Consumers Power Company

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

December 27, 1972

Mr. John F. O'Leary, Director
Directorate of Licensing
US Atomic Energy Commission
Washington, DC 20545

Re: Docket No 50-255
License No DPR-20

Dear Mr. O'Leary:

This is written to apprise you of a recent occurrence at the Palisades Plant involving the unplanned release from "C" waste gas tank. The occurrence was discussed by telephone with your Mr. Cook on December 18, 1972.

Because of a combination of a root valve malfunction and sample line leakage, the contents of "C" waste gas decay tank were inadvertently discharged to the plant vent through the auxiliary building. An operator, intending to align "A" gas decay tank for sampling, opened the root valve on "C" tank. The error was discovered and corrected when no sample was available from the "A" tank sample line at the sample panel. Shortly thereafter, however, it was noted that the pressure on "C" tank was decreasing and that the continuous air monitor (CAM) located near the radwaste exhaust plenum was alarming.

At the time the "C" tank pressure decrease and CAM alarm were noted, operators were dispatched to recheck valve alignment. Although no misvalving was found, the tank pressure continued to decrease and the CAM indicated high airborne radioactivity for approximately four hours. The area of high airborne radioactivity was evacuated during the period.

Our investigation leads to the conclusion that foreign material became lodged in the root valve on "C" tank, allowing the line from the root valve to the sample panel to become pressurized. The sample line, normally isolated from the decay tank by the root valve, apparently leaked into the auxiliary building. The gas from the decay tank was diluted with auxiliary building ventilation air and discharged through the filter system to the plant stack.

The estimated unplanned release, based on samples from other tanks, previous experience and CAM calibrations, consisted of the following:

Xe-133	16.4 Ci
Xe-133m	0.14 Ci
Xe-135	0.007 Ci

The maximum in-plant airborne concentration was 1.4×10^{-8} $\mu Ci/cm^3$, whereas the most restrictive MPC for the nuclide mixture involved is 1×10^{-6} $\mu Ci/cm^3$.

As a result of the low concentration of radioactivity and being limited to noble gas, the radiological consequences of the above occurrence were negligible, both in-plant and off-site. We are, however, taking corrective action to isolate and eliminate all potential sources of leakage from the waste gas decay system. We will keep both Directorate of Licensing and Directorate of Regulatory Operations representatives informed as to the final action taken to insure system integrity.

Yours very truly,

Gerald J. Walke (Signed)

WGF/map

Gerald J. Walke
Nuclear Fuels Administrator

CC: BHGrier,
USAEC