

ENTERGY OPERATIONS INCORPORATED

ARKANSAS NUCLEAR ONE

Arkansas Nuclear One
Russellville, Arkansas
Date: 950508

MEMORANDUM

TO: 103
CC - NRC - WASHINGTON

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3RD floor Admin Bldg*

FROM: DOCUMENT CONTROL
Ref Key: 19430

SUBJECT: PLANT MANUAL UPDATE: NEW REVISION TO PROCEDURE

PROCEDURE/FORM NUMBER: OP-1905.004

REV. # 5 TC # 0 PC # 0

PROCEDURE/FORM TITLE: EOF RAD CONTROL

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PROCEDURE(S)

PAGE(S)

SIGNATURE: _____ DATE: _____
UPDATED

PRINT NAME _____

form title: TRANSMITTAL (PROCEDURE/WORK PLANS/CHANGES/FORMS) | form no. 1013.002H | rev. _____

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ENTERGY OPERATIONS INCORPORATED ARKANSAS NUCLEAR ONE

61 of 77

TITLE: EOF RADIOLOGICAL CONTROLS

PROC/WORK PLAN NO.
1905.004

REV.
5

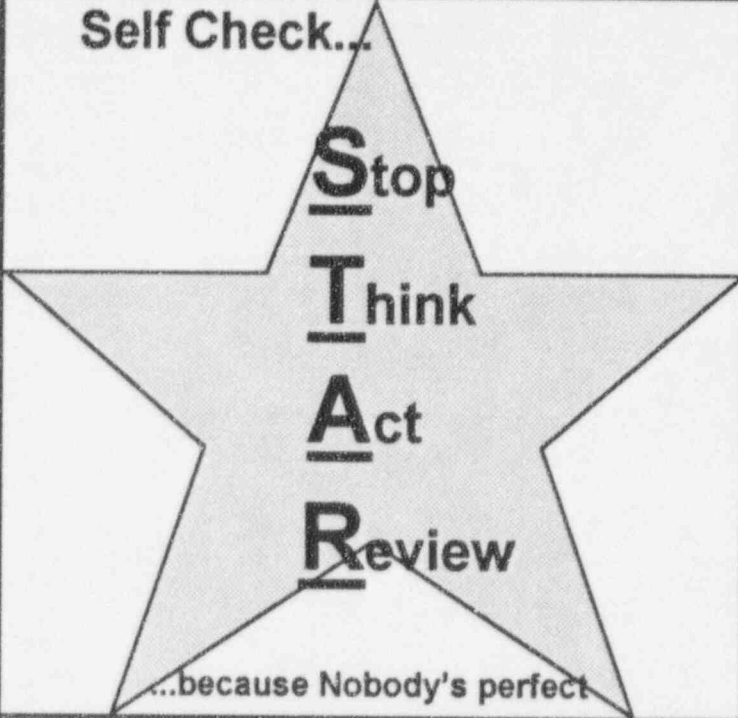
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SAFETY-RELATED
☒ YES ☐ NO

CONTROLLED COPY # 103

PAGE 1 OF 1

IPTE ☐ YES
☒ NO

PAGE	CHG	PAGE	CHG		PAGE	CHG	PAGE	CHG
1				<p>Self Check...</p>  <p>Stop Think Act Review</p> <p>...because Nobody's perfect</p>				
2								
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VERIFIED BY DATE TIME

APPROVAL AUTHORITY:

Shirley R. Cotton

APPROVAL DATE:

5/5/95

REQUIRED EFFECTIVE DATE:

FORM TITLE:

LIST OF AFFECTED PAGES

FORM NO.
1000.006A

REV.
43

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 1 of 12 REV: 5 CHANGE:
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1.0 PURPOSE

This procedure provides guidance for radiological control practices at the Emergency Operations Facility (EOF) during emergency situations.

2.0 SCOPE

- 2.1 This procedure is applicable during Alert, Site Area Emergency, or General Emergency conditions.
- 2.2 This procedure applies to ANO emergency support personnel and the Emergency Operations Facility/Alternate Emergency Operations Facility.

3.0 REFERENCES

3.1 REFERENCES USED IN PROCEDURE PREPARATION:

- 3.1.1 Emergency Plan
- 3.1.2 1000.031, "Radiation Protection Manual"
- 3.1.3 1903.011, "Emergency Response/Notifications"

3.2 REFERENCES USED IN CONJUNCTION WITH THIS PROCEDURE:

- 3.2.1 1903.030, "Evacuation"
- 3.2.2 1903.034, "Emergency Operations Facility Evacuation"
- 3.2.3 1903.066, "Emergency Response Facility - Operational Support Center (OSC)"
- 3.2.4 1903.067, "Emergency Response Facility - Emergency Operations Facility (EOF)"
- 3.2.5 1601.209, "Whole Body Counting"
- 3.2.6 1601.208, "Self Reading Dosimeters"
- 3.2.7 1601.301, "Radiological Surveys"
- 3.2.8 1601.200, "Personnel Processing/Records"
- 3.2.9 1601.400, "Response Check and Operation of Portable Survey Meters"
- 3.2.10 1601.402, "Operation of Portable Air Samplers"
- 3.2.11 1601.203, "TLD Reader Calibration"

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 2 of 12 REV: 5 CHANGE:
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3.3 RELATED ANO PROCEDURES

3.3.1 1905.001, "Emergency Radiological Controls"

3.4 REGULATORY CORRESPONDENCE CONTAINING NRC COMMITMENTS WHICH ARE IMPLEMENTED IN THIS PROCEDURE:

3.4.1 OCAN038313; Section 8

4.0 DEFINITIONS

- 4.1 Controlled Access Area - That portion of the station to which access is positively controlled for radiological protection purposes. (Basically, this area consists of the Reactor Buildings and portions of the Auxiliary Buildings for both units.)
- 4.2 Control Point - The area or location established for the purpose of controlling personnel movement into and out of Controlled Access Areas.
- 4.3 Radiologically Controlled Area - A Radiologically Controlled Area (RCA) is defined as an area within the plant site in which radioactive material (including contamination) and/or radiation may be present in quantities sufficient to require protective measures. (The Controlled Access Area, for example, is a Radiologically Controlled Area).
- 4.4 Emergency Operations Facility (EOF) - A near site emergency response facility located approximately 0.65 miles northeast of the reactor buildings (the ANO Training Center).
- 4.5 Alternate Emergency Operations Facility (AEOF) - The AP&L Russellville District Office located at 305 South Knoxville Street, Russellville, or any other facility designated by the EOF Director/TSC Director as appropriate.

5.0 RESPONSIBILITIES

- 5.1 RADIOLOGICAL/ENVIRONMENTAL ASSESSMENT MANAGER (REAM)
 - 5.1.1 Responsible for the implementation of this procedure during an emergency following arrival at the EOF or Alternate EOF.
 - 5.1.2 Responsible for the activation of the REAM Assistant.
- 5.2 REAM ASSISTANT
 - 5.2.1 Responsible for the activation of the EOF Health Physics Supervisor.

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 3 of 12 REV: 5 CHANGE:
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5.3 RADIATION PROTECTION AND RADWASTE MANAGER

5.3.1 Responsible for the administrative control of this procedure.

5.4 HEALTH PHYSICS SUPERVISOR

5.4.1 Responsible for ensuring that HP assistance has been dispatched to the EOF.

5.5 EOF HEALTH PHYSICS SUPERVISOR

5.5.1 Responsible for ensuring that the appropriate control points and radiological control measures are established and implemented at the EOF or AEOF.

5.5.2 Responsible for evaluating radiological conditions of the EOF and recommending EOF protective actions.

5.5.3 Responsible for supervising health physics coverage at the EOF and at the Alternate EOF, if activated.

6.0 GENERAL GUIDELINES FOR EOF RADIOLOGICAL CONTROL

6.1 The EOF HP Supervisor shall determine habitability of EOF and make appropriate recommendations to the REAM in accordance with Attachment 1.

6.2 If the EOF is not habitable, the EOF HP Supervisor shall determine habitability of the AEOF and make appropriate recommendations to the REAM in accordance with Attachment 1.

6.3 Evacuation of the EOF shall be performed in accordance with Procedure 1903.034, "Emergency Operations Facility Evacuation".

7.0 SURVEYS

7.1 Surveys should be conducted in accordance with the applicable radiation protection procedures (1012.xxx Series) and emergency radiation protection procedures (1905.xxx) Series. Performance of surveys should be logged on Form 1905.004A, "EOF Survey Log".

7.2 Survey results shall be documented on Forms 1905.004B-1905.004F, "EOF Survey Form". Radiation surveys should be made inside and outside the EOF hourly and shall be made every two hours. Contamination surveys should be performed as conditions warrant (i.e., contaminated personnel at the control point(s)).

7.3 Airborne radioactivity surveys shall be performed in accordance with 1012.018, "Administration of Radiological Surveys". If a release is in progress, attempts should be made to take air samples inside and outside the EOF protected area every hour but shall be taken at least every four hours.

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 4 of 12 REV: 5 CHANGE:
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7.4 A completed copy of each survey report shall be retained by the EOF HP Supervisor.

7.5 The EOF HP Supervisor should provide the REAM a verbal summary report of the EOF radiological conditions at least hourly or more frequently as conditions warrant.

8.0 CONTROL POINTS

8.1 Upon activation of the EOF, radiological control points should be established at the designated (exits/entrances) to the EOF. (Normally the 1st floor west entrance and the 2nd floor north entrance.)

8.2 The following radiological controls should be instituted at the control points.

8.2.1 A frisking station using an RM-14/HP-210 or equivalent calibrated device should be used to check personnel entering the EOF suspected of being contaminated and contamination control points set up accordingly.

NOTE

An HP Technician shall be stationed at the control point during plant evacuation to the EOF to monitor Emergency Response/Emergency Standby Personnel as they arrive.

8.2.2 If anyone entering or leaving the EOF is found to be contaminated, decontamination procedures should be evaluated/initiated in accordance with 1012.023, "Personnel Contamination Events (PCE)".

9.0 ATTACHMENTS AND FORMS

9.1 ATTACHMENTS 1, "EOF/AEOF PROTECTIVE ACTION GUIDELINES".

9.2 FORM 1905.004A, "EOF SURVEY LOG".

9.3 FORM 1905.004B, "EOF SURVEY FORM - EOF 1ST FLOOR, WEST SIDE

9.4 FORM 1905.004C, "EOF SURVEY FORM - EOF 1ST FLOOR, EAST SIDE

9.5 FORM 1905.004D, "EOF SURVEY FORM - EOF 2ND FLOOR, WEST SIDE

9.6 FORM 1905.004E, "EOF SURVEY FORM - EOF 2ND FLOOR, EAST SIDE

9.7 FORM 1905.004F, "EOF SURVEY FORM - ALTERNATE EOF

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 5 of 12 REV: 5 CHANGE:
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ATTACHMENT 1

Page 1 of 2

EOF/AEOF PROTECTIVE ACTION GUIDELINES

<u>CONDITION</u>	<u>RECOMMENDED ACTIONS</u>
1. Plant Evacuation declared, EOF Evacuation likely to occur.	Consider relocation of media and/or non-essential ANO personnel.
2. Exclusion Area and/or Area Evacuation declared.	Consider protective action for media and/or non-essential ANO personnel consistent with the protective action recommendations made for the general public per the applicable EPIP.
3. Area Survey Measurements Exceed 2.5 mRem/hr in Unprotected Areas of EOF.	Consider evacuation of all non-essential personnel from the unprotected areas of the EOF.
4. EOF Protected Area Radiation Monitor Warning Alarm (1 mr/hr)	Verify EOF ARM alarm. Conduct area radiation survey of unprotected areas of EOF and evacuate all personnel in those areas if necessary. Consider having all ERO personnel, other than activated Emergency Response Teams, to remain sheltered in the protected area of the EOF, unless otherwise instructed by the EOF Director.
5. EOF Protected Area Radiation Monitor alarms Hi (2.5 mr/hr) and/or iodine concentration exceeds $2.7E^{-9}$ μ Ci/cc.	Verify EOF ARM alarm. Consider evacuation of all nonessential personnel from the protected areas of the EOF. All ERO personnel should remain sheltered in the EOF protected area. Increase frequency of airborne and direct radiation monitoring of EOF, ensure EOF filtered ventilation is operational; record DAC hours.

PROC./WORK PLAN NO. 1905.004	PROCEDURE/WORK PLAN TITLE: EOF RADIOLOGICAL CONTROLS	PAGE: 6 of 12 REV: 5 CHANGE:
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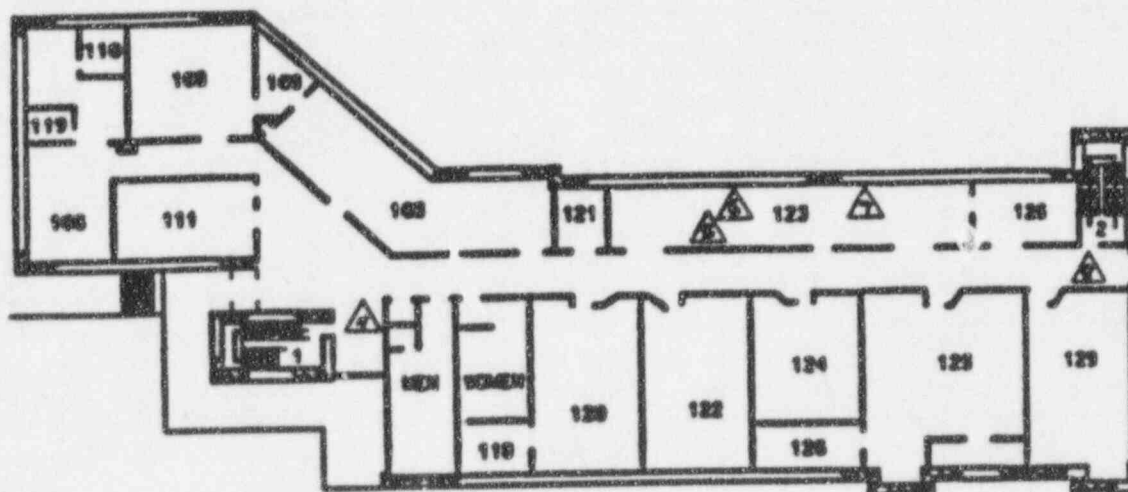
ATTACHMENT 1

Page 2 of 2

EOF/AEOF PROTECTIVE ACTION GUIDELINES

<u>CONDITION</u>	<u>RECOMMENDED ACTIONS</u>
6. EOF Protected Area radiation levels exceed 100 mRem/hr but less than 1 Rem/hr, and/or iodine concentration exceeds 1 DAC ($2.0E^{-8}$ μ Ci/cc).	If conditions are estimated to be temporary (less than 30 minutes), continue on-going protective actions. If conditions are estimated to be long-term (greater than 30 minutes), initiate EOF evacuation.
7. EOF Protected Area radiation levels exceed 1 Rem/hr, and/or iodine concentration exceeds 4 DAC ($8.0E^{-8}$ μ Ci/cc).	<u>Immediate</u> evacuation of the EOF is required.

EMERGENCY OPERATIONS FACILITY
1ST FLOOR - WEST SIDE
(PROTECTED AREA)



RMS LOCATION

4-8052 7-8055
5-8053 8-8056
6-8054

SURVEY NO. _____
DATE: _____
INSTR. SERIAL NO. _____
SURVEYED BY: _____
REVIEWED BY: _____
(EOF HP SUPERVISOR)

TIME: _____
CAL. DUE DATE: _____

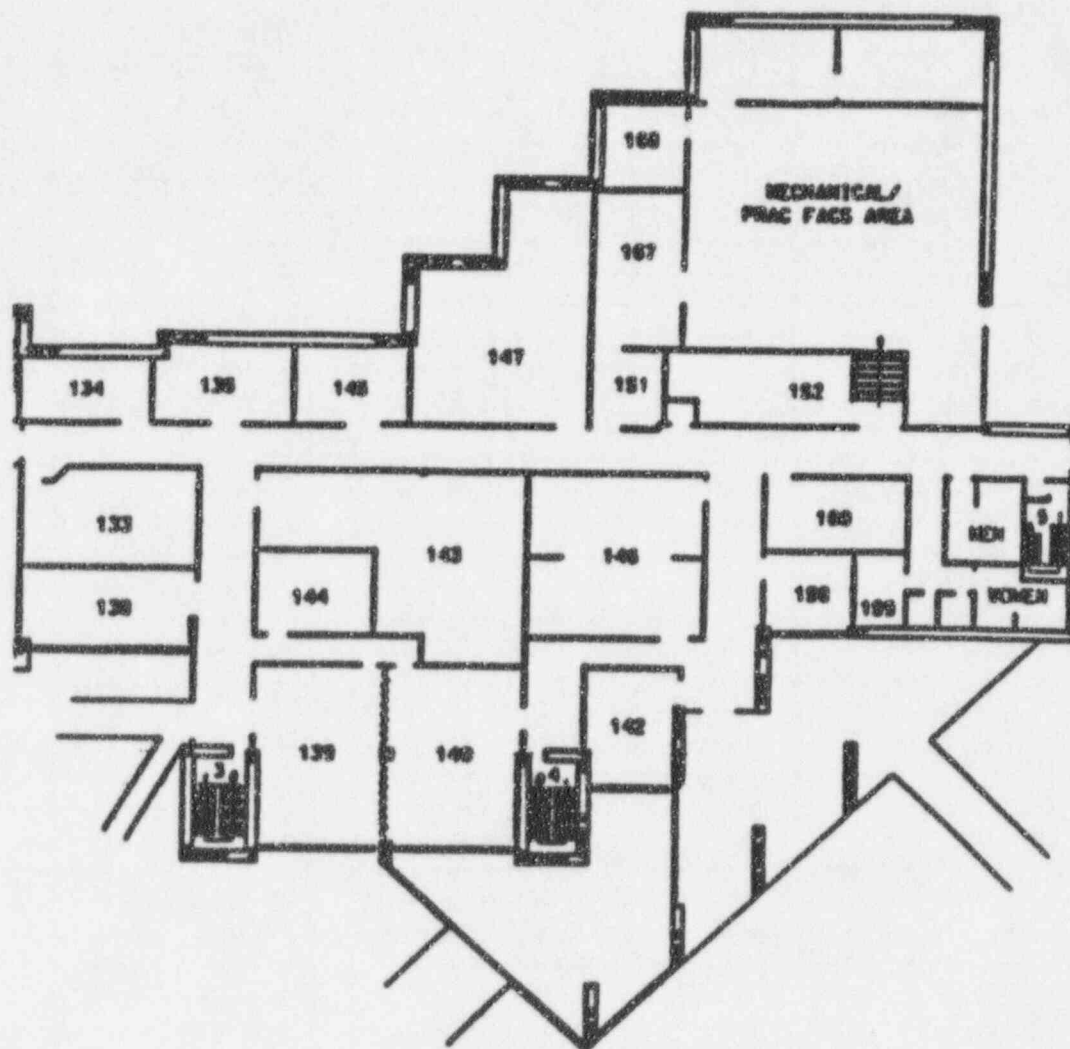
FORM TITLE:	EOF SURVEY FORM	FORM NO. 1905.004B	REV. 5
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() Smears indicated on the reverse side have less than 1000 DPM unless otherwise noted.

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Date _____ Time _____	Date _____ Time _____
Counting Inst. _____	Counting Inst. _____
Cal. Due Date: _____ D/C _____	Cal. Due Date: _____ D/C _____
Bkgd: _____	Bkgd: _____
Counted by: _____	Counted by: _____

EMERGENCY OPERATIONS FACILITY
1ST FLOOR - EAST SIDE
(UNPROTECTED AREA)



SURVEY NO. _____
DATE: _____
INSTR. SERIAL NO. _____
SURVEYED BY: _____
REVIEWED BY: _____
(EOF HP SUPERVISOR)

TIME: _____
CAL. DUE DATE: _____

FORM TITLE:

EOF SURVEY FORM

FORM NO.

1905.004C

REV.

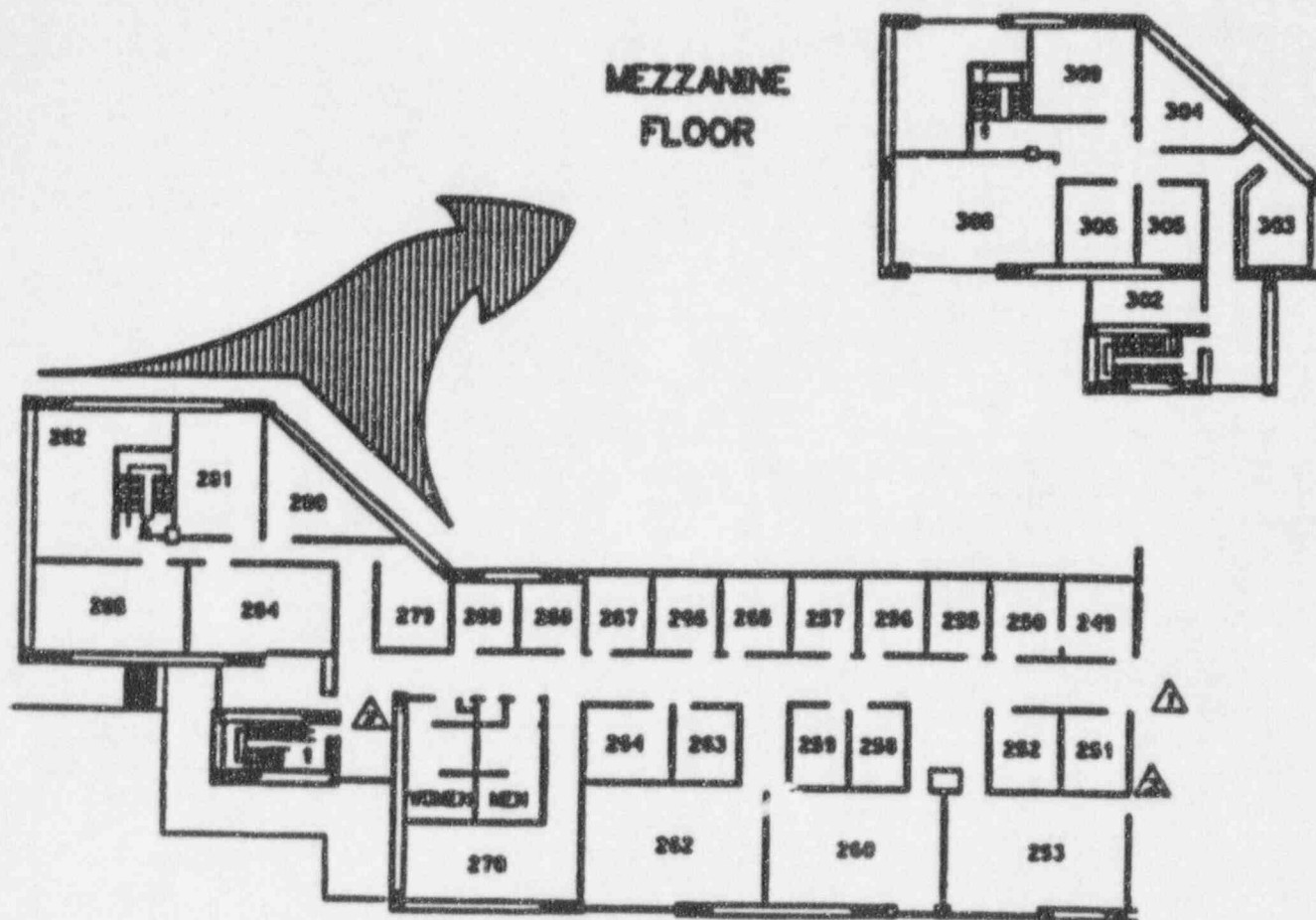
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Counting Inst. _____	Counting Inst. _____
Cal. Due Date: _____ D/C _____	Cal. Due Date: _____ D/C _____
Bkgd: _____	Bkgd: _____
Counted by: _____	Counted by: _____

EMERGENCY OPERATIONS FACILITY
2ND FLOOR - WEST SIDE
(PROTECTED AREA)



RMS LOCATION
1-8058
2-8059
3-8057

SURVEY NO. _____
DATE: _____
INSTR. SERIAL NO. _____
SURVEYED BY: _____
REVIEWED BY: _____
(EOF HP SUPERVISOR)

TIME: _____
CAL. DUE DATE: _____

FORM TITLE: EOF SURVEY FORM	FORM NO. 1905.004D	REV. 5
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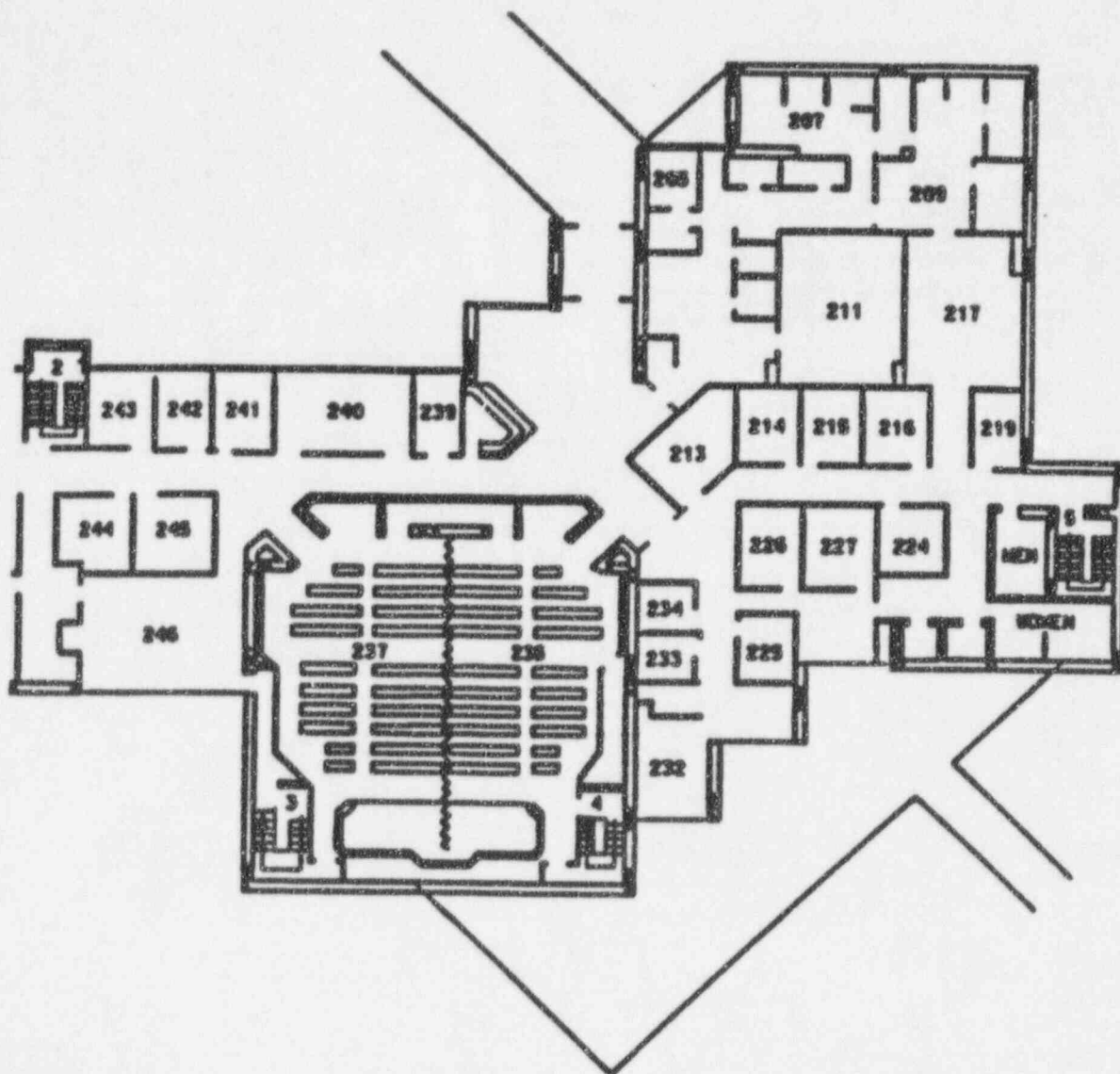
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Counting Inst. _____
Cal. Due Date: _____ D/C _____
Bkgd: _____
Counted by: _____

Date _____ Time _____
Counting Inst. _____
Cal. Due Date: _____ D/C _____
Bkgd: _____
Counted by: _____

EMERGENCY OPERATIONS FACILITY
2ND FLOOR - EAST SIDE
(UNPROTECTED AREA)



SURVEY NO. _____
DATE: _____
INSTR. SERIAL NO. _____
SURVEYED BY: _____
REVIEWED BY: _____
(EOF HP SUPERVISOR)

TIME: _____
CAL. DUE DATE: _____

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Date _____ Time _____	Date _____ Time _____
Counting Inst. _____	Counting Inst. _____
Cal. Due Date: _____ D/C _____	Cal. Due Date: _____ D/C _____
Bkgd: _____	Bkgd: _____
Counted by: _____	Counted by: _____

[] Smears indicated on the reverse side have less than 1000 DPM unless otherwise noted.

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Date _____ Time _____	Date _____ Time _____
Counting Inst. _____	Counting Inst. _____
Cal. Due Date: _____ D/C _____	Cal. Due Date: _____ D/C _____
Bkgd: _____	Bkgd: _____
Counted by: _____	Counted by: _____