

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/84-17

Cocket No. 50-244

License No. DPR-18

Priority --

Category C

Licensee: Rochester Gas & Electric Company
89 East Avenue
Rochester, New York 14649

Facility Name: Ginna Nuclear Station

Inspection At: Ontario, New York

Inspection Conducted: June 25-29, 1984

Inspectors:

J. C. Jang
J.C. Jang, Radiation Specialist

8-7-84
date

A. Weadock
A. Weadock, Radiation Specialist

8-7-84
date

Approved by:

W.J. Pasciak
W.J. Pasciak, Chief, Effluents Radiation
Protection Section, Radiological
Protection Branch

8/14/84
date

Inspection Summary: Inspection on June 25-29, 1984 (Report No. 50-244/84-17)

Areas Inspected: Routine, unannounced inspection of the radioactive waste program. Areas reviewed included: radioactive effluent releases - liquid and gaseous, records and reports of radioactive effluents, effluent control instrumentation, testing of air cleaning systems, and procedures. The inspection involved 64 inspector hours onsite by two NRC regionally based inspectors.

Results: No violations were identified.

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DETAILS

1. Individuals Contacted

- C. Anderson, QA Manager
- *S. Bullock, QA Engineer
- R. Burt, Assistant Training Coordinator, Training Department
- *G. Cain, I&C Technician
- *D. Fillion, Radiochemist
- *D. Filkins, Manager, Health Physics/Chemistry
- *W. Goodman, Health Physics Foreman
- *F. Mis, Health Physicist
- R. Morrell, Manager, Training Department
- *T. Rackiewicz, I&C Foreman
- B. Snow, Station Superintendent
- *S. Spector, Assistant Station Superintendent

*denotes those present at exit interview on June 29, 1984.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance(244/81-06-01): Failure to follow Procedure PC 18-1. The licensee issued new procedures to measure chloride concentration in reactor coolant samples.

3. Audits

The inspector reviewed the following QA audits with respect to Technical Specification requirements:

- (1) Audit Number 83-30:CA, covering Health Physics, June 22, 1983,
- (2) Audit Number 83-40:JB, covering HP/Chemistry, December 22, 1983,
and
- (3) Audit Number 84-05:SB, covering Test Equipment Control,
February 24, 1984

No violations were identified in this area.

4. Radiation Monitoring Instrumentation

4-1 Introduction

The inspector examined the liquid and gaseous effluent monitors and process monitors with respect to Technical Specification requirements for calibration, alarm setpoints and functional testing. The inspector reviewed the data for the calibration and alarm setpoints of the steam generator blowdown monitor, high conductivity waste monitor, containment fan coolers monitor, liquid radwaste discharge monitor, plant ventilation monitors (noble gas, particulate sampler, and iodine sampler), and containment purge monitor(noble gas, particulate sampler and iodine sampler). Source calibrations of the radiation monitors are performed

by HP/Chemistry personnel while electronic calibration and functional tests are performed by I&C personnel.

4-2 Procedure Review

The inspector reviewed the following calibration procedures:

- (1) RD-13.1 : Effluent Monitor Setpoint Determination, Revision 3, February 8, 1983
- (2) P-9 : Radiation Monitoring System, Revision 35, February 21, 1984, and
- (3) CP-211.2: Calibration of R-11 Detector, Revision 2, November 13, 1980
- (4) CP-213: Calibration and/or Maintenance of RMS Channel R-13, Revision 1, June 25, 1984
- (5) CP-214: Calibration and/or Maintenance of RMS Channel R-14, Revision 0, March 22, 1983
- (6) CP-215: Calibration and/or Maintenance of RMS Channel R-15, Revision 1, August 9, 1983
- (7) CP-216: Calibration and/or Maintenance of RMS Channel R-16, Revision 0, June 7, 1983
- (8) CP-217: Calibration and/or Maintenance of RMS Channel R-17, Revision 0, June 7, 1983
- (9) CP-218: Calibration and/or Maintenance of RMS Channel R-18, Revision 0, June 21, 1983
- (10) CP-219: Calibration and/or Maintenance of RMS Channel R-19, Revision 0, June 21, 1983
- (11) CP-220: Calibration and/or Maintenance of RMS Channel R-20, Revision 0, June 21, 1983
- (12) CP-221.2: Calibration of R-21 Detector, Revision 4, November 13, 1980, and
- (13) CP-222.2: Calibration of R-22 Detector, Revision 1, November 13, 1980

In reviewing the above procedures the inspector noted that several steps were not consistent with standard industrial practices, including the following items:

- (1) no documentation of electronic calibration data,
- (2) no raw data for the plateau check,
- (3) plateau curves were drawn on semi-log graph paper,
- (4) no acceptance criteria, and
- (5) determination of Xe-133 efficiency for the noble gas monitor using a non-NBS traceable source.

The inspector discussed with the licensee these items and stated that they are critical to evaluate the adequacy of the monitor capability. The inspector noted that several revisions of procedures were issued during June 1984. The inspector reviewed four revised calibration procedures (CP-210, CP-211, CP-212, and CP-213) and found that the revised procedures contained the above deficiencies.

The licensee stated that the calibration procedures noted above will be revised to correct the above problems.

4-3 Calibration Results

The inspector reviewed selected calibration results of 12 monitors for 1983 and 1984.

In reviewing monitor calibration results the inspector was not able to obtain the energy discrimination setting for the liquid effluent monitors as the licensee did not keep records of this information. The inspector stated that the capability of the effluent monitors to read low gamma energy radionuclides was questionable.

Procedure CP-219.2, Calibration of R-19 Detector, consists of placing a sealed source on a detector and then adjusting the high voltage until an acceptable count rate is indicated on a ratemeter (log scale meter). Another two readings (computer and recorder) are recorded as well at the same step for information. The inspector noted that the licensee used the ratemeter reading for the calibration. Since there was no acceptance criteria for the ratemeter reading the inspector was not able to determine the monitor operability. The inspector stated that the reading of the log scale ratemeter was questionable for the calibration purpose due to the coarse reading. The inspector recommended that the computer reading might be more suitable for the calibration.

The licensee used calibration factors (uCi/cc/cpm) to calculate the alarm setpoints. The licensee obtained the calibration factors either from manufacturer's data or by direct determination using a standard radioactive source. Since the licensee did not have the manufacturer's data the inspector was not able to verify the calibration factors. The inspector stated that the manufacturer's data must be obtained and utilized to verify the calibration factors.

In reviewing the noble gas monitor calibration data, the inspector noted that the licensee collected a gas sample from the radwaste treatment system and counted it using the gamma spectrometry system. This gas sample was then used as the Xe-133 calibration source to calibrate the noble gas monitor. The inspector reviewed the gamma counting results and noted that the activity of Xe-133 was either non-detectable or at the minimum detectable level. The inspector stated that a higher Xe-133 source must be used for calibration.

Based on the above findings, the inspector stated that improvements in the following areas were needed:

- (1) the majority of calibration procedures noted in Section 4-2 must be rewritten to incorporate limitations and actions (acceptance criteria),

- (2) energy discrimination setting for liquid monitors should be determined,
- (3) manufacturer's data should be obtained and utilized to verify the calibration results, and
- (4) any raw data should be attached to the calibration results.

The calibration frequency for monitors is on an annual basis. The inspector discussed in detail the above areas with the licensee representatives at the exit interview and the licensee committed to recalibrating the effluent monitors (R-12, R-14, and R-18) in the near future and revising the procedures as necessary. The inspector stated that this area will be reviewed thoroughly during a subsequent inspection (244/84-17-01).

5. Testing of Air Cleaning Systems

The inspector reviewed the licensee's air filtration system with respect to Technical Specification requirements and the results of the 1983 HEPA and charcoal adsorber in-place and laboratory tests. Results of 1984 testing are being compiled by the licensee and will be sent to the NRC for review in the near future.

No items of noncompliance were identified.

6. Records and Reports of Radioactive Effluents

The inspector reviewed the licensee's Semiannual Radioactive Effluent Release Reports for 1981, 1982, and 1983. During review of the report covering the latter half of 1983 the inspector noted that several of the values reported in the summary Table of Gaseous Effluent Releases did not agree with values given elsewhere in the report. The licensee indicated that a revised report with corrected values would be submitted with the next semi-annual report.

No items of noncompliance were identified.

7. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on June 29, 1984. The inspector summarized the purpose and scope of the inspection and the inspection findings. At no time during this inspection was written material provided to the licensee by the inspectors.