



**Consumers  
Power  
Company**

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0550

December 6, 1983

Dennis M Crutchfield, Chief  
Operating Reactor Branch No 5  
Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 -  
PALISADES PLANT - POST ACCIDENT SAMPLING SYSTEM ADDITIONAL INFORMATION

Consumers Power Company letter dated August 12, 1983 provided verification that the criteria in NUREG-0737 Item II.B.3 with exception of the Containment Atmosphere/Hydrogen sampling had been satisfied by the Palisades Plant post accident sample monitoring system (PASM). The purpose of this letter is to provide additional <sup>include</sup> information stating the reasons for not using charcoal adsorbers in the ventilation exhaust of the Palisades PASM system.

NUREG-0737 states that consideration should be given to charcoal adsorbers in the ventilation exhaust of the PASM. The Palisades PASM system is designed as a closed system with the only potential for the escape of iodine to the ventilation plenum is from a leak in the apparatus or a premature evacuation of the off-gas system after a sampling procedure (operator error).

The charcoal adsorbers are not considered necessary for the following reasons:

1. The system is environmentally qualified to the conditions experienced during an accident and a leak is unlikely to occur.
2. During normal and accident operating conditions, the iodine release from the system is expected to be insignificant (see Attachment 1).
3. Proper operating procedures and training will prevent the premature evacuation of the off-gas system after sampling.

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Palisades Plant  
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4. The reactor coolant line in the system has an automatic isolation function initiated by a high coolant temperature.
5. The accident sampling procedure requires two individuals, one to perform the sampling and one to monitor the radiation levels. If radiation levels exceed a predetermined level, the sampling process will be terminated and isolation of the system accomplished immediately.



Brian D Johnson  
Staff Licensing Engineer

CC Administrator, Region III, USNRC  
NRC Resident Inspector - Palisades

Attachment

ATTACHMENT 1

Consumers Power Company

Palisades Plant - Docket 50-255

POST ACCIDENT SAMPLING SYSTEM  
ADDITIONAL INFORMATION

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# EQUIPMENT CORP.

P. O. BOX 127 • OCONOMOWOC, WISCONSIN 53066 • PHONE 414 • 567-7256

September 22, 1982

Consumers Power Company  
1945 West Parnall  
Jackson, MI 49201

Attention: Mr. Joseph Beer  
Room P-24-418

Reference: Post Accident Sample Monitoring System  
Palisades Plant  
P.O. #CP10-5008-CQ  
Spec. #0330-1-775-51-31-3S  
SEC J.O. #10058

Dear Joe:

Per our discussion of yesterday, I'm sending along a copy of the radiation report on the Model "B" system which we provided for Midland Units 1 & 2. While the Palisades and Midland systems are both designated as "Model B", both were customized in accordance with the engineer's directives, as reflected in the specifications. This has resulted in a few major differences which should be borne in mind when using the report.

1. The Palisades Unit has 2-1/2" solid lead in 1/4" steel plate shielding on the right side and rear of the panel, with 1/2" of steel on the left side. The Midland (GSP) Units have 1/2" steel sides and 1/4" steel at the back. The Midland CASP (Containment Air Sample Panel) has 5" of lead shot between 1/2" plates on both sides. The front (operating) wall of all units is composed of 7" of lead shot between 1/2" steel plates.
2. The containment air is sampled in a separate panel in the Midland system. Because the sample tubing routing is less complex, the Midland containment air sampling system has about 20% less tubing than Palisades.
3. The Midland panels do not include provisions for:  
(a) connections to the Gross Gamma detectors and;  
(b) front of panel (splash box) grab sampling.  
The Midland panels, therefore, have less tubing and few penetrations through the shield. These items would tend to increase the Palisades dose rate when compared to the Midland dose rate.

Regarding the release of Iodine into the ventilation system, we feel that any such release will be relatively insignificant for the following

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Mr. Joseph Beer

reasons:

1. The liquid sample is routed directly to the waste connection and the containment air sample is returned to the containment. The operating procedures are designed to minimize the time which a "hot" sample spends in the panel; it is contained in the tubing, valves, and vessels during the entire period. The only chance for escape into the plenum is via a leak.
2. The off-gas from the liquid sample is flushed to waste before the system is dried with the eductor. Any iodine left in the piping would thus tend to redissolve and be carried to waste.

From the above, it can be seen that there are two possible sources for iodine escape into the plenum, and from there to the ventilation system:

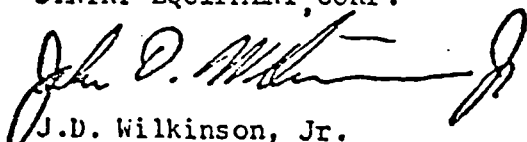
- (a) through a leak in the tubing, or
- (b) premature evacuation of the off-gas system after a sampling procedure.

We feel that the former (a) is unlikely if the units are properly installed and maintained, and that the latter (b) if not a recurring condition will release negligible amounts of iodine into the ventilation system.

If we can be of further assistance, please do not hesitate to call.

Very truly yours,

SENTRY EQUIPMENT CORP.

  
J.D. Wilkinson, Jr.  
Program Manager

cc: Clark Kahn, CPCo Palisades  
D.W. Holder, SEC  
F.R. Rommelfaenger, SEC  
File - 10058

JDW/njl