

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/88-26

Docket No. 50-397

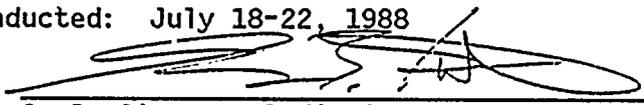
License No. NPF-21

Licensee: Washington Public Power Supply System
P. O. Box 968
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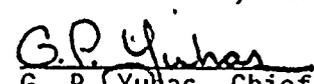
Facility Name: Washington Nuclear Project No. 2

Inspection at: WNP-2, Benton County, Washington

Inspection Conducted: July 18-22, 1988

Inspected by: 
G. R. Cicotte, Radiation Specialist.

8-19-88
Date Signed

Approved by: 
G. P. Yujas, Chief
Emergency Preparedness and Radiological
Protection Branch

8/19/88
Date Signed

Summary:

Inspection during period of July 18-22, 1988 (Report No. 50-397/88-26)

Areas Inspected: Routine unannounced inspection by a regionally based inspector of licensee reported events, open items, supervisory awareness, postings effectiveness, and tours of the facility. Inspection procedures 30703, 92700, 92701, 83722, 83724 and 83726 were addressed.

Results: Of the five areas addressed, no violations or deviations were identified. In one area, an unresolved item, involving possible failure to take all the samples required during primary containment venting and purging, was identified (see paragraph 5.B). In addition, continuing concerns related to Equipment Operator knowledge of radiological controls and control of high radiation areas, concerns as to timeliness of 10 CFR 21 reports, and in posting of NRC documents pursuant to 10 CFR 19.11, were identified (see paragraphs 4, 3, and 6, respectively).

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DETAILS

1. Persons Contacted

- *C. M. Powers, Plant Manager
- *J. W. Baker, Assistant Plant Manager
- *L. Bradford, Health Physics Supervisor
- *D. S. Feldman, Plant QA/QC Manager
- *R. G. Graybeal, Health Physics/Chemistry Manager
- *S. L. McKay, Operations Manager
- *D. B. Ottley, Radiological Services Supervisor
- R. B. Quay, General and Technical Support Training Manager
- *V. E. Shockley, Health Physics Support Supervisor
- G. C. Sorensen, Regulatory Programs Manager
- D. M. Werlau, Training Supervisor
- M. R. Wuestefeld, Reactor Engineering Supervisor

NRC Personnel

- *C. Bosted, Senior Resident Inspector

In addition to the individuals identified above, the inspectors met and held discussions with other members of the licensee's staff and personnel.

*Denotes those present at the exit interview held on July 22, 1988.

2. Onsite Follow-up of Written Reports of Non-Routine Events

A. (Closed - Followup 50-397/87-11-L0)

This refers to a licensee identified failure to have an operable flow measurement device during operation of the Radwaste Building exhaust ventilation. The licensee attributed the cause to an inadequate checklist for deenergization of the vital bus supplying power to the device. Corrective action consisted of upgrading power supply checklists used for determination of systems affected. The inspector verified the licensee's actions, and noted that other power supplies had been evaluated to ensure that similar events would not occur. This matter is considered closed (50-397/87-11-L0).

B. (Closed - Followup 50-397/88-09-L0)

This refers to two missed surveillances on the standby gas treatment (SGT) system. The licensee reported that the surveillances were missed when a Senior Health Physicist failed to pass the Surveillance Monitoring System (SMS) cards on to the individual responsible for performance of the Technical Specification (TS) surveillances. Surveillances PPM 7.4.6.5.3.5, "Standby Gas Treatment System HEPA DOP Test and Visual Inspection," and PPM 7.4.6.5.3.6, "Standby Gas Treatment System Adsorber Bypass Leakage

Test," were performed within one week of the 18-month plus 25% late date.

The licensee identified the failure to pass the cards on as having been caused by failure of Health Physics Supervision to utilize the SMS and status reports effectively.

In addition to counseling the responsible individuals, the licensee modified procedure PPM 1.5.1, "Technical Specification Surveillance Testing Program," to better define due dates. The inspector noted that the Senior Health Physicist (SHP) had not received the cards until February 1, 1988, when the early date was in August 1987, and the due date was November 12, 1987. The Health Physics/Chemistry Manager stated that he had received the cards but had not passed them on to the SHP until about February 1, 1988, and had not appropriately pursued status notices showing the surveillances to be late. He further stated that action to assign surveillance responsibility more in keeping with who performs the surveillance had been conducted, although this was not reflected in the licensee event report (LER). The licensee's analysis and corrective action appeared adequate to prevent recurrence. This matter is considered closed (50-397/88-09-L0).

No violations or deviations were identified.

3. Followup

A. Information Notices (INs)

The following INs had been received and disposition initiated by the licensee:

(Closed) IN-88-08 Chemical Reactions with Radioactive Waste Solidification Agents

(Closed) IN-88-22 Disposal of Sludge from Onsite Sewage Treatment Facilities at Nuclear Power Stations

(Closed) IN-87-39 Control of Hot Particle Contamination at Nuclear Power Plants

With respect to IN-87-39, addressed in Inspection Report 50-397/88-12, the inspector noted that the licensee's program for hot particle control had been fully implemented and proceduralized, and appeared consistent with the recommendations of IN-87-39 and with industry standards. These items are considered closed.

B. Open Items

(50-397/88-01-GC) (Closed) The licensee had received the evaluation by NRR of amendment 4 to the Offsite Dose Calculation Manual (ODCM).

The licensee was preparing a special submittal to NRR, in advance of the second half 1988 Semi-Annual Effluent Release Report. The

submittal appeared to address the concerns not resolved by Amendment 5. (See Inspection Report 50-397/88-12). This matter is considered closed based on timely response to NRR (50-397/88-01-GC) (Closed).

(50-397/88-12-P0) (Closed) This refers to a 10 CFR 21 report submitted as LER 88-12-00, dated June 6, 1988, regarding a potential unmonitored release path from the Turbine Building under certain emergency ventilation conditions, originally discovered by the licensee on May 6, 1988. The licensee had informed the architect-engineer and NRC, and had completed removal of the release path, as that portion of the ventilation system was not deemed necessary. The report contained the information required by 10 CFR 21.

In reviewing the timeliness of the report, the inspector made the following observations:

- ° Region V first became aware of the situation when a regionally based inspector was verbally informed, within two days of the discovery in accordance with 10 CFR 21, that the potential existed for a 10 CFR 21 reportable condition, with brief details.
- ° The licensee processed the discovered condition in accordance with their procedures, which specify that the Plant Technical Manager determines whether or not the item is reportable under 10 CFR 21. This determination is reviewed by the Plant Operations Committee (POC), in accordance with TS 6.5.1.6.f, which requires review of all reportable events.
- ° The potentially reportable occurrence (PRO) report was, according to POC meeting minutes, first reviewed by the POC on May 25, 1988. The POC determined that more information was required in order to determine if the condition was reportable under 10 CFR 21. The matter was deferred until the POC meeting of June 1, 1988, at which time it was determined to be reportable and LER 88-12-00 was sent within 5 days thereafter.

The inspector discussed the time limit of five days for 10 CFR 21 reports with the licensee. The licensee was aware of the reporting requirements of 10 CFR 21 and stated that the matter was not determined to be reportable until June 1, 1988, and was thus reported within the five day time limit. The inspector informed the licensee that 10 CFR 21 reportable conditions are expected to receive the appropriate level of review, to assure the time limit is met, when items appear to meet the reporting criteria. The inspector noted that a previous 10 CFR 21 report, LER 88-002-00, had received similar handling, with determination as to 10 CFR 21 reportability being made about three weeks after the discovery of the condition. The inspector informed the licensee that items of greater safety significance could be expected to receive more rigorous scrutiny with respect to reporting responsibilities. As the report was submitted within five days of the determination that



it was reportable, and the deficiency corrected as of the time of the inspection, this matter is considered closed (50-397/88-12-P0).

No violations or deviations were identified.

4. Radiological Posting Effectiveness

Radiological postings were discussed with plant workers and observed during facility tours. Adherence to posted instructions appeared to have improved (see Inspection Report 50-397/88-12). No areas were observed to have been improperly deposited, although two examples of barriers being left open for access were observed.

Upon entry to the 437' elevation of the Radwaste Building (RWB), on July 18, 1988, Area Radiation Monitor (ARM) CH-27, located on the wall near equipment drain tank #EDR-T-5, was observed to be alarming at about 10 mr/hr. The licensee was aware of the alarming condition, and stated that planning for decontamination of EDR-T-5 was in progress. The licensee further stated that ARM CH-27 had been alarming since the previous day, when EDR-T-5 was drained. A high radiation area (HRA) posting and barricade had been placed around EDR-T-5.

Later on July 18, an Equipment Operator (EO) was observed to be dressing in protective clothing, next to the HRA and the still alarming CH-27 at EDR-T-5. The licensee had previously removed the dressing area bench, but not the shelves of protective clothing, in order to discourage workers from dressing next to EDR-T-5, a higher dose area. This had been done in response to NRC ALARA concerns (see Inspection Report 50-397/88-12). When asked about the alarming ARM, the EO stated that he thought HP personnel were probably aware of the ARM alarm, and that he was "just going to quick hang a tag." The EO stated that the area in which he was dressing was about 5 mr/hr. The ARM meter read 20 mr/hr, and was further from EDR-T-5 than the EO. The inspector informed the EO that he was standing in an area of about 30 mr/hr, at which time he went to a lower dose area (less than 1 mr/hr) on the 437' RWB to finish dressing. The inspector informed the HP Supervisor, who stated that the matter would be discussed with the Shift Support Supervisor.

Access control for HRAs was observed in conjunction with decontamination of EDR-T-5. The inspector entered the 437' RWB to read CH-27, located a few feet away from the door. CH-27 read about 100 mr/hr, and the NRC instrument read about 250 mr/hr outside the HRA barricade. The inspector immediately turned to exit the vicinity, at which time an HPT turned to him to report that this was an HRA which he was guarding until a drum of highly radioactive debris from EDR-T-5 could be removed. The inspector observed that guarding should constitute challenging the presence of personnel before entry to a greater than 100 mr/hr field. Dose rates returned to their previous level when the drum was removed a few minutes later (the drum had measured 7 R/hr contact with the licensee's instrument). The inspector immediately informed the HP Supervisor, who then counseled the HPT.

Radiologically Controlled Area (RCA) status boards were observed on July 18, 1988 to have been updated, with dates ranging from June 15 to July



15, 1988. However, some areas, including some HRAs which were verified to exist, were not indicated on the status boards (see Inspection Report 50-397/88-22).

High radiation area access control and radiological posting cognizance by plant personnel were discussed with the HP Supervisor. The HP Supervisor and other HP personnel stated that compliance with "Contact HP prior to entry" inserts in radiological boundary signs was running about 95%, and plant personnel were being more informative to HP personnel, in order to provide better work control and to obtain more thorough knowledge of radiological conditions in their work areas.

No violations or deviations were identified.

5. Organization and Management Controls

A. Supervisory Controls

The inspector was informed of projected changes in the Health Physics/Chemistry (HP/C) organization by the HP/C Manager. The HP/C Manager stated that the changes were expected to result in additional management control, by releasing the HP and Chemistry Supervisors from many routine duties through the addition of Foremen. He further stated that the HP Foreman had been selected, and the Chemistry Foreman position was expected to be filled in the next few months.

Tours of the plant by supervisory and management personnel were observed to have increased in frequency. In particular, lead HPTs were observed to be making tours to ascertain the activities of plant workers. Supervisory personnel were observed to be determining the status of authorized work in the plant.

A personnel contamination incident, involving an HPT, was reviewed to determine if sufficient management attention is directed toward prevention of inadvertent uptake or contaminations, in particular with regard to root cause and corrective action. The HP Supervisor stated that an evaluation was in the process of being approved for submittal. The inspector briefly reviewed the data and discussed the incident with the HP Supervisor and the HPT. The following observations were made by the licensee.

- ° The incident occurred when the HPT dropped a CRD filter, which resulted in his becoming contaminated, and in exceeding his administrative whole body radiation dose limit.
- ° CRD filters had been left in a drum in the solid waste liner processing area, due to the dose rates. The filters read up to 50 R/hr contact. The location of the drum caused unnecessary dose to workers on a solid waste liner.
- ° The HPT, with the approval of the HP Supervisor, moved the drum away from the work area, and began to move the filters to a shielded container. Previous practice had been to place the



filters in this configuration at the time of removal. Filters left from the 1987 outage had prevented this, and no action was taken at the time to package the filters or use a drum liner.

- When the last filter was being moved, it fell to the floor. The HPT stated that it was about this time when his digital dosimeter alarmed, at 256 mr. He stated that he stayed "just long enough to stabilize the area," by placing the filter in a container and wiping up most of the corrosion products which had come off the filter. He stated his digital dosimeter read 276 mr at that time.
- The HPT was found to have minor facial contamination, and a whole body count and air sample results from a sample he had taken during the work confirmed minimal internal uptake. His whole body TLD read 380 mr, with an administrative limit of 300 mr. No other limits were exceeded.

The licensee's preliminary evaluation had determined the following root causes:

- Inadequate planning for dose to the individual - a small dose extension would have been warranted in order to avoid an administrative overexposure.
- Inadequate followup on the 1987 outage - the job would not have been necessary had the filters been appropriately disposed of by the Radwaste department at that time.
- Inadequate respiratory protection - the HPT was not wearing any respiratory protection device and had not made any effort to minimize airborne radioactivity, as he had erroneously concluded that the filters were damp.

The matter will be examined further upon receipt of a copy of the evaluation in final form.

B. Management Controls

The licensee's methodology for handling of apparent conflicts in the Technical Specifications (TS) was reviewed with respect to interpretations thereof. The inspector noted that licensee procedure PPM 1.3.34, "Plant Technical Specification Interpretation Process," Revision 2, dated 10/27/87, called for restricted distribution among controlled copies of the TS. The inspector reviewed a controlled copy of the TS in which TS interpretations (TSIs) were contained. TSI #85-004, related to sampling and analysis during Reactor Building Primary Containment (PC) purging and venting, in accordance with TS 4.11.2.1.2 and TS 4.11.2.8.3, had concluded that sampling in accordance with TS 4.11.2.8.3 precluded the need for sampling in accordance with TS 4.11.2.1.2. TS 3/4.11.2.1 states, in part:



"3.11.2.1 The dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the SITE BOUNDARY (see Figure 5.1-3) shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrems/yr to the total body and less than or equal to 3000 mrems/yr to the skin, and
- b. For iodine-131, for iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrems/yr to any organ.

APPLICABILITY: At all times..."

"4.11.2.1.2 The dose rate due to iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents shall be determined to be within the above limits in accordance with the methodology and parameters in the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program specified in Table 4.11-2."

Amendment 5 to the ODCM states in part:

"3.2 Gaseous Effluent Radiation Monitoring System

3.2.1 Main Plant Release Point

The Main Plant Release is instrument monitored for gaseous radioactivity prior to discharge to the environment via the main plant vent release point. Particulates and iodine activity are accumulated in filters which will be changed and analyzed as per Technical Specification 4.11.2.1.2 and Table 4.11.2. The effluent is supplied from: the gland seal exhaust, mechanical vacuum pumps, treated off gas, standby gas treatment, and exhaust air from the entire reactor building's ventilation."

The subject page of the ODCM, page 34, was last revised in Amendment 3, dated February 1986.

TS 3/4.11.2.8 states, in part:

"3.11.2.8 VENTING or PURGING of the Mark II containment drywell shall be through the standby gas treatment system or the primary containment vent and purge system. The first 24 hours of any vent or purge operation shall be through one standby gas treatment system.

APPLICABILITY: Whenever the drywell is vented or purged...."

"4.11.2.8.3 The containment drywell shall be sampled and analyzed per Table 4.11-2 of Specification 3.11.2.1 within 8 hours prior to the start of and at least once per 12 hours during VENTING and

PURGING of the drywell through other than the standby gas treatment system."

TS Table 4.11-2 states, in part:

"TABLE 4.11-2"

"RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM"

"GASEOUS RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS
A. Primary Containment PURGE AND VENT	^P Each PURGE ^b and VENT Grab Sample	^P Each PURGE ^b and VENT ^M	Principal Gamma Emitters H-3
B. Main Plant Vent	^{M^{b,d}} Grab Sample	^{M^b}	Principal Gamma Emitters

"... TABLE NOTATIONS"

"^bSampling and analysis shall also be performed following shutdown, startup, or a THERMAL POWER change exceeding 15% of RATED THERMAL POWER within a 1-hour period."

"^dTritium grab samples..."

"^fThe principal gamma emitters include...in iodine and particulate releases...."

TS 3.6.1.1 states, in part:

"3.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be maintained. APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3."

The TSI stated, in part:

"The provisions of 4.11.2.8.3 should be considered in evaluating the requirements of Specification 3.11.2.1 (Table 4.11-2). The need for sampling and analysing the drywell atmosphere prior to venting and purging through the SGT system is specifically excepted by this paragraph..."

"...Consequently, unless deemed necessary by the plant staff, sampling will not be required prior to or during venting or purging through the SGT system..."

The inspector concluded that surveillance TS 4.11.2.1.2 was required to be performed for each vent and/or purge operation conducted: that is, whenever the PC is vented or purged during modes 1, 2, or 3, in accordance with TS 3.6.1.1. The inspector discussed the TSI



with the HP/C Manager, and with the Reactor Engineering Supervisor, who had conducted TSI #85-004. The HP/C Manager stated that it had been determined that sampling drywell atmosphere, when the purge or vent was conducted through SGT, would not provide any additional level of protection. The inspector informed the HP/C Manager that TS 4.11.2.8.3 was designed to provide an additional level of monitoring when SGT is not used, and that TS 4.11.2.1.2 is required to be met whenever SGT is used.

A conflict in interpretation appeared to result from the fact that Table 4.11-2 lists the sampling and analysis frequencies as 'P', which is defined in Table 1.1 of the TS as being prior to each radioactive release, while the title of the sample point is "Gaseous Release Type." The ODCM cites SGT as an effluent to the main plant vent (see above). Sampling prior to release would not be possible if there were no flow, but it would be possible to sample the Main Plant Vent (MPV), into which the SGT discharges, or to sample the PC atmosphere, which is how the licensee meets the requirement to sample in accordance with TS 4.11.2.8.3 and how they met TS 4.11.2.1.2 prior to the TSI. Review of the model TS for GE BWRs revealed that provisions for purging or venting through other than SGT were not contained therein. Other licensees meet the sampling and analysis requirement either as an effluent sample or a priori as a prior-to-batch-release.

The inspector concluded, after review by regional staff, that two apparent conflicts exist:

1. Disagreement as to whether TS 4.11.2.1.2 is an effluent or a prior to release drywell atmosphere sample.
2. Disagreement as to whether the initial drywell sample time requirement (within 8 hours prior to start) as called out in 4.11.2.8.3 applies in all cases or just for those instances of non-SGT vents or purges.

A walkdown of the licensee's SGT system did not reveal any installed sample points between the outlet of the SGT trains and the sampling location for MPV. The inspector discussed the above with the HP/C Manager, who stated that the automatic isolation function of the MPV would provide adequate protection, and that the continuous monitoring of PC atmosphere and MPV obviated the need for grab samples of SGT output, or of MPV specifically during venting or purging through SGT. The setpoint for the isolation function of the MPV is 13 mrem/h, as denoted in TS Table 3.3.2-2, and is based on mitigation of the consequences of an accident, not normal effluent dose rate limitations. Licensee staff personnel stated that each of the three vents, i.e., Main Plant, Turbine Building, and Radwaste Building, is set to alarm (no isolation function) at 200 mrem/year equivalent count rate for noble gases. The ODCM does not specify a decontamination factor for the SGT.

The inspector reviewed the process whereby TSIs are incorporated. Licensee staff personnel stated to the inspector that the TSI was



requested due to differences of opinion among Shift Managers (SMs) as to the applicability of TS 4.11.2.1.2. PPM 1.3.34 states, in part:

"...This procedure is intended to provide a mechanism, where needed, to document Management approved Technical Specification interpretations. It is not intended to provide exceptions to Technical Specification requirements, merely clarifications where the law is unclear. Licensed personnel are to use the interpretations as guidance but it is recognized that conditions could exist that render the interpretation not applicable or inconclusive. Use of the interpretation and Technical Specifications is, as always, the responsibility of licensed personnel..."

PPM 1.3.34 further states, in part:

"8. Present the Technical Specification Interpretation to POC and process any required changes. The POC evaluation may include a recommendation to investigate a change to the Technical Specifications per PPM 1.4.5."

The procedure's log indicated that the TSI request was originated by the secretary, and dated 11/25/85. The inspector reviewed POC meeting minutes for the POC meeting conducted November 27, 1985. The following observations were made regarding the meeting minutes:

- ° TSI #85-004 was listed as approved by the POC.
- ° The Assistant Plant Manager chaired the POC meeting, with the Plant Manager not listed as attending.
- ° No proposed change to the TS was indicated by the POC meeting minutes.
- ° The input to the meeting by the Nuclear Safety Assurance Group (NSAG), Corporate Nuclear Safety Review Board (CNSRB), and Licensing representatives appeared to have been handled as indicated by the following excerpt from the meeting minutes:

"Prior to approval of this Interpretation, concerns were expressed by Licensing, NSAG and the CNSRB Member present. Licensing and NSAG stated that in reviewing similar Technical Specifications, it was apparent that this wording is only used when an alternate vent and purge path is available (i.e., venting and purging is only allowed through Standby Gas Treatment). No sampling frequency is specified in the Technical Specifications. This implies that when only the Standby Gas Treatment system is available the sampling frequency specified in the table (4.11-2) takes precedent (Limerick #1, Susquehanna #1, LaSalle #1).

The CNSRB member's concern was that the gaseous effluent dose rate specification surveillance (4.11.2.1.2) requires a minimum

sampling and analysis program (Table 4.11-2) which is prior to each release for purging and venting of primary containment. The venting or purging specification surveillance (4.11.2.8.3) adds additional sampling and analysis requirements over the minimum when SGT system is not used but says nothing about when it is used. The surveillance of 4.11.2.1.2 stands when the SGT is used.

After analysis and consideration of the above concerns, the Plant Operations Committee recommended approval of the Interpretation as presented."

- The meeting minutes stated that all comments from other than POC members were discussed and resolved by the end of the meeting. The NSAG, CNSRB, and Licensing persons were listed as "other attendees". The minutes did not indicate whether they were acting in a voting or advisory capacity, but the Plant Manager stated at the exit interview that the decision to approve the TSI was unanimous.

Licensee procedures used for conducting purging, venting, and for sampling and analysis in accordance therewith, were reviewed. Subsequent to TSI #85-004 approval, the following procedures were revised as follows.

- PPM 2.3.1, "Primary Containment Venting, Purging, and Inerting," was revised under revision 5. Under step 2.3.1.5.A(B), "Drywell and suppression chamber venting (purging) via the Standby Gas Treatment System," the following was added:

"...Prior to venting or purging the drywell through Standby Gas Treatment, the drywell noble gas monitors shall be read to confirm the following:

- a. Activity levels have not increased more than 15% in the last hour.
- b. Activity levels are below the noble gas monitor High-High alarm setpoint and have been below setpoint for at least the last hour.

If these conditions are satisfied there is no need to sample the drywell atmosphere prior to vent or purge. If they are not satisfied, request Chemistry to sample per PPM 7.4.11.2.1.2.1."

- PPM 7.4.11.2.1.2.1, "Primary Containment Purge Sampling and Analysis," was revised under Revision 3. Under step 7.4.11.2.1.2.1.4, "Procedure," the note "The Primary Containment shall be sampled and analyzed prior to purging or venting" was revised to add at the end of the note: "...through other than the Standby Gas Treatment System." The change was originally made via the licensee's procedure deviation process on December 5, 1985.

The following representative records were reviewed to determine the frequency of venting and purging of the PC without the sampling required by TS 4.11.2.1.2:

Control Room Operator's Log

Chemistry SMS Log

PPM 7.4.11.2.1.2.1, "Primary Containment Purge Sampling and Analysis" (results)

PPM 7.4.11.2.1.2.3, "Grab Gas Sample Following Shutdown, Startup and Thermal Power Changes," (results)

PPM 7.1.1, "HP/Chemistry Shift Channel Checks," (results)

PPM 7.1.3, "Reactor Building Effluent," (results)

Samples of the PC atmosphere, which the licensee had been determining were the appropriate sample to obtain to meet TS 4.11.2.1.2, and of the MPV, which is the available sample point for SGT output to the exhaust plenum, were compared with records of purges or ventings of the PC. The data was discussed with the Chemistry Supervisor, a Senior Radiochemist, and the HP/C Manager. From discussions and the above records, the following observations were made:

- ° Prior to the interpretation, the Shift Managers (SMs) were inconsistent as to whether they would request a sample of PC atmosphere if the purge or venting operation was conducted through SGT. This inconsistency appeared to be the motivation for requesting the TSI.
- ° The licensee, from the time of the TSI to the time of the inspection, obtained grab samples of PC atmosphere and the MPV, in accordance with notation b of TS Table 4.11-2, and monthly for the MPV.
- ° The licensee typically obtained samples in accordance with TS 4.11.2.8.3.
- ° The licensee did not obtain grab samples of either PC atmosphere or of gaseous effluents for purge or venting operations conducted through SGT, except as noted to meet notation b or for periodic MPV samples.



The licensee typically vented or purged through SGT every one to three days, for periods of less than 24 hours. The following operations are considered representative, but are not inclusive, of the operations conducted apparently without satisfying TS 4.11.2.1.2. Examples from each year since the TSI was approved are shown:

Purge (P) Vent (V) Inert (I)

(The licensee terms venting as through the 2" SGT lines, and purging as through the 30" lines.)

<u>Date</u>	<u>P/V/I</u>	<u>Date</u>	<u>P/V/I</u>	<u>Date</u>	<u>P/V/I</u>	<u>Date</u>	<u>P/V/I</u>
7-20-88	V	7-28-87	V	9-6-86	I	12-01-85	P
7-19-88	V	1-12-87	V	9-6-86	V	11-30-85	V(2)
7-15-88	V	1-11-87	V	9-2-86	V	11-12-85	V
7-10-88	V	1-10-87	V	9-1-86	V	7-03-85	V
7-09-88	V	1-07-87	V			6-30-85	V
7-08-88	V	1-03-87	V				
7-07-88	V						
6-28-88	I						

The following additional observations were made as to the nature of monitoring conducted:

- o SGT flow is approximately 5% of Reactor Building plenum exhaust flow.
- o MPV is continuously sampled for particulates and iodides in accordance with the continuous sampling requirements of TS Table 4.11-2, Radioactive Gaseous Waste Sampling and Analysis Program."
- o PC atmosphere is continuously sampled/monitored in accordance with TS Table 3.3.7.5-1, "Accident Monitoring Instrumentation."

The inspector discussed the above with the licensee as information was obtained and at the exit interview. The licensee stated that they had gone through the approved review process to obtain the interpretation. The inspector noted the objections of the NSAG, CNSRB, and Licensing, as described in the POC meeting minutes, and informed the licensee that the conclusions drawn by the above individuals were correct, and should have been incorporated. The inspector further informed the licensee that the avenue for relaxation of a TS surveillance requirement is to propose a change to the TS, and that this could have been done some years ago, when the licensee first surmized that an apparent conflict existed.

In a telephone conversation conducted July 26, 1988, with the Reactor Engineering Supervisor (RES), the RES stated to the inspector that the individuals at NRR who had been instrumental in reviewing the original TSs had indicated that the intent of the TS had been to give credit for the cleanup function of SGT, and that no

sample was intended to be required when SGT is used. The RES was unable to provide the name of the individual who had made the statement. The inspector observed that the TSI, POC minutes, and procedures written prior to the TSI did not indicate any prior interpretation.

The above lack of sampling and analysis appears to be an unresolved item, in that TS Table 4.11-2 was not followed as required in TS 4.11.2.1.2. This matter will be referred to NRR for determination as to whether the licensee violated TS 4.11.2.1.2 (50-397/88-26-01) (unresolved).

An unresolved item is one about which more information is required in order to determine if it is an acceptable item, a deviation, or a violation.

No violations or deviations were identified.

6. Facility Tours

The inspector conducted several tours of radiologically controlled areas of the Reactor Building (RB), Radwaste Building (RWB), and the Turbine Building (TB). Independent radiation surveys were conducted using an ion chamber survey instrument model RO-2, serial #022906, due for calibration August 20, 1988. Discussion of radiological postings noted during the tour is contained in paragraph 5, above.

Housekeeping appeared typical. The inspector noted that the 437' RWB was somewhat cluttered in the area of the truck bay, including the area where the incident occurred as discussed in paragraph 5.A, above. The inspector continued to have difficulty in finding gloves which would pass a leak check - about 30% of gloves tested failed (see Inspection Report 50-397/88-22, paragraph 3).

The following instrumentation problems were observed:

- WRA-RIS-1 detector broken. Maintenance Work Request (MWR) submitted.
- RRA-RIS-1 same as above
- WEA-FIS-1A magnehelic flow meter pegged high (flow indicator for WEA-SR-25A, RWB effluent monitor).
- REA-SR-37 bypass vacuum pump "on" light not on with pump running (RB effluent monitor).
- Frisker model #L-177 serial #137 no daily source check (548' RB stairwell)

The inspector informed the HP Foreman of WEA-FIS-1A and REA-SR-37, of which he was not previously aware, and for which MWRs were then submitted. The lead HPT was informed of the frisker, for which he had already dispatched an HPT to perform a source check. The rotameter for



WEA-FIS-1A indicated proper sample flow, and WEA-SUM-1 was operating properly.

The ARM strip chart recorder (see Inspection Report 50-397/88-22) was observed to be operating with each bank using different colors as designed. However, the individual readings were difficult to discern due to a lack of contrast between selected colors.

During a brief tour of the Plant Support Facility, (PSF) on July 18, 1988, the bulletin boards for the PSF, in particular of the laundry, calibration, and other radiological areas, were noted to have statements as to where documents can be found, pursuant to 10 CFR 19.11(b).

10 CFR 19.11 reads, in part:

"(a) Each licensee shall post current copies of the following documents:

(1) The regulations in this part and in Part 20 of this chapter;

(2) The license...."

"(3) The operating procedures..."

(4) Any notice of violation involving radiological working conditions, ..."

"(b) If posting of a document specified in paragraph (a) (1), (2) or (3) of this section is not practicable; the licensee may post a notice which describes the document and states where it may be examined..."

"(d) Documents, notices, or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in licensed activities to observe them on the way to or from any particular licensed activity location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(e) Commission documents posted pursuant to paragraph (a)(4) of this section shall be posted within 2 working days after receipt of the documents from the Commission; ..."

All of the bulletin boards were posted with a description of where documents could be viewed, in accordance with 10 CFR 19.11(b). However, some were noted to have a statement to the effect that this applied to 10 CFR 19.11(a)(4).

A Notice of Violation involving radiological working conditions was issued to the licensee, on June 29, 1988 (see Inspection Report 50-397/88-22, Appendix A "Notice of Violation"). Discussion with the licensee revealed that it had been received on July 5, 1988, and posted in accordance with licensee procedure 1.10.5, "NRC Required Bulletin Board Postings," Revision 4, dated 8-13-86. The procedure did not, however, address areas where radiological work and/or licensed activities take place outside the protected area. When informed, the licensee

immediately (within 2 hours) posted the PSF with the notice, to comply with 10 CFR 19.11(d).

The inspector attended respiratory protection training, which the licensee conducts in part to meet the requirements of 10 CFR 20.103 "Exposure of individuals to concentrations of radioactive materials in air in restricted areas." and NUREG 0041, "Manual of Respiratory Protection Against Airborne Radioactive Materials." Some minor errors, primarily regarding non-radiological aspects of self-contained breathing apparatus (SCBA) use, were corrected when brought to the attention of the instructor. The requirement to provide special training in SCBA use, pursuant to 10 CFR 20, Appendix A, note k, was discussed with the Manager, General and Technical Support Training (GTST), who acknowledged the inspector's concerns and stated that they would be further addressed. The inspector informed the GTST manager of the matters which had already been corrected by the instructor.

The inspector verified radiological postings within the RB, TB, and RWB, to be in accordance with 10 CFR 20.203, "Caution signs, labels, signals and controls." The licensee stated that MWRs had been submitted to construct enclosures for two areas in the 467' RWB east and west valve galleries, which were posted with flashing yellow lights to indicate high radiation areas greater than 1000 mrem/hr, pursuant to TS 6.12.2. Water was observed to be flowing slowly across the corner of a posted contaminated area into the unposted walkway in the west valve gallery. A survey by the licensee indicated no spread of contamination into the clean area.

Frisking of personal items and equipment for contamination at the exit from the radiologically controlled area (RCA) was observed. Various HPTs were observed, and survey techniques were not consistently thorough. In one instance, a portion of the inspector's hard hat was surveyed with the wrong side of the detector probe, i.e., with the window pointed away from the hat. The hat was verified to not be contaminated. The inspector expressed concern that equipment which might be contaminated could be released to unrestricted areas. This was discussed with the HP Supervisor, who immediately ordered HPTs to improve their technique, and authorized them to discourage individual workers from taking extraneous or unnecessary equipment into controlled areas.

No violations or deviations were identified.

7. Exit Interview

The inspector met with those individuals denoted in paragraph 1 at the conclusion of the inspection on July 22, 1988. The scope and findings of the inspection were summarized. The licensee acknowledged the inspector's observations. With regard to the unresolved item discussed in paragraph 5.B, the Plant Manager stated that the POC had performed the required review process for a TS interpretation, and expressed concern that an ambiguous wording in the TS might result in a violation. The inspector reminded him of the concerns expressed by NSAG, CNSRB, and Licensing.