REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8502200244 DOC.DATE: 85/02/15 NOTARIZED: NO DOCKET #
FACIL:50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331
AUTH.NAME AUTHOR AFFILIATION
MCGAUGHY,R.W. Iowa Electric Light & Power Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards response to NRC request for addl info re util 840727 response to Generic Ltr 84-09, "Recombiner Capability Requirements of 10CFR50.44(c)(3)(ii)."

DISTRIBUTION CODE: A034D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4
TITLE: OR Submittal: Containment Purging

NOTES: 05000331
OL:02/22/74

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR ORB2 BC	01	7	7				
INTERNAL:	ACRS	13	6	6	ADM/LFMB		1	0
	NRR FIELDS,M	12	1	1	NRR REEVES,E	14	1	1
	NRR/DE/EQB	09	1	1	NRR/DSI/AEB		1	1
	[redacted]	04	1	1	RGN3		1	1
EXTERNAL:	LPDR	03	1	1	NRC PDR	02	1	1
	NSIC	05	1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 23 ENCL 22

Iowa Electric Light and Power Company
February 15, 1985
NG-85-0571

Mr. Harold Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Response to Request for Additional Information Regarding Generic Letter 84-09; Recombiner Capability Requirements of 10 CFR 50.44(c)(3)(ii)

References:
1) Letter, R. McGaughy to H. Denton, "Response to Generic Letter 84-09; Recombiner Capability Requirements of 10 CFR 50.44(c)(3)(ii)," NG-84-3175, July 27, 1984.
2) Letter, R. McGaughy to H. Denton, "Containment Purge and Vent Valve Operability," NG-83-2024, June 10, 1983.
3) Letter, D. Vassallo to L. Liu, "Demonstration of Containment Purge/Vent Valve Operability and Item II.E.4.2.6 Compliance," October 1, 1984.

File: A-107b, A-107d

Dear Mr. Denton:

Attached you will find our responses to your staff's request for additional information regarding our response to Generic Letter 84-09 (Reference 1).

Please contact this office if you require further information.

Very truly yours,

Richard W. McGaughy

Richard W. McGaughy
Manager, Nuclear Division

RWM/RAB/ta*
Attachment: Iowa Electric Response to Request for Additional Information Regarding Generic Letter 84-09

cc: R. Browning
L. Liu
S. Tuthill
M. Thadani
NRC Resident Office
Commitment Control No. 85-0026

8502200244 850215
PDR ADOCK 05000331
P PDR

A034

IOWA ELECTRIC RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC LETTER 84-09

Question 1

Do we have a backup supply system to our drywell instrument "air" system? If so, does it use nitrogen or air?

Response

As indicated in Reference 1, all pneumatic control systems within the DAEC containment use nitrogen or recycled containment atmosphere. Supply to these pneumatic controls is provided by the containment atmosphere control and dilution system: nitrogen from the nitrogen makeup subsystem, and recycled containment atmosphere from the nitrogen compressor subsystem. A backup to the supply provided by the containment atmosphere control and dilution system supply is not necessary and is not provided. Pneumatic controls within the DAEC containment are either fail-safe or are provided with separate accumulators (e.g., ADS/SRVs).

Question 2

If we use air in our instrument "air" system as a backup supply or during periods when the containment is not required to be inerted, such as cold shutdown, what are the requirements for transferring from nitrogen to air and vice versa, and what procedural controls are there for insuring proper valve line-up?

Response

As indicated in Reference 1 and in the Response to Question 1 above, "air" is not used as a backup to the supply of nitrogen or recycled containment atmosphere during periods when the containment is required to be inerted or during periods when the containment is not required to be inerted (e.g., cold shutdown). DAEC procedures require that the nitrogen compressor subsystem be "secured" prior to deinerting the containment to protect against charging the nitrogen accumulator with "air."

However, during the present refueling outage, a modification to the containment purge line is being installed which will allow this line to be used for service air when the plant is in cold shutdown. Prior to converting this line to temporary service air, the line leading from the nitrogen supply tank will be verified to be isolated in order to prevent introducing air into the nitrogen tank. In addition, the flanges and isolation valves, which have been added in this modification, will be verified to be blanked and/or closed, prior to commencing containment atmosphere purging during plant startup. These flanges and valves will be added to the appropriate checklists and procedures to insure proper valve line-up, both before and after use. Based upon these strict administrative controls, this modification is judged not to be a source of oxygen in-leakage into the containment.

(2)

Question 3

Is air used as the backup supply to the various valve accumulators in the drywell, such as the ADS and MSIVs? If so, what procedures are used to monitor the use of air to recharge these accumulators?

Response

As indicated in Reference 1 and above, "air" is not used as a backup supply to valve accumulators in the DAEC drywell, including ADS/SRVs and MSIVs.

Question 4

Verify that the following are not sources of oxygen in the containment: instrument air, service air, breathing air, and MSIV-LCS.

Also, does the DAEC containment design incorporate the use of pressurized penetrations or inflatable door seals? If so, are these a source of oxygen in the containment?

Response

The following are not sources of oxygen in-leakage into the DAEC containment during normal plant operation or under postulated LOCA conditions: instrument air, service air, and MSIV-LCS.

The breathing air connection to the drywell is blank flanged inside the drywell and a spoolpiece is removed, leaving the isolated portion of the line vented within the drywell. Outside the containment, the outboard isolation valve on the breathing air line is required by procedures to be verified closed prior to plant startup, as are the blanking off of the flange and spoolpiece removal within the drywell. Also, there is a low pressure alarm in the control room, which verifies the system to be vented. Therefore, the breathing air system is judged not to be a source of oxygen in-leakage to the containment during normal operation or under postulated LOCA conditions.

In addition, the DAEC containment design does not incorporate the use of pressurized penetrations or inflatable door seals. The purge and vent system containment isolation valves do, however, utilize a T-ring seal which seals with a bubble-tight seal under pressure from the instrument air or compressed air systems. These valves do not, without assuming failure of the T-ring seal, represent a source of oxygen in, or in-leakage into the containment. The valves, and their instrument air/compressed air supply and exhaust are located outside of the containment and are not, therefore, a direct source of oxygen. As discussed in Reference 2, the T-ring seals are qualified for their intended service, and are replaced every four years. NRC acceptance of these T-ring seals is documented in the Reference 3 Safety Evaluation Report. Given purge/vent valve operability, these seals do not represent a source of oxygen in-leakage into the containment.

(3)

Question 5

What methods and procedures do we have for monitoring leaks in the DAEC H_2/O_2 analyzer and isolating the system?

Response

Methods and procedures for monitoring "leakage" of oxygen into containment by the H_2/O_2 analyzers, or isolation of the H_2/O_2 analyzers for the purpose of containment oxygen control are not required. As indicated in Reference 1, the H_2/O_2 analyzers are designed to inject oxygen into the containment periodically for calibration, and continuously as a reagent for analysis. Normally, this oxygen would be consumed by the calibration or analysis process. However, the evaluation provided in Reference 1 demonstrated that even if the entire supply of oxygen available to the H_2/O_2 analyzers is injected (or "leaked") into containment unconsumed as free oxygen, the total oxygen concentration in containment would remain below the Regulatory Guide 1.7 limits, and, therefore, the conclusions of the BWR Owners' Group studies remain valid for the DAEC.