



Prairie Island actions to improve:

- Exam development, review and approval,
- Candidate pass rates

1

Our Challenge:

- Determine the cause(s) of our past failures
- Incorporate effective corrective actions
- Be **experts** in the exam process
- Develop a **top notch, high quality** exam in 2001
 - No NRC comments
 - 100% pass rate

2

Root Cause Process

- Led by industry peer
 - ◆ Barrier and Cause and Effect Analysis
 - ◆ Interviews
- ◆ Focused on the exam development, review and validation processes
- Candidate preparation will be evaluated in November 2000
 - Comprehensive self-assessment
 - Team will include several industry peers

3

Root Cause -- Change Management

Condition:

- Change occurred without sufficient control
 - Many exam items changing late in the process

Corrective Action

- Focus is on the students
- Effective validation
 - Draft exam prior to outline submittal
 - Validate using good tools & enough resources
 - Industry peer review
 - Pre-review exam with the NRC
 - **NEVER USE AN EXAM ITEM THAT HAS NOT BEEN FULLY VALIDATED**

4

Student Focus

- First - we share the NRC's commitment to protect the health and safety of the public
 - A cornerstone of that commitment is effective reactor operator training and licensing
- Within that context, we believe that our primary customer for NRC exams are the candidates
 - They have worked long and hard to prepare themselves for a licensing exam
 - They deserve a professionally administered, high quality, and operationally valid exam

5

Root Cause -- Resource Management

Condition:

- Insufficient manpower to support the exam development processes
 - Too few instructors in operations training
 - Ineffective barriers to compensate for the loss of experienced instructors

Corrective Action

- Updated the human asset plan
 - Added four ops instructor positions
 - Two hired
 - Two offers made
- Reorganized ops training
 - Two additional supervisors
- Manager oversight of the process
 - Will hold station accountable

6

Root Cause -- Work Organization and Planning

Condition:

- Insufficient time allowed for task
- Insufficient number of trained or experienced workers assigned to task
- Duties not well distributed among personnel

Corrective Actions:

- NMC BEST-practice project plan
 - **WE will be the expert**
 - Promotes being over prepared
 - 3,000 person hours
- Project manager with no concurrent duties
- Exam developer with no concurrent duties
 - Contract support
- Instructor training and mentoring

7

Improving Candidate Pass Rates

- Test to the right level during the entire program
 - Exam bank upgrade project
- Write the audit exam using the same process as the NRC exam
 - Same degree of difficulty
- Follow the station standards
 - 85% quiz average
 - 85% audit exam score

8

Summary

Condition:		Corrective Action
■ Ineffective Change Management	→	■ Focus on students and effective validation
■ Resource Management	→	■ Add staff, add supervisors, management oversight
■ Work Organization and Planning	→	■ Project Plan, Project Manager, Exam Developer, Training and Mentoring



Confusion Factors for Developers

- 1021 vague on Admin JPMs.(NEI)
- Inconsistencies between Lead examiner and NRC reviewers. last 2 exams.
- At times we cannot reach examiner for weeks during critical work, no feedback.
- Interactions between examiners, facility and region related to May 2000 exam.
- Is a quality problem anything that results in a change, ie: enhancement?