Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247
402/636-2000

June 30, 1992
LIC-92-212R

Mr. John L. Pellet
Chief, Operator Licensing Section
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Reference: Docket No. 50-285

Dear Mr. Pellet:

SUBJECT: Technical Review of the Reactor Operator and Senior Reactor Operator Licensing Examinations

Omaha Public Power District (OPPD) has reviewed the Reactor Operator and Senior Reactor Operator licensing examinations that were administered by the NRC at Fort Calhoun Station on June 22, 1992. Enclosed are OPPD's comments on the examination, in accordance with the requirement specified in the Operator Licensing Examiners Standard, NUREG-1021. These comments were provided to your examiner, Mr. Kriss Kennedy, on June 26, 1992.

If you should have any questions, please contact me.

Sincerely,

W. G. Gates
Division Manager
Nuclear Operations

WGG/sel

Enclosures

c: LeBoeuf, Lamb, Leiby & MacRae (w/o Enclosures)
R. D. Martin, NRC Regional Administrator, Region IV (w/o Enclosures)
R. P. Mullikin, NRC Senior Resident Inspector (w/o Enclosures)
S. D. Bloom, NRC Acting Project Manager (w/o Enclosures)
Document Control Desk







IE42
11

## SRO Question 82

During power operations, if containment entry is required then the Shift Supervisor and which ONE of the following must approve?

a. Radiation Protection Supervisor OR Operations Supervisor

b. Radiation Protection Supervisor AND Operations Supervisor

c. Plant Manager OR Chemistry and Radiation Protection Supervisor

d. Plant Manager AND Chemistry and Radiation Protection Supervisor

ANSWER: d.

REFERENCE: Fort Calhoun Station IHB: 7-11-8, p.34
SRO only
KA: 103000G001 [3.3/3.9]

## OPPD Comment

OPPD requests that this question be deleted. All of the choices offered are incorrect.

According to SO-O-22, "Containment Access and Egress", and RP-213, "Operational Containment Entry", the only authorization required for a containment entry at power is that of the Shift Supervisor. The other positions having responsibilities associated with a containment entry at power are the STA and the Radiological Operations Coordinator.

REFERENCES: SO-O-22, Section 4.0
RP-213, Section 2.0

SRO 82



3.5.2 C. Individuals departing containment will have their key cards swiped thru the Egress Reader by a Security Officer prior to having their cards returned.

3.5.3 Must operate the Personnel Air Lock Doors in accordance with OI-CO-2.

4.0 OPERATIONS CONTAINMENT ENTRIES AT POWER.

**NOTE:** It is the responsibility of the immediate supervisor of the craft requesting containment entry to ensure that the evaluation is completed.

**NOTE:** The FC-RP-213-1 evaluation is not required for routine chemistry sampling entries.

**NOTE:** Additional requirements for containment entries during power operation are given in RP-213.

4.1 STA must complete the entry evaluation for the tasks to be performed on FC-RP-213-1.

4.2 The Shift Supervisor must authorize the operational containment entry per FC-RP-213-1.

5.0 CONTAINMENT EVACUATION

5.1 In the event the Nuclear Emergency Alarm is annunciated, all personnel will evacuate the containment immediately.

5.2 In the event that any containment building area monitor, portable area monitor or air activity monitor reading increases rapidly and alarms without prior anticipation or preparation, the Shift Supervisor will be notified immediately and he will ensure that all personnel evacuate the containment building immediately until Radiation Protection and/or operations personnel have investigated the cause of the alarm and determined that conditions are safe for re-entry.

5.3 In the event that an announcement is made over the Plant Communication System to evacuate the containment building, all personnel will do so immediately. These announcements should be made by the Shift Supervisor.

5.4 The Security Guard is responsible for accountability. If all personnel are not accounted for the Shift Supervisor and Radiological Operations Coordinator must be notified.

SRO 82



# OPERATIONAL CONTAINMENT ENTRY

## 1.0 PURPOSE

This procedure provides guidance on the Radiation Protection requirements for personnel to enter the Containment during power operation.

## 2.0 RESPONSIBILITIES

2.1 The Supervisor-Radiation Protection Operations is responsible for implementation of this procedure.

2.2 The Shift Supervisor is responsible for controlling entrance to and egress from the Containment Building.

2.3 The Radiological Operations Coordinator is responsible for:

2.3.1 Ensuring that Form FC-RP-213-1, Operational Containment Entry Evaluation Worksheet, is properly completed prior to entries, other than for routine Chemistry sampling.

2.3.2 Ensuring that FC-RP-213-2, Containment Entry Worksheet, is completed prior to the first entry of each day when the reactor is critical or Containment Integrity is required while shutdown.

2.3.3 Ensuring that an appropriate Radiation Work Permit is issued for the entry.

2.3.4 Ensuring that proper Radiation Protection Technician coverage is provided for the entry.

2.4 A representative of the group requesting the entry is responsible for:

2.4.1 Initiating Form FC-RP-213-1, Operational Containment Entry Evaluation Worksheet

2.4.2 Arranging to have Security Personnel as required for the Containment entry.

2.5 The Shift Technical Advisor (S ) is responsible for completing the applicable portions of FC-RP-213-1, Operational Containment Entry Evaluation Worksheet.

SRO 82



5.3.4 The Security Guard is responsible for accountability. If all personnel are not accounted for the Shift Supervisor and Radiological Operations Coordinator must be notified.

7.0 PROCEDURE

7.1 For Containment entries other than Routine Chemistry Sampling, Form FC-RP-213-1, "Operational Containment Entry Evaluation Worksheet" must be completed prior to entry.

7.1.1 A representative of the group requesting entry will initiate the FC-RP-213-1.

7.1.2 The representative will turn the FC-RP-213-1 over to the Shift Technical Advisor (STA).

**NOTE:** Steps 7.1.3 through 7.1.4 may be performed in any order.

7.1.3 The STA will complete Steps 3.1 through 3.4 and 3.6 of FC-RP-213-1.

7.1.4 The STA will obtain the "Radiological Conditions" from the Radiation Protection Department and have them initial Step 3.5 of FC-RP-213-1.

7.1.5 The FC-RP-213-1 will be presented to the Operations - Shift Supervisor. He will determine if it is required that the task be performed at power and sign Step 4.0 of FC-RP-213-1.

7.1.6 Form FC-RP-213-1 is then presented to the Radiological Operations Coordinator. He will ensure that an appropriate Radiation Work Permit is issued for the task, complete and sign Step 5.0 of FC-RP-213-1.

7.1.7 Form FC-RP-213-1 is then filed in the Radiation Protection records storage files.

SRO 82



7.2 If not completed previously that day or if conditions in Containment are suspected to have changed, (i.e.: Reactor Power or RM-050/051 readings increased significantly since completion of last FC-RP-213-2 as determined by the ROC), Radiation Protection personnel will complete Form FC-RP-213-2, "Containment Entry Worksheet," to estimate the airborne radiological conditions in Containment, prior to entry.

7.2.1 Obtain a copy of the current revision of FC-RP-213-2.

7.2.2 Record the information needed to complete the calculations on FC-RP-213-2, as listed in the box labeled, "TODAY'S INFORMATION."

A. RM-050/051 Gross CPM are read in the Control Room.

B. Background CPM is taken from the current revision of the Technical Data Book.

C. Sensitivity is taken from the current revision of the Technical Data Book.

D. Flowrate (SCFM) is calculated from readings taken from RM-050/051 in Room 69. The indicated flowrate and vacuum readings are compared on the graph located on the RM-050/051 cabinet to obtain the corrected flowrate.

E. Transit Time (min) is obtained from Chemistry personnel who refer to the last calibration performed on RM-050/051.

7.2.3 Using the information obtained in Step 7.2.2, complete Steps 1 and 2 of FC-RP-213-2. These calculations will yield the estimated Particulate MPC value and the estimated Beta Dose rate in mR/Hr in the Containment atmosphere.

7.2.4 Review previous FC-RP-213-2 data to check for upward/downward trends. (IF using the computer program for completion of this form, this data will be printed in Step 3, when form prints).

7.2.5 Complete Step 4, "Demographic Information." Tritium concentration is obtained from Chemistry personnel.

SRO 82



7.2.6 Submit FC-RP-213-2 to the Radiological Operations Coordinator for Containment entry approval and determination of respiratory requirements.

7.2.7 The remaining items on FC-RP-213-2 will be completed following the Containment entry using actual measured values.

7.3 The Radiation Protection Technician assigned coverage responsibility for this task will ensure that the following items are available, (as required):

7.3.1 An appropriate radiation monitoring instrument, which is in current calibration and has been function checked for the day.

7.3.2 A neutron monitoring instrument which is in current calibration and has been function checked for the day.

7.3.3 Air sampling equipment for gaseous, Iodine and particulate contaminants.

7.3.4 A copy of the current revision of FC-RP-205-1, "Airborne Radioactivity Area Entry Log."

7.3.5 The appropriate Radiation Work Permit for the task to be performed.

7.4 Notify the representative of the group requesting the entry that preparations are complete.

7.5 The representative of the group supervisor requesting the entry will arrange with Security to provide personnel as required for the Containment entry.

7.6 Personnel making the Containment entry will review the Radiation Work Permit with the Radiation Protection Technician providing task coverage. They will be informed of the RP requirements and the expected/known radiological conditions.

7.7 Ensure that the neutron dose tracking is used when entering data into the access control computer.

7.8 Immediately prior to entering Containment complete the following: (Steps 7.8.1 through 7.8.4 maybe performed in any order)

7.8.1 Notify the Operations - Shift Supervisor that you are ready to make the entry and receive his permission.

7.8.2 Sign in on FC-RP-205-1 if posted.

7.8.3 Check in with the Security person at the PAL door.

7.8.4 Ensure that the TLD's are not left with the Security Badge.

**NOTE:** If the scope of the task or the radiological conditions change during the entry, exit Containment and contact the Radiological Operations Coordinator for resolution.

7.9 Enter containment and complete the task as described on the appropriate Radiation Work Permit.

7.10 While in Containment, the Radiation Protection Technician will perform radiological surveys, including airborne as needed, to assess the current conditions.

7.11 When all personnel are clear of Containment, the Radiation Protection Technician will lock the PAL door. Another individual will verify that the door is shut and locked. Both will sign Form FC-RP-204-1, "Very High Radiation Area Verification Check," upon exiting the Radiation Controlled Area.

NOTE: Steps 7.12 through 7.14 maybe performed in any order.

7.12 Notify the Operations - Shift Supervisor when all personnel are out of Containment.

7.13 Sign out on FC-RP-205-1, if posted.

7.14 Check out with Security.

7.15 The Radiation Protection Technician will document and submit for review the radiological survey completed during entry.

7.16 When results of the airborne radioactivity samples taken during entry are available, complete Step 5 of FC-RP-213-2 and submit to the Radiological Operations Coordinator for final review.

8.0 REFERENCES

8.1 Standing Order O-22, "Containment Access and Egress."

9.0 ATTACHMENTS

# OPERATIONAL CONTAINMENT ENTRY EVALUATION WORKSHEET

1.0 Tasks to be performed:_____

_____

_____

2.0 Entry Request by:_____ Date:_____

3.0 Entry Evaluation (Attach additional sheets as needed).

Initials/Date

3.1 Indication and Parameters _____/_____
Ops/or STA Date

_____

_____

3.2 Potential causes outside containment _____/_____
STA Date

_____

_____

3.3 Alternate means _____/_____
STA Date

_____

_____

3.4 Can the task be delayed _____/_____
STA Date

_____

_____

3.5 Radiological Conditions _____/_____
R.P. Date

_____

_____

3.6 Benefit of performing the task _____/_____
STA Date

_____

_____

4.0 It is required that this task be performed during reactor operation.

_____
Operations Shift Supervisor Date

5.0 Forward to Radiation Protection to issue appropriate RWP.

RWP#_____ has been issued for this task.

_____
Radiological Operations Coordinator Date

## SRO Question 77

If a women operator declares that she is pregnant and she has already received 600 mrem since conception, which of the following exposure limits apply for the remainder of her pregnancy?

a. No further exposure [0 mrem]

b. 5 mrem

c. 25 mrem

d. 50 mrem

ANSWER: d.

REFERENCE: FCS RP-AD-600, Section 5.6.2, p.7
SRO only

KA: 194001K104

## OPPD COMMENT

OPPD requests that the correct answer be changed to choice A, no further exposure.

In General Employee Training, it is emphasized that "OPPD has established a prenatal limit in accordance with Reg. Guide 8.13 of 500 mR/gestation period."

The exposure limit established in RP-602, table 1 and in RP-AD-600 section 5.6.2 is 50 mrem/month and 500 mrem/gestation period. Since the operator has received in excess of 500 mrem/gestation period, she would not be allowed to receive any additional occupational exposure during the duration of her pregnancy.

Note 4 on page 7 of RP-AD-600 establishes the predominance of the 500 mrem/gestation limit over the 50 mrem/month limit for a pregnant worker. The intent of the note is to state that the pregnant worker may NOT be allowed to receive up to 50 mrem/month if that exposure will be in excess of the 500 mrem/gestation period limit.

REFERENCES: General Employee Training, Station Orientation, p. RP17
Regulatory Guide 8.13,"Instruction Concerning Prenatal Radiation Exposure"
RP-602, TABLE 1
RP-AD-600, section 5.6.2

SRO. 77

# REGULATORY GUIDE 8.13

## POTENTIAL INCREASED RISK TO A FETUS DURING THE GESTATION PERIOD

MOST SENSITIVE DURING THE FIRST TRIMESTER

INCREASED RISK OF INFANT CANCER AND LEUKEMIA

## PRENATAL EXPOSURE INSTRUCTIONS

OPPD HAS ESTABLISHED A PRENATAL LIMIT IN ACCORDANCE WITH REG. GUIDE 8.13 OF 500 mR/GESTATION PERIOD

PURPOSE FOR ESTABLISHING LIMIT:

- EMBRYONIC AND FETAL DEVELOPMENT IS A PERIOD OF VERY RAPID CELLULAR DIVISION
- BIOLOGICAL DAMAGE MAY OCCUR MORE FREQUENTLY TO AREAS OF THE BODY THAT EXPERIENCE RAPID CELL DIVISION
- AT PRESENT OCCUPATIONAL DOSE LIMITS, THE ACTUAL RISK TO THE UNBORN CHILD IS SMALL, BUT OPPD WOULD LIKE TO MINIMIZE DOSES AND KEEP EXPOSURE TO AS LOW AS REASONABLY ACHIEVABLE

RP 17

**TABLE 1**

**ADMINISTRATIVE EXPOSURE LIMITS**

| Stipulation | Level | 80% |
|---|---|---|
| Individuals with a facilities written estimate or official record of WB dose for the current quarter. Individuals with no current quarter exposure. | 1000 mrem/qtr | 800 |
| Current quarter exposure and no written estimate provided by a facility. | 250 mrem/qtr | N/A |
| Whole body exposure for the year. | 4000 mrem/yr | 3200 |
| Extremity exposure for the quarter. | 18.75 rem/qtr | 15.0 |
| Skin exposure for the quarter. | 7.5 rem/qtr | 6.0 |
| Declared Pregnancy | 500 mrem/gestation<br>50 mrem/month | 400 |

7.3 Dosimetry Issue

7.3.1 Obtain the next available TLD, and verify the insert number on the TLD issue log.

7.3.2 Fill in the requested information on the TLD issue log. (See Attachment 1 - PRISM TLD Issue Log).

7.3.3 Write individual's PID number and name on the TLD label.

7.3.4 Instruct the individual on the proper placement of dosimetry and the requirements for returning the TLD when leaving site.

7.4 Data Entry into PRISM Computer System

7.4.1 A computer Data Entry Worksheet (FC-RP-602-11) should be used to ensure complete data entry into PRISM.

5.6.2 The administrative limits listed below are used to ensure that regulatory limits are not reached without warning and as an administrative tool to identify persons or processes that are not in keeping with ALARA principles.

| | |
|---|---|
| Whole Body Exposure | 4.0 rem/year |
| Whole Body Exposure | 1.0 rem/qtr |
| Whole Body Exposure (1) | 0.25 rem/qtr |
| Whole Body Exposure (2) | 0.1 rem/qtr |
| Whole Body Exposure (3) | 50 mrem/month |
| Whole Body Exposure (4) | 0.5 rem/gestation |
| Inhalation Intakes | 10 MPC-hrs/ 7 days |

1. This limit applies only to individuals who have received exposure during the current quarter and have not provided documents to substantiate the exposure.

2. This limit applies only to Visitors and is for exposures received solely at FCS.

3. This limit applies to women who have declared they are or may be pregnant.

4. For a declared pregnancy. If the pregnancy is declared after the individual has received more than 450 mrem since conception, the limit is 50 mrem for the remainder of the pregnancy.

## RO Question 58

Which one of the below is the MINIMUM RCS makeup rate that is sufficient to replenish the boil off from decay heat following a loss of shutdown cooling?

a. 15 gpm

b. 55 gpm

c. 1500 gpm

d. 5500 gpm

ANSWER: a.

REFERENCE: AOP-19, p.3
RO only

KA: 005000K301

## OPPD Comment

The correct answer to this question is choice B, 55 gpm. The answer key incorrectly lists choice A, 15 gpm, as the right choice.

AOP-19, Loss of Shutdown Cooling, states that "An RCS makeup rate of 55 gpm is sufficient to replenish the boil off from decay heat".

REFERENCE: AOP-19, p.4

## 3.0 PRECAUTIONS

The following specific cautions and notes apply prior to or throughout this procedure.

### A. CAUTIONS

1. Containment evacuation is required when boiling is imminent.
2. If the HPSI Pump suction, the LPSI Pump suction or the CS Pump suction is aligned to the SIRWT, do not operate the HPSI Pumps, the LPSI Pumps or the CS Pumps when SIRWT level falls below 16 inches.
3. If the Charging Pump suction is aligned to the SIRWT, do not operate the Charging Pumps when SIRWT level falls below 72 inches.
4. If the HPSI Pump suction, the LPSI Pump suction or the CS Pump suction is aligned to the Containment Sump, do not operate the HPSI Pumps, the LPSI Pumps or the CS Pumps when Containment sump level is below five feet as read on LI-387 and LI-388.
5. Do not operate the CS Pumps or the LPSI Pumps if the pump flow rate can not be maintained above 200 gpm.
6. Do not start the LPSI Pump(s) until the cause of SDC loss has been determined and corrected.
7. Charging Pump operation could cause excessive RCS pressure. Charging flowrate must be carefully regulated to prevent overpressurization of the RCS.

### B. NOTES

1. Establishing Containment Integrity requires approximately 30 minutes. If RCS water level is at or near the centerline of the hot leg, the remaining time to boil may be less than 30 minutes.
2. An RCS makeup rate of 55 gpm is sufficient to replenish the boil off from decay heat.
3. Use of CS Pumps for SDC is subject to **BOTH** of the following limitations:
   - RCS temperature is less than 120°F
   - RCS is vented with a vent area is greater than or equal to that of the Pressurizer Manway

RO Question 9/ SRO Question 9

Which ONE of the following should be commenced only AFTER on-coming personnel have assumed the shift?

a. A Pre-Shift briefing for on-coming personnel.

b. Sign the Licensed Operator Shift Turnover Log.

c. Review of surveillance tests or special tests in progress.

d. Review items affecting plant operations by the on-coming and off-going Licensed Operators.

ANSWER: a.

REFERENCE: Fort Calhoun Station SO-O-1, p.58,59,60,61
Both

KA: 194001A103 [2.5/3.4]

OPPD COMMENT

OPPD requests that this question be deleted. None of the choices offered is correct.

Normal operating practice is to accomplish all of the items listed in the choices prior to the on-coming personnel assuming the shift. Choices B,C and D are part of the turnover process and are completed prior to the on-coming personnel assuming the shift.

Current operating practice, as outlined in the attached memo, is for the off-going Shift Supervisor to conduct a pre-shift briefing for the on-coming Shift Supervisor, Operators and STA. This pre-shift briefing is conducted outside the control room and prior to the watchstation turnover. Therefore, choice A is incorrect.

This practice was established on 2/8/92 which was during the License candidates OJT period. A revision to SO-O-1 which reflects the current practice was issued on 6/15/92 and the applicable sections are attached.

REFERENCE: SO-O-1, R5, section 6.1
Memo FC-0170-92

RO 9/SRO 9

Fort Calhoun Station
Unit No. 1

# SO-O-1

STANDING ORDER

Title: CONDUCT OF OPERATIONS

---

| | |
|---|---|
| Setpoint/Procedure Form Number (FC-68): | 37439 |
| Reason for Change: | Update procedure to reflect current operations policy. |
| Contact Person: | David J. Bannister |

ISSUED: 06-15-92 4:00 pm

R5

# 6.0 SHIFT OPERATIONS

## 6.1 Pre-Shift Briefings

### 6.1.1 Conduct of Pre-Shift Briefings

A. At the beginning of each shift, the on-coming Operating crew shall report to the common briefing area outside the Control Room for a Pre-Shift Briefing.

B. The briefing shall be conducted by the off-going Shift Supervisor or designee.

**NOTE:** Extra Operators shall report to the briefing room as part of the operating crew.

C. The following on-comming Shift Personnel shall attend the Pre-Shift Briefing:

(1) Licensed Operators

(2) Equipment Operators

(3) Auxiliary Operators

(4) Shift Technical Advisor

(5) Shift Chemist

(6) Shift Radiation Protection Technician

D. It is permissible to conduct the pre-shift briefing without full attendance by the required personnel if these individuals are unavailable due to the performance of other job specific tasks.

### 6.1.2 Content of Pre-Shift Briefings

A. The Pre-Shift Briefing is intended to be approximately ten (10) minutes in duration and provide an overview of plant conditions.

B. During the Briefing, the off-going Shift Supervisor will ensure the following (as applicable) have been reviewed with the on-coming crew:

(1) Plant status

(2) Crew composition

(3) Operational priorities

6.1.2 B. (4) Major equipment out of service

(5) Surveillance Tests scheduled or in progress

(6) Preventative maintenance scheduled or in progress

(7) Maintenance scheduled or in progress

(8) Newly installed Temporary Modifications

(9) Unusual occurrences within the last 24 hours

(10) Other items of operational significance

NOTE: The requirements of Standing Order G-92 (Conduct of Infrequently Performed Procedures), may apply.

6.1.3 Special Briefings

A. Special Briefings (Pre-Job etc.) may be conducted prior to special or complicated evolutions. Only the personnel directly involved in the evolution are normally required to attend such briefings.

6.2 Shift Turnover and Relief

6.2.1 Responsibility

A. It is the responsibility of the personnel being relieved to brief the oncoming personnel.

B. It is the responsibility of the Operator assigned a work station to perform rounds including equipment checks and a general inspection for that area.

C. No person shall assume a shift position unless he/she is physically and mentally fit to competently discharge his/her duties.

D. No person shall permit his/her relief to assume the shift if there is doubt that he/she is alert, coherent, and fully capable of performing his/her assigned duties.

6.2.2 Shift Relief Instructions

A. The on-duty operating shift shall complete and sign the appropriate shift turnover log prior to being relieved.

| Position | Turnover Log Form No. |
|---|---|
| Control Room Operators | FC-95 or 95A |
| Auxiliary Bldg. | FC-165 |
| Turbine Bldg. | FC-166 |
| Water Plant | FC-167 |

B. The oncoming operating shift shall review the shift turnover sheet with their respective counterparts and sign the sheet at the end of the turnover. The Shift Supervisor's review may be conducted after turnover.

C. The on-duty operating shift shall remain on duty until they have been properly relieved by qualified personnel.

D. The oncoming shift shall familiarize themselves with conditions in areas to which they are responsible, prior to assuming the duties and responsibilities of their respective job.

E. The oncoming and on-duty Control Room Operators shall walk-down the control boards to verify turnover log items.

F. Prior to being relieved of their respective jobs, each person will brief his/her relief on the condition and status of that portion of the plant to which he/she is assigned. The following is a list of items which may be included in the pre-shift briefing, (when applicable).

(1) Shift Turnover Log

(2) Operating Logs

(3) Abnormal conditions or alignments

(4) New alarms

(5) Inoperable equipment

6.2.2 F. (6) Surveillance tests or special tests in progress

(7) Recently issued Special Orders, Operations Memos, Night Notes, S.A.O's

(8) Recently installed Temporary Mods

(9) Technical Specification problems or LCO's in effect

(10) The oncoming shift shall perform a walkdown of their assigned equipment or control boards shortly after assuming the shift

G. Prior to assuming the shift, each Operator shall personally verify the status of important system operating parameters, especially those relating to safety systems.

H. The off-going Operator shall not leave his/her work area until he/she is satisfied that his/her relief is fully aware of existing conditions.

I. Each shift position shall be relieved by a person who is properly licensed and/or qualified to assume the shift position.

J. The off-going Operator shall not be relieved until the equipment he/she is responsible for is in a stable condition.

K. The Control Room Communicator may be relieved and conduct shift turnover in the Control Room. Such relief will not be conducted in the "at the controls" area.

# Memorandum

R09/SR09

Date: February 8, 1992

FC-0170-92

From: D. R. Trausch

To: Shift Supervisors

SUBJECT: Compensation for Watchstation Turnover

Effective February 9, 1992, you are required to begin compensation of operators for overtime worked as a result of watchstation turnover. Compensation directly related to watchstation turnover shall only be given under the following circumstances.

A. If the operator is standing one of the following watchstations:

Control Room Licensed Senior Operators (LSO)
Control Room Licensed Operator (LO)
Control Room Licensed Operator (LO*)
Auxiliary Building Operator
Turbine Building Operator
Water Plant Operator

B. If an operator not assigned a watchstation, is performing an activity for which a turnover is required.

C. If the operator assigned the communicator watch, is performing an activity for which a turnover is required.

Compensation will be given in accordance with Article IV Section 4 Contract Agreement Local 763. On a short term basis only, it will be the responsibility of the Shift Supervisor to complete the time sheets for each of his operators. It will be the responsibility of the individual operator to report to the Shift Supervisor, prior to leaving the protected area, any overtime worked as a result of the turnover process.

As usual, overtime should be paid to the nearest tenth of an hour. It will be the responsibility of the Shift Supervisor to ensure all operators are aware of this change in employee compensation.

As a result of this agreement, additional changes to the shift operating crews "routine" are required. These changes will be implemented the week of February 10, 1992. Guidance will be provided to the Shift Supervisors shortly.

Major aspects of this new program will include:

A. Official start hours for all operators (excluding operators scheduled for classroom training) will be 0700-1500, 1500-2300, and 2300-0700.

R09/SR09



B. The operating crew (Shift Supervisors, Operators, STA) will report to a common briefing area outside the control room for a pre-shift brief conducted by the off-going Shift Supervisor.

C. Operators must be in the briefing room, with personal items stored, no later than 0700, 1500, 2300 or be considered late for work. Operator tardiness for these briefings will be considered unacceptable.

D. Extra operators will report to the briefing room, with personal items stored, as part of the operating crew.

E. The pre-shift briefing will be conducted by the Duty-Shift Supervisor or other operations staff member as appropriate.

Please fee free to contact me with any questions concerning the implementation of this program.

D R Trausch

D. R. Trausch
Supervisor - Operations

DRT:keb

c: W. G. Gates
T. L. Patterson
All Operations Personnel
Mike Lazar
Bob Luikens
Bob DeMeulmeester

## SRO Question 74

Personnel entry into a confined space is permitted if toxic gas in the confined space is less than 50 ppm Carbon Monoxide and the confined space atmosphere also meets which ONE of the following conditions?

a. Oxygen concentration is not less than 19.5%; explosive concentration is not greater than 10%.

b. Oxygen concentration is not less than 19.5%; explosive concentration is not greater than 4%.

c. Oxygen concentration is not less than 20%; explosive concentration is not greater than 4%.

d. Oxygen concentration is not less than 20%; explosive concentration is not greater than 10%.

ANSWER: a.

REFERENCE: SO-G-45, p.1
SRO only

KA: 194001K113 [3.3/3.6]

## OPPD COMMENT

OPPD requests that this question be deleted.

It is the responsibility of the Chemistry Department to sample the confined space atmosphere, to determine if the oxygen and explosive concentrations are within limits, and to issue the Confined Space Entry Permit. Senior Operator Licensed Individuals and operators under their supervision are required to obtain a Confined Space Entry Permit from Chemistry prior to entry into a confined space.

KA 194001 K1.13 requires knowledge of safety procedures related to an oxygen-deficient environment. Memorization of specific limits is not required since they are listed on the Confined Space Entry Permit.

REFERENCE: FC-1200, "Confined Space Entry Permit"
SO-G-45, paragraphs 1.6.1, 1.6.8, 1.6.9

SRO 74

FO T CALHOUN STATION
GENERAL FORM

FC-1200
R0
PAGE 1 OF 2

OPPD
NUCLEAR AND PRODUCTION OPERATION DIVISION
CONFINED SPACE ENTRY PERMIT

| OPERATING AREA | VALID FROM (Date and Time) | VALID TO (Date and Time) |
|---|---|---|
| DESCRIPTION AND LOCATION OF WORK TO BE DONE | | |
| GAS TESTS: FORCED VENTILATION MUST BE OFF DURING TESTING | PREVIOUS CONTENTS OF CONFINED SPACE | |
| OXYGEN READING (19.5%-22%) [ ] _____% | COMBUSTIBLE GAS TEST READING (≤10%) [ ] _____%LEL | TOXICITY TEST READING TYPE (LESS THAN 50 PPM CO) GAS [ ] _____ PPM CHECKED____ |
| OTHER TOXIC TEST READINGS (Specify) | POTENTIAL HAZARDS | |
| SIGNATURE OF PERSON PERFORMING TESTS | DATE | TIME |

| SYSTEM PREPARATION | | | REQUIRED EQUIPMENT |
|---|---|---|---|
| TAGGING AND LOCK-OUT PROCEDURES FOLLOWED Y N N/A | VESSEL BLANKED OR PHYSICALLY DISCONNECTED Y N N/A | GFCI GROUND FAULT CIRCUIT INTERUPTER Y N N/A | AIR SUPPLIED MASKS SCBA'S/AIRLINE Y N N/A |
| VESSEL CLEANED FOR ENTRY Y N N/A | VENTILATION ON DURING ENTRY Y N N/A | CHEMICAL BOOTS AND GLOVES Y N N/A | CHEMICAL SUIT/ SPECIAL CLOTHING Y N N/A |
| CONTINUOUS OR INTER-MITTENT GAS TESTS NEEDED Y N N/A | PERMIT PROVIDED FLAME/CHEMICAL/ RWP Y N N/A | HEARING PROTECTION Y N N/A | SAFETY HARNESS&LINE Y N N/A |
| RADIATION SOURCES SECURED Y N N/A | OTHER Y N N/A | FIRE EXTINGUISHER Y N N/A | OTHER Y N N/A |

LIST ANY SPECIAL PRECAUTIONS NECESSARY

A PREJOB BRIEFING HAS BEEN CONDUCTED AND I HAVE PERSONALLY EXAMINED THE ABOVE AND CERTIFY THE EQUIPMENT SAFE FOR ENTRY WITH THE ABOVE NOTED PRECAUTIONS BEING TAKEN

| SUPERVISOR/CREW LEADER | DATE | TIME |
|---|---|---|
| | | |

SRO 74



1.5.2 Entries into confined spaces with atmospheres which are immediately dangerous to life or health are not permitted under this procedure.

1.5.3 If ventilation is required to insure acceptable explosive and oxygen levels, take care that the method of ventilation does not result in an explosive or oxygen deficient atmosphere elsewhere. Also, be sure the air intake is placed in an area that will draw in fresh air only.

1.6 Procedure

1.6.1 Obtain a Confined Space Entry Permit from the Chemistry Department.

1.6.2 The Confined Space Entry Permit Form (ref. FC-1200) is to be filled out by the craftsmen involved, and posted at the confined space access point until the space is closed out or the permit expires.

1.6.3 A prejob briefing shall be conducted by the job foreman/supervisor and attendance documented on Fort Calhoun Form FC-1200, Page 2. The briefing shall be given to all personnel supporting the confined space entry. The briefing shall consist of but not limited to the following:

A. A detailed sequential description of all phases of work to be completed in the space. Assign tasks required to perform the job if applicable.

B. Assign tasks to ensure all equipment is available and inspected prior to confined space entry if applicable.

SRO 74



1.6.4 C. Disconnecting belt and chain drives and mechanical linkages on shaft driven equipment where possible.

D. Securing mechanical moving parts within confined spaces with latches, chains, chocks, blocks or other devices.

1.6.5 Flush the confined space as required to maintain as low as reasonably achievable exposure if required.

1.6.6 Pump or drain confined space to the lowest practical level.

1.6.7 Remove the manway cover from the confined space.

1.6.8 Chemistry sample the atmosphere of the tank to ensure that combustible gases are less than 10% and oxygen is 19.5% or greater, and CO is less than 50 ppm. If the atmosphere was found unacceptable and then ventilated, ensure it is retested before entry.

1.6.9 If the combustible gases are less than 10% and the oxygen is 19.5% or greater, and CO is less than 50 ppm record the values on the form. The space may be cleared for entry.

1.6.10 Chemistry assign an expiration date to the Confined Space Entry Permit.

**NOTE:** If more than one craft will work in the same confined space, the craft to which the Confined Space Entry Permit was originally issued will be contacted, and joint work coordinated with that craft.

A. Determination of the expiration date should consider:

(1) If the confined space normally contains water solutions and is not blanketed with an inert or oxygen displacing gas, then an expiration date for the duration of the planned work (but not to exceed 14 days) is appropriate.

(2) If the confined space is normally blanketed with an inert or oxygen displacing gas, then a permit duration of one day is appropriate.