

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-220/88-14
50-410/88-13

Docket Nos. 50-220
50-410

License Nos. DPR-63
NPF-54 Priority - Category C

Licensee: Niagara Mohawk Power Company
301 Plainfield Road
Syracuse, New York 13212

Facility Name: Nine Mile Point Units 1 and 2

Inspection At: Scriba, New York

Inspection Conducted: April 25-29, 1988

Inspectors: J. J. Kottan 6-3-88
A. S. Kirkwood, Radiation Specialist date

J. J. Kottan 6-3-88
J. J. Kottan, Radiation Laboratory Specialist date

Approved by: W. J. Pasciak 6-16-88
W. J. Pasciak, Chief, Effluents date
Radiation Protection Section

Inspection Summary: Inspection on April 25-29, 1988 (Combined Inspection
Report Nos. 50-220/88-14, 50-410/88-13)

Areas Inspected: Routine inspection of the licensee's action on previous inspection findings of the post accident and airborne effluent sampling systems. Areas reviewed included: licensee action on previous findings and airborne effluent radiation monitoring systems.

Results: No violations were identified.



DETAILS

1. Individuals Contacted

Principal Licensee Employees

- *A. Pinter, Unit 2 Licensing Engineer
- *T. Egan, Unit 1 Licensing Engineer
- *S. Agarwal, Lead Engineer - Site Licensing
- *P. Fernandez, Unit 2 Mod Engineer
- *B. Bock, Generation Engineer - Chemistry
- *K. Dahlberg, Site Superintendent of Maintenance
- *P. Volza, Radiation Protection Manager
- *R. Abbott, Unit 2 Station Superintendent
- *J. Willis, General Superintendent
- *K. Snyder, Generation Engineer - Chemistry
- *J. Duell, Site Chemistry Supervisor
- A. Ross, Unit 2 Chemistry Supervisor
- E. Leach, Generation Specialist
- J. Lawton, Unit 2 Foreman
- G. Corell, Training Instructor

New York State Public Service Commission

- P. Eddy, Site Representative

*Denotes those individuals attending the exit meeting on April 29, 1988.

The inspector also talked with and interviewed other members of the chemistry staffs.

2. Licensee Action on Previous Findings

(Open) Inspector Follow-up Item (50-410/85-20-05): Representative samples from effluent monitors. Due to the lack of radioactive material in airborne effluents, the licensee has been unable to verify the representativeness of the airborne effluent monitors. Until this can be done this item will remain open.

(Closed) Inspector Followup Item (50-410/86-49-01): Gaseous Effluent Monitoring System (GEMS) pre-operational testing deficiency reports. The inspector reviewed seven Pre-Operational Test N2-POT-80A-2 deficiency reports which were to have been completed prior to fuel loading. The deficiency reports were reviewed and resolved by the licensee as required by the licensee's procedures. In addition the inspector noted that the pre-operational test had been reviewed and approved by the Station Superintendent indicating operational acceptance.

(Closed) Inspector Followup Item (50-410/87-22-01): Post Accident Sampling System (PASS) sampling.



This item consists of three parts:

1. Practicing procedures for hydrogen determination by Henry's Law in undiluted samples.
2. Intercomparison of results to ensure that hydrogen gas determinations could be made using Henry's Law
3. Calibration of PASS reactor water sample dilution system.

Licensee personnel have completed practical factors training for hydrogen determinations using Henry's Law. The inspector reviewed the training course outline, sample calculations, and attendance lists. In addition the inspector noted that on the job chemistry training task 7.18 included PASS sampling and hydrogen determination. The licensee compared dissolved oxygen levels determined from the normal reactor water sampling points and the PASS and found them to be in agreement. Oxygen was used because hydrogen levels were too low to perform the comparison. The licensee measured the volume of the sample dilution valve in order to verify the dilution factor.

(Closed) Inspector Follow-up Item (50-410/87-22-02): Limiting total activity on containment particulate and iodine samples. The licensee has modified Procedure N2-CSP-13, Chemical Post Accident Assessment at Unit 2, to include an equation for limiting the total activity collected on particulate filters and charcoal cartridges.

(Closed) Inspector Follow-up Item (50-410/87-22-03): Licensee to become a registered user of the undiluted reactor water shipping cask and to establish procedures for cask loading and shipping. The licensee is now a registered user of a NUPAC Model PAS-1 (Certificate of Compliance No. 9184) shipping cask. In addition, the licensee has modified Procedures SRP-6, The Packaging and Transportation of Radioactive Material, and N1-WHP-4, Cask Loading Procedure, to incorporate provisions for handling and loading the cask.

(Closed) Inspector Followup Item (50-410/87-22-04): Modify FSAR relative to PASS boron analysis range. The licensee's FSAR commitment for PASS boron analysis specified an analysis range of 50-2000 ppm. However, the GE Standard Method calls for an analysis range of 50-1000 ppm. The inspector reviewed licensing document change notice (LDCN) No. U-40 initiated on June 24, 1987 by the site Chemistry Department and approved by the Manager, Nuclear Licensing on September 25, 1987 to change the FSAR PASS boron analysis range from 50-2000 ppm to 50-1000 ppm.

(Closed) Inspector Followup Item (50-410/87-22-06): Adequate provisions for collection of a noble gas grab sample. The licensee has made provisions for using a 25 cc gas counting geometry so that high concentrations of noble gases can be analyzed and personnel exposure minimized. Also gas samples taken using the backup sample pump are not purged to the general sample area, but returned via the normal effluent monitor (GEMS) sample exhaust line.



(Closed) Inspector Followup Item (50-410/87-22-07): This item consists of two parts:

1. Guidance for use of the optimum library for analysis of charcoal cartridges at 100 cm, and
2. Deficiencies in backup sampling capabilities for particulate and iodine samples of plant effluents.

The licensee's current method for charcoal cartridge analysis at the 100 cm shelf involves the use of batch files in which the gamma spectrometry computer selects the nuclide library used for sample analysis rather than the technician. The licensee has permanently installed the back up sample pumps into the primary (GEMS) sampling system isokinetic sampling line and return lines. Therefore, the samples are collected via an isokinetic sample system and do not now exhaust to the general sampling area. Procedure N2-CSP-79, Gaseous Effluent Manual Sampling and Analysis, contains instructions for use of the backup sampling pump and apparatus as well as provisions to limit the activity collected on the particulate filter/charcoal cartridge. The inspector also reviewed training records indicating that chemistry technicians had completed practical factors training in Procedure N2-CSP-79.

(Open) Inspector Followup Item (50-410/87-22-10): This item consists of three sub parts:

1. Provisions for restoration of power to the PASS system containment isolation valves to ensure capability to collect a sample,
2. Provisions for restoration of power to the storeroom elevator to ensure its availability for sample transport, and
3. Provide appropriate periodic maintenance of heat tracing for the containment sample line.

The licensee has initiated action for subitems one and two above. The actions appear adequate to provide alternate power to both the PASS system containment sample line solenoid operated valves and the storeroom elevator. However, the action in response to sub items one and two above was not formalized in a procedure which would require review and approval of the proposed actions. In addition, the licensee stated that rather than provide instructions for obtaining alternate power supplies, permanent modifications to the power supply to PASS containment sampling valves would be made so that one sample line will have a common Division I power, and the other containment sample line will have a common Division II power supply.

Also the licensee determined that the elevator power supply would automatically transfer to a Unit 1 power source if power is lost from its normal source. In the event that this alternate power source is lost, the post accident samples would be transported using a pickup truck.



Therefore, subitem 2 is closed. With regard to subitem 3, the licensee has modified procedures N2-EPM-GEN-A78, Heat Tape PM; and N2-ICP-HTS-SA001, Calibration of Thermal Heat Trace Control Panels, to include the PASS sample system. This subitem is closed.

Until the licensee completes the modifications to the power supplies to the containment sampling valves or incorporates into procedures provisions for retaining power to the system as presently installed, subitem 1 will remain open.

(Closed) Inspector Followup Item (50-410/87-22-11): Inclusion of the maintenance program data sheets for GEMS into the formally established maintenance program. Procedure N2-MPM-RMS-V022, Gaseous Effluent Monitoring System PM, now includes preventive maintenance data sheets. The procedure also specifies the frequency of the preventive maintenance tasks and provides for an evaluation of component failure rates.

3. Airborne Effluent Radiation Monitoring Systems-Unit 2

The licensee's radioactive gaseous effluent monitoring system (GEMS) consists of an on-line germanium detector to measure noble gases and an automatic off-line system to measure particulates and radioiodines. One GEMS is located on the main stack and the other GEMS is located on the radwaste/reactor building ventilation system. The licensee has submitted several licensee event reports (LERs: 87-14 dated 2-27-87, 87-56 dated 10-23-87, and 87-84 dated 1-28-88) related to the GEMS. The event reports identified a failure to properly calibrate the system flow meters, a lack of alarm "reflash" capability in the control room, and the loss of auxiliary sampling capability, respectively. Since September, 1987 the licensee has been using auxiliary sampling equipment to meet the sampling and analysis requirements of the Technical Specifications for airborne effluents. The inspector noted during this inspection that the auxiliary sampling systems were permanently installed using the same isokinetic sampling lines as used by the GEMS. Therefore, during a GEMS shutdown, the licensee would be able to adjust the auxiliary sample flow to maintain isokinetic sampling conditions.

The inspector noted the following with respect to the auxiliary sampling systems:

1. The pressure gauge at the inlet side of the stack auxiliary sampling pump was offscale at greater than 30PSI, when, in fact, the gauge should be indicating a negative pressure.
2. Noble gas grab samples are taken after the sample pump. The air flow after the sample pump includes "bleed air" which is introduced into the sample.
3. Vacuum corrections are not made to the flow gauge readings. The flow gauge is located upstream of the sample pump and is under negative pressure.



4. The licensee is currently operating both the GEMS and auxiliary sampling pumps simultaneously. This results in a flow rate greater than that necessary for isokinetic sample flow.

The licensee, in response to the above items changed the pressure gauge at the stack sample pump prior to the completion of the inspection. The new gauge indicated approximately two inches of mercury vacuum as expected. The licensee stated that the old gauge was apparently defective, and more attention would be directed to the gauge readings and prompt corrective action taken. The licensee also stated that the flow meter readings would be corrected for system vacuum, and the gas grab samples would be taken with the sample pump bypass isolated. In addition, the licensee stated that the GEMS pumps would no longer be operating on the same sampling line with the auxiliary pumps at the same time. The licensee further stated that data was available from previous tests, when the offgas treatment system was not in service, comparing offgas samples and stack gas samples which would demonstrate the representativeness of the auxiliary sampling system. The inspector stated that the above licensee actions and data would be reviewed during a subsequent inspection. (50-410/88-13-01)

The inspector noted that in January, 1988 the licensee assigned a person full time to work on software and hardware modifications to the GEMS so that the systems could be returned to service. The licensee stated that, pending completion of pre-operational tests of the GEMS, the systems should be returned to service in May or June of 1988.

4. Exit Meeting

The inspector met with the licensee representatives denoted in Section 1 of the report at the conclusion of the inspection on April 29, 1988. The inspector summarized the purpose, scope, and findings of the inspection.

