

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-454; 50-455
Licenses No: NPF-37; PF-66

Reports No: 50-454/97003(DRS); 50-455/97003(DRS)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Byron Generating Station, Units 1 & 2

Location: 4450 North German Church Road
Byron, IL 61010

Dates: March 3-7, 1997

Inspectors: S. Orth, Radiation Specialist
D. Hart, Radiation Specialist

Approved by: T. Kozak, Chief, Plant Support Branch 2
Division of Reactor Safety

EXECUTIVE SUMMARY

Byron Generating Station, Units 1 & 2
NRC Inspection Reports 50-454/97003; 50-455/97003

This inspection included an announced review of the chemistry and radiation protection programs. One violation with three examples was identified concerning the failure to establish and implement procedures. One additional violation was identified concerning the failure to provide training on the post accident sampling system (PASS) at the required frequency.

Plant Support

- The water chemistry of primary and secondary systems was well maintained and monitored. The licensee took appropriate actions to mitigate the effects of circulating water inleakage. (Section R1.1)
- The laboratory and in-line instrument quality control program was well implemented and ensured the accuracy of chemistry analyses. Interlaboratory program results were generally very good; however, discrepancies in 1995 results were not effectively resolved. (Section R1.2)
- The PASS maintenance program was effective in ensuring system operability. A Non-Cited Violation was identified concerning the lack of instructions for performing PASS surveillances. (Section R1.3)
- Access to safety related equipment remained relatively unencumbered by radiological impediments. An example of a violation was identified concerning the failure to post contaminated areas in accordance with procedures. A Non-Cited Violation was identified concerning the failure to post a high radiation area. (Section R2.1)
- Examples of violations were identified concerning the failure to adequately implement chemistry procedures and the failure to establish a procedure covering chemistry procedure adherence. Although contamination control practices were generally good, chemistry technicians did not always adhere to routine sampling and analyses procedures, potentially effecting analytical accuracy. (Section R4.1)
- One violation was identified concerning the failure to provide PASS training at the frequency specified by procedures. (Section R5.1)
- Improvements were observed in the chemistry department self assessment program. (Section R7)

Report Details

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Plant Water Chemistry Control

a. Inspection Scope (84750)

The inspectors reviewed the licensee's management of primary and secondary water chemistry including the program to mitigate impurities in the systems. Included was a review of the licensee's trending and analysis of chemistry parameters for the period of January 1996 through January 1997 and a review of the following procedures:

BAP 560-1, "Primary Chemistry Program Description," Revision 9, dated November 13, 1996; and

BAP 560-2, "Secondary Chemistry Monitoring Program," Revision 8, dated September 26, 1996.

b. Observations and Findings

The licensee's procedures, BAP 560-1 and BAP 560-2, were consistent with the industry guidelines for minimizing the concentration of corrosive agents and radiation source term buildup. The licensee continued to use all-volatile treatments (AVT) chemistry in the secondary system to reduce oxygen concentrations and iron transport and to control pH, via addition of hydrazine and methoxypropyl amine.

The licensee effectively maintained control of primary and secondary water chemistry in both units. The concentration of chloride in the primary systems was maintained between 3-5 parts per billion (ppb). During routine operations, steam generator (SG) sodium and chloride concentrations were 0.3 - 1.0 ppb. The concentration of feedwater iron was often above the licensee's goal of 1.5 ppb, but was maintained below the action level 1 concentration of 5 ppb. The licensee experienced circulating water inleakage in both units which resulted in significant increases of secondary water impurities. During March of 1996, the Unit 2 SG chloride concentration increased above the 20 ppb action level specified in procedure BAP 560-2. It appeared that the licensee took appropriate actions and reduced the levels in a timely manner, ensuring minimal corrosion effects.

The licensee's radiochemistry data did not indicate any fuel integrity problems. There were no increases in the reactor coolant noble gas or radioiodine activity nor was there a change in the radioiodine ratios. Additionally, the licensee had not observed any gross indications of a failure in fuel integrity.

c. Conclusions

The primary and secondary systems water chemistry was well maintained and monitored. The licensee took appropriate actions to mitigate the effects of circulating water inleakage.

R1.2 Quality Control of Laboratory and In-line Chemistry Instruments

a. Inspection Scope (84750)

The inspectors reviewed the licensee's quality control (QC) program for both laboratory and in-line instruments. The inspectors reviewed the licensee's implementation of procedure BAP 560-12, "Byron Station Chemistry Quality Control Program," Revision 2, dated January 1, 1994. The inspectors also reviewed the licensee's maintenance of instrument control charts and performance of instrument calibrations.

b. Observations and Findings

The inspectors reviewed the preparation, labeling, and storage of reagents and calibration standards. The inspectors did not identify any chemicals which were improperly labeled or which had been used beyond their expiration date. Laboratory chemicals were appropriately stored (i.e. incompatible chemicals were not stored in common locations).

The inspectors observed that performance tests for the licensee's laboratory and in-line instruments were appropriately performed. The licensee's laboratory control charts were well maintained and indicated proper instrument response, with statistical distribution of performance test data. The chemistry staff reviewed instrument control charts as required. The in-line instruments were tested as required with corrective actions taken for instruments not meeting the stated acceptance criteria contained in procedure BCP 520-6, "Byron Station In-line Quality Control Program."

While the licensee achieved excellent results for the 1996 interlaboratory comparison program, the inspectors identified some problems in the licensee's corrective actions for discrepancies in the 1995 comparison results. For example, the licensee's third quarter 1995 lithium results were not within the stated acceptance criteria. In response, the licensee analyzed additional samples to investigate the disagreements but no documentation to assess the results of the additional analyses existed. During the inspection, the licensee obtained the results which indicated further disagreements. Although the cause of the disagreements could not be determined, the inspectors verified that the 1996 results were within the licensee's required tolerance and that there was no current problem with the licensee's analytical accuracy. The lack of timely resolution reduced the ability to correct potential analytical or instrument problems indicated by the data. The licensee attributed this problem to a change in the administration of the program, which had improved in 1996.

c. Conclusions

The laboratory and in-line instrument quality control program was well implemented and ensured the accuracy of chemistry analyses. Interlaboratory program results were generally very good; however, discrepancies in 1995 results were not effectively resolved.

R1.3 Post Accident Sampling System Maintenance and Surveillance Program

a. Inspection Scope (84750)

The inspectors reviewed the licensee's program to ensure the operability of the post accident sampling system (PASS). The inspectors reviewed the licensee's QC program required by procedure BAP 560-10 "Byron Chemistry Post-Accident Program Description," Revision 2, dated December 2, 1996. In addition, the inspectors reviewed maintenance records and discussed system operability with the cognizant member of the chemistry staff.

b. Observations and Findings

The licensee's QC program required that a PASS surveillance program, consisting of routine performance tests and calibrations of PASS equipment to ensure its readiness, be implemented. With the exception of gas chromatograph and ion chromatograph surveillances, the inspectors noted that the licensee did not have procedures which defined the surveillance frequency and the method of performing surveillances for the remaining system capabilities. Previously, the licensee had followed a corporate sponsored Nuclear Operations Directive (NOD) NOD CY.5, which provided instructions to accomplish this program but was deleted in 1995. Although the licensee did not establish new guidance to replace the NOD, the chemistry staff continued to perform surveillances at the frequencies provided in the NOD. As a result of self assessment activities (Section R7), the licensee identified this deficiency and was in the process of developing a procedure to define the surveillance program. Concurrently, the licensee performed quarterly sampling of diluted and undiluted reactor coolant samples to ensure the capabilities of the system. The licensee's results indicated that diluted and undiluted samples could be obtained at the PASS and that the dilution factor had remained constant.

Technical Specification 6.8.4.d requires the licensee to implement a program to ensure the capability of to obtain and analyze reactor coolant under accident conditions. The failure to have procedures, as required by BAP 560-10, to ensure the readiness of the PASS is a violation of TS 6.8.4.d. However, this licensee identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV Nos. 50-454/97003-01 and 50-455/97003-01).

The inspectors reviewed outstanding licensee work requests for the PASS and observed that deficiencies in the system were corrected in a timely manner. With the exception of the containment sump sample, the inspectors observed that outstanding maintenance requests did not effect the licensee's ability to obtain PASS samples. In January 1997, the licensee identified a problem with a check

valve which affected the licensee's ability to obtain containment sump samples. The licensee had initiated a work request to correct the problem, which was scheduled for late March 1997.

c. Conclusions

The PASS maintenance programs was effective in ensuring system operability. A Non-Cited Violation was issued concerning the lack of instructions for performing PASS surveillances.

R2 **Status of RP&C Facilities and Equipment**

R2.1 Radiological Surveys and Identification of Radiological Hazards

a. Inspection Scope (83750)

On March 3 and 4, 1997, the inspectors reviewed the radiological conditions in the Auxiliary Building (AB) and the adequacy of radiological postings and surveys, as required by procedure BRP 5010-1 "Radiological Postings and Labeling Requirements," Revision 12, dated January 31, 1997. The inspectors also reviewed the licensee's investigation concerning the inadequate posting of the volume control tank (VCT) room in October of 1996.

b. Observations and Findings

The inspectors observed that the licensee maintained good access to safety related equipment with minimal radiological impediments. The inspectors verified that radiation areas and high radiation areas (HRAs) were properly posted and controlled. However, the inspectors identified several indications of pump seal leakage (i.e. boric acid residue) in the 1A and 2A chemical and volume control pump rooms, the 2A safety injection pump room, and the 2A residual heat removal (RHR) pump room which were not within posted contaminated areas (CAs). As a result of the inspectors' observations, the licensee conducted surveys of the identified areas and measured removable radioactive contamination between 1,000 and 6,000 disintegrations per minute (dpm) over 100 square centimeter (cm²) areas. Procedure BRP 5010-1 requires that areas with removable contamination greater than or equal to 1000 dpm per 100 cm² be posted with a sign that states "CAUTION, CONTAMINATED AREA". Subsequently, the licensee placed boundaries and postings around the affected areas. The licensee indicated that the site quality verification (SQV) organization had recently found problems in the contamination control program but comprehensive corrective actions had not yet been implemented.

TS 6.8.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide (RG) 1.33, Appendix A, Revision 2, February 1978. RG 1.33, Appendix A recommends that radiation protection procedures be implemented which cover contamination control. BRP 5010-1 contains instructions for the labeling and posting of contaminated areas and, thus, implements the recommendation of RG

1.33. The failure to post contaminated areas in accordance with BRP 5010-1 is a violation of TS 6.8.1 (Violation Nos. 50-454/97003-02a and 50-455/97003-02a).

During October of 1996, the licensee identified four occasions when radiological postings for the volume control tank (VCT) room and the valve aisle room were found to be incorrect. On two occasions, the high radiation area (HRA) posting for the VCT room was found on the door to the valve aisle room. Although the VCT room was not correctly posted, the room remained controlled and locked, preventing unauthorized access into the area. On two other occasions, the CA posting for the valve aisle room was found on the entrance to the VCT room. Following the initial events, the licensee implemented the following corrective actions: (1) the postings were corrected; (2) RP surveillances of the AB were increased; (3) additional adhesives to the HRA signs were provided; and (4) a formal investigation was initiated by the licensee.

During the licensee's investigation, a contract fire watch individual indicated that on two occasions he replaced fallen radiological postings and on two occasions he had moved radiological postings which he thought were incorrect. The individual indicated that he thought he was taking the proper action in placing the fallen signs on the door he felt they belonged and subsequently moving the signs when he found they were on what he believed was the wrong door. As a long term corrective action, the licensee and its contractor discussed the event with plant staff and emphasized the correct actions to take when abnormal situations are observed. The individual's access to the site was revoked.

The failure to properly post the VCT, a HRA, is a violation of 10 CFR 20.1902(b). However, this licensee identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV Nos. 50-454/97003-03 and 50-455/97003-03).

c. Conclusions

Access to safety related equipment remained relatively unencumbered by radiological impediments. An example of a violation was identified concerning the failure to post CAs in accordance with procedures. A Non-Cited Violation was identified concerning the failure to post a HRA.

R4 Staff Knowledge and Performance in R/P&C

R4.1 Sampling and Analysis of Primary Coolant

a. Inspection Scope (84750)

The inspectors observed chemistry technicians (CTs) obtain and analyze routine reactor coolant liquid and gas samples. The following procedures were used during the sampling and analysis evolutions:

BCP 140-12, "Gas Analysis using the Hewlett Packard 6890 Gas Chromatograph, Revision 0, dated December 7, 1995;

BCP 300-23, "Reactor Coolant or Pressurizer Liquid Grab Sample," Revision 13, dated September 16, 1996;
BCP 300-62, "Preparation of Gas Samples for Isotopic Analysis," Revision 4, dated November 14, 1996; and
BCP 300-77, "Preparing a Pressurized Liquid Sample for Analysis Using the Degassing Panel," Revision 7, dated August 2, 1994.

b. Observations and Findings

On March 4 and 5, 1997, the inspectors identified numerous procedure adherence problems while observing CTs obtaining and analyzing routine chemistry samples. As the CTs were obtaining a reactor coolant sample on March 4, 1997, the inspectors questioned the CTs actions which prevented imminent violations of procedure BCP 300-23. For example, prior to performing step F.30, the CTs had not performed a radiological survey of the liquid sample panel (LSP) as directed by step F.29. Once questioned by the inspectors, a dose rate of less than 3 millirem per hour was obtained. Prior to additional questions by the inspectors, the CTs subsequently failed to recognize that obtaining a dose rate of less than 3 millirem per hour (mrem/hr) on the LSP in step F.29 required them to proceed to step F.43 instead of continuing to step F.30.

During the operation of the gas chromatograph (GC), the inspectors also identified problems with procedure adherence. Procedure BCP 140-12 required the CTs to discard the results of the first performance test of the shift to ensure the sample lines were adequately purged and then perform a second test. During the operation of the GC on March 5, 1997, the results of the first performance test of the shift were not acceptable, and the CT properly repeated the analysis. However, the CT indicated that it was acceptable to use the initial results if they were within the licensee's acceptance range. The chemistry supervisor indicated to the inspectors that this was not acceptable and communicated this to all CTs in the department.

On March 5, 1997, the inspectors identified that the licensee failed to adequately follow procedure BCP 300-62. Prior to transferring a gas sample, procedure BCP 300-62 requires that the 15 cubic centimeter (cc) gas vial be evacuated. Two CTs had participated in the preparation and analysis but had not adequately ensured that all of the procedural steps had been completed. CT A had prepared the vial for the analysis by placing a septum on the vial, but he did not evacuate the vial. Subsequently, CT B transferred the sample to the vial but did not recognize that the vial was not adequately prepared in accordance with BCP 300-62. The failure to evacuate the sample vial potentially introduced a nonconservative error in the analysis from a potential loss of sample. As a result of problems in the analyses, the licensee repeated the entire evolution.

TS 6.8.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in RG 1.33, Appendix A, Revision 2, February 1978. RG 1.33, Appendix A recommends that procedures be implemented which specify chemistry instructions and the calibration of laboratory instruments. Procedure BCP 300-62 provides chemistry instructions for the preparation of gas samples, thus implements the recommendation of RG

1.33. The failure to evacuate gas vials in accordance with BCP 300-62 is a violation of TS 6.8.1 (Violation Nos. 50-454/97003-02b and 50-455/97003-02b).

During routine chemistry sampling, it was common practice for one CT to read the procedure steps and another perform the required actions. The inspectors observed that the two CTs frequently exchanged roles during the evolutions. The inspectors noted that the lack of consistency appeared to contribute to the problems described above. The chemistry supervisor indicated that this was a newly implemented practice and that he planned to review its effectiveness and to ensure that the CTs understood his expectations.

Effective contamination controls were used by CTs while they obtained and analyzed radioactive samples. The CTs demonstrated good use of gloves while handling potentially contaminated samples and performed contamination surveys prior to removing samples from contaminated sample sinks. Prior to removing samples from the sample room, the CTs performed radiological surveys.

As a result of the procedure adherence problems discussed above, the inspectors also reviewed the licensee's guidance and requirements concerning procedure adherence. On November 1, 1996, the station manager approved Site Policy Memo No. 200.14 which provided management's expectations to site personnel. The memorandum provided guidance concerning procedure adherence, independent verification, and conduct of general day-to-day activities. However, the inspectors identified that the licensee did not have a procedure which covered adherence to chemistry procedures.

TS 6.8.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in RG 1.33, Appendix A, Revision 2, February 1978. RG 1.33, Appendix A recommends that procedures be established which cover procedure adherence. The failure to establish procedures which cover procedural adherence is a violation of TS 6.8.1 (Violation Nos. 50-454/97003-02c and 50-455/97003-02c).

c. Conclusions

Three examples of a violation were identified concerning the failure to adequately implement chemistry procedures. Although contamination control practices were effective, CTs did not always adhere to routine sampling and analyses procedures, potentially effecting analytical accuracy.

R5 Staff Training and Qualification in RP&C

R5.1 Post Accident Sampling System Training (84750)

The inspectors reviewed licensee training records and discussed the continuing training program for CTs with a member of the training program. The inspectors identified that the licensee's training program was not in accordance with BAP 560-10, "Byron Chemistry Post-Accident Program Description," Revision 2, dated December 2, 1996. Procedure BAP 560-10 requires that CTs receive training on PASS procedures and perform or witness the performance of the stated procedures

at least every six months. During the discussion, the chemistry trainer indicated that the CT post qualification training program was conducted on an annual frequency covering the topics in procedure BTP 300-29, "Chemistry Training Program," Revision 7. Procedure BTP 300-29 contains the topics covered in annual CT training program, including post accident sampling system (PASS) procedure review. The instructor's 1995 and 1996 records indicated that training was conducted in September through October of 1995 and in June through August of 1996. The inspectors discussed this with the chemistry supervisor who initially indicated that he believed training had been conducted on a six month period.

TS 6.8.4.d requires that a program be implemented which will ensure the capability exists to obtain and analyze reactor coolant samples, radioactive iodine and particulate samples in plant gaseous effluents and containment atmosphere samples under accident conditions. Procedure BAP 560-10 describes the PASS program and requires that CTs receive training semiannual training on the system and receive training on PASS procedures at least every six months. The failure to provide semiannual PASS training in accordance with BAP 560-10 is a violation of TS 6.8.4.d (Violation Nos. 50-454/97003-04 and 50-455/97003-04).

R5.2 Qualifications of Radiation Protection Staff (83750)

The inspectors reviewed the qualifications of the Health Physics Supervisor (HPS), who was appointed to the position in February 1997. The HPS held a bachelors degree in physics and mathematics and had several years of experience in nuclear operations and licensing, but he had limited experience in professional health physics. The inspectors noted that the individual met the minimum qualifications of a technical manager contained in ANSI N18.1-1971, but did not meet the qualifications of Regulatory Guide 1.8, September 1975, for a Radiation Protection Manager (RPM). In accordance with TS 6.3, the licensee's lead health physicist (LHP) met the requirements of Regulatory Guide 1.8 and held the functional responsibilities of the RPM. The inspectors concluded that the HPS and LHP were qualified with respect to the licensee's TS requirements.

R7 Quality Assurance in RP&C Activities

The inspectors reviewed the licensee's chemistry self assessment program including audits and surveillances performed by corporate personnel, contractors, and the licensee's chemistry and SQV staffs. The inspectors observed a notable improvement in the chemistry staff's performance in this area from performance documented in NRC Inspection Report Nos. 50-454/455-95011(DRP). In 1996, the chemistry organization performed a comprehensive surveillance which reviewed the adequacy of previous corrective actions. In addition, the licensee had reviews performed by vendors and the corporate staff which covered a wide range of chemistry activities and identified performance issues and improvement items. In aggregate, the assessments of the chemistry program covered quality control, procedure adequacy, post accident sampling system maintenance and surveillances, and CT procedure adherence. Although CT procedure adherence problems were still evident (Section R4.1), the licensee audits appeared effective in identifying program problems. The inspectors verified that the licensee had developed and documented corrective actions to address assessment findings. The chemistry

supervisor indicated that he had planned to perform additional department surveillances for 1997 and that he was confident that the chemistry staff understood his expectations.

R8 Miscellaneous RP&C Issues (84750)

- R8.1 (Closed) Licensee Event Report (LER) 50-454/96013 Revision 0: On August 15, 1996, the licensee identified that the alarm setpoint for the containment atmosphere particulate and gaseous radiation monitors (1/2PRO11J) would not detect the design basis leak rate of one gallon per minute (gpm) in less than one hour. The licensee indicated that the alarm setpoints had been determined with respect to radioactive release requirements. However, to meet the requirements of TS 3.4.6.1, the TS basis states that leak detections systems are consistent with the recommendations of Regulatory Guide 1.45 "Reactor Coolant Pressure Boundary Leakage Detection System," dated May 1973. Regulatory Guide 1.45 states that monitor sensitivities be such that a leak of one gpm in one hour be detected. As immediate corrective actions, the licensee declared the monitors inoperable and entered the limiting condition action requirements. On August 16, 1996, the licensee determined the correct setpoints for the monitors, which were consistent with Regulatory Guide 1.45. The inspectors reviewed the licensee's determination and verified that the current control room alarm setpoints were consistent with the determination. As additional corrective actions, the licensee reviewed other radiation monitor setpoints to ensure that all were consistent with design criteria. As documented in the LER, other means of leak detection were operable for the above period of time. The failure to have operable reactor coolant leak detection systems required by TS 3.4.6.1 is a violation. However, this licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV 50-454/97003-05 and 50-455/97003-05).
- R8.2 (Closed) LER 50-454/96022 Revision 0: On December 5, 1996, the licensee identified that the alarm setpoints for containment fuel handling incident radiation monitors (1/2AR011J and 1/2AR012J) were not in accordance with TS Table 3.3-6. The licensee determined this inconsistency as a result of corrective actions for LER 96-013. Table 3.3-6 requires the trip setpoint to be set at a level such that the actual submersion dose in the containment building would not exceed 10 millirem per hour (mrem/hr). The as found setpoints were 75 mrem/hr (alert) and 100 mrem/hr (high alarm). After identifying the problem, the licensee removed the monitors from operation and redetermined the alert and high alarm setpoints (i.e. 35 and 40 mrem/hr, respectively) as required by TS Table 3.3-6. The inspectors reviewed the licensee's setpoint justification document and ensured that the alarm setpoints in the control room were as documented. During the period of time that the setpoints were outside of the TS requirements, the licensee indicated that the containment purge radiation monitors had setpoints which would have alarmed if radiation levels exceeded 10 mrem/hr above background. As additional corrective actions, the licensee completed a change request to correct the Updated Final Safety Analysis Report (UFSAR) description of radiation monitors 1/2AR011J and 1/2AR012J to be consistent with the TS requirements. The failure to adhere to TS Table 3.3-6 is a TS violation. However, this licensee-identified and corrected

violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV 50-454/97003-06 and 50-455/97003-06).

R8.3 (Open) VIO Nos. 50-454/95011-01(c) and 50-455/95011-01(c): While obtaining reactor coolant samples, CTs failed to adequately follow chemistry procedures. The inspectors verified that the licensee had completed the following corrective actions:

- The chemistry manager communicated his expectations that procedures be opened and used in the field and that errors in procedures be forwarded to chemistry management for correction;
- The chemistry manager communicated his expectations that lab supervisors will accompany CTs in the field to observe and evaluate the CTs and evaluate the adequacy of the chemistry procedures; and
- The CTs were formally trained on the procedure revision process in April 1996 continuing training.

However, as described in Section R4.1, the inspectors identified additional examples of inadequate procedural adherence by CTs. Based on these observations, this violation will remain open.

R8.4 (Closed) VIO Nos. 50-454/96005-02 and 50-455/96005-02: During chemistry training on May 27-31, 1996, the licensee identified a procedure deficiency concerning sample line purge times but failed to take effective corrective actions. The inspectors verified that the licensee's planned corrective actions were subsequently implemented. Following the event, the licensee corrected the affected procedures to ensure representative samples were obtained. Chemistry personnel were counseled on the event with emphasis placed on evaluating the full impact of a problem. During December 1996, CT continuing training included a discussion of the issue. As documented in Section R7, the licensee conducted additional self assessments which identified problems. The inspectors reviewed the results of these assessments which were adequately evaluated to ensure that corrective actions were properly determined. This item is closed.

V. Management Meetings

X1 Exit Meeting Summary

On March 7, 1997, the inspectors presented the inspection results to licensee management. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Bauer, Health Physics Support Supervisor
D. Brindle, Regulatory Assurance Supervisor
R. Colglazier, NRC Coordinator
W. Grundmann, Chemistry Supervisor
W. Israel, Audit Supervisor
K. Kofron, Station Manager
W. McNeil, Radiation Protection
D. Mead, Lead Chemist
D. Starke, Quality Chemist

INSPECTION PROCEDURES USED

IP 8371/0 Occupational Radiation Exposure
IP 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring
IP 92904 Followup - Plant Support

ITEMS OPEN, CLOSED, AND DISCUSSED

Opened

50-454/455-97003-02(a-c)	VIO	Failure to establish, maintain, and implement procedures recommended by Appendix A of Regulatory Guide 1.33.
50-454/455-97003-04	VIO	Failure to provide PASS training in accordance with procedure BAP 560-10

Closed

50-454/455-96005-02	VIO	Failure to take adequate corrective actions
50-454/455-97003-01	NCV	Failure to establish PASS surveillance procedures
50-454/455-97003-03	NCV	Failure to post a high radiation area in accordance with 10 CFR Part 20
50-454/455-97003-05	NCV	Failure to have proper radiation monitor setpoints
50-454/455-97003-06	NCV	Failure to have proper radiation monitor setpoints
50-454/96013	LER	Radiation monitor alarm setpoints greater than technical specification requirements

50-454/96022

LER Radiation monitor alarm setpoints greater than
technical specification requirements

Discussed

50-454/455-95011-01(c)

VIO Failure to follow chemistry procedures

LIST OF ACRONYMS USED

AB	Auxiliary Building
AVT	All-Volatile Treatment
CA	Contaminated Area
CFR	Code of Federal Regulations
CT	Chemistry Technician
DPM	Disintegrations Per Minute
GC	Gas Chromatograph
GPM	Gallons Per Minute
HPS	Health Physics Supervisor
HRA	High Radiation Area
LER	Licensee Event Report
LHP	Lead Health Physicist
LSP	Liquid Sample Panel
MREM/HR	Millirem per hour
NCV	Non-Cited Violation
PIF	Problem Identification Form
PPB	Parts Per Billion
QC	Quality Control
Radwaste	Radioactive Waste
RG	Regulatory Guide
RHR	Residual Heat Removal
RP	Radiation Protection
RPT	Radiation Protection Technician
RP&C	Radiation Protection and Chemistry
SG	Steam Generator
SQV	Site Quality Verification
TS	Technical Specification
UFCA.R	Updated Final Safety Analysis Report
VCT	Volume Control Tank
VIO	Violation

PARTIAL LIST OF DOCUMENTS REVIEWED

Byron Station On-Site Review Report, "Technical Specification 3.3.3.1 Regarding ARO11/12 Alarm/Trip Setpoints," Dated February 14, 1997.

Chemistry Performance Assessment, Surveillance QAS 06-96-025, Dated December 17, 1996.

Problem Identification Form No. 454-200-97-0015, "Regen Waste Drain Tank Overfilled/Overpressurized."

Problem Investigation Report No. 454-200-96-0052S1, "High Radiation Area Not Posted Due to Improper Sign Movement."

Process Radiation Monitor Setpoint Justification Document (with Updates), dated August 12, 1993.

Site Quality Verification Audit of Chemistry, QAA 06-95-14, dated December 5, 1995.

UFSAR Appendix E.21, "Post Accident Sampling (II.B.3)."

UFSAR Section 9.3.2, "Sampling Systems."

UFSAR Section 10.3.5, "Water Chemistry."

UFSAR Section 11.5.2.4, "Sampling."

UFSAR Section 11.5.2.5, "Instrument Inspection, Calibration, and Maintenance."

UFSAR Chapter 13, "Conduct of Operations."