

Managing Operability Issues while implementing a major EQ Program Recovery Effort

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Topics of Discussion

- The Challenge
- Background
- Our Solution
- Managing Emergent Issues
- Qualifiability Determination Process
- Results
- Benefits

The Challenge

- To effectively manage the discovery of EQ related emergent issues while implementing a major EQ Program Recovery Effort.
 - Eliminate Un-necessary Distractions to Station
 - Minimize Cycling of Project Priorities
 - Minimize Impact on other Project Activities
 - Leverage CAP instead of it controlling you
 - Know “why we are OK to operate” while we fix it
- Provide a contingency plan or process for dealing with emergent issues that could challenge operability.

Background

- Based on EQCAP Project at Nine Mile Point.
- Project is implementing the corrective actions for a SCAQ Condition Report.
 - Adverse Trend Rollup of previous EQ problems
 - Predominately a Documentation Problem
 - Some documentation issues manifested into hardware issues & NCVs.
- The Root Cause Identified Programmatic Issues in:
 - EQ Documentation Auditability / Traceability
 - EQ Design / Licensing Basis
 - EQ Configuration Control
- This is a Major Program Reconstitution Effort.

Background

- Previous EQCAP Effort was “managed” via CAP.
 - Resulted in constantly changing priorities
 - Project became reactionary to “today’s crisis”
 - Negative impact on progress and timeliness
 - CAP is not a good Project Management tool
- Impact of emergent issues wasn’t accounted for.
- Numerous Documentation Issues known to exist.
- Compounded by previously failed recovery efforts.
- Management lost focus on what the project was trying to solve.
- Resulted in re-organizing the project to address Q&PA findings on progress and timeliness.

Background

Lessons Learned:

- Management of Emergent Issues is Critical to Success.
- Need for a Contingency Plan / Process is Directly Related to:
 - The current health of the Program
 - The amount of “Discovery” involved in the fix
- CAP is not a good Project Management tool.
- For NMP a different approach was needed!

Our Solution

- Developed “Aggregate Effect” EQ ODs.
 - Addresses Operability for a degraded EQ Program
 - Documents Why Each Unit is Safe to Operate while the Project Restores Program Integrity & Compliance
- New “Qualifiability Determination” Process.
 - Defines when emergent issues are within the umbrella of existing Corrective Actions / OD
 - Defines when new CRs are required
 - Eliminates un-necessary Control Room distractions
- Initiated the use of traditional PM Tools.
(Project no longer managed via CAP)
- Allocated Staff to address emergent issues.

Managing Emergent Issues

- “Aggregate Effect” ODs were developed based on:
 - Trend of Previous Operability Determinations
 - Implemented Corrective Actions
 - Extent of Condition Reviews
 - Results of Self Assessments and Q&PA Oversight
 - Results of EQ Backlog reduction efforts
- Also Took Credit for:
 - Use of Risk Informed Logic during “Discovery” activities of the EQCAP Recovery Project
 - Use of CAP for New Issues that are not “Qualifiable” to get operability call

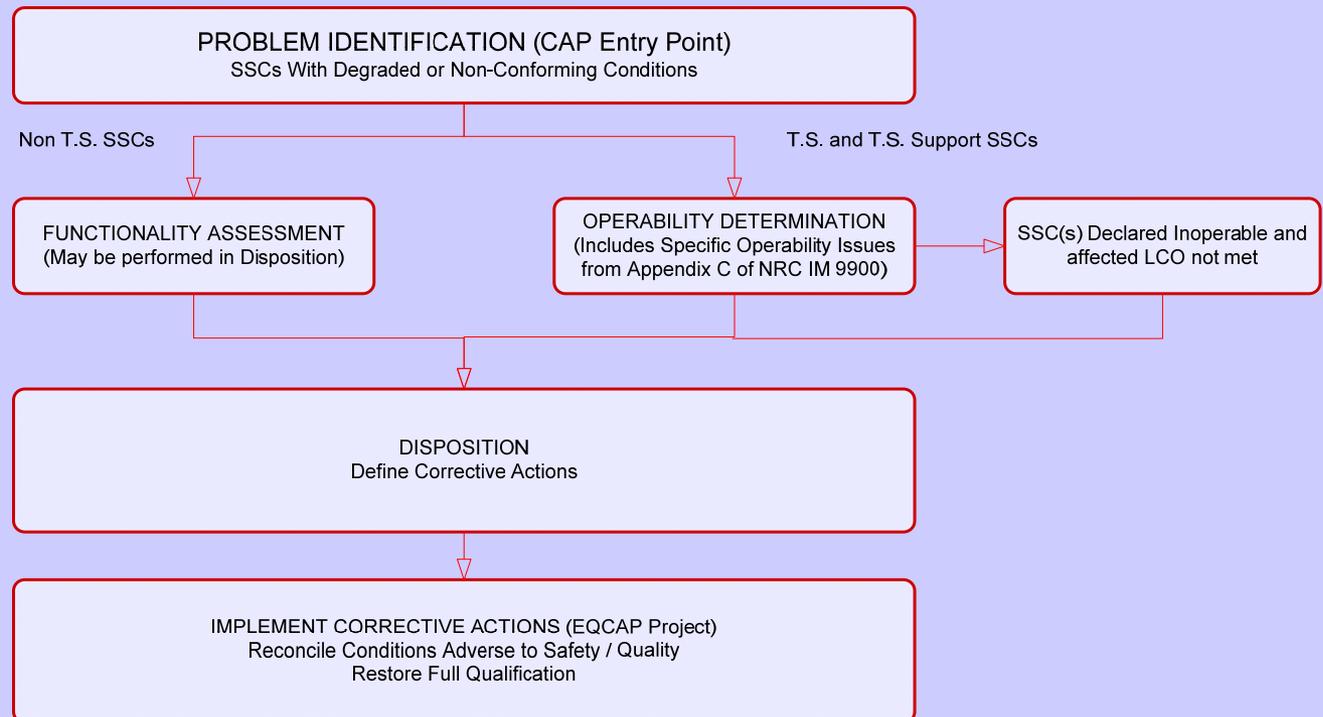
Managing Emergent Issues

- The EQ OD's characterized the state of the three principal program elements:
 - EQ Design Inputs
 - EQ Documentation
 - EQ Implementation
- Concluded that the documentation issues have not manifested into widespread equipment problems that could affect their ITS function.
- Supported an assumption of operability unless there is evidence to the contrary.
- Periodically updated at key project milestones.

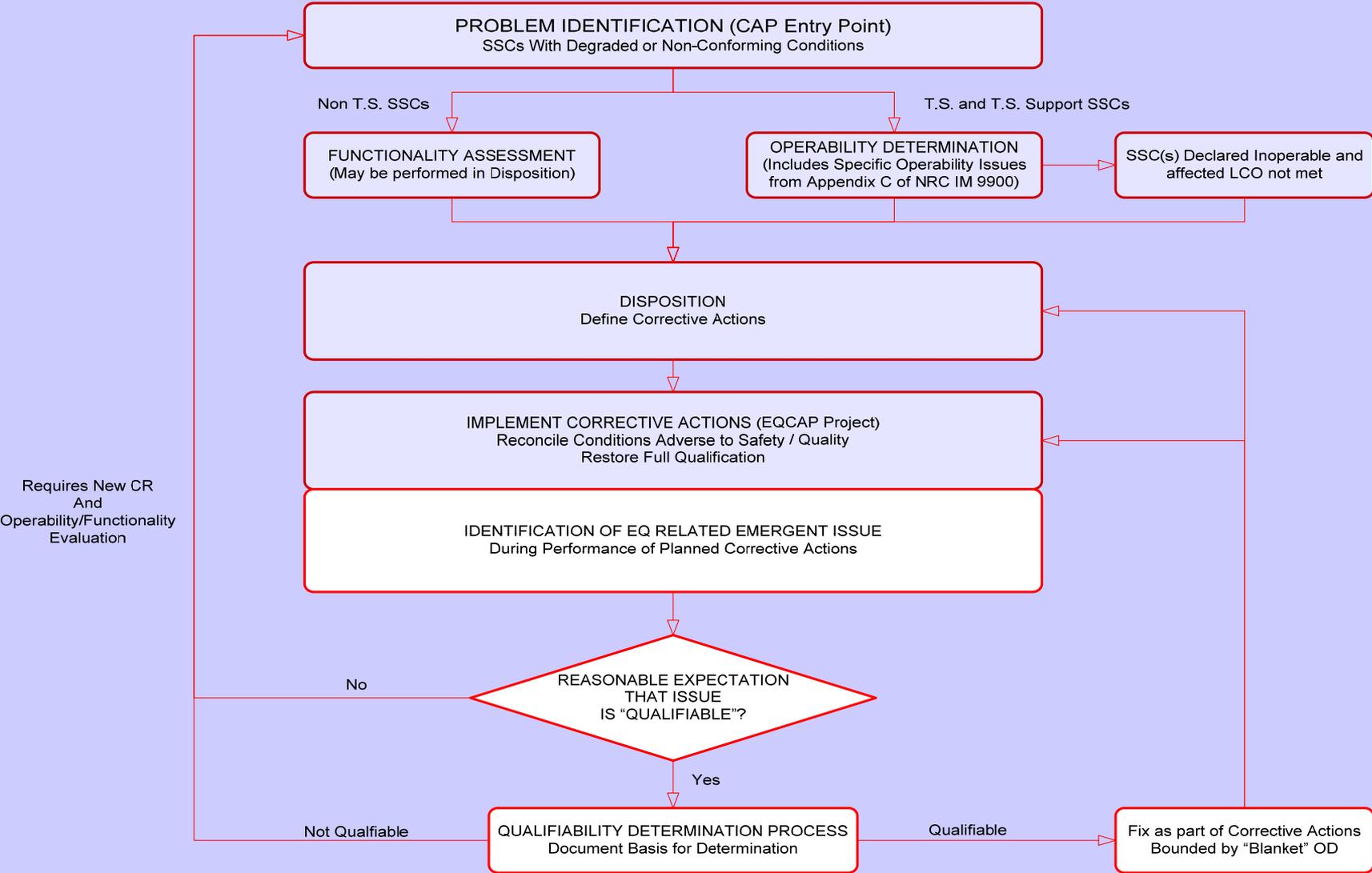
Managing Emergent Issues

- QD Process defines if an issue is bounded by OD.
- Procedure was reviewed / concurred by Licensing, Operations, and Q&PA.
- Provided a specific definition for when an EQ item is “Qualifiable”.
- Conceptually Based on NRC IM 9900 Section C.7 (Ref RIS 2005-020).
- Process was reviewed by NRC under a PI&R Sample Inspection (Ref NMP IR 2006-005).

Typical Process



“Modified” Process



Qualifiability Determination Process

- All Issues are evaluated/resolved within CAP.
- NOT used to avoid CAP entry.
- Defines when documentation issues can be resolved as part of the existing corrective actions.
- Issues which are “Qualifiable” are by definition bounded by the OD(s) and resolved as part of EQCAP Project.
- New CRs are initiated for issues which are not “Qualifiable” or outside scope of EQCAP.

Qualifiability Determination Process

- QD Process is only applicable when:
 - There is a reasonable expectation that the effected equipment can be shown to be “Qualifiable”, or
 - There is a reasonable expectation that the effected equipment can be removed from the scope of the EQ Program, and
 - The corrective actions are within the scope of the EQCAP Recovery Project
- Not applicable to issues which obviously affects compliance with 50.49 (an adequate basis for qualification does not exist).

Qualifiability Determination Process

- Used as an interim supplement to the existing EQ documentation until the issue is resolved as part of the EQCAP Project.
- Allows the use of additional documentation, analysis, or calculations that are obtained or developed during the QD process.
- Receives the same level of review as the document being supplemented.

Qualifiability Determination Process

- QD's were used to address qualification gaps:
 - New/Revised Environments
 - Equipment being added to EQML
 - Evaluate the Qualified Life of Components
 - Changes in Op-Times or Safety Function
 - Discrepancies from EQ Walkdowns
 - Evaluation of new/revised test reports
 - Similarity Analysis evaluations
 - Pending EQ Backlog issues
- Not Used to define / implement base EQ Program Requirements.

Definition of Qualifiable

- EQ equipment or components that are subject to a documentation discrepancy may be classified as being “*Qualifiable*” when it can be demonstrated that an adequate basis to establish qualification exists.

Basis for Definition

- Part 9900 of the NRC Inspection Manual provides guidance and criteria for Operability Determination or Functionality Assessment for degraded or non-conforming conditions.
- Section C.7 of Part 9900 provides specific guidance when a licensee identifies a degraded or non-conforming condition that affects compliance with 10CFR50.49 (e.g. a licensee does not have an adequate basis to establish qualification).

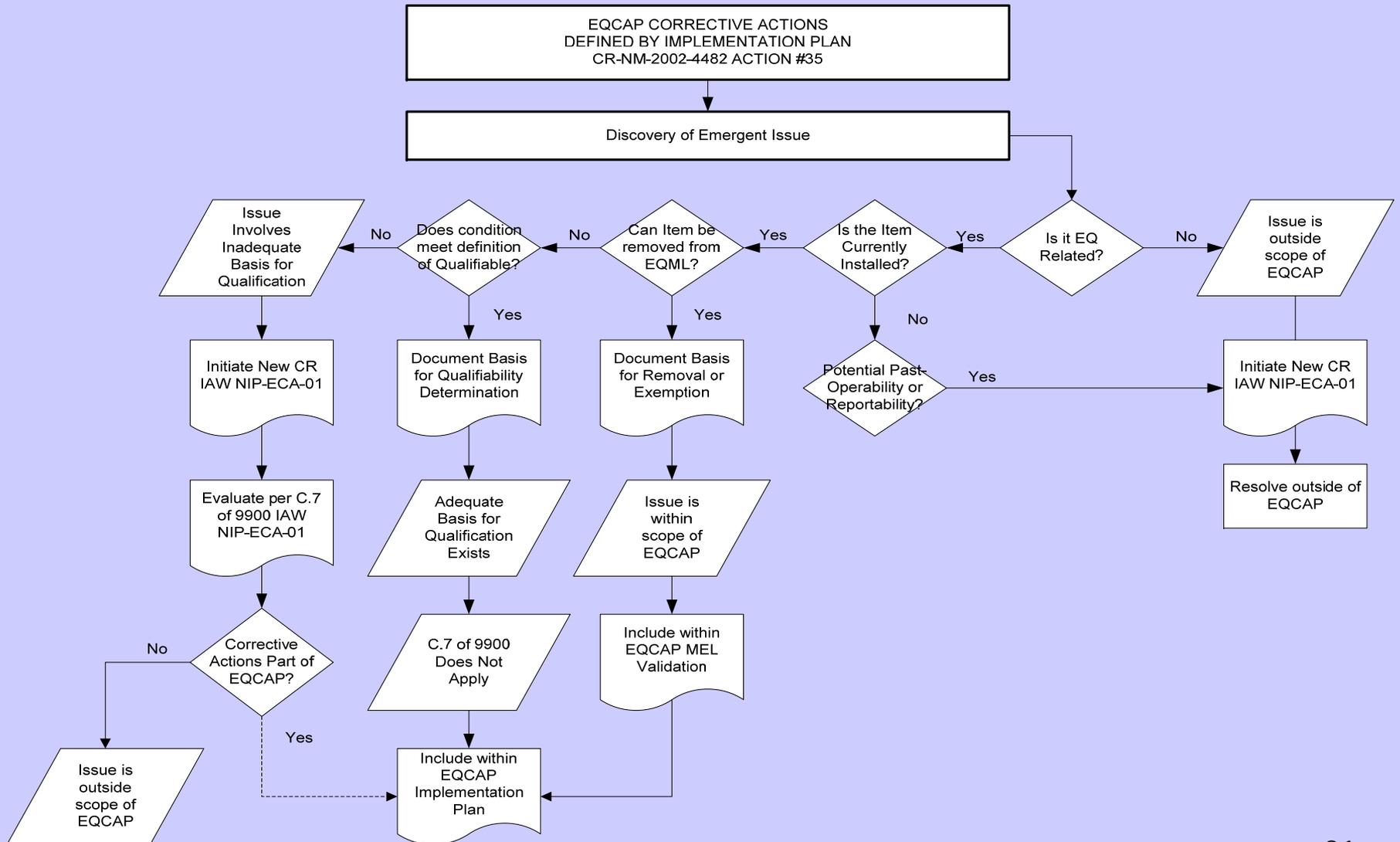
Adequate Basis For Qualification

- An Adequate Basis to Establish Qualification exists when the equipment:
 - Meets the applicable codes & standards, and
 - Is capable of performing all of the required safety function(s) when exposed to harsh design basis accident conditions for the required operating time in its current condition or configuration, and
 - Has not/Will not exceeded it's qualified life.
- Or there is a technical basis to remove the item from the scope of the program.

Adequate Basis For Qualification

- The conclusion that EQ equipment is “*Qualifiable*” means:
 - The condition does not affect the ability to conclude that the equipment can be shown to be qualified
 - Without any additional qualification testing
 - Without any physical change, modification, or maintenance
 - Verified to be a “documentation only” problem
 - Issue is Bounded by EQ “Aggregate Effects” OD
 - Not necessary to enter a new CR
 - The issue is being resolved as part of the EQCAP Project as part of the Corrective Action process

Flowchart of QD Process



Results

- Effective for Major EQ Recovery Efforts that have a high potential to identify multiple EQ documentation non-conformances.
 - Minimized Impact of Emergent Issues on Station
 - Minimized the number of Operability Determinations
 - Minimized the number of Functionality Assessments
 - Entered QD Process >165 times
 - Exited QD Process 11 times to enter CAP

- The QDs and the ODs or FAs for the new CRs have supported the initial conclusions in the EQ “Aggregate Effect” Operability Determination(s).

Benefits

- The EQ ODs Raised Awareness & Urgency.
- QDs Supported Operational Focus.
 - Ensures site focus on new CRs for which an adequate basis for qualification does not exist
 - Eliminated need for processing 150+ CRs on issues which met the definition of “Qualifiable”
 - Minimized the number of open ODs tracked by OPS
- Significantly reduced impact of emergent issues.
- Facilitated use of Traditional PM tools.