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104 - 104 - RADIATION PROTECTION COORDINATOR (RPC): EMERGENCY PLSN-POSITION  
SPECIFIC PROCEDURE

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CATEGORY: PROCEDURES TYPE: EP

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A045

# PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC		NUCLEAR DEPARTMENT PROCEDURE	
<b>RADIATION PROTECTION COORDINATOR:</b> Emergency Plan-Position Specific Procedure			EP-PS-104 Revision 17 Page 1 of 4
<b>QUALITY CLASSIFICATION:</b> <input type="checkbox"/> QA Program <input checked="" type="checkbox"/> Non-QA Program		<b>APPROVAL CLASSIFICATION:</b> <input type="checkbox"/> Plant <input type="checkbox"/> Non-Plant <input checked="" type="checkbox"/> Instruction	
EFFECTIVE DATE: <u>6-26-2003</u> PERIODIC REVIEW FREQUENCY: <u>2 Years</u> PERIODIC REVIEW DUE DATE: <u>6-26-2005</u>			
<b>RECOMMENDED REVIEWS:</b> All			
Procedure Owner: <u>Nuclear Emergency Planning</u> Responsible Supervisor: <u>Radiation Protection Manager</u> Responsible FUM: <u>Supv.-Nuclear Emergency Planning</u> Responsible Approver: <u>Vice President-Nuclear Operations</u>			

**RADIATION PROTECTION COORDINATOR (RPC):**

Emergency Plan-Position  
Specific Procedure

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**WHEN:** Technical Support Center (TSC) is activated  
**HOW NOTIFIED:** Paged, phone backup  
**REPORT TO:** TSC Emergency Director  
**WHERE TO REPORT:** TSC

**OVERALL DUTY:**

Quantify and assess radiological conditions both on- and off-site, then recommend emergency classification and protective actions.

<b><u>MAJOR TASKS:</u></b>	<b><u>TAB:</u></b>	<b><u>REVISION:</u></b>
Obtain briefing on the emergency.	TAB A	4
Activate TSC Health Physics group and, if needed, request EOF activation.	TAB B	5
Make sure initial habitability is assessed.	TAB C	8
Take inventory of information required to analyze the radiological situation.	TAB D	6
Brief Emergency Director in the TSC on what you know about radiological conditions and Health Physics staff.	TAB E	1
Assess emergency classification and confirm or recommend changes to the Emergency Director.	TAB F	6
Assess and recommend protective actions to the Emergency Director.	TAB G	10
Communicate with DEP/BRP.	TAB H	5
Continue assessing radiological situation, updating Emergency Director, TSC staff, and Health Physics staff.	TAB I	10
Evaluate and approve emergency exposure extensions and/or revise RWP's.	TAB J	4

<b>MAJOR TASKS:</b>	<b>TAB:</b>	<b>REVISION:</b>
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Manage turn over to the next shift.

TAB K

0

Manage vehicle decontamination.

TAB L

1

Transfer Back Calculations, and responsibility  
for DEP/BRP communications to the EOF.

TAB M

4

Determine if there is a non-routine  
Radiological Release in Progress.

TAB N

0

**SUPPORTING INFORMATION:**

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Emergency Organization	TAB 2
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• Protective Action Recommendation Form	
• Emergency Exposure Extension Request	
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**REFERENCES:**

SSES Emergency Plan

NUREG-0654, Planning Standards and Evaluation Criteria

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

SP-00-308, Emergency Medical Response

**MAJOR TASK:**

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Obtain briefing on the emergency.

**SPECIFIC TASKS:**

**HOW:**

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- |   |   |
|---|---|
| <p>1. Go to the TSC and talk with Emergency Director or Operation Coordinator and HP II Dose Calculator.</p>                  | <p>1a. Key questions might include:</p> <ul style="list-style-type: none"><li>(1) Is there a release?</li><li>(2) Status of OSCAR and other Field Monitoring Teams?<br/>(Dispatch, if necessary.)</li><li>(3) Are on-shift Health Physics Technicians available? in Control Room?</li><li>(4) Get some indication from Emergency Director about what the plant's radiological status is. Consider:<ul style="list-style-type: none"><li>(a) Indication of fuel damage.</li><li>(b) High rad areas in plant.</li><li>(c) Accident type.</li><li>(d) Current met data.</li><li>(e) Plume pathway.</li><li>(f) Release data.</li><li>(g) ARMs.</li></ul></li></ul> |
| <p>2. Inform Emergency Director and Administrative Coordinator of your arrival.</p>   |   |
| <p>3. Determine need or status of additional personnel such as Health Physics management, technicians, or EOF responders.</p> | <p>3a. Discuss manpower requirements with the Health Physics Specialist, (Health Physics Duty Foreman).</p> <p><b>NOTE:</b><br/>Minimum staffing requirements are ten Health Physics Technician qualified personnel.</p> <p>3b. Request the Health Physics Specialist to call-out additional Health Physics support, as needed.</p>   |
| <p>4. Obtain copies of any Protective Action Recommendation Forms.</p>  |   |
| <p>5. Determine the status of any communications to DEP/BRP.</p>  | <p>5. Make sure DEP/BRP radiological is notified approximately every 30 minutes.</p>  |

**MAJOR TASK:**

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Activate TSC Health Physics group and, if needed, request EOF activation.

**SPECIFIC TASKS:**

**HOW:**

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1. Check status of people who work for you.

- 1a. Look for whether they are:

- (1) In TSC?
- (2) Through their setup steps?
- (3) Doing their jobs?  
(Especially OSCAR.)

- 1b. Find out any relevant information they have.

- 1c. Determine that the following are present or accounted for:

- (1) HP II Dose Calculator.
- (2) OSCAR. (HP Tech 1)
- (3) TSC Dose Calculator.
- (4) Health Physics Specialist.
- (5) Health Physics Radioman.
- (6) HPN Communicator.
- (7) Other Field Monitoring Team personnel.

**NOTE:**

Only the RPC is required for TSC Activation.

**NOTE:**

The following personnel are required to report to the TSC within 60 minutes. they are not required for TSC activation:

- Two Rad Monitoring Personnel  
(Report to West Building)
- Three HP Technicians
- 1 HP Tech-OSCAR
- HP Specialist

The following personnel are required to report to the TSC within 90 minutes:

Four HP Technicians.

**SPECIFIC TASKS:**

**HOW:**

**HELP**

**Emergency Organization  
See TAB 2**

- |    |  |     |  |
|----|--|-----|--|
| 2. | Brief TSC Health Physics staff on what you learned from the Emergency Director.          | 1d. | Call-out an HPN Communicator.<br><b>NOTE:</b><br>Refer to on-call master list for phone numbers.   |
| 3. | Ensure set-up of in-plant team preparation area.   | 1e. | Until the arrival of the HPN Communicator insure HPN Communications occur.   |
| 4. | Provide support, when required, to the "EMERGENCY MEDICAL RESPONSE, SEARCH/RESCUE TEAM." | 2a. | Specifically, you might include:<br>(1) Rad conditions in plant.<br>(2) If there is accountability.<br>(3) Accident type.<br>(4) Any release.<br>(5) Status of supplemental crews. |
|    |  | 3a. | Verify this with Health Physics Specialist.  |
|    |  | 4a. | Reference SP-00-308 (Emergency Medical Response).  |



**MAJOR TASK:**

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Make sure initial habitability is assessed.

**SPECIFIC TASKS:**

**HOW:**

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1. Check that initial habitability is assessed in the TSC, Control Structure, Chem Lab In-plant Team Staging Area and Accountability Areas.

- 1a. Upon TSC activation, assess habitability based on:

- (1) CREOASS rad and chlorine monitors.

**NOTE:**

Chem Lab ventilation has no filters or recirculation system for airborne/chlorine protection.

- (2) TSC rad Conditions.  
(3) In-plant ARM/CAMS.  
(4) SPING and wind direction.

2. See that initial habitability is assessed at other inhabited areas if warranted by radiological conditions.

- 2a. Consider habitability at other inhabited areas such as:

- (1) North Gate house.  
(2) South Gate house.  
(3) West Building.  
(4) Energy Information Center.  
(5) Nuclear Learning Center.  
(6) Ecology III.  
(7) White House.  
(8) Sewage Treatment Plant.  
(9) Access Processing Facility.  
(10) Peach Stand.  
(11) Vehicle Maintenance Shed.  
(12) Security Firing Range.

- 2b. Provide guidance as needed.

- 2c. Consider both radiological and non-radiological, (for example, chlorine), conditions.

- 2d. Consider mobilizing (remote) ARM's or CAM's to onsite habitability areas.

**SPECIFIC TASKS:**

**HOW:**

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3. When required, check habitability of the Offsite Chemistry Lab located in the West Building.

- 3a. Assess habitability of the offsite lab when notified by chemistry that samples from the site are to be taken there for analysis.

**MAJOR TASK:**

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Take inventory of information required to analyze the radiological situation.

**SPECIFIC TASKS:**

**HOW:**

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1. Evaluate offsite radiological conditions.

- 1a. Review available data such as:

- (1) Valid release rates (airborne and liquid).
- (2) Field measurements.
- (3) Meteorological data.
- (4) Dose calculations.
- (5) Affected sectors.

**NOTE:**

"White" PICSY data is an indication of unreliable data. It may be normal and acceptable due to low or no flow in the SPING Monitor. It may also indicate a release exceeding the range of the instrument or an indication of instrumentation or computer interface problems.

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**HELP**

**TSC Dose Assessment Flowchart**  
**See TAB 16**

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- 1b. Use the default Noble Gas to Iodine ratio of 1,000 and the default Noble Gas to Particulate Ratio of 10,000 until Chemistry vent data is available.

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**HELP**

**TSC Dose Assessment Flowchart**  
**See TAB 16**

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- 1c. If low confidence (white) PICSY data exists:

- (1) If data is suspect, consult with Operations or Engineering to determine if condition is normal.

**SPECIFIC TASKS:**

**HOW:**

- (2) Use appropriate alternate data such as grab sample (vent, PAVSS, HP air samples) results in Forward Calculation.

**HELP**

**TSC Dose Assessment  
Flowcharts  
See TAB 16**

- 2. Evaluate onsite radiological conditions.

- 2a. Review available data such as:
  - (1) ARMs.
  - (2) Containment integrity.
  - (3) Containment high rad monitor.
  - (4) Liquid release.
  - (5) CAM's.
  - (6) INDIA Team's survey data.
  - (7) HVAC status/conditions.
  - (8) Status of turbine building doors.
  - (9) Status of blow-out panels.

**MAJOR TASK:**

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Assess emergency classification and confirm or recommend changes to the  
Emergency Director.

**SPECIFIC TASKS:**

**HOW:**

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1. Quantify available radiological release  
information.

1a. Quantify both airborne and/or liquid  
releases.

2. Classify conditions using matrix.

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**HELP**

**Emergency Classification**  
**See TAB 6**

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3. Recommend any changes in  
classification to the Emergency  
Director.

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**HELP**

**TSC Dose Assessment Flowchart**  
**See TAB 16**

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**MAJOR TASK:**

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Assess and recommend protective actions to the Emergency Director.

**SPECIFIC TASKS:**

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**HOW:**

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1. Assess radiological status of plant and releases.

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**HELP**

**SSES Contamination Response Plan  
See TAB 4**

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**HELP**

**Public Protective Action Recommendation  
Guide  
See TAB 7**

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2. If a liquid release has occurred which exceeds Technical Requirements Manual Limits, notify the Danville Water Authority, Public Information Manager and DEP/BRP.

**NOTE:**

**Do not make any protective action recommendations directly to the Danville Water Authority.**

3. If a liquid release has occurred for which the diluted sum of the EC fractions at Danville exceeds 0.85, recommend protective actions for drinking water.

- 3a. Notify the ED that a Protective Action Recommendation is required.

4. Evaluate protective action alternatives.

- 4a. In evaluating protective actions, consider:
- (1) Reducing projected release time based on weather conditions, total inventory, or damage control measures.
  - (2) Do not react on one piece of information until it can be verified to be correct.
  - (3) Impact of liquid releases on Danville Water Authority.

**SPECIFIC TASKS:**

**HOW:**

4b. When a Site Evacuation is initiated, discuss notification of the Learning Center and occupied buildings in the Exclusion Zone with the Security Coordinator and Emergency Director.

(1) Building to be notified, if occupied, are:

\_\_\_ SSES Learning Center  
\_\_\_ Access Processing Facility  
\_\_\_ Warehouse #2  
\_\_\_ 500 KV Switchyard  
\_\_\_ SSES Garage

(2) Consider sending extra staff, (example: Chemistry Tech, Maintenance, Operations or OSCAR), with a bull horn to notify these facilities of Site Evacuation.

**NOTE:**

Two bull horns are located in the Security Coordinator's desk. One is located in the OSCAR van.

**NOTE:**

Gate #10 access road will remain manned by Security. RMS Units #4 & #5 in the ENE and E section are conservatively representative of their location.

(3) Notify the TSC Security Coordinator to issue emergency dosimetry to each Security Officer manning the Gate #10 access road.

**SPECIFIC TASKS:**

**HOW:**

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4c. Upon call for a site evacuation, discuss notification of personnel inside the Emergency Planning Boundary.

- (1) Dispatch an individual with a bull horn and vehicle to traverse the Emergency Planning Boundary announcing, "Attention all personnel, an evacuation of PPL property has been ordered and you are requested to leave immediately."

**NOTE:**

Two bull horns are located in the Security Coordinator's desk. Another is available in the "OSCAR" van.

- (2) Consider using 'extra' staff, (Chem. Tech, Maintenance, or Ops personnel, OSCAR, if available), to support this activity. Copies of maps outlining the Emergency Planning Boundary are available in the Radiation Protection Coordinator's desk.

4d. Evacuate the Security Officers manning the Gate #10 access road when a Public Airborne Release PAR is made.

- (1) Request an evacuee to remove the area TLDs from the Gate #10 facilities.
- (2) Record in the log the individual who possess these dosimeters.

5. Recommend changes in protective action.



**SPECIFIC TASKS:**

**HOW:**

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6. Assess if a protective action recommendation beyond 10 miles is appropriate.

- 6a. Perform dose projection estimates for distances greater than 10 miles.
- 6b. Consult with Operations and Technical Support Coordinator to verify that dose projections are consistent with plant conditions.
- 6c. Insure that PAR's have been made for distances up to 10 miles.
- 6d. Recommend a PAR rounding up the distance to the nearest 5 mile increment until dose projections are less than 1 REM TEDE or 5 REM TEDE.

**MAJOR TASK:**

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Communicate with DEP/BRP.

**SPECIFIC TASKS:**

**HOW:**

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1. Make sure DEP/BRP radiological is notified approximately every 30 minutes.

- 1a. Complete and transmit the Protective Action Recommendation Form.

**HELP**

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**Emergency Forms  
See TAB 12**

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**MAJOR TASK:**

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Continue assessing radiological situation, updating Emergency Director, TSC staff, and Health Physics staff.

**SPECIFIC TASKS:**

**HOW:**

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- |   |   |
|---|---|
| <p>1. Attend TSC briefing and provide radiological status.</p>                                    | <p>1a. Give the status of the following items at the briefing:</p> <ul style="list-style-type: none"><li>(1) Current radiological release status and Dose Projections.</li><li>(2) Current and forecast weather conditions.</li><li>(3) Field monitoring team locations, current radiological information, and Real Time Monitoring System data.</li><li>(4) In-plant radiological conditions.</li><li>(5) Protective action(s) implemented or under consideration.</li><li>(6) Provide recommendations for actions to be taken to mitigate the effects of any release, for example:<ul style="list-style-type: none"><li>• Initiate water spray to provide for Iodine scrubbing.</li><li>• Temporary coverings over blowout panels.</li><li>• Fire hose water spray to quench steam.</li></ul></li></ul> |
| <p>2. Periodically brief Health Physics staff and receive updates from them.</p>                  |   |
| <p>3. Perform frequent on-going assessment of radiological situation both offsite and onsite.</p> |   |
| <p>4. Periodically perform general HP operation assessment.</p>                                   | <p>4a. Verify form flows, board is being maintained, contamination controls in place, and that staffing is adequate.</p>  |

**SPECIFIC TASKS:**

**HOW:**

5. Provide information to Ops Coordinator on rad releases and projected doses to the public for use by Control Room personnel.

- 5a. Notify Operations Coordinator if doses at the EPB are projected to exceed **1 rem TEDE or 5 rem Thyroid CDE**. Control Room needs radiological data to evaluate entry conditions and action levels for EOP procedures. These procedures require operator actions such as rapid depressurization based on projected doses.

**NOTE:**

These procedures also require that projected doses be determined when containment venting is needed.

- 5b. Discuss projection time with Ops Coordinator. (This may differ from the default projection time being used in the dose projection model.) Consider the following:

- (1) Prognosis of event.
- (2) Time to cooldown to <200 deg.
- (3) Duration & type of release.
- (4) Weather forecasts.
- (5) Protective measures already implemented.
- (6) Release pathway - possible filtration and/or monitoring.

6. Continue to evaluate the current PAR and recommend revising the PAR to the Emergency Director based on increasing dose levels.

**MAJOR TASK:**

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Evaluate and approve emergency exposure extensions and/or revise RWPs.

**SPECIFIC TASKS:**

**HOW:**

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1. Approve emergency extensions.

- 1a. Direct personnel to sign-in on the appropriate Emergency Plan '8000' RWP.
- 1b. Approve emergency dose extensions as warranted.

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**HELP**

PPL Emergency Personnel Dose  
Assessment and PAR Guide  
See TAB 8

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**HELP**

Emergency Exposure Extension  
See TAB 11

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2. Evaluate anticipated or actual emergency exposures.

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**HELP**

PPL Emergency Personnel Dose  
Assessment and PAR Guide  
See TAB 8

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- 2a. The Health Physics Specialist will consider the use of KI and issuance once approved.
- 2b. The Health Physics Specialist will evaluate emergency exposures prior to approval.
- 2c. The RPC shall assess emergency exposures which may have occurred in excess of station limits.

**SPECIFIC TASKS:**

**HOW:**

3. Evaluate need for revision of '8000' series RWPs and/or provision of additional radiological controls information.

**NOTE:**

RWP 8000, 8001 and 8002 provide controls for INDIA, OSCAR and Field Monitoring teams, respectively.

- 3a. As changes in plant conditions warrant, evaluate the need to revise '8000' series RWPs.
- 3b. Ensure necessary changes to RWPs are implemented.
- 3c. Respond as appropriate to requests from EOF Dose Assessment staff for occupational exposure control information.

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**MAJOR TASK:**

Determine if there is a non-routine Radiological Release in Progress.

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**SPECIFIC TASKS:**

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**HOW:**

1. Determine if there is a non-routine Radiological release in progress.

- 1a. There is a release in progress if ANY of the following are true:

- (1) Any release rates above Technical Specifications or Technical Requirements Manual limits, OR
- (2) Entry into the Emergency Plan for the listed EALs:
  - 3 fuel Clad Degradation
  - 15 Radiological Effluents
  - 17 Spent Fuel Related Incident
  - 18 Steam Line Break
- (3) Any radiological release to the environment, detected by effluent monitors or environmental monitoring, above normal levels and is attributable to a declared event, OR

**NOTE:**

Normal levels are the highest reading in the last 24 hours prior to the emergency, excluding the current peak value.

- (4) If the Shift Manager/ED/RM has reason to believe that an Unmonitored release is in progress even though plant indications are otherwise normal, OR
- (5) Entry into the E Plan under EAL 21 Dry Fuel Storage or EAL 16 Security Event, AND the Dry Storage Cask has been breached.

**SPECIFIC TASKS:**

**HOW:**

2. If there is a non-routine Radiological release in progress, ensure performance of the following actions.

(6) Initiation of SBGT System due to Radiological release.

- 2a. Provide that information to the Emergency Director and TSC Communicators to transmit the information to offsite agencies.
- 2b. Direct Health Physics personnel to initiate dose calculations and field monitoring.