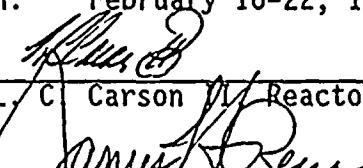
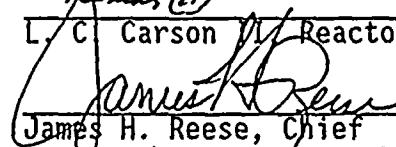


U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report: 50-397/93-07
License: NPF-21
Licensee: Washington Public Power Supply System (WPPSS)
P.O. Box 968
3000 George Washington Way
Richland, WA 99352
Facility: Washington Nuclear Project 2 (WNP-2)
Inspection location: WNP-2 Site, Benton County, Washington
Inspection duration: February 16-22, 1993
Inspected by:  L. C. Carson, Reactor Radiation Specialist 3/25/93
Approved by:  James H. Reese, Chief Facilities Radiological Protection Branch 3/25/93
Date Signed
Date Signed

Summary:

Areas Inspected: This routine announced inspection covered followup items and the licensee's radioactive waste management program. The inspection included gaseous radwaste (GRW) management, liquid radwaste (LRW) management, solid radwaste management, and the Radiological Environmental Monitoring Program (REMP). Inspection procedures 83725, 83728, 83729, 84722, 84723, 84724, 84850, 86721, 86740, 90712, 90713, 92700, 92701, and 92702 were used.

Results: The licensee's programs for radioactive waste management appeared adequate in meeting the licensee's safety objectives. One violation was identified:

The licensee established a LRW hose control program on January 29, 1993, as a corrective action in response to cited violations in NRC Inspection Report 50-397/92-35. However, the inspector identified four examples of non-compliance with the licensee's procedure for identifying and controlling hoses that drain to LRW systems.

Three open items were closed during this inspection: (1) the alternate acceptance criteria used for completing the calibration of the meteorological wind speed and wind direction instruments; (2) reactor coolant sample analysis bias; and (3) the contamination of the licensee's sewage treatment facility from the Department of Energy's Fast Flux Test Facility Reactor.

DETAILS

1. Persons Contacted

Licensee

*J. Baker, Plant Manager
*C. Card, Supervisor, Radiological Environmental Monitoring Program
 J. Chasse, Regulatory Programs Environmental Engineer
*J. Dabney, Work Control Manager
*A. Davis, Principal Health Physicist and Radiochemist
*W. Davison, Plant Quality Assurance Manager
 C. Halbfoster, Chemistry Manager (Institute of Nuclear Power Operations)
*J. Gearhart, Director, Quality Assurance
*P. MacBeth, Radwaste Supervisor
*C. Madden, Quality Assurance Engineer (QAE)
*T. Messersmith, Maintenance Support Manager
*M. Monopoli, Support Services Manager
*V. Parrish, Assistant Director of Operations
 J. Peters, Plant Administration Manager
*D. Pisarcik, Radiation Protection Manager (RPM)
*D. Schumann, Operations Event Assessment Engineer
*W. Shaeffer, Operations Manager
 V. Shockley, Health Physics Manager, Corporate
*G. Smith, Operations Division Manager
*G. Sorensen, Regulatory Programs Manager
*R. Webring, Technical Manager
*D. Werlau, HP, Chemistry, GET Training
*N. Zimmerman, Plant Technical Supervisor

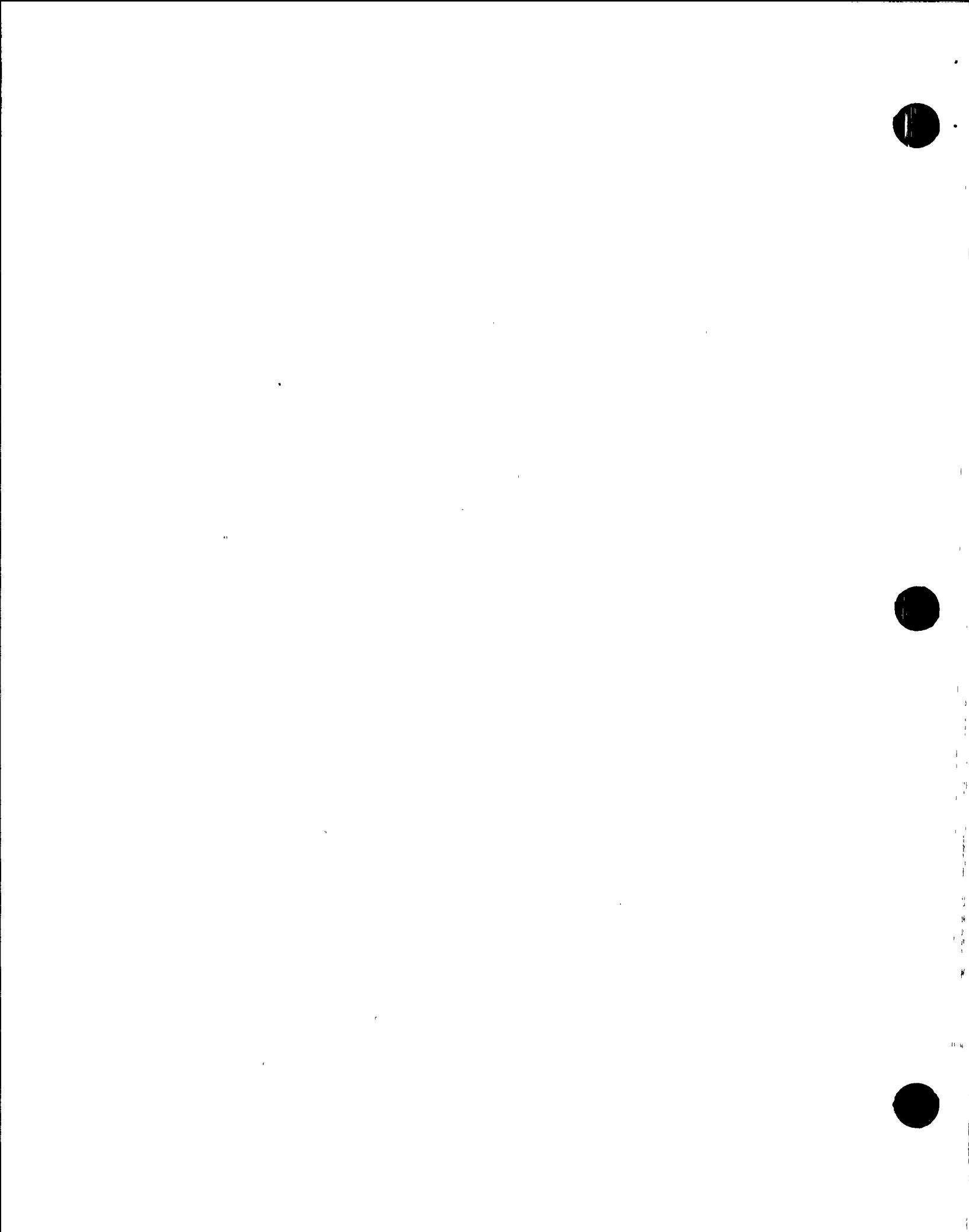
NRC

D. Proulx, Resident Inspector

(*) Denotes those individuals who attended the exit meeting on February 22, 1993. The inspectors met and held discussions with additional members of the licensee's staff during the inspection.

2. Followup (92701)

Item 50-397/91-40-01 (Closed): This item involved an inspector identifying bias in isotopic results of reactor coolant samples. Subsequently, the licensee agreed that when their new calibration standards arrived in 1992 they would verify calibration curves for a 250 milliliter polybottle that was used during liquid isotopic analysis. The inspector reviewed Chemistry Department memoranda dated September 23 and December 16, 1992, which summarized contractor radiochemistry and polybottle comparison data, and found that the licensee's sample comparisons improved in 1992. The licensee concluded that the improvement was probably due to improved efficiency curves, which were put into service during annual detector calibrations. The inspector had no further concerns in this matter.



Item 50-397/92-35-05 (Closed): This item involved the licensee's calibration and performance data for meteorological monitoring instruments. It was noted by the inspector that certain data were not taken at output points MET-P01 and MET-P02 due to the computer being down. The inspectors asked the system engineer if an alternate criteria was used to ensure that points MET-P01 and MET-P02 were satisfactorily calibrated. The system engineer stated that further research was necessary to determine what criteria had been used. Licensee system engineers provided the inspector detailed drawings, procedures, and an explanation of why output points MET-P01 and MET-P02 did not require testing in order to meet the Technical Specification (TS) calibration requirements. The inspector found that output points MET-P01 and MET-P02 were not TS required data points, but merely alternate data points. The inspector verified that the licensee had appropriately documented that non TS data points (MET-P01/P02) would be tested at a later date. The data points were tested satisfactorily, and the inspector had no further concerns in this matter.

Item 50-397/92-41-07 (Closed): This item involved the licensee's report that the sewage treatment system was contaminated with H-3, Cs-137, and Co-60, and the source could be the Department of Energy Fast Flux Test Reactor. The inspector completed an evaluation of the sewage system contamination. This matter is discussed in detail in Section 6(a) of this report.

3. Followup of Items of Noncompliance (92702)

Item 50-397/92-35-01 (Open): This violation of 10 CFR 20.301 was issued, because the licensee was discharged liquid radwaste (LRW) into the Storm Drain pond in a unauthorized manner. The inspector verified that corrective actions listed in the licensee's January 24, 1992, "Response to the Notice of Violation," were being implemented. This item is covered in detail in Section 6(b) of this report.

Item 50-397/92-35-02 (Open): This violation was for operating the non-radioactive Turbine Bldg. sumps as radioactive sumps without performing a 10 CFR 50.59 safety determination. The inspector verified that the corrective actions listed in the licensee's July 24, 1992, "Response to the Notice of Violation," were being implemented. This item is covered in detail in Section 6(b) of this report.

Item 50-397/92-35-03 (Closed): This violation was issued because the licensee's Control Room (CR) operators failed to respond appropriately to valid CR emergency ventilation radiation monitor alarms (WOA-RIS-31A) in accordance with alarm response procedure (PPM 4.826.P1). The inspector verified that the Operations Manager trained all operating crews on the details of the event, and management's procedural adherence expectations. The inspector verified that an evaluation of the event resulted in a change to procedure PPM 4.826P1. PPM 4.826P1 now requires that operations contact the radiochemist on a CR radiation monitor alarm in order to verify the source of radioactivity. The inspector had no further concerns in this matter.

4. In-Office Review of Periodic and Special Reports (90712 & 90713)

a. WNP-2 Semiannual Radioactive Effluent Release Report (SRERR)

The inspector conducted an in-office review of the licensee's 1992 SRERRs, which were submitted in accordance with 10 CFR 50.36(a)(2) and TS 6.9.1.11. Liquid and gaseous radioactive releases, and the resulting doses were below the limits specified in the licensee's Offsite Dose Calculation Manual (ODCM). The dose assessments for offsite members of the public were performed in accordance with the methods specified in the ODCM. The licensee reported two abnormal liquid radwaste (LRW) releases in 1992, which were documented in Problem Evaluation Request (PER) 292-0622 and PER 292-0671. The inspector noted that the licensee did not characterize the LRW releases to the Storm Drain Pond as abnormal. However, the licensee did issue a Special Report in August 1992 on radioactivity found in the Storm Drain Pond. The licensee did not report any abnormal releases of gaseous radwaste (GRW) in 1992. However, the licensee identified that the auxiliary boiler was contaminated, and considered an unmonitored release point. The licensee performed a 10 CFR 50.59 safety determination on the auxiliary boiler GRW releases in December 1992, and will submit the changes to the ODCM in 1993. Changes to the ODCM in 1992 were documented in accordance with TS 6.14. There were no major changes to the licensee's radwaste systems or Process Control Program.

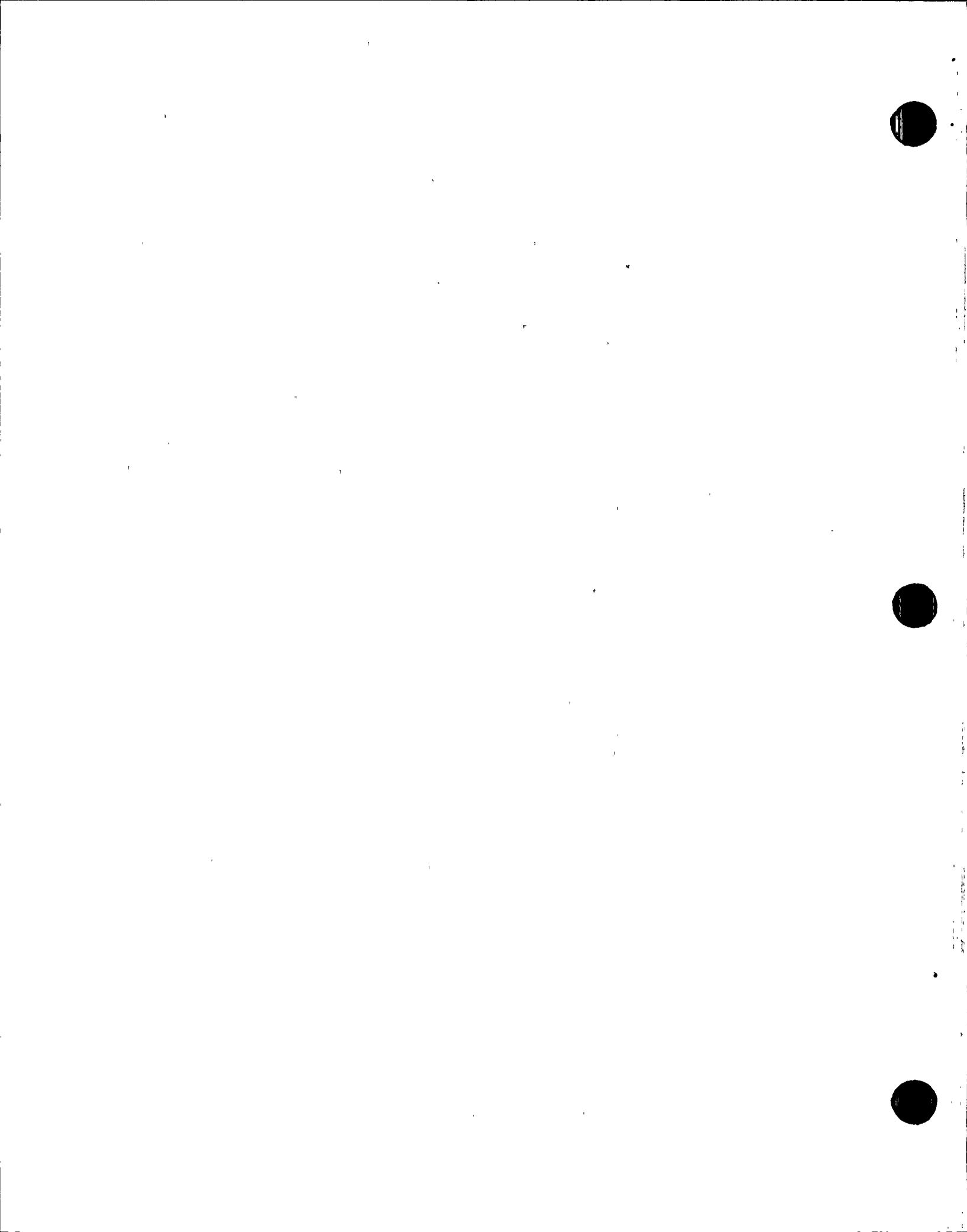
The licensee's reporting program appeared adequate to accomplish its objectives. No violation or deviations were identified.

5. Gaseous Radwaste System and Onsite/Offsite Followup of Nonroutine Events (84724, 90712, 90713, and 92700)

a. Explosive Gas Hydrogen Monitoring

The inspector reviewed maintenance records for the offgas hydrogen analyzers (OG-AY-12A/B) in order to assess operational reliability. Also, discussions were held with maintenance and engineering personnel, and the inspectors noted the following items:

- (1) OG-AY-12A was in and out of service several times in 1992. Two Licensee Event Reports (LER) 92-038 and 92-046, written in October and December 1992, stated that violations of TS 3.3.7:12 occurred when the Chemistry Department missed the 4-hour offgas hydrogen analysis. The root causes of both LERs were poor work practices and personnel errors.
- (2) The January 1993 chemistry technicians retraining program specifically included the lessons learned from the LERs.



- (3) Many Maintenance Work Requests (MWR) and Problem Evaluation Requests (PERs) were written to repair OG-AY-12A/B. Licensee personnel revealed that Technical Evaluation Request (TER) 90-0090 asked for the replacement of the hydrogen monitors, but the licensee's Management Review Committee (MRC) determined that the current monitors were satisfactory. The MRC authorized Plant Modification Record (PMR) 91-0176 to improve the hydrogen monitor's reliability by replacing the monitor's old relay logic with new micro-controller logic. Workers were implementing PMR 91-0176 at the time of this inspection.
- (4) TS Amendment 98 was reissued on January 19, 1993, because the original revision in December 1992 inadvertently required two operable hydrogen monitors channels (reference: TS Amendment 95) instead of one channel. The revised TS Amendment 98 now requires one operable monitor channel.

The inspector concluded that enhancements to the licensee's offgas hydrogen monitors should decrease maintenance problems and increase reliability. The inspector had no further concerns in this area. No violations or deviations were identified.

6. Liquids and Liquid Waste and Onsite/Offsite Followup of Nonroutine Events (83725, 83728, 83729, 84725, 90712, and 92700)

a. The Fast Flux Test Reactor's Sewage Line to WNP-2

The licensee's process for the connection of the Department of Energy Fast Flux Test Reactor (DOE-FFTF) sewage line to WNP-2's sanitary sewage system was reviewed by the inspector. Also, reviewed were State of Washington (State) documents, licensee documents associated with the DOE-FFTF sewage line, the licensee's sanitary sewage system operations, the licensee's TSs, Updated Final Safety Analysis Report (UFSAR), and procedures. A meeting between the inspector and licensee corporate personnel responsible for the DOE-FFTF sewage line was held. Discussions were held with WNP-2's Radiation Protection Manager (RPM) and the sanitary sewage facility supervisor. The licensee's root cause/corrective action report NCR 292-1206 on this matter was evaluated by the inspector.

(1) Background

The licensee allowed DOE-FFTF to design and connect a sewage line to their sanitary sewage system. Sewage services were to start when a contract was signed between both parties, and certain State requirements were met. The licensee reported to the NRC in October 1992 that contamination in the form of H-3 (1400 picoCuries/milliliter (pCi/ml)), Co-60 (700 pCi/ml), and Cs-137 (200 pCi/ml) was measured in their sanitary sewage system. The H-3 contamination exceeded the

States' reporting level of 1000 pCi/ml. The licensee thought that DOE-FFTF was not discharging sewage to WNP-2 for the following reasons:

- (a) No contract between DOE-FFTF and WPPSS existed.
- (b) DOE-FFTF installed isolation valves.
- (c) DOE-FFTF maintained the valves locked closed.

Subsequently, the licensee found that DOE-FFTF did not install isolation valves. WPPSS determined that the source of contamination was a DOE-FFTF sewage line that was connected to their sanitary sewage piping in 1991.

(2) Inspector's Findings Related to the Sewage Connection Design

Through interviews and meetings with licensee personnel the inspector found the following:

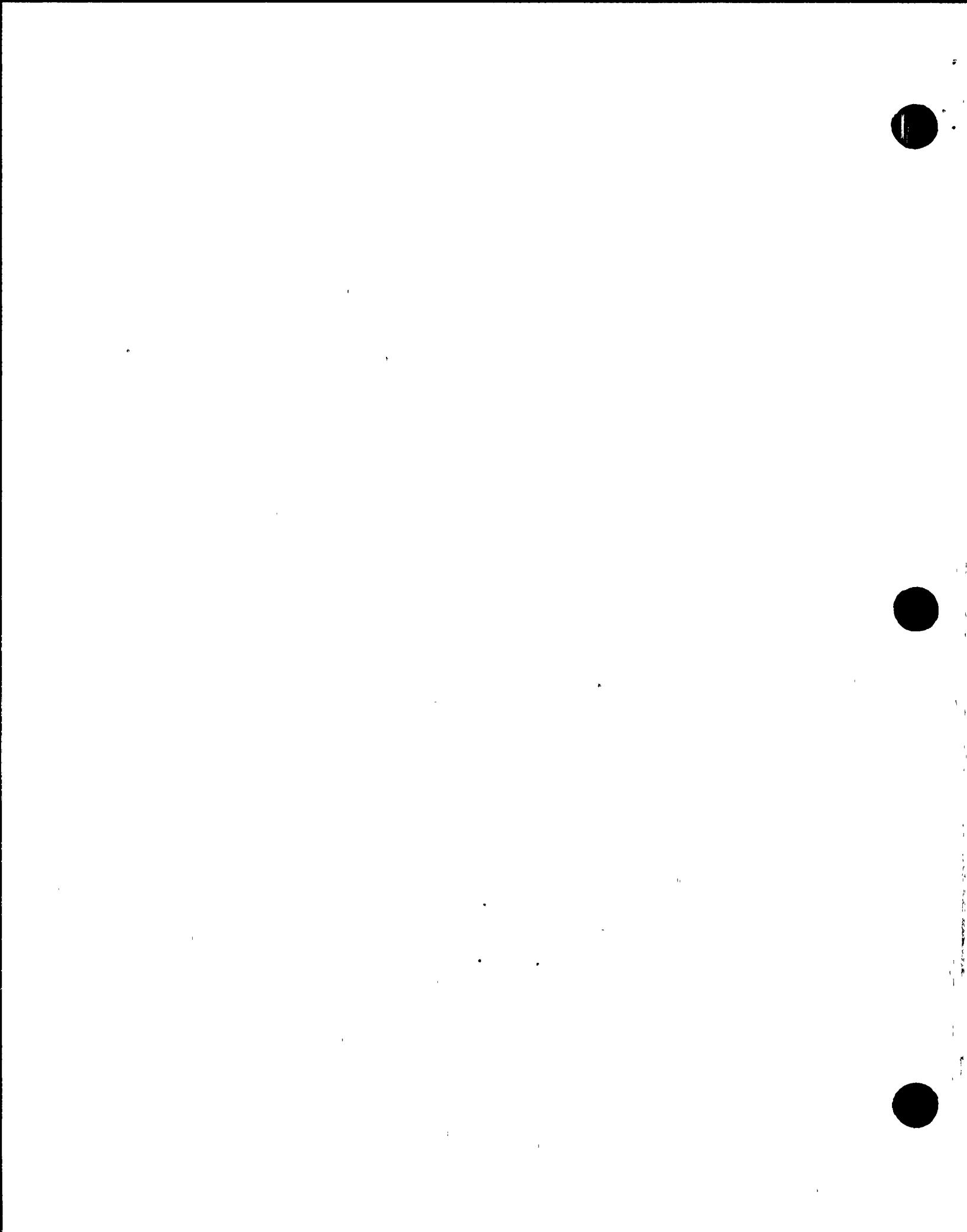
- (a) The licensee's DOE-FFTF sewage line project engineer and Corporate Support Services (CSS) Manager did not perform a sanitary sewage system design review.
- (b) The licensee did not perform an Updated Final Safety Analysis Report (UFSAR) review, or site design drawing review for changes affecting WNP-2.
- (c) DOE-FFTF transferred the sewage line design package and drawings to the licensee on February 28, 1991, and the sewage line connection occurred on April 22, 1991. As of February 16, 1993, the licensee had not updated WNP-2 site drawings and the UFSAR, pursuant to 10 CFR 50.71, to reflect this design change.

(3) Root Cause of Sewage System Contamination/Corrective Actions

The licensee's final version of the root cause determination report (Nonconformance Report (NCR) 292-1206) of the DOE-FFTF Supply System sewage treatment facility contamination concluded the following:

- (a) The problem was less than adequate "Managerial Methods" in that risks and consequences of decisions were not completely identified or assessed prior to entering into the agreement with DOE to receive waste water from the Fast Flux Test Facility."
- (b) The licensee did not test FFTF sewage to determine if objectionable chemicals or radioactivity existed that could present a problem to WNP-2.

Some of the licensee's corrective actions for this event included the following:



- (a) An immediate verifiable isolation between the licensee's facilities and DOE-FFTF was installed.
- (b) Negotiations and dealings with DOE-FFTF were terminated until matters such as cleanup cost were decided.
- (c) Periodic inspections of the DOE-FFTF connection to assure that no further contamination would go undetected were being performed.
- (d) Procedure PPM 1.4.1 "Plant Modifications," was changed to include all portions of the licensee's sewage system, and insure that all modifications to any portions of the system were clearly addressed.
- (e) The licensee requested a 10 CFR 50.59 determination, and requested that a UFSAR change notice and drawing changes be submitted to reflect the DOE-FFTF connection into the licensee's sanitary sewage system.

(4) Conclusions Based on Inspector's Findings and NCR 292-1206

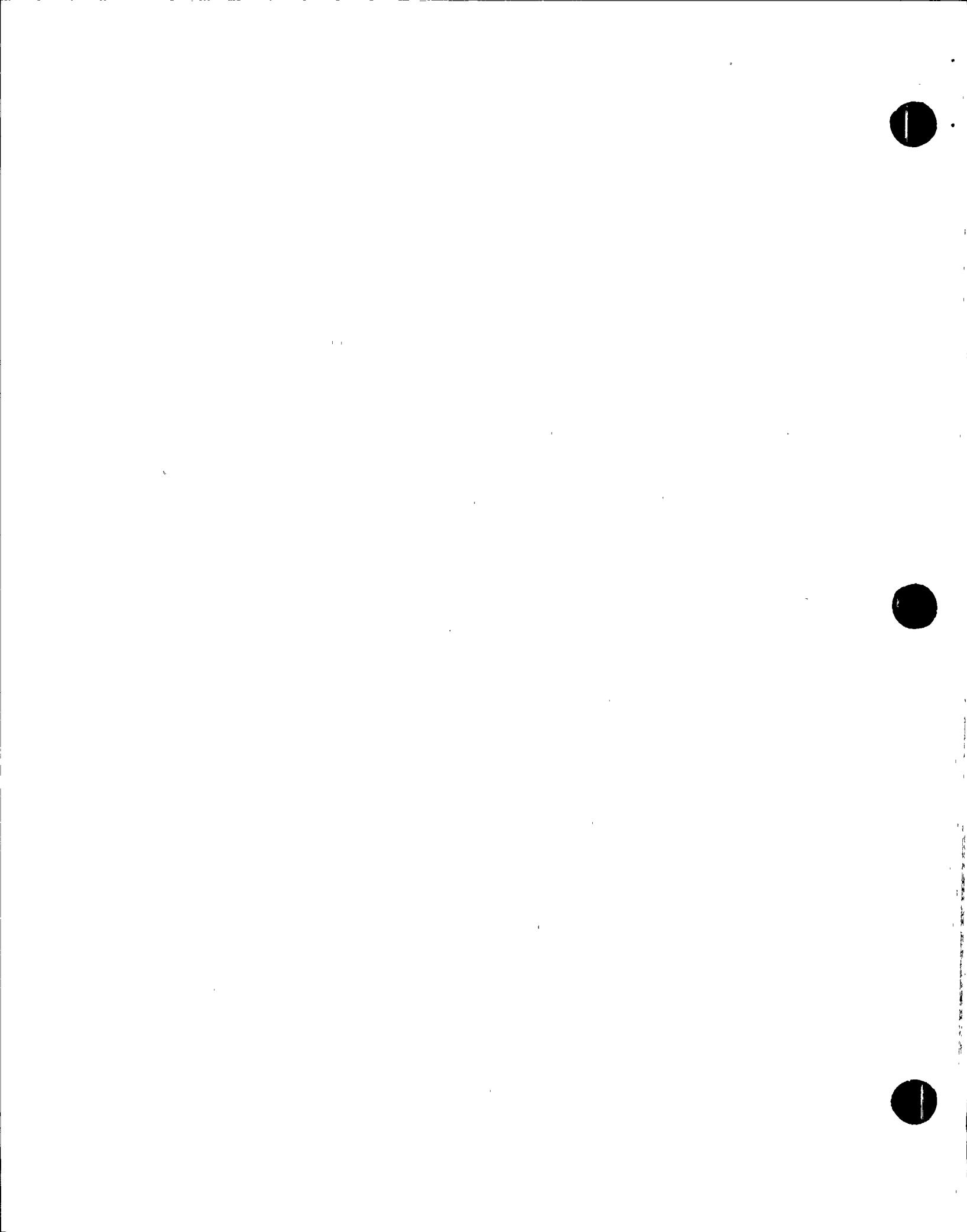
The inspector concluded that root cause report (NCR 292-1206) was adequate. Corporate personnel were advised of potential radiological concerns regarding DOE-FFTF sewage, and those concerns were expressed in writing by the State and licensee attorneys. No violation or deviation was identified.

b. Implementation of Storm Drain Pond Violation Corrective Actions

(1) Licensee Reports and Inspector Reviews

The licensee's corrective actions regarding the Storm Drain Pond and non-radioactive Turbine Bldg. sump violations identified in NRC Inspection Report 50-397/92-35 were comprehensive. Licensee personnel and the inspector discussed the details of implementing the corrective actions. During this inspection, the inspector examined several of the completed corrective actions. Additionally, the inspector reviewed the following:

- (a) Radiological Effluent Monitoring Program (REMP) Special Report, dated July 1, 1992, on the Storm Drain Pond radioactivity
- (b) Licensee Event Report (LER) 50-397/92-042, dated December 11, 1992, "Nonradioactive Storm Drain Pond Found to Contain Radioactivity Above Expected Levels"



- (c) Problem Evaluation Report (PER) 293-050, Design Safety Analysis Report/10 CFR 50.59 Safety Determination, dated January 8, 1992, on the Turbine Bldg. sump system design.
- (d) Nonconformance Report (NCR) 292-1228, dated February 14, 1992, root cause/corrective actions for the Storm Drain Pond and Nonradioactive Turbine Bldg. sums.
- (e) PER-293-093, dated January 27, 1993, which reported that Co-60 concentrations found in Storm Drain Pond sediment samples were 40 times higher than previously measured.

The inspector found that the above reports were adequate, and the corrective actions were consistent with the licensee's Response to the Notice of Violations from NRC Inspection Report 50-397/92-35.

(2) Procedures to Maintain Non-Radioactive Sumps Clean

This corrective action involved a licensee review of plant procedures by February 1, 1993, to assure that appropriate written processes were in place to maintain the Turbine Bldg. non-radioactive sums in a clean condition as defined by the free release policy.

The inspector found that non-radioactive sums were included in the Scheduled Maintenance System (SMS). The SMS was the licensee's preventative maintenance program that automatically prompts specific work task. The SMS task for non-radioactive sums required that the sums are dewatered and cleaned out every six months; the last cleaning was February 1993. A Plant Manager memorandum, dated January 20, 1993, on disposal of liquid at WNP-2 emphasized to workers to follow procedure PPM 1.11.12, "Removal of Liquids From the RCA." The memorandum stated that system draining into floor drains required the Shift Support Supervisor's permission. The inspector also noted that the licensee deviated procedure PPM 2.11.9, "Draining the CST [Condensate Storage Tank] Pit," required radiological assessments per PPM 1.11.12 before draining to the Turbine Bldg. Drains.

The inspector concluded that this corrective action was met.

(3) Hose Control Program

This licensee corrective action was to establish, by February 1, 1993, a program to control the movement of hoses being used in the plant for routing fluids.

The inspector toured the plant on February 18 and 20, 1993, and found the following hoses in place without controls such as "Work In Progress" tags.

- (a) A hose and submersible pump routed from the Reactor Bldg. equipment drain (EDR) liquid radwaste (LRW) P5 sump to the floor drain (FDR) P4 sump.
- (b) A catch basin tygon hose installed to channel potentially contaminated FDR-LRW from the process piping to the Turbine Bldg. (T-3) non-radioactive sump.
- (c) A fire hose draining equipment leakage from the "B" Reactor Feed Pump routed to the Turbine Bldg. LRW FDR (T-5) sump.
- (d) A hose routed from Fuel Pool Cooling valve FPC-V-103 to a nearby floor drain.

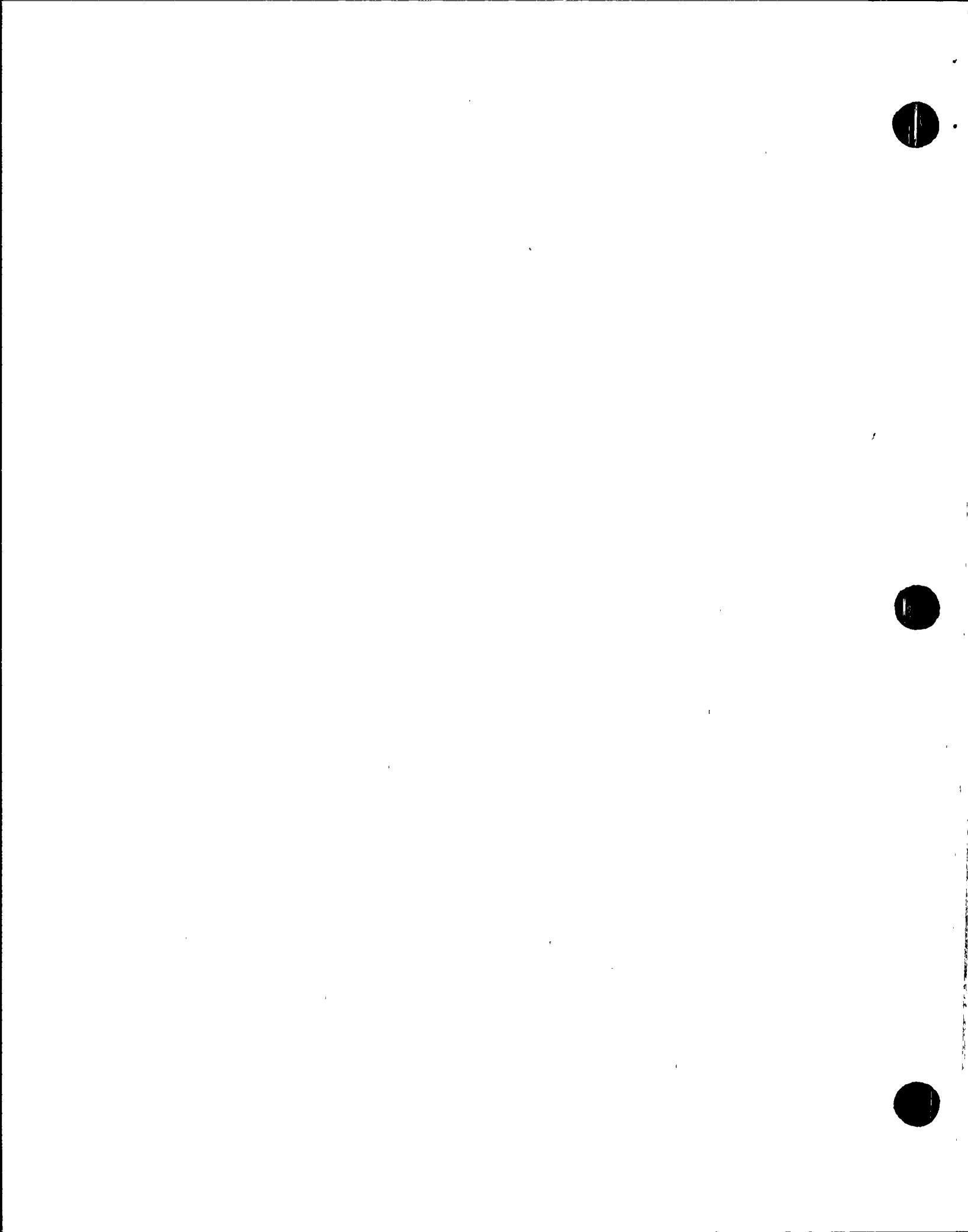
Other untagged hoses were also routed to floor drains. Operations, also, revealed that no Hose Control Log existed in the Radwaste Control Room as described in PPM 1.3.19.

PPM 1.3.19, Section 4.2.11(a), "Rubber/Tygon Hose Tagging," states in part that:

"All Rubber and Tygon hoses used in the Power Block to route equipment drains, vents, leaks, pump from sump to sump, etc. shall be tagged with a "Work In Progress" Tag . . . For hoses used to route leakage from leaking valves or other components to a drain or catch basin (barrel, etc.) the EPN [equipment part number] of the leaking equipment, the date the drain was installed, and the name of the individual authorizing installation of the drain will be recorded on the tag . . . Installation or removal of the hose inside the Power Block will be recorded in a log maintained in the Radwaste Control Room."

Technical Specification 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the activities referenced in Regulatory Guide 1.33, Appendix A, Section 7(a) references procedures for the control of radioactivity for limiting materials released to the environment and limiting personnel exposure related to LRW systems.

The four hoses the inspector identified in the Power Block on February 18 and 20, 1993, did not have "Work In Progress" tags in accordance with the requirements in PPM 1.3.19. The licensee's failure to follow PPM 1.3.19 was a violation of TS 6.8.1 (50-397/93-07-01).



When the inspector asked the RPM if the hose control program was established he stated that the program was established, but not fully implemented. The Plant Operations Committee (POC) allowed a procedure implementation grace period from December 16, 1992 to January 29, 1993. On January 18, 1993, the Plant Manager issued a memorandum to specific groups that were likely to install hoses, which stated that the PPM 1.3.19 "Hose Control Program" will be implemented on January 29, 1993. The memorandum stated that management was expected to ensure that personnel were informed of and understood the procedure changes.

The licensee acknowledged the violations and "Hose control Program" implementation deficiencies. The inspector concluded that the licensee met the corrective action to establish a "Hose Control Program," but failed to properly implement the program.

(4) Turbine Bldg. Sumps Design Evaluation

This corrective action was to perform a technical evaluation, by February 1, 1993, to determine if a design change to increase batch processing capacity from the Turbine Bldg. sumps was feasible.

On February 10, 1993, Technical Evaluation Report (TER) 92-0273 approved a recommendation to issue Plant Modification Record (PMR) 92-0273. PMR 92-0273 will change the Turbine Bldg. non-radioactive sumps piping to discharge to the LRW distillate and detergent tanks. This modification will allow water with trace amounts of radioactivity and other undesirable constituents to be processed as batched LRW.

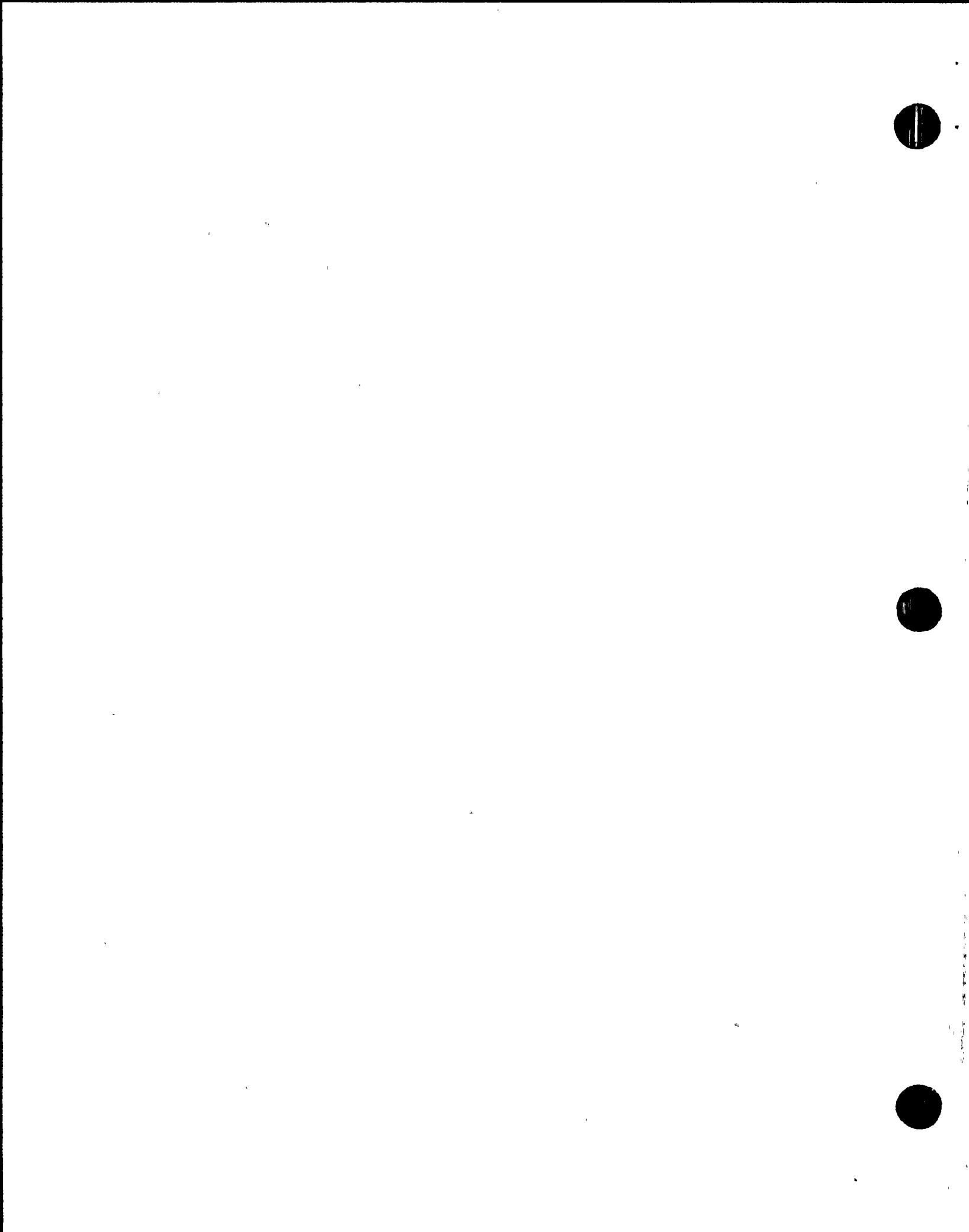
The inspector noted that all Turbine Bldg. sumps were routed to LRW and programmatic controls were established. However, a memorandum dated November 17, 1992, "Circulating Water Discharge to the Storm Drain," from the RPM allows the Turbine Bldg. non-radioactive sumps to discharge condenser circulating water to the Storm Drain Pond. Licensee management acknowledged this plan, but maintained that strict administrative controls were required.

The inspector concluded that the corrective action was met.

(5) Walkdown of All Plant Floor Drains

(a) Licensee's Walkdown Overview

On December 18, 1992, the licensee resolved TER 88-0157, which was discussed in NRC Inspection Report 50-397/92-35. TER 88-0157 identified that in 1988 radioactivity in the Storm Drain Pond was indicative of leakage between



radioactive, and non-radioactive systems, and possibly caused by leaky backflow check valves (FDR-V-34/35). The TER stated that no formal engineering resolution was required for the following reasons: (1) personnel were being trained on using the floor drains, (2) the plant drain system was being labelled, (3) the Turbine Bldg. sumps were red tagged to LRW, and (4) a system walkdown was in progress to identify radioactive to non-radioactive sump cross-connections.

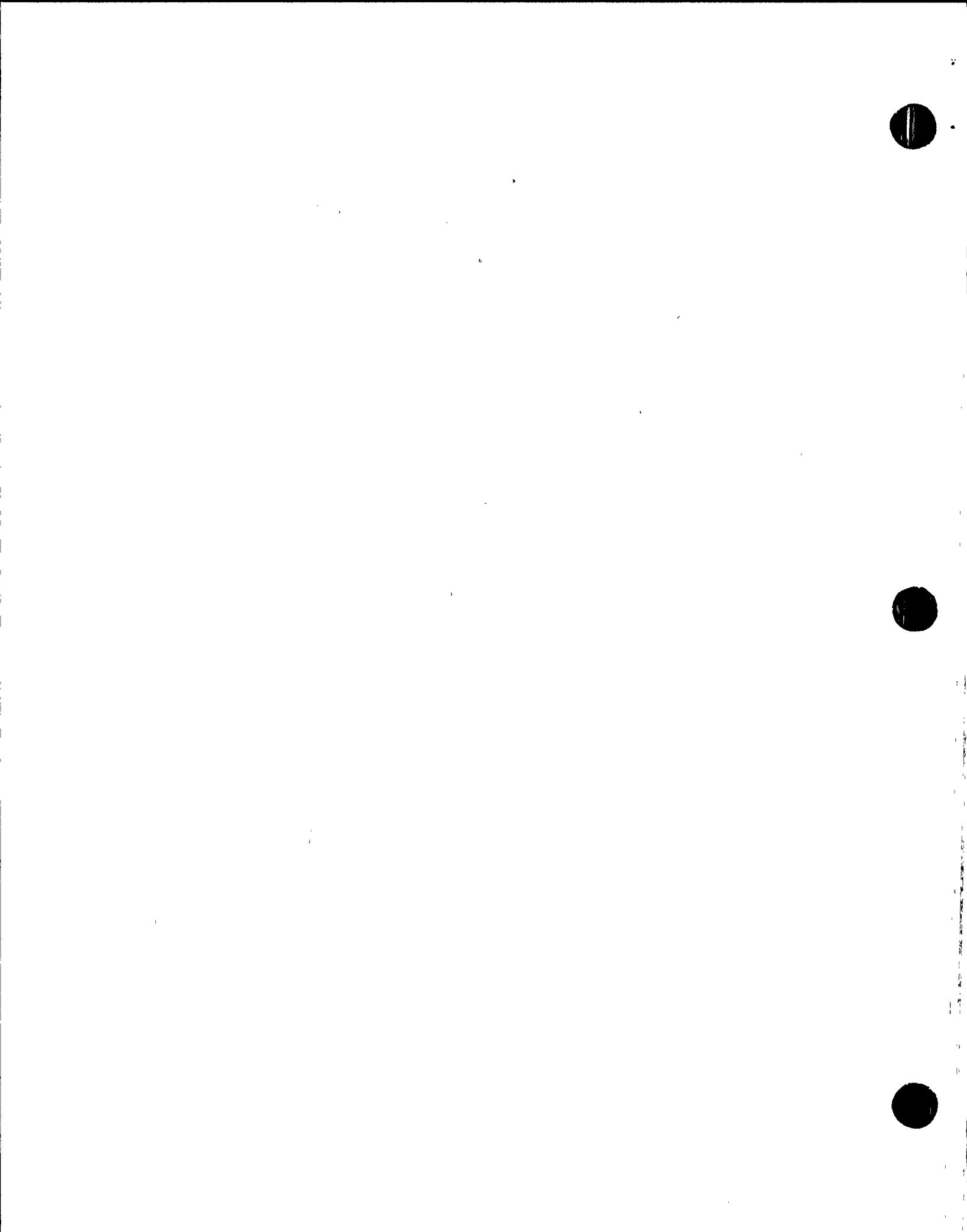
This licensee corrective action involved a complete walkdown of all plant floor drains associated with the storm drain system to confirm that no inputs from any contaminated systems existed. The walkdown was to be complete by January 15, 1993, for accessible areas, and during the 1993 refueling outage for inaccessible areas. Plant technical staff submitted a memorandum on January 14, 1993, stating that the walkdown was completed for accessible parts of the system, and no inputs from the radioactive systems were found. The licensee performed the following:

- (1) The licensee reviewed the non-radioactive and radioactive drain system's design changes, and flush procedures from 1983 and 1987.
- (2) The plant engineer walked down the system, and no inputs from radioactive systems were found.
- (3) The plant technical engineer verified that administrative controls were in affect on the Turbine Bldg. sumps to prevent cross-ties and contamination of the non-radioactive systems.

Based on the licensee's reports and inspector findings, it was concluded that the walkdowns of the Turbine Bldg. floor drain collection systems were performed as committed, but the source of the Storm Drain Pond contamination was still undetermined.

(6) Radiological Survey of Turbine Bldg. Drains and Sumps

This licensee corrective action was to complete a detailed radiological survey of all Turbine Bldg. clean drains and sumps by February 1, 1993. The inspector reviewed the results of the survey, which was documented in an RPM memorandum dated February 2, 1993. The licensee's health physics technicians (HPTs) were instructed to remove drain covers, smear the internal surfaces and count the smear on a low background alpha/beta radiation counter. If water was found HPTs would have the Chemistry Department perform analysis. The licensee found no contamination in the Turbine Bldg. drains and sumps.



The inspector concluded that HP and chemistry's performance regarding this corrective action was adequate.

c. LRW System Changes

The inspector reviewed changes affecting LRW systems processing, operations, and components. Changes in the LRW management associated with the Storm Drain Pond and Sanitary Waste System were documented in Sections 6(a) and 6(b) of this report. The licensee was implementing changes which affected other aspects of LRW management.

(1) Second Pump for the Reactor Bldg. EDR-P5 Sump

During a tour in the Reactor Bldg. basement, the inspector noted the installation of a new pump in equipment drain (EDR) sump P5. The inspector discussed the work with the plant engineer, reviewed PMR 87-0030, MWR AR 3436, and other documents associated with the new pump installation. The inspector recognized that the addition of the second pump enhanced the reliability of the LRW system. However, the inspector noted that no electrical circuitry was added to automatically start the second pump, or allow both pumps to operate simultaneously.

The inspector concluded that this change was an improvement to the LRW system.

(2) LRW Sample Line Changes

The inspector determined if the licensee monitored the quality of LRW collected to assure consistency with the descriptions of equipment and floor drain radwaste in UFSAR Chapter 11.2.2.2. The inspector was also concerned that chemistry personnel could not collect LRW samples under safe radiological conditions. Discussions with chemistry and reviews of chemistry logbooks from 1993, revealed that LRW collection tanks and waste surge tank sample lines had chronic problems. On February 22, 1993, the licensee's Project Review Group (PRG) met and discussed that chemistry sampling had to be performed in radiation areas because sample lines were plugged. The PRG revealed that four of the seven plugged sample lines were LRW pretreatment sample lines. The licensee's PRG decided to implement PMR 86-0514, which will add booster pumps and backflushable filters to the sampling system.

The inspector concluded that this proposed change was a positive ALARA LRW design change.

(3) Undesirable LRW for Processing

During a tour of the Radwaste Bldg. basement the inspector saw at least 500 barrels (55 gallon drums) of stored, unprocessed LRW. Most of the barrels of LRW contained glycol from a 2000 gallon spill in May 1992, and other barrels had LRW with high organic and chemical content. None of the barrels could be processed through the LRW filter system. On February 23, 1993, the inspector, RPM, and Radwaste Supervisor discussed the plan for disposing of the barrels of LRW. A portable LRW demineralizer skid was procured for batch processing this LRW. Procedures were being prepared to operate the LRW skid, and process the barrels of undesired LRW material. The portable LRW system skid will be retained to augment future operations. The licensee was taking this plan through a 10 CFR 50.59 safety review and the Plant Operations Committee.

The inspector concluded that the licensee's temporary modification, and plans to reduce the barrels of LRW were adequate.

(4) LRW Radiation Source Term Reduction

In January 1993 the licensee introduced its Source Term Reduction Program, which fulfilled a previous 1992 NRC commitment. The inspector assessed the Source Term Reduction Program's applicability towards reducing radiation levels in the LRW collection and waste surge tanks. The inspector independently measured the radiation levels around the waste surge tank (EDR-TK-5) with NRC ionization chamber (Serial No. 22906, calibration due date April 7, 1993). Radiation levels near the waste surge tank were at 65 millirem/hour, which were consistent with licensee surveys taken in 1993. The inspector noted that the licensee last lowered waste surge tank dose rates by cleaning out the sludge in April 1986. In October 1992 the licensee attempted to lower dose rates in the LRW waste surge and collector tanks, but was unsuccessful. According to the Source Term Reduction Program, the licensee planned to decontaminate and desludge the LRW tanks with the highest impact on personnel exposures. During the April 1993 refueling outage, the licensee planned to decontaminate and desludge the waste surge tank (EDR-TK-5).

The progress of the licensee's Source Term Reduction Program will be monitored during future inspections.

d. Conclusions on LRW Management

One violation of TS 6.8.1 was identified for not complying with the LRW and radiation protection hose control measures that were set in procedure PPM 1.3.19. No deviations were identified.

7. Solid Radwaste Management and Transportation Activities (83728, 84722, 84850, 86721, and 86740)

The inspector reviewed programs for controlling and quantifying solid radwaste (SRW) during normal operations, and conducted tours in SRW storage areas. Also, SRW classification program changes and SRW training were reviewed.

a. SRW Storage

Procedures PPM 11.2.14.3, "Storage of Radioactive Material," and PPM 11.2.23.16, "Dry Active Waste Sorting," were reviewed by the inspector. The inspector toured the radioactive material (RAM) cage where many bags of radioactive trash were stored. The inspector measured the radiation levels on some of the bags in the RAM cage, which measured as high as 40 mrem/hr. The licensee stores SRW bags (< 2 mr/hr) and higher activity SRW bags (> 2 mr/hr) in the accessible part of the RAM cage. The inspector verified that SRW bags (> 100 mr/hr) were behind a locked gate. Discussions were held with the Radwaste Supervisor and RPM on whether sorting and processing the SRW bags would occur before the refueling outage. The licensee explained that the bags of SRW currently in storage would need to be sorted as part of the SRW reduction program. However, the number of SRW bags accumulated did not meet the threshold used to justify an HPT sorting operation. The inspector had no further concerns at this time.

b. SRW Classification Program Changes and Training

The inspector reviewed changes in the licensee's SRW classification program. Procedure PPM 11.2.23.2, "Radioactive Waste Classification," was reviewed by the inspector. PPM 11.2.23.2 had a procedure deviation form (PDF) 93-34, which added instructions to verify that their computer software used correct values for scaling radionuclides, particularly Co-60, Cs-137, and Ce-144. The inspector noted that the process for verifying scaling valves was not specifically detailed in PPM 11.2.23.2. The licensee had contracted services to enhance their low-level waste characterization and 10 CFR 61 sample analysis program. Various licensee personnel were being trained on the contractors SRW classification program including QA engineers, radwaste staff, and corporate HP. The main element of the licensee's waste classification program change was the incorporation of the contractors computer software which determines the appropriate scaling factor to be used for a SRW package based on data comparisons and stored waste stream sample data. The inspector reviewed one SRW package (EL-142/93-03-02) where the licensee used the new scaling factor process. No concerns were identified by the inspector.

No violations or deviations were identified. The licensee was capable of accomplishing its safety objectives.

8. Exit Interview

The inspectors met with members of licensee management at the conclusion of the inspection on February 22, 1993. The scope and findings of the inspection were summarized. One violation of licensee requirements pursuant TS 6.8.1 was identified. No deviations were identified. The licensee acknowledged the inspector's observations.