Ford/Markley

MORNING REPORT - REGION III

DATE: 10/04/90

Facility/Licensee:
Point Beach Nuclear Plant Units 1 & 2
Wisconsin Electric Power Co.

Notification:

SRI

Docket No.

50-266; 301
PWR/Westinghouse 2 Loop/
Large Dry Atmospheric Containment

Subject:

Inadvertent Offsite Release

Reportable Event Number: 032567

Discussion: While attempting to obtain a daily gaseous sample of Unit 1 reactor coolant on October 3, a release of radioactive gas occurred. The leak originated from the Unit 1 gas analyzer allowing coolant gases to vent into the primary auxiliary building (PAB).

The release commenced at 0740 and caused the PAB exhaust vent radiation monitors to alarm. Another process radiation monitor located near the gas analyzer also alarmed due to the radiation levels produced by the released gases. The peak reading on the vent stack monitor was about 6.2E-5 microcuries/ml, and stayed above the alert alarm for about one hour while the gas was vented out of the PAB.

Plant personnel responded rapidly to the event by isolating the supply line to the gas analyzer and initiating a partial evacuation of the PAB.

Four operators received skin contamination due to immersion in the gas cloud. The principal contaminants were isotopes of Cesium and Rubidium. The four operators were decontaminated and received whole body counts. The highest intake measured on one of the operators was 263 nanocuries with the principal isotopes being Xe 133 and Xe 135. All personnel who were in the PAB at the time of the event also received whole body counts. No abnormal levels were found. The operators involved in the sampling activity were estimated to have received doses of 34 mrem to the skin and 20 mrem whole body from immersion in the gas cloud.

The licensee calculated the total offsite release to be 1.1 Curies consisting entirely of noble gasses. Licensee's maximum worst case assessment of airborne activity during the one hour was 0.07% of the maximum permissible concentration at the site boundary. Wind conditions at the time were favorable, being out of the south with gusts of up to 25 miles per hour.

Regional Action: Routine Resident Inspector followup.

Contact: T. N. Jackiw

FTS: 388-5697

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U.S. NUCLEAR REGULATORY COMMISSION
Region III

EVENT NOTIFICATION WORKSHEET

EVENT NUMBER (ASSIGNED BY HOO): 19515 update

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLER'S NAME	CALL BACK #: ENS / ( )
HOO: 1500 RDO: 1500CT	POINT BEACH	1/2	✓	

EVENT TIME & ZONE	EVENT DATE
AM	10, 3, 90

POWER/MODE BEFORE	POWER/MODE AFTER
N/A	N/A

EVENT CLASSIFICATIONS

- GENERAL EMERGENCY
- SITE AREA EMERGENCY
- ALERT
- UNUSUAL EVENT
- 50.72 NON-EMERGENCY (see next columns)
- PHYSICAL SECURITY (73.71)
- TRANSPORTATION
- 20.403 MATERIAL/EXPOSURE
- OTHER

1-Hr Non-Emergency 10 CFR 50.72(b)(1)

- (i)(A) TS Required S/D
- (i)(B) TS Deviation
- (ii) Degraded Condition
- (iii)(A) Unanalyzed Condition
- (iii)(B) Outside Design Basis
- (iii)(C) Not Covered by OPs/EPs
- (iii) Earthquake
- (iii) Flood
- (iii) Hurricane
- (iii) Ice/M&R
- (iii) Lightning
- (iii) Tornado
- (iii) Oth Natural Phenomenon
- (iv) ECCS Discharge to RCS
- (v) Lost ENS
- (vi) Lost Emerg. Assessment

- (v) Lost Offsite Comms
- (vi) Fire
- (vii) Toxic Gas
- (viii) Rad Release
- (viii) Oth Hampering Safe Op.

4-Hr Non-Emergency 10 CFR 50.72(b)(2)

- (i) Degrade While S/D
- (ii) RPS Actuation (scram)
- (ii) ESF Actuation
- (iii)(A) Safe S/D Capability
- (iii)(B) RHR Capability
- (iii)(C) Control of Rad Release
- (iii)(D) Accident Mitigation
- (iv)(A) Air Release > 2X App B
- (iv)(B) Liq Release > 2X App B
- (v) Offsite Medical
- (vi) Offsite Notification

DESCRIPTION

Licensee determined that total gaseous release was noble gas of 1.10 Curies. Over a 60 minute period worst case (boundary) would have been .07% MPC at the site (EAB). Four (4) personnel were contaminated. Worst case was 22.5 mrem to skin. All four personnel were assigned doses of 34 mrem to skin and 30 mrem whole body. All four personnel were whole body counted. The worst case was 263 uci Xenon 133 & 135. Licensee has talked to media.

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT	X		
STATE(s)			
LOCAL			
OTHER GOV AGENCIES			
MEDIA/PRESS RELEASE	X		

ANYTHING UNUSUAL OR NOT UNDERSTOOD? YES (Explain above) / NO

DID ALL SYSTEMS FUNCTION AS REQUIRED? YES / NO (Explain above)

MODE OF OPERATION UNTIL CORRECTED: N/A

ESTIMATE FOR RESTART DATE: N/A

ADDITIONAL INFO ON BACK? NO

AH

Joe Belanger RI6

0745 event Rad alarms duration ~10 min then start down.

Small leak from gas analyzer — evac. aux bldg

4 contam. on skin — est dose 33 mrem skin (skin dose) [highest 10^6 dpm ...]

Also Calc'd => 36 mrem whole body submersion & 20 TB

• WBC neg... except Xe133 + Xe135 263 nCi total. — did not use for calc submersion dose

Did not do calc....

From back calc of conc. to get the submersion dose...

would have expected ... consistent with 1% retention.

• TLD's — not read yet.

little or self reader.

• Will pull TLD's — but not yet..

• Plant gathering together package for region.

Not sure of cause

• 4 people CT, OPS, HP, & Security.

Only ones effected but WBC for all people in aux bldg

• Not sure of cause but work with sampling.

Came back to normal ~ after ~ 10 min

R-21 Vent St Gas (PAB)
R-14 Plant Vent Noble Gas ...
R-13 Pri Aux Bldg Vent
R-209 SG BD ... Mon
} all responded

• Est. total release Xe133 equiv. 1 Ci

Est well below T.S. limit

Reached no emergency limits

• Largest reading was R-13

- VI 8th sample room
  were sampling ∅ (hung upt) from VI VCT.
- Spike in 10 min –
- Chemistry has xxx... Ron [illegible] Reg...
- Talked to media

• Dan Hest   {4 at site bldg / 2 default met.   worst case (4/9)   believe from ovem...   (C)

• .083 x 10^-3 % MPC, based on gas release & RMS
The highest org. from RMS ... Ob Nuc Mach (E 214)
Calc. release of noble gas nuclides
and fraction from gas sample taken – while releases

• Conc in room – based on RMS..
Corrected sample flow rate & flow rate of release path
Sample from during release
calc conc being vented
Rational MPC accul. by normalizing .. to neat reading..
then calc nuclide conc. as..

Approx (5 nuclides)   Kr 85m | .69 MPC
                      88   14.3 MPC
                      Xe133 .25 MPC
                      Xe135 26.25 MPC
                      Xe135m ——— ?
} 10 min avg } Required as room conc in room for

~ 41.5 MPC

used this for minimum calc.
weighted these, ~ 7 MPC-hours
procedure assumes run @ cloud .. HPIP 1.50 — Semi @ cloud

• WBC – so far related only from Helgeson – greater sensitivity. Xe 133 & Xe 135 uptakes – preliminary

• Decay 1–2 hrs before WBC
• Max release rate ... 5E-4 Ci/sec Xe133 equiv (release of conc by Eq. or MPC) (based on DF of RG 1.109 or NUREG 0172 or ICRP 30) (Based rate)

- System (Sizer - Key Engr)

  Pump seal on gas analyzer was blown out
  to exhaust & pump used to the room. Pump cabinet
  not ventilated - only room

- Can take a 80 VCT gas sample in lord. Unlikely room

To: I. N. JACKIW

Local

Leak detected at Point Beach

TWO CREEKS — A small leak of radioactivity from a gas analyzer at the Point Beach Nuclear Power Plant this morning resulted in the precautionary evacuation of the plant's auxiliary building.

Several employees were exposed to radioactivity, but the contamination has been addressed, according to a spokesperson for the Wisconsin Electric Power Company, operators of the plant. The exact number of employees was not known early this morning, but the spokesman said it is probably three or four.

"As the investigation goes on, we may find someone close to the area might have been contaminated," the spokesman said. "At first just two were contaminated, but then we found a third and there may be another who was in the area," the spokesman said.

The level of exposure to the employees will be determined later today.

The leak began at 7:40 a.m. and was terminated at 8:45 a.m. by isolating the gas analyzer, according to a statement from the utility. The release of radioactivity was only one-one hundredth (0.01) of the allowable limit. Access to the auxiliary building has been restored and the Nuclear Regulatory Commission has been informed.

The gas analyzer tests gases in various systems of the reactor coolant system. Oxygen and hydrogen in the rector coolant system must be kept at specific levels, according to WEPCO.

The analyzer also measures waste gases for composition level.

The gases or environment the analyzers is examining can contain radioactivity, according to the spokesman.

The employees who were contaminated showered and they were continued to be examined through a process of a whole body count which takes several hours. They are being examined by using instrumentation to examine the entire body.

The health physics staff on site is doing the examination. The employees are remaining on site for the examination, according to the utility. If the employees had been injured and contaminated, they may be transported to Community Hospital in Two Rivers. There were no injuries in this situation.

A13

Point Beach (October 3, 1990)

This morning a (non-reportable) event occurred at Point Beach Nuclear Plant involving the release of about 5 curies of noble gases, contamination of four individuals, and partial evacuation of the auxiliary building. At 7:46 a.m. CDT a stack monitor "alert level" alarm occurred. This alarm indicates that releases are exceeding the normal level. the alert alarm setpoint is 2E-5. (The tech spec release rate limit is 3E-3). The actual release rate reached a peak value of 6E-5. Evacuation of the auxiliary building was initiated.

It was quickly determined that the release resulted from actions of technicians doing the daily sampling of the volume control tank (VCT). Apparently alignment of the sampling apparatus to the VCT was done in a manner which permitted venting of the sample into the auxiliary building atmosphere.

Whole body counts were made of individuals evacuating the building. Skin contamination was found on four individuals. The four had been involved in the VCT sampling. The highest nose smear was 700 counts.

The integrity of the VCT system was subsequently restored and access to the auxiliary building was reestablished by about 8:50 a.m. CDT.

It was estimated that 5 curies were released to the outside atmosphere. Relatively high winds, gusting to 25 miles per hour from the south, were occurring at the time. Thus it is unlikely that releases were detectable at the site boundaries.

Although they determined that the event was not reportable, the licensee made a courtesy call to the NRC ops center. There has been some media interest in the event.

A16

a. Inadvertent Offsite Release (93702)

While attempting to obtain a daily gaseous sample of Unit 1 reactor coolant on October 3, a release of radioactive gas occurred. A pump seal in the Unit 1 gas analyzer failed allowing coolant gasses to vent into the primary auxiliary building (PAB), when the gas analyzer was aligned to the volume control tank for sampling. The gasses were then drawn into the PAB ventilation system, driven through roughing and high efficiency filters, and finally exhausted out the vent stack. The plant made an informational notification to the NRC via the emergency notification system.

The release commenced at 0740 and caused the PAB exhaust vent radiation monitors to alarm. Another process radiation monitor located near the gas analyzer also alarmed due to the radiation levels produced by the released gasses. The radiation monitors have two alarm setpoints, a lower alert limit to warn of above normal levels, and a high alarm limit to warn of radiation levels above permissable limits. The peak reading on the vent stack monitor was about 6.2E-5 microcuries/ml, which is above the alert limit of 2.1E-5 but well below the high alarm limit of 5.0E-3. The radiation monitor stayed above the alert limit for about one hour while the gas was vented out of the PAB.

Plant personnel responded rapidly to the event by isolating the supply line to the gas analyzer and initiating a partial evacuation of the PAB. Operators dressed in anti contamination clothing and breathing apparatus were then sent back in to isolate the entire gas analyzer. PAB ventilation was shifted to exhaust through charcoal filters. The inspector noted that the plant manager and other management personnel responded quickly to the control room to assist in recovery from the event.

Four operators involved in the sampling process received skin contamination due to immersion in the gas cloud. The principal contaminants were isotopes of Cesium and Rubidium. The four operators were decontaminated and received whole body counts. The highest intake measured on one of the operators was 263 nanocuries with the principal isotopes being Xe 133 and Xe 135. All personnel who were in the PAB at the time of the event also received whole body counts. No abnormal levels were found. The operators involved in the sampling activity were estimated to have received doses of 34 mrem to the skin and 20 mrem whole body from immersion in the gas cloud.

The licensee calculated the total offsite release to be 1.1 Curies consisting entirely of noble gasses. Their maximum worst case assessment of airborne activity during the one hour of the release, determined the activity levels to be 0.07% of the maximum permissible concentration at the site boundary. Wind conditions at the time were favorable, being out of the south with gusts of up to 25 miles per hour.

Of note is that the letdown gas stripper was out of service for maintenance during this event. Had it been operating, much of the gaseous activity that was released would have been previously removed, resulting in a reduced release amount. The inspector observed the event recovery process and discussed the details with plant personnel. No additional concerns were noted.

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-III-90-67 Date October 3, 1990

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date.

Facility: Point Beach Station Unit 1
Wisconsin Electric Power Company
6612 Nuclear Road
Two Rivers, WI 54241

Docket: 50-266

Licensee Emergency Classification:
____ Unusual Event
____ Alert
____ Site Area Emergency
____ General Emergency
_X_ Not Applicable

Subject: MINOR NOBLE GAS RELEASE

At 7:40 a.m. on October 3, 1990, a small release of noble gases occurred while plant personnel were collecting a gas sample from the Volume Control Tank. The release apparently occurred as a result of a seal failure on a gas analyzer sample pump.

Four individuals received minor skin contamination and were subsequently decontaminated. About 30 (10) workers were evacuated from the Auxiliary Building as a precaution.

The licensee reported the release was about 1/5 curies. The gases were removed by the auxiliary building ventilation system and released from the plant through the ventilation stack. The release path is filtered and monitored. No measurable radioactivity was detected off-site, the licensee reported.

The resident inspectors are reviewing the event.

There has been news media interest in the release.

The State of Wisconsin will be notified. The information in this Preliminary Notification has been reviewed by licensee management.

The licensee notified the NRC Operations Center at 8:44 a.m. (CDT). This information is current as of 3:00 p.m. (CDT) October 3, 1990.

CONTACT: W. Snell FTS 388-5513 R. Greger FTS 388-5644

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*Denotes a Displaywriter/PC not an IBM 5520 Terminal.

Rev. 07/17/90

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OCT 3 0 1990

Docket No. 50-266
Docket No. 50-301

Wisconsin Electric Power Company
ATTN: Mr. C. W. Fay
Vice President
Nuclear Power
231 West Michigan Street - P379
Milwaukee, WI 5320[illegible]

Gentlemen:

This refers to the routine safety inspection conducted by Messrs. C. L. Vanderniet and J. Gadzala of this office, from September 5 through October 15, 1990, of activities at the Point Beach Nuclear Plant Units 1 and 2. Our findings were discussed with Mr. G. J. Maxfield and members of his staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice. An event requiring the submission of a licensee report was not filed until noted by our inspectors about one year later. Since corrective actions have already been taken in response to this violation, no response is required.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

We will gladly discuss any questions you have concerning this inspection Your cooperation with us is appreciated.

Sincerely,

Richard C. Knop, Chief
Reactor Projects Branch 3

Enclosure: Inspection Reports
No. 50-266/90019(DRP);
No. 50-301/90019(DRP)

SEE ATTACHED CONCURRENCE

See Attached Distribution

RIII	RIII	RIII	RIII	RIII
Jackiw/sd	Vanderniet	Gadzala	Castleman	Knop

9011140258

A15

Distribution

cc w/enclosures:
G. J. Maxfield, Plant Manager
DCD/DCB (RIDS)
OC/LFDCB
Resident Inspector, RIII
Virgil Kanable, Chief
Boiler Section
Charles Thompson, Chairman
Wisconsin Public Service
Commission
Leroy E. Conner, Acting Administrator
WI Div. of Emergency Government
Teri L. Vierima, Chief
Radiation Protection Section
WI Department of Health and
Social Services

NOTICE OF VIOLATION

Wisconsin Electric Power Company
Point Beach Nuclear Plant

Docket Nos. 50-266; 50-301
Licenses No. DPR-24; DPR-27

As a result of the inspection conducted from September 5 through October 15, 1990, and in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1989) (Enforcement Policy) the following violation was identified:

10 CFR 50.73, "Licensee Event Report System," requires that the licensee shall submit a Licensee Event Report (LER) for any type of event described in this paragraph within 30 days after the discovery of the event. Section a.2.(iv) of this paragraph specifies that an LER is required for any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System.

Contrary to the above, on October 8, 1989, an inadvertent actuation of the Reactor Protection System occurred when two out of three containment pressure bistables were tripped. This event was not reported until October 11, 1990, over one year from the date of the occurrence.

This is a Severity Level V violation (Supplement I).

The inspection showed that actions had been taken to correct the identified violation and to prevent recurrence. Consequently, no reply to the violation is required and we have no further questions regarding this matter.

OCT 30 1990
Dated

Richard C. Knop
Richard C. Knop, Chief
Reactor Projects Branch 3

9011140262

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Reports No. 50-266/90019(DRP); 50-301/90019(DRP)

Docket Nos. 50-266; 50-301 Licenses No. DPR-24; DPR-27

Licensee: Wisconsin Electric Company
231 West Michigan
Milwaukee, WI 53201

Facility Name: Point Beach Units 1 and 2

Inspection At: Two Rivers, Wisconsin

Dates: September 5 through October 15, 1990

Inspectors: C. L. Vanderniet
J. Gadzala
P. Castleman

Approved By: I. N. Jackiw, Chief
Reactor Projects Section 3A

10-30-90
Date

Inspection Summary

Inspection from September 5 through October 15, 1990, (Reports No. 50-266/90019(DRP); No. 50-301/90019(DRP))
Areas Inspected: Routine, unannounced inspection by resident inspectors of outstanding items; operational safety; radiological controls; maintenance and surveillance; emergency preparedness; security; engineering and technical support; and safety assessment/quality verification.
Results: During this inspection period, Unit 1 operated at full power with only requested load following power reductions. Unit 2 operated at full power until September 14, when it began an end of life Tavg coastdown. The unit was shutdown October 6 for refueling outage 16. Issues addressed in this inspection report include: Inadvertent Migratory Waterfowl Deaths, paragraph 3.f.; Inadvertent Auxiliary Feedwater Pump Actuation, paragraph 3.g.; Inadvertent Offsite Release, paragraph 4.a.; Emergency Preparedness Training Drill, paragraph 6.a.; Inattentive Security Guard, paragraph 7.a.; Single Failure Potential on Bus Tie Breakers, paragraph 8.a.; Service Water Radiography, paragraph 9.a.; Failure to Issue an Event Report, paragraph 9.d.; and Plant Management Changes, paragraph 9.e. New issues which remain unresolved include: Inadvertent Auxiliary Feedwater Pump Actuation, paragraph 3.g.; and Single Failure Potential on Bus Tie Breakers, paragraph 8.a.

DETAILS

1. Persons Contacted (30703) (30702)]

*J. J. Zach, Senior Manager, Nuclear Power Department
*G. J. Maxfield, Plant Manager
T. J. Koehler, General Superintendent, Maintenance
J. C. Reisenbuechler, Superintendent, Operations
J. G. Schweitzer, Superintendent, Maintenance
N. L. Hoefert, Superintendent, Instrument & Controls
W. J. Herrman, Superintendent, Technical Services
T. L Fredrichs, Superintendent, Chemistry
J. J. Bevelacqua, Superintendent, Health Physics
M. L. Marvine, Superintendent, Training
*R. D. Seizert, Superintendent, Regulatory & Support Services
F. A. Flentje, Administrative Specialist

Other licensee employees were also contacted including members of the technical and engineering staffs, and reactor and auxiliary operators.

*Denotes the personnel attending the management exit interview for summation of preliminary findings.

2. Licensee Action on Previous Inspection Findings (92701)

(Closed) Unresolved Item (266/90010-03; 301/90010-03): Emergency Diesel Generator (EDG) Load Sequencing

The utility discovered that a phrase was omitted from Technical Specification 15.4.6.A.2 in 1985 during retyping of that page to incorporate an unrelated amendment. Omission of this phrase, in effect, changed the meaning of the specification to require Emergency Diesel Generator (EDG) load sequencing times be within a tolerance band on either side of the Final Safety Analysis Report (FSAR) limit. The original intent was that they be less than the limits stated in the FSAR. Certain required equipment was subsequently found to not meet the original intent of the specifications, although the largest deficiency was 1.6 seconds.

Wisconsin Electric performed an evaluation of this situation for its safety significance in a design basis event. The licensee determined that all equipment whose start times were outside the original specification intent were nonetheless well inside the design basis for those times. Furthermore, they determined that the original intent was actually less conservative since its tolerances were wide enough to have permitted multiple components to start simultaneously and thereby possibly overload the EDG.

The corrective actions that the utility decided upon include changing the Technical Specifications to require EDG load sequence

times to conform to those of the FSAR with an appropriate tolerance band. This will confirm the existing practice as being not only acceptable, but preferable. The inspector reviewed the analysis and discussed the corrective actions with the licensee. No additional concerns were noted and this item is closed.

3. Plant Operations (71707) (71710) (93702)

a. [illegible]ol Room Observation (71707)

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the inspection period. During these discussions and observations, the inspectors ascertained that the operators were alert, cognizant of current plant conditions, attentive to changes in those conditions and took prompt action when appropriate. The inspectors noted that a high degree of professionalism attended all facets of control room operation and that both unit control boards were generally in a 'black board' condition (no non-testing annunciators in alarm condition). Several shift turnovers were also observed and appeared to be handled in a thorough manner.

The control room has only one copy of alarm response cards for use in responding to various annunciators on the control boards. This copy is maintained at the shift supervisor's station, requiring the unit operators to leave their control panels if they need to obtain an alarm response card. Having only a single copy would also be an inconvenience if both units were to receive the same alarm simultaneously. The inspector discussed this issue with plant management and the licensee plans to take appropriate corrective action.

The inspectors performed walkdowns of the control boards to verify the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components.

b. Facility Tours (71707)

Tours of the turbine building, primary auxiliary building, service water building, and Unit 2 containment were conducted to observe plant and equipment conditions, including plant housekeeping/ cleanliness conditions, status of fire protection equipment, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance.

During facility tours, inspectors noticed several steam leaks on the secondary side of Unit 2. Normally, very few leaks are in evidence. The noted leaks were identified with tags as requiring maintenance work. All equipment appears to be in good operating condition.

Plant cleanliness has improved noticeably during the recent Institute of Nuclear Plant Operations (INPO) evaluation. Portions of the service water system piping continue to show heavy surface rust, especially the sections leading to the auxiliary feedwater pump bearings.

The inspectors noted several installations of temporary hoses connected to vent fittings or hooked between vent and drain fittings. Examples include the auxiliary feedwater pumps and the charging pumps. The length of time these temporary hoses have been connected suggests a permanent installation. The licensee informed the inspector that connecting hoses to permanent vent or drain fittings does not fall under the jurisdiction of their temporary modification requirements, hence no controls are necessary. They added that plans are nonetheless being made for replacing these hoses with hard piping under a permanent modification.

c. Unit 1 Operational Status (93702)

The unit continued to operate at full power during this period with only requested load following power reductions and one power reduction to 86% on September 7, to repair a leak on a feedwater heater operating vent.

d. Unit 2 Operational Status (93702)

The unit continued to operate at full power during this period until September 14, when it began an end of life Tavg coastdown. The unit was shutdown October 6 for refueling outage 16. The inspector verified that the plant had reviewed their controls for mid-loop operations and that applicable administrative procedures were in place for use prior to the unit's entering into a partially drained condition.

e. Engineered Safeguards Features (ESF) System Walkdown (71710)

The inspector performed a detailed walkdown of portions of the containment air recirculation cooling systems in order to independently verify operability. The containment air recirculation cooling system walkdowns included verification of the following items:

- Inspection of system equipment conditions.
- Confirmation that the system check-off-list (COL) and operating procedures are consistent with plant drawings.
- Verification that system valves, breakers, and switches are properly aligned.
- Verification that instrumentation is properly valved in and operable.

- Verification that valves required to be locked have appropriate locking devices.

- Verification that control room switches, indications, and controls are satisfactory.

- Verification that surveillance test procedures properly implement the Technical Specifications surveillance requirements.

Several vent cooler valves inside containment were found to have only the original construction labels identifying them. Several vent cooler differential pressure indicators also have either the construction label or a hand written identifier under the gauge. The system drawing did not correctly depict the location of three fire hose connections on the service water piping supplying the vent coolers. The inspector conveyed these discrepancies to the licensee for correction.

f. Inadvertent Migratory Waterfowl Deaths (71707)

Approximately 275 Double Crested Cormorants (Phalacrocorax Auritus) have been found dead in the water intake forebay at the plant. These birds, which are large migratory waterfowl, are a protected species.

Point Beach has a large doughnut shaped intake structure about 300 yards offshore that is surrounded by concrete riprap. The intake doughnut resembles a rocky island, which is a favorite roosting place for the birds. Since the birds began roosting on the intake structure, numerous birds have either fallen into the inside of the riprap, or dived in after fish. Once in the water on the inside of the intake structure, the birds become too water-laden to be able to fly out of the structure. It has been postulated that these birds tire from swimming or accidentally dive into one of the suction vortexes and are drawn into the plant, thereby drowning in the process.

This is the first such occurrence of these birds roosting at the plant. The plant is taking action to remedy the situation. A propane-powered air canon has been installed at the intake structure to frighten off the birds. Though this worked for the first couple of days after installation, it has since become ineffective. The licensee is considering further options to prevent the entry of the birds into the intake structure.

Representatives from the State of Wisconsin Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service have been sent to investigate this issue. The DNR is in the process of considering enforcement action against the utility for this event. Media interest has occurred and several articles and news items have been circulated.

g. Inadvertent Auxiliary Feedwater (AFW) Pump Actuation (93702)

On October 9, the licensee notified the NRC via the emergency notification system regarding the inadvertent initiation of motor-driven AFW pump (P38A). Point Beach has two motor-driven AFW pumps which are shared between the two units.

The event occurred during the performance of a main steam line hydrostatic test on Unit 2. During this test, an unrelated maintenance action was being performed on the Unit 2 "B" train safeguards relays. This maintenance required the deenergizing of the B train of safeguards power and removal of the B steam generator level bistable. Consequently, although both steam generators were full, the AFW actuation circuitry sensed a low-low level from the B steam generator. This satisfied logic for the initiation of AFW, however, the main feed pump control switches were in the pull-to-lock position, which blocks the signal. The intended pressure source for the hydrostatic test was the Unit 2A main feed pump. When the main feed pump control switch was taken out of the pull-to-lock position in preparation for starting the pump, the initiation signal was unblocked and the A AFW pump started. The B AFW pump was already running as part of the hydrostatic test.

The Unit 1 operator attempted to secure the A AFW pump by placing the control switch in "OFF". Since the actuation signal was still present, when the spring loaded switch returned to the "AUTO" position, the pump restarted. The rapid restart apparently tripped the A AFW pump breaker on overcurrent. After determining what had happened, the operator reset the breaker and allowed the pump to restart in the "AUTO" position. Some water was injected into the Unit 1A steam generator during the event although its effect on level was negligible. The A AFW pump discharge into the Unit 1A steam generator was shut to preclude continued water addition.

The simulated low-low level signal from the Unit 2B steam generator was subsequently reset and the motor driven AFW pumps were secured. The hydrostatic test was then completed without further incident. This event remains unresolved pending an evaluation by the licensee and subsequent review by the NRC (266/90019-01; 301/90019-01).

These reviews and observations were conducted to verify that facility operations were conducted safely and in conformance with requirements established under technical specifications, federal regulations, and administrative procedures.

4. Radiological Controls (71707), (93702)

The inspectors routinely observed the licensee's radiological controls and practices during normal plant tours and the inspection of work activities. Inspection in this area includes direct observation of the use of Radiation Work Permits (RWPs); normal work practices inside

contaminated barriers; maintenance of radiological barriers and signs; and health physics (HP) activities regarding monitoring, sampling, and surveying. The inspector also observed portions of the radioactive waste system controls associated with radwaste processing.

From a radiological standpoint the plant is in good condition, allowing access to most sections of the facility. During tours of the facility, the inspectors noted that barriers and signs also were in good condition. When minor discrepancies were identified, the HP staff quickly responded to correct any problems.

Inadvertent Offsite Release (93702)

While preparing to obtain a weekly gaseous sample of Unit 1 reactor coolant on October 3, a release of radioactive gas occurred. A pump seal in the Unit 1 gas analyzer failed allowing coolant gasses to vent into the primary auxiliary building (PAB), when the gas analyzer was aligned to the volume control tank for sampling. The gasses were then drawn into the PAB ventilation system, driven through roughing and high efficiency filters, and finally exhausted out the vent stack. The plant made an informational notification to the NRC via the emergency notification system.

The release commenced at 0740 and caused the PAB exhaust vent radiation monitors to alarm. Another process radiation monitor located near the gas analyzer also alarmed due to the radiation levels produced by the released gasses. The radiation monitors have two alarm setpoints, a lower alert limit to warn of above normal levels, and a high alarm limit to warn of radiation levels above permissible limits. The peak reading on the vent stack monitor was about 6.2E-5 microcuries/ml, which is above the alert limit of 2.1E-5 but well below the high alarm limit of 5.0E-3. The radiation monitor stayed above the alert limit for about one hour while the gas was vented out of the PAB.

Upon receipt of the radiation alarm, control room operators attempted to determine the source of the release. The operators involved in the sampling activity were not initially aware they had caused the release. PAB ventilation was shifted to exhaust through charcoal filters to further reduce the release rate. Plant personnel identified the gas sampler as the cause of the release about one-half hour into the event. They responded by isolating the supply line to the gas analyzer and initiating a partial evacuation of the PAB. Operators dressed in anti-contamination clothing and breathing apparatus were then sent back in to isolate the entire gas analyzer. The inspector noted that the plant manager and other management personnel responded quickly to the control room to assist in recovery from the event.

Four operators involved in the sampling process received skin contamination due to immersion in the gas cloud. The principal

contaminants were isotopes of Cesium and Rubidium. The four operators were decontaminated and received whole body counts. The highest intake measured on one of the operators was 263 nanocuries with the principal isotopes being Xe-133 and Xe-135. All personnel who were in the PAB at the time of the event also received whole body counts and no abnormal levels were found. The operators involved in the sampling activity were estimated to have received doses of 34 mrem to the skin and 20 mrem whole body from immersion in the gas cloud.

The licensee calculated the total offsite release to be 1.2 Curies consisting entirely of noble gasses. Their worst case assessment of airborne activity during the one hour release determined the highest activity level to be 0.07% of the maximum permissible concentration at the site boundary. Wind conditions at the time of the event were favorable, being out of the south with gusts of up to 25 miles per hour.

Of note is that the letdown gas stripper was out of service for maintenance during this event. Had it been operating, much of the gaseous activity that was released would have been previously removed, resulting in a reduced release amount. The inspector observed the event recovery process and discussed the details with plant personnel. No additional concerns were noted.

All activities were conducted in a satisfactory manner during this inspection period.

5. Maintenance/Surveillance Observation (62703) (61726)

a. Maintenance (62703)

Station maintenance activities of safety-related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

Portions of the following maintenance activities were observed/reviewed:

- 2P-11B component cooling water pump motor repair

  The inspector expressed concern about the method of lifting the pump motor. A cable used to support the motor was being partially deflected by an intervening pipe. The inspector's concern regarded the side loading being placed on the intervening pipe. The licensee informed the inspector that they had performed an informal evaluation on the side loading and determined that it was well within the limit of the pipe.

- MI 5.2 (Revision 4), Air diaphragm operated control valve maintenance of AF-4012

  The specifications for valve operating pressure and regulator setting listed in the procedure specified a single value without providing any tolerance band around that value. This practice tends to produce inconsistencies in the tolerances that a given technician thinks is acceptable. The technicians performing the work used a 0-150 psi range pressure gauge to measure a 1 psi test pressure. When questioned about this practice, the technicians proved knowledgeable about the gauge range suitable for the pressures being worked with, but the procedure only specified a generic test rig, which they used. The procedure also did not require logging "as found" data on the valve to be worked. The technicians obtained this data anyway because they knew it would be needed for comparison later. No flush of the valve was specified despite the need for grinding inside the valve body. The technicians also took it upon themselves to perform this task. The inspector discussed these concerns with the licensee for correction.

- ICP 9.11 (Revision 6), Special Maintenance Procedure, Tavg Range Change

  After installation of resistors to change the indicating range of the Tave instruments, reactor engineers must update the plant computer database conversion parameters to enable it to correctly interpret the new signals. There is no procedure for this evolution so it is done by reviewing log entries from when the evolution was last performed and entering the same data as is recorded in the log.

- IWP 89-188*D (Revision 0), Replacement of Breakers 2, 4, 14, 16 on panel D13

b. Surveillance (61726)

The inspector observed surveillance testing and verified that testing was performed in accordance with adequate procedures; that

test instrumentation was calibrated; that limiting conditions for operation were met; that removal and restoration of the affected components were accomplished; that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test; and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector witnessed and reviewed the following test activities:

- IT-1181.2 (Revision 0), Ten Year Hydrostatic Test of Emergency Diesel Generator Fuel Oil System

  The procedure used for this test appears to have been inadequately reviewed by the plant's engineering staff prior to its performance. One step in the procedure directs shutting of a pressure control valve, although the intent is to throttle it until 150 psi backpressure is reached. However, no gauge is provided in the system to read that high a pressure. The test had to be suspended when fuel oil could not be pumped into the test rig as specified in the procedure. An investigation revealed that there were micropore filters installed upstream of the point used for the test connection. These filters are only designed to transmit static pressure and were quickly clogged when fuel oil flow was induced through them. The presence of this filter was not determined before the start of the test. The procedure was eventually revised and the test completed without further incident. The inspector discussed these weaknesses with the licensee.

- ICP 2.16 Appendix A (Revision 2), Overpressure Mitigating System

  Step 2.21 of the procedure directs the technician to reduce voltage to less than 26.3 to allow relay CX to energize. The relay energized at 26.32 and the technician did not reduce voltage further. When questioned by the inspector about the need to reduce voltage below 26.3 as stated in the procedure, the technician stated that the intent of the procedure was only to reduce voltage sufficiently to energize the relay and the value of the voltage was only an approximation. During further discussions with the technician's supervisor, the licensee agreed that although the technician was correct in his interpretation, the wording of the procedure was not conducive to procedural compliance and would be changed. The inspector had no further concerns.

- ICP 2.1 Appendix A (Revision 8), Protection and Safeguards Analog

No other discrepancies were noted during the observance of any of the above tests.

6. Emergency Preparedness (71707)

An inspection of emergency preparedness (EP) activities was performed to assess the licensee's implementation of the site emergency plan and implementing procedures. The inspection included monthly review and tour of emergency facilities and equipment, discussions with licensee staff, and a review of selected procedures.

EP Training Drill (71707)

The site conducted an EP training drill on September 17 to assist in preparing personnel for handling their assignments during declared emergencies. The technical support center was activated and an accident scenario was played out. The inspector observed portions of the training and played the role of the NRC headquarters duty officer. Although there were notable flaws in the scenario data, the training was considered worthwhile.

All activities were conducted in a satisfactory manner during this inspection period.

7. Security (71707)

The inspector, by direct observation and interview, verified that portions of the physical security program were being implemented in accordance with the station security plan. This included checks that identification badges were properly displayed, vital areas were locked and alarmed, and personnel and packages entering the protected area were appropriately searched. [The inspector also monitored any compensatory measures that may have been enacted by the licensee.]

Inattentive Security Guard (71707)

On October 10, the licensee notified the NRC via the emergency notification system that a security guard at the Unit 2 containment hatch had fallen asleep while on duty. The inspector discussed this event with the licensee and determined that appropriate compensatory measures were subsequently taken. No additional concerns were noted.

All other activities were conducted in a satisfactory manner during this inspection period.

8. Engineering and Technical Support (71707)

The inspector evaluated licensee engineering and technical support activities to determine their involvement and support of facility operations. This was accomplished during the course of routine evaluation of facility events and concerns through direct observation of activities and discussions with engineering personnel.

Single Failure Potential on Bus Tie Breakers (71707)

On October 8, the licensee identified a potential for a single failure on the tie breakers between the safeguards and non-safeguards electrical busses (B01/B03 and B02/B04) to accidentally shut the tie breakers. If this accident happened while a diesel generator was supplying the safeguards bus, it would tie the non-safeguards bus onto the diesel generator and probably overload it.

As immediate corrective action, the licensee removed the control power fuses for these tie breakers and is administratively controlling the breaker control switches in the pull-to-lock position. This removes the potential for the inadvertent closure. The breakers are used only for maintenance purposes and have no safety function. Wisconsin Electric is performing an analysis of this situation and this item remains unresolved pending completion of that analysis and subsequent review by the inspector (266/90019-02; 301/90019-02).

All activities were conducted in a satisfactory manner during this inspection period.

9. Safety Assessment/Quality Verification (92701) (90712) (92700)

The licensee's quality assurance programs were inspected to assess the implementation and effectiveness of programs associated with management control, verification, and oversite activities. Special consideration was given to issues which may be indicative of overall management involvement in quality matters such as self improvement programs, response to regulatory and industry initiatives, the frequency of management plant tours and control room observations, and management personnel's attendance at technical and planning/scheduling meetings.

a. Service Water Radiography (92701)

An extensive radiographic examination program was performed on the service water system in response to Generic Letter 89-13, "Service Water System Problems Affecting Safety Related Equipment", and Information Notice 89-001/01, "Valve Body Erosion". About 70 selected areas were radiographed including 10 areas inside the Unit 2 containment during the current outage. This examination identified piping areas in the service water system that have up to a 75% wall loss in highly localized areas. The areas of high wall loss are in the form of pitting rather than general thinning. The licensee has determined that this is a leakage concern instead of a pipe wall strength concern. The inspector discussed this with the licensee and was informed that plans are being made to repair several sections of piping once the evaluation is complete.

b. Licensee Event Report (LER) Review (90712)

The inspector reviewed LERs submitted to the NRC to verify that the details were clearly reported, including accuracy of the description

and corrective action taken. The inspector determined whether further information was required, whether generic implications were indicated, and whether the event warranted onsite followup. The following LERs were reviewed and closed:

*301/89-010 Unanticipated Containment Pressure Trip Signal

On October 8, 1989, an inadvertent actuation of the reactor protection system occurred while performing a surveillance on the containment pressure trip instrumentation. Unit 2 received a trip signal when two of the trip bistables generated a trip signal satisfying the two of three logic requirement. The unit was shutdown at the time. The cause was determined to be a combination of operator error and procedure inadequacy. The procedure did not contain any precautions instructing the operator to check for the existence of a tripped channel prior to performing the test and the operator did not notice that one channel was already in the tripped position from an earlier unrelated maintenance. The licensee subsequently revised the procedures involved to include appropriate caution statements regarding tripped channels. This event report was submitted nearly one year late as discussed in paragraph 9.d.

c. LER Followup (92700)

The LER denoted by asterisk above was selected for additional followup. The inspector verified that appropriate corrective action was taken or responsibility was assigned and that continued operation of the facility was conducted in accordance with Technical Specifications and did not constitute an unreviewed safety question as defined in 10 CFR 50.59. Report accuracy, compliance with current reporting requirements and applicability to other site systems and components were also reviewed.

d. Failure to Issue an Event Report (90712)

During a review of LERs, the inspector noticed that no report was filed for a reactor protection system (RPS) actuation which occurred on October 8, 1989. This is a violation of 10 CFR 50.73, "Licensee Event Reports" (301/90019-03). The event in question is documented in inspection report (266/89027; 301/89026) and is similar to another RPS actuation which occurred two days prior to this one. An LER was submitted for the earlier RPS actuation. The inspector determined that corrective action for this second actuation had already been completed even though no LER was submitted. The licensee has since submitted the missed LER, therefore, no written response to this violation is required. Although this incident meets the criteria for considering enforcement discretion, the licensee's past history of missed commitment dates for LER corrective actions and occasional weaknesses noted in the material content of some LERs warrants issuance of the violation citation.

e. Plant Management Changes (71707)

On September 17, the mechanical systems lead engineer was promoted to superintendent of maintenance. This position had been filled since August 1 on a temporary basis by the maintenance assistant.

All activities were conducted in a satisfactory manner during this inspection period.

10. Outstanding Items (92701)

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 3.g and 8.a.

11. Management Meetings (30702) (94600)

A Meeting was held between NRC Region III management and plant management on September 28, to discuss items of interest and foster improved communications between the licensee and the NRC. Items of discussion included corrective action status of a previous electrical inspection, status of increasing personnel resources, personnel retention, the plant's corrective action improvement program, and procedural control improvements.
The Senior Resident Inspector met with local emergency government officials and provided a brief on the resident inspector program. He also fielded questions regarding recent events and issues at the plant.

The NRC Region II Administrator and a representative from NRC headquarters accompanied a team from the Institute of Nuclear Plant Operations (INPO) during INPO's annual inspection of Point Beach from September 10 through 21. The NRC personnel were evaluating INPO's inspection methodology with an emphasis on the maintenance area.

12. Exit Interview (30703)

A verbal summary of preliminary findings was provided to the licensee representatives denoted in Section 1 on October 16, 1990, at the conclusion of the inspection. No written inspection material was provided to the licensee during the inspection.

The likely informational content of the inspection report with regard to documents or processes reviewed during the inspection was also discussed. The licensee did not identify any documents or processes as proprietary.