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On July 31, 1986 at 0915 hours, it was discovered that during the calibration of the waste gas hydrogen analyzer, an improper gas mixture was used to check the accuracy of the analyzer following the July 3 calibration.

The cause was non-compliance to a procedure (personnel error). The operability of the hydrogen analyzer and the companion oxygen analyzer were not affected by the event. The event does not constitute an unreviewed safety question as defined in 10 CFR 50.59.

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A complete calibration of the analyzer was performed on July 29, 1986, prior to the discovery of the event. The technical specification required gas mixtures were used. Appropriate administrative actions have been taken concerning the individuals involved.

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NRC Form 366A (9-83)	NT REPORT (LER) TEXT CONTINU	IATIO	N			U.S. P	APPROVED OMB NO 2150-0104 EXPIRES: 8/31/86							SION
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# Conditions Prior to Occurrence

Unit 1 shutdown in Mode 3 (hot standby), Unit 2 at 80 percent reactor thermal power.

## Description of Event

On July 31, 1986 at 0915 hours, it was discovered that following the July 3, 1986 calibration of the waste gas hydrogen analyzer (EIIS:WE), an improper gas mixture was used for the calibration check at 1 percent of scale.

The analyzer was incorrectly tested, after calibration, with a gas mixture which consisted of one percent hydrogen, balance argon instead of one percent hydrogen balance nitrogen, as required by Technical Specifications. (Table 4.3-9 Notation 3, Section 1).

No safety system responses would have been affected from the improper testing. Responses to waste gas system (EIIS:WE) flammability hazards are based on oxygen, rather than hydrogen concentrations. The oxygen analyzer remained operable.

### Cause of Event

The cause of the event is a procedural non-compliance (personnel error). The procedure used specifies the check gas composition, however, the composition of the inert portion of the mixture was considered equivalent by the technician. It was believed that the balance argon and nitrogen were equivalent. The substitution constituted a violation of the procedure and technical specification.

#### Analysis of Event

This event is considered reportable under the criteria of 10 CFR 50.73 a(2) (i)(B).

Three calibration gases are used in the hydrogen analyzer calibration/ verification 80 percent hydrogen, 4 percent hydrogen, 1 percent hydrogen (all balance nitrogen). The analyzer is adjusted to proper readings using the 80 percent hydrogen gas; the other two serve as calibration checks. Since the only improper gas was the 1 percent hydrogen gas, all flammable ranges of hydrogen, i.e., 4 percent and above, would have been reliably detected by the analyzer. Inaccuracy in the 0 - 4 percent range would not have caused a flammability hazard. Response to the 1 percent hydrogen gas mixture falls at the lowest end of the meter scale and response is minimized. The analyzer produced an expected response during the calibration check.

NRC Form 386A (9-83)	LICENSEE EVENT REP	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION APPROVED ON EXPIRES: 8/31/												
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

As-found results from a subsequent calibration conducted on July 29, 1986 Indicated that the previous instrument settings from the July 3 calibration produced an accurate response. This verifies that the auto gas analyzer, hydrogen portion was calibrated and operable during this period.

There are no limits for maximum or minimum concentrations of hydrogen in the waste gas system. At no time was the analyzer inoperable not was an explosive gas mixture present.

For these reasons, it is concluded that this event does not constitute an unreviewed safety question as defined by 10 CFR 50.59. The health and safety of the public were not affected.

## Corrective Action

The recalibration and calibration checks of the analyzer with the proper technical specification required gas mixtures had already taken place by the time the event was discovered.

Appropriate administrative actions have been taken concerning the individuals involved.

## Failed Component Identification

None

Previous Similar Events

None



August 28, 1986

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United States Nuclear Regulatory Commission Document Control Desk Washington, D.C. 20555

> Operating License DPR-58 Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by 10CFR50.73 entitled Licensee Event Reporting System, the following report/s are being submitted:

86-019-0

Sincerely,

mille With W.G. Smith, Jr. Plant Manager

/cbm

Attachment

cc: John E. Dolan J.G. Keppler, RO:III M.P. Alexich R.F. Kroeger H.B. Brugger R.W. Jurgensen NRC Resident Inspector R.C. Callen, MPSC G. Charnoff, Esq. D. Hahn INPO PNSRC A.A. Blind Dottie Sherman, ANI Library File