DOCKET NO. 50-247 DATE: MAR 7 1974

LICENSEE: Consolidated Edison Company

FACILITY: Indian Point Unit 2

SUMMARY OF MEETING RE CONTAINMENT FILTERS

Representatives of Con Ed and Licensing met on February 15, 1974, to discuss the capability of the iodine filters in the containment recirculation system, the possible need for improving the effectiveness of the recirculation system, technical specifications for surveillance of filter capability, and needed revisions to these specifications.

A list of attendees is given in Enclosure 1.

Significant points discussed are described below:

1. Capability of the Filters and the Recirculation System

For iodine filters which utilize carbon as the adsorbent, we stated that data exist which indicate that the pressure drop across these filters increases when subjected to a saturated atmosphere. The increased pressure drop results from deposition of moisture on the carbon. Because Unit 2 has a bypass path around the filters, we conclude that deposition of moisture in them following a loss-of-coolant accident (LOCA) would reduce their iodine removal capability below the level assumed in the final safety analysis report. Our position is that Con Ed must: (a) verify now and periodically that flow through the filters would meet the flow rate assumed in the analysis of the consequences of a LOCA, (b) install filters in the bypass path, or (c) take other appropriate action. Con Ed agreed to review the problem and to provide by telephone by February 22 the results of their investigation.

2. Existing Surveillance Requirements

The Technical Specifications for Unit 2 require periodic surveillance of the carbon in the filters to determine that significant degradation of the carbon has not occurred. Measurement of the methyl iodide removal efficiency is required for carbon samples exposed to air at 271°F and 100% relative humidity. Testing at these conditions is difficult because a small decrease in carbon temperature results in condensation of moisture on the carbon and a large decrease in removal efficiency. Therefore, replication at these conditions leads to a large uncertainty in the measured removal efficiency.

We informed Con Ed that we recognize that the surveillance specification needs to be changed for this reason. However, Con Ed informed us that they have successfully completed the surveillance testing required by the existing surveillance specifications.

3. Proposed Changes to Surveillance Requirements

By letter dated December 4, 1973, Con Ed applied for changes to the surveillance specification. The proposed changes are not acceptable because the conditions for the carbon sample are not sufficiently severe and the required removal efficiency is too low. Therefore, we discussed the surveillance requirements which will probably be established. These surveillance requirements are given in Enclosure 2. We and the Con Ed representatives generally agreed that these requirements, if properly implemented, will provide reasonable assurance that the filters will exceed their performance requirements and that these requirements are acceptable.

SUMMARY OF TELECON RE CONTAINMENT FILTERS

On February 22, 1974, Mr. Jackson called me to inform us that Con Ed has not completed their investigation of the effect of moisture on the pressure drop across the filters and flow through them. However, Westinghouse has developed the equations necessary for a parametric study of the containment recirculation system, including the effects of pressure drops across the filters, the bypass path, and the coolers. Con Ed and Westinghouse are evaluating the whole recirculation system to assure that any modifications to the filters or the bypass do not adversely affect the cooling capability of the system. While this work has been progressing, Mr. Adams of Air Tech has performed scoping calculations which indicate that 10 to 12 additional carbon trays may be needed. Space is available for 100 additional trays.

Mr. Jackson will advise us by March 5, 1974, of the status or the results of their investigation of the containment recirculation system.

/s/

R. W. Woodruff
Operating Reactors Branch #1
Directorate of Licensing

Enclosures:
See next page

Enclosures:
1. List of Attendees
2. Surveillance Requirements

cc w/enclosures:
Docket File
AEC PDR
Local PDR
RP Reading File
L Reading File
RP Assistant Directors
RP Branch Chiefs
T. Carter, L:OR
J. Hendrie, L:TR
TR Assistant Directors
TR Branch Chiefs
R. Woodruff, L:ORB#1 (2)
M. Oestmann, L:EP
M. Karman, OGC
E. Lyle, OGC
RO (3)
RS (3)
R. Fraley, ACRS (16)
Licensing Attendees
W. Cahill, Jr., Con Ed
C. Jackson, Con Ed

OFFICE ➔	L:ORB#1	L:ORB#1	L:TR	L:ORB#1		
SURNAME ➔	RWWoodruff:dc	SATeets	RZavadoski	RJSchemel		
DATE ➔	3/4/74	3/5/74	3/5/74	3/6/74		

Form AEC-318 (Rev. 9-53) AECM 0240 GPO C43 16 81485-1 520-284

Enclosure 1

List of Attendees

W. J. Cahill, Jr., Con Ed

C. W. Jackson, Con Ed

J. J. Grob, Con Ed

M. S. Silberstein, Con Ed

J. Makepeace, Con Ed

R. Adams, Air Tech

P. J. McDonough, Westinghouse

H. Clark, Westinghouse

R. J. Lutz, Jr., Westinghouse

D. J. Skovholt, Licensing

R. J. Schemel, Licensing

R. Zavadoski, Licensing

M. J. Oestmann, Licensing

R. W. Woodruff, Licensing

G. Manz, Licensing

M. Bell, Licensing

OFFICE ➔						
SURNAME ➔						
DATE ➔						

5. Adsorber Penetration Test

Test installed adsorbers with Freon by a method consistent with Regulatory Position C.5.c. of Regulatory Guide 1.52. The adsorber shall demonstrate a penetration of no more than 1% of the Freon.

6. Functional Test

Each redundant unit of the system will be operated individually for a period of not less than ten hours per month.

7. Test Frequency

a. Repeat tests 1, 2, 3, 4, and 5 each refueling or every 18 months, whichever occurs first.

b. Repeat test 4 following any HEPA filter replacement or following any structural maintenance on a system housing.

c. Repeat test 5 on either redundant unit of the system in which any adsorber is replaced.

d. Repeat test 1 following painting, fire, or chemical release in any ventilation zone communicating with the system.

e. Repeat tests 1, 4, and 5 whenever either unit of the system has accumulated 720 hours of operation since the latest date of any of these three tests.

Enclosure 2

1. Adsorber Efficiency Tests

   a. Remove one adsorber tray from the system and install a replacement.

   b. Empty adsorbent from one bed (one side) of the removed tray and mix adsorbent thoroughly. The adsorbent will be replaced with new adsorbent which meets an acceptable qualification test.

   c. Take from the mixed adsorbent not less than two samples. Each sample will be two inches or greater in diameter and of a length equal to the thickness of the adsorber bed from which the adsorber was emptied. (For example, if the adsorber was removed from a bed two inches in thickness, each sample will be two inches in length as well as two inches in diameter.)

   d. Samples will be tested for retention of methyl iodide. Testing will be performed @ 95% R.H. and 250°F, an inlet methyl iodide concentration of 10 $\pm$ 5 mg/m^3 and a face velocity of 50 $\pm$ 10 ft/min.

   e. Unless two test results indicate methyl iodide retention of greater than 85%, all adsorbent in the system shall be replaced with an adsorbent qualified according to Table 1, Regulatory Guide 1.52.

2. Uniformity of Air Flow Test

   Test for uniformity of air flow across HEPA filters and adsorbers (by a pitot tube traverse or any other standard method) installed in the system and demonstrate that air distribution is uniform within 20%.

3. Air Delivery Test

   Test installed fan or blower for air delivery and demonstrate that air flow is within 10% of the specified flow for fan or blower.

4. HEPA Penetration Test

   Test installed HEPA filters with dioctyl phthalate (DOP) aerosol, according to ANSI N101.1, and demonstrate aerosol retention to a minimum of 99%. Abrasions, holes, slits, or other points of leakage in a HEPA filter shall not be repaired. Any filters found defective shall be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52, following which the system will be retested and a retention efficiency of 99% for DOP demonstrated.