



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

JAN 31 1997

EA 96-489

S. K. Gambhir, Division Manager
Production Engineering
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

SUBJECT: PREDECISIONAL ENFORCEMENT CONFERENCE

Dear Mr. Gambhir:

This refers to the meeting conducted in the Region IV office on January 29, 1997. This meeting related to apparent violations identified in NRC Inspection Report 50-285/96-17. These apparent violations included maintenance, configuration control, and operability concerns with the postaccident sampling system. During the meeting, representatives of the Omaha Public Power District presented information related to the identification, causes, and corrective actions for the apparent violations and presented their analysis related to the operability of the system.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the NRC's Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

J. E. Dyer, Director
Division of Reactor Projects

Enclosures:

1. Attendance Lists
2. Apparent Violations
3. Licensee Presentation
4. Postaccident Sampling System Action Plan of June 1, 1993

9702100279 970131
PDR ADOCK 05000285
G PDR

cc w/enclosures:

James W. Tills, Manager
Nuclear Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
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Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

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JAN 31 1997

bcc to DMB (IE45)

bcc distrib. by RIV:

L. J. Callan

DRP Director

Branch Chief (DRP/B)

Project Engineer (DRP/B)

Branch Chief (DRP/TSS)

Resident Inspector

C. Hackney, RSLO

W. L. Brown, RC

OE:EA File, MS: 7-H5

DRS-PSB

MIS System

RIV File

Leah Tremper (OC/LFDCB, MS: TWFN 9E10)

B. Henderson, PAO

K. Perkins, Director, WCFO

G. F. Sanborn, EO

J. Lieberman, OE, MS: 7-H5

L. R. Wharton, NRR, MS: 13-E-16

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RIV:C:DRP/B	D:DRP								
WDJohnson;df	JEDyer								
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PREDECISIONAL ENFORCEMENT CONFERENCE ATTENDANCE

LICENSEE/FACILITY	Omaha Public Power District/Fort Calhoun Station
DATE/TIME	January 29, 1997/1:00 p.m. (CST)
CONFERENCE LOCATION	Arlington, Texas
EA NUMBER	96-489

LICENSEE REPRESENTATIVES

NAME (PLEASE PRINT)	ORGANIZATION	TITLE
James W Tills	OPPD-FCS	Manager - Nuclear Licensing
W. GARY GATES	OPPD-FCS	VICE PRESIDENT
SUDESH K. GAMBHIR	OPPD-FCS	Division Manager - ^{Production} Engineering
R. L. ANDREWS	OPPD-FCS	DIVISION ^{NUCLEAR} MANAGER SERVICES
Jim Chase	OPPD-FCS	Plant Manager
DAVID SPIRES	OPPD-FCS	mgr - Chemistry
CRAIG FRITTS	OPPD-FCS	System Engineering
KEVIN HYDE	OPPD-FCS	SR Nuclear Design Engineer

PREDECISIONAL ENFORCEMENT CONFERENCE ATTENDANCE

LICENSEE/FACILITY	Omaha Public Power District/Fort Calhoun Station
DATE/TIME	January 29, 1997/1:00 p.m. (CST)
CONFERENCE LOCATION	Arlington, Texas
EA NUMBER	96-489

NRC REPRESENTATIVES

NAME (PLEASE PRINT)	ORGANIZATION	TITLE
G. Michael Vasquez	NRC RIV	Enforcement Specialist
Arthur T. Howell	NRC RIV	Dep. Dir. / DRP
T. P. Grogan	NRC RIV	Dir., DRS
W.D. Johnson	NRC RIV	Chief, Project Branch B
V. G. Gaddy	NRC RIV	RESIDENT INSPECTOR
WAYNE C WALKER	NRC / RIV	SENIOR RESIDENT INSPECTOR
Ray Wharten	NRC / NRR	Licensing Project Manager
John L Pellet	NRC / RIV	Chief, Operations Branch, DRS
RYAN E. LANTZ	NRC / RIV	INSPECTOR, OPS BRANCH, DRS
Paul M. Good	NRC / RIV	St. Emergency Preparedness Analyst
Blaine Murray	NRC / RIV	Chief, Plant Support Branch

APPARENT VIOLATIONS*

PREDECISIONAL ENFORCEMENT CONFERENCE

OMAHA PUBLIC POWER DISTRICT

JANUARY 29, 1997

**NOTE: THE APPARENT VIOLATIONS DISCUSSED AT THIS PREDECISIONAL ENFORCEMENT CONFERENCE ARE SUBJECT TO FURTHER REVIEW AND MAY BE REVISED PRIOR TO ANY RESULTING ENFORCEMENT ACTION.*

APPARENT VIOLATION

1. Technical Specification 5.15 requires, in part, that a program shall be implemented and maintained to ensure the capability to accurately monitor and or sample/analyze radiological effluents and concentrations in a post-accident condition, including the capability to obtain and analyze a containment atmosphere sample under accident conditions. This program shall include provisions for maintenance of sampling and analysis equipment.

Procedure SO-G-98, "Administrative Controls for Operation, Maintenance and Testing of the Post Accident Sampling System," Revision 2, step 5.4.1, stated, that periodic maintenance and testing of the PASS is administered by the PMO program.

Procedure SO-M-2, "Preventive Maintenance Order," Revision 24, step 5.3.2, stated, in part, that personnel have the responsibility to initiate changes to preventive maintenance tasks on equipment within their disciplines to assure effective preventive maintenance activities.

Contrary to the above, Preventive Maintenance Order (PMO) 9605793, which directed the drawing of a containment atmospheric sample utilizing the isotopic analyzer, was not revised or canceled following disabling of the in-line isotopic analyzer.

THIS APPARENT VIOLATION IS SUBJECT TO FURTHER REVIEW AND MAY BE REVISED

APPARENT VIOLATION

2. 10 CFR 50, Appendix B, Criterion V, requires, in part, that procedures affecting quality shall be accomplished in accordance with prescribed procedures.

Procedure PED-QP-2, "Configuration Change Control," Revision 18, defined the Configuration Control Boundary, in part, as any system or structure located within the Protected Area at Fort Calhoun Station.

Procedure PED-QP-2, "Configuration Change Control," Revision 18, step 4.1.5(2), required, in part, that all configuration changes within the configuration control boundary shall be authorized by one of several methods, one of which was an Engineering Change Notice (ECN).

Contrary to the above, in August 1995, computer equipment that controlled the isotopic analysis portion of the Post Accident Sample System was removed prior to completion and issuance of an Engineering Change Notice.

THIS APPARENT VIOLATION IS SUBJECT TO FURTHER REVIEW AND MAY BE REVISED

APPARENT VIOLATION

3. Technical Specification 5.15 requires, in part, that a program shall be implemented and maintained to ensure the capability to accurately monitor and or sample/analyze radiological effluents and concentrations in a post-accident condition, including the capability to obtain and analyze a containment atmosphere sample under accident conditions. This program shall include provisions for maintenance of sampling and analysis equipment.

Procedure SO-G-98, "Administrative Controls for Operation, Maintenance and Testing of the Post Accident Sampling System," Revision 2, step 5.4.4.1, stated, in part, that maintenance work documents written for malfunctioning PASS equipment shall be prioritized as a Priority 3 if the deficiency causes a PASS sequence to be inoperable.

Contrary to the above, Maintenance Work Order 960523 was initiated in February 1996 as a Priority 4, when system leaks, in conjunction with the disabled isotopic analyzer sequence, disabled both sequences of sampling the containment atmosphere via the PASS.

THIS APPARENT VIOLATION IS SUBJECT TO FURTHER REVIEW AND MAY BE REVISED

APPARENT VIOLATION

4. Technical Specification 5.15 requires, in part, that a program shall be implemented and maintained to ensure the capability to accurately monitor and or sample/analyze radiological effluents and concentrations in a post-accident condition, including the capability to obtain and analyze a containment atmosphere sample under accident conditions. This program shall include provisions for maintenance of sampling and analysis equipment.

Contrary to the above, the PASS was unable to sample or monitor the containment atmosphere because of disabled and deficient equipment from February 1996 until July 1996.

THIS APPARENT VIOLATION IS SUBJECT TO FURTHER REVIEW AND MAY BE REVISED

APPARENT VIOLATION

5. Technical Specification 5.15 requires, in part, that a program shall be implemented and maintained to ensure the capability to accurately monitor and or sample/analyze radiological effluents and concentrations in a post-accident condition, including the capability to obtain and analyze a containment atmosphere sample under accident conditions. This program shall include provisions for maintenance of sampling and analysis equipment.

Procedure SO-G-98, "Administrative Controls for Operation, Maintenance and Testing of the Post Accident Sampling System," Revision 2, step 5.4.1, stated, that periodic maintenance and testing of the PASS is administered by the PMO program.

Standing Order SO-M-2, "Preventive Maintenance Order," Revision 24, step 11.2.4.B, requires, in part, that the maintenance supervisor and plant manager shall sign for approval of tasks which are safety, security, and commitment related for administrative closeout.

Contrary to the above, PMO 9603987 was administratively closed on May 22, 1996, by the Maintenance Manager without Plant Manager approval.

THIS APPARENT VIOLATION IS SUBJECT TO FURTHER REVIEW AND MAY BE REVISED



OMAHA PUBLIC POWER DISTRICT

Fort Calhoun Station
Post-Accident Sampling System
Predecisional Enforcement Conference



OPENING REMARKS INTRODUCTIONS

Gary Gates

AGENDA

- ◆ Opening Remarks / Introductions
 - Gary Gates
- ◆ PASS Design Bases / Maintenance History
 - Sudesh Gambhir
- ◆ PASS Program Description - Jim Chase
- ◆ Timeline - Dave Spires
- ◆ System Operability - Craig Fritts
- ◆ Causal Analysis - Dick Andrews

AGENDA

- ◆ Corrective Actions - Sudesh Gambhir
- ◆ Violation Significance - Sudesh Gambhir
- ◆ Aggregation of Violations - Sudesh Gambhir
- ◆ PASS Civil Penalty Assessment
 - Sudesh Gambhir
- ◆ Closing Remarks - Gary Gates



DESIGN BASES / MAINTENANCE HISTORY

Sudesh Gambhir

SAMPLE SEQUENCES

1. Undiluted High Pressure Grab Sample
2. RCS Dissolved Gas
3. RCS Boron & Chloride
4. Reactor Coolant Diluted Grab Sample
5. Containment Atmosphere Grab Sample
6. * Reactor Coolant In-line Isotopic Analysis
7. * Containment Atmosphere In-line Isotopic Analysis
8. * *Reactor Coolant In-line pH

*These sequences no longer used

**Approved for abandonment

DESIGN BASIS REQUIREMENTS

Containment Atmosphere Sample

- ◆ Installed in Response to NUREG 0737
- ◆ Sample and Analyze Containment Atmosphere
- ◆ Obtain Samples once/day for the first week
- ◆ Obtain Samples once/week until accident conditions no longer exist
- ◆ Obtain Samples while complying with GDC 19 - (Personnel Exposure)

DESIGN BASIS REQUIREMENTS

Containment Atmosphere Sample

- ◆ Measure nuclides in the range of 1 micro -Ci/gm to 10 Ci/gm
- ◆ Minimize plate out and amount of fluid required to obtain sample
- ◆ Return liquid and gas to suitable collection facilities

ACCURACY REQUIREMENTS

Containment Atmosphere Analysis

- ◆ Regulatory Guide 1.97
 - ◆ Detectors should respond to gamma radiation photons ... within a factor of two
- ◆ NUREG 0737 Criterion 10
 - ◆ Gross Activity, Gamma Spectrum: ... accurate within a factor of two

PIPING and INSTRUMENTATION

Diagram

- ◆ Containment Atmosphere Sequence Piping Diagram

PASS MAINTENANCE HISTORY

◆ Pre 1993

- ◆ Several Maintenance/Reliability Problems With PASS
- ◆ Problems Discussed at several SARC meetings
- ◆ Action Plan for improved reliability of PASS was developed and implemented

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PASS MAINTENANCE HISTORY

◆ Results

- ◆ NRC approval obtained to remove several PASS sequences
- ◆ Greatly improved system reliability
- ◆ SO-G-98 was issued to provide continued system support and attention
- ◆ NSRG RCA confirms that generally PASS problems have received good support from Maintenance and Engineering

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PASS PROGRAM DESCRIPTION

Jim Chase

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PROGRAM DESCRIPTION

- ◆ Technical Specification 5.15 specifies the overall PASS Program requirements of NUREG-0737
- ◆ The program is defined in plant procedure Standing Order G-98, "Administrative Controls for Operation, Maintenance, and Testing of the Post Accident Sampling System (PASS)"

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PROGRAM DESCRIPTION

- ◆ This procedure defines the responsibilities of operations, chemistry, maintenance, system engineering, and training to support the PASS
- ◆ Off-site support facilities for long term assistance, if required, are also defined in this procedure

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PROGRAM DESCRIPTION

- ◆ Calibration and testing schedules are designated for each of the sequences
- ◆ Schedules for demonstrating operability are also defined for each of the five sampling parameters

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Sequence	Mode	Sample Point			
		RCS Hot Leg	Pressurizer Surge Line	LPSI Disch Hdr	Containment Atmosphere
Undiluted High Pressure Reactor Coolant (RC) Sample	NORMAL	M04	M04	R01	N/A
	ACCIDENT	Y01	Y01	R02	N/A
RC Dissolved Gas	NORMAL	M04	M04	R01	N/A
	ACCIDENT	Y01	Y01	R02	N/A
RC Boron/Chloride Analysis	NORMAL	M04	M04	R01	N/A
	ACCIDENT	Y01	Y01	R02	N/A
RC Diluted Grab Sample	NORMAL	M04	M04	R01	N/A
	ACCIDENT	Y01	Y01	R02	N/A
Containment Atmosphere Grab Sample	NORMAL	N/A	N/A	N/A	M03
	ACCIDENT	N/A	N/A	N/A	Y01

Key to Sample Frequency Codes

M03 - Every 3 months
 M04 - Every 4 months
 Y01 - Yearly
 R01 - Every Refueling Outage
 R02 - Every Second Refueling Outage

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PASS TIMELINE

Dave Spires

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TIMELINE

- ◆ Timeline divided into three areas, based on cause
- ◆ The three basic areas are:
 - ◆ PASS Material Deficiency (TS 5.15),
 - ◆ Configuration Control, and
 - ◆ Implementation of the Preventive Maintenance (PM) Program

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TIMELINE

Material Deficiency

- ◆ 10/27/95, Containment grab sample taken and performed satisfactorily
- ◆ 1/18/96, Containment grab sample taken, performed satisfactorily, leaking fitting noted, instrument reject tagged
- ◆ 2/21/96, Maintenance request (MWR) initiated to repair the leak
- ◆ 3/14/96, Plant Mini-Outage Begins
- ◆ 3/25/96, Plant Mini-Outage Ends

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TIMELINE

Material Deficiency

- ◆ 5/9/96, New MWR generated
 - ◆ Specifies correct work group
 - ◆ Elevates priority
- ◆ 5/9/96, Parts requested by OPPD
- ◆ 5/20/96, Parts received in OPPD Warehouse
- ◆ 6/7/96, RCP ARD Plant Outage Begins

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TIMELINE

Material Deficiency

- ◆ 6/14/96, Duration of needed maintenance considered excessive, Condition Report generated
- ◆ 6/21/96, RCP ARD Plant Outage Ends
- ◆ 6/28/96, Work on leaking fitting begins
- ◆ 7/1/96, Leaking fitting repaired
- ◆ 7/3/96, PMT complete, Chemistry clears Reject tag

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TIMELINE

Configuration Control

- ◆ 9/24/93, OPPD requests approval to delete the in-line containment atmosphere sample requirement
- ◆ 2/17/94, NRC approves request to delete the in-line containment atmosphere sample
- ◆ 3/9/94, ECN 94-107 requested to remove PASS sequence
- ◆ 9/95, Fuses pulled

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TIMELINE

Configuration Control

- ◆ 12/15/95, Computer equipment for isotopic analysis removed with verbal authorization
- ◆ 12/21/95, Condition Report to document configuration control deficiency initiated
- ◆ 10/5/96, Refueling Outage Begins
- ◆ 11/3/96, Temporary modification implemented for Containment Atmosphere in-line sample equipment removal

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TIMELINE

PM Program

- ◆ 5/22/96, Routine (normal mode)
containment atmosphere grab sample not
performed, administratively closed
 - ◆ Plant Manager approval not obtained
- ◆ 9/18/96, CR 199601134 initiated to
document generic problem with Plant
Manager approval for commitment related
PMs

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OPPD

PASS SYSTEM OPERABILITY

Craig H. Fritts

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INTRODUCTION

- ◆ Operability of PASS with respect to the leak on the Containment Atmosphere Grab Sample tubing

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ISSUES SURROUNDING PASS

Operability

- ◆ Condition Report 199600781
- ◆ Subsequent PASS Testing & Analysis
- ◆ PASS Sampling During Emergencies

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ISSUES SURROUNDING PASS
Operability

- ◆ Condition Report 199600781

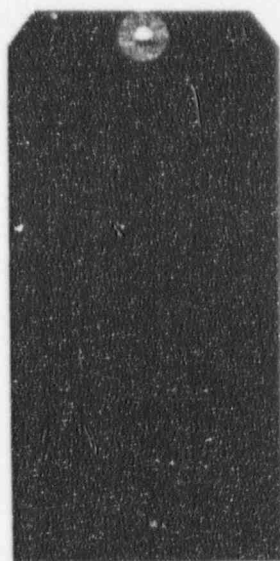
Condition Report 199600781

***"...THIS LEAK HAS RENDERED THE
CONTAINMENT ATMOSPHERE SAMPLE
INOPERABLE FOR ALMOST 6 MONTHS AND
THE MWO HAS NOT BEEN WORKED YET."***

REASONS FOR CONDITION REPORT

- ◆ Excessive Time to Complete Maintenance
- ◆ Assumed Sample Sequence Inoperable

CHEMISTRY REJECT TAG



REASONS FOR CONDITION REPORT

- ◆ Excessive Time to Complete Maintenance
- ◆ Assumed Sample Sequence Inoperable
 - ◆ Sequence Reject Tagged
 - ◆ Performance Indicators
 - ◆ PMO Administratively Closed in May
- ◆ Bring to Management's Attention

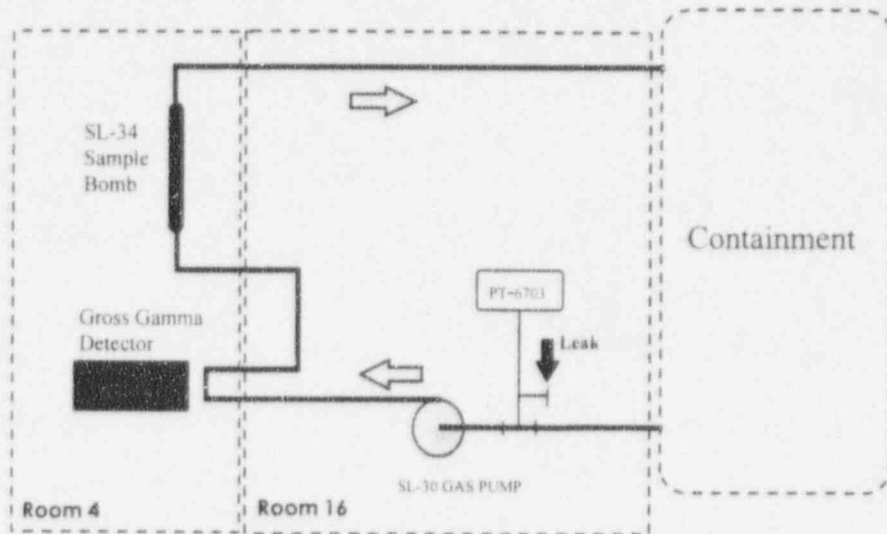
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ISSUES SURROUNDING PASS OPERABILITY

- ◆ Condition Report 199600781
- ◆ Subsequent PASS Testing & Analysis

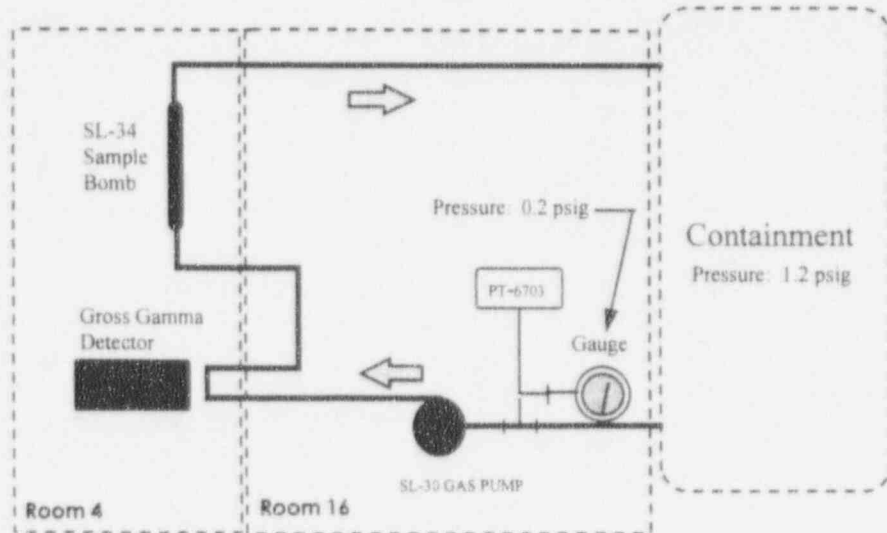
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PASS CONTAINMENT ATMOSPHERE SAMPLE



15

PASS CONTAINMENT ATMOSPHERE SAMPLE



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QUESTIONS

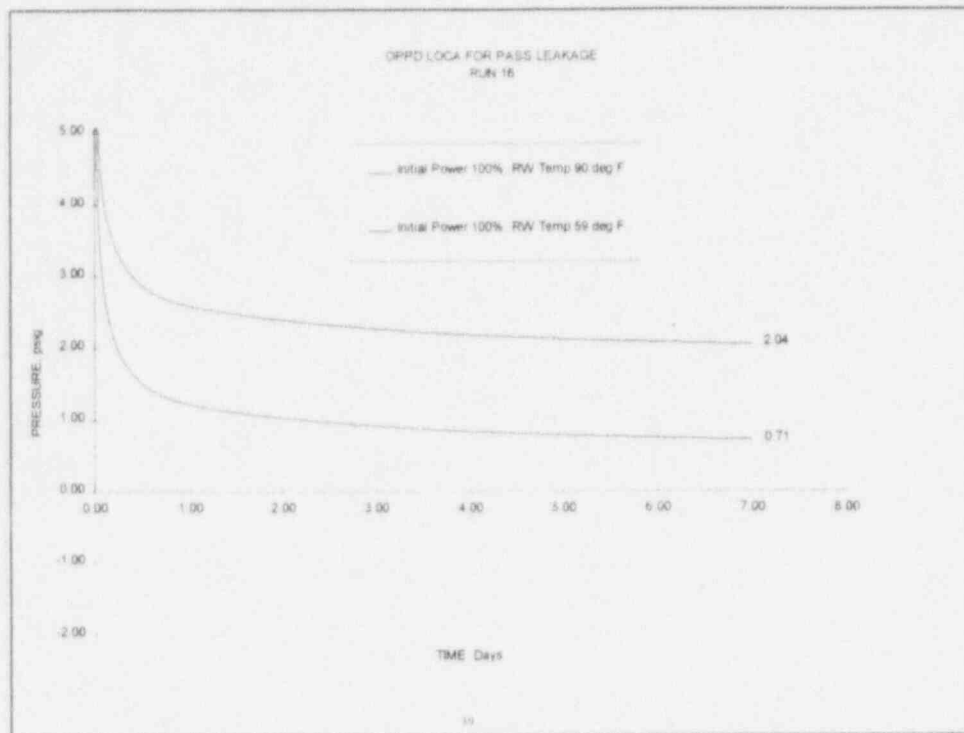
- ◆ How long after an accident are we required to be able to obtain PASS samples?
- ◆ Following an accident, how long until containment pressure drops below 1.2 psig?
- ◆ What is the effect on the PASS sample if containment pressure drops below 1.2 psig?

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QUESTIONS

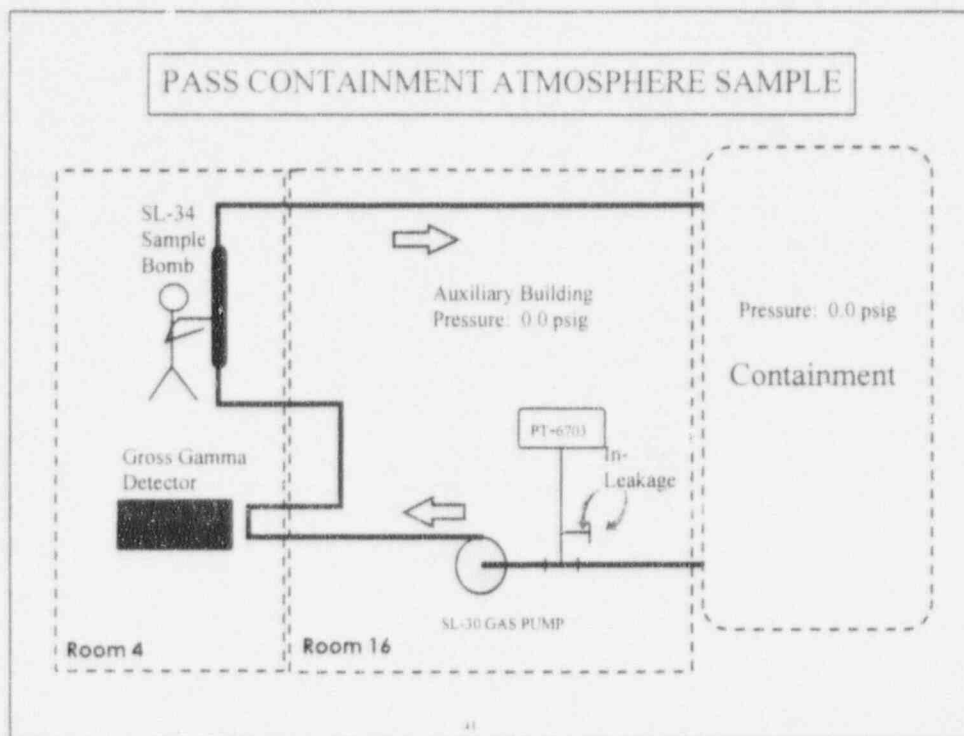
- ◆ How long after an accident are we required to be able to obtain PASS samples?
- ◆ Following an accident, how long until containment pressure drops below 1.2 psig?

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QUESTIONS

- ◆ How long after an accident are we required to be able to obtain PASS samples?
- ◆ Following an accident, how long until containment pressure drops below 1.2 psig?
- ◆ What is the effect on the PASS sample if containment pressure drops below 1.2 psig?



ACCEPTANCE CRITERIA

Containment Atmosphere Sample
results must be within :

+100% / -50%

of a Grab Sample from RM-051/-052

CALCULATION SUMMARY

Equivalent Orifice Size (inches)	Error	Comments
0.146 (>1/8")	-40%	Maximum leak to produce results in-tolerance with a -10% instrument error
0.062 (1/16")	-22%	Error resulting from a leak equivalent to a 1/16" orifice

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ISSUES SURROUNDING PASS OPERABILITY

- ◆ Condition Report 199600781
- ◆ Subsequent PASS Testing & Analysis
- ◆ PASS sampling during Emergencies

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EMERGENCY PASS OPERATION

- ◆ Reject and Deficiency Tags State Leak Exists on Containment Atmosphere Sample



WORK REQUEST

WORK DOCUMENT # _____

EQUIPMENT TAG # _____

OR STICKER IN PANEL # _____

PROBLEM DESCRIPTION _____

INITIATOR _____ DATE _____

FOLLOW-UP INFORMATION _____

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EMERGENCY PASS OPERATION

- ◆ Reject and Deficiency Tags State Leak Exists on Containment Atmosphere Sample
- ◆ Neither Reject Tag nor MWR state Containment Atmosphere Sample inoperable
- ◆ 1/96 PMO performed satisfactorily
- ◆ No mention of leak in PMO

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EMERGENCY PASS OPERATION

- ◆ Reject and Deficiency Tags State Leak Exists on Containment Atmosphere Sample
- ◆ Neither Reject Tag nor MWR state Containment Atmosphere Sample inoperable
- ◆ 1/96 PMO performed satisfactorily
- ◆ No mention of leak in PMO

☆ Consensus to recommend going ahead with PASS sample.

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EMERGENCY PASS OPERATION

Conclusion

- ◆ Containment Atmosphere Sample Sequence could and would have been used during an emergency
- ◆ Sample results would have been within acceptance criteria

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PASS EVENTS CAUSE DETERMINATION

Dick Andrews

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CAUSE DETERMINATION

- ◆ Material Deficiency
- ◆ Configuration Control
- ◆ Preventive Maintenance Program

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CAUSE DETERMINATION

- ◆ Material Deficiency on the PASS
 - ◆ Weakness in problem reporting
 - ◆ Inappropriate use of Chemistry Reject Tag
 - ◆ Lack of timely leak evaluation
 - ◆ Lack of timely maintenance
 - ◆ Inadequate documentation in PMO
 - ◆ Periodic system integrity check not performed

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CAUSE DETERMINATION

- ◆ Configuration Control
 - ◆ Lack of depth in evaluation and review by engineering
 - ◆ verbal authorization to remove computer cabinets
 - ◆ PMO task not deleted coincident with PASS change
 - ◆ Less than timely completion of the ECN
 - ◆ low priority of ECN for removal of PASS equipment that is no longer required

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CAUSE DETERMINATION

- ◆ Preventive Maintenance of PASS
 - ◆ Inconsistency in PM close-out administrative requirements

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PASS CORRECTIVE ACTIONS

Sudesh Gambhir

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CORRECTIVE ACTIONS

- ◆ Corrective Actions divided into four categories
 - ◆ Material Deficiency (apparent violations 3 and 4)
 - ◆ Configuration Control (apparent violations 1 and 2)
 - ◆ PM Program (apparent violation 5)
 - ◆ Training

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CORRECTIVE ACTIONS

Material Deficiency

- ◆ The leak was repaired (7/1/96)
- ◆ Reject Tag removed (7/3/96)
- ◆ An analysis to document operability was performed (1/17/97)

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CORRECTIVE ACTIONS

Material Deficiency

- ◆ SO-G-98 revised (new guidance issued 10/10/96)
 - ◆ "Maintenance Work Documents written for malfunctioning PASS equipment shall be prioritized such that deficiencies which cause a PASS sequence to be inoperable should be completed and the PASS returned to an operable status within seven (7) days. If this can not be accomplished consideration shall be given to submission of an action plan to the NRC outlining the actions necessary to return the PASS to a fully operable status, including anticipated completion dates."

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CORRECTIVE ACTIONS

Material Deficiency

- ◆ Management expectations reinforced with Chemistry personnel (January 1997)
 - ◆ Repairs completed within 7 days OR
 - ◆ Consider informing NRC of plan of action to complete Repairs (G-98)
 - ◆ Timely initiation of MWRs
 - ◆ Use of a Caution Tag in addition to a Reject Tag
 - ◆ Complete PMO information

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CORRECTIVE ACTIONS

Material Deficiency

- ◆ Chemistry Reject Tag Process will be strengthened to:
 - ◆ More clearly address when a Reject Tag should be used and
 - ◆ How to assess the impact on system operation of an equipment deficiency
- ◆ A PMO is being developed to routinely leak check the PASS to ensure system integrity
 - ◆ Leak testing Containment Sample lines completed 1/25/97

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CORRECTIVE ACTIONS

Material Deficiency

- ◆ Improvements are in progress in the Maintenance Planning area
 - ◆ Improve efficiency
 - ◆ reduce backlogs

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CORRECTIVE ACTIONS

Configuration Control

- ◆ Process to Abandon Equipment defined (11/3/96)
- ◆ Temporary Modification for Isotopic In-line Sequence removal issued (11/3/96)
- ◆ ECN 94-107 for Isotopic In-line Sequences removal (in progress)
- ◆ Design Engineering Work Process Control system

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CORRECTIVE ACTIONS

Configuration Control

- ◆ Management expectations emphasized to engineering personnel
- ◆ Management expectations will be emphasized to other appropriate station personnel

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CORRECTIVE ACTIONS

Preventive Maintenance Program

- ◆ Procedure SO-M-2 "Preventive Maintenance Program" is being revised to be consistent with its associated form (FC-1066)

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PREVENTIVE MAINTENANCE PROGRAM TASK DEFERRAL/ADMIN CLOSE OUT					
CHECK ONE: TASK DEFERRAL <input type="checkbox"/> ADMIN CLOSE OUT <input type="checkbox"/>					
WORK PLAN WP# _____		WORK PERFORMED NUMBER _____			
PMO TYPE (Circle one):	ED	PM	PC	CP	HS
SAFETY RELATED: <input type="checkbox"/> YES <input type="checkbox"/> NO					
PMO TASK DESCRIPTION					
BASIS FOR REQUEST					
REQUESTED BY _____		SIGNATURE _____		DATE _____	
PM ADMINISTRATOR/MAINT SCHEDULING COORDINATOR DEFERRAL REQUEST AFTER (Circle one):					
SCHEDULED DATE _____		DUE DATE _____		LATE DATE _____	
RECOMMENDED RESCHEDULE DATE _____					
ROUTING					
SIGNATURE _____		DATE _____		CONCUR?	
SYSTEM ENGINEER				YES NO	
PM ADMINISTRATOR				YES NO	
MAINT SCHEDULING COORD				YES NO	
SIGNATURE _____		DATE _____		APPROVE	
MAINTENANCE SUPERVISOR				YES NO	
PLANT MANAGER		(For Safety Related and EEO Only)		YES NO	
EEO COORDINATOR		(For EEO Only)		YES NO	

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CORRECTIVE ACTIONS

Training

- ◆ Training is being conducted to improve knowledge of plant personnel on PASS system operation and significance (Started 1/20/97)
 - ◆ Operations
 - ◆ Engineering
 - ◆ Chemistry
- ◆ Similar RP Staff Training on PASS was performed (June/July 1996)

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OPPO

PASS VIOLATION SIGNIFICANCE

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VIOLATION SIGNIFICANCE

- ◆ Concerns
 - ◆ Operability
 - ◆ Configuration Control
 - ◆ PM Procedure

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VIOLATION SIGNIFICANCE

Operability

- ◆ Material Deficiency (apparent violations 3 and 4)
 - ◆ Could have used PASS Sequence and met the Regulatory Criteria
 - ◆ Minimal Onsite or Offsite Personnel Exposure Risk due to leak

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VIOLATION SIGNIFICANCE

Configuration Control

- ◆ Premature removal of Equipment (apparent violations 1 and 2)
 - ◆ Mismatch between "paper plant" and "physical plant"
 - ◆ No negative impact on the NRC required PASS sequences



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VIOLATION SIGNIFICANCE

PM Procedure

- ◆ Missed Plant Manager approval for administrative closure of PMO (apparent violation 5)
 - ◆ Plant Manager approval is one of 5 approvals required for deferral
 - ◆ System Engineer, PM Administrator, Maintenance Scheduling Coordinator, Maintenance Supervisor
 - ◆ Procedure is being revised to delete the requirement for the Plant Manager's approval for this type of deferral
 - ◆ The form FC-1066 for documenting the approval is correct

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Aggregation of Violations

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AGGREGATION OF VIOLATIONS

◆ Regulatory Guidance

- A group of Severity Level IV violations may be evaluated in the aggregate and assigned a single, increased severity level, thereby resulting in a Severity Level III problem, if the violations have the same underlying cause or programmatic deficiencies, or the violations contributed to or were unavoidable consequences of the underlying problem.

◆ Violations do not have same underlying cause, programmatic deficiencies, or problem

- ◆ PASS material deficiency (operability)
- ◆ Configuration control issue
- ◆ Minor error in the PMO program

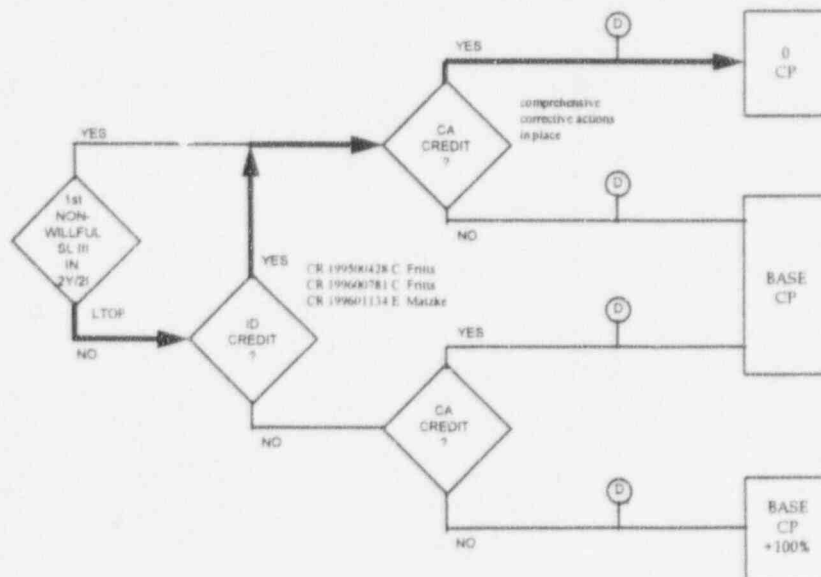
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PASS VIOLATION

Identification

- ◆ CR 199500428, Configuration control problem
 - ◆ C. Fritts 12/21/95
 - ◆ apparent violations 1 and 2
- ◆ CR 199600781, PASS Sequence leak repair
 - ◆ C. Fritts 6/14/96
 - ◆ apparent violations 3 and 4
- ◆ CR 199601134, PMO Program problem (PM signature)
 - ◆ E. Matzke 8/21/96
 - ◆ apparent violation 5

CIVIL PENALTY ASSESSMENT



CIVIL PENALTY ASSESSMENT

◆ SUMMARY

- ◆ Opportunities for Improvement
- ◆ Minimal Safety Significance
- ◆ No Common Programmatic Weakness
- ◆ Violations Were Self Identified
- ◆ Comprehensive Corrective Actions

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CLOSING REMARKS

Gary Gates

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June 1, 1993

POST ACCIDENT SAMPLING SYSTEM ACTION PLAN

I. PROBLEM STATEMENT

There are several issues associated with the Post Accident Sampling System (PASS) which bring into question the ability of the PASS to operate reliably under all conditions, per the requirements of NUREG-0737 and OPPD's associated commitments.

II. GOALS

- A. Verify the ability of PASS equipment to operate reliably in both the NORMAL and ACCIDENT modes.
- B. Verify the design basis and operational constraints of the PASS.
- C. Verify adherence to commitments associated with the PASS.
- D. Develop a comprehensive program document for the PASS which:
 - 1. Ensures that the PASS will operate reliably, under all conditions, when called upon to do so.
 - 2. Ensures that equipment problems which arise will be given the appropriate priority commensurate with the level of importance to maintaining the system in an operable status.
 - 3. Captures and maintains system operational constraints and references to the system design basis.
 - 4. Captures, and verifies adherence to, all OPPD commitments associated with the PASS.
 - 5. Delineates qualification and proficiency requirements for personnel operating the PASS.
 - 6. Meets the requirements of Technical Specification 5.15.

POST ACCIDENT SAMPLING SYSTEM ACTION PLAN

III. ACTION ITEMS

<u>ACTIONS REQUIRED TO ACCOMPLISH GOAL A:</u>	<u>RESPONSIBILITY</u>	<u>DUE DATE</u>	<u>COMMENTS</u>
1. Test SL-44, Containment Sump Booster Pump, to verify proper operation.	C.H. FRITTS	**	Cancelled. NRC submittal has been approved to use alternate sample point for containment sump sample.
2. Troubleshoot/Repair cause of pH sequence not working properly.	C.H. FRITTS	7/30/93	MWO 931537. Complete.
3. Obtain certification for the PASS Calibration Source Shield.	C.H. FRITTS	7/31/93	MWO 924387. Complete.
4. Complete ACCIDENT mode testing of PASS to verify operability.	C.H. FRITTS	6/15/93	G-87 ACTION PLAN - Completed 6/3/93.
5. Replace pH instruments with equipment qualified for use in post-accident chemical and radiological environment.	J.T. O'CONNOR	12/31/94	ECN 93-354 - Approved by NPRC for Fourth Quarter, 1994. ECN cancelled - No longer a commitment to perform pH.
6. Change PASS programming so that all Reactor Coolant Samples are cooled by SI-3.	J.T. O'CONNOR	12/31/94	ECN 93-267. Approved by NPRC for Fourth Quarter, 1994. Complete
<u>ACTIONS REQUIRED TO ACCOMPLISH GOAL B:</u>			
1. Perform Calculations to determine whether SL-44 is able to draw a sample without a Containment Sump Pump running to backup A.I. above. Revise procedures accordingly.	M.M. BARE	7/23/93	EAR 93-102 (SRG 93-012/06). Completed 8-2-93.
2. Determine whether the PASS sample point from the SI common recirc header is available during a design basis accident, and whether a sample drawn from this location would meet the requirements of NUREG-0737.	M.M. BARE	8/2/93	EAR 93-103 (SRG 93-012/06). Completed.
3. Develop a test for the Dissolved Gas Analyzer using high dissolved gas concentrations representative of post-accident reactor coolant.	M.M. BARE	8/2/93	EAR 93-035 -- DEN response complete and being evaluated by System Engineering. - Evaluation Complete

POST ACCIDENT SAMPLING SYSTEM ACTION PLAN

<u>ACTIONS REQ'D TO ACCOMP. GOAL B (Cont):</u>	<u>RESPONSIBILITY</u>	<u>DUE DATE</u>	<u>COMMENTS</u>
4. Determine the operational constraints of the PASS.	M. M. BARE	9/10/93	SRG 93-012/02 - COMPLETE.
5. PASS relies on several systems to operate properly, such as Instrument Air, 120 VAC, etc. Determine whether the PASS meets the requirements of NUREG-0737 with respect to not relying on Isotopic Auxiliary systems to function.	C.H. FRITTS	12/23/93	Original commitments still valid. Complete 7/13/93.
6. SL-3, Primary Sample Cooler, is bypassed in the ACCIDENT mode of operation for the Reactor Coolant Dissolved Gas and High Pressure Coolant Sample Sequences only. Determine whether it is necessary to bypass SL-3.	R.J. MUELLER	9/1/93	Complete; ECN 93-267 issued to make change so that SL-3 is not bypassed. (See Action Item A.6.)
7. Intrinsic Germanium detectors have liquid N ₂ dewers. Determine whether radiation levels in AI-100 area are low enough, post-accident, to allow filling of the dewers on a routine basis.	R.G. EURICH	8/2/93	Completed per Memo PED-FC-93-2594. Must either keep N ₂ supply in AI-100 room or route a temporary N ₂ supply line from Corridor 26 through floor plug.
8. Complete design work for new Isotopic Analysis computer and supporting equipment (If C.3 is not approved).	R.J. MUELLER	Cancelled	ECN 92-295. Cancelled under the assumption that C.3 will be submitted and approved. Submittal has been received and approved.
9. Evaluate B&W Draft Proposal for PASS Program Participation by OPPD.	C.H. FRITTS	5/1/94	- complete - elected not to participate
10. PASS DBD has not been updated to reflect several system design changes. Perform detailed review of PASS DBD and revise/update as necessary. Additionally, close out PASS Design Basis Document Open Items.	R.G. EURICH	6/30/94	SRG 93-012/04. All mechanical open items closed. Three electrical items and one nuclear item will be closed by 6/30/94. - Complete - All open items closed.

POST ACCIDENT SAMPLING SYSTEM ACTION PLAN

<u>ACTIONS REQUIRED TO ACCOMPLISH GOAL C:</u>	<u>RESPONSIBILITY</u>	<u>DUE DATE</u>	<u>COMMENTS</u>
1. Our equipment and procedures do not conform to accuracy commitments made in response to NUREG-0737/RG 197. This difference needs to be resolved.	C.H. FRITTS/ R.W. SHORT	*	* Submittal has been mailed to NRC. This item will remain open to track formal approval by NRC. 3/24/94 submittal has been approved by NRC. Complete.
2. Review all NRC correspondence and CIDs concerning the PASS to determine whether previously made commitments are being adhered to.	C.H. FRITTS	6/30/93	Complete.
3. Isotopic Analysis equipment is obsolete and unreliable. Make NRC submittal to obtain relief from In-line reactor coolant and containment atmosphere isotopic analysis sequences (in lieu of B.8 above).	C.H. FRITTS/ R.W. SHORT	*	* Submittal has been mailed to NRC. This item will remain open to track formal approval by NRC. 3/24/94 submittal has been approved by NRC. Complete.
4. Evaluate CEOG Task 659, "PASS Requirements; Forwarding of NRC Approval," for possibility of deleting commitments to perform certain PASS sequences, to be included in the upcoming NRC submittal.	C.H. FRITTS	6/15/93	Completed 6/7/93. Does not provide any information which OPPD can use at this time.
5. Revise commitment to meeting all requirements of RG 197, Rev. 2, which was made in error in previous OPPD correspondence to the NRC.	C.H. FRITTS/ R.W. SHORT	*	* Submittal has been mailed to NRC. This item will remain open to track formal approval by NRC. 3/24/94 submittal has been approved by NRC. Complete.
6. Describe location and content of programs/procedures which fully satisfy Technical Specification 5.15.	C.H. FRITTS	6/30/93	Complete. Will be forwarded to Licensing with C.2 information.

POST ACCIDENT SAMPLING SYSTEM ACTION PLAN

<u>ACTIONS REQUIRED TO ACCOMPLISH GOAL D:</u>	<u>RESPONSIBILITY</u>	<u>DUE DATE</u>	<u>COMMENTS</u>
1. Develop a comprehensive Program Document for the PASS.	C.H. FRITTS	2/15/94	S.O. G-98 written and in the review process. <i>-Complete</i>
2. Develop PMOs and procedures which will run the PASS in the ACCIDENT mode and from various sample points on a regular frequency and include acceptance criteria. Additionally, review existing PMOs and revise as necessary to include acceptance criteria.	C.H. FRITTS	2/15/94	SRG 93-012/01; SRG 93-012/03. Complete.
3. Evaluate PASS equipment to determine if the appropriate level of preventative maintenance is being performed, and if all equipment which requires preventative maintenance is being maintained.	C.H. FRITTS	2/15/94	SRG 93-012/05. Complete.

NOTE: For original signatures, see PASS Action Plan issued June 1, 1993.

SUBMITTED BY: /s/ C. H. Fritts _____
System Engineer Date _____

APPROVED BY: /s/ K. R. Henry _____
Lead SYE/Supervisor - System Engineering Date _____

CONCURRENCE BY: /s/ J. P. Bobba _____
Maintenance Date _____

CONCURRENCE BY: /s/ R. L. Phelps by C. H. Fritts (per telecon) _____
DEN Date _____