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bcc to DAC:ADM:
CENTRAL FILES
PDR:HQ
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NSIC

STATE

Omaha Public Power District

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

March 21, 1980

Mr. K. V. Seyfrit, Director
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Reference: Docket No. 50-285

Dear Mr. Seyfrit:

The Omaha Public Power District received IE Bulletin 80-03, dated February 6, 1980, requesting information on ventilation system adsorber cell leakage. The attached report is submitted in response to the bulletin.

Sincerely,

W. C. Jones
Division Manager
Production Operations

WCJ/KJM/BJH/TLP:jmm

Attach.

cc: OIE, Washington
LeBoeuf, Lamb, Leiby & MacRae

RESPONSE TO IE BULLETIN 80-03

The following charcoal filter units are in use at the Fort Calhoun Station:

VA-6A, B: Containment Recirculation

These filters are installed in the containment air recirculation units and can be brought on line to reduce the concentration of iodine in the containment atmosphere.

Type of Cells: American Air Filter Type II
Number of Cells: 576
Type of Testing/Inspection: Visual

VA-26A, B: Safety Injection Pump Rooms

These filters are installed in the exhaust ducts of the pump rooms.

Type of Cells: Barnebey-Cheney Model FC
Number of Cells: 12
Type of Testing/Inspection: Visual and halide in-place

VA-27: Spent Regenerant Tank Room

This filter is installed in the exhaust duct of the tank room.

Type of Cell: Barnebey-Cheney Model FC
Number of Cells: 1
Type of Testing/Inspection: Visual

VA-64: Control Room Makeup

These filters are installed in the supply air makeup duct to the control room.

Type of Cells: American Air Filter Type II
Number of Cells: 3
Type of Testing/Inspection: Visual and halide in-place

VA-66: Spent Fuel Pool Area

These filters are installed in the spent fuel pool area exhaust duct.

Type of Cells: Barnebey-Cheney Model FC
Number of Cells: 12
Type of Testing/Inspection: Visual and halide in-place

In over six years of operation, the Barnebey-Cheney (B-C) cells have proven to be solid and reliable. The Quality Assurance (QA) receipt inspections have never revealed a leakage problem with the B-C cells, nor have B-C cells ever failed a halide in-place test. Upon receipt of IE Bulletin 80-03, all B-C cells were inspected in-place for evidence of excessive charcoal leakage. No leakage was found.

The performance record for the American Air Filter (AAF) cells duplicated that of the B-C cells, up until earlier this year, when a refilled shipment of 142 charcoal and 12 thermistor trays was received on site. Prior to this shipment, the AAF trays had never failed either the QA receipt inspections or the halide in-place tests. With the latest shipment of 154 trays, the following problems were encountered:

(1) The AAF trays have four spacer rods between the top and bottom media. Each of these rods has a retaining nut on the top and on the bottom. Some of these nuts had vibrated loose, allowing the perforated retaining sheets to deform. This deformation permitted the charcoal to shift about and produce voids in the cells.

(2) In some instances, the face plate-to-screen joint was leaking charcoal. This is a lapped joint, welded on the sides, and was probably damaged during handling. It must be emphasized that the AAF cells are not susceptible to the type of deformation experienced with the Flanders cells, as the screens are not riveted, but spot welded to the housings at approximately 3/4 inch intervals.

(3) In some instances, the riveted charcoal filler hole plates were loose and leaked charcoal. This leakage was caused by damage to the rivets during handling.

The condition of the AAF cells in the latest shipment could be summarized as follows:

Total No. of Cells: 154
No. of Leaking Cells: 6
No. of Cells Where Voiding was Found: 34

The leaking AAF cells, as per (2), were not subsequently used. Re-riveting the leaking AAF cells, as per (3), produced integrally tight seals and these cells were re-used. The cells where voiding was detected, but no leakage, as per (1), were all topped off with additional charcoal in accordance with set guidelines from Barnebey-Cheney. The cells were then upended and examined visually with a strong light source for further voiding. The spacer rod nuts were locked into place and the cells installed in the containment recirculation units.

It is the belief of the District that the charcoal cells at the Fort Calhoun Station are not susceptible to damage during operation. Proper receipt inspection and installation procedures, in conjunction with existing surveillance tests, should ensure the operability of all the charcoal filter units.