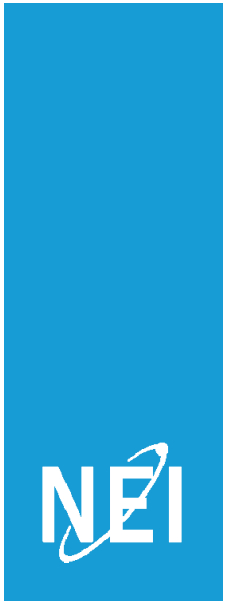

Enhancement of ROP Indicator with CDF Trending

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Intro

- Need to address challenge of MSPI faced by both the industry and the NRC
- Need broad solution to address knowledge issue while reducing MSPI resource burden
- Solution under consideration is a CDF trending indicator to augment the intent of MSPI
  - Simpler to perform
  - Easier to understand
  - **Greater insights**
  - Efficiency gains and alignment with other programs/industry

Insights

- CDF trending, augmentation of the current MSPI indicator, is an integrated risk informed indicator
- Availability of all modeled systems will impact the indicator
  - **Not limited to the five deterministically chosen systems currently in MSPI**
  - Components currently outside of MSPI could have a much larger impact on CDF
    - e.g. DC Power

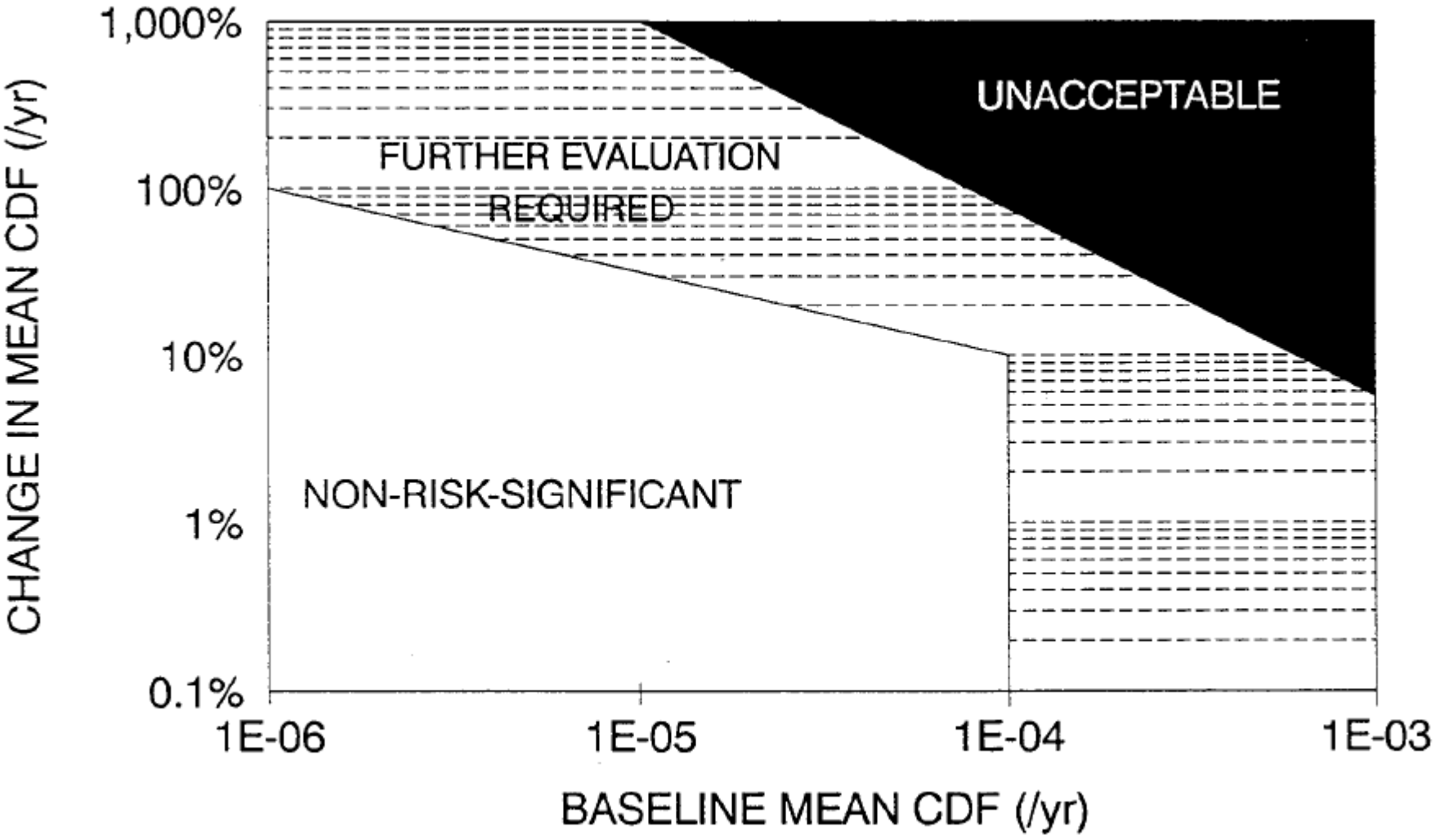
Insights

- An improved indication of risk impact of equipment performance
- Drives risk-informed decision making behaviors
- Focus of CDF trending is with online unavailability
  - Considers the impact of the UA of multiple systems, which MSPI does not
  - Failure rates will be updated during scheduled PRA model updates (not when failures occur)
  - Outage UA and reliability will be addressed by other existing processes
    - Maintenance Rule
    - SDP

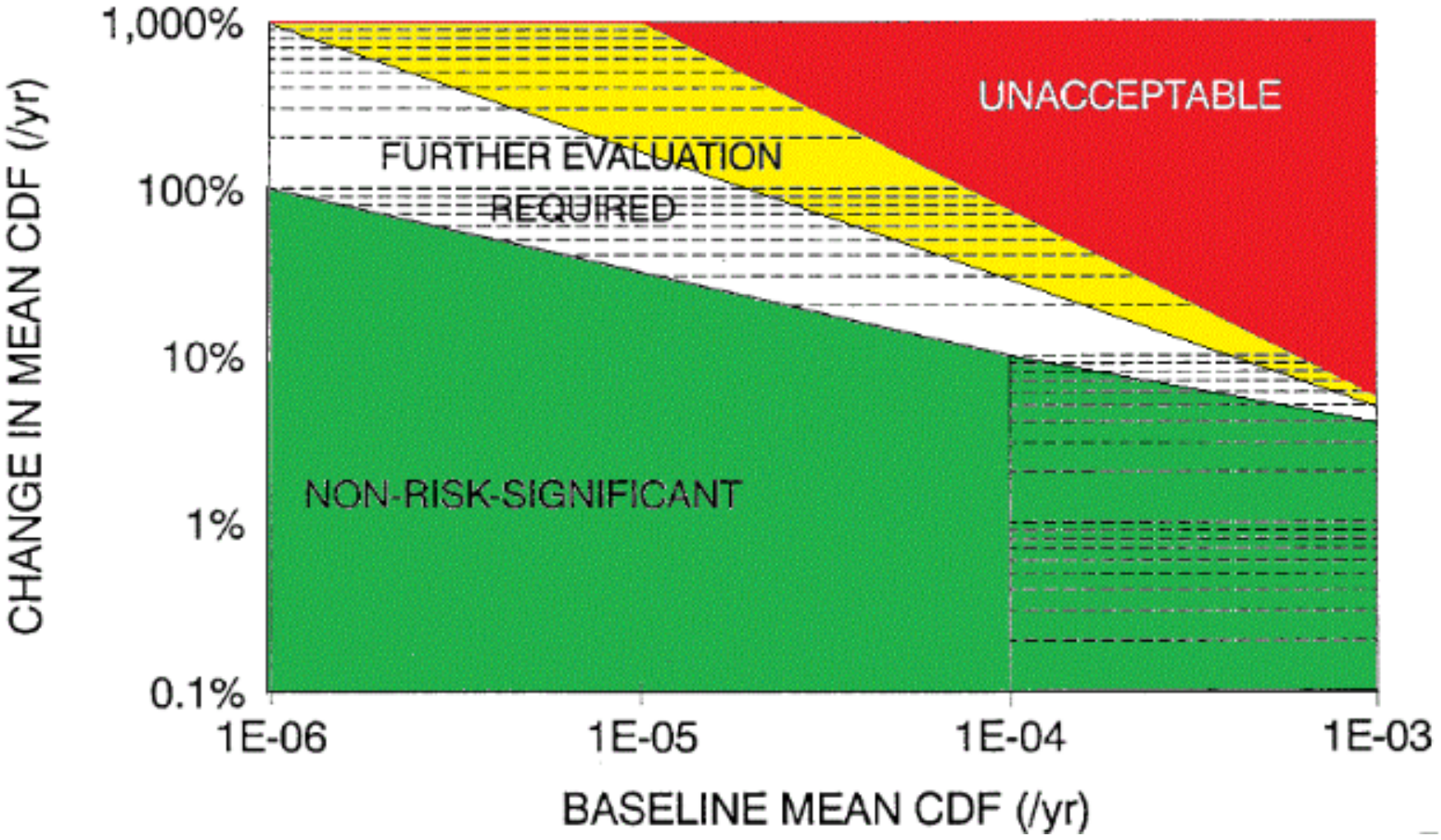
Proposed Solution

- Expand the ROP Indicator to leverage CDF Trending, consistent with the guidance in NEI 18-10
  - Replacement for all sites regardless of implementation of MR 2.0
  - One integrated indicator for data entry into CDE: ΔCDF
  - Proposal to use a sliding scale, consistent with EPRI TR-105396: PSA Applications Guide
  - Not a RG 1.200 application – a revised NEI 99-02 Appendix G would be used for PRA model technical requirements
  - Eliminates duplicative/overlapping programs and greatly simplifies guidance/reduce resource burden.

PSA Applications Guide



Proposed CDF thresholds



CDF Trending vs MSPI

CDF Trending

- One value for entry into CDE
- Some sites are already performing CDF Trending as part of normal business
- When properly configured with site (a)(4) tool, is automatically calculated to eliminate manual scrubbing of logbook entries
- Auditing the automatic process could be used as a means for inspecting the indicator

MSPI

- Significant CDE data entry
- 5 separate sub-indicators each with at least 2 trains/segments with both planned and unplanned UA fields
- Some sites are entering monthly actuals for run time and demands
- Many fields get modified during PRA model changes including the addition or removal of scope

CDF Trending vs MSPI

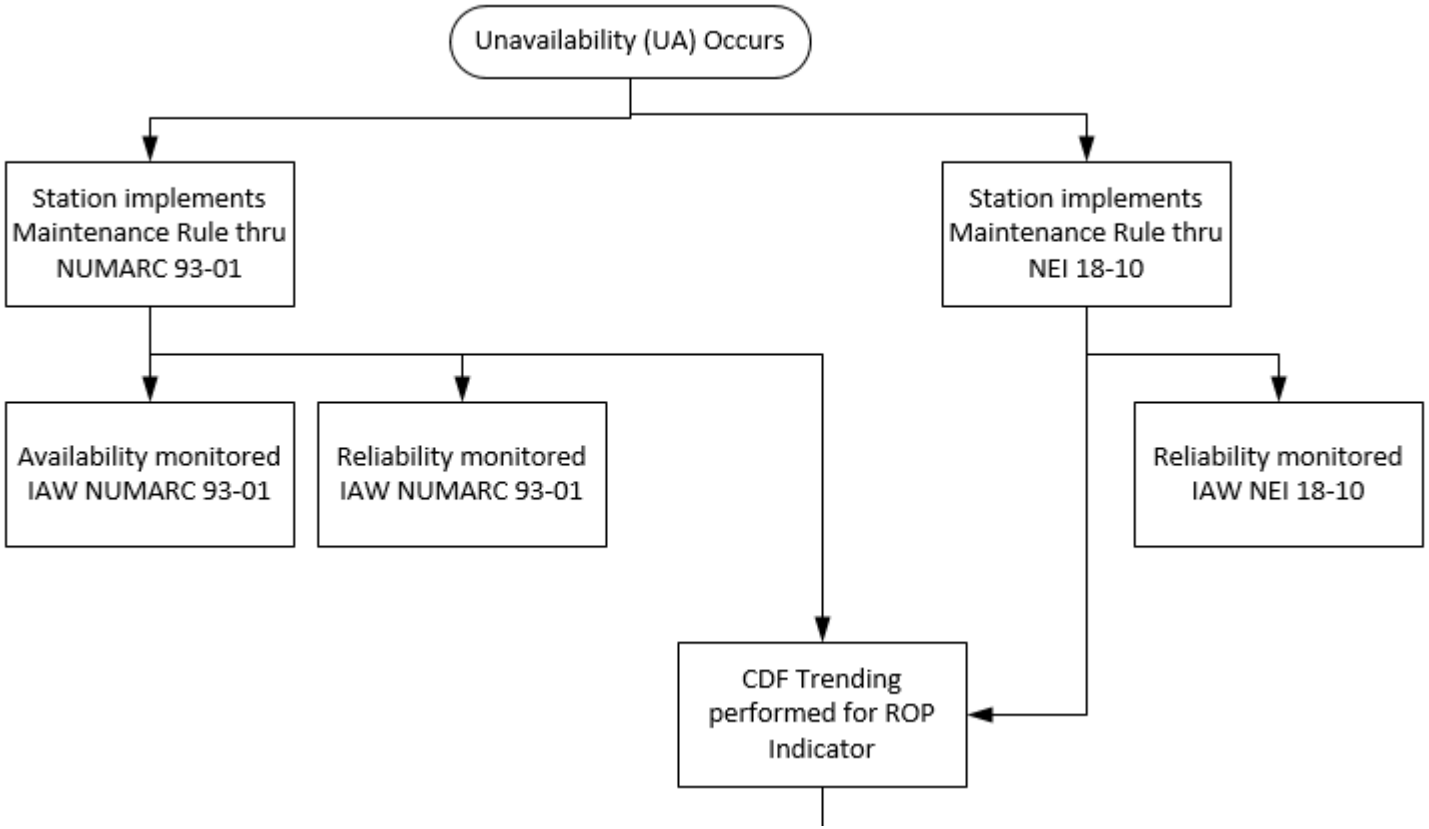
CDF Trending

- Simpler to perform
- Easier to understand
- Greater insights

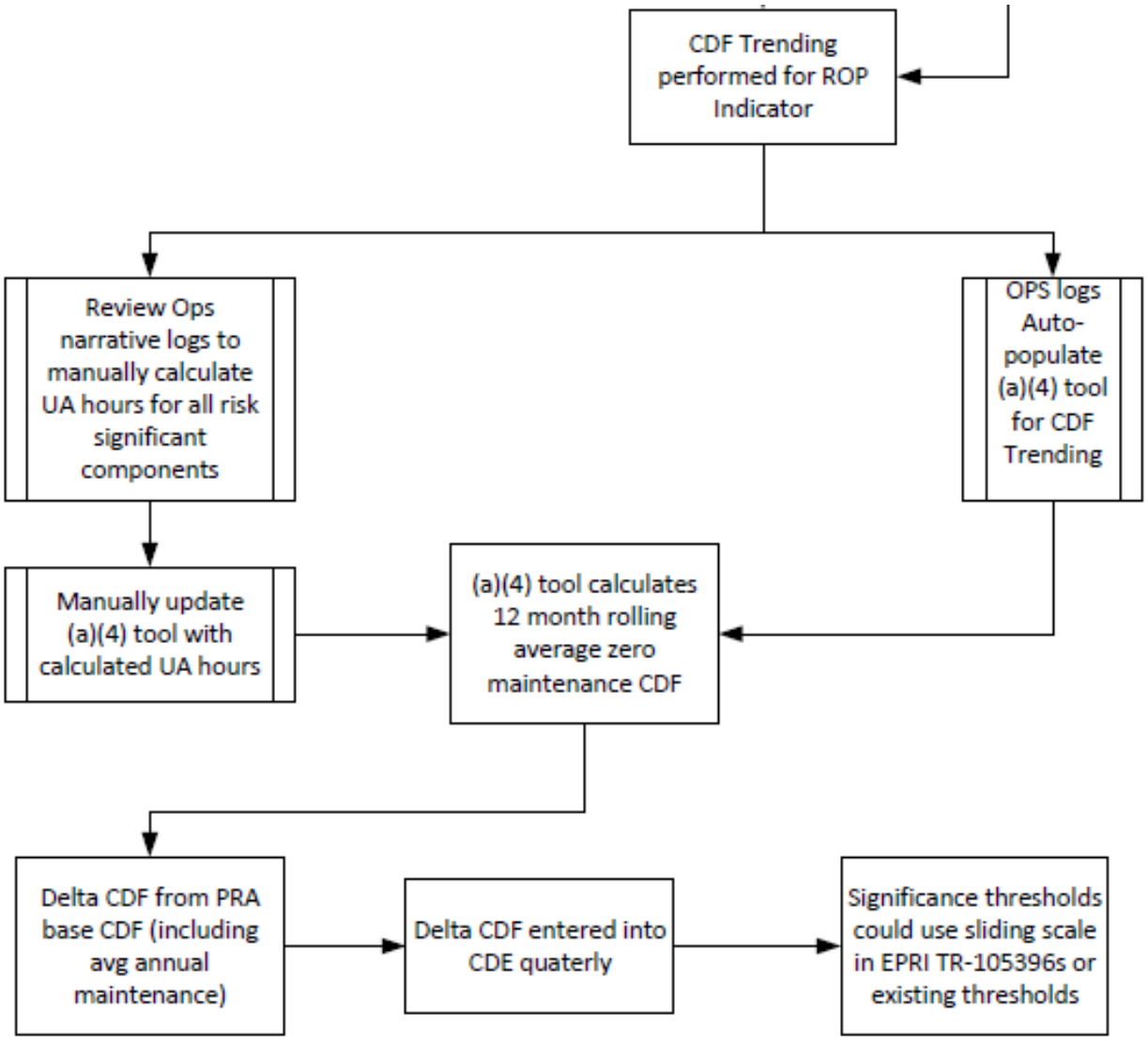
MSPI

- Complex/difficult to modify planned UA baseline
- Significant time/resources spent determining if UA is planned or unplanned
- Significant time/resources spent determining what is and is not a failure of a MSPI monitored component
- Fractured and complex guidance

Process Diagram



Process Diagram



Impact to NRC

- NRC has the capability to inspect the indicator
  - Can be done entirely under the inspection of the site (a)(4) tool (IP 62706)
  - Inspection of initial automated processes
- NRC indicator will be able to compare site to site across the industry
  - All sites will need to adopt this proposed change and start performing CDF Trending, if not already being performed
  - Sites of similar baseline mean CDF will have similar margin
- Needs to be coordinated with other ROP enhancements currently being considered (abbreviated inspections, 95001 changes, etc.)

Short-Term Supporting Actions

- CDF Trending is a longer term solution

- Looking for short term change as an interim step to the long term solution
  - Eliminate data collection and reporting on MSPI Planned Unavailability
    - Represents one of the **greatest resource burdens** associated with MSPI
    - Contributes to the difficulty for the NRC to limit annual PI verifications to 19-38 hours IAW PI Verification (IP 71151)
    - Has the **least impact** on MSPI margin

Short-Term Supporting Actions

- Removal of planned UA from MSPI:
  - Allow ‘0’ to be entered for all systems’ baseline and actual planned UA
  - Allowance to change the baseline already normalizes any notable difference between the baseline and actual values
  - Risk from planned UA is already managed to a finer level of detail under (a)(4)

Short-Term Supporting Actions

- Unplanned UA to be maintained
  - More readily apparent, as CAP ensures that failures of these components are well communicated at the sites
  - With only one remaining definition of unavailable, less time/resources will be spent labeling hours with the appropriate categories
  - Revise guidance to ensure all unavailability resulting from failure of a MSPI monitored component will be treated as unplanned.

Summary/Actions

- Provided a status update for our 1G Initiative
- Long Term Solution:
  - Will continue to perform feasibility studies and validate what the data is telling us
  - Will present an update to the NRC w/ an engagement strategy in 6 months
  - In parallel – working on drafting indicator details
  - Pilot an indicator by Oct
- Short Term Solution: Continue to work with the NRC to determine the best means to address

