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THE FOLLOWING CHANGES HAVE OCCURRED TO THE HARDCOPY OR ELECTRONIC MANUAL ASSIGNED
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114 - 114 - CHEMISTRY COORDINATOR: EMERGENCY PLAN-POSITION SPECIFIC PROCEDURE

REMOVE MANUAL TABLE OF CONTENTS DATE: 06/24/2003

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CATEGORY: PROCEDURES TYPE: EP

ID: EP-PS-114

REMOVE: REV:9

ADD: REV: 10

REMOVE: PCAF 2002-1320 REV: N/A

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A045

PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC		NUCLEAR DEPARTMENT PROCEDURE	
<p align="center">TSC CHEMISTRY COORDINATOR: Emergency Plan Position-Specific Instruction</p>			<p align="center">EP-PS-114 Revision 10 Page 1 of 3</p>
<p>QUALITY CLASSIFICATION: () QA Program (X) Non-QA Program</p>		<p>APPROVAL CLASSIFICATION: () Plant () Non-Plant (X) Instruction</p>	
<p align="center">EFFECTIVE DATE: <u>6-26-2003</u></p> <p align="center">PERIODIC REVIEW FREQUENCY: <u>2 Years</u></p> <p align="center">PERIODIC REVIEW DUE DATE: <u>6-26-2005</u></p>			
<p>RECOMMENDED REVIEWS:</p>			
Procedure Owner:		<u>Nuclear Emergency Planning</u>	
Responsible Supervisor:		<u>Primary Chemistry Coordinator</u>	
Responsible FUM:		<u>Supv.-Nuclear Emergency Planning</u>	
Responsible Approver:		<u>Primary Emergency Director</u>	

CHEMISTRY COORDINATOR: Emergency Plan-Position Specific Procedure

WHEN: The Technical Support Center (TSC) is activated, if not already contacted by Chemistry personnel

HOW NOTIFIED: Paged

REPORT TO: Technical Support Coordinator

WHERE TO REPORT: TSC

OVERALL DUTY:

Coordinate activities of Chemistry personnel to make sure necessary information on plant status is accurate and available.

MAJOR TASKS:	TAB:	REVISION:
Get plant status for both units.	TAB A	1
If there will be Chemistry involvement, make sure you have adequate Chemistry support.	TAB B	4
If indicated, direct setup of Chemistry Lab(s).	TAB C	2
Consider what samples will be required.	TAB D	4
If reactor water sample(s) is/are required, decide where and how to collect the sample(s).	TAB E	5
If containment gas is required, decide where and how to collect the sample(s).	TAB F	2
Decide where and how to collect Suppression Pool samples.	TAB G	1
Perform of Liquid Release Calculations	TAB H	8
Dispatch teams, evaluating and communicating data received.	TAB I	4
Decide when and where to collect vent samples.	TAB K	0

SUPPORTING INFORMATION:

TAB:

Emergency Telephone Instructions	TAB 1
Emergency Organization	TAB 2
Logkeeping	TAB 3
Emergency Facility Form Flow	TAB 4
Intentionally Blank	TAB 5
Emergency Forms	TAB 6
o Emergency Notification Report	
o Protective Action Recommendation Form	
PASS Sample Locations For Gas Samples	TAB 7
Liquid Discharge Data Sheets	TAB 8
Intentionally Blank	TAB 9

REFERENCES:

SSES Emergency Plan

NUREG-0654, Planning Standards and Evaluation Criteria

NUREG-0731, Guidelines for Utility Management Structure and Technical Resources,
September 1980

T.S. 5.5.3

MAJOR TASK:

If there will be Chemistry involvement, make sure you have adequate Chemistry support.

SPECIFIC TASKS:

HOW:

1. Assess what Chemistry staff involvement will be.

1a. Consider:

- (1) Assignments already made and requests received.
- (2) Staffing needs for unaffected unit.

NOTE:

Consider additional staffing needs if offsite Chemistry Lab is likely to be set up. (Reference TAB C)

2. Call a Chemistry Foreman.

2a. Brief Foreman on plant status and staffing needs.

2b. Call Foreman in.

2c. Direct Foreman to call out needed personnel.

NOTE:

Minimum staffing requirements are two Chemistry Technicians. (one on-shift and one within 60 minutes).

3. If Foreman is not available or you need personnel immediately, call the Chem Techs and/or additional staff directly.

4. Contact Chemistry Supervisor.

5. Contact any consultants needed for additional support.

6. Consider long-term staffing needs (including turnover).

MAJOR TASK:

If reactor water sample(s) is/are required, decide where and how to collect the sample(s).

SPECIFIC TASKS:

HOW:

- | | |
|--|--|
| 1. Decide where to take the sample(s) based on available conditions. | 1a. Contact the Technical Support Coordinator or the Operations Coordinator to obtain plant system information to aid in the decision on where to obtain the samples. |
| 2. If conditions allow, direct sample(s) be taken from the Reactor Building Sample Station. | 2a. Before directing sampling at this location, make sure these considerations have been made:

(1) Dose/projected dose.

(2) Area conditions (radiation levels) on the way to the sampling location.

(3) Access available to the Reactor Building. |
| 3. If conditions permit sampling at the Reactor Building Sample Station, determine if you'll have them taken from Reactor Water Cleanup. | 3a. Before directing sampling from Reactor Water Cleanup, consider whether these conditions have been met:

(1) Is Reactor Water Cleanup in service?

(2) Can Operations place the system in service?

CAUTION:
Area radiation levels are likely to increase dramatically after flow is established. |
| 4. If Operations places RWCU in service, reassess accessibility to the Reactor Building Sample Station. | 4a. Check with Health Physics and available Area Radiation Monitor data. |

SPECIFIC TASKS:	HOW:
5. If conditions for sampling from Reactor Water Cleanup are unsatisfactory, consider conditions at Recirculation.	5a. Conditions at Recirculation should be similar to those needed for sampling at Reactor Water Cleanup: (1) Is Recirculation in service? (2) Has flow been established, or can flow be established by opening HV143F019 and HV143F020 (HV-243-F019 and HV-243-F020)? CAUTION: Area rad levels are likely to increase dramatically after flow is established.
6. If Operations opens HV-143-F019 and HV-143-F020 (HV-243-F019 and HV-243-F020), reassess accessibility to Reactor Building Sample Station.	6a. Check with Health Physics and available Area Radiation Monitor data.
7. If sampling at these locations is prohibited, recommend going to RHR for sampling.	7a. Consider if these conditions have been met. (1) RHR is in shutdown cooling. (2) Determine which loop is in service. (3) Necessary valves SV-151-F079A(B) and SV-151-F080A(B) (SV-251-F079A(B) and SV-251-F080A(B)) have been opened to establish flow. (4) Projected dose assessment after valves are opened is acceptable.

SPECIFIC TASKS:

HOW:

8. If the Reactor Building is not available, go to the Post Accident Sampling System (PASS).
- 8a. Determine reactor pressure:
- (1) If > 109 psi, obtain a jet pump sample.
- (2) If < 109 psi, obtain a RHR sample.
- 8b. RHR must be in the same operating mode for at least thirty minutes prior to sampling.
- 8c. Samples may be collected from RHR in shutdown cooling.
- 8d. During a Loss of Coolant Accident (LOCA) with RHR in Low Pressure Core Injection (LPCI) mode, samples may be obtained from RHR. Mixing time necessary for representative samples is dependent upon accident scenario (e.g., size of break).
9. Determine what analysis will be required.
- 9a. Using the chart below, decide what samples are needed based on determination.

DETERMINATION	REQUEST THIS SAMPLE
Core Damage estimate	Small Volume
Isotopic	Small Volume
Chlorides	Large Volume
pH	Small Volume
Boron	Small Volume
Hydrogen and Oxygen	Dissolved Gas

MAJOR TASK:

Perform liquid release calculations

SPECIFIC TASKS:

HOW:

1. If there is an unusual liquid release, monitor the release and perform liquid release calculations until the EOF is activated and the Field Team director is available.

NOTE:

Technical Requirements limits are ten times the effluent concentrations for Unrestricted areas as listed in Appendix B, Table 2, 10 CFR20.1001-20.2402.

HELP

Liquid Discharge Data Sheets
See TAB 8

2. Gather the applicable liquid release and sampling information.

- 2a. This information should include:

- (1) Time release started
- (2) Time release stopped (if applicable)
- (3) Flow Rate of Waste Stream into the Cooling Tower blowdown line.
- (4) Cooling tower blowdown discharge to the river.
- (5) Spray pond release rate (if applicable)
- (6) Spray pond water elevation (if applicable)
- (7) Radionuclide(s) and activities in the release
- (8) River depth (at river intake or Env. Lab.)

SPECIFIC TASKS:

HOW:

-
- | | |
|---|--|
| 3. Review results from previous analyses for errors if samples have already been obtained and analyzed. | (9) Sample locations
(10) Previous liquid release calculations
(11) Notifications made |
| 4. Dispatch a Chemistry Team to collect samples from on-site sampling locations. | <p>NOTE:
Ensure all samples are saved and appropriately labeled.</p> 4. Direct team to collect sample(s):
(1) Automatic composite sampler located outside the North Gate House. |
| <u>OR</u> | |
| 5. Direct the Project Director - SSES Environmental Laboratory to obtain samples from the Susquehanna River, if desired, to confirm the release. | <p>(2) At another appropriate location, depending on actual location and time of release.</p> <p>NOTE:
Analysis results for river water samples are not used in liquid release calculations.</p> 5a. Provide the Project Director - SSES Environmental Laboratory with an estimate of the earliest possible time for the beginning of the release. Together, determine the appropriate location(s) downriver to sample. |
| 6. Analyze samples onsite or request that the Radiation Protection Coordinator (RPC) arrange to have the samples transported to an offsite radioanalytical laboratory. | 6a. Consider sending river water samples to Teledyne Isotopes or another offsite radioanalytical laboratory if sufficient analysis sensitivity may be impractical to achieve onsite. |

SPECIFIC TASKS:

HOW:

7. Notify the appropriate Manager if there is an unusual liquid release AND if such a release exceeds Technical Requirements limits.

7a. If the TSC has not been activated, inform the Shift Manager of required notifications (Public Information Manager and as specified in EP-AD-000-126, PAR Liquid Releases).

7b. If the TSC has been activated, inform the RPC of required notifications (Public Information Manager and as specified in EP-AD-000-126, PAR Liquid Releases).

HELP

Telephone numbers are located in
"EMERGENCY TELEPHONE DIRECTORY"

NOTE:

**NO PROTECTIVE ACTION
RECOMMENDATIONS SHOULD BE MADE
TO THE DANVILLE WATER AUTHORITY.**

HELP

Liquid Discharge Data Sheets
See TAB 8

Perform a liquid release calculation to facilitate a PAR determination. Approved computer program on s:\Liquid Discharge Data Program may be used for calculations.

8a. Obtain the results of the gamma analysis for a sample of the water being released into the Susquehanna river.

8b. Determine which of the fifteen radionuclides listed in parts I, II and III of the "Liquid Discharge Data Sheet" have been identified in the sample.

8c. Enter the activity concentrations ($\mu\text{Ci/ml}$), for these radionuclides in the appropriate table in the applicable part of the "Liquid Discharge Data Sheet." Enter zeros for the activity concentrations of the listed radionuclides that were not identified in the sample.

SPECIFIC TASKS:

HOW:

-
- | | | | |
|-----|--|-----|--|
| 9. | Notify the appropriate Manager when the diluted sum of the EC fractions at Danville exceeds 0.85. | 8d. | Determine the EC fraction for each individual radionuclide identified in the sample using either Part I, II or III of the "Liquid Discharge Data Sheet." |
| | | 8e. | Determine the diluted sum of the EC fractions at Danville using Part IV of the "Liquid Discharge Data Sheet." |
| 9. | Notify the appropriate Manager when the diluted sum of the EC fractions at Danville exceeds 0.85. | 9a. | If the TSC <u>has not been</u> activated, inform the Emergency Director in the Control Room. |
| | | 9b. | If the TSC <u>has been</u> activated, inform the Radiation Protection Coordinator. |
| | | 9c. | If the EOF <u>has been</u> activated, inform the Field Team Director. |
| 10. | Convey results of liquid release calculations to appropriate Manager. | | |
| 11. | Inform the Field Team Director, when the EOF is manned, of any recommendations that have been made to DEP/BRP. | | |
| 12. | Inform the Field Team Director of the need to perform necessary liquid release calculations. | | |