



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

P.O. BOX 5000 - CLEVELAND, OHIO 44101 - TELEPHONE (216) 622-9800 - ILLUMINATING BLDG. - 55 PUBLIC SQUARE

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MURRAY R. EDELMAN

VICE PRESIDENT  
NUCLEAR

August 8, 1985  
PY-CEI/NRR-0306 L

Mr. B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Perry Nuclear Power Plant  
Docket Nos. 50-440; 50-441  
Air Quality Standard  
for Service Air System  
(Instrument Air)

Dear Mr. Youngblood:

Your letter dated June 26, 1985, requested additional information concerning recent changes we made to the FSAR related to Instrument Air System air quality. Our response is attached.

Please feel free to contact me if you have any questions concerning this matter.

Very truly yours,

Murray R. Edelman  
Vice President  
Nuclear Group

MRE:njc

Attachment

cc: Jay Silberg, Esq.  
John Stefano (2)  
J. Grobe

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A PDR

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Question 1:

Provide the basis for your system design deviation from three (3) micron ANSI, MC-11-1 limit to 40 microns proposed limit for air quality.

Response

The instrument air system is provided with 3 micron filters downstream of the compressor and receiver tank. Thus, it is designed to limit particulate size to 3 microns. 40 microns was chosen as the air quality limit based upon system performance criteria and the practical limits of testing. A review of manufacturers data for all active, air operated, safety-related valves and dampers support the conclusion that limiting particulate size to 40 microns or less will ensure long-term reliable operation of all components served by instrument air.

Question 2:

Provide verification that the involved safety related equipment will perform its intended function utilizing the proposed 40 micron instrument air quality. Provide a listing of the safety related equipment and corresponding manufacturer's recommended air quality.

Response

As stated above, a review of manufacturers data has been conducted to assure ourselves that the equipment served by Instrument Air will perform its intended function with the specified air quality. Attachment 2 lists the identifying valve/damper number, maximum allowable particle size and the basis for the maximum allowable particle size for each active, air operated, safety-related valve and damper utilized at PNPP Unit 1. This listing provides a summary verification, based upon manufacturer's data that the components in question will perform their intended function provided particulate size is maintained at 40 microns or less.

Question 3:

Verify that the air quality, at the INLET of the involved safety related equipment, will meet the proposed 40 micron limit in order to perform its intended function. Provide procedures and/or technical specifications to test, detect, and correct the degradation of the proposed instrument air quality at the INLET of the involved safety related equipment in order to assure its intended operation.

Response

The instrument air system contains 3 micron after filters downstream of the compressor and receiver tank. Once the system has been blown clean, and air quality established (particulate  $\leq$  40 microns), it can be expected to remain clean provided the 3 micron after filters remain intact and are replaced when needed, and provided the system remains closed.

The after filters are monitored for pressure drop and are replaced when necessary. In addition, these filters are checked semi-annually for signs of desiccant and other particulates. When the system is opened for maintenance, PNPP procedure PAP-0204 requires a test blow followed by an air quality test for 40 micron particle size downstream of the repair using an air particle counter. Finally, an annual air quality test is performed downstream of the purification equipment. Test acceptance criteria is zero particulates larger than 40 microns and a dewpoint of less than  $-40^{\circ}\text{F}$ .

These steps, taken together, ensure that the cleanliness of the instrument air system will remain adequate to allow the system to perform its intended function. Additional testing at the inlet of each user component should not be necessary and, in fact, provides a greater opportunity for the system to become contaminated at the end user location since the system would have to be opened periodically at that location for testing. We believe the methods outlined above provide adequate assurance that instrument air supplied, active, safety-related valves and dampers will operate satisfactorily when required.

Active - Air Operated - Safety Related Valves (& Dampers)

<u>M. P. L.</u>	<u>MAX. ALLOWABLE PARTICLE</u>	<u>BASIS FOR PARTICLE SIZE</u>
1B21-F022A-D	50m	GE Document No. 22A2537 Rev. 2
1B21-F028A-D	50m	"
1B21-F041A-K	50m	"
1B21-F047A-H	50m	"
1B21-F051A-G	50m	"
1B33-F019	40m	Fisher Inst. Manual
1B33-F020	40m	"
1C11-F010	50m	GE Document No. 22A2537 Rev. 2
1C11-F011	50m	"
1C11-F180	50m	"
1C11-F181	50m	"
1C11-F002A,B	50m	"
1C11-F126	50m	"
1C11-F127	50m	"
1C11-F139	50m	"
1C41-R004	50m	"
1E12-F051A,B	40m	Fisher Inst. Manual
1E12-F065A,B	40m	"
1E51-F004	40m	"
1E51-F005	40m	"

<u>M. P. L</u>	<u>MAX. ALLOWABLE PARTICLE</u>	<u>BASIS FOR PARTICLE SIZE</u>
1E51-F025	40m	"
1E51-F026	40m	"
1M14-F040	152m(.006")	Telecons 8/8/84
1M14-F090	152m(.006")	"
1M14-F190	152m(.006")	"
1M14-F195	152m(.006")	"
1M14-F200	152m(.006")	"
1M14-F205	152m(.006")	"
OM23-F010A,B	790m(.031")	Telecon 8/17/84 & 8/28/84
OM25-F010A,B	790m(.031")	"
OM25-F020A,B	790m(.031")	"
OM25-F130A,B	790m(.031")	"
OM25-F250A,B	790m(.031")	"
OM25-F255A,B	790m(.031")	"
OM25-F260A,B	790m(.031")	"
1M36-F060A,B	790m(.031")	"
1M51-F100	40m	Fisher Inst. Manual
1P51-F150	40m	"