

***Importance of Corrective Action  
Program (CAP) to the Reactor  
Oversight Process (ROP)  
(& Some Anticipated Changes...)***

***Human Performance & Root Cause Trending  
(HPRCT) Conference, Delray Beach, FL***

***Ross Telson  
June 18, 2015***

# *Preview*

- **What is the Reactor Oversight Process (ROP)?**
- **Why is the Corrective Action Program (CAP) Important to the ROP?**
- **How is CAP Regulated?**
- **ROP Expectations, Inspection & Assessment of CAP**
- **Anticipated Changes**

***What is the Reactor Oversight  
Process (ROP) & Why is the  
Corrective Action Program (CAP)  
Important to it?***

**7 slides**

# ***What is the Reactor Oversight Process (ROP)?***

***(NUREG 1649, Rev. 5, February 2014)***

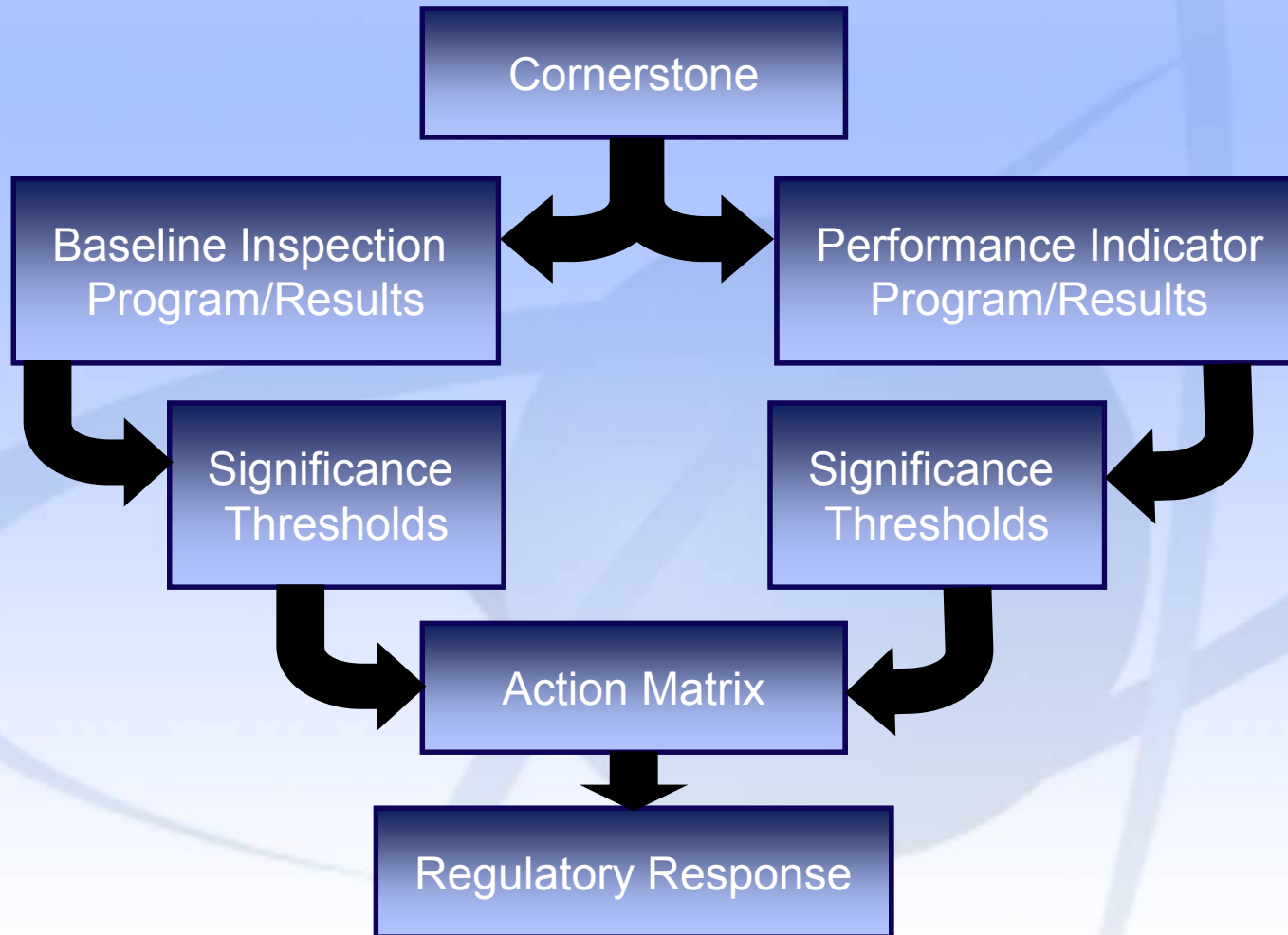
- **The ROP is the agency's program to inspect, measure, and assess the safety and security performance of operating commercial nuclear power plants, and to respond to any decline in performance.**

# ***What is the Reactor Oversight Process (ROP)?***

***(NUREG 1649, Rev. 5, February 2014)***

- **Implemented in 2000** with the **goal** of providing a more **objective, risk-informed, understandable and predictable** approach to the oversight of nuclear power plant performance.
- The ROP **supports** the agency's strategic goals for **safety and security**, and **displays** the organizational excellence values of **openness and effectiveness**.

# Reactor Oversight Process



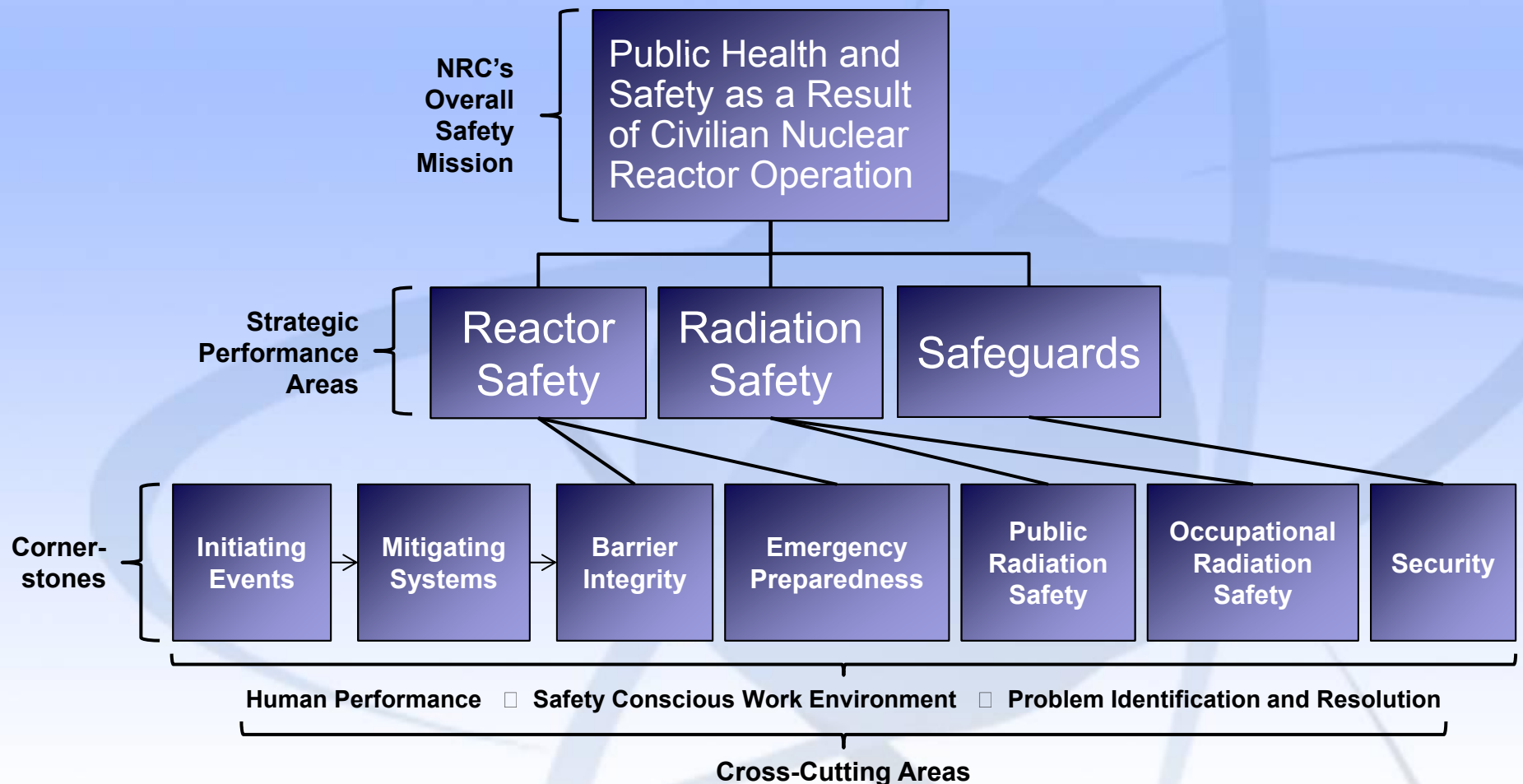
# ***ROP & Corrective Action Program (CAP)***

## ***A.K.A. - Problem Identification & Resolution (PI&R)***

- **A fundamental goal of the ROP is to establish confidence that a licensee is effectively detecting, correcting, and preventing problems which could impact cornerstone objectives**
- **A key premise of the ROP is that weaknesses in the licensee's problem identification and resolution programs will manifest themselves as performance issues which will be identified during the baseline inspection program or by performance indicators crossing predetermined thresholds.**



# Regulatory Framework





# Cross-Cutting Areas

- The ROP features three **“cross-cutting” areas (CCAs)**, so named because they can **affect** each of the cornerstones across **all strategic performance areas**. These CCAs are:
  - Human Performance
  - **Problem Identification and Resolution**
  - **Safety-Conscious Work Environment**

# Cross-Cutting Areas

- Human Performance - Decision-making process, availability and adequacy of resources to ensure nuclear safety, coordination of work activities, and personnel work practices
- Problem Identification and Resolution - Corrective action and operating experience programs and self- and independent-assessments
- Safety-Conscious Work Environment - Workers feel free to raise nuclear safety concerns without fear of harassment, intimidation, retaliation, or discrimination

# ***How is CAP Regulated?***

**3 slides**

**10 CFR 50 Appendix B Criterion XVI  
And Related Criteria**

# **“THE” CAP Regulatory Requirement**

**(10 CFR 50 Appendix B Criterion XVI Corrective Action)**

- **Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected**
- **In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.**
- **The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.**

# ***CAP is Part of Quality Assurance (QA) Program*** ***(Appendix B Criterion II Quality Assurance Program)***

- This program shall be documented by **written policies, procedures, or instructions** and shall be **carried out** throughout plant life **in accordance with** those policies, procedures, or instructions.
- Program shall provide **control** over activities affecting the quality of the identified structures, systems, and components, to an extent **consistent with their importance to safety**.
- The program shall **take into account** the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the **need for verification** of quality by inspection and test.

# ***CAP is Part of Quality Assurance (QA) Program*** ***(Appendix B Criterion II Quality Assurance Program)***

- The program shall **provide for indoctrination and training of personnel** performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.
- The applicant shall **regularly review the status and adequacy** of the quality assurance program.
- Management of **other organizations** participating in the quality assurance program **shall regularly review the status and adequacy** of that part of the quality assurance program which they are executing.

# ***ROP Expectations, Inspection & Assessment of CAP***

**6 slides**

**Note: *By Design*, ROP Expectations, Inspection, & Assessment of CAP (PI&R) Are Not Restricted to Regulatory Requirements of Part 50 Appendix B**



# ***Inspecting CAP (PI&R)***

## ***(IP 71152 Problem Identification & Resolution)***

- **While** a key premise of the ROP is that **weaknesses in PI&R programs will manifest themselves as performance issues** which will be identified during the baseline inspection program or PIs crossing predetermined thresholds...
- **Several aspects of PI&R are *not* specifically addressed by either the individual cornerstone PIs or other baseline inspections.** These aspects are addressed by IP 71152.
- **IP 71152 Problem Identification and Resolution employs routine PI&R reviews, semiannual trend reviews, annual follow-up of selected issues, and biennial team inspections to address aspects of PI&R not adequately addressed by PIs or other baseline inspection.**

# **PI&R Inspection Objectives** (1 of 3)

(IP 71152 Problem Identification & Resolution)

- To **evaluate** the **effectiveness** of the licensee's corrective action program in **identifying, prioritizing, evaluating, and correcting problems**
- To **confirm** that licensees are **complying with NRC regulations** regarding corrective action programs
- To **help** the NRC **gauge supplemental response** when ROP Action Matrix thresholds are crossed

## ***PI&R Inspection Objectives*** (2 of 3) ***(IP 71152 Problem Identification & Resolution)***

- To **confirm** the licensee's **appropriate use** of industry and NRC **operating experience**
- To **evaluate** the **effectiveness** of licensee **audits and self assessments**
- To **confirm** licensees have established a **safety conscious work environment**

## **PI&R Inspection Objectives** (3 of 3)

(IP 71152 Problem Identification & Resolution)

- To **follow-up** on corrective actions for selected previously-identified compliance issues (e.g. non-cited violations (**NCVs**))
- To **verify** that licensees are identifying and placing potential **10 CFR 21 – REPORTING OF DEFECTS AND NON-COMPLIANCE** issues into the Corrective Action Program (CAP) and appropriately evaluating them.

# *Review & Questions*

- **What is the ROP?**
- **Why is CAP Important to the ROP?**
- **How is CAP Regulated?**
- **ROP Expectations, Inspection & Assessment of CAP**
- **Anticipated Changes**



# ***Anticipated Changes***

**Changes are anticipated to: (a) licensee CAP due to industry initiatives, (b) NRC PI&R inspection & assessment due to ROP self- and external assessments.**

# ***Industry “Cumulative Impacts” Initiative***

- **Vocabulary: CAQ, SCAQ, CAQ+, NCAQ...**
- **Separating CAQ & NCAQ**
- **Site-specific Implementation Differences**
- **App B Compliance vs. ROP Expectations**
- **Enhancing Training & Adapting IP 71152**



# Selected ROP Assessments

- **Self-Assessment Reports**
  - 2013 ROP Independent Assessment, “The McDermott Report” ([ML14035A571](#))
  - April 4, 2014 ROP Baseline Inspection Program Enhancement (BIPE) Project Report ([ML14017A340](#))
  - ROP BIPE Enclosure 6 - Problem Identification and Resolution ([ML14017A391](#))
  - SECY-14-0047 - ROP Self-Assessment for CY 2013 (<http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2014/2014-0047scy.pdf>)
- **External Assessment Reports**
  - Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight: GAO-13-743: Published: Sep 27, 2013. Publicly Released: Oct 17, 2013 (<http://www.gao.gov/products/gao-13-743>)

# ***ROP Baseline Inspection Program Enhancement Project***

**WITH EMPHASIS ON  
PROBLEM IDENTIFICATION AND RESOLUTION  
(ENCLOSURE 6)**

# ***Baseline Inspection Procedure (IP) 71152***

## ***“Problem Identification and Resolution”***

- IP 71152, “Problem Identification and Resolution,” ([ML14316A042](#)) would benefit from **enhancements in assessment and inspection**
- Recommended changes to the inspection process include clarification and expansion of inspection guidance and enhanced **focus on inspection of corrective action program implementation**

## ***Enhancing Alignment Between IP 71152 Objectives vs. Guidance & Application***

- IP 71152 **early warning** of issues that could result in transition across the action matrix has been less than fully effective
- Look for:
  - Improvements in **guidance to effectively recognize and assess declining corrective action programs**
  - **Enhanced incorporation of team inspection results into the overall assessment**
  - **Possible graduated regulatory responses to declining corrective action programs**

# **Take-away**

## **Problem Identification and Resolution**

- **Look for initiatives to promote:**
  - **Sharper PI&R IP focus on licensee CAPs**
  - **Making PI&R Inspection more predictive**
  - **Improved governance on how to assess licensee CAPs**
  - **Improved Integration of PI&R Inspection Insights into:**
    - **Assessment / Action Matrix**
    - **Supplemental Inspection**

# ***References***

# *Principal ROP References*

- A plain language description of the Reactor Oversight Process (ROP) can be found in NUREG-1649, Rev. 5, February 2014 ([ML14052A306](#))
- Additional background information can be found on the Detailed ROP Description page (<http://www.nrc.gov/reactors/operating/oversight/rop-description.html>)
- ROP-related program and policy documents are summarized on the ROP Program Documents page (<http://www.nrc.gov/reactors/operating/oversight/program-documents.html>)



# ROP Assessments

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***END OF PRESENTATION***