



UNITED STATES
NUCLEAR REGULATORY COMMISSION
Region III
LISLE, ILLINOIS 60532

MEMORANDUM TO: Patrick Loudon, Chief
Projects Branch 7
Division of Reactor Projects

FROM: Kenneth Riemer, Chief
Plant Support Branch
Division of Reactor Safety

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 & 2
DRS INPUT TO INTEGRATED REPORT 50-266/04-03;
50-301/04-03

Attached is the report input for Point Beach Nuclear Plant, Units 1 and 2, Inspection Report 50-266/04-03; 50-301/04-03. Specifically, this report focused on occupational radiation safety during the recent U1R28 refueling outage as related to the licensee's radiological access control and ALARA programs. I have reviewed this input and have determined it is ready for distribution to the licensee and dissemination to the public.

This report documents nine (9) inspection samples for Inspection Procedure (IP) 71121.01 and seven (7) inspection samples for IP 71121.02. If you have any additional questions relative to additional RPS entry info (i.e., PIM item), please contact me or the cognizant inspector.

Attachment: Input to Inspection Report 50-266/04-03;
50-301/04-03

CONTACT: Ryan D. Alexander, DRS
(630) 829-9853

DOCUMENT NAME: G:DRS\Point Beach Input to Report 04-03 RDA REV 1.wpd
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Cover Letter

✓ Input below, no color or Green findings were identified.

This report input documents one NRC-identified finding of very low safety significance (Green), which was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because the issue is entered into your corrective action program, the NRC is treating this issue as a Non-Cited Violations (NCV) consistent with Section VI.A of the NRC Enforcement Policy. **Though the finding related to bubble hood use during the refueling outage was determined to be of very low safety significance per the NRC's Significance Determination Process, the NRC is concerned that circumstances surrounding this event involved deficiencies in human performance, problem identification and resolution, and appropriate levels of questioning attitudes on the part of your staff, all which had the potential to directly affect the health and safety of workers at the station.** If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and to the Resident Inspector at the Point Beach Nuclear Plant.

Title Page

Inspector: R. Alexander, Radiation Specialist

SUMMARY OF FINDINGS

ADAMS boilerplate - Inspectable area: Radiation Protection

Modify second paragraph as follows:

The baseline inspection was conducted by a regional radiation specialist inspector.

A. Inspector-Identified and Self-Revealed Findings

Cornerstone: Occupational Radiation Safety (OS)

- Green. A finding of very low safety significance and an associated Non-Cited Violation were identified through an NRC-identified event, when on April 9, 2004, while installing steam generator nozzle dams, licensee staff increased supplied breathing air pressure in excess of procedural requirements while attempting to mitigate lost or diminished air flow to contract workers who were utilizing continuous flow, supplied air respirator "bubble hoods." The inspectors determined that the licensee failed to meet the requirements of 10 CFR 20.1703, when the licensee increased the air line pressure in excess of the procedural guidance, which likely resulted in the licensee utilizing a respiratory protection device contrary to its National Institute for Occupational Safety and Health (NIOSH) certification.

This issue was determined to be more than minor in that it could reasonably be viewed as a precursor to a significant event, and if left uncorrected would become a more significant safety concern. Also, the issue involves conditions contrary to licensee procedures and NRC regulations which impact protective equipment related to mitigating worker dose. Based on the inspectors' review of dose rates and contamination levels in the steam generator bowls, and worst case stay time estimates within the bowls, there were no radiological exposures in excess of regulatory limits, nor was there a substantial potential for an overexposure. Therefore, the finding was of very low safety significance. One Non-Cited Violation for the failure to maintain and use procedures for respiratory protection device use and utilizing a respiratory protection device contrary to the NIOSH certification in accordance with 10 CFR 20.1703 was identified. (Section 2OS1.2)

B. Licensee-Identified Violations

None

REPORT DETAILS

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors reviewed licensee controls and surveys for selected radiation areas, high radiation areas and airborne radioactivity areas, as available, in the following radiologically significant work areas within the plant and reviewed work packages which included associated licensee controls and surveys for these areas to determine if radiological controls (including postings and barricades) were acceptable:

- Primary Auxiliary Building, and
- Unit 1 Containment (all levels).

The inspectors reviewed the radiation work permits (RWP) and work packages used to control work in these areas and other high radiation work areas to identify the work control instructions and control barriers that had been specified. Electronic dosimeter alarm set points for both integrated dose and dose rate were evaluated for conformity with survey indications and plant policy. Workers were interviewed to assess their knowledge of the actions required when their electronic dosimeters noticeably malfunctioned or alarmed.

The inspectors walked down these areas to verify that the prescribed RWPs, procedures, and engineering controls were in place, that licensee surveys and postings were complete and accurate, and that air samplers (if necessary) were properly located.

The inspectors reviewed the RWPs and surveys for the steam generator nozzle dam installation and eddy current testing activities which had the potential for creating an airborne radioactivity area. The inspectors reviewed the RWPs to verify barrier integrity and engineering control contingency plans were in place and to determine if there was a potential for individual worker internal exposures of greater than 50 millirem committed effective dose equivalent. This and other work activities/areas having a history of, or the potential for, airborne transuranic isotopes were evaluated to verify that the licensee had considered the potential for transuranic isotopes and provided appropriate worker protection.

The inspectors assessed the adequacy of the licensee's internal dose assessment process by reviewing personnel contamination event logs (and associated dose assessments) for the refueling outage. As of April 21, 2004, no personnel contamination events had resulted in dose assignments of greater than 10 millirem committed effective dose equivalent.

These reviews represented four inspection samples.

b. Findings

No findings of significance were identified.

.2 Job-In-Progress Reviews

a. Inspection Scope

The inspectors observed the following four activities that were being performed in radiation areas, airborne radioactivity areas, or high radiation areas for observation of work activities that presented the greatest radiological risk to workers:

- 1B Reactor Coolant Pump Motor Lift;
- Steam Generator Eddy Current Testing;
- Reactor Vessel Head Lift; and
- Cono-Seal Bullet Replacement.

The inspectors reviewed radiological job requirements for these four activities, including RWP and work procedure requirements, and attended ALARA pre-job briefings.

Job performance was observed with respect to these requirements to verify that radiological conditions in the work areas were adequately communicated to workers through pre-job briefings and postings. The inspectors also verified the adequacy of radiological controls (including required radiation, contamination, and airborne surveys); radiation protection job coverage (including audio/visual surveillance for remote job coverage); and contamination controls. This included a review of the radiological controls employed and resulting potential dose consequences related to the installation of steam generator nozzle dams early in the refueling outage. The inspectors completed their assessment of the nozzle dam installation activities by conducting an in-office review of the licensee's root cause evaluation (RCE) for the evolution during the week of May 24, 2004.

Radiological work in high radiation work areas having significant dose rate gradients was reviewed to evaluate the application of dosimetry to effectively monitor exposure to personnel and to verify that licensee controls were adequate. In particular, the steam generator eddy current activities and cono-seal bullet replacement involved evolutions where the dose rate gradients were severe which increased the necessity of providing multiple or repositioned dosimetry and/or enhanced job controls.

These reviews represented three inspection samples.

b. Findings

Introduction: One NRC-identified Green finding and an associated Non-Cited Violation (NCV), were identified when, on April 9, 2004, while installing steam generator nozzle dams, licensee staff increased supplied breathing air pressure in excess of procedural requirements while attempting to mitigate lost or diminished air flow to contract workers who were utilizing continuous flow, supplied air respirator "bubble hoods."

Description: On April 9, 2004, during the Unit 1 refueling outage, installation of steam generator nozzle dams was to take place per Work Order 0400042. The work commenced at 0417 hours on April 9 (approximately 11 hours into a 12-hour shift), following a pre-job brief which Nuclear Oversight personnel noted as "less than adequate due to poor communications, failure to document brief on an approved form, and lack of interaction of personnel at the brief." However, Nuclear Oversight personnel apparently did not raise these concerns to station management until after the shift had completed.

Upon start of the work, contractor personnel who were tasked with performance of the nozzle dam installation assembled on the 8' elevation of Containment, and were dressed per the requirements of RWP 04-141. The ALARA plan and TEDE ALARA evaluation for RWP 04-141 determined that "the use of an airline/hood for this work is not ALARA. However, the increase in dose due to the use of the airline/hood does not negate its use when accounting for the additional time and energy needed to address the effects of external and internal contamination that will result when the airline/hood is not used."

Therefore, the RWP dress requirements included the use of continuous flow, supplied air respirator "bubble hoods" for whole body entries into the steam generator bowl. The "bubble hoods" and air lines had been staged at the 8' elevation and on the steam generator platforms at approximately 1700 hours on April 7, 2004. At the 8' elevation contract personnel donned the "bubble hoods" with assistance of radiation protection (RP) personnel, though the licensee's RCE was unable to determine if RP staff followed procedure HPIP 4.58, "Issuance of Respiratory Equipment," in that no documentation could be identified for the issuance of the "bubble hoods" by the RP staff as required by the procedure.

Upon donning the "bubble hood," at least one contract personnel expressed concerns about low air pressure within the hood while connected at the 8' elevation. RP staff discussed this concern with the contract personnel, and expressed opinions that there would be more air flow at the steam generator platform level, though no formal investigation of the air flow concern was performed. Subsequently, contract personnel and RP personnel proceeded to the steam generator platforms. Upon arrival, the first

contract worker connected to a 50 foot air line on the platform for his entry into the 'B' steam generator and again he expressed concern about the air flow. However, he proceeded to prepare to enter the steam generator to install the 'B' cold leg nozzle dam, and requested that the RP technician on the platform wet him down with an unknown liquid, in order to lubricate him and to facilitate the contract worker's entry into the steam generator. Neither station nor contractor procedures address the use of a wetting liquid to facilitate steam generator entry.

The RP technician wet down the contract worker, and he entered the 'B' steam generator. During the contractor's stay time in the generator (1:48 minutes), he noted continued dissatisfaction with the apparent low air flow in the hood and dissatisfaction with his job progress. The worker exited the generator based on his concern with the low air flow, and the RP technician cut him out of the "bubble hood", which resulted in a minor personnel contamination event (PCE) documented by RP staff. (Of note, during a supervisory review of the PCE one day later, it was identified that the RP staff which responded to the worker's PCE did not perform nasal smears as directed by station procedures for this type of PCE. The licensee captured this issue into its corrective action program as CAP 55565.)

The quick disconnect "Snap-Tite" connection from the "bubble hood" hose to the regulator air hose was examined by the RP staff and no obvious failures were identified. The RP Manager contacted the Outage Control Center (OCC) regarding a possible loss of breathing air, though the issue was not logged by Operations until 16 minutes after the contract worker had left the platform area. The RP technician and RP supervision discussed the air pressure issue in the field, and RP supervision approved an increase in the air pressure to support the needs of the contract workers. Subsequently, the RP technician increased the air pressure from a range of 20 - 28 pounds per square inch gage (psig) to approximately 60 - 64 psig. The increase of the air pressure violated HPIP 4.58, Step 4.5.7, which states, "adjust air supply pressure so that air flow is between 6 and 15 cubic feet per minute [cfm]. For an air line length of 50 feet, a pressure range of 20 to 28 psig corresponds to a flow rate of 6 to 15 cfm."

Ten minutes after the first contract worker exited the steam generator due to diminished air flow, a second contract worker attempted to access the 'B' steam generator (with the increased air flow into the "bubble hood"), but failed to enter the generator after two attempts due in part to the individual's size. The second contract worker also requested the RP technician wet him down. After doing so, the second contractor successfully entered the steam generator with physical assistance from the RP technician and another contractor on the platform. According to the licensee's RCE, while inside the bowl (for 1:18 minutes), the contractor realized that he had lost air flow, but he continued working until he "believed he had 2 or 3 good breaths" at which point he exited the steam generator. Upon his exit, the contractor was cut out of the "bubble hood" which resulted in a documented PCE (though again nasal smears were not completed as required). The RP staff at the platform determined that the "Snap-Tite" fitting on the hood hose had disconnected resulting in the loss of air flow.

RP personnel and the NMC project leader discussed allowance of the next contractor to complete the 'B' nozzle dam installations for approximately five minutes in the field, however, the OCC was not contacted relative to this second air line issue. After the air pressure was verified as acceptable and the air line connection was challenged, a third

contract worker entered the steam generator and completed installation in approximately one minute.

During installation activities on the 'A' steam generator, two additional loss of air incidents occurred. In one instance, the contractor had partially entered the bowl when the "Snap-Tite" fitting contacted the manway and disconnected. The contractor immediately exited, the air line was reconnected, and the contractor re-entered the steam generator to complete the installation. In the second instance, an air supply line pinched against and was cut by equipment staged on the platform, resulting in diminished air flow. The RP technician taped the cut air line and asked the contractor if air flow was acceptable. The contractor indicated air flow was acceptable several times and completed his installation activities. In neither occurrence was work stopped or investigated. At this point, an NRC inspector who was observing the nozzle dam installation activities via video monitors raised concerns about the breathing air problems to site management. Subsequently, a formal investigation was initiated by the licensee which led to a formal root cause evaluation.

The licensee's Root Cause Evaluation (CAP55527/RCE 253, completed May 22, 2004), detailed more than 20 inappropriate actions during the steam generator nozzle dam installation activities. In addition to the performance issues detailed above, the licensee's RCE identified other significant performance issues, including:

- The work planner did not use procedure NP 1.1.7, "Managing Work Activity Risk," and associated forms in developing the work order for the nozzle dam installation/removal. Specifically, the work was categorized as "High - Multiple Risks," which requires that 12 compensatory actions be considered in developing the work plan, including, in part, a look-ahead plan, utilization of high-risk pre-job briefing process, supervisory/management attendance at pre-job briefs, and critical step identification. However, no mitigation or assessment of risk for this activity was identified by the licensee's RCE.
- The April 3, 2004, mockup training for the nozzle dam activities was conducted in "street clothes" and did not: (1) address the dress requirement concerns the contract workers raised during the job evolution; (2) identify air pressure/flow issues realized during the job evolution; (3) identify air line connection failures experienced by two workers during the evolution; and (4) identify issues surrounding two individuals which requested to be "wet down" to assist their entry into the steam generator bowl.
- Three different RP department evaluations of calendar year 2003 Operating Events (OE), relative to the loss of supplied breathing air due to separation of air line quick disconnect fittings, failed to adequately assess the station's susceptibility to similar occurrences. Specifically, OE031454, OE048685, and OE010321 were evaluated by the licensee but were closed for reasons including "fittings are from a different manufacturer," "fittings are taped," and "procedures and controls are adequate to minimize susceptibility to this event." However, the fittings described in the OE are of similar design as those used for "bubble hood" air line connections at Point Beach and no actions were taken to physically challenge the "Snap-Tite" fittings during the evaluations.

The licensee's evaluation identified the root cause of these events as: Oversight by Supervisors/Managers during work planning development and task execution did not assure compliance with procedures and processes, resulting in an inadequate work plan being developed and approved for use.

Additionally, the licensee identified four significant contributing causes:

- (1) Work Order Processing per NP 10.2.4 and Outage Management Planning per NP 10.2.1 does not include logic ties (e.g., IF this, THEN that) to drive use of appropriate procedures during work plan development.
- (2) Program Engineering personnel and Radiation Protection personnel did not use and/or follow Work Order Processing, Risk Assessment, Briefing, or Radiation Protection procedures in preparing for and during execution of the steam generator nozzle dam project.
- (3) Training for steam generator nozzle dam installation was not adequate to identify the error-likely situations that existed upon the start of work.
- (4) Communications to the OCC of safety significant events was not delivered and Nuclear Oversight identification of an inadequate briefing was not delivered in a timely or effective manner.

The licensee's corrective actions included: (1) site-wide stand-down to discuss these and related events with station/contractor staff; (2) independent team assessment the station's procedures and processes relative to the use of supplied air respiratory devices (and implementation of procedural and equipment changes, as necessary); (3) development of a complete nozzle dam removal plan in accordance with the applicable work planning procedures, including NP 10.2.1; (4) full mock-up training for the nozzle dam removal, including bubble hood use and air pressure requirements; and (5) development of a specific procedure for nozzle dam installation/removal activities, including lessons learned, supervisory oversight requirements, stop work authority, communications protocol, and external operating experience.

During the NRC inspectors' in-office review of the RCE, the inspectors identified that when the RP staff increased the air line pressure to approximately 60 psig, the resulting flow rate in the "bubble hood" would have likely exceeded 15 cfm. The National Institute for Occupational Safety and Health (NIOSH) certification requirements for continuous flow, supplied air respirator "bubble hoods" are described in 42 CFR Part 84, Subpart J. Specifically, Table 8 of Subpart J, requires, in part, that for the "bubble hoods" used during the evolution (Type C, loose fitting hood), the air supply hose with air regulating valve shall permit a flow of not less than 6 cfm, and the maximum flow shall not exceed 15 cfm. Therefore, in addition to violating station procedure HPIP 4.58, the inspectors determined that when the RP staff increased the air pressure to approximately 60 psig, the licensee was likely utilizing a respiratory protection device contrary to the NIOSH certification for the device, which is a violation of 10 CFR 20.1703, "Use of Individual Respiratory Protection Equipment."

Analysis: The inspectors determined that the licensee failed to meet the requirements of 10 CFR 20.1703, when the licensee increased the air line pressure in excess of the procedural guidance in HPIP 4.58, which likely resulted in the licensee utilizing a respiratory protection device contrary to its NIOSH certification. This issue could reasonably be viewed as a precursor to a significant event, and if left uncorrected would become a more significant safety concern. Also, the issue involves conditions contrary to licensee procedures and NRC regulations which impact protective equipment related to mitigating worker dose. Therefore, the issue was determined to be more than minor and represents a finding which was evaluated using the significance determination process (SDP) for the Occupational Radiation Safety Cornerstone.

The inspectors determined utilizing Manual Chapter 0609, Appendix C, "Occupational Radiation Safety SDP," that the finding did not involve ALARA/work controls. Further, based on the inspectors' review of: (1) dose rates and contamination levels in the steam generator bowls; (2) licensee dose evaluations; and (3) worst case stay time estimates within the bowls, there were no radiological exposures in excess of regulatory limits, nor was there a substantial potential for an overexposure. Additionally, the licensee's ability to assess dose was not compromised. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green).

Finally, the inspectors identified that multiple cross-cutting areas were affected by these events. Specifically, the root cause of inadequate supervisory oversight and the contributing cause relative to procedure use and adherence were the result of poor human performance. The contributing cause relative to the station's use and evaluation of operating experience relates to Problem Identification and Resolution. Finally, an inadequate level of questioning attitude was exhibited by station staff relative to: (1) the cause of the apparent low air flow and the use of a lubricating fluid for personnel entry into the steam generators; (2) Nuclear Oversight's slow response in raising concerns about the pre-job brief; and (3) the one contractor's failure to immediately leave the steam generator bowl upon loss of air.

Enforcement: Title 10 of the Code of Federal Regulation, Part 20.1703 requires, in part, that if a licensee permits the use of respiratory protection equipment, the licensee shall: (1) use only equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH), unless authorized by the NRC; and (2) implement and maintain a respiratory protection program that includes written procedures regarding the storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment. Contrary to the above, on April 9, 2004, the licensee increased the air line pressure of the "bubble hoods" employed during steam generator nozzle dam installation activities, beyond the procedural requirements of HPIP 4.58, "Issuance of Respiratory Equipment," which likely resulted in the licensee utilizing a respiratory protection device contrary to the NIOSH certification and without NRC authorization. However, because the licensee documented this issue in its corrective action program (CAP 55527/RCE 253), conducted a full evaluation into the causes of the events, took corrective actions to address staff knowledge of procedural adherence prior to nozzle dam removal activities, and the violation is of very low safety significance, it is being treated as a Non-Cited Violation (NCV 05000266/2004003-XX; 05000301/2004003-XX).

.4 Radiation Worker Performance

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation worker performance with respect to stated radiation protection work requirements and evaluated whether workers were aware of the significant radiological conditions in their workplace, the RWP controls and limits in place, and that their performance accounted for the level of radiological hazards present.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.5 Radiation Protection Technician Proficiency

a. Inspection Scope

During job performance observations, the inspectors evaluated RP technician performance with respect to radiation protection work requirements and evaluated whether they were aware of the radiological conditions in their workplace, the RWP controls and limits in place, and if their oversight of radiological activities was consistent with their training and qualifications with respect to the radiological hazards and work activities.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

2OS2 As Low As Is Reasonably Achievable Planning And Controls (ALARA) (71121.02)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the U1R28 refueling outage work scheduled during the inspection period and associated work activity exposure estimates for the following four work activities which were likely to result in the highest personnel collective exposures:

- U1R28 RP Coverage [RWP No. 04-104];
- Bottom Mounted Instrumentation Inspection [RWP No. 04-133];
- Nozzle Dam Installation/Removal [RWP No. 04-141]; and
- Steam Generator Eddy Current Testing [RWP No. 04-142].

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Radiological Work Planning

a. Inspection Scope

For those activities identified in Section 2OS2.1, the inspectors reviewed the ALARA evaluations, exposure estimates, and exposure mitigation requirements in order to verify that the licensee had established procedures, and engineering and work controls that were based on sound radiation protection principles in order to achieve occupational exposures that were ALARA.

The interfaces between radiation protection, operations, maintenance, planning, scheduling, and engineering groups were evaluated by the inspectors to identify interface problems or missing program elements. The inspectors evaluated if work activity planning included consideration of the benefits of dose rate reduction activities such as shielding provided by water filled components/piping, job scheduling, and shielding and scaffolding installation/removal activities. Finally, the inspectors evaluated the integration of radiological job planning activities (pre-job ALARA reviews) into work procedure and RWP documents.

These reviews represented three inspection samples.

b. Findings

No findings of significance were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems

a. Inspection Scope

The inspectors reviewed the licensee's process for adjusting exposure estimates or re-planning work, when unexpected changes in scope, emergent work, or higher than anticipated radiation levels were encountered. This review included a determination if adjustments to estimated exposures (intended dose) were based on sound radiation protection and ALARA principles, rather than adjustments to account for failures to adequately control the work. The frequency of these adjustments was reviewed to evaluate the adequacy of the original ALARA planning process. In particular, the inspectors reviewed and discussed with the RP staff the In-Progress ALARA reviews conducted for the bottom mounted instrumentation inspection and steam generator nozzle dam installation/removal RWPs.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.4 Job Site Inspections and ALARA Control

a. Inspection Scope

The inspectors observed the four activities identified in Section 2OS1.2 that were being performed in radiation areas, airborne radioactivity areas, or high radiation areas for observation of work activities that presented the greatest radiological risk to workers. The licensee's use of engineering controls to achieve dose reductions was evaluated to verify that procedures and controls were consistent with the licensee's ALARA reviews, that sufficient shielding of radiation sources was provided for and that the dose expended to install/remove the shielding did not exceed the dose reduction benefits afforded by the shielding.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.5 Radiation Worker Performance

a. Inspection Scope

Radiation worker and RP technician performance was observed during work activities performed in radiological areas that presented the greatest radiological risk to workers. The inspectors evaluated whether workers demonstrated the ALARA philosophy in practice by being familiar with the work activity scope and tools to be used, by utilizing ALARA low dose waiting areas, and that work activity controls were being complied with. Also, radiation worker performance was observed to determine whether individual training/skill level was sufficient with respect to the radiological hazards and the work involved.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES (OA)**

4OA4 Cross-Cutting Aspects of Findings

- .1 A finding described in Section 2OS1.2 of this report, had, as primary causes, human performance deficiencies, in that: (1) there was inadequate supervisory oversight of bubble hood use during steam generator nozzle dam installation; and (2) RP staff failed to appropriately apply the procedure for bubble hood issuance and the maximum air flow criteria.
- .2 A finding described in Section 2OS1.2 of this report, had, as a contributing cause, inadequate evaluation of operating experience (an element of problem identification and

resolution), in that certain quick disconnect air line fittings had recently been identified as being susceptible to inadvertently separating. However, licensee evaluations of these operating experiences failed to physically challenge the bubble hood air fittings used at the station.

4OA6 Meetings

.2 Interim Exit Meetings

An interim exit meeting was conducted for:

- Occupational Radiation Safety ALARA and access control programs inspection with Mr. G. VanMiddlesworth on April 23, 2004. A re-exit to discuss the finding relative to bubble hood use was conducted telephonically on July 9, 2004, with Mr. J. Shaw.

KEY POINTS OF CONTACT

Licensee

G. VanMiddlesworth, Site Vice President

S. Thomas, Radiation Protection Manager

B. Carberry, Radiation Protection - ALARA

K. Zastrow, Root Cause Assessment Coordinator, Kewaunee Nuclear Plant

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

05000266/2004003-XX;	NCV	Failure to Follow Procedures in the Issuance and Use of
05000301/2004003-XX		Bubble Hood-type Respiratory Protective Devices

LIST OF DOCUMENTS REVIEWED

2OS1 Access Control to Radiologically Significant Areas

CAP 055366; Worker Received Electronic Dosimeter Dose Alarm; dated April 5, 2004

CAP 055587; S/G Nozzle Dam Installation Dose Exceeded Estimate; dated April 11, 2004

CAP 055595; Air Supply to Bubble Hoods Not Within Procedure Limits; dated April 12, 2004

CAP 055951; Incore Thermocouple Guide ("Bullet Nose") Inadvertently Lifted with Reactor Head; dated April 22, 2004

CAP 055986; Evaluate Use of RP Greeter at Containment Hatches During Outage Periods; dated April 23, 2004 [NRC-Identified Issue]

HP 3.2; Radiological Labeling, Posting, and Barricading Requirements; Revision 39; dated January 23, 2004

HPIP 4.58; Issuance of Respiratory Equipment; Revision 13; dated March 19, 2004

HPIP 3.52; Airborne Radioactivity Surveys; Revision 30; dated June 20, 2003

PCE No. 04-02-018; Personnel Contamination Event (PCE) Report; dated April 8, 2004

PCE No. 04-02-019; Personnel Contamination Event (PCE) Report; dated April 9, 2004

PCE No. 04-02-020; Personnel Contamination Event (PCE) Report; dated April 8, 2004

RCE 253/CAP 55527; Industrial Safety Issues and Poor Work Practices During Nozzle Dam Installation; dated May 22, 2004

RWP No. 04-104; RP Coverage; Revision 0

RWP No. 04-113; Reactor Head Lift; Revision 0

RWP No. 04-122; Reactor Coolant Pump Maintenance; Revision 0

RWP No. 04-133; BMI Inspection; Revision 0

RWP No. 04-141; Nozzle Dam Install/Remove; Revision 0

RWP No. 04-142; Steam Generator Eddy Current Testing; Revision 1

RWP No. 04-171; NRC Walkdowns for U1R28; Revision 0

RWP No. 04-182; Replace Cono-Seal Bullet; Revision 0

2OS2 As Low As Is Reasonably Achievable Planning And Controls (ALARA)

ALARA Review No. 2004-0012; Level 3 Pre-Job ALARA Review for BMI Inspection (RWP No. 04-133); dated April 6, 2004

ALARA Review No. 2004-0017; Level 3 Pre-Job and In-Progress ALARA Reviews for Nozzle Dam Install/Remove (RWP No. 04-141); dated April 2 and 11, 2004

ALARA Review No. 2004-0018; Level 3 Pre-Job ALARA Reviews (Revisions 0 and 1) for Steam Generator Eddy Current Testing (RWP No. 04-142); dated March 16 and April 12, 2004

ALARA Review No. 2004-0027; Level 3 Pre-Job ALARA Review for Replace Cono-Seal Bullet (RWP No. 04-182); dated April 22, 2004

JIT Briefing Activity MM-8480D3; Just In Time Briefing for Reactor Vessel Head Lift; dated April 21, 2004

HPIP 4.40; TEDE ALARA Evaluation; Revision 0 (February 6, 2002)

NP 4.2.1; ALARA Program; Revision 11 (November 19, 2003)

Point Beach Nuclear Plant U1R28 Estimated RWP Dose Spreadsheet; dated April 6, 2004

TEDE ALARA Evaluation for RWP 04-141; dated April 3, 2004

TEDE ALARA Evaluation for RWP 04-182; dated April 22, 2004

LIST OF ACRONYMS USED

ALARA	As Low As Is Reasonably Achievable
NCV	Non-Cited Violation
NIOSH	National Institute for Occupational Safety and Health
OCC	Outage Control Center
OE	Operating Events/Experience
PCE	Personnel Contamination Event
RCE	Root Cause Evaluation
RP	Radiation Protection
RWP	Radiation Work Permit
SDP	Significance Determination Process
U1R28	Point Beach Unit 1's 28 th Refueling Outage