Enclosure 2

Handouts and Presentations Discussed during the
May 18, 2016 ROP WG Public Meeting

Dated May 30, 2016

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Problem Identification & Resolution (PI&R) Enhancement Update

Ross Telson, IP 71152 Lead & Chair of PI&R Working Group (Public Charter: ML15290A004)

May 18, 2016; 10:30 AM to Noon

ROP Public Meeting, NRC HQ

ROP Self-Assessment

- **In the interest of introspection and continued learning, the NRC is routinely reviewing the ROP for improvement.**
- **The above was established in SECY 01 0114 and is implemented today through:**
  - **IMC 0307 ROP Self-Assessment Program which evaluates ROP effectiveness through its success in meeting pre-established goals and intended outcomes**
  - **Other NRC Assessment & Feedback Processes**

ROP / PI&R Assessments & Feedback

- Multiple diverse assessments & feedback sources from 2012-2015
  - 2012-2015, Cross-Regional Self-Assessments, IP 95003 Self-Assessments, & ROP Feedback Process [NP]
  - Jun 2013, periodic assessment of IP 71152 "Problem Identification and Resolution" [NP]
  - Apr 2014, ROP Enhancement Project Encl. 6 (ML14017A391) [P]
  - Mar 2014, ROP Independent Assessment Report (ML14035A571 "McDermott Report") [P]
  - Dec 2015, Staff Actions on McDermott Report Recommendations and Suggestions (ML15264A171) [P]
- The above-assessments & feedback were distilled into the PI&R Enhancement Project Recommendations & Objectives

PI&R Recommendations

- **Three Principle Recommendations Underpin the following PI&R Enhancement Objectives:**
  1. **Improve Focus on Inspecting Licensee PI&R Program Implementation**
  2. **Improve Guidance on Assessing Licensee PI&R Program & Incorporating Outcome into Overall Licensee Assessment**
  3. **Resolve Differences between PI&R Inspection Bases and Inspection Procedure**

Timeline & Future Milestones (1 of 2)

Timeline:

- 17 Nov 15 – ROP Public Mtg. (Ann. PI&R Enhancmt. Initiative)
- 17 Dec 15 – PI&R Public Charter & Wk. Group (PIRWG) Approved
- 6 Jan 16 – PIRWG Mtg. 1
- 14 Jan 16 – ROP Public Mtg. (Reviewed PI&R Charter)
- 28 Jan 16 – PIRWG Mtg. 2
- 17 Mar 16 – PI&R Public Workshop
- 29 Mar 16 – PIRWG Mtg. 3
- 13 Apr 16 – ROP Public Telecom (Follow-up to Workshop)
- 27 Apr 16 – PIRWG Mtg. 4
- 29 Apr 16 – Charter Extension (IP 71152 Effective 1 Jan 2017)

Timeline & Future Milestones (2 of 2)

Future Milestones:

Activity (Within Scope of Charter)	Start Date	Dur. (Wks.)	Orig. Target. Completion Date	Approved Extension Date
Formalize PIRWG, Chair Turnover, Solicit Members, Develop and Approve Charter, Publish to Public	9/1/2015	10	11/13/2015	
Brief and Engage Internal Stakeholders - Initial	11/2/2015	1	11/13/2015	
Brief and Engage Public at the ROP Public Meeting	11/17/2015	0	11/17/2015	
Develop Enhanced PI&R and Generate Consensus	11/2/2015	20	3/18/2016	6/10/16
Integrate Enhanced PI&R into Impacted IPs and IMCs	2/5/2016	8	4/1/2016	6/24/16
PI&R-Enhanced IP/IMC Comment Period	4/1/2016	4	5/2/2016	7/25/16
Resolve Comments & Publish PI&R-Enhanced IPs/IMCs	5/1/2016	4	6/1/2016	8/24/16
Brief/Train All Stakeholders on Enhanced PI&R	6/1/2016	4	7/1/2016	9/23/16
Effective Date of Revised IPs & IMCs (End Phase I)	7/1/2016	0	7/1/2016	1/1/17

Open Session
Public Discussion & Feedback

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

END OF PI&R Enhancement OPEN SESSION

ROPTF Comments on NRC's New Plant ROP Verification Matrix

1. Page 1, "Purpose", second paragraph: "Furthermore, additional thought should be given to other plant challenges (e.g., seismic events) before finalizing the matrix."
    a. Question/Comment: What does the term "other plant challenges" mean? How do these differ from the challenges currently addressed by the document?
2. Page 1, "Definitions", first paragraph: "SSC: A structure, system or component that warrants regulatory oversight during operations."
    a. Question/Comment: We recommend the document utilize the common industry definition of SSC, and then discuss the scope of SSCs addressed by the document.
3. Page 2, Table, General Comments:
    a. Question/Comment: We recommend that the document describe how the boundaries within systems (ex. is accumulator normally open at-power discharge valve part of accumulator SSC?) and system interfaces (CCS to RNS HX) are determined.
    b. Question/Comment: We recommend that NRC clarify which portions of SSCs or which functions enter the scope of the document. For example, the ECS powers some non-safety-related, non-diesel-backed (Tier 1) loads. Is the portion of the system supplying these loads subject to inspection/indicators?
    c. Question/Comment: We recommend that up-to-date information from the pre-fuel load PRA model be used for the purpose of determining SSC and/or function risk importance and success criteria.
    d. Question/Comment: Will the risk importance be used for screening low-risk SSCs/functions to green?
4. Page 8, Table:
    a. Question/Comment: Please clarify why VES, a safety-related system, was not included but the non-safety related VBS system was included.
5. Page 7, Table:
    a. Question/Comment: On DGs/ZOS, key functions, for LOOP only, while at-power, DGs/ZOS is not the preferred source, as stated in the matrix. The preferred source with the main generator still running is from the main generator (island mode). This is a unique aspect of AP1000; unlike other plants, two dedicated offsite sources are not required.

        UFSAR 8.2.1., "The main generator is connected to the offsite power system via three single-phase main stepup transformers. The normal power source for the plant auxiliary ac loads is provided from the isophase generator bus through the two unit auxiliary transformers of identical ratings. In the event of a loss of the main generator, the power is maintained without interruption from the preferred power supply by an auto-trip of the main generator breaker. Power then flows from the transformer area to the auxiliary loads through the main and unit auxiliary transformers."
6. Page 1, "Verify by PI…", third line, reference to SSC safety margins; and pages 2-8, Table:
    a. Question/Comment: Please clarify "SSC safety margins" for non-safety-related systems and clarify the required regulatory treatment for non-safety-related systems.

7. Page 7, Table, Plant Control System:
    a. Question/Comment: Please clarify "SSC safety margins" for non-safety The PLS system has a "Moderate" importance vice the term "Intermediate" importance used elsewhere in the table.

U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

Mitigating Strategies Significance Determination Process – IMC Appendix O

Meeting with Industry

May 18, 2016

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Background

- Multi-disciplined team established
- Diverse views on SDP development
- Decision to use screening approach with a transition to IMC 0609 App M for findings that do not screen to Green
- Draft procedure reviewed by regions with substantive comments
- Cross Regional Panel informed by draft App O during early TI-191 performances

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Key Considerations

- App O focuses on FLEX equipment, procedures, strategies and training
- Most findings expected to be either minor or very low safety significance (Green)
- When findings affect situations other than Mitigating Strategies, decision needed to enter appropriate SDP
- Experience needed to better under how FLEX equipment may be used for other purposes

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

How Does App O Work?

- It's a risk-informed screening tool that focuses on...
  - Equipment deficiencies that result in a complete loss of function to cool the core, containment or spent fuel pool for greater than 72 hours
  - Procedure and training deficiencies that would result in loss of function(s) underlined above
  - External hazard frequencies are documented to be greater than 1E-6/year
  - Significant programmatic deficiencies in two or more areas exist
  - Spent fuel pool level wide range level instrument findings screen to Green

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Next Steps

- Address regional/industry comments
- Issue App O in June/July
- Validate App O through TI-191 performances
- Develop technical basis document
- Develop minor/more than minor examples for IMC 0612 App E

ROP Task Force Comments on Draft SDP for Mitigating Strategies

Following are comments from the Reactor Oversight Process Task Force on the draft SDP for Mitigating Strategies.[1] This SDP would apply to findings from inspections performed under Temporary Instruction 2515/191[2]. Copies of the B.5.b SDP and its basis document, and a copy of the charter for the Cross-Regional Panel, which are mentioned in the comments below, are attached for reference.

1. **General Comments**
   - COMMENTS:
     a) SINGLE SDP: The staff originally proposed merging the existing B.5.b SDP (IMC 0609, Appendix L) with the proposed Mitigating Strategies SDP (IMC 0609, Appendix O). Because of the overlap in capabilities utilized in B.5.b and Mitigating Strategies scenarios, we believe a single SDP is still the right approach.

     b) SCOPE OF INSPECTION: TI 2515/191 includes as an Objective the inspection of implementation of communications and staffing plans. The proposed SDP is silent on the treatment of findings related to communications and staffing. How will NRC handle any such findings?

     c) CROSS-REGIONAL PANEL: The Cross-Regional Panel is mentioned on page 2, in the introduction to Section 4.0, "Guidance". The charter for this panel is available in ADAMS and should be included in the references listed in Section 5.0.

2. **Title: *"Post Fukushima Mitigating Strategies Significance Determination Process (Orders EA-12-049 and EA-12-051)"*.**
   - COMMENTS:
     a) WORDING OF TITLE: To be consistent with TI 2515/191, the title of Appendix O should be written as follows: "Significance Determination Process for Mitigation Strategies and Spent Fuel Pool Instrumentation Orders"

3. **Section 1.0, *"Purpose", lines 6-8: "Entering into this appendix presumes that the performance deficiency is of more than minor significance using the guidance in IMC 0612, Appendix B – Issue Screening."***
   - COMMENTS:
     a) REFERENCE TO IMC 0612 APP. E: Right after the mention of Appendix B, shouldn't this sentence also mention IMC 0612, Appendix E, "Examples of Minor Issues", as part of the issue screening process?

     b) IMC 0612 EXAMPLES: To support the above, IMC 0612, Appendix E, should be revised to include examples that would apply to a mitigating strategies-related problem.

4. **Section 4.0, *"Guidance", page 3, general comment on the use of screening questions***
   - COMMENTS:

     a) NEED FOR CRITERIA: Affirmative responses to any one of the five questions in this section directs the user to IMC-0609, Appendix M, for a qualitative SDP. The five screening questions are broadly worded, in effect deferring the hard choices about the significance determination to Appendix M. Thus, Appendix M serves as a catch-all to this draft Appendix O. Yet neither Appendix O nor Appendix M provide specific criteria for making

---

[1] *Inspection Manual Chapter 0609, Appendix O, "Post Fukushima Mitigating Strategies Significance Determination Process (Orders EA-12-049 and EA-12-051)", ADAMS accession number ML16055A351.*

[2] *TI 2515/191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staff/Multi-Unit Dose Assessment Plans", ADAMS accession number ML15257A188.*

the significance determination. We don't yet know what the proposed revision of Appendix M would produce. Hence, what the draft Appendix O presents is a coarse screen that throws the tough decisions over to a yet-to-be-defined set of criteria for a future revision of Appendix M. This is not appropriate.

b) BDB GTG?: What would be the basis on which NRC would screen anything associated with Beyond Design Basis events to a Greater than Green outcome? Based on the improbability of most Beyond Design Basis events, the right SDP should be as simple as a single question: "For all findings related to the Mitigating Strategies, Spent Fuel Pool Instrumentation and BWR Hardened Vent orders, screen to Green."

c) CRITERIA IN APP. O: IMC 0609, Appendix L provides B.5.b-specific criteria for screening B.5.b findings without reference to IMC 0609, Appendix M. Why is the Appendix L approach not also suitable for the proposed Appendix O? [The basis for the Appendix L avoidance of Appendix M is provided below.]

d) APPLIABILITY OF APP. M: IMC-0308, Attachment 3, Appendix L, says the following: "*The staff recognized that Appendix M was not the right significance determination process (SDP) tool to evaluate the significance of B.5.b findings because of "the beyond design basis" nature of the findings. All B.5.b scenarios are initiated by events that are beyond the design basis of the plant. Since these events are outside the baseline risk of the plant, assessing the significance of findings quantitatively would result in an inflated significance. Appendix M, although a qualitative risk tool, is focused on determining if the licensee is operating within its design basis by assessing safety attributes, such as safety margin and defense-in-depth. To deal with the unique nature of the B.5.b inspection finding, the staff recognized the need to develop a specific qualitative significance determination model based on expert judgment, focused on defense-in-depth, informed by stakeholder input. To ensure a consistent assessment of findings identified during B.5.b inspections, the staff, with input from industry stakeholders, developed a special SDP for TI 2515/171. This SDP focused on performance deficiencies affecting the feasibility of multiple strategies that have a greater significance than those deficiencies that affect the feasibility of a single strategy. The NRC issued TI 2515/171, Appendix C, on May 16, 2008, and an SDP tailored to B.5.b requirements. The staff incorporated this SDP into Revision 1 of the TI, and issued the TI for use on July 25, 2008.*" Why doesn't this argument apply equally well to the draft Appendix O?

5. **Section 4.0, *"Guidance", page 3, <u>Question 2</u>: "Does the inspection finding involve equipment used for Mitigating Strategies that would result in a complete loss for more than 72 hours of one or more functions to maintain or restore core cooling, containment pressure control/heat removal and/or spent fuel pooling cooling capabilities?"***

- COMMENT:

a) BASIS: What is the basis for 72 hours?

b) COMPARABILITY: A precise limit of 72 hours seems needlessly restrictive in comparison with, for example, technical specification limits that allow 72 hours of unavailability plus time to change plant modes for equipment of greater risk significance than equipment used in Mitigating Strategies.

c) WOULD: The use of the word "would" ("…that would result in…") is speculative, imprecise and subjective. This appears contrary to the principles of good regulation. How will the NRC minimize or eliminate the problem of defining and interpreting this key term?

d) NOTE: In the Note below Question 2, the words "there are" can be deleted: "In situations where ~~there are~~ multiple means…"

6. **Section 4.0, *"Guidance", page 3, Question 3: "Does the inspection finding involve procedures and/or training for Mitigating Strategies that would result in the complete loss of one or more functions needed to maintain or restore core cooling, containment pressure control/heat removal and/or spent fuel pooling cooling capabilities?"***
   - COMMENTS:
     a) BASIS: What is the basis for this question? If an equipment problem results in loss of function but it can be corrected in less than 72 hours, Appendix O would not direct the user to Appendix M. On the contrary, if a procedure problem results in loss of function, even if it can be corrected in less than 72 hours, Appendix O would direct the user to Appendix M. What is the basis for this differing treatment of equipment problems versus procedure problems corrected within 72 hours?

     b) WOULD: The use of the word "would" ("…that would result in…") is speculative, imprecise and subjective. This appears contrary to the principles of good regulation. How will the NRC minimize or eliminate the problem of defining and interpreting this key term?

7. **Section 4.0, *"Guidance", page 3, Question 4: "Is the inspection finding associated with a licensee facility that has a documented (e.g., FSAR, IPEEE, or other licensee external hazard analysis paper) external event hazard initiating event frequency greater than 1E-6 per year??"***
   - COMMENT:
     a) BASIS FOR 1E-6: What is the basis for the threshold value of 1E-6 per year? At some sites, BDB external event frequencies are greater than the 1E-6 threshold value. For them, this question would throw all findings over to Appendix M.

8. **Section 4.0, *"Guidance", page 3, Question 5: "Does the finding involve significant programmatic issues in two or more of the following areas such that implementation of the Mitigating Strategies Program would be unsuccessful: (1) equipment monitoring and/or reliability; (2) procedures used for Mitigating Strategies; (3) training developed/implemented for Mitigating Strategies?"***
   - COMMENTS:
     a) BASIS: What is the basis for this question? Why is two programmatic areas the right threshold?

     b) QUESTION 5 vs. 2&3: In practice, what would Question 5 capture that Questions 2 and 3 would not?

     c) PROGRAM: To what does the proper noun "Mitigating Strategies Program" refer? Is this intended to apply to the Final Integrated Plan, just Mitigating Strategies, or something else that comprises a recognizable "program"? Or are you using the word "programmatic" as a synonym of "systematic" or "pervasive" without reference to a specific plant program?

     d) WOULD: The use of the word "would" ("…that would result in…") is speculative, imprecise and subjective. This appears contrary to the principles of good regulation. How will the NRC minimize or eliminate the problem of defining and interpreting this key term?

     e) EXPOSURE: The wording of Question 5 makes no mention of exposure time. Why not?