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**ComEd**

January 9, 1998

JMHLTR: #98-0005


U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555  
Attention: Document Control Desk

**SUBJECT: NRC INITIAL OPERATOR LICENSING  
EXAMINATION REPORTS  
50-237/97304(OL); 249/97304(OL)  
NRC Docket Nos. 50237 and 50249**

The subject examination report covering the initial operator licensing examinations completed on August 6, 1997 at Dresden Station raised several issues related to the fidelity of the simulator. Actions addressing the simulator issues are attached. Additionally, I have assigned the Operations Training Department the responsibility to track simulator deficiency issues. This has been done to increase station management's awareness of issues affecting simulator operations so that additional resources can be devoted when warranted.

If you have questions regarding these issues, please contact Tim Eason, Operations Training Superintendent at (815) 942-2920, ext. 2110.

Sincerely,

  
J. M. Heffley  
Site Vice President  
Dresden Station

Att. Attachment A Operator License Performance Report

cc. A. Bill Beach, Regional Administrator, Region III  
M. Ring, Branch Chief, DRP, Region III  
J. F. Stang, Project Manager, NRR (Unit 2/3)  
C. L. Vanderniet, Senior Resident Inspector, Dresden  
J. A. Grobe, Director of Reactor Safety, Region III  
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## ATTACHMENT A

The following ten observations were noted in the November 21, 1997, NRC Initial Operator Licensing Examination Report 50-237/97304(OL); 249/97304(OL). The observations and resolutions are provided below.

### Observation 1

Rod Worth Minimizer (RWM) hardware problem. RWM became inoperable after the simulator was placed in RUN.

#### Resolution

The problem was caused by a bad disk drive on the computer that drives the RWM portion of the simulator. The problem was fixed within an hour.

### Observation 2

When RPMG cooling water support system failed, high temperature alarms annunciated for motor or generator windings (902-4 E-4), but recorder (TR 2-262-19A and B) points 1 and 2 did not change.

#### Resolution

This component failure is not currently modeled in the simulator. The simulator operator attempted to model the requested failure with a local software change known as a MODVAR file. This particular file does not have the ability to include the recorder functions.

Departmental policy has been established to prevent instructors from using MODVAR files during "Evaluation" type scenarios, due to the possibility that MODVARs may not fully "Integrate" all the "Expected" actions.

### Observation 3

Main Turbine Control Valve #1 jumped in plant but not in simulator.

## ATTACHMENT A

### **Resolution**

A Temporary System Alteration (Temp Alt) (TA) # II-36-96, was written on 12/23/96 to cover a problem with the #1 TCV.

The policy at the Dresden Station is to not install Temp Alts on the simulator unless specifically requested or unless the installation affects plant operations modeled by the simulator.

This particular Temp Alt is only observed in the simulator during a Job Performance Measure that uses procedure DOS 0500-09, "Turbine Control Valve Fast Closure (Load Reject) Scram Circuit Functional Test". The Temp Alt was proceduralized due to the length of time it has been installed pending resolution of the problem with the TCV. The current plans are to resolve the TCV problem during the upcoming refuel outage in March 1998. This Temp Alt will not be modeled in the simulator in accordance with existing practice.

### **Observation 4**

Main Turbine condenser vacuum decreases only after Main Steam Isolation Valves (MSIVs) closed. Upon loss of Main Turbine Condenser Steam Jet Air Condensers (SJAEs), the condenser vacuum remained normal for the throughout the scenario (approximately 30 minutes).

### **Resolution**

The System Engineers have stated there should be some loss of vacuum from this event but do not have specific data to formulate a "rate of vacuum loss" model. Operation crews believe that during an actual loss of SJAe event, vacuum remains steady for 15-20 minutes.

The simulator support staff is waiting for additional data to support any changes to current simulator modeling related to this event. There is an open Simulator Work Request (SWR) on this issue.

## ATTACHMENT A

### Observation 5

Reactor Recirc Pump 2A(2B) #1 seal leakoff alarm. Did not receive Simulator Main Control Room Panel alarm 902-4 F-3 (F-7), 2A (2B) Recirc PP #2 SEAL LEAKOFF, when the setpoint of 0.25 gpm was exceeded.

#### Resolution

The simulator responded in the same manner as plant response. The alarm in question only occurs if the #2 seal fails.

Originally there was an alarm received if the #1 seal failed. A modification several years ago removed this annunciator and now only a computer alarm is received upon failure of the #1 seal (which did occur). Failure of the #2 seal results in an annunciator alarm (902-4 F-3/F-7).

### Observation 6

No accumulator alarms received after losing CRD for 20 minutes.

#### Resolution

No alarms were received after loss of both CRD pumps. This is not unusual if the system has little leakage. This has been the case on Unit 2, following extensive CRD maintenance during previous outages.

The System Engineer was contacted concerning this issue and stated that during outages greater than 48 hours, DOS 0300-03, "Cold Shutdown CRD Accumulator Leak Check" is performed. Performance of this test on Unit 2 resulted in the first accumulator alarm after 90 minutes and the second alarm after 130 minutes. With both pumps off, approximately 30% of the HCU's will NOT alarm after one week.

### Observation 7

AGAF (Average Power Range Monitor (A)PRM gain adjustment factor) process computer alarmed continuously.

## ATTACHMENT A

### **Resolution**

This was an existing problem during the examination period. A temporary fix was available, however, the simulator operator was unfamiliar with this temporary fix and failed to implement it. The software problem was repaired and a log has been developed to ensure that simulator operators are aware of simulator operational problems and resolutions in place to deal with them.

### **Observation 8**

Control Rod K-8 full core display indicating position '4' vice '48'

### **Resolution**

This was a new hardware problem and was corrected.

### **Observation 9**

Did not get nominal motor parameter values listed in procedure, DOP 0202-01, RESTARTING A RRP (Reactor Recirculation Pump)

The "Nominal" values listed in the procedure are for an initial ambient pump start, not a hot pump start. The values in the simulator do not match the nominal values and actual plant data was obtained to update the model. This is being tracked under a simulator work request.

### **Observation 10**

When starting second RRP, the percent speed controller indication would only go to a minimum of '29%' vice the procedure required value of '28%' (DOP 0202-01, RESTARTING A RRP, step G.10).

### **Resolution**

The meters have been recalibrated and the value of 28% can be attained.