U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Assessment and Enforcement Program Development

December 18, 2007

Workshop Objectives

- Provide enforcement examples
- Introduce minor threshold and examples
- Introduce identification categories for findings

Workshop Series Accomplishments

- Positive interactions with stakeholders on inspection, assessment, and enforcement program inter-relationships.
- General agreement on the significance of 08/30 examples.
- Agreement on the outputs of the construction response table and the inputs (except for cross-cutting issues).
- Introduced CAP effectiveness approach and enforcement examples.

Future Workshop Topics

• Follow-up discussion on CAP review	January 31, 2008
• Criteria/ timing/documentation	
• Discuss minor/threshold/examples	
• CRT inputs/ thresholds/outputs	Early March 2008
• Length of time inputs in CRT	
• Substantive cross-cutting issues	Late March 2008
• Cross-cutting aspects, themes, and areas	
• Treatment of licensee-identified issues	Late April 2008
• Allegations interface	

Enforcement Example #1

- The results of a DG preoperational test was approved by the licensee even though test results indicated that one of the test criteria had not been met. Specifically the test acceptance criteria specified that the DG be run at a load of 3850 to 3900 KW for 2 hours and that data be recorded at 15 minute intervals. Neither of the test requirements were met. Nonetheless, the test Engineer, QA Manager, etc. signed and accepted the test results as being satisfactory.

Enforcement Example #2

- An NRC reactive inspection was conducted to conduct an as-built inspection of installed equipment to verify conformance with approved drawings and specifications. The results of the inspection indicated a breakdown in the implementation of the QA program. There were numerous examples of installation of inadequate safety-related electrical components which resulted in suspension of certain safety-related construction activity. Contributing causes were failure to follow procedures, drawings, and specifications; first line supervisors and field engineers failure to identify and correct unacceptable work; and construction management failure to call for timely QC inspections. In addition, it was discovered that QC Supervisors instructed their inspectors to suspend an inspection if an excessive number of deficiencies were observed.

Enforcement Example #3

- An NRC investigation was initiated as a result of allegations made by several QC inspectors who were employed by the principal contractor. The inspection concluded that there were widespread breakdowns in the quality control of installed electrical equipment. Examples included pipe hangers that were deliberately bent to fit around installed safety-related conduit, cables not properly attached to their support hangers, cables not installed in conduits, and coiled cables not properly supported in accordance with approved procedures.

Enforcement Example #4

- The NRC identified numerous examples of field weld repairs conducted in proximity of the reactor pressure vessel and steam generator nozzles. A review of the weld repair records revealed that the ASME Code, Section III requirements may not have been met, in that there were no recorded evidence that the code criteria for the control of the depth and area of each base metal repair cavity had been implemented and no post weld heat treatment of the low-alloy steel base material had been performed. Further NRC review of the referenced weld repair procedures could not confirm adequate controls for the conduct of the nozzle (safe-end) weld repairs. Additionally, there was no evidence that repair cavity measurements had been taken to check and verify Code compliance.

Enforcement Example #5

- Several deficiencies were discovered associated with weld repairs to the torus modifications. Examples were associated with the long-term torus integrity program and involved failure to evaluate or incorporate numerous deficient welds into the deficiency fix requests sketches; failure to perform numerous repairs on the correct welds; omission of numerous welds requiring repair from work orders, and failure of QC to independently verify the correct location of numerous weld repairs.

Enforcement Example #6

- Six bends in stainless steel piping for each of four loops of the hydraulic supply to Reactor Recirculation System (RRC) were made using an unapproved and unqualified pipe bender in accordance with an unapproved and unqualified pipe bending procedure.

Enforcement Example #7

- Design control measures were inadequate to assure that as-built configuration of the 480 Volt Shutdown Power System was correctly translated into as-built drawings. The normal and alternate power feeders for the diesel auxiliary boards, a load off the shutdown boards, had been deleted from the drawings and were shown as spares when in fact the feeder cables were either still installed or a temporary Modification was in place.

Conclusions and Recommendations

- Workshop Summary
- Next steps
- Public Meeting Schedule:

  January 31, 2008

  Early March 2008