K3 C-4 DRP

4-23-04

COPY

Event Investigation Report

Complete the evaluation of the human performance event using the following, as applicable:

1. Date and Time of the event: **4/23/04 ~1430 (between 1400 and 1500 per Tom Jessessky the SRO who directed the breaker operation).**
2. Personnel Involved: [ ] (Mtn M/E), [ ] (Mtn M/E), [ ] (Peaker), and [ ] (Ops – SRO). Ex 6
3. Department/Group Involved: **Maintenance – Electrical & Operations**
4. Program/Work Process/Activity Involved: **Work was in progress IAW IWP 01-128*E-FN MCC 1B42 Bus Bracing Installation – CR/PAB Fan Realignment, paragraph/step 3.6.7, Breaker manipulation.**
5. Unit: **PBNP Unit 1**
6. Mode/Power Level: **Mode 6 Refueling Shutdown**
7. Describe the inappropriate action and conditions that led up to the event. Consider the following in this description:

   a. Was a conscious decision made or not made by the individual(s) involved?

   Although Error Reduction Tools were used appropriately throughout performance of the IWP, at the moment of the event [ ] did not use STAR. [ ] did verify they were operating the correct breaker. [ ] lost focus on the breaker manipulation while communicating on the telephone and did not re-verify he was on the correct breaker. [ ] peer checked initially, but "moved out of the way of the phone cord" and did not watch the breaker manipulation. A note in the procedure warned of loss of status light indication directly before the step for the breaker manipulation. [ ] failed to use STAR and review action taken for expected results. [ ] failed to "review" based on previous step performance. In previous steps, the Ops SRO verified loss of indication. [ ] felt nothing was wrong and went on since he didn't hear anything from [ ] Ex 6 Ex 6 Ex 6 Ex 6

   b. Was the event a result of rule non-compliance, misapplication of a rule, or applying an incorrect rule?

   The event was rule non-compliance since the IWP step was not performed as written.

   c. Was the individual fully trained/knowledgeable of the task?

   Yes

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6
FOIA/PA-2004-0282

d. Did the individual make an error in judgment?

Yes, [ ] failed to use STAR after being distracted by phone communications with OPS. He also did not perform the "review" step of STAR after manipulating the wrong breaker. Ex 6

e. Was an intended action not performed due to shortcuts taken or inadequate tracking?

No.

f. Was the individual overconfident or was their mental/physical state a factor?

[ ] was tired due to the long outage hours worked, but he does not believe this contributed to the error. Ex 6

g. Did the supervisor not identify error likely situations and error precursors?

The Supervisor DID identify error likely situations in the brief and peer check was discussed and used during this situation. The "Are You Ready Checklist" and "Error Precursors" were covered during the pre-job brief and again in the field as required by the Electrical GS.

h. Was there a process or organizational failure that led to this error (see table on next page)?

No.

8. Summarize the inappropriate action in one sentence as follows:

(WHO) (WHAT) (THE REQUIREMENT)

(Where the Requirement is found) (WHY if known)

[ ] opened breaker 2B52-3212M – "A" SFP Cooling Pump instead of breaker 2B52-3211M – W21B Aux Bldg Fan as found in IWP 01-128*E-FN step 3.6.11. Ex 6

9. Based on what you have learned, describe the error likely situations that were present at the time of the event.

   a. What Error Reduction Tools were not used or not used effectively? What Error Reduction Tools could have been used to prevent this event? Clearly state which is the one tool, which if used, would have had the greatest chance of being successful.

   STAR was not used appropriately. If [ ] would have "stopped" after being distracted the event would have been prevented. Also if [ ] had "reviewed", the consequences of the event would have been less severe. Ex 6 Ex 6

b. Are these Error Reduction Tools going to provide the barriers to prevent recurrence? Where else should these barriers be applied?
Yes, and they shall be applied at all times

Human Performance Failure Modes (From the NMC Trend Code Manual)

- Inattention
- **Distracted & Interrupted**
- **Time & Schedule Pressure**
- Spatial Disorientation
- Inadequate Motivation
- Unfamiliar or Infrequent Task
- Inadequate Knowledge of Standards
- Inadequate Knowledge of Fundamentals
- **Inadequate Verification**
- Inadequate Tracking (Place Keeping)
- Habit/Reflex
- Imprecise Communication
- Work Around
- Bored
- Multi-Tasking
- Fear of Failure
- Mindset/Preconceived Idea
- Shortcuts Taken
- Misdiagnosis
- Flawed Analytical Process or Model
- Over Confident
- Cognitive Overload
- **Tired & Fatigued**
- Lapse of Memory
- Wrong Assumptions
- Tunnel Vision

Process Failure Modes (From the NMC Trend Code Manual)

- **Critical Actions Not Verified**
- Excessive Verifications
- No Process Monitoring
- Only Monitoring Problems
- Person Specified Not Able to Perform Task.
- More Than One Person Specified to Perform Task
- No One Specified to Perform Task
- No Acceptance Criteria

Organizational Failure Modes (From the NMC Trend Code Manual)

- Inadequate Prioritization
- Inadequate Trust
- Inadequate Self Assessment
- Inadequate Planning
- Inadequate Teamwork
- Inadequate Program Management
- Inadequate Span of Control
- Inadequate Communication among Organizations
- Inadequate Communication within an Organization
- Lack of Commitment
- Inadequate Knowledge
- Inadequate Emerging Issues Management
- Insufficient Staffing
- Inadequate Levels in Organization