

# Mod/50.59 Inspections



# The Old Way

- ▶ One Week
- ▶ 3 to 5 inspectors
- ▶ Logistics
  - Entrance - Monday morning or afternoon
  - Exit – Friday morning
  - Inspection - Tuesday and Wednesday
  - Wrap-up on Thursday with a technical debrief in the afternoon

# The Old Way

## ► Preparation

- List of Mods, screens, and 50.59s provided the week before the inspect
- Sample documents selected the week before the inspection

## ► Inspection

- 2 to 3 days
- Sample focussed

# The Old Way

## ► Advantages

- Easy to schedule
- Easy to man
- Short duration
  - NRC – Manpower the same, but focus time less
  - Licensee – Burden large for the one week, but inspection complete in one week

# The Old Way

## ► Disadvantages

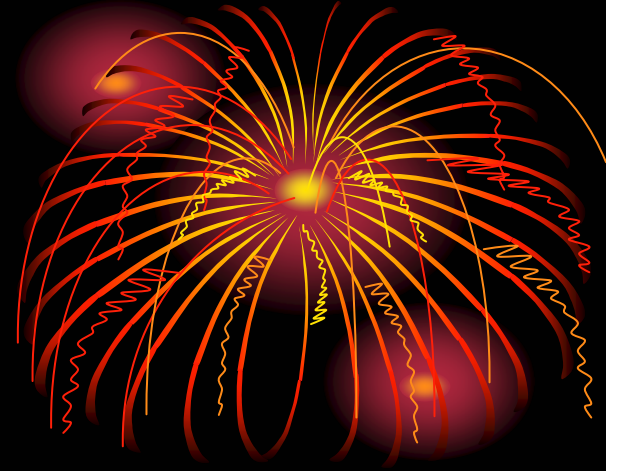
- Not as in-depth
- Sample focused – ancillary effects of changes not looked into in any great detail
- Issues dropped or URIs initiated (further inspection)
- Licensee did not have a chance to develop a full and thorough response to some questions
- Preparation limited to picking samples

# The New Way



- **Two weeks long – one week off between on-site inspection weeks**
- **Two inspectors**
- **Logistics**
  - **Entrance - Monday of 1<sup>st</sup> week**
  - **Exit – Friday morning of 2<sup>nd</sup> week**
  - **Inspection – 1<sup>st</sup> week and Monday thru Wednesday of 2<sup>nd</sup> Week (May cut off a day of inspection if possible)**
  - **Wrap-up on Thursday of 2<sup>nd</sup> week with a technical debrief in the afternoon**

# The New Way



- **Preparation**
  - **Lists of Mods, screens, 50.59s and other documents provided 1 to 2 months in advance**
  - **Paired down list of Mods, screens, 50.59s reviewed in some depth the week before the inspection in preparation for onsite inspection**

# The New Way



- **Inspection**
  - **6 to 7 days**
  - **Inspects samples but also inspect ancillary documents effected by the changes such as:**
    - **Calculations**
    - **Procedures**
    - **USAR**
    - **TS, TS Bases, TRM**



# The New Way



- **Advantages**
  - **More in-depth**
  - **More time to branch into ancillary documents affected by the change**
  - **2 people – 2 week approach allows inspectors to probe further yet still follow-up and close out questions and issues**

# The New Way



- **Added preparation allows for a better quality inspection**
- **Licensee has more time to develop responses to inspector questions.**
- **Licensee – need less people for interface; however, interface period is longer**
- **Higher percent of issues are resolved prior to the exit meeting.**

# The New Way



- **Findings and observations are more meaningful, because the team has more time to understand the issues and the process breakdowns and/or human errors involved**

# The New Way

- **Disadvantages**
  - **Longer inspection period**
  - **More difficult to schedule**
  - **Manning more difficult**
    - **Inspection ties up inspectors for a longer period**
    - **Skill sets are more essential**



# What Else Have We Done?

- Training
  - Lectures
    - 50.59
    - Modification Process
    - License Basis and Design Basis
    - Guidance Documentation: NEI 96-07, NEI 98-03, Part 9900 Operability Guidance
  - Mentoring
- Core Group Development

# What Have We Gained?

- Issues and Findings
  - Prior 2 years (16 inspections) produced 3 findings
  - Last 7 inspections (since October 2005) have produced:
    - 14 findings
    - 3 Unresolved Items
  - Finding Examples:
    - adversely changed the UFSAR description of the recirculation runback feature - could no longer prevent a reactor scram if a feedwater pump tripped;
    - Non-representative containment air temperature measurements (setpoint calc);
    - New equipment placed in service (Required for use by Operators during EOP entry) – not put into maintenance program;
    - Multiple TRM findings.
- Higher percent of issues are resolved prior to the exit meeting.
- Better knowledge of 10 CFR 50.59, License Basis, and Design Basis

# How Does this Affect the Licensee?

- An extra document request prior to the inspection
- Longer Inspection
- Inspection will be more in-depth
  - Now more similar to the Design Inspections
  - Questions may require more work to answer
- There may be more findings than what was historically seen for this type of inspection



# Future Inspection Activities

- TI 2515/166, Pressurized Water Reactor Containment Sump Blockage – Either covered during this inspection or the CDBI



# Where Have We Been Seeing a Problems?

- Non-Conservative Interpretations of License and Design Basis
- Confusion between the following activities:
  - Maintenance
  - 10 CFR 50.59
  - Operability and Functionality
  - 10 CFR 50, Appendix B, Criterion XVI
- What rules to apply when addressing non-conforming or degraded equipment
- What needs to be done to replace automatic actions or design functions with manual operator actions?

# What Documents Do We Use?

- NEI 96-07, "Guidelines for 10 CFR 50.59 Implementation"
- Part 9900 , "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety"
- NEI 97-04, "Design Basis Program Guidelines"
  - Revised Appendix B to NEI 97-04
- NUMARC 93-01 Section 11 (dated 02/00), "Assessment of Risk Resulting from Performance of Maintenance Activities"
- NEI 98-03, "Guidelines for Updating Final Safety Analysis Reports"