



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

December 21, 2012

L-MT-12-078
10 CFR 50.90

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

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

License Amendment Request: Modification to the MNGP Emergency Plan Concerning
a Revision to the Emergency Action Level Setpoint for the Turbine Building Normal
Waste Sump Monitor

Pursuant to 10 CFR 50.90, Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., proposes to revise the Monticello Nuclear Generating Plant (MNGP) Emergency Plan by revising the Emergency Action Level (RA1.2) setpoint for the Turbine Building Normal Waste Sump (radiation) Monitor.

Enclosure 1 provides a description of the proposed changes and includes the technical evaluation and associated no significant hazards determination and environmental evaluation. Enclosure 2 provides a marked-up copy of the existing Emergency Action Level (EAL) and Basis pages indicating the proposed changes.

The MNGP Plant Operations Review Committee has reviewed this application. In accordance with 10 CFR 50.91, a copy of this application, with enclosures, is being provided to the designated Minnesota Official.

This license amendment request has been evaluated and has no impact on the pending Extended Power Uprate and Maximum Extended Load Line Limit Analysis Plus (MELLLA+) license amendment requests currently under NRC review.

NSPM requests approval of this proposed license amendment request by December 30, 2013, with the amendment being implemented within 120 days of U.S. Nuclear Regulatory Commission (NRC) approval.

Should you have questions regarding this letter, please contact Mr. Richard Loeffler at (763) 295-1247.

Summary of Commitments

This letter proposes no new commitments and does not revise any existing commitments.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on December 21, 2012.

A handwritten signature in cursive script, reading "Mark A. Schimmel". The signature is written in dark ink and is positioned above the printed name and title.

Mark A. Schimmel
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosures (2)

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC
Minnesota Department of Commerce

ENCLOSURE 1

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE AMENDMENT REQUEST

**MODIFICATION TO THE MNGP EMERGENCY PLAN CONCERNING A
REVISION TO THE EMERGENCY ACTION LEVEL SETPOINT FOR THE
TURBINE BUILDING NORMAL WASTE SUMP MONITOR**

DESCRIPTION OF CHANGES

(11 pages follow)

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**MODIFICATION TO THE MNGP EMERGENCY PLAN CONCERNING A
REVISION TO THE EMERGENCY ACTION LEVEL SETPOINT FOR THE
TURBINE BUILDING NORMAL WASTE SUMP MONITOR**

DESCRIPTION OF CHANGES

1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., proposes to revise the Monticello Nuclear Generating Plant (MNGP) Emergency Plan by revising the Emergency Action Level (RA1.2) setpoint for the Turbine Building Normal Waste Sump (radiation) Monitor. The proposed change will approve the reduction of the threshold value for the Turbine Building Normal Waste Sump (TBNWS) Monitor to a new value of approximately 90 percent of the range of the monitor (i.e., 900,000 counts-per-minute (cpm)), which is approximately 48 times the Offsite Dose Calculation Manual (ODCM) alarm setpoint value.

2.0 DETAILED DESCRIPTION

2.1 Proposed Change

A description of the proposed change to the TBNWS Monitor Emergency Action Level (EAL), i.e., RA1.2, is provided below together with a discussion of the justification for the change. The proposed wording for this monitor EAL (and basis document) which was developed previously, and for which approval is requested, is provided in Enclosure 2.

EAL RA1.2: The action level for escalation to the emergency classification Alert level due to liquid releases is revised from 200 times the ODCM alarm setpoint to 48 times the setpoint as indicated by the TBNWS (radiation) Monitor. A corresponding change to the Basis discussion is proposed to describe the basis for this revised action. This change to the EAL is appropriate because it will restore indication to within the capability of the applicable instrumentation and, based on this proposed action level, classification will be determined on a timely basis assuring the health and safety of the public is maintained.

This proposed change is acceptable because the MNGP Emergency Plan will continue to meet the requirements of 10 CFR 50 Appendix E and the planning standards of 10 CFR 50.47(b).

2.2 Background

The current licensing basis for the MNGP EALs was established in early 2006. In October 2004, the Nuclear Management Company (NMC) submitted EAL changes for the MNGP (Reference 1) based on the EALs provided in Nuclear Energy Institute (NEI) 99-01 Revision 4, "Methodology for Development of Emergency Action Levels" (Reference 2). U.S. Nuclear Regulatory Commission (NRC) Regulatory Guide (RG) 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors" (Reference 3), identifies NEI 99-01 Revision 4 as an acceptable EAL scheme for compliance with 10 CFR 50.47(b)(4). The NRC reviewed the proposed EAL changes and approved them for implementation at MNGP by a Safety Evaluation (Reference 4) which became the current licensing basis for the MNGP EAL scheme.

Subsequent to implementing the revised EALs, the NSPM staff for the MNGP determined that the indication range (span) of the installed TBNWS (radiation) Monitor was insufficient to support the NEI 99-01 intended threshold value of 200 times the ODCM alarm setpoint value. This condition was documented in the corrective action program (CAP) for resolution. Similar issues have been identified at other plants,⁽¹⁾ and has resulted in NRC findings. An interim compensatory measure was implemented at MNGP under the incorrectly interpreted provisions of 10 CFR 50.54(q) to revise the TBNWS Monitor setpoint to be reset to 90 percent of full scale without prior NRC review and approval.

Industry experience and a detailed EAL review for MNGP determined that changes were required to maintain compliance with the intent of the scheme as provided in NEI 99-01, the licensing basis for the current MNGP EALs. NSPM, applying the evaluation criteria provided in RG 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors" (Reference 5), determined that the changes to resolve this issue should have been considered a "difference" that would require prior NRC approval. A presubmittal conference call was held with the NRC, as recommended by RG 1.219, pertaining to EAL changes for the Prairie Island Nuclear Generating Plant (PINGP). Subsequently NSPM concluded that revision was also required to the TBNWS (radiation) Monitor setpoint, as described within this LAR, and required prior NRC review and approval.

As indicated above the proposed EAL change requested by this LAR, for which approval is requested, had been incorrectly incorporated (as an interim compensatory measure) into the MNGP Emergency Plan. Thus a markup of clarifying changes to the current TBNWS Monitor EAL and the new EAL Basis is provided. Since the current EAL is already in the final proposed form, the previously incorporated EAL and EAL Basis changes are indicated, since they are already in the MNGP Emergency Plan.

1. A review of operating experience indicated EALs associated with radiation monitors with setpoints exceeding full scale were ineffective. Based on this, a review was performed for the PINGP and subsequently MNGP EALs.

This LAR seeks to bring the change process for EAL into compliance with regulatory requirements and revise the EAL Basis to reflect the proposed change.

3.0 TECHNICAL EVALUATION

The current licensing basis for MNGP is in conformance with NEI 99-01 Revision 4, which was determined to be an acceptable EAL scheme by RG 1.101 for compliance with 10 CFR 50.47(b)(4). The NRC has reviewed and approved the present EAL scheme for the MNGP (Reference 4).

EAL RA1.2 addresses effluent or accident radiation monitors on non-routine release pathways (i.e., those for which a discharge permit would not normally be prepared). The MNGP ODCM establishes a methodology for determining effluent radiation monitor setpoints. The EAL scheme requires the values shown for each radiation monitor under the "Alert" column to be 200 hundred times the calculated ODCM release limits, unless an alternative value is authorized⁽²⁾ and were determined using the ODCM methodology. The effluent or accident radiation monitor setpoints, in this case the TBNWS Monitor setpoint, are established to ensure ODCM release limits are not exceeded for releases via these non-routine release pathways. The current EAL for the TBNWS Monitor (RA1.2) is based upon the NEI 99-01, Revision 4, classification scheme which requires escalation to an Alert emergency classification when a liquid release monitored by a radiation monitor indicates 200 times the ODCM alarm setpoint value for one of the specified radiation monitoring instruments for 15 minutes or longer.

However, as discussed previously, a review determined that the threshold value for the MNGP TBNWS Monitor was approximately 3.7 times greater than the range of the monitor. This was determined to be unacceptable since the installed TBNWS (radiation) Monitor cannot provide a reading for that radiation level, since it would be reading off-scale, and hence did not provide an acceptable basis for escalating the event classification. In 2010 a setpoint modification was made that established a new threshold value for the TBNWS Monitor of 90 percent of the range of the monitor, i.e., it was reset to the current value of 900,000 cpm. This setpoint correlates to 48 times the ODCM alarm setpoint.

This LAR requests the NRC authorize the revision of the TBNWS Monitor setpoint to require escalating the event classification to an Alert status when the TBNWS Monitor indicates 48 times the ODCM alarm setpoint value for 15 minutes or longer. Revising EAL RA1.2 to classify an Alert at 48 times the ODCM alarm setpoint ensures the classification can be performed within the current range of the installed radiation monitoring equipment.

2. The Stack Effluent Monitor setpoint for MNGP was approved by the NRC to be forty times the calculated ODCM release limit.

This proposed EAL change reduces the classification of a liquid effluent release via the Turbine Building normal waste sump pathway to approximately 48 times the ODCM limit from the current approved licensing bases of 200 times the ODCM limit. No other radiation monitor is available to assess the liquid effluent radioactive release condition from the Turbine Building normal waste sump pathway at 200 times the ODCM value. Use of the TBNWS Monitor with a setting of 48 times the ODCM alarm setpoint maintains a clear delineation and escalation criteria for classification of and notification of an Unusual Event and an Alert. Classification of an Alert at 48 times the ODCM alarm setpoint value remains the most effective means of classifying an abnormal liquid release via the Turbine Building normal waste sump pathway.

Conclusion

Changing the TBNWS Monitor setting EAL (RA1.2) will assure that the Emergency Plan is implemented in an effective and consistent manner. The EAL alarm setpoint value for classifying a liquid effluent release via the Turbine Building normal waste sump pathway will be established at a value within the indication capability of the radiation monitor. Use of the TBNWS Monitor at the proposed alarm setpoint value will provide for escalation of an event at an appropriate level for liquid releases through this pathway.

4.0 REGULATORY SAFETY ANALYSIS

4.1 Applicable Regulatory Requirements / Criteria

a. Discussion of Applicable 10 CFR 50, Appendix A, General Design Criteria and Plant Specific Principal Design Criteria

MNGP was designed largely before the publishing of the 70 General Design Criteria (GDC) for Nuclear Power Plant Construction Permits proposed by the Atomic Energy Commission (AEC) for public comment in July 1967, and constructed prior to the 1971 publication of the 10 CFR 50, Appendix A, GDC. As such, MNGP was not licensed to the Appendix A, GDC.

The MNGP USAR, Section 1.2, lists the Principal Design Criteria (PDC) for the design, construction and operation of the plant. MNGP USAR Appendix E provides a plant comparative evaluation to the 70 proposed AEC design criteria. It was concluded that the plant conforms to the intent of the GDC. The applicable GDC and PDC associated with radiation monitoring instrumentation is discussed below.

- PDC 1.2.1 – General Criteria

- b. The plant is designed in such a way that the release of radioactive materials to the environment is limited, so that the limits and guideline values of published regulations pertaining to the release of radioactive materials are not exceeded.

- PDC 1.2.4 – Plant Containment

- e. The integrity of the complete plant containment system and such other associated engineered safeguards as may be necessary are designed and maintained so that offsite and Control Room operator doses resulting from postulated design basis accidents are below the values stated in 10 CFR 50.67.

The applicable 70 Draft AEC General Design Criteria (AEC-GDC) are:

- Criterion 17 - Monitoring Radioactivity Releases (Category B)

Means shall be provided for monitoring the containment atmosphere, the facility effluent discharge paths, and the facility environs, for radioactivity that could be released from normal operations, from anticipated transients, and from accident conditions.

- b. *Title 10 Code of Federal Regulations 50.47(b):*

- (b) The onsite and, except as provided in paragraph (d) of this section, offsite emergency response plans for nuclear power reactors must meet the following standards:
 - (4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

The MNGP Emergency Plan includes a standard emergency classification and emergency action level scheme based on the industry standard NEI 99-01, Revision 4. This LAR proposes to modify the TBNWS Monitor setting EAL (RA1.2) to specifically reflect a scheme based upon the plant radiation monitor system and effluent parameters. EAL RA1.2 will be modified to base liquid effluent event actions on the TBNWS Monitor (radiation monitor) at 48 times the ODCM alarm setpoint value. With this change, the Emergency Plan

will continue to invoke a standard emergency classification and action level scheme consistent with the plant design and ability to measure effluent parameters. Thus with the proposed change to the TBNWS Monitor described within this LAR, the requirements of 10 CFR 50.47(b) continue to be met.

c. *Title 10 Code of Federal Regulations Part 50 Appendix E*

IV. Content of Emergency Plans

1. The applicant's emergency plans shall contain, but not necessarily be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiological emergencies, assessment actions ...

B. Assessment Actions

1. The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring.

The MNGP Emergency Plan includes means for determining the magnitude of, and for continually assessing the impact of the release of radioactive materials, including emergency actions levels that provide the criteria for determining the need for notification and participation of governmental agencies and protective measures. This LAR proposes to modify the TBNWS Monitor EAL (RA1.2) to specifically base the actions on in-plant conditions and instrumentation. EAL RA1.2 will be modified to base liquid effluent event actions on in-plant radiation monitor indications at 48 times the ODCM alarm setpoint value. With this change, the Emergency Plan will continue to provide the means for determining the magnitude of the release of radioactive material and include emergency actions levels that provide criteria for notification of governmental agencies and determining protective measures. This emergency action level continues to be based on in-plant conditions, instrumentation and onsite monitoring. Thus with the change proposed in this LAR, the requirements of 10 CFR 50 Appendix E continue to be met.

4.2 Precedent

NSPM is aware of two LARs which propose EAL changes. On April 27, 2012, Omaha Public Power District submitted an LAR for Fort Calhoun Station, Unit 1 (Reference 6) which proposed to revise emergency action levels for flooding. On April 30, 2012, NextEra Energy Seabrook, LLC, submitted an LAR for Seabrook Station, Unit 1 (Reference 7) which proposed to revise EALs for classifications based on instrumentation failures. Since the requirement to request EAL changes as an LAR was established less than one year ago, NSPM is not aware of any such LARs that have been reviewed and approved by the NRC.

4.3 No Significant Hazards Consideration Determination

In accordance with the requirements of 10 CFR 50.90, Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., requests an amendment to facility Renewed Operating License DPR-22, for the Monticello Nuclear Generating Plant (MNGP). The proposed change to the Emergency Plan is associated with the initiating condition for radioactive effluent monitoring via one pathway. The proposed change revise the emergency action level associated with the TBNWS Monitor to align with the capability of the installed instrumentation.

NSPM has evaluated the proposed amendment in accordance with 10 CFR 50.91 against the standards in 10 CFR 50.92 and has determined that the operation of the MNGP in accordance with the proposed amendment presents no significant hazards. NSPM's evaluation against each of the criteria in 10 CFR 50.92 follows.

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change to the emergency plan does not impact the physical function of plant structures, systems, or components (SSCs) or the manner in which SSCs perform their design function. The proposed change neither adversely affect accident initiators or precursors, nor alter design assumptions. The proposed change does not alter or prevent the ability of operable SSCs to perform their intended function to mitigate the consequences of an initiating event within assumed acceptance limits. No operating procedures or administrative controls that function to prevent or mitigate accidents are affected by the proposed change.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not impact the accident analysis. The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed), a change in the method of plant operation, or new operator actions. The proposed change will not introduce failure modes that could result in a new accident, and the change does not alter assumptions made in the safety analysis. The proposed change revise an emergency action level (EAL), which establish the thresholds for placing the plant in an emergency classification. EALs are not initiators of any accidents.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

Margin of safety is associated with confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public. The proposed change is associated with the EALs and does not impact operation of the plant or its response to transients or accidents. The change does not affect the TSs or the operating license. The proposed change does not involve a change in the method of plant operation, and no accident analyses will be affected by the proposed change. Additionally, the proposed change will not relax any criteria used to establish safety limits and will not relax any safety system settings. The safety analysis acceptance criteria are not affected by this change. The proposed changes will not result in plant operation in a configuration outside the design basis. The proposed change does not adversely affect systems that respond to safely shutdown the plant and to maintain the plant in a safe shutdown condition.

The revised EAL provides more appropriate and accurate criteria for determining protective measures that should be considered within and outside the site boundary to protect health and safety. The emergency plan will continue to activate an emergency response commensurate with the extent of degradation of plant safety.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, the NSPM has determined that operation of the facility in accordance with the proposed change does not involve a significant hazards consideration as defined in 10 CFR 50.92(c), in that it does not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

5.0 ENVIRONMENTAL EVALUATION

The NSPM has determined that the proposed change would not revise a requirement with respect to installation or use of a facility or component located within the restricted area, as defined in 10 CFR 20, nor would it change an inspection or surveillance requirement. The proposed amendment does not involve (i) a significant hazards consideration, or (ii) authorize a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite, or (iii) result in a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for a categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, NSPM concludes that pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Letter from Nuclear Management Company, LLC (NMC) to Nuclear Regulatory Commission (NRC), "Revision to Emergency Action Levels," dated October 22, 2004 (L-MT-04-066)
2. Nuclear Energy Institute (NEI) 99-01 Revision 4, "Methodology for Development of Emergency Action Levels," dated January 2003 (NUMARC/NESP-007). (ADAMS Accession Number ML041470131)
3. U.S. NRC Regulatory Guide 1.101, Revision 4, "Emergency Planning and Preparedness for Nuclear Power Reactors," dated July 2003.
4. Letter from NRC to NMC, "Monticello Nuclear Generating Plant, Unit No. 1 - Revision to Emergency Plan Emergency Action Levels (TAC No. MC5017)," dated January 5, 2006.
5. U.S. NRC Regulatory Guide 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors." (ADAMS Accession Number ML102510560)
6. Letter from Omaha Public Power District (OPPD) to Nuclear Regulatory Commission (NRC), "License Amendment Request (LAR) 12-03, Proposed Change to Revise Operating Requirements for Technical Specification 2.16, River Level, and Establish Emergency Action Level Classification Criteria for External Flooding Events under the Radiological Emergency Response Plan for Fort Calhoun Station," dated April 27, 2012 (LIC-12-0056).
7. Letter from NextEra Energy Seabrook, LLC (NextEra) to Nuclear Regulatory Commission (NRC), "Proposed Changes to Seabrook Station Emergency Action Levels Regarding Safety System Indications," dated April 30, 2012 (LAR 12-01).

ENCLOSURE 2

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE AMENDMENT REQUEST

**MODIFICATION TO THE MNGP EMERGENCY PLAN CONCERNING A
REVISION TO THE EMERGENCY ACTION LEVEL SETPOINT FOR THE
TURBINE BUILDING NORMAL WASTE SUMP MONITOR**

MARKED-UP EAL PAGES

(3 pages follow)

MONTICELLO NUCLEAR GENERATING PLANT		A.2-101
TITLE:	CLASSIFICATION OF EMERGENCIES	Revision 46
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FIGURE

7.2 EAL Technical Basis Document (Rev. 8) - (cont'd)

Abnormal Rad Levels / Radiological Effluent

RA1

Initiating Condition -- ALERT

Any UNPLANNED Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times the Off-site Dose Calculation Manual Limit for 15 Minutes or Longer.

Operating Mode Applicability: All

Emergency Action Levels: (RA1.1 or RA1.2 or RA1.3)

- RA1.1. VALID reading on any effluent monitor that exceeds 200 times the alarm setpoint established by a current radioactivity discharge permit for 15 minutes or longer.
- RA1.2. VALID reading on any of the following radiation monitors that exceeds the reading shown for 15 minutes or longer.

Monitor	Alert
<u>Gaseous</u>	
Stack Effluent Monitor (Ch A or B)	1.46E7 $\mu\text{Ci/sec}^*$
RB Vent Effluent Monitor (Ch A or B)	2.16E6 $\mu\text{Ci/sec}$
<u>Liquid</u>	
Service Water	31,400 cps
Discharge Canal Monitor	93,000 cps
TBNWS	900,000 cpm

Insert below.

" ** 48 times
ODCM
calculated limit"

Add " ** ".

FOR INFORMATION:

The TBNWS setpoint was previously changed from 3,775,200 cpm to 900,000 cpm as discussed within this LAR.

No change is required to this value.

*40 times ODCM calculated limit

- RA1.3. Confirmed sample analysis for gaseous or liquid release indicates concentrations or release rates, with a release duration of 15 minutes or longer, in excess of 200 times ODCM limit.

Basis:

This IC addresses a potential or actual decrease in the level of safety of the plant as indicated by a radiological release that exceeds regulatory commitments for an extended period of time. MNGP incorporates features intended to control the release of radioactive effluents to the environment. Further, there are administrative controls established to prevent unintentional releases, or control and monitor intentional releases. These controls are located in the Off-site Dose Calculation Manual (ODCM). The occurrence of extended, uncontrolled radioactive releases to the environment is indicative of a degradation in these features and/or controls.

I/arb

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FIGURE

7.2 EAL Technical Basis Document (Rev. 8) - (cont'd)

Abnormal Rad Levels / Radiological Effluent

RA1

The ODCM multiples are specified in ICs RU1 and RA1 only to distinguish between non-emergency conditions, and from each other. While these multiples obviously correspond to an off-site dose or dose rate, the emphasis in classifying these events is the degradation in the level of safety of the plant, NOT the magnitude of the associated dose or dose rate. Releases should not be prorated or averaged.

Using the NEI recommended scaling factor of 200X the ODCM limit for the Stack Effluent Monitor setpoint creates an overlap situation where the RA1 set point would be greater than the RS1 setpoint for this monitor. Because of this overlap, MNGP chose a scaling factor of 40X the ODCM limit for the Stack Effluent Monitor set point to provide proper and logical scaling and yet maintain separation between the RA1 and RS1 set points. This is necessary because the set points calculated for RA1 are based upon a different calculation methodology and limit than the setpoints calculated for RS1. The factor of 40 represents 20 times the RU1 EAL setpoint for the Stack Effluent Monitor and, as described above, serves only to distinguish between non-emergency conditions, and from each other.

UNPLANNED, as used in this context, includes any release for which a radioactivity discharge permit was not prepared, or a release that exceeds the conditions (e.g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit. The Emergency Director should not wait until 15 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 15 minutes. Also, if an ongoing release is detected and the starting time for that release is unknown, the Emergency Director should, in the absence of data to the contrary, assume that the release has exceeded 15 minutes.

" forty eight times the calculated ODCM release limit ("

RA1.1 addresses radioactivity releases that for whatever reason cause effluent radiation monitor readings that exceed two hundred times the alarm setpoint established by the radioactivity discharge permit. The alarm setpoints may be associated with a planned batch release, or a continuous release path. In either case, the setpoint is established by the ODCM to warn of a release that is not in compliance with the ODCM. Indexing the EAL threshold to the ODCM setpoints in this manner insures that the EAL threshold will never be less than the setpoint established by a specific discharge permit.

RA1.2 is intended to address effluent or accident radiation monitors on non-routine release pathways (i.e., for which a discharge permit would not normally be prepared). The ODCM establishes a methodology for determining effluent radiation monitor setpoints. The ODCM specifies default source terms and, for gaseous releases, prescribes the use of pre-determined annual average meteorology in the most limiting downwind sector for showing compliance with the regulatory commitments. The values shown for each monitor under column "Alert" are two hundred times the calculated ODCM release limits (with the exception of the Stack Effluent Monitor setpoint which is forty times the calculated ODCM release limit and the TBNWS Monitor setpoint which is 90% of the instruments full scale reading of 1,000,000 cpm) and were determined using this methodology. The setpoints are established to ensure the ODCM release limits are not exceeded.

RA1.3 addresses uncontrolled releases that are detected by sample analyses, particularly on unmonitored pathways, e.g., spills of radioactive liquids into storm drains, heat exchanger leakage in river water systems, etc.

l/arb

") "

Basis description information previously added as described with in this LAR.

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FIGURE

7.2 EAL Technical Basis Document (Rev. 8) - (cont'd)

Abnormal Rad Levels / Radiological Effluent

RA1

RA1.1 and RA1.2 directly correlate with the IC since annual average meteorology is required to be used in showing compliance with the ODCM and is used in calculating the alarm setpoints. The fundamental basis of this IC is NOT a dose or dose rate, but rather the degradation in the level of safety of the plant implied by the uncontrolled release.

Due to the uncertainty associated with meteorology, emergency implementing procedures call for the timely performance of dose assessments using actual (real-time) meteorology in the event of a gaseous radioactivity release of this magnitude. The results of these assessments should be compared to the ICs RS1 and RG1 to determine if the event classification should be escalated.

MNGP Basis Reference(s):

1. Monticello Calculation CA 04-199, Methodology Used to Derive Radiation Monitor Readings for NEI 99-01 Rev. 4 EALs.
2. ODCM-01.01 Off-site Dose Calculation Manual
3. AR01242696 - TBNWS PRM scale will not reach the EP Alert setpoint