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TO: ~~GEN LACH*ROSE M~~ 10/31/2003
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THE FOLLOWING CHANGES HAVE OCCURRED TO THE HARDCOPY OR ELECTRONIC MANUAL ASSIGNED
TO YOU:

101 - 101 - EMERGENCY DIRECTOR (ED)-TSC EMERGENCY PLAN-POSITION SPECIFIC PROCEDURE

REMOVE MANUAL TABLE OF CONTENTS DATE: 10/27/2003

ADD MANUAL TABLE OF CONTENTS DATE: 10/30/2003

CATEGORY: PROCEDURES TYPE: EP

ID: EP-PS-101

REPLACE: REV:19

REPLACE: REV:19

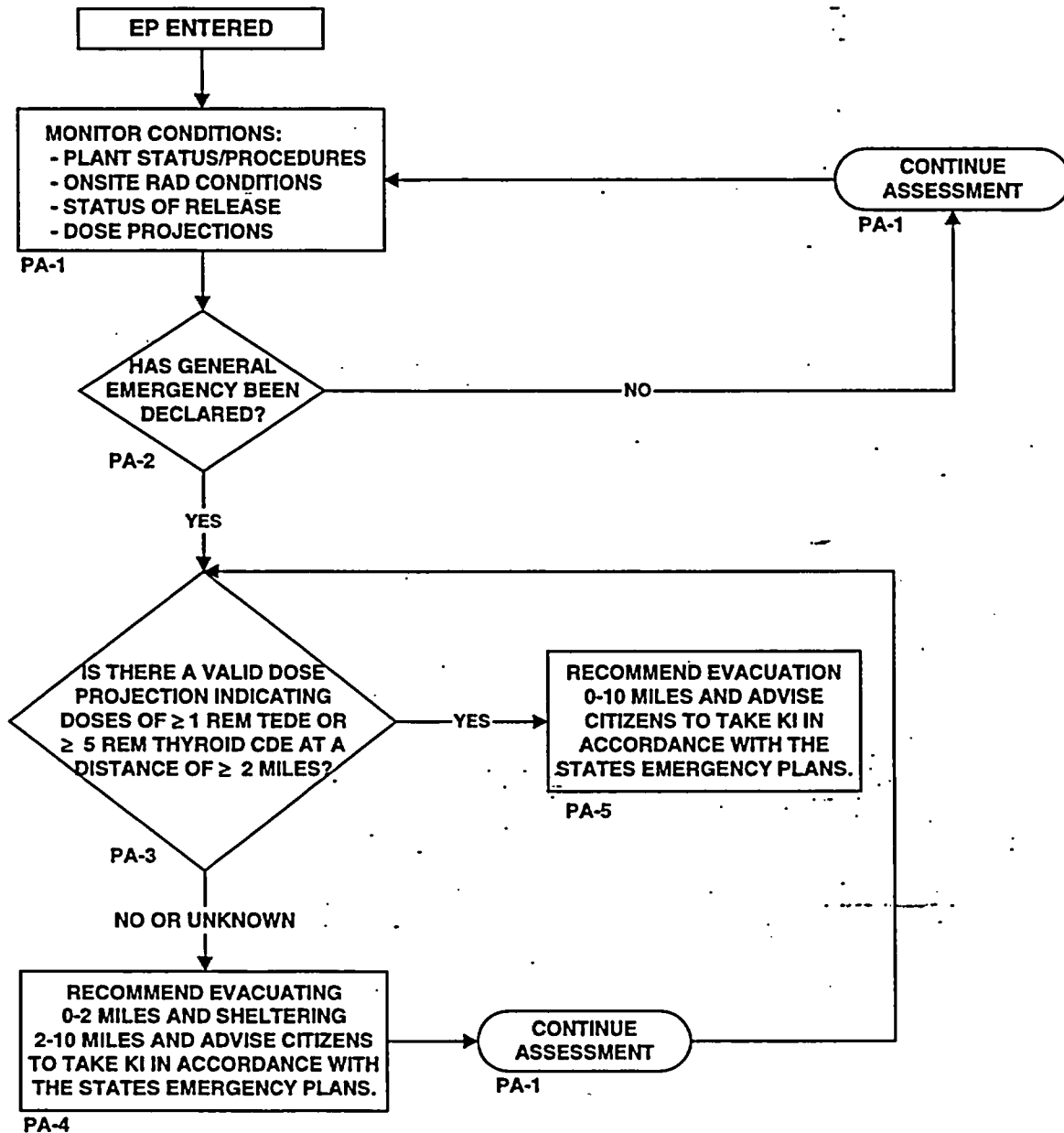
REMOVE: PCAF 2003-1642 REV: N/A

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REVIEW THE APPROPRIATE DOCUMENTS AND ACKNOWLEDGE COMPLETE IN YOUR NIMS INBOX.

1045

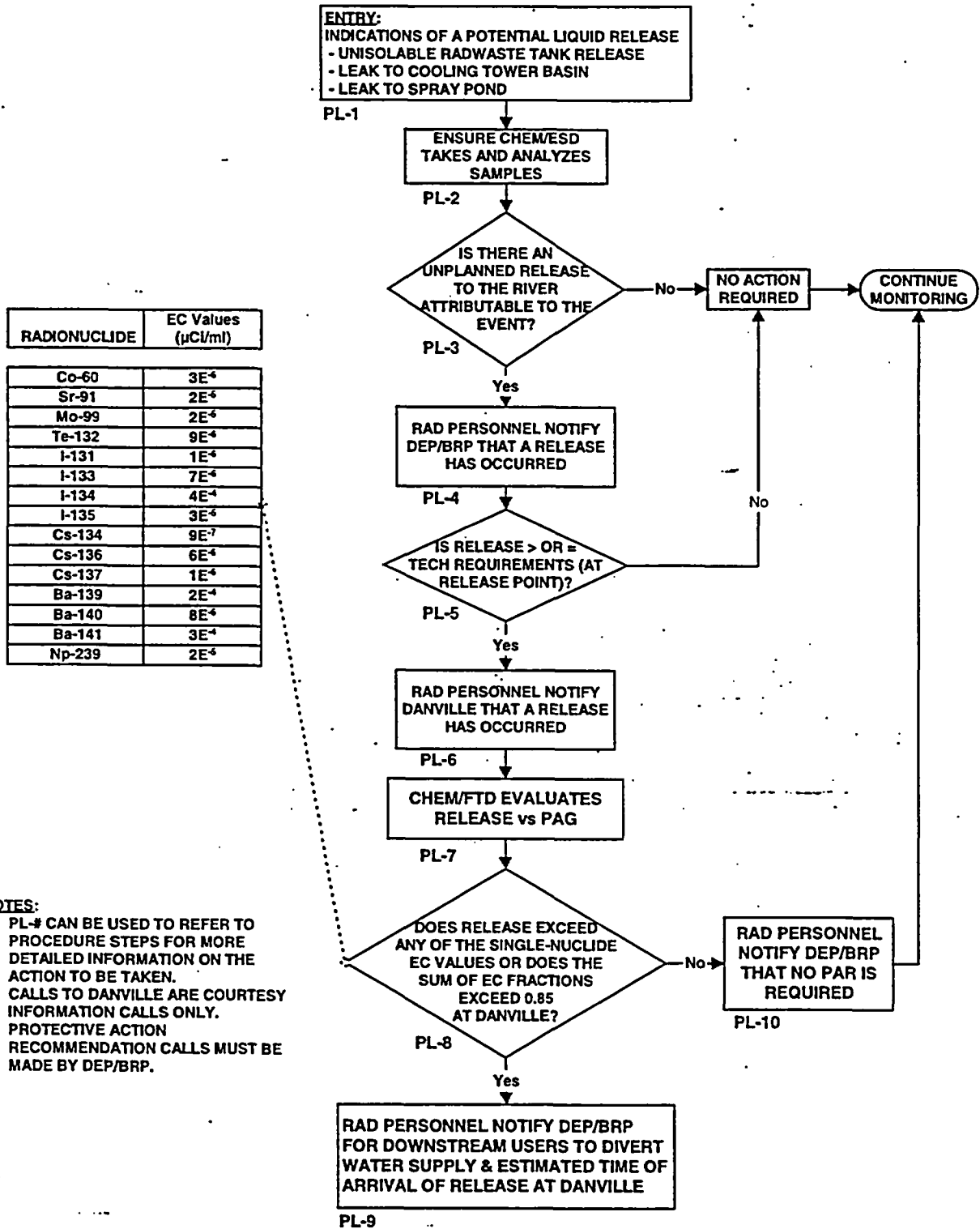
PAR AIRBORNE RELEASES



NOTES:

1. PA-# CAN BE USED TO REFER TO PROCEDURE STEPS FOR MORE DETAILED INFORMATION ON THE ACTION TO BE TAKEN.
2. DOSE PROJECTIONS DO NOT INCLUDE DOSE ALREADY RECEIVED.
3. TEDE - WHOLE BODY (TEDE) IS THE SUM OF EFFECTIVE DOSE EQUIVALENT RESULTING FROM EXPOSURE TO EXTERNAL SOURCES. THE COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE) FROM ALL SIGNIFICANT INHALATION PATHWAYS AND THE DOSE DUE TO GROUND DEPOSITION.
4. CDE - COMMITTED DOSE EQUIVALENT TO THE CHILD THYROID.

PAR LIQUID RELEASES



PUBLIC PROTECTIVE ACTION RECOMMENDATION GUIDE

AIRBORNE RELEASES

☐ **PA-1 MONITOR CONDITIONS FOR PAR APPLICATION**

The following conditions should be continuously evaluated to determine if a PAR should be implemented or changed:

- Plant status and prognosis for changes in conditions
- Onsite radiological conditions
- Status of actual or potential radioactive releases
- Offsite dose projections or actual offsite radiological conditions
- Escalation in Emergency Classification (i.e., General)

(Go to PA-2)

☐ **PA-2 HAS A GENERAL EMERGENCY BEEN DECLARED?**

- ☐ **YES —** If a GENERAL EMERGENCY has been declared, a PAR must be made within 15 minutes of the emergency declaration. The PAR requirement is found in NUREG-0654. **(Go to PA-3)**
 - ☐ **NO —** If a GENERAL EMERGENCY has not been declared, continue to monitor plant status, parameter trends, and prognosis for termination or escalation of the event. **(Go to PA-1)**
-

☐ **PA-3 IS THERE A VALID DOSE PROJECTION INDICATING DOSES OF ≥ 1 REM TEDE OR ≥ 5 REM CDE CHILD THYROID AT A DISTANCE OF > 2 MILES?**

- ☐ **YES —** If the projected doses at 2 miles are ≥ 1 REM TEDE or ≥ 5 REM CDE child thyroid, then full evacuation (0-10 miles) is recommended. **(Go to PA-5)**
 - ☐ **NO/UNKNOWN —** **(Go to PA-4)**
-

☐ **PA-4 RECOMMEND EVACUATION 0-2 MILES; SHELTER 2-10 MILES AND ADVISE CITIZENS TO TAKE KI IN ACCORDANCE WITH THE STATE'S EMERGENCY PLANS.**

Limited Evacuation (0-2 miles) and sheltering is appropriate for events that are significant enough to cause a General Emergency classification and dose projections are low, unknown, or below full evacuation guidelines. A recommendation is also given to the state to advise citizens to take KI in accordance with the state's emergency plans.

☐ **PA-5 EVACUATE 0-10 MILES AND ADVISE CITIZENS TO TAKE KI IN ACCORDANCE WITH THE STATE'S EMERGENCY PLANS.**

Full evacuation of members of the general public is recommended at this point based on the emergency classification and dose projections. A recommendation is also given to the state to advise citizens to take KI in accordance with the state's emergency plans.

LIQUID

☐ **PL-1 ENTRY**

This section is entered when there are indications of a potential unplanned radioactive liquid release.

Indications of potential unplanned releases include:

- an unisolable radwaste tank release
- leaks to cooling tower basin
- leak to spray pond

(Go to PL-2)

☐ **PL-2 CHEMISTRY/ENVIRONMENTAL SAMPLING DIRECTOR (ESD) TAKES AND ANALYZES SAMPLE**

(Go to PL-3)

PL-3 IS THERE AN UNPLANNED RELEASE TO THE RIVER?

- ☐ **YES —** An unplanned release to the river has occurred when event-related radioactive materials are released to the river that are not controlled by the release methodologies described in the ODCM and applicable Chemistry procedures.

(Go to PL-4)

- ☐ **NO —** If there is no unplanned release to the river, then no notifications are required and monitoring should continue.
-

☐ **PL-4 RAD PERSONNEL NOTIFY DEP/BRP THAT A RELEASE HAS OCCURRED**

Depending on which facility is activated, the notification to BRP will be made by the RPC (TSC), Dose Assessment Supervisor, or Radiological Liaison at the EOF.

DO NOT MAKE ANY PROTECTIVE ACTION RECOMMENDATIONS AT THIS TIME.

(Go to PL-5)

LIQUID (CONT'D)

PL-5 IS RELEASE \geq TECHNICAL REQUIREMENTS LIMITS (AT THE RELEASE POINT)?

- ☐ **YES —** Releases are at or greater than Technical Requirements limits when Chemistry determines that the limits are exceeded based on methodologies described in the ODCM and applicable Chemistry procedures.

(Go to PL-6)

- ☐ **NO —** If the release is $<$ Technical Requirements limits, then no further notifications are required and monitoring should continue.

☐ **PL-6 RAD PERSONNEL NOTIFY DANVILLE THAT A RELEASE HAS OCCURRED**

Depending on which facility is activated, the notification to Danville will be made by the RPC (TSC), Dose Assessment Supervisor, or Radiological Liaison at the EOF.

DO NOT MAKE ANY PROTECTIVE ACTION RECOMMENDATIONS AT THIS TIME.

(Go to PL-7)

☐ **PL-7 CHEM/FTD EVALUATES RELEASE VERSUS PAGs**

The results of the sample analysis are compared to the PAGs for radionuclides in drinking water. The analysis calculates the expected concentration at Danville, taking into account the dilution afforded by the river.

PL-8 DOES RELEASE EXCEED PAGs (AT DANVILLE)?

- ☐ **YES —** If a single isotope exceeds its effluent concentration (EC) value or the sum of EC fractions exceeds 0.85, then a protective action recommendation should be made for downstream water users (e.g., Danville) to **DIVERT DRINKING WATER** supply to a backup supply or terminate user intake until the release has passed.

(Go to PL-9)

- ☐ **NO —** If the PAGs are not exceeded, monitoring should continue and the State should be notified that no PAR for the liquid release is required.

(Go to PL-10)

LIQUID (CONT'D)

☐ **PL-9 RAD PERSONNEL NOTIFY DEP/BRP OF PAR**

Depending on which facility is activated, the PAR notification to DEP/BRP will be made by the RPC (TSC), Dose Assessment Supervisor, or Radiological Liaison at the EOF. The PAR FORM shall be used to document the PAR.

DO NOT COMMUNICATE THE PROTECTIVE ACTION RECOMMENDATION TO DANVILLE. THE DEP/BRP IS RESPONSIBLE FOR THIS COMMUNICATION AND ANY COMMUNICATION TO OTHER DRINKING WATER SUPPLIERS OR WATER USERS.

☐ **PL-10 RAD PERSONNEL NOTIFY DEP/BRP**

No PAR is required. Depending on which facility is activated, the RPC (TSC), Dose Assessment Supervisor, or Radiological Liaison at the EOF shall notify DEP/BRP that no PAR is required.

TSC DATA SHEET

Date: _____

REACTOR PARAMETERS Time _____ Power APRM A _____%, IRM A _____%, SRM A _____CPS Reactor Water Level _____Inches Reactor Pressure _____PSIG Reactor Temp _____°F (Recirc. Loop A) Drywell Temperature _____°F Drywell Pressure _____PSIG Suppression Pool Level _____Ft. Suppression Pool Water Temp _____°F Suppression Pool Atmospheric Pressure _____PSIG	TIME OF SHUTDOWN _____ ESTIMATED RELEASE TERMINATION _____ EMERGENCY CLASSIFICATION _____ TIME _____ CONTAINMENT RAD LEVEL _____ R/HR
RADIOLOGICAL DATA Time _____ Release In Progress _____ Yes _____ No Release Type _____ Airborne _____ Liquid Release Is _____ Monitored _____ Unmonitored Release Path _____ Current Dose Rates at EPB _____mrem/hr TEDE _____mrem/hr Thyroid Current Field Measurement at EPB _____mrem/hr External _____Iodine Conc Peak Sector (TEDE) _____ Current Project Dose at EPB _____mrem/hr TEDE _____mrem/hr Thyroid PPL's Protective Action Recommendation Is _____ State's Protective Action is _____ Implemented at _____	BIG PICTURE Time _____ ECCS EQUIPMENT IN SERVICE Time _____ Equipment _____ MAJOR EQUIPMENT OUT OF SERVICE Time _____ Equipment _____

POTASSIUM IODIDE (KI) TRACKING FORM

(Recommended dose: 1 tablet/day = 130 mg)

[illegible]

Approved by: _____
Emergency Director - or - Recovery Manager

Date _____

ALARA REVIEW

Check ☒

A. PERSON-REM ESTIMATION

- | | |
|---|--|
| <p>_____ 1. Assess the number of workers required.</p> <p>2. Evaluate the use of fewer workers.</p> <p>3. Investigate experience of workers selected.</p> | <p>4. Assure all workers have essential, productive tasks.</p> <p>5. Assure workers have available exposure.</p> <p>6. Evaluate criteria for emergency exposure.</p> |
|---|--|

B. PLANNING

- | | |
|--|---|
| <p>_____ 1. Preplanning meeting with supervisors and/or workers required.</p> <p>2. Access to and exit from work are planned.</p> <p>3. Evaluate staging/setup in accessible low dose rate area.</p> | <p>4. Prefabrication considered.</p> <p>5. Evaluate use of remote handling devices or other special tools.</p> <p>6. Cold equipment "mockups", rehearsals, or other practical exercise.</p> |
|--|---|

C. EXPOSURE REDUCTION CONTROLS

- | | |
|---|---|
| <p>_____ 1. Evaluate need for timekeeping.</p> <p>2. Consider use of water bucket shielding for carrying hot parts.</p> <p>3. Consider use of shielded drums or lead "pigs" for carrying hot parts.</p> <p>4. Consider use of temporary shielding such as lead wool blankets, lead sheets, or lead bricks.</p> <p>5. Consider use of shadow shields utilizing a portable curtain shield.</p> <p>6. System or equipment to be filled with water.</p> | <p>7. System or equipment to be drained and flushed.</p> <p>8. Assess exposure reduction by permitting decay of radiation sources during reactor shutdown or system isolation.</p> <p>9. Assess the need of communication devices such as head sets, TV cameras, others.</p> <p>10. Assess practicality of removing component from radiation area.</p> <p>11. Evaluate use of photographs of "as installed equipment" to aid in worker briefings.</p> |
|---|---|

D. AIRBORNE/CONTAMINATION CONTROL

- | | |
|--|--|
| <p>_____ 1. Assess need for respiratory protection usage against effectiveness of engineering controls.</p> <p>2. Assess individual's history of internal DAC-Hr exposure to airborne contamination.</p> | <p>3. Assess necessity of area decon before commencement of work.</p> <p>4. Containment structure (tent) required.</p> <p>5. Portable ventilation system required.</p> <p>6. Assess need for flooding or draining rooms.</p> <p>7. Assess hot particle or fuel fragment migration.</p> |
|--|--|

Performed by _____

Provided below are the instructions on how to retrieve an individual's occupational exposure information.

1. Log into NIMS, go to RPDPERX screen.
2. Query the individual.
3. Click on DOSE SUMMARIES button.
4. The screen in Figure 1 will appear.
5. The individual's YEAR-TO-DATE (YTD) dose will be provided as 'NRC PERIOD EXPOSURE' for the current calendar year.

Radiation Protection Management {PPL TATS}

RPDPERX Dose Summaries

Person Related Information

Name: John Doe SSN: 123456789

Dose Summaries

Type	YTD	YTD	YTD	YTD	YTD	YTD	YTD
Lifetime Exposure	52	52	62	62	0	0	52
Lifetime Level							45000
2002 NRC Period Available	2000	12000	40000	40000			2000
2002 NRC Period Exposure	0	0	0	0	0	0	0
2002 NRC Period Level	2000	12000	40000	40000			2000
2002 non SSES Exposure							
2002 SSES Exposure	0	0	0	0	0	0	0

Figure 1

EMERGENCY EXPOSURE EXTENSIONS

EXTENSION		APPROVAL	ACTIONS
FROM mrem (TEDE)	TO mrem (TEDE)		
4000	<25000	ED and RPC/RM and RSM	ALL OF THE LISTED APPROVALS AND APPLY EMERGENCY EXPOSURE CONSIDERATIONS
>25000		ED and RPC/RM and RSM	ALL OF THE LISTED APPROVALS, APPLY EMERGENCY EXPOSURE CONSIDERATIONS AND BRIEFING ON RISKS

PROTECTIVE ACTION RECOMMENDATION STATE NOTIFICATION FORM

☐ THIS IS A DRILL

☐ THIS IS AN ACTUAL EVENT

(This form is to be used to communicate PPL's Protective Action to the senior state official at 717-651-2148.)

1. This is _____ of the Susquehanna Steam Electric Station.
(Fill in your name)

2. I am the: ☐ Emergency Director at the Susquehanna SES Control Room
☐ Emergency Director at the Technical Support Center
☐ Recovery Manager at the Emergency Operations Facility

3. I am about to provide a Protective Action Recommendation. Do I have the Senior State Official on the line?

Name _____

4. A General Emergency has been declared as of _____.

5. This declaration was made due to:

6. The PPL Susquehanna Protective Action Recommendation is:

- ☐ Evacuate 0-10 miles and advise citizens to take KI in accordance with the state's emergency plans.
☐ Evacuate 0-2 miles and shelter 2-10 miles and advise citizens to take KI in accordance with the state's emergency plans.
☐ Divert Danville drinking water supply from the Susquehanna River
☐ Evacuate beyond 10 miles (specify distance _____) and advise citizens to take KI in accordance with the state's emergency plans.

7. Date/Time: _____