Omaha Public Power District

1623 HARNEY • OMAHA, NEBRASKA 68102 • TELEPHONE 536-4000 AREA CODE 402

June 8, 1979

Director of Nuclear Reactor Regulation
ATTN: Mr. Robert W. Reid, Chief
Operating Reactors Branch No. 4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Reference: Docket No. 50-285

Gentlemen:

The Omaha Public Power District received a telecopy from the Commission, dated June 7, 1979, requesting information in regard to the Fort Calhoun Station noble gas effluent monitoring system. Accordingly, the requested information is attached.

Sincerely,

T. E. Short
Assistant General Manager

TES/KJM/BJH:jmm

Attach.

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue
Suite 1100
Washington, D. C. 20036

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Monitor	RM051 Containment/Stack	RM052 Containment Stack	RM057 Condenser Off-Gas	RM062 Stack Gas
1. A. Location of effluent monitor monitoring system	Normally containment/ stack vent	Stack vent	Condenser off-gas vent	Stack vent
B. Print reference	11405-M-1	11405-M-1	11405-M-1 11405-M-261	11405-M-1 input from stack same as RM050/ 51
2. Type of detector	Beta scintillation detector	Geiger Mueller detector	Beta scintillation detector	Beta scintillation detector
3. Readout range of detector (CPM)	Max. - 10^6 CPM Min. - 10 CPM	Max. - 10^6 CPM Min. - 10 CPM	Max. - 10^6 CPM Min. - 10 CPM	Max. - 10^6 CPM Min. - 10 CPM
4. Maximum release rate that can be detected on scale by the detector	Max. concentration which can be detected 2.5×10^{-8} Ci/cc Max. flow 5.758×10^7 cc/sec Max. release rate 1.439 Ci/sec	Max. concentration 4.16×10^{-7} Ci/cc Max. flow 5.758×10^7 cc/sec Max. release rate 23.95 Ci/sec	Max. concentration 2.5×10^{-8} Ci/cc Max. flow 5.758×10^7 cc/sec Max. release rate 1.439 Ci/sec	Max. concentration 2.5×10^{-8} Ci/cc Max. flow 5.758×10^7 cc/sec Max. release rate 1.439 Ci/sec
5. Calibration factor for system (CPM per $\mu Ci/cm^3$)	4.0×10^7	2.4×10^6	4.0×10^7	4.0×10^7
6. Reference radionuclide used to calibrate system	Gas samples are taken and isotopically analyzed. The results of this analysis are used to accurately calibrate the detectors. In most cases, Xe^{133} is the predominant gas/radionuclide.	Gas samples are taken and isotopically analyzed. The results of this analysis are used to accurately calibrate the detectors. In most cases, Xe^{133} is the predominant gas/radionuclide.	Gas samples are taken and isotopically analyzed. The results of this analysis are used to accurately calibrate the detectors. In most cases, Xe^{133} is the predominant gas/radionuclide.	Gas samples are taken and isotopically analyzed. The results of this analysis are used to accurately calibrate the detectors. In most cases, Xe^{133} is the predominant gas/radionuclide.
7. Alarm setpoint for system (CPM or $\mu Ci/cm^3$)	Alert alarm setpoint 9573 CPM High alarm setpoint 12,764 CPM	Alert alarm setpoint 8590 CPM High alarm setpoint 17,090 CPM	Alert alarm setpoint 850 CPM High alarm setpoint 3159 CPM	Alert alarm setpoint 2022 CPM High alarm setpoint 8090 CPM

Monitor	RM051 Containment/Stack	RM052 Containment Stack	RM057 Condenser Off-Gas	RM062 Stach Gas
8. Alarm function of system (e.g., isolation of purge, alarm in control room, etc.)	On trip of alert alarm, alarms on AI-44 On trip of high alarm, initiates a CRHS*, which initiates a VIAS*, and triggers high alarm on monitor	On trip of alert alarm, alarms on AI-44 On trip of high alarm, performs no control function except to trigger high alarm on monitor	On trip of alert alarm, alarms on CB-1 On trip of high alarm, closes PCV-978 and triggers high alarm on monitor	On trip of alert alarm, alarms on AI-44 On trip of high alarm, initiates a CRHS*, which initiates a VIAS*, and triggers high alarm on monitor

*VIAS - Ventilation Isolation Actuation Signal - will isolate containment purge, containment relief line, containment sample line to and from RM050/51, gas decay tank release line (PCV521 closes), opens supply and exhaust dampers to safety injection pump rooms and spent regenerate tank room, switches control room ventilation to filtered air makeup mode, switches containment recirculation dampers in containment to the charcoal filtering mode.

*CRHS - Containment Radiation High Signal - initiates VIAS.

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