U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/87-01

Docket No. 50-244

License No. DPR18 Category C

Licensee: Rochester Gas and Electric Corporation
49 East Avenue
Rochester, New York 14649

Facility Name: Ginna Nuclear Power Plant

Inspection At: Ontario, New York

Inspection Conducted: January 5-9, 1987

Inspectors: J. McFadden 2-3-87
J. McFadden, Radiation Specialist date

Approved by: M. Shanbaky 2/4/87
M. Shanbaky, Chief, Facilities Radiation Protection Section date

Inspection Summary: Inspection on January 5-9, 1987 (Inspection Report No. 50-244/87-01)

Areas Inspected: Routine unannounced inspection of the occupational radiation protection program, including: status of previously identified items, external exposure control, internal exposure control, control of radioactive material and contamination, surveys and monitoring, and ALARA. One regionally-based inspector was on-site for the inspection.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

During the course of this inspection, the following personnel were contacted or interviewed.

1.1 Licensee Personnel

J. Bement, Radiation Protection Technician
*D. Filkins, Manager, Health Physics/Chemistry
*W. Goodman, HP Foreman
M. Klueber, Radiation Protection Technician
F. Mis, Health Physicist
P. Spacher, Health Physicist
*S. Spector, Superintendent, Ginna Production
*J. Supina, Dosimetry Supervisor/ALARA Coordinator
S. Warren, Health Physicist

*Attended the exit meeting on January 9, 1987.

Additional licensee personnel were contracted during this inspection.

1.2 NRC Personnel Attending the Exit Interview

T. Kim, Resident Inspector
T. Polich, Senior Resident Inspector

2.0 Purpose

The purpose of this inspection was to review the licensee's occupational radiation protection program with respect to the following elements:

- Status of previously identified items.
- External occupational exposure control and personal dosimetry.
- Internal exposure control and assessment.
- Control of radioactive materials and contamination, surveys, and monitoring.
- Maintaining occupational exposures ALARA.

3.0 Status of Previously - Identified Items

3.1 (Open) Follow-up Item (86-04-01): SWP procedures are to be revised to clarify how a SWP is generated and how a radiation protection technician is to comply with and to complete a SWP. During this inspection, a licensee representative stated that the revision to this procedure is currently being addressed and that it will be ready by the upcoming outage.

3.2 (Closed) Follow-up Item (86-04-02): Written instructions for calibration and operation of the automated frisker are to be developed and implemented, and calibrations are to be documented. During this inspection, Procedure No. HP-7.47, "Operation and Calibration of Eberline PCM-1A", was reviewed and appeared adequate. Current calibration results were documented. Based on this review, this item is closed.

4.0 External Occupational Exposure Control and Personnel Dosimetry

The licensee's program for external occupational exposure control and personnel dosimetry was reviewed against criteria contained in:

- 10 CFR 20, Standards for Protection Against Radiation
- Applicable Technical Specifications
- Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation)

The licensee's performance relative to these criteria was determined by:

- Discussions with licensee personnel
- Independent radiation dose rate measurements
- Observations by the inspector during a tour of the controlled area
- Review of procedures including:
  - A-1, Radiation Control Manual
  - A-1.1, Locked Radiation Areas
  - A-25.6, NRC Written Notification
  - HP-1.1, Issuing Personnel Dosimeters
  - HP-1.2, External Exposure Limits
  - HP-1.3, External Exposure Records
  - HP-1.5, Dosimeter Discrepancy Evaluation
  - HP-1.6, Neutron Exposure
  - HP-3.1, Exposure Reports to Individuals and the NRC
  - HP-4.1, Controlled Area Entry
  - HP-4.2, Self-Reading Dosimeter Use
  - HP-4.3, Health Physics Work Permit Use
  - HP-5.2, Posting of Radiation Areas and Container Labeling
- Review of documentation including:
  - Selected calibration records for self-reading dosimeters
  - Cumulative exposure records for 1986
  - Selected individual radiation exposure files
  - Current and selected past Special Work Permit (SWP) packages

Within the scope of this review, no violations were identified.

During this programmatic review, procedures were examined for adequate coverage of the elements of an external exposure control and dosimetry program, for content, and for implementation. No deficiencies were noted.

5.0 Internal Exposure Control and Assessment

The licensee's program for internal occupational exposure control and assessment was reviewed against criteria contained in:

- 10 CFR 20, Standards for Protection Against Radiation
- Applicable Technical Specifications
- Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation)

The licensee's performance relative to these criteria was determined by:

- Discussions with licensee personnel
- Observations by the inspector during a tour of the controlled area
- Review of procedures including:
    - A-1, Radiation Control Manual
    - A-1.6.3, Ginna Station Respiratory Protection Program
    - A-25.6, NRC Written Notification
    - HP-2.1, Whole Body Counting Guide
    - HP-2.2, Whole Body Counter Operations
    - HP-2.5.1, Bioassay Samples Collection, Handling and Analysis
    - HP-2.5.2, Determination MPC-Hours from Body Burden Analysis
      HP-2.5.3, Calculational Methods for Internal Dose and Body Burdens
    - HP-3.1, Exposure Reports to Individuals and the NRC
    - HP-6.2, Posting of Contaminated and Airborne Areas
    - HP-7.44, Operation of Tennelec LB-5100
    - HP-12.1, Usage of Respirators
    - HP-12.5, Maintenance of Respirators
    - HP-14.0, Guidelines for the Use of Air Sampling Equipment
    - HP-14.2, Cperation and Calibration of Gilian Model HFS-113T Air Sampler
- Review of selected documentation including:
    - Whole body count results
    - MPC-hour tracking logs
    - Air sampling records for work coverage
    - Respirator medical and fit-test records

Within the scope of this review, no violations were identified.

The inspector noted that assigned tritium MPC-hours during the 1986 annual outage were higher than that normally expected and that a large number of individuals were involved. The licensee explained that modifications were being done on the containment purge supply and exhaust system during the outage. Documentation indicated that the tritium levels generally exceeded 25 percent of MPC when the purge was not operating and the reactor cavity was flooded for refueling. The licensee stated that this was the case even though the purge fans were used whenever possible. Records indicated that no individual exceeded the 40 MPC-hour control measure within any period of seven consecutive days.

6.0 Control of Radioactive Materials and Contamination, Surveys, and Monitoring

The licensee's program for control of radioactive materials and contamination, surveys, and monitoring was reviewed against criteria contained in:

- 10 CFR 20, Standards for Protection Against Radiation
- Applicable Technical Specifications
- Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation)

The licensee's performance relative to these criteria was determined by:

- Discussions with licensee personnel
- Observations by the inspector during a tour of the controlled area
- Review of procedures including:
  - A-1, Radiation Control Manual
  - HP-4.3, Health Physics Work Permit Use
  - HP-5.1, Area Radiation Survey
  - HP-6.1, Contamination Surveys
  - HP-6.3, Personnel Decontamination
  - HP-7.47, Operation and Calibration of Eberline PCM-1A
  - HP-11.5, Operation of Constant Air Monitors
  - HP-14.0, Guidelines for the Use of Air Sampling Equipment
- Review of selected documentation including:
  - Routine radiation surveys
  - Routine contamination surveys
  - Routine airborne radioactivity surveys
  - Contaminated Area Incident Log (CAIL)
  - Instrument calibration list
  - Frisker/skin contamination log

Within the scope of this review, no violations were identified.

The following items needing licensee attention were identified:

- Lack of a procedure for the routine air sampling program
- Potential spread of contamination from contaminated Locked High Radiation Areas (LHRAs)

The licensee has procedures (HP-5.1 and HP-6.1) which address routine area and contamination surveys. These two procedures contain sections entitled purpose, references, principle, prerequisites, precautions and limit values, and instructions. They also contain detailed checklists which give survey locations and frequencies. However, there was no comparable procedure or procedures available addressing a routine air sampling program. The licensee has documented in a procedure that routine air sampling is conducted, has a general procedure on air sampling, and has specific procedures for the operation and calibration

of various continuous air monitors. The inspector verified that a routine air sampling program is conducted using continuous air monitors. Still, the lack of a specific procedure for the routine air sampling program gives less assurance that this program will continue to be implemented uniformly and consistently than if it were proceduralized as the routine area and contamination survey programs are. A licensee representative stated that this item would be evaluated.

The licensee's current practice for contamination control of entries into contaminated LHRAs was reviewed. The licensee has several sets of rubber overshoes placed at the step-off pads (SOPs) at the access points to these areas, and these overshoes are left there to be reused. This practice appeared to the inspector to provide a significant probability for the spread of contamination since the potentially contaminated gloves are not discarded upon exit from each area, the potentially contaminated overshoes are not replaced at any specified frequency, nor is their level of contamination routinely checked. Additionally, friskers were not stationed near these SOPs. Although a review of routine smear surveys (in the vicinity of these SOPs) and the skin contamination log gave no indication that this practice was causing spread of contamination, a licensee representative stated that this item would be reviewed.

There are now two automated frisker units in use at the primary exit from the controlled area. The licensee stated that this should provide greater assurance that adequate frisking will take place.

7.0 Maintaining Occupational Exposures ALARA

The licensee's program for maintaining occupational exposures ALARA was reviewed against criteria contained in:

- 10 CFR 20.1, Purpose
- Applicable Technical Specifications
- Regulatory Guide 1.33, Quality Assurance Program Requirements

The licensee's performance relative to these criteria was determined by:

- Discussions with licensee personnel
- Observations by the inspector during a tour of the controlled area
- Review of procedures including:
  - A-1, Radiation Control Manual
  - A-1.5, Keeping Occupational Exposure at Ginna ALARA
  - A-1.6, ALARA Committee Operating Procedure
  - A-1.6.1, Documentation of "As Low As Reasonably Achievable" (ALARA) Program
- Review of documentation including:
  - The corporate ALARA policy
  - The corporate position analysis questionnaire for the position title of Corporate Health Physicist
  - A draft corporate engineering procedure entitled "ALARA/Radiation Safety Design Review"

- ALARA work packages
- ALARA dose-tracking records
- ALARA committee meeting minutes

7.1 Planning and Preparation

Based on discussions with the ALARA coordinator and review of ALARA work packages, dose-tracking records, and committee meeting minutes, it appears that the licensee is continuing to do a good job of documenting their ALARA efforts. The licensee has provided for increased radiation protection personnel for the upcoming outage. The licensee stated that a robot, manway shields, and an automated torque device for manway studs would be in use for the steam generator work. There were approximately eighteen ALARA committee meetings in 1986 and the minutes of each received PORC review. At the time of this inspection, neither an approved corporate engineering ALARA design review procedure nor completed engineering work request ALARA work packages were available for review at the plant site. This documentation will be reviewed in a subsequent inspection.

7.2 Goals/Objectives/Results

The licensee's person-rem goal for 1986 was 375. The actual person-rem total achieved for 1986 was 368. So, in addition to having a goal for 1986 which was less than their actual person-rem (412) for 1985, the licensee's actual person-rem for 1986 was lower than their goal.

The licensee's goal for 1987 is 375 person-rem. This does not appear aggressive since they had the same person-rem goal for 1986. The licensee stated that the 1987 goal, when considered within the context of their five-year plan, does demonstrate a strong commitment to reduction of annual person-rem totals. The licensee's five-year plan, as of early 1986, was as follows:

Year	Target
1986	375
1987	375
1988	300
1989	300
1990	250

During this inspection, the licensee stated that the 1989 target has been modified to 350 person-rem. Ten-year ISI work is planned for 1989.

8.0 Exit Interview

The inspector met with the personnel denoted in Section 1.0 at the conclusion of the inspection on January 9, 1987. The scope and findings of the inspection were discussed at that time.