



Monticello Nuclear Generating Plant  
2807 W County Road 75  
Monticello, MN 55362

January 4, 2017

L-MT-17-001  
10 CFR 50.54(q)(5)  
10 CFR 72.44(f)

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Monticello Nuclear Generating Plant  
Docket 50-263  
Renewed Facility Operating License No. DPR-22

Change to the Monticello Nuclear Generating Plant (MNGP) Emergency Plan

Pursuant to 10 CFR 50.54(q)(5) and 10 CFR 72.44(f), Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy, submits a summary of changes to a MNGP Emergency Plan Implementing Procedure (EPIP) as Enclosure 1. The new revision to the EPIP is provided in Enclosure 2. The EPIP changes have been reviewed and do not result in a reduction in the effectiveness of the Emergency Plan.

Summary of Commitments

There are no new commitments and no revisions to existing commitments in this letter.

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Site Vice President, Monticello Nuclear Generating Plant  
Northern States Power Company – Minnesota

Enclosures (2)

cc: Emergency Response Coordinator, Region III, USNRC (with Enclosures)  
Resident Inspector, MNGP, USNRC (with Enclosure 1)  
Administrator, Region III, USNRC (w/o Enclosures)  
Chief, Plant Support Branch, Division of Reactor Safety, Region III, USNRC  
(with Enclosure 1)  
Director, Division of Spent Fuel Management, Office of Nuclear Material Safety and  
Safeguards (with Enclosure 1)

# ENCLOSURE 1

## Monticello Nuclear Generating Plant Summary of Changes – 10 CFR 50.54(q)(5)

### Description (Executive Summary)

A.2-424 (EOF Count Room Procedures) is being revised as described below:

Section 6.3 (Beta Counter Operation) reference to Miniscaler Beta Counter has changed as well as the reference to the Radiation Protection procedure for operational specific instructions (R.09.72). The new model of Beta Counter (Ludlam Model 3030P) has the same capabilities of detecting beta radiation as the previous one. The new instrument will continue to provide the users with the ability to test samples for radioactivity. This instrument upgrade is considered a change to the Monticello Nuclear Generating Plant (MNGP) Emergency Plan and will be evaluated further to ensure it does not result in a reduction in effectiveness of the MNGP Emergency Plan or require pre-approval prior to implementation.

### Change (1)

#### **Description:**

Section 6.3 of A.2-424

Verbiage before the change:

6.3 Beta Counter Operation (Miniscaler)

6.3.1 Set up the Beta Counter (Miniscaler) IAW Radiation Protection Procedure R.03.08

Verbiage after the change:

6.3 Beta Counter Operation

6.3.1 Set up the Beta Counter IAW Radiation Protection Procedure R.09.72 (MODEL 3030P ALPHA-BETA SMEAR COUNTER OPERATION)

**Doc ID or (Procedure Number) / Revision Number:** A.2-424 / 13

**Document Title:** EOF Count Room Procedures

#### **Licensing/Basis Affected:**

- 10 CFR 50.47
- 10 CFR Appendix E to Part 50
- NUREG-0654

### Evaluation Determination

#### **Regulatory Compliance Basis:**

This replacement of the beta counter in the EOF Count Room to a Ludlam Model 3030P and the related procedure change to A.2-424 will continue to comply with the regulatory requirements set forth per 10CFR50.47(b)(8), 10CFR50.47(b)(9) and 10CFR50.47(b)(11).

#### **Emergency Plan Effectiveness Basis:**

The revised version of A.2-424 and the related equipment replacement as described above will support effective Emergency Plan implementation and ensure continued capability to detect and measure contamination of samples taken on or off site for the purposes of assessing offsite deposition and EOF habitability. No reduction in effectiveness of the site's Emergency Plan results from this change.

**ENCLOSURE 2**

**Monticello Nuclear Generating Plant  
A.2-424, EOF Count Room Procedures, Revision 13**

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Approval: PCR 01468835

<b><u>INFORMATION USE</u></b>
<ul style="list-style-type: none"><li>• Procedure should be available, but <u>NOT</u> necessarily at the work location.</li><li>• Procedure may be performed from memory.</li><li>• User remains responsible for procedure adherence.</li></ul>

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## 1.0 PURPOSE

The purpose of this procedure is to provide instructions for EOF Count Room set-up, receiving area set-up, the proper operation of the Count Room equipment and instructions for the analysis of environmental and/or plant samples.

## 2.0 APPLICABILITY

2.1 An Alert or higher Emergency Classification has been declared and the Emergency Response Organization has been staffed, or the in-plant Count Room is unavailable.

## 3.0 ORGANIZATION AND RESPONSIBILITIES

3.1 The Radiation Protection Support Supervisor (RPSS) is responsible for:

3.1.1 Overall direction of the Field Teams and EOF Count Room activities.

3.1.2 Coordination of Radiation Protection group activities in the Count Room and Receiving Area.

3.2 The Radiation Protection Specialists (Chem) are responsible for:

3.2.1 Implementation of this procedure.

3.2.2 Coordination of Sample logging, identification and documentation.

## 4.0 DISCUSSION

4.1 The primary function of the EOF Count Room is the analysis of environmental and/or plant samples taken during emergency conditions. The EOF Count Room also provides backup Count Room capability in the event the in-plant Count Room becomes inoperable or uninhabitable.

This procedure provides instructions for the startup and operation of analytical equipment located in the EOF Count Room and also provides instructions for the analysis of environmental samples that may be taken during post accident conditions.

## 5.0 PRECAUTIONS

5.1 Appropriate radiological precautions should be used when handling potentially contaminated or highly radioactive samples.

5.2 Strict contamination control methods should be employed when transferring samples from the EOF receiving area to the EOF Count Room for analysis. These methods should include the re-bagging or wrapping of samples to prevent contamination of the EOF Count Room.

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- 5.3 High activity samples (i.e., > 10 millirem/HR) should be stored in the shielded storage container in the EOF receiving area. A sample storage cabinet is also provided in the EOF receiving area for storage of low activity samples. Samples which are no longer required for analysis should be properly disposed of or transferred to a designated storage area as directed.
- 5.4 EOF Count Room personnel should perform periodic radiological surveys of the Count Room and receiving area, have proper dosimetry, and remain alert to their own exposure. Exposure of Count Room personnel should be in accordance with administrative control levels.

## **6.0 INSTRUCTIONS**

### **6.1 EOF Count Room Activation**

- 6.1.1 Obtain keys for the supply cabinets and count room desk from the key box in the EOF command center.
- 6.1.2 Initiate Form 5790-424-01 (EOF COUNT ROOM STARTUP CHECKLIST).

**NOTE: Steps 6.2 through 6.4 may be performed in any order or concurrently; however, substeps within each step must be performed in order written.**

### **6.2 HpGe Operation**

- 6.2.1 Log into computer using current node, user name, and password.
- 6.2.2 IF High Voltage power is OFF on DSPEC display, THEN apply voltage IAW section 5.11 of FP-CY-GSA-01
- 6.2.3 Perform HpGe energy calibration, IAW FP-CY-GSA-01 (OPERATION OF THE GAMMA SPECTRAL ANALYSIS INSTRUMENTATION).
- 6.2.4 Record calibration completion on Form 5790-424-01.

### **6.3 Beta Counter Operation**

- 6.3.1 Set up the Beta Counter IAW Radiation Protection Procedure R.09.72 (MODEL 3030P ALPHA-BETA SMEAR COUNTER OPERATION).
- 6.3.2 IF Beta Counter can NOT be setup, THEN inform RP personnel and count smears with a frisker or RO-2 IAW R.02.02.
- 6.3.3 Record completion on Form 5790-424-01.

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#### 6.4 Receiving Area Setup

- 6.4.1 When directed set up the receiving area with equipment in the Receiving Area Setup Cabinet. (See Form 5790-802-07)
- 6.4.2 Set up the portable change booths next to the shower as indicated on Form 5790-802-07.
- 6.4.3 Set up the contamination area boundaries with the rad-rope, step-off-pads, and stanchions located in cabinet.
- 6.4.4 Obtain friskers from the instrument cabinet in the count room and set up in their respective location. (See Form 5790-802-07)
- 6.4.5 Break out any other equipment which is required for handling contaminated samples or personnel decontamination in the receiving area.

**NOTE:** Steps 6.5 and 6.6 may be performed in any order and may be repeated as necessary for additional samples.

#### 6.5 Snow/Dirt/Sand Sample Analysis

- 6.5.1 FILL a 500 ml marinelli with sample. For snow, melt snow if not already melted and transfer to a 500 ml marinelli container.
- 6.5.2 Analyze the sample IAW Fleet Procedure FP-CY-GSA-01.
- 6.5.3 Calculate ground deposition activity as follows:

$$uCi/m^2 = \frac{\text{total uCi in sample}}{(\text{area of sample in cm}^2) \times (.0001 \text{ m}^2/\text{cm}^2)}$$

- 6.5.4 Record sample results on Form 5790-424-02 (EOF EMERGENCY CHEMISTRY SAMPLE LOG) and report the results to the REC or RPSS.
- 6.5.5 IF additional sample analysis is required, THEN repeat Steps 6.5.1 through 6.5.4.

#### 6.6 Vegetation Sample Analysis

- 6.6.1 FILL a 500 ml marinelli with vegetation.
- 6.6.2 WEIGH the marinelli on the Triple Beam Balance and note the weight.
- 6.6.3 Calculate the weight of the vegetation as follows:  
Gross Weight (gms) - 163 gms (marinelli + bag) = Net weight of sample



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**NOTE: For sample units use grams, for sample size use net sample weight.**

- 6.6.4 Analyze sample in accordance with Fleet Procedure FP-CY-GSA-01.
- 6.6.5 Record sample results on Form 5790-424-02 (EOF EMERGENCY CHEMISTRY SAMPLE LOG) and report the results to the REC or RPSS.
- 6.6.6 IF additional sample analysis is required, THEN repeat Steps 6.6.1 through 6.6.5.

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## 7.0 FIGURES

### FIGURE

#### 7.1 Forms Utilized in this Procedure

1. 5790-424-01 EOF Count Room Startup Checklist.
2. 5790-424-02 EOF Emergency Chemistry Sample Log.
3. 5790-802-07 EOF Receiving Area Floor Plan.

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FIGURE

**7.2 Summary of Significant Changes**

<u>Section</u>	<u>Change and Reason for the Change</u>
6.2.1 and 6.2.2	Update to be functional with new Ortec DSPEC and added note to allow concurrent performance activities.
6.3.1	Add the procedural reference for the 3030P procedure because new equipment was placed in the EOF countroom. Updated to reference new model of Beta Counter.
6.3.2	Added compensatory measure for counting smears in the event the BC-4 or 3030P Smear Counters cannot be used.
6.5	Added note to allow samples to be repeated and be performed in any order.