

Description of Event

On September 24, 1982, while performing an instrument calibration on the Meteorological Monitoring channels for ambient temperature and the Delta Temperature channels, a signal conditioner and a recorder were found to be out of calibration. This event is contrary to T.S. 3.3.3.4.

The signal conditioner (TC-MM-100A-1) is in the ambient temperature channel and converts the raw signal from the temperature probe from millivolts to milliamps for compatibility with in-plant equipment. A calibration signal of -4.94°F was entered and the resulting signal of -5.98°F was obtained. The Regulatory Guide 1.23 required accuracy of $\pm 0.5^{\circ}\text{C}$ ($\pm 0.9^{\circ}\text{F}$) was exceeded by 0.14°F .

The recorder (TR-MM-100B) is in the delta temperature channel and is located in the Control Room. A calibration signal of $+0.50^{\circ}\text{F}$ was inserted and the resulting indication was $+0.69^{\circ}\text{F}$. The Regulatory Guide 1.23 required accuracy of $\pm 1.1^{\circ}\text{C}$ ($\pm 1.8^{\circ}\text{F}$) was exceeded by $.01^{\circ}\text{F}$.

The error in the conditioner and in the recorder affected the Control Room displays that are used for the determination of atmospheric dilution factors (X/Q) during an accidental release. Since the error would have caused an indication of greater atmospheric dilution than actually existed, (non-conservative), these events are reportable pursuant to T.S. 6.9.1.9.b. A special report required by T.S. 6.9.2 is not required since the channels were repaired shortly after the error was discovered.

Probable Consequences of Occurrence

The ambient temperature and Delta Temperature channels are utilized for indication of atmospheric stability and the determination of dispersion factors (X/Q atmospheric dilution factor) during times of accidental releases. Since this indication was required for indication only and the channels were recalibrated as soon as the condition was discovered, the health and safety of the public were not affected.

In addition to these channels, there are local redundant recorders that were unaffected by the instrument drift. The raw signal from the temperature probes are also recorded on magnetic tape and retrieved daily for the determination of off-site dose calculations from normal radioactive gaseous discharges. These signals were also unaffected by this event.

Cause of Event

This event was caused by instrument drift.

Immediate Corrective Action

The affected channels were recalibrated and returned to service.

Scheduled Corrective Action

No further corrective action required.

Action Taken To Prevent Recurrence

No further actions required.

Generic Implications

There are no generic implications from this event.