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SUBJECT: Forwards response to NRC request for addl info re 910830 TS
Change RTS-218, "Elimination of Scram & MSIV Isolation on
Main Steam Line Radiation Monitor." Rev 7 to Abnormal
Operating Procedure AOP-672.2 encl.

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Iowa Electric Light and Power Company

January 27, 1992
NG-92-0173

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Response to Request for Additional
Information Regarding RTS-218
"Elimination of Scram and MSIV Isolation
on MSLRM"
Reference: NG-91-2574, D. Mineck (IE) to T. Murley
(NRC), dated August 30, 1991
File: A-117

Dear Dr. Murley:

Attached you will find our response to your staff's request for additional information regarding the referenced submittal requesting revision of our Technical Specifications.

Please contact this office if you require further information regarding this matter.

Very truly yours,



John F. Franz, Jr.
Vice President, Nuclear

JFF/CJR/pjv~

Attachment 1: Iowa Electric's Response to NRC Request for Additional Information Regarding RTS-218
"Elimination of Scram and MSIV Isolation on MSLRM"

Attachment 2: AOP 672.2, Offgas Radiation/Reactor Coolant High Activity

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Iowa Electric's Response to NRC Request for Additional
Information Regarding RTS-218 "Elimination of Scram and
MSIV Isolation on MSLRM"

1. NRC QUESTION:

The NRC staff in their safety evaluation on NEDO-31400 identified three conditions that needed to be addressed by each licensee in their plant specific application to remove the main steam line radiation monitor (MSLRM) scram function and main steam isolation valve (MSIV) isolation function. Condition 2 was that the application for such a change should provide sufficient evidence (implemented or proposed operating procedures, or equivalent commitments) to provide reasonable assurance that increased significant levels of radioactivity in the main steam lines will be controlled expeditiously to limit both occupational doses and environmental releases. In the submittal for this proposed change, the response addressing Condition 2 indicated that Duane Arnold has procedures in place which address the actions required in the event of high radiation in the main steam line. It was further stated that if the request was approved, these procedures would be revised as appropriate. The staff does not understand the licensee's response to Condition 2. If the procedures covering this situation are already in place, then why are the revisions required? The licensee should clarify this response, provide the procedure numbers which will contain the actions addressing high radiation in the MSL and summarize the actions to be taken by the operators using such procedures in the event of high radiation.

RESPONSE:

DAEC has procedures in place to ensure that any significant increase in the levels of radioactivity in the main steam lines is promptly controlled to limit environmental and on-site (occupational) exposures. These procedures will only need revision to reflect the elimination of the scram and MSIV isolation function of the MSLRMs.

The procedures, listed below, include Annunciator Response Procedures (ARPs), an Abnormal Operating Procedure (AOP) and an Emergency Operating Procedure (EOP).

Procedure	Title
ARP 1C05B, C-2	Main Steam Line Hi Rad Trip 3x Normal
ARP 1C05B, D-2	Main Steam Line Hi Rad 1.5 x Normal
ARP 1C03A, B-3	Pretreat RM-4104 Hi Rad
ARP 1C03A, C-2	Post Treat RM-4101A/B Hi Rad
AOP 672.2	Offgas Radiation/Reactor Coolant High Activity
EOP 3	Secondary Containment Control

These procedures direct the operator to confirm high radiation using the main steam line or offgas radiation monitors and to determine if radiation levels are trending upward. If conditions warrant, the procedures direct a reactor coolant isotopic analysis. The procedures will be updated, as appropriate, to incorporate the proposed Technical Specification change upon its approval. These revised procedures will ensure aggressive actions are taken in the event of confirmed high radiation in the main steam lines.

2. NRC QUESTION:

The NRC staff in their safety evaluation on NEDO-31400 identified three conditions that needed to be addressed by each licensee in their plant specific application to remove the main steam line radiation monitor (MSLRM) scram function and main steam isolation valve (MSIV) isolation function. Condition 3 was that the application for such a change should standardize the MSLRM and the offgas radiation monitor alarm setpoint at 1.5 times the nominal ¹⁶N background dose rate at the monitor locations and commit to promptly sample the reactor coolant to determine possible contamination levels in the plant reactor coolant and the need for additional corrective actions if the MSLRM or offgas radiation monitors or both exceed their alarm setpoints. It was stated in the submittal that the MSLRM would be set to alarm at 1.5 times normal background accounting for the increased ¹⁶N carryover due to hydrogen water chemistry. It was also stated that Duane Arnold currently has procedures for controlling the offgas monitor setpoints as part of their Offsite Dose Assessment Manual, which implements Appendix I of 10 CFR Part 50 requirements. The licensee proposed an addition to TS Table 3.2-D which would have the mechanical vacuum pump tripped when the MSLRM trip level setpoint is exceeded, thereby isolating the mechanical vacuum pump suction valves. However, the licensee did not commit to promptly sampling the reactor

coolant if either the MSLRM and/or the offgas radiation monitor exceeded their alarm setpoint nor were any TS changes proposed which would require such sampling. Neither did the licensee identify any additional corrective actions if the offgas radiation monitor exceeded its alarm setpoint. The staff's review of the ODCM did not reveal any guidance within that document if the offgas radiation monitor setpoint is exceeded. The licensee should address Condition 3 with respect to the questions raised above.

RESPONSE:

As stated in the response to Item 1 above, we currently have procedures in place which identify appropriate actions in the event that MSLRMs and/or offgas monitors detect high radiation. The procedure ARP 1C05B, D-2 will be revised to specifically direct the operator to request a reactor coolant sample from the Chemistry Department in the event of a confirmed high main steam line radiation condition.

The Offsite Dose Assessment Manual contains procedures for controlling the setpoint of the offgas pre-treatment monitor. This monitor's alarm is set to satisfy the DAEC Technical Specifications by alarming at a value equivalent to 1.0 Ci/sec of noble gases after 30 minutes delay in the offgas holdup line. If this setpoint is exceeded, procedure ARP 1C03A, B-3 directs the operator to confirm the high activity and monitor the MSLRMs and offgas system operation; it also refers the operator to procedure AOP 672.2 (Attachment 2). Step 3 of this AOP directs the operator to request the Chemistry Department to perform an isotopic analysis of the reactor coolant.

3. NRC QUESTION:

Do the operating procedures allow continued bypassing of the offgas treatment system until late in the power ascension? If they do, then the offgas pretreatment and posttreatment radiation monitors should be utilized to isolate the offgas treatment line and/or the offgas process line before the acceptable release rates are exceeded. As noted in NEDO-31400, the pretreatment monitor is typically included in the TS with the requirements for periodic calibration and functional testing. If this condition applies at Duane Arnold then some additional TS changes need to be made to incorporate one or more of these monitors into the TS.

RESPONSE:

The existing operating procedures do not allow continued bypassing of the offgas treatment system. Integrated Plant Operating Instruction (IPOI) 2 reiterates the Technical Specification 3.15.E.1 requirement that at least one train of charcoal beds in the offgas system be placed in operation to treat radioactive gases within four hours after commencing operation of the main condenser air ejectors. In addition, requirements for the offgas post-treatment and pre-treatment radiation monitors are addressed in existing Technical Specification Section 3.2.D.1. These monitors are also included in Table 3.2-D, "Radiation Monitoring Systems that Initiate and/or Isolate Systems."