the Risk of 9500X PI Inspections

**CERTREC** is a recognized industry expert in the Reactor Oversight Process (ROP) and specifically the Mitigating Systems Performance Index (MSPI). Our experts have been involved with Reactor Oversight since 2001 and helped write the NEI 99-02 guidance for MSPI.

### We can help you:

- Understand the MSPI Indicator and the algorithm used to calculate values
- Understand and manage MSPI margin
- Proactively address potential problems
- Better predict the impact of additional equipment failures and unavailability
- Report MSPI accurately
- Communicate MSPI status and options to the site management team
- Ensure staff and management understand the indicator and are proactive in addressing potential problems

## Managing the Mitigating Systems Performance Index (MSPI)

Complying with the Mitigating System Performance Index (MSPI) within the Reactor Oversight Process (ROP) can be challenging. In addition to understanding the algorithm used to calculate the value of the Performance Indicators, nuclear operators need to understand the risks of MSPI compliance, how to proactively address potential problems, and communicate MSPI status to management and the NRC. Unfortunately, deficiencies in knowledge transfer, training, and communication of information about issues often contribute to greater than green indicators.

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### Two Greater Than Green Indicators - **Could have been avoided**

A strong understanding of the Mitigating System Performance Index in the Reactor Oversight Process is needed by licensing, regulatory compliance, systems engineers and management to avoid unnecessarily tripping the green-white or even green-yellow ROP threshold and being subject to a 95001 or 95002 inspection.

An Emergency AC Power NRC Performance Indicator went from Green to Yellow on a single failure at a large nuclear generator. As a result, the NRC performed Inspection Procedure 95002.

#### **This could have been avoided.**

During the preparation of the root cause evaluation, the utility identified that the underlying performance issues were poor understanding and management of the risk margin for the EAC system, or "margin management."

The MSPI Cooling Water Performance Indicator at another facility likewise went from Green to White resulting in NRC performing a 95001 Supplemental Inspection.

#### **This too could have been avoided.**

The licensee identified that organizational weaknesses with MSPI margin management, and weak understanding of MSPI requirements contributed to the White indicators.

To avoid these problems, it's helpful to understand and address the common MSPI challenges... *(continued on page 2)*

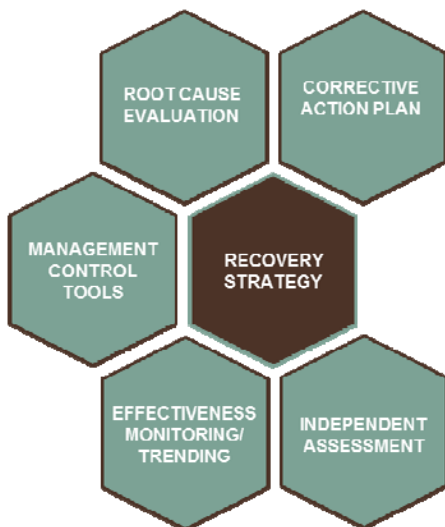


## Common MSPI Challenges

Certrec's involvement with the ROP has found the following challenges to be common in MSPI compliance:

- The MSPI margin management process is not well defined.
- MSPI knowledge is not adequately captured in processes and procedures.
- The impact of risks such as calculation of unavailability, unreliability, probabilistic risk, and critical hours are not well considered.
- Communication of MSPI status, design, procedure, and PRA options to senior plant and fleet management may be lacking due to organizational weakness or the lack of knowledge transfer.
- Continuous Learning Environment may play a larger role than considered.

### Office of Assessment and Recovery: An Integrated 9500X Solution Suite



Certrec's Office of Assessment and Recovery (OAR) is an integrated suite of 9500X recovery services that ensure all aspects of 9500X recovery are appropriately addressed and effectively resolved.

OAR experts offer more than 300+ cumulative years of experience in assessment and recovery improvement. Many have served at the NRC, NEI, INPO, and our nation's largest reactor plants.

### MSPI Solutions Offered Within the Office of Assessment and Recovery

Recognized ROP expert, Ken Heffner, leads Certrec's MSPI services with the Office of Assessment and Recovery. Mr. Heffner has been part of the Reactor Oversight Process since 2001, helped write NEI 99-02 guidance for MSPI compliance, and led the ROP Task Force in 2009. Ken and his team are available to assist your Fleet Engineering, Licensing and Management Personnel with:

- Analysis of your current situation with recommendations for enhancements to avoid MSPI problems
- Detailed review of Unavailability and Unreliability Derivation reports to identify high risk worth components
- Independent review of MSPI Basis documents to ensure they don't contain any unnecessary conservatisms
- Understanding and managing MSPI margin along with potential actions to increase MSPI margin
- Strategies for communicating MSPI margin to site management team
- Plant specific performance training to ensure staff and management understand the indicator and are proactive in addressing potential problems