U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-237; 50-249
Licenses No:	DPR-19; DPR-25
Reports No:	50-237/97010(DRS); 50-249/97010(DRS)
Licensee:	Commonwealth Edison Company
Facility:	Dresden Nuclear Station, Units 2 and 3
Location:	6500 N. Dresden Road Morris, IL 60450
Dates:	May 19-23, 1997
Inspectors:	R. Paul, Senior Radiation Specialist R. Glinski, Radiation Specialist
Approved by:	Gary L. Shear, Chief, Plant Support Branch 2 Division of Reactor Safety

EXECUTIVE SUMMARY

Dresden Generating Station, Units 2 & 3
NRC Inspection Reports 50-237/97010; 50-249/97010

This announced inspection included a review of the licensee's performance, specifically an evaluation of the effectiveness of the radiation protection program. Three violations of NRC requirements were identified, one concerning inadequate high radiation area (HRA) controls, another concerning the lack of an evaluation to determine radiological conditions in an area in which a person received an intake of radioactive material, and one which involved the failure to meet a station training requirement.

- A self revealing event occurred where two workers could not exit from a posted and controlled HRA because a contract radiation protection technician (RPT) failed to ensure all workers were out of the HRA before locking the door allowing egress. The dose rates in the room in which there was no egress were less than one mrem per hour (Violation Nos. 50-237;249-97010-01(DRS) (Section R1.5).

- A self revealing event in which a worker received a slight intake of radioactive material occurred because the licensee failed to perform an evaluation of the radiological conditions in the area he was working. The investigation/assessment of the event identified several weaknesses and poor worker performance. The immediate corrective actions were appropriate (Violation Nos. 50-237;249-97010-02(DRS)) (Section R1.6).

- The overall RP training program was well implemented. A violation was issued for the failure to follow a training procedure related to initial training on a new instrument (Violation Nos. 50-237;249-97010-03(DRS).

- Refueling outage dose (D3R14) was well controlled. Rework, which had been a cause of significant dose during previous outages, was reduced. The station's improved work process program radiological controls, and ALARA initiatives were instrumental in reducing rework and outage dose. Conservative actions were taken for all work where the potential for alpha airborne contamination was possible (Section R1.2).

- With the exception of some discrepancies noted with the calibration and test results of alpha monitoring equipment, the overall calibration and test program for alpha monitoring, the whole body frisker, the whole body counter and tool monitoring equipment was well implemented (Section R1.4).

Report Details

Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Control of Radioactive Materials and Radiological Surveys

a. Inspection Scope (83750)

The inspectors reviewed the control of radioactive materials and the posting of radiological hazards within the radiologically controlled area (RCA) and RCAs outside the power block. The inspectors made frequent tours of the radiologically posted areas and reviewed radioactive material labelling and radiological postings.

b. Observations and Findings

During these tours, the inspectors noted good control and labelling of radioactive materials. The inspectors found high and very high radiation areas to be posted and controlled in accordance with NRC requirements.

During one tour of the reactor buildings, the inspectors noted discrepancies between some areas which had postings identifying "no loitering, high radiation field" signs and other areas with about the same general radiation field levels that did not have similar postings. The inspectors further noted that the licensee did not have any specific criterion to be used for posting of areas with elevated dose rates. This matter will be reviewed by the licensee who intends to develop guidelines concerning posting of those areas. Verification of radiation levels in the reactor buildings was performed and the inspectors found they were comparable to those posted.

c. Conclusions

Tours of the RCA and outside the power block identified that, with the exception of elevated dose rate area discrepancies inside the reactor building, that areas were properly posted and that radioactive material was properly controlled.

R1.2 Unit 3 Outage Dose Control and ALARA Implementation

a. Inspection Scope (83750)

The inspector reviewed the licensee's radiological controls, dose reduction/ALARA, and work practices for the D3R14 refueling outage. The inspection consisted primarily of in-plant observations, attendance at pre-job meetings, review of records (ALARA plans, radiation work permits (RWPs), work packages, etc), discussions with workers and discussions with members of the work control groups. The following high dose jobs were observed in progress (either remotely or on location):

- reactor water cleanup (RWCU) system pipe replacement
- RWCU removed pipe and heat exchanger shipping activities
- removal of waste activities associated with the RWCU
- refuel floor work activities.
- aspects of the control rod drive (CRD) removal activities.
- Valve work activities
- Drywell work activities

b. Observations and Findings

During a recent NRC maintenance team inspection of work activities during D3R14 it was found that the licensee effectively implemented ALARA controls. The findings of the inspection are documented in Inspection Report Nos. 50-10/97007, 50-237/97007, and 50-247/97007. During that inspection it was noted that ALARA tools implemented for the outage included the use of additional shielding, RWCU chemical decontamination, and the incorporation of lessons learned from previous outages which effectively mitigated the effects of the increased dose rates. In addition, major outage activities were assigned a manager/overseer who was responsible for developing and implementing the ALARA plans and for ensuring effective radiological controls were used, good oversight by radiation protection personnel and sufficient coordination between working groups occurred, and that there were good radiological controls established for Unit 3 drywell, RWCU, and refuel floor work activities.

As of May 23, 1997, the licensee had accrued about 180 rem with about eighty five percent of the scheduled work completed. At that point the overall outage dose was expected to meet the revised goal of 245 rem. The dose goals were based on previous similar work and included the dose for added work scope, rework, and emergent work of about 30 percent of the projected dose, most of which was due to added scope. The added scope was due primarily to work that was found to be required after post shut down surveillances were performed, however, there appeared to be sufficient planning and preparation time to provide RP input and implement ALARA initiatives before the added work began. The licensee's efforts to reduce the amount of rework which contributed to significant station dose during previous outages, were effective during D3R14. Contingencies were in place for the major dose producing jobs and RP was involved in the planning process.

The inspectors observed that the RP department maintained close oversight of outage tasks and dose was effectively controlled as a result. Although there were some observations of persons loitering and of poor radworker practices (Inspection

Report Nos. 50-10/97007, 50-237/97007, and 50-249/97007), there was considerable improvement from previous outages.

Roles and responsibilities of individuals were clearly discussed at the pre-job meetings and special instructions were prepared for those jobs observed by the team. The RP staff clearly communicated RWP requirements, dose and dose rate alarms, and radiological hold points. In general, the inspectors observed good radiation worker (radworker) practices and workers properly donned and removed protective clothing and demonstrated a good knowledge of electronic dosimetry alarm setpoints. The licensee provided additional support at the Drywell step-off-pads which were effective in improving worker performance and correcting errors. Workers demonstrated good awareness of radiological conditions and appropriate use of low dose waiting areas.

The inspectors also noted that because the licensee found alpha contamination on smears taken in the Unit 3 main steam top valve and some other areas, it implemented conservative actions for all work in those areas and on certain systems. Increased air samples and smears were taken for condenser work, main steam line valve (MSIV) work in the X area, drywell MSIV work, isocondenser work, and high pressure cooling injection (HPCI) work. ALARA/Total Effective Dose Equivalent (TEDE) reviews were performed and respirators were worn until conditions existed such that it would not be ALARA/TEDE to wear them. In addition the inspectors found that the licensee has been aggressive in, identifying those areas of the station with the highest probability for alpha contamination, in identifying the alpha isotopes, and in developing a program to reduce and control the alpha contamination.

c. Conclusions

The licensee's measures to control Unit 3 outage (D3R14) dose were effective. The licensee effectively used past outage work critiques to apply lessons learned to existing work. Rework, which had troubled the station during previous outages was markedly reduced through better planning, supervisory oversight, and work control. During outage work evolutions, workers generally demonstrated good radiological practices, and aggressive measures to control the potential for alpha radiation airborne activity, were taken. Pre-job ALARA meetings ensured workers were aware of radiological requirements, and specific work contingencies.

R1.3 Radiation Work Practices

a. Inspection Scope (83750)

The inspectors reviewed the licensees initiatives to prevent and control poor radworker practices which had been a continuing problem, especially during refueling work outages.

b. Observations and Findings

The inspectors observed general radiation worker practices of those personnel working in the Unit 3 drywell and the RWCU. Radiation worker practices observed included, personal monitoring techniques, use of protective clothing, dosimetry placement (thermolumenescent dosimetry (TLDs) and electronic dosimeters (EDs)), ALARA practices (use of low dose zones, controlling crew size), working conditions, understanding general and specific area dose rates and RWP requirements, and station housekeeping.

c. Conclusions

The inspectors found that other than the poor radiation work practices that were observed and documented in Inspection Report Nos. 50-10/97007, 50-237/97007, and 50-249/97007, radworker practices have generally improved from those noted during previous outages. Initiatives such as the greeter program, increased emphasis on worker responsibility, first line supervisory oversight, and stronger RP control point oversight were instrumental in reducing poor radworker practices.

R1.4 Facilities and Equipment

a. Inspection Scope (83750)

The inspectors reviewed the operation and calibration methodology for the whole body friskers, tool monitors, and the portable alpha counting detectors. The inspection included a walk down of the whole body friskers, independent testing of whole body frisker and tool monitor alarms and set points, observation of radioactive source condition, and review of procedures, detector operability history, and calibration and test results.

b. Observations and Findings

The calibrations and instrument tests were performed as required. Frisker alarms were nominally set at about 5000 dpm with detector efficiencies at about 10 to 15 percent. The gamma portal whole body frisker can detect down to about 50 nanocuries cobalt-60 at about a 90 percent confidence level. Calibration and test methodology is technically sound for all detectors inspected, and availability of monitors is high, running at about 90 percent. Several new whole body friskers were noted to be onsite but were not yet operable. The purchase of the monitors is part of a long term program to generally upgrade radiation monitoring equipment. The licensee hired a contractor to review and upgrade calibration procedures for all portable hand held detectors. The inspectors found that several of the alpha standards appeared degraded; the licensee was aware of those conditions and new standards (alpha and beta-gamma) had been ordered. There did not appear to be any significant difference between the observed and expected output of the degraded standards.

Several discrepancies were found in the alpha counting equipment calibration and

Several discrepancies were found in the alpha counting equipment calibration and maintenance program logs. The inspectors noted that the record for one of the alpha detectors showed about a 50 percent different detection efficiency using one calibration source compared to the use of others. The inspectors subsequently learned that the licensee had previously observed the same discrepancy, and as a result identified and disposed of a defective alpha source. The licensee's investigation of this matter found that the defective source had not been electroplated and was producing about one half of its original radioactive output, which in this case resulted in a conservative error. The inspectors had not observed similar defective sources during the inspection.

c. Conclusions

Several equipment calibration and maintenance program log discrepancies and an error in the use of an alpha calibration source were identified. However, the overall calibration and maintenance program for those monitors reviewed was well implemented, and the monitors were noted to have good operability history.

R1.5 High Radiation Area Event

a. Inspection Scope (83750)

The inspectors reviewed the circumstances associated with a self revealing event in which workers were prevented from exiting a posted and controlled high radiation area (HRA). The inspection included a review of the licensee's investigation, and a review of applicable procedures and documentation.

On April 21, 1997, electrical maintenance (EM) personnel were working in the Unit 2 drywell, which was designated as a locked high radiation area (LHRA). The entrance and egress into the drywell was through the personnel hatch which was accessible only through the drywell anteroom. During normal operation the drywell personnel hatch is posted as a very high radiation area (VHRA) and locked. Because Unit 2 was in a forced outage, the controls were removed from the personnel hatch and the door leading into the anteroom was posted as a LHRA and controlled with a lock. On April 1, the anteroom was unlocked while the EMs were performing their work and a RPT was assigned to perform duties as the LHRA attendant. The attendant was responsible for ensuring all regulatory requirements for HRA controls were implemented.

During the day, numerous entries into and out of the area were made. At about mid afternoon, four of the EMs exited the area and the RPT thought they were the last group of EMs working in the drywell. Based on a discussion the RPT had with the EMs, the RPT felt confident that everyone was out of the drywell. The RPT did not enter the drywell to verify that all workers had left and after a few minutes he placed the lock on the hasp of the door leading into the anteroom. The RPT then left the area to find a person to verify that the anteroom door was locked. Shortly after the RPT left the area another drywell worker tried to exit through the anteroom door but was unable to because the door was locked from the outside. One of the

EMs who had exited the drywell earlier saw the lock on the door moving and discovered two workers were locked inside the anteroom. After RP was informed of this condition the door was unlocked and the workers left the area. Dose rates in the anteroom were less than 1 mrem/hour. The workers were in the anteroom for about 12 minutes and their personal exposure for the day was 37 mrem and 48 mrem, respectively. Failure to provide individuals an exit from the locked and posted LRHA is a violation of 10 CFR 20.1601(d) which requires that the licensee establish the controls required by this section in a way that does not prevent individuals from leaving a HRA. (Violation 50-237/249-97010-01)

The causes of the event included the failure of the RPT to ensure that all personnel that entered the area exited the area, and the failure to establish a written log or some other mechanism to track personnel entry into the LHRA; the RPT tried to maintain a mental log of entries.

Corrective actions taken to prevent recurrence included the development of a method to ensure tracking of personnel accountability for LHRA/VHRA entries, physical verification to ensure all personnel have exited from the HRAs, and a station wide review of all HRAs to determine the status of accessibility for egress of all HRAs.

c. Conclusions

The inspectors concluded that the licensee's investigation and immediate corrective actions were appropriate. Several problems were identified including, the RPT in attendance failed to ensure there were no persons remaining in the drywell before locking the door, and there was no mechanism in place to track workers entry and egress from the HRA. A violation was identified for failure to allow egress from a locked HRA.

R1.6 Intake of Radioactive Material During Decontamination Work in the Unit 2 Torus Basement

a. Inspection Scope (83750)

The inspectors reviewed the circumstances surrounding a self revealing event in which a worker had a intake of radioactive material during decontamination work in the Unit 2 basement. The review consisted of interviewing workers involved in the job, reviewing the licensee's preliminary investigation and reviewing applicable procedures and documentation.

b. Observations and Findings

On May 4, 1997, a contract station decon technician (CDT) was performing decontamination activities in the trench area of Unit 2 torus bays 9 and 10 and part of the non-trenched area of bay 11. The work consisted of wetting the material, using a scraper and/or rags to remove the contaminated material, and then

collecting it into a plastic bag. The CDT wore protective clothing including vinyl pants, double rubbers and gloves and safety eye glasses.

After completing the job, the worker alarmed a personnel contamination monitor at the RP control point prompting an investigation by the licensee. The licensee's evaluation concluded that the worker had received an intake of radioactive material resulting in a committed effective dose equivalent (CEDE) of 5 mrem and a total effective dose equivalent (TEDE) of 22 mrem. The inspectors independently reviewed this evaluation and agreed with the dose estimate.

The inspectors independent review agreed with the licensee's conclusion that the root cause was the failure to properly evaluate the job. Specifically, the contract RP supervisor was aware of a 500,000 dpm/100 cm^2 area in bay 11, but failed to recognize that an ALARA briefing was procedurally required at these contamination levels. The failure to perform this briefing, resulted in the licensee's failing to consider additional controls for the job, including continuous RPT coverage, air sampling or engineering controls. Additionally, the CDT used a routine survey map which did not include surveys of the trenches in bays 9 and 10. Subsequent surveys of these areas identified smear results ranging up to 1.5 million dpm beta-gamma and 1,800 dpm alpha.

A significant contributing cause was poor communications between the contract RP supervisor, CDT foreman, CDTs and contract RPTs. The contract RP supervisor instructed the CDT foreman to decon the trench area of bay 11 in the Unit 2 torus basement. However, the foreman instructed the CDTs to decon the trench areas in bays 9 and 10 instead of bay 11. After the first CDT completed his inspection of bays 9 and 10, he left to obtain a vacuum cleaner for the job, (the second CDT never entered the torus for this inspection because he was the outman). At about the time the first CDT left the area and found that a vacuum cleaner was not available, he was removed from the job and reassigned to perform fire watch duties. Subsequently, the second CDT was assigned to the torus job, but without receiving a turnover from the first CDT. Because there was no RPT control point in Unit 2, the second CDT discussed this job with an RPT at the Unit 3 control point. Although this RPT was unfamiliar with the Unit 2 basement conditions and was not told by the CDT of the job specifics, the RPT did not question the CDT or investigate the job. This evolution occurred without licensee oversight indicating a weakness in the control of contractor activities.

Poor communication was a contributing cause for a previous violation for a similar event documented in Inspection Report Nos. 50-237/249/96009. Specifically, in that event, the duty RP shift supervisor (RPSS) was not informed of the scope of work activities and job scope changes. Although none of the corrective actions for this event would have prevented the torus decon event, the inspectors concluded that the previous corrective actions were weak because they were not sufficiently broad enough to prevent similar events from occurring. The licensee planned to evaluate this observation during the development of corrective actions for this event.

Immediate corrective actions for this event included instructing all RP and decon personnel that evolutions performed in either unit that does not have a dedicated RP control point, be discussed at the station RP desk.

The failure to perform an ALARA review to evaluate the radiological hazards that could be present is a violation of 10 CFR 20.1501, which requires that surveys be conducted to ensure compliance with the regulations in part 20. Because an ALARA review was not accomplished, the licensee did not perform a thorough radiological survey of the actual work areas and did not evaluate other appropriate ALARA controls to assure compliance with 10 CFR 20.1201(a)(1)(i), which limits the total effective dose equivalent to 5 rems per year. (Violation 50-237/249-97010-02)

c. Conclusions

The licensee's weak oversight, worker's lack of familiarity and knowledge of station requirements, and work conditions caused a personal intake. Contributing to the root cause was poor communication and contact between all persons involved in this event. One violation was identified for the failure to perform an adequate survey to ensure 10 CFR 20.1201 dose limits.

R4 Staff Knowledge and Performance in RP&C

R4.1 Implementation of the Greeter Program

a. Inspection Scope (83750)

The inspector interviewed RP staff, reviewed RP policies, and observed performance regarding implementation of the greeter program during D3R14.

b. Observations and Findings

In late 1996, the licensee initiated a greeter program to improve ALARA practices by ensuring radworker understanding of radiological conditions in their specific work areas and of station requirements for working in radiologically posted areas (RPAs). The workers were challenged by personnel at the main access control points before entering the RCA. For D3R14, the station trained individuals with no nuclear experience to function as greeters. These individuals received N-GET training and instruction from ADM-10. The program was described in RP Policy Memo ADM-10, Rev. 01.

The inspectors observed greeters at the main access control points and noted that the greeters maintained a log of personnel that demonstrated insufficient knowledge. Personnel refused entrance to the RPA by greeters were subsequently denied access to the RPA, and the access was restored only after a meeting with RP management. The greeters generally quizzed workers from ADM-10 guidance. However, the inspectors identified that the greeters were not routinely reminding workers of high radiation area control responsibilities and the responsibility to return

the work area to the "as found" condition. The greeters stated that they had not been instructed to ask these questions. The failure to train greeters to remind workers of responsibilities for high radiation areas and housekeeping was contrary to commitments made to the NRC in letters dated January 13 and February 26, 1997. RP management indicated that these commitments applied during plant operation, but not outage activities. The inspector discussed with RP staff that the letters did not state this restriction and RP stated that greeters would receive instruction to challenge workers in these two issues.

The overall success of the greeter program was demonstrated by the fact that 70% (114/153) of RP deficiencies identified in April 1997 were attributed to greeters. Observation of greeter activities and interviews with RP staff further indicated that radworkers were sufficiently aware of their responsibilities.

c. Conclusion

The greeter program successfully identified numerous outage personnel who lacked sufficient knowledge or preparation for work in the RPA. The inspectors observed that greeters were not instructed to implement commitments made to the NRC and this issue will be reviewed as an Inspection Follow-up Item. (IFI 50-237,249/97010-04)

R5 Staff Training and Qualification in RP&C

R5.1 Training for Contract Radiation Protection Technicians (CRPTs)

a. Inspection Scope (83729)

The inspectors interviewed Professional Training Center (PTC) staff, contract radiation protection technicians (CRPTs), and RP supervisors (RPS) regarding the training and qualifications required for CRPTs working D3R14. The inspectors also reviewed training procedures, lesson plans, and records.

b. Observations and Findings

The inspectors noted that the procedure for processing CRPTs (NRP 5000-4, Rev. 2) stated that prospective CRPTs should attend Core training, must pass a ComEd approved Health Physics Theory Test (80%), and receive 80% or higher on the standardized Northeast Utilities HP Theory Test. After On-the-Job (OJT) training with RP instrumentation, the individuals were required to pass a radiation detection meter reading test and successfully complete two survey scenarios, one of which covered a routine RP survey and the other which addressed a personnel contamination event.

The inspectors noted that the classroom training covered the practical aspects of over 60 CRPT activities. Then, OJT was conducted by both PTC and corporate ComEd staff. Training records indicated that prospective CRPTs received the full training program in accordance with the PTC instructions prior to working in D3R14.

The records also revealed a failure rate of 8% for prospective CRPTs, with most failures occurring on the written tests. Individuals who failed the test were denied employment at the station. Although documentation for each TPE failure was required by PTC core training instructions, the PTC did not document the first TPE failure.

Interviews with RPSs and CRPTs working in D3R14 indicated that the CRPT training adequately prepared the workers for outage tasks. In addition to the tasks covered in the PTC training, CRPTs were also trained for other instrumentation and tasks. A CRPT qualification matrix was maintained by an outage coordinator to document this information and to ensure that only qualified CRPTs were assigned to specific tasks.

c. Conclusion

The training for prospective CRPTs was comprehensive and well implemented. One discrepancy was noted in the training documentation.

R5.2 Continuing Training for Dresden RPTs

a. Inspection Scope (83750)

The inspector interviewed training and RP personnel, and reviewed site training and evaluation documentation regarding the RPT continuing training program for new instrumentation.

b. Observations and Findings

Continuing RPT training consisted of classroom instruction, OJT, and TPE. Within the training program, a Radiation Protection Training Advisory Committee (RPTAC), composed of RP and training staff, met monthly to review training needs. Regarding new instrumentation, classroom instruction was optional, however, the OJT and TPE are required.

The inspector reviewed lesson plans and instructions contained in the training program. Training Department Instruction, "Conduct of On-the-Job Training and Evaluation" (TDI-206, Rev. 10), stated that OJT and TPE are separate processes, and that the evaluator is not to guide, prompt, or coach the trainee during TPE. Interviews with training instructors and coordinators, evaluators, and RPTs indicated that plant staff understood the distinction between OJT and TPE.

Review of training for new RP instrumentation indicated weaknesses in communication and documentation. Training records demonstrated that the initial performance evaluations for the PASSPORT Personal Alarm (which measures air quality in confined spaces) were conducted from October 1995 to January 1996. A review of training records for six RPTs revealed that only three of the training files contained the sign-off sheets which showed successful completion of the training. However, the Person Course History List from the Training Administration System

listed completed PASSPORT training only for the RPT files which did not have the sign-off sheet. None of the training records had the PASSPORT information in the training file and on computer file. This was a weakness in the recordkeeping for completed training.

An evaluation conducted by the licensee regarding the initial PASSPORT training determined the following:

- The RPTAC meeting minutes for March 1995 failed to document the TAC's intention that an evaluation phase be required for PASSPORT training, and this failure to document the need for an evaluation provided RP trainers with inadequate guidance;

- Although electronic records indicated that RPTs received this training, the lack of hardcopy PASSPORT evaluation records indicated that training staff failed to complete the documentation required by TDI 702, "RPT Continuing Training";

- Eight of the nine RPTs interviewed by the licensee did not recall any evaluation phase for PASSPORT training.

The licensee's evaluation concluded that the initial PASSPORT training consisted of instruction and OJT, without any subsequent evaluation (TPE). The failure to conduct an evaluation for the PASSPORT was contrary to TDI 206 (OJT Trainer and Evaluator Qualification) which stated that evaluations of task performance must be conducted in a consistent and objective manner to ensure that the required knowledge and skills have been acquired by the trainees. In addition, TDI 702 required that the training program structure include Performance Training which evaluates the trainee's ability to actually perform a task. The failure to conduct PASSPORT evaluations was a procedural violation of Training Department Instruction (TDI) 206 which required evaluations of trainee task performance. The licensee has subsequently conducted OJT and TPE for the PASSPORT in accordance with training instructions. Although problems with PASSPORT training were identified, no safety problems associated with the use of this instrument occurred and the RPTs were confident in their ability to use the instrument. (Violation 50-237/249-97010-03).

The licensee evaluation further noted that although training for several other tasks was conducted in accordance with TDIs and TAC review, the TAC did not review training for the IPM-9D whole body monitor. Interviews indicated that RP staff procured and trained RPTs to source check the IPM-9D without the knowledge of the training department. Subsequently, RPTAC minutes for December 20, 1996, stated that all RPTs would be disqualified from the IPM-9D until the proper OJT/TPE was completed. This was another example of the communication weakness which existed between the training and RP departments.

To improve the training program, the licensee is considering a task qualification system rather than the current position qualified system. This would allow the plant

to qualify and disqualify RPTs for individual tasks rather than all tasks collectively. In addition, RP management recently added Line Management Observation (LMO) to the RPT training program. LMO consisted of first line RPSs accompanying RPTs during performance of routine and non-routine tasks and evaluating the RPT performance. To date, the RPS staff has not identified any adverse trends in RPT performance.

c. Conclusions

Although weaknesses were identified, the training department and RP staff generally conducted continuing training for RPTs in accordance with station practices. One procedural violation was identified for failure to conduct evaluations during the initial PASSPORT training. In addition, weaknesses in training documentation and communication were identified.

R8 Miscellaneous RP&C Issues

R8.1 (Closed) Violation (50-237,249/96006-07(DRS), LER 96-010: failure to perform Technical Specification required monthly analysis for tritium on the Unit 1 Main Chimney, Units 2/3 Main Chimney, and Reactor Building Vent Stack samples. Due to personnel error, the lack of an operational liquid scintillation counter, and an inconsistent Pre-Define method to control sampling and analysis, the licensee failed to complete the required monthly tritium analyses from June 1995 to May 1996.

The licensee analyzed the chimney and stack samples on June 20 and 21, 1996 and the 1995 Annual Radiological Environmental Operating Report and the applicable Semiannual radioactive Effluent Release reports were revised. In addition, the Pre-Define was revised to require completion of the analysis prior to being signed and the analysis of the tritium samples was added to the Chemistry Technician assignment sheet. This item is closed.

R8.2 (Closed) Violation 50-237;249/97010-03: failure to conduct Task Performance Evaluations for initial PASSPORT training. Interviews with staff and review of a licensee evaluation and training records revealed that the initial training for the operation of the PASSPORT Personal Alarm, conducted from October 1995 to January 1996, did not include an evaluation phase. Evaluations of personnel were required to ensure that the required knowledge and skills have been acquired by the trainees.

Subsequently, the licensee trained plant RP staff on the use of the PASSPORT by conducting the OJT/TPE phases with the appropriate sign-offs. The inspector's review of training records and interviews with staff showed that the PASSPORT re-training was successfully conducted from December 1996 to February 1997. This item is closed.

V. Management Meetings

X1 Exit Meeting Summary

On May 23, 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

ComEd

M. Heffley, Station Manager
F. Spangenburg, Regulatory Assurance Manager
C. Howland, Radiation Protection Manager
J. Moser, ALARA Manager
L. Aldrich, Assistant RPM
J. Hill, Lead Radiation Protection Supervisor
M. Friedmann, Lead Health Physicist
J. Kuczynski, Internal Dosimetry Health Physicist
L. Jordan,

INSPECTION PROCEDURES USED

IP 83750: Occupational Radiation Exposure

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-237;249/97010-01	VIO	Failure to provide egress from a HRA (Section R1.5)
50-237;249/97010-02	VIO	Failure to provide an adequate evaluation (Section R1.6)
50-237;249/97010-03	VIO	Failure to follow requirements of training procedure (Section R5.1)
50-237/249/97010-04	IFI	Verify actions taken to ensure implementation of commitments made to NRC (Section R4.1)

Closed

50-237/249-96006-07	VIO	Failure to complete the required monthly tritium analysis for Units 1,2, 3 Chimney and Units 2/3 Reactor Building stack samples from June 1995 to May 1996
50-237/249-97010-03	VIO	Failure to conduct Task Performance Evaluations for PASSPORT air quality monitor

Discussed

None.