



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

MAR - 7 2002

David L. Wilson, Vice President of  
Nuclear Energy  
Nebraska Public Power District  
P.O. Box 98  
Brownville, Nebraska 68321

SUBJECT: COOPER NUCLEAR STATION - REGULATORY CONFERENCE -  
FEBRUARY 1, 2002

Dear Mr. Wilson,

This refers to the meeting conducted in the Region IV Office, Arlington, Texas, on February 1, 2002. As you are aware, the purpose of this meeting was for you to provide information that would assist in our assessment of a potential White finding and the associated apparent violation involving a compromise of the 2000 licensed operator requalification biennial examinations and corrective action deficiencies addressed in NRC Inspection Report 50-298/01-12. The attendance list and the licensee's presentation are enclosed (Enclosures 1 and 2).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

Anthony T. Gody, Chief  
Operations Branch  
Division of Reactor Safety

Docket: 50-298  
License: DPR-46

Enclosures:

1. Attendance List
2. Licensee Presentation

cc w/enclosure:

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Senior Project Engineer, DRP/C (**DPL**)

Staff Chief, DRP/TSS (**PHH**)

RITS Coordinator (**NBH**)

**RidsNrrDipmLipb**

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**ENCLOSURE 1**

**MEETING: COOOPER NUCLEAR STATION**

**SUBJECT: REGULATORY CONFERENCE**

**DATE: FEBRUARY 1, 2002**

<b>ATTENDANCE LIST</b>		
<b>NAME</b>	<b>ORGANIZATION</b>	<b>POSITION/TITLE</b>
William Macecevic	NPPD CNS	Operations Manager
David Linnen	NPPD CNS	Senior Training Manager
Dave Wilson	NPPD CNS	Vice President - Nuclear
Jim Hutton	NPPD CNS	Plant Manager
John Christensen	NPPD CNS	Assistant Training Manager
David Kunsemiller	NPPD CNS	Risk & Reg Affairs Manager
Guy Horn	NPPD CNS	Vice President - Energy
Arthur T. Howell	NRC	Director, Division of Reactor Safety
Kriss Kennedy	NRC	Chief, Project Branch C
Anthony T. Gody	NRC	Chief, Operations Branch
Ryan Lantz	NRC	Senior EP Inspector
Pat Gwynn	NRC	Deputy Regional Administrator
Chris Nolan	NRC	Enforcement Specialist
Russell Wise	NRC	Enforcement Specialist
Alfred Sanchez	NRC	Operations Engineer
Karla Smith	NRC	Regional Counsel
Tom Mckernon	NRC	Senior Operations Engineer
Ronald Stoddard	Lincoln Electric Sys.	Consultant
Douglas Curry	Lincoln Electric Sys.	Counsel
Robert Slough	TXU CPSES	Regulatory Affairs
D. W. McGaughey	TXU CPSES	Operations Training Supervisor

ATTENDANCE LIST		
NAME	ORGANIZATION	POSITION/TITLE
Dave Trimble	NRC	Section Chief, IOHS
Richard Eckenrode	NRC	Sr. Human Factors Specialist
Fred Guenther	NRC	Senior Reactor Engineer, IHOS
Tom Harrison	McGraw-Hill	Journalist
Jean Liaw	Winston and Strom	Paralegal
Dr. William D. Leech	MidAmerican Energy	Nuclear Manager
Mohan Thadani	NRC	
Sue Semerena	Nebraska Health and Human Services System	

ENCLOSURE 2

## CNS PRESENTATION

# Safety Conclusions

Re-grade results for 5 NRC identified question sets and 4 CNS identified question sets

	ORIGINAL SCORE	NRC QUESTIONS REMOVED	NRC AND CNS QUESTIONS REMOVED
Test 1		GRADE	GRADE
SRO	91.40	90.9	90.9
SRO	82.80	84.8	84.8
SRO	91.40	90.9	90.9
RO	88.50	88.2	88.2
RO	82.80	82.3	82.3
Test 2			
SRO	80.00	81.8	81.8
SRO	88.60	87.8	87.8
SRO	88.60	87.8	87.8
SRO	91.40	90.9	90.9
SRO	91.40	90.9	90.9
SRO	82.80	81.8	81.8
SRO	94.30	93.9	93.9
RO	94.30	93.9	93.9
RO	85.70	84.8	84.8
RO	88.60	87.8	87.8
Test 3			
SRO	85.70	85.7	85.3
SRO	85.70	85.7	85.3
RO	77.10	77.1	77.1
RO	82.80	80.0	80.0
RO	80.00	82.8	82.8
Test 4			
SRO	88.60	90.6	90.3
SRO	91.40	90.6	90.3
SRO	85.70	84.4	83.9
RO	85.70	84.4	84.4
RO	71.40	68.7	68.7
Test 5			
SRO	71.40	72.7	72.7
SRO	80.00	81.8	81.8
SRO	85.70	84.8	84.8
SRO	88.60	87.8	87.8
RO	91.40	91.4	91.4
RO	82.90	82.9	82.9

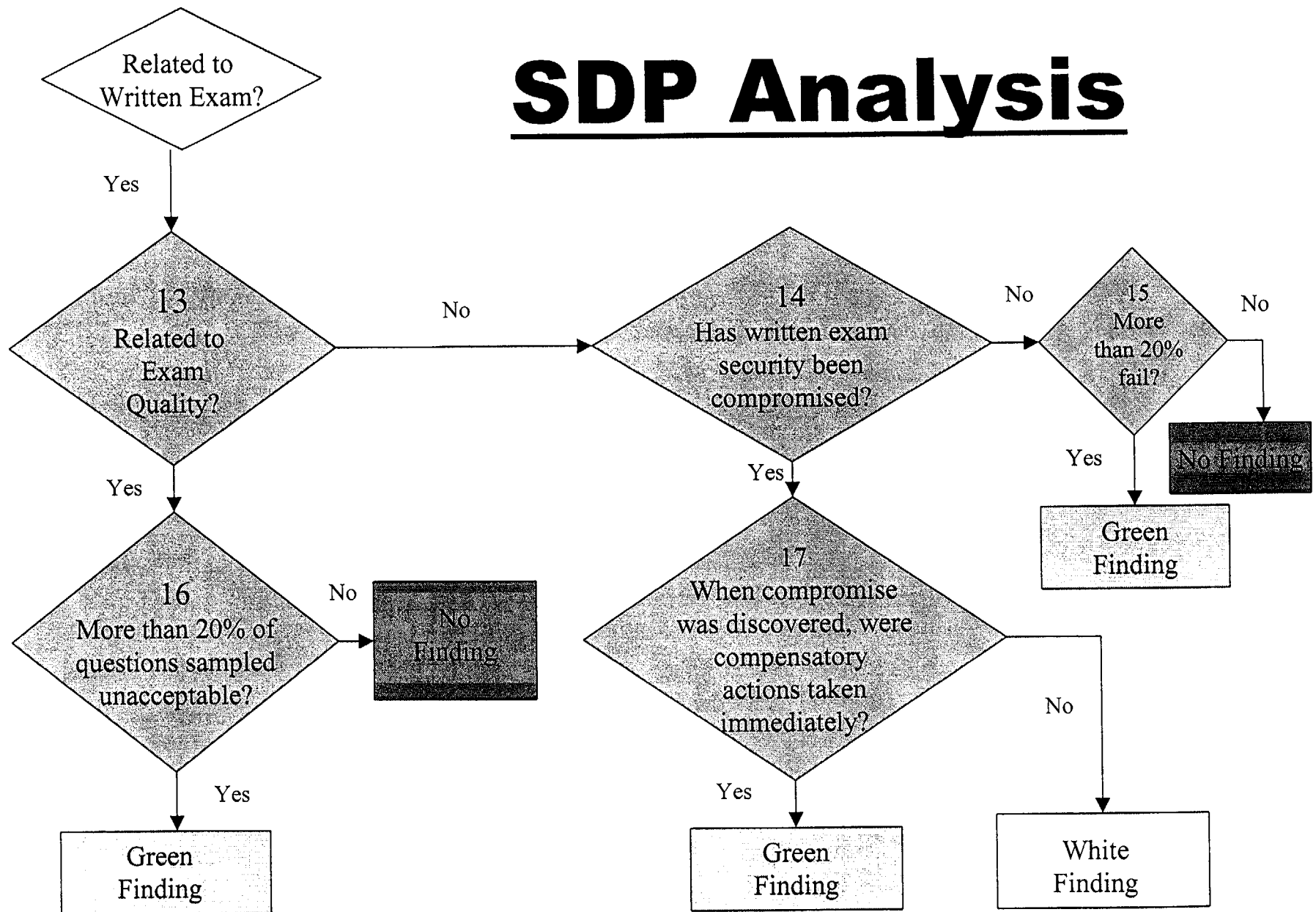


# SDP Review

## OPENBOOK AVERAGES

OPERATOR	98-14	99-01	99-02	99-04	99-05	00-09	PAST AVG.	00-20
<b>TEST 1</b>								
SRO	100.00	80.00	73.30	93.30	100.00	88.00	89.10	91.40
SRO	100.00	93.30	86.70	93.30	86.70	88.00	91.33	82.80
SRO	80.00	86.70	86.70	100.00	86.70	92.00	88.68	91.40
RO	93.30	86.70	80.00	86.70	80.00	72.00	83.12	88.50
RO	100.00	86.70	80.00	86.70	91.70	88.00	88.85	82.80
<b>TEST 2</b>								
SRO	100.00	93.30	73.30	86.70	93.30	72.00	86.43	80.00
SRO	100.00	80.00	93.30	66.60	93.30	88.00	86.87	88.60
SRO	66.70	80.00	100.00	86.70	73.30	88.00	82.45	88.60
SRO	93.30	86.70	93.30	93.30	93.30	84.00	90.65	91.40
SRO	100.00	100.00	93.30	93.30	100.00	92.00	96.43	91.40
SRO	93.30	93.30	86.70	100.00	80.00	72.00	87.55	82.80
SRO		100.00	86.70	100.00	86.70	92.00	93.08	94.30
RO	100.00	80.00	86.70	100.00	100.00	92.00	93.12	94.30
RO			100.00	93.30	93.30	96.00	95.65	85.70
RO			86.70	100.00	100.00	92.00	94.68	88.60
<b>TEST 3</b>								
SRO	93.30	86.70	100.00	86.70	80.00	96.00	90.45	85.70
SRO	93.30	66.70	80.00	80.00	86.70	100.00	84.45	85.70
RO			86.70	73.30	100.00	100.00	90.00	77.10
RO	100.00	80.00	93.30	80.00	93.30	80.00	87.77	82.80
RO	86.60	86.70	80.00	80.00	80.00	80.00	82.22	80.00
<b>TEST 4</b>								
SRO		93.30	86.70	93.30	86.70	92.00	90.40	88.60
SRO	96.70	86.70	100.00	100.00	73.30	92.00	91.45	91.40
SRO	93.30	86.70	100.00	100.00	80.00	88.00	91.33	85.70
RO	86.70	66.70	93.30	100.00	86.70	92.00	87.57	85.70
RO		80.00	80.00	80.00	100.00	80.00	84.00	71.40
<b>TEST 5</b>								
SRO	86.70	86.70	93.30	80.00	80.00	88.00	85.78	71.40
SRO	80.00	93.30	93.30	86.70	80.00	80.00	85.55	80.00
SRO	86.70	100.00	93.30	100.00	93.30	96.00	94.88	85.70
SRO	86.70	100.00	80.00	93.30	86.70	80.00	87.78	88.60
RO	86.70	86.70	93.30	93.30	93.30	84.00	89.55	91.40
RO		80.00	80.00	93.30	86.70	76.00	83.20	82.90
<b>OTHER</b>								
SRO	86.70	100.00	100.00	93.30	80.00	100.00	93.33	97.10
SRO	86.60	80.00	86.70	100.00	93.30	92.00	89.77	88.60
SRO	83.30	86.70	86.70	100.00	86.70	80.00	87.23	91.40
SRO	86.70	80.00	86.70	100.00	80.00	80.00	85.57	85.70
SRO	100.00	100.00	80.00	100.00	80.00	92.00	92.00	85.70
RO	93.30	73.30	80.00	80.00	66.47	84.00	79.51	80.00

# SDP Analysis



# Timeline

6/20/00-7/27/00	Exams Administered
<b>8/10/00</b>	<b>PIR 4-10812 Written</b>
<b>8/11/00</b>	<b>Peer Evaluation Performed</b>
<b>12/5/00</b>	<b>PIR 4-10812 closed</b>
7/10/01	Notification 10096568 written
<b>7/13/01</b>	<b>Industry Expert Evaluation Begins</b>
<b>7/14/01</b>	<b>1<sup>st</sup> CNS Evaluation Begins</b>
<b>7/24/01</b>	<b>Industry Expert evaluation issued</b>
<b>7/26/01</b>	<b>1<sup>st</sup> CNS Position paper issued</b>
<b>9/5/01</b>	<b>1<sup>st</sup> CNS Evaluation issued</b>
10/15/01	NRC Inspection begins
<b>10/18/01</b>	<b>2<sup>nd</sup> CNS position paper issued (NRC request)</b>
<b>11/08/01</b>	<b>2<sup>nd</sup> detailed CNS evaluation issued (NRC request)</b>
<b>12/3/01</b>	<b>NRC Exit</b>
1/2/02	NRC IR 50-298/0112 issued
1/4/02	SCR 2001-1495 issued

# **Nebraska Public Power District**

## **Operator Requalification Exam Regulatory Conference**

February 1, 2002

# Agenda

- |                                  |                |
|----------------------------------|----------------|
| • Introduction                   | D. Wilson      |
| • Summary of Issue               | J. Christensen |
| • Safety Conclusions             | J. Christensen |
| • SDP Review                     | D. Kunsemiller |
| • Root Cause/Extent of Condition | J. Christensen |
| • Corrective Actions             | J. Christensen |
| • Closing Summary                | D. Wilson      |

# **Nebraska Public Power District**

## **Operator Requalification Exam Regulatory Conference**

February 1, 2002

# Agenda

- Introduction D. Wilson
- Summary of Issue J. Christensen
- Safety Conclusions J. Christensen
- SDP Review D. Kunsemiller
- Root Cause/Extent of Condition J. Christensen
- Corrective Actions J. Christensen
- Closing Summary D. Wilson

# Introduction

- Administration of 2000 requalification exams did not meet our expectations and standards.
- Purpose of this Regulatory Conference
  - Summarize the exam process.
  - Discuss determination of safety significance.
  - Summarize root cause analysis and extent of condition review.
  - Present corrective actions.
- Condition has been determined to have no or very low safety significance.
- Corrective actions have precluded recurrence and enhanced standards.



# Summary of Issue

John Christensen

# Summary of Issue

## Regulatory Compliance

- 10CFR55.49 states, *“The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or but for detection, would have affected the equitable and consistent administration of the test or examination.”*
- CNS acknowledges that it did not meet this requirement because exam validation practices could have affected the equitable and consistent administration of the examination.

# Overview of Exam Process

- Seven 35 question exams developed using same objectives for each exam.
- Crews conducted validation by taking half of the next week's 35 question exam.
- Crews took exam and questions evaluated for quality.
- Questions changed when appropriate.
- Crews given their exams next day.

# Exam Process Issues

- Objectives should not have been the same for successive exams.
- Exam validated by a crew prior to taking own exam.
- Validation of exam occurred 24 hours prior to taking actual exam.
- Not all individuals exposed to same questions during validation.
- Not all individuals conducted validation.

# Safety Conclusions

John Christensen

# Safety Conclusions

- Issue first identified in July/August 2000.
  - Cooper evaluation placed in corrective action process.
  - PEER Review confirmed conclusions.
- Issue raised again in July 2001.
  - Independent Assessment
  - Root Cause completed
  - Test Adequacy Evaluation
  - Additional Test Evaluation
  - SCR Root Cause Issued

# Safety Conclusions

- Results of 2000 Evaluation
  - No questions duplicated - either new or significantly modified.
  - PEER utility review confirmed that questions were adequate and the exam acceptable.
  - Exam was valid

# Safety Conclusions

- Results of 2001 Evaluations
  - Independent Assessment
    - Questions were similar
    - Exam valid
  - Test Adequacy Evaluation
    - Did not meet 10CFR55.49
    - Similarity of questions did not impact results
    - Exam valid
  - Additional Test Evaluation
    - More detailed look at question similarity
    - Exam valid
    - Worst-case analysis completed
  - Root Cause
    - Weak procedural guidance for process



# Safety Conclusions

- Analysis of evaluations conclude:
  - Questions were acceptable.
  - Timing of validation and actual test not optimum, but did not invalidate exam results.
  - Inconsistent administration did not invalidate exam results.
  - 2001 evaluations support 2000 evaluation.
- Operators were returned to licensed operator duties with adequate knowledge levels.
  - Confirmed by analysis of prior and subsequent exam results.

# Safety Conclusions

- In hindsight “worst-case” analysis was unreasonable.
  - Looked at all potentially similar questions.
  - Removed these questions from exam (27 total questions).
  - Did not remove if question missed.
  - Determined that three operators potentially affected.
- Evaluated impact of removing questions identified by CNS and NRC that showed advantage may have been gained.
  - No additional operators would fail the exam.

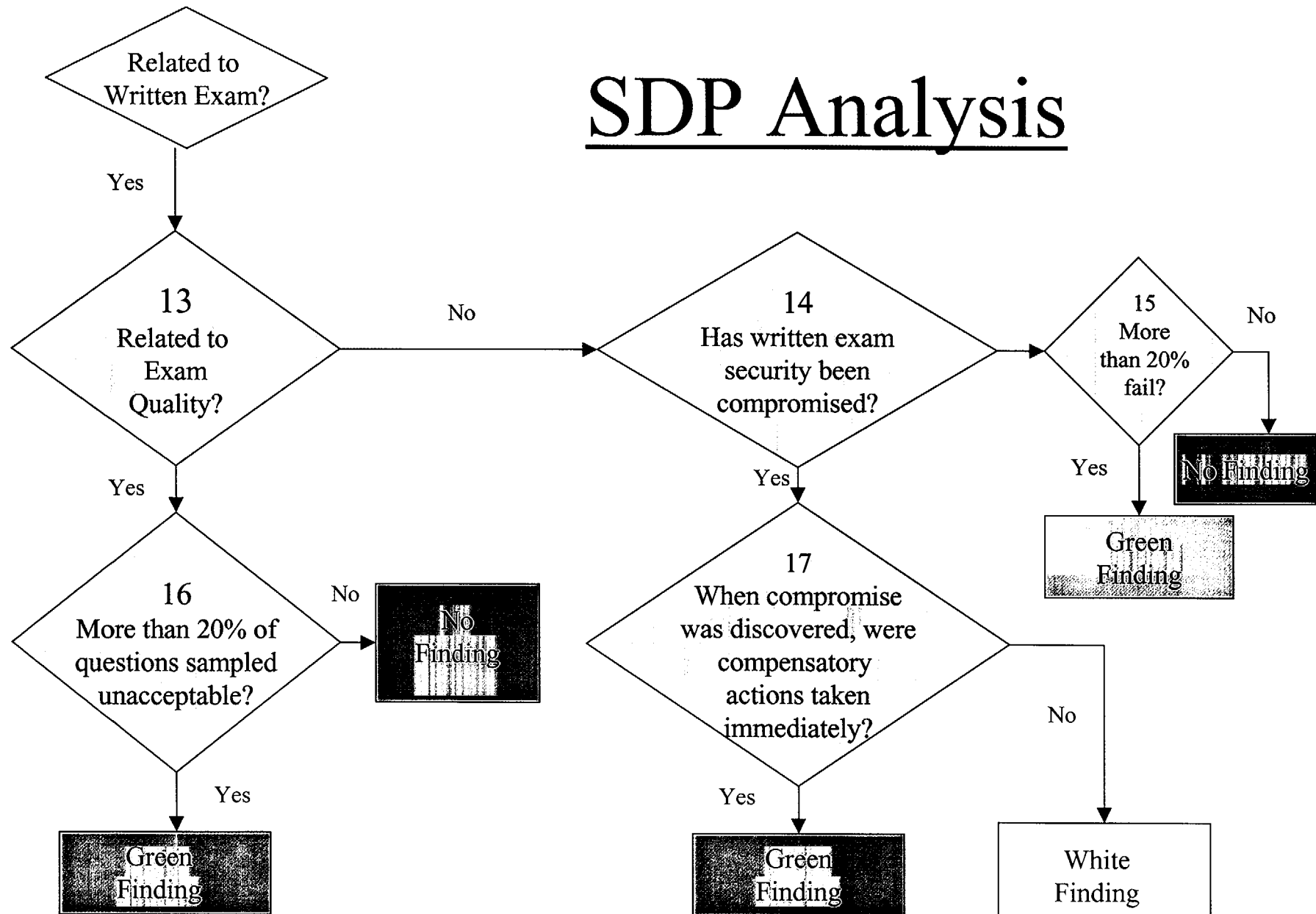
# Safety Conclusions

- All operators qualified when returned to duty.
  - Therefore, no or very low safety significance.
  - Compensatory actions were not required.
- No impact on safe operation of CNS.

# SDP Review

Dave Kunsemiller

# SDP Analysis



February 1, 2002

Cooper Nuclear Station

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## SDP Decision Block # 13

- Could be considered “Quality of Exam” issue.
  - More than 20% of questions deemed unacceptable? - NO
  - Removing those questions challenged by CNS and NRC would impact maximum of 5 questions on one exam
- “No finding”

## SDP Decision Block # 14

- Has the security of the written exam been compromised?
  1. Loss of control of exam material - NO
    - Exam material controls in place
    - No unintended exposure to materials by students
  2. Was exam validity affected? - NO

## SDP Decision Block # 14

- Examinations were valid and reliable based on NUREG 1021.
  - ✓Valid
    - Content validity (appropriate sampling of knowledge).
    - Operational validity (reflect actual operational conditions and decisions).
    - Discrimination validity (use of exam banks and exposure to exam banks coupled with confidence in testing knowledge).
  - ✓Reliable
    - Consistency and repeatability.

*NUREG 1021, Rev. 8, Appx. A*



## SDP Decision Block # 14

- Other standards applied to ensure exams were valid and reliable.
  - Regulatory standard in ES-602 met for novelty of questions.
  - Applied regulatory standards in ES-401 for operator initial license exams to duplication and significantly modified questions.
  - Requal exams developed for CNS 2000 biennial written exam contained no duplicate questions, and all were either new or significantly modified.

## SDP Decision Block # 14

- Evidence of exam security breach - NO
  - No advance knowledge of actual questions.
  - Analysis of results indicates consistency with past operator performance.
- Block # 14 decision should be NO
  - Leads to No Finding via Block #15

## SDP Decision Block # 17

- Were appropriate measures taken immediately? - YES
  - Evaluation concluded that exam was valid.
  - Exam confirmed by PEER review to be valid.
  - Upon reassessment no additional failures.
  - Evaluation confirms that operators returned to shift were qualified.
- No compensatory measures were necessary
- “Green finding”

# SDP Review Conclusions

- SDP process demonstrates that finding has no or very low safety significance.

# Root Cause/Extent of Condition

John Christensen

# Root Cause Analysis

- Two root causes completed
- Summary of root causes
  - Weak procedural guidance.
  - Focus primarily on duplicate questions.

# Extent of Condition Review

- Extent of condition review determined that issues related to this violation were limited to 00-20 written exam only.
  - No other previous requalification exams were conducted using same development and validation processes.
  - No other exam processes affected by this issue.

# Corrective Actions

John Christensen



# Corrective Actions

- Corrective Actions were prompt
  - Completed detailed analysis of impact on exam.
  - Revised CNS exam development and administration processes to provide specific guidance for conducting exam validation.
  - Revised CNS procedures to provide more control of examination material for non-regulatory exams.
  - Completed benchmark of other utilities for question duplication on successive exams for non-regulatory exams.
- New process in use during current requal written examination.

All corrective actions to prevent recurrence  
are complete.

# Closing Summary

Dave Wilson