

AUG 10 1988

Docket No. 50-219

Mr. E. E. Fitzpatrick
Vice President and Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
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Dear Mr. Fitzpatrick:

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION (OCNGS) SEP TOPIC V-5,
REACTOR COOLANT PRESSURE BOUNDARY (RLPB) LEAKAGE DETECTION
IPSAR 4.16.1, AIRBORNE PARTICULATE AND GASEOUS RADIOACTIVITY
MONITORS (TAC NO. 61968)

By letter dated July 1, 1988 GPU Nuclear Corporation (GPUN) stated that, as documented in Section 4.16.1 of the NRC staff's Integrated Plant Safety Assessment Report (IPSAR-NUREG 0822) for SEP Topic V-5, Reactor Coolant Pressure Boundary (RCPB) Leakage Detection, GPUN committed to identify the system modifications necessary to make the installed airborne particulate and gaseous radiation monitoring system operational. GPUN further stated that in a letter dated July 8, 1986, GPUN requested cancellation of their commitment to restore the APGRMS. The July 8, 1986 letter described the diversity and adequacy of the sump monitoring system available at Oyster Creek to detect RCPB leakage quantitatively and stated that the APGRMS would be of little use in quantifying leakage rates to meet Technical Specification limits. It stated that the APGRMS would measure the leakage indirectly through released radioactivity and could only be used as a trending indication of the leakage which must be confirmed and quantified by other means. It also stated that there are other data available such as drywell pressure, humidity, and temperature which can also provide qualitative or trending information concerning RCPB leakage comparable to that provided by the APGRMS.

In a letter dated March 12, 1987 the staff denied your request for cancellation on the basis that GPUN did not supply sufficient information such as the sensitivity of drywell pressure, humidity and temperature data and concluded that APGRMS should be installed during the upcoming 12R outage.

In your letter of July 1, 1988 you indicated that GPUN proceeded with a detailed evaluation which attempted to supply the additional information the staff referred to. The evaluation pointed out that the interpretation of drywell atmosphere contamination in terms of reactor coolant leakage could lead to ambiguous results because different portions of the reactor coolant system contain different levels of radioactive contamination. It also indicated that pressure and humidity would respond well to leakage and could be better quantified. GPUN also recently concluded that these indications may be masked by operator action. Because of this GPUN decided to replace the APGRMS to provide the diversity required by the staff.

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GPUN further indicates that you plan to accomplish the modification in two phases. The first phase, which will be completed during the upcoming 12R outage, consists of these activities which require the plant to be shutdown, i.e., rerouting of existing piping and relocating electrical controls for control of isolation valves. GPUN has completed the engineering and installation specification and initiated the material procurement effort. The second phase, installation of a new APGRMS, will be completed during the operating Cycle 12.

GPUN notes that there are several leak detection methods available for unidentified leakage into the containment sump at Oyster Creek which operate on diverse principles.

The normal method of monitoring unidentified leak rate is to obtain flow integrator readings from the containment sump pump discharge every four hour period and calculate average flow rate. Approximately 1 gpm can be measured in a four hour interval. This methodology is identified in Oyster Creek Technical Specifications as the primary method of leakage measurement.

When the flow integrator is not available, the average leakage rate can be calculated using the known volume between the high and the low level alarms for the sump and the time required to fill the sump between these levels.

A recorder available in the control room also provides continuous indication of an estimated unidentified leak rate to the containment sump by utilizing a differential pressure signal as a result of the sump level change. The sensitivity of the recorder is approximately 0.2 gpm.

Additionally, a timer available in the 480 volt switch gear room provides the run time of the containment sump pumps. This run time along with the estimated flow rate of the sump pumps can provide approximate leak rates. This methodology is utilized every four hours during power operation.

Also, an annunciator will alarm in the control room if the time to fill the containment sump is too short an interval. The time associated with this alarm is set to bring in the alarm if unidentified leak rate equals or exceeds 4 gpm.

Based on the above, GPUN concludes that, these methods provide quantitative indications of unidentified RCS leakage inside containment and also provide assurance that unidentified leakage can be detected and quantified during Cycle 12 operation pending operability of the new APGRMS which will provide an additional diverse and qualitative means of leak detection.

Mr. E. E. Fitzpatrick

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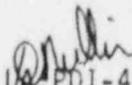
The staff has evaluated the information provided by GPUN, and concurs with the licensee that installation of the APGRMS during Cycle 12 is acceptable on the basis that the methods discussed above provide quantitative indications of unidentified RCS leakage inside containment. They also provide assurance that unidentified leakage can be detected and quantified during Cycle 12 operation pending operability of the new APGRMS which will provide additional diverse and qualitative means of leak detection. Therefore, we consider this SEP issue resolved. Region I will verify that the APGRMS is installed during operating Cycle 12.

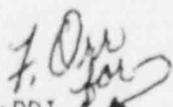
Sincerely,

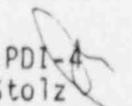
ORIGINAL SIGNED BY
JOHN F. STOLZ

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