VIRGINIA ELECTRIC AND POWER COMPANY

REVISIONS TO
SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES

Enclosed are recently revised pages to the Surry Power Station Emergency Plan Implementing Procedures. Please take the following actions in order to keep your manual updated with the most recent revisions.

EPIP-4.23 POST ACCIDENT SAMPLING OF REACTOR COOLANT

Remove and Destroy	Enter
Pages 1 of 14 through 14 of 14 of the procedure disregarding Attachment 1	Page 1 of 16 through 16 of 16 of the procedure disregarding Attachment 1 Dated 12-08-83

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VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.23	POST ACCIDENT SAMPLING OF REACTOR COOLANT (With 1 Attachment)	03 PAGE 1 of 16

PURPOSE

1. To collect a post accident sample of reactor coolant from the hot leg of Unit 1 OR Unit 2 Reactor Coolant Systems.

USER

Chemistry Team Leader AND Chemistry Team Member.

ENTRY CONDITIONS

1. Entry directed by Emergency Technical Director

OR

2. Entry directed by Station Emergency Manager

REVISION RECORD

REV. 00	PAGE(S):	Entire Procedure	DATE: 07-29-82
REV. 01	PAGE(S):	1, 13, 14	DATE: 02-24-83
REV. 02	PAGE(S):	Pages 1 of 14 through 14 of 14	DATE: 09-23-83
REV. 03	PAGE(S):	Pages 1 of 16 through 16 of 16	DATE: DEC 8 1983
REV.	PAGE(S):		DATE:
REV.	PAGE(S):		DATE:
REV.	PAGE(S):		DATE:

APPROVAL RECOMMENDED	APPROVED	DATE
W. L. Stewart, Jr. QC REVIEW E. L. Harrell	R. F. Saunders CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	DEC 8 1983

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.23	POST ACCIDENT SAMPLING OF REACTOR COOLANT (With 1 Attachment)	03
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

   a) By: _____

      Date: _____

      Time: _____

   NOTE: Only one reactor coolant sample may be obtained from this system.

2. VERIFY STATION SYSTEMS:

   a) Systems Operable

      1) Station Service Electrical System per OP-26

      2) Component Coolant System per OP-51

      3) Compressed Air Service System per OP-46

      4) Ventilation System per OP-21

      5) Radiation Monitoring System per OP-56

   a) IF NOT operable, request operations assistance to insure system operability

3. DESIGNATE SAMPLING PARTY:

   a) Chemistry team leaders

      AND

   b) Chemistry team members

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	VERIFY RWP:	
	a) RWP issued	a) IF NOT issued, request initiation of RWP.
5.	OBTAIN REQUIRED EQUIPMENT:	
	a) 2 adjustable wrenches	
	b) Extension wrench	
	c) Come-A-Long or equivalent	
	d) 5 gallon poly bottle	
	e) 10 ft. of 3/4" tygon tubing	
6.	DRESS OUT:	
	a) Have sample party dress out IAW RWP	
7.	OBTAIN SAMPLE ROOM RAD LEVEL:	
	a) RM-RMS-156, "Sample Area Monitor"	
8.	BRIEF SAMPLING PARTY:	
	a) Review sampling procedure	
	b) Review entry and exit routes	
	c) Review RWP requirements	
	1) Stay times 2) Protective clothing 3) Dosimetry 4) Respiratory equipment 5) H.P. monitoring	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

8. (CONTINUED)

d) Review cautions

1) High radiation levels
2) High sample activity level
3) High pressure sample
4) High temperature sample
5) Open valves slowly

9. NOTIFICATIONS:

a) Notify Station Emergency Manager sampling party is being dispatched

AND

Notify Shift Supervisor sampling party is being dispatched

10. DISPATCH SAMPLE TEAM:

a) Insure sample party has a copy of this procedure

NOTE: Refer to attachment 1 for system arrangement

11. PROCEED TO PRIMARY SAMPLE ROOM:

a) Monitor radiation levels

b) Follow preplanned routes

c) Leave rope at Aux. Bldg. entry Door.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	VERIFY SAMPLE COLLECTION CYLINDER CONNECTED:	
	a) Cylinder - IN SHIELDED "PIG"	a) IF NOT, place in "PIG"
	b) Quick Disconnect - CONNECTED	b) IF NOT, connect quick disconnect
	c) Vent valve 1-SS-237 - CLOSED	c) IF NOT, close valve 1-SS-237
	d) Vent plug on tank 2 - REMOVED	d) IF NOT, remove plug
13.	ENTER PRIMARY SAMPLE ROOM:	
	a) Observe radiation readings on RM-RMS-156 "Sample Room Monitor"	
14.	VERIFY DILUTION WATER - TK3:	
	a) Insure dilution water checklist on wall is updated	a) IF NOT updated, drain sampling tank AND Add 835 ml of DI water through funnel AND GO TO STEP 15
15.	VERIFY NITROGEN BOTTLE PRESSURE:	
	a) Open isolation valve 1-SS-241 on Nitrogen Bottle	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
15.	(CONTINUED)	
	b) Verify Nitrogen Bottle pressure GREATER THAN 200 PSIG	b) IF NOT, leave area AND initiate Nitrogen Bottle replacement AND GO TO step 16
16.	VERIFY VALVE LINE UP:	
	a) Insure following valves - CLOSED ____ 1-SS-229 ____ 1-SS-230 ____ 1-SS-233 ____ 1-SS-236 ____ 1-SS-238 ____ 1-SS-239 ____ 1-SS-240 ____ 1-SS-241 ____ 1-SS-242 ____ 1-SS-236 valve "K" ____ 1-SS-236 valve "L"	
	b) Insure following valve - OPEN ____ 1-SS-231	
17.	VENT AND DRAIN HOLDING TANK - TK1	
	a) Remove vent plug on TK1	
	b) Insure following valves - CLOSED ____ 1-SS-234 ____ 1-SS-235	

NUMBER	PROCEDURE TITLE	REVISION
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
17.	(CONTINUED)	
	c) Attach tygon tubing to 1-SS-234 AND Attach opposite end to 5 gallon poly bottle	
	d) Insure following valves - OPEN ____ 1-SS-234 ____ 1-SS-235	
	e) Drain until flow to 5 gallon poly bottle stops	e) IF NO flow detected GO TO Step 18
18.	ISOLATE HOLDING TANK:	
	a) Insure following valves - CLOSED ____ 1-SS-235 ____ 1-SS-234	
19.	DETERMINE UNIT TO BE SAMPLED:	
	a) IF UNIT 1 to be sampled GO TO NOTE prior to Step 20	a) IF UNIT 2 to be sampled GO TO NOTE prior to Step 21
	NOTE: Step 20 is for sampling Unit 1.	
20.	SAMPLE UNIT 1:	
	a) Insure control room valves - CLOSED ____ TV-SS-106A ____ TV-SS-106B	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

20. (CONTINUED)

b) Insure following valve CLOSED

____ 1-SS-228

c) Insure UNIT 1 sample line trip valve (solenoid valve back of sample room) - OPEN

____ HCV-SS-101D

d) Insure following valve - OPEN

____ 1-SS-233

e) Insure control room trip valves - OPEN

____ TV-SS-106A
____ TV-SS-106B

* *

CAUTION: Flow of high activity reactor coolant will commence when next steps are performed.

* *

f) Observe sample line pressure gage PI-SS-200

g) Carefully open following valve

____ 1-SS-229

AND

AT 20 PSIG on PI-SS-200 insure following valve - CLOSED

____ 1-SS-229

20. (CONTINUED)

h) Insure following valve - CLOSED

____ 1-SS-233

i) Insure following valves - OPEN

____ 1-SS-236 valve "I"

____ 1-SS-236 valve "J"

j) Observe sample pressure gage PI-SS-200

k) Cycle following valve

____ 1-SS-229

AND

AT 100 PSIG on PI-SS-200 insure following valve - CLOSED

____ 1-SS-229

AND

GO TO Step 22

NOTE: The following step is for sampling UNIT 2

21. SAMPLE UNIT 2:

a) Insure control room valves - CLOSED

____ TV-SS-206A

____ TV-SS-206B

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.23	POST ACCIDENT SAMPLING OF REACTOR COOLANT (With 1 Attachment)	03 PAGE 10 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

21. (CONTINUED)

b) Insure following valve - CLOSED

____ 2-SS-240

c) Insure UNIT 2 sample line trip valve (solenoid valve - back of sample room) - OPEN

____ HCV-SS-201D

d) Insure following valve - OPEN

____ 1-SS-233

e) Insure control room trip valves - OPEN

____ TV-SS-206A

____ TV-SS-206B

* *

CAUTION: Flow of high activity reactor coolant will commence when next steps are performed.

* *

f) Observe sample line pressure gage PI-SS-200

21. (CONTINUED)

g) Carefully open following valve

____ 1-SS-230

AND

AT 20 PSIG on PI-SS-200
insure following valve - CLOSED

____ 1-SS-230

h) Insure following valve - CLOSED
____ 1-SS-233

i) Insure following valves - OPEN

____ 1-SS-236 valve "I"

____ 1-SS-236 valve "J"

j) Observe sample pressure gage PI-SS-200

k) Cycle following valve

____ 1-SS-230

AND

AT 100 PSIG on PI-SS-200
insure following valve - CLOSED

____ 1-SS-230

22. ISOLATE AND TRANSFER CALIBRATED SAMPLE:

a) Insure following valves - CLOSED

____ 1-SS-236 valve "I"
____ 1-SS-236 valve "J"

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

22. (CONTINUED)

b) Insure following valves - OPEN

____ 1-SS-236 valve "K"

____ 1-SS-236 valve "L"

c) Verify valve 1-SS-238 - OPEN until pressure on sample bottle is appx. 50 PSIG

AND

Wait appx. one minute to complete transfer.

d) Open 1-SS-241 until pressure on regulator is approx. 50 psig

e) Insure following valves - CLOSED

____ 1-SS-238

____ 1-SS-236 valve "K"

____ 1-SS-236 valve "L"

23. DISCONNECT SAMPLE CYLINDER:

a) Use adjustable wrench or extension wrench if HP determines it is necessary

b) Disconnect quick disconnect

c) Lower lid onto sample "pig"

24. SURVEY SAMPLE PIG:

a) Survey sample "pig" to determine rad levels and hot spot locations

25. TRANSPORT PIT:

a) Unlock wheel brakes

b) Use preplanned exit route

c) Avoid hot spots on pig

d) Roll sample pig to Aux. Bldg. exit door

* *

CAUTION: The sample pig is extremely heavy and may present a hazard if allowed to roll down the ramp unrestrained. Use caution in lowering.

* *

26. LOWER PIG DOWN RAMP:

a) Use come-a-long or equivalent to lower sample pig down ramp

27. TRANSPORT PIG TO HOT LAB:

a) Roll pig to Chemistry Hot Lab

b) Place shielded sample pig in corner by the A.A.

28. RECORD SAMPLE DATE/TIME

a) Date_____

b) Time_____

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
29.	HAVE SAMPLE TRIP VALVES SHUT:	
	a) Notify Shift Supervisor that sampling completed	
	b) IF sampling Unit 1, have Control Room shut TV-SS-106A AND TV-SS-106B	a) IF sampling Unit 2, have Control Room shut TV-SS-206A AND TV-206B
30.	NOTIFICATIONS:	
	a) Notify following that sampling completed	
	1) Shift Supervisor	
	2) Station Emergency Manager	
31.	VERIFY RWP:	
	a) Request initiation of RWP to dilute sample	
	b) Dress out IAW RWP	
	c) Observe precautions and limitations noted in RWP	
32.	VENT SAMPLE BOMB:	
	a) Raise lid covering sample bomb to highest position	
	b) Ensure suction through AA vent	
	c) Attach vent hose to AA vent	
	d) Attach vent hose to sample bomb	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
32.	(CONTINUED)	
	e) Open sample bomb valve to vent pressure to hood	
	f) Remove vent hose from sample bomb	
33.	REMOVE SAMPLE FROM SAMPLE BOMB:	
	a) Attach appx. 6" micro-bore tubing to syringe needle	
	b) Carefully insert tubing into sample bomb and withdraw 1 ml of sample	
	c) Expel 1 ml sample into marinelli beaker and mix well with 999 mls DI water	
34.	SAMPLE ANALYSIS:	
	a) Label sample beaker as to: PASS sample, date, time of sample, final dilution, actual mls sample used	
	b) Transport diluted sample to HP count room	
	c) Have HP count sample	c) IF sample will not count, consider initiation of EPIP-4.26, High Activity Sample Analysis, upon termination of procedure.

35. TERMINATE EPIP-4.23:

a) COMPLETED BY: _____

TIME: _____

BY: _____

b) Forward completed EPIP-4.23 and other applicable records to secretary SNSOC

END

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

December 14, 1983

Mr. James P. O'Reilly
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Serial No. 711
NO/REB/jmj:LM1-031
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Dear Mr. O'Reilly:

REVISIONS TO
SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES

Pursuant to 10CFR 50, Appendix E, paragraph 50.54(q), revisions to the Surry Power Station Emergency Plan Implementing Procedures, numbers, and subjects as listed on enclosures are submitted.

Sincerely,

W. L. Stewart

Enclosures

cc: [redacted] (2)

w/o Enclosures

cc: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1

Mr. D. J. Burke - (NRC - Surry)

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