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TO: ~~GERLACH\*ROSE M~~ 10/31/2003

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THE FOLLOWING CHANGES HAVE OCCURRED TO THE HARDCOPY OR ELECTRONIC MANUAL ASSIGNED TO YOU:

244 - 244 - DOSE ASSESSMENT STAFFER

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-244

REPLACE: REV:7

REPLACE: REV:7

REMOVE: PCAF 2003-1484 REV: N/A

REMOVE: PCAF 2003-1606 REV: N/A

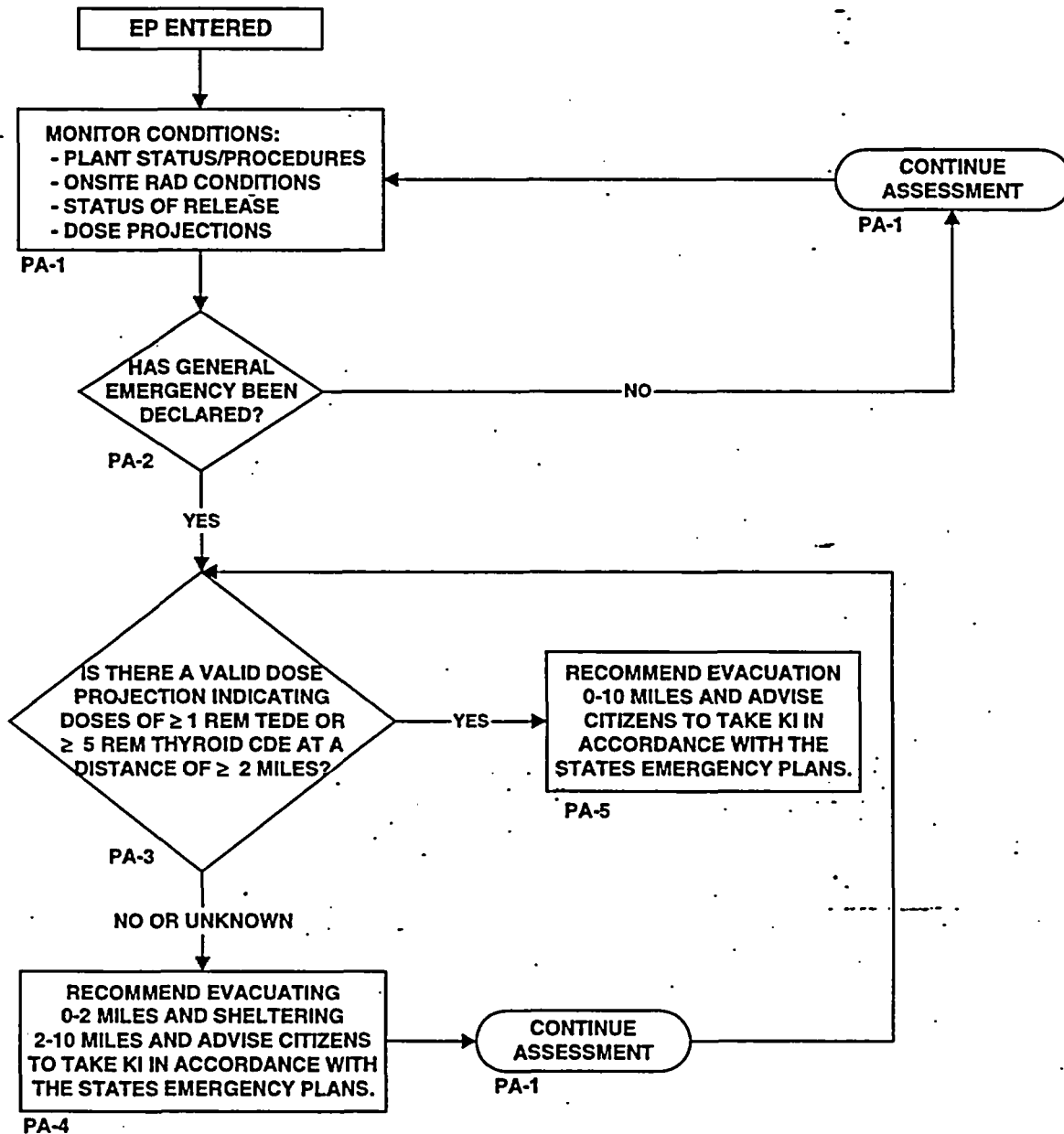
ADD: PCAF 2003-1484 REV: N/A

ADD: PCAF 2003-1606 REV: N/A

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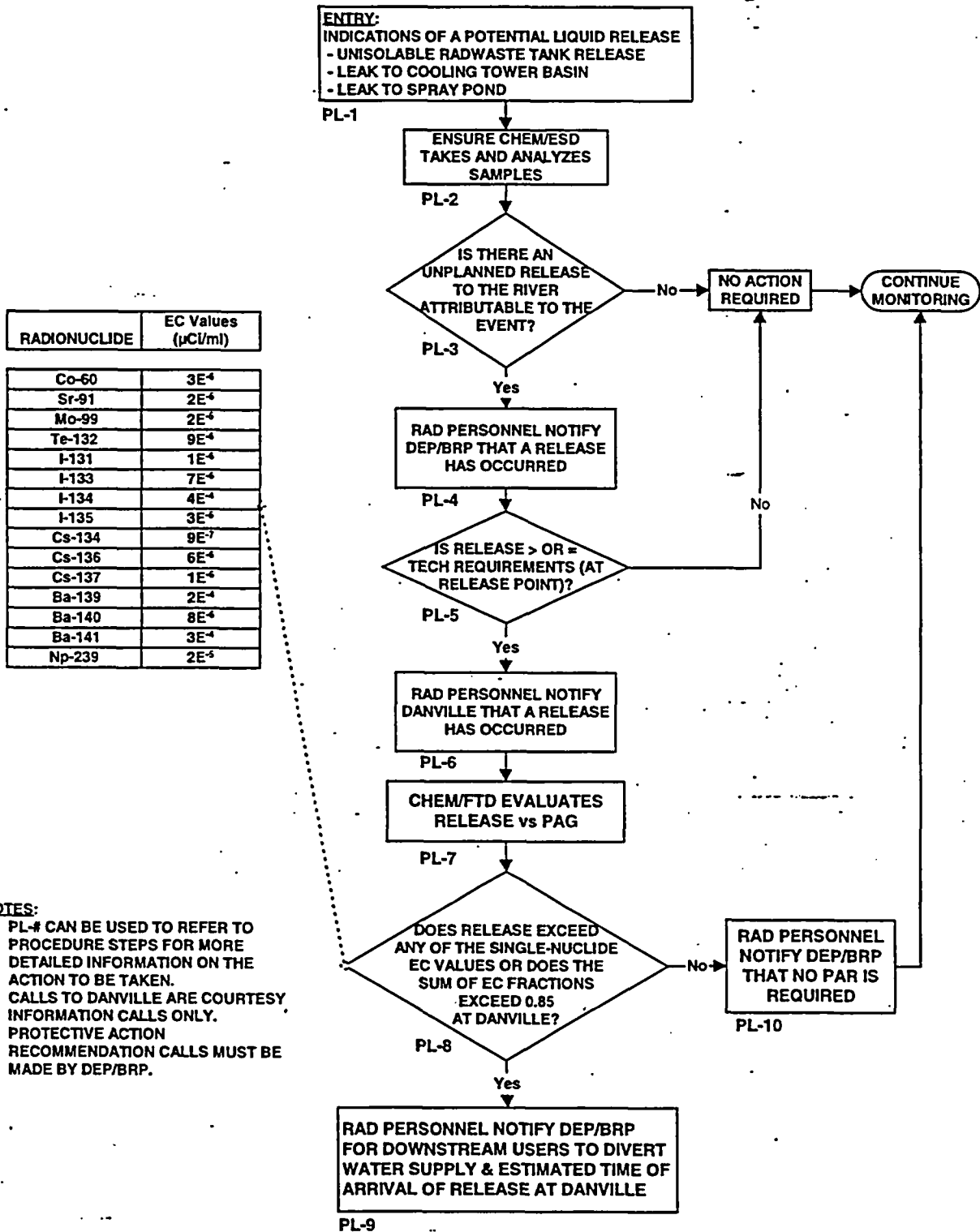
## PAR AIRBORNE RELEASES



### 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)

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#### ☐ 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)

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

☐ YES — If the projected doses at 2 miles are  $\geq 1$  REM TEDE or  $\geq 5$  REM CDE child thyroid, then full evacuation (0-10 miles) is recommended. (Go to PA-5)

☐ NO/UNKNOWN — (Go to PA-4)

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#### ☐ 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.

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#### ☐ 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)**

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

**(Go to PL-3)**

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**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.
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☐ **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)**

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**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.

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☐ **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)**

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☐ **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.

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**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.**

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☐ **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.