

MEETING SUMMARY

Licensee: Texas A&M University
Facility: Nuclear Science Center
License No.: R-83
Docket No.: 50-128
Subject: ENFORCEMENT CONFERENCE, NRC INSPECTION REPORT 50-128/88-01

On April 5, 1988, representatives of Texas A&M University and the Texas Engineering Experiment Station Nuclear Science Center (NSC) met with Region IV personnel in Arlington, Texas to discuss the circumstances surrounding five apparent violations and four significant findings identified in NRC Inspection Report 50-128/88-01 and the licensee's position regarding these apparent violations. The NRC concerns regarding the lack of an effective radiation protection program at the NSC were also discussed. The attendance list is attached as Appendix A to this summary.

The licensee addressed the apparent violations and NRC concerns identified in the inspection report. The licensee also discussed their response to Confirmatory Action Letter 88-03 and provided an evaluation report on the possible overexposure of an experimenter at the NSC during the fourth quarter of 1987.

The licensee also made a presentation, at which time they took exception to three apparent violations. Copies of the visual presentation are attached as Appendix B to this summary. The licensee provided the following comments concerning the three violations:

1. Apparent Violation (128/8801-01): The licensee's evaluation report indicated that no regulatory exposure limits were exceeded.
2. Apparent Violation (128/8801-03): The licensee stated that even though the high radiation controls in effect during the experimenter's purported overexposure were not optimal, they met the regulatory requirements. However, the licensee is taking action to review all procedures/experiments for possible upgrading of high radiation area controls.
3. Apparent Violation (128/8801-05): The licensee stated that they believe adequate surveys were performed.

The licensee addressed specific actions to be taken to improve: control over experiments, standard operating procedures, audits, personnel neutron dosimetry, portable gamma and neutron dose rate survey instrumentation, administrative responsibilities, experimenter/health physics interface, and qualifications and training.

The NRC acknowledged the licensee's presentation and stated that the Region IV recommendation concerning enforcement action for the apparent violations would be forwarded to the NRC Office of Enforcement for their concurrence. After review by that office, the licensee will be notified in writing of the NRC's proposed enforcement action.

for Blaine Muncay 4/15/88
H. D. Chaney, Radiation Specialist Date
Facilities Radiological Protection
Section

Attachment:

1. Appendix A - Attendance List
2. Appendix B - TAMU Presentation

APPENDIX A

ATTENDANCE LIST

Attendance at the Texas A&M University - NRC meeting on April 5, 1988, at the NRC Region IV office.

Texas A&M University

Herbert H. Richardson, Deputy Chancellor, Director TEES
John W. Poston, Professor and Interim Department Head of Nuclear Engineering
Feenan D. Jennings, Director, Office of University Research Chair, Reactor
Safety Board
Donald E. Feltz, Director Nuclear Science Center
Jon Reuscher, Director Nuclear Research Reactor Programs
Milton E. McLain, Director, Office of Radiation Safety
John Simek, Assistant Radiation Safety Officer
Chris Meyer, Senior Health Physicist, NSC

NRC Region IV

L. J. Callan, Director, Division of Reactor Projects
Richard L. Bangart, Director, Division of Radiation Safety and Safeguards
Ramon E. Hall, Deputy Director, Division of Radiation Safety and Safeguards
Lawrence A. Yandell, Chief, Radiological Protection and Safeguards Branch
E. J. Holler, Chief, Reactor Projects Section C
Blaine Murray, Chief, Facilities Radiological Protection Section
John Pellet, Chief, Operator Licensing Section
H. L. Scott, Acting Enforcement Officer
H. D. Chaney, Radiation Specialist, Facilities Radiological Protection Section

**PRESENTATION FOR THE U. S. NUCLEAR
REGULATORY COMMISSION, REGION IV**

**TEXAS ENGINEERING EXPERIMENT STATION
TEXAS A&M UNIVERSITY
COLLEGE STATION, TX**

APRIL 5, 1988

RADIATION PROTECTION (RP):

f. PERSONNEL MONITORING AND EXPOSURE CONTROL

(Apparent Violation 128/8801-01)

- * **NRC CONCERN - FAILURE TO RESTRICT PERSONNEL EXPOSURES TO LESS THAN 3 REM PER QUARTER**

- * **TAMU PERCEPTION**

- **REPORT ON SITUATION ISSUED ON MARCH 31, 1988**
- **NOT AN OVER-EXPOSURE**
- **MISINTERPRETATIONS OF LEVELS IN INSPECTION REPORT**
- **STEPS TAKEN TO ENSURE NO ADDITIONAL EXPOSURES**
- **GENERAL AGREEMENT WITH THE ASSESSMENT - LACK OF ALARA REVIEW**

RADIATION PROTECTION (RP):

**f. PERSONNEL MONITORING AND
EXPOSURE CONTROL**

(Apparent Violation 128/8801-02)

*** NRC CONCERN - FAILURE TO
PROVIDE ADEQUATE PERSONNEL
MONITORING DEVICES**

*** TAMU PERCEPTION**

- CORRECT ASSESSMENT**
- OVERSIGHT BY RP STAFF**
- EXACT LOCATION OF HIGHEST
RATE VARIABLE BUT DOSIMETER
LOCATION APPROPRIATE**

RADIATION PROTECTION (RP):

- f. **PERSONNEL MONITORING AND EXPOSURE CONTROL**
(Apparent Violation 128/8801-02)

* **CORRECTIVE ACTIONS**

- EVALUATION OF AVAILABLE NEUTRON MONITORING DEVICES
- WORK WITH DOSIMETRY VENDOR TO DEVELOP APPROPRIATE DEVICE PACKAGE

* **TAMU COMMITMENT**

- ALREADY UNDERWAY
- IMPLEMENT AS SOON AS POSSIBLE

RADIATION PROTECTION (RP):

- f. PERSONNEL MONITORING AND EXPOSURE CONTROL**
(Apparent Violation 128/8801-03)

- * NRC CONCERN - FAILURE TO PROVIDE POSITIVE ACCESS CONTROL OVER HIGH RADIATION AREAS**

- * TAMU PERCEPTION**
 - EXISTING PROCEDURE DESIGNED TO CONTROL ACCESS

 - FENCES ERECTED AROUND THE EXPERIMENT

 - EXPERIMENTER RESPONSIBLE FOR AREA ONCE OPERATIONS BEGIN

 - NOT OPTIMUM CONTROL

 - NOT A VIOLATION

RADIATION PROTECTION (RP):

- f. **PERSONNEL MONITORING AND EXPOSURE CONTROL**
(Apparent Violation 128/8801-03)

* **CORRECTIVE ACTIONS**

- REVIEW AND APPROVAL OF EXPERIMENT BY RSB
- PREVENT ACCESS TO BEAM
- BEAM STOP ALIGNMENT
- REVIEW AND REVISE PROCEDURES FOR ALL SUCH EXPERIMENTS

* **COMMITMENT**

RADIATION PROTECTION (RP):

- h. RADIOLOGICAL SURVEYS**
(Apparent Violation 128/8801-05)
- * **NRC CONCERN - FAILURE TO PERFORM ADEQUATE SURVEYS**
- * **TAMU PERCEPTION**
 - **RESULTS FOR UNATTENUATED BEAM ONLY**
 - **BORATED PARAFFIN BLOCKS REDUCE BEAM INTENSITY WELL WITHIN INSTRUMENT CAPABILITY**
 - **DID NOT ALLOW WORK W/O APPROPRIATE ASSESSMENTS**
 - **DO NOT AGREE WITH ASSESSMENT**
- * **CORRECTIVE ACTIONS**
 - **PREVIOUS COMMITMENTS**

RADIATION PROTECTION (RP):

- g. **ENVIRONMENTAL AND RADIOACTIVE EFFLUENTS RELEASES**
(Open Item 128/8801-04)

- * **NRC CONCERN - FAILURE TO PERFORM SAFETY ANALYSIS OF A DESIGN CHANGE**

- * **TAMU PERCEPTION**
 - RECOGNIZES FAILURE TO PERFORM REVIEW

 - MANAGEMENT DECISION DUE TO APPROVAL OF SIMILAR SAMPLING TAP ON ANOTHER TANK

 - VALVE REMOVED AND PIPE CAPPED IN RESPONSE TO CONCERNS OF THE INSPECTOR

- * **CORRECTIVE ACTIONS**
 - DISCONTINUE USE

 - SEEK RSB REVIEW AND APPROVAL

RADIATION PROTECTION (RP):

- a. **RP ORGANIZATION AND CONTROLS**
(Open Item 128/8801-06)

- * **NRC CONCERN - FAILURE TO FOLLOW HP INSTRUCTIONS**

- BEAM REDUCTION TECHNIQUES
- PASSAGE THROUGH BEAM
- INTIMIDATION OF HP PERSONNEL

- * **TAMU PERCEPTION**

- REASONABLY ACCURATE DESCRIPTION OF EXPERIMENT
- NEVER OBSERVED IN BEAM W/O REDUCTION DEVICES IN PLACE
- MIS-COMMUNICATION OF ORAL INSTRUCTIONS
- NO INTIMIDATION OF HP STAFF

RADIATION PROTECTION (RP):

- a. **RP ORGANIZATION AND CONTROLS**
(Open Item 128/8801-06)

* **CORRECTIVE ACTIONS**

- REVIEW QUALIFICATIONS AND TRAINING OF INDIVIDUALS
- REVIEW EXPERIMENTER/HEALTH PHYSICS INTERFACE
- REVIEW EXISTING PROCEDURES - MAKE APPROPRIATE CHANGES - INCLUDE ALARA REVIEW
- REVIEW NEED FOR PROGRAM TO REINFORCE ADMINISTRATIVE RESPONSIBILITIES
- REFER TO APPROPRIATE LEVEL OF UNIVERSITY MANAGEMENT FOR ACTION, IF NECESSARY

* **TAMU COMMITMENT**

RADIATION PROTECTION (RP):

d. RP INSTRUMENTATION
(Open Item 128/8801-07)

* **NRC CONCERN - SUITABILITY OF
DOSE RATE MEASURING
INSTRUMENTATION**

* **TAMU PERCEPTION**

- INSTRUMENT READS HIGH NOT LOW
- UPPER LIMIT OF CALIBRATION DOES NOT EQUAL LIMIT OF UPPER RANGE OF USE

RADIATION PROTECTION (RP):

- d. **RP INSTRUMENTATION**
(Open Item 128/8801-07)

*** CORRECTIVE ACTIONS**

- PURCHASE ADDITIONAL NEUTRON SURVEY INSTRUMENT
- UTILIZE REGIONAL CALIBRATION LABORATORY (ARKANSAS)

*** TAMU COMMITMENT**

- P.O. BY MAY 1, 1988
- CALIBRATE W/ PuBe SOURCES WHEN RECEIVED
- CALIBRATE AT RCL WITH APPROPRIATE NEUTRON SOURCE

RADIATION PROTECTION (RP):

d. RP INSTRUMENTATION (Open Item 128/8801-08)

*** NRC CONCERN**

- HAND AND FOOT MONITOR IN MHA
- HIGH BACKGROUND
- DEBRIS BUILDUP

*** TAMU PERCEPTION**

- LOCATION OF MHA FORCES THE MONITOR LOCATION
- REACTOR STATUS AND WORK IN AREA INFLUENCES MONITOR BACKGROUND

RADIATION PROTECTION (RP):

- d. **RP INSTRUMENTATION**
(Open Item 128/8801-08)

*** CORRECTIVE ACTIONS**

- REVIEW SOP'S REGARDING USE OF MONITOR
- REVIEW CONTAMINATION CONTROL PHILOSOPHY FOR CONFINEMENT BUILDING
- REVIEW PROCEDURES REGARDING MAINTENANCE OF THE MONITOR
- PURCHASE ADDITIONAL MONITORS AND EQUIPMENT AS NECESSARY

*** TAMU COMMITMENT**

RADIATION PROTECTION (RP):

- f. **PERSONNEL MONITORING AND EXPOSURE CONTROL**
(Open Item 128/8801-09)

- * **NRC CONCERN - RADIATION EXPOSURE CONTROL ASPECTS OF DIVING ACTIVITIES IN THE REACTOR POOL**

- * **TAMU PERCEPTION**
 - AGREE WITH THE ASSESSMENT

- * **CORRECTIVE ACTIONS**
 - DEVELOP PROCEDURES FOR THIS ACTIVITY
 - REVIEW DOSIMETRY OPTIONS
 - OBTAIN PROPER INSTRUMENTATION FOR USE IN POOL

- * **COMMITMENT**
 - COMPLETE AS SOON AS POSSIBLE