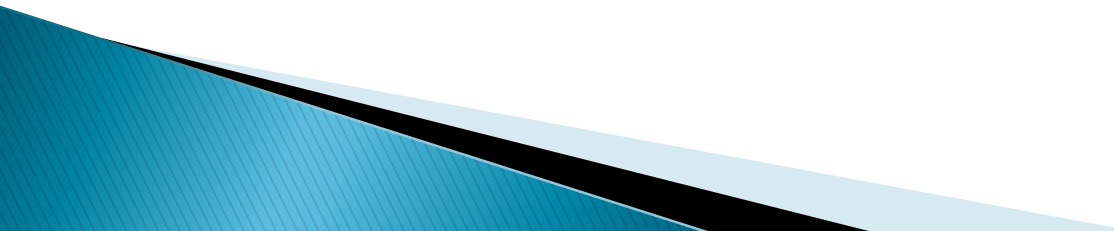


# Purpose of System Engineer Evaluation

- ▶ The purpose of the System Engineer evaluation is to ensure that the system can support the STI change in terms of its performance and experience.

# SFCP System Engineer Evaluation

System Engineer evaluation of a surveillance interval change covers:

- Current performance
  - Commitment review
  - Defense in depth review
  - OE review
  - Performance monitoring
- 

# Commitment review

- ▶ Use commitment tracking tools to search for commitments
- ▶ Evaluate current basis for frequency
  - ▶ TS basis section
  - ▶ code, standard or commitment
  - ▶ vendor manual
- ▶ Is the frequency based on a commitment?
  - ▶ ex. In response to xx, we agreed to test yy monthly to detect zz failure mechanism
- ▶ If based on a commitment ,can we change it?
- ▶ If no, can't change the frequency



# Commitments

- ▶ Commitments can be direct–
  - UFSAR commits to a RG that has test frequency in it (ex. RG 1.108 for EDGs)
  - Response to GL or in a LAR

Can be indirect–

by a reference to a document

by an internal response to a vendor document such a W technical letter or WCAP

# Current performance

- ▶ Check ST history for failures (6yrs online test, 10yrs outage test)
- ▶ Are test failures from what the test is looking for or other
  - ▶ Is it a fail to start or test box failure?
- ▶ Check PM history
  - ▶ is the test part of the PM strategy?
  - ▶ is the test doing equipment conditioning?
    - ▶ Lubrication, contact wiping
- ▶ Check CM history
  - ▶ are failures from what the test is looking for or other?

# Current performance continued

- ▶ Check Maintenance rule status
- ▶ is it a(1)?
- ▶ If it's a(1) then system performance may not support the change

# OE

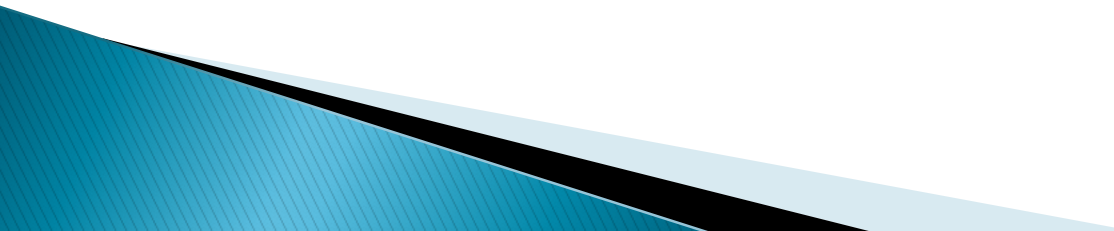
- ▶ Look at site OE
- ▶ Look at industry OE
- ▶ INPO OPEX
- ▶ Are there failures that we may experience that the test would detect?
- ▶ Are there failures from less frequently test equipment?
- ▶ Look at vendor information
- ▶ SILs, TIL, WCAPs
- ▶ part 21
- ▶

# Defense in depth

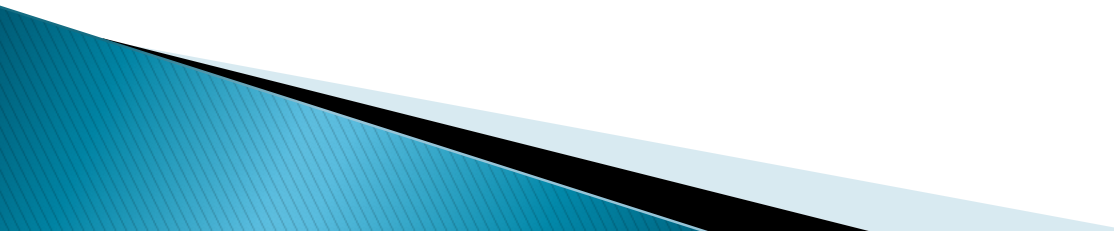
- ▶ Are we affecting the defense in depth of the system or function?



# Qualitative issues

- ▶ If instrumentation, consider setpoint drift.
  - ▶ Are there time based failure mechanisms that could become an issue if testing is extended
  - ▶ Is the test a conditioning exercise
  - ▶ Is there alternate testing
  - ▶ Is a harsh environment a consideration
- 

# Phased implementation

- ▶ Phased implementation is using one or more intermediate frequencies before the final extended frequency is reached.
  - ▶ Consider when the change in frequency is significant (ex. Monthly to Annual)
  - ▶ Consider when there is not data on operation with a long test interval
  - ▶ Perform several successful tests at the intermediate frequency before moving on.
- 

# Monitoring

- ▶ Monitoring criteria need to be set to ensure performance of the equipment remains adequate
  - ▶ If the Maintenance Rule Performance criteria adequately look for the function being tested, they can be used.
  - ▶ Otherwise develop a monitoring criteria that will show is performance is being maintained
- 