50-387/388

MANUAL HARD COPY DISTRIBUTION

DOCUMENT TRANSMITTAL 2002-26574

USER INFORMATION:

~~FLAIM*LAUREL B~~ EMPL#:23244 CA#: 0386

~~Address: NUCSA~~2

Phone#: 254-3658

TRANSMITTAL INFORMATION:

~~TO: FLAIM*LAUREL B~~ 05/24/2002
LOCATION: DOCUMENT CONTROL DESK
FROM: NUCLEAR RECORDS DOCUMENT CONTROL CENTER (NUCSA-2)
THE FOLLOWING CHANGES HAVE OCCURRED TO THE HARDCOPY OR ELECTRONIC MANUAL ASSIGNED TO YOU:

245 - 245 - DOSE ASSESSMENT SUPERVISOR

REMOVE MANUAL TABLE OF CONTENTS DATE: 03/25/2002

ADD MANUAL TABLE OF CONTENTS DATE: 05/23/2002

CATEGORY: PROCEDURES TYPE: EP
ID: EP-PS-245
REMOVE: REV:2

ADD: REV: 3

REMOVE: PCAF 2002-1201 REV: N/A

UPDATES FOR HARD COPY MANUALS WILL BE DISTRIBUTED WITHIN 5 DAYS IN ACCORDANCE WITH DEPARTMENT PROCEDURES. PLEASE MAKE ALL CHANGES AND ACKNOWLEDGE COMPLETE IN YOUR NIMS INBOX UPON RECEIPT OF HARD COPY. FOR ELECTRONIC MANUAL USERS, ELECTRONICALLY REVIEW THE APPROPRIATE DOCUMENTS AND ACKNOWLEDGE COMPLETE IN YOUR NIMS INBOX.

A045

EP-PS-245, REV 3
DOSE ASSESSMENT SUPERVISOR

REMOVE:	TABLE OF CONTENTS, Pages 1, 2, 3 and 4, Rev 2
ADD:	TABLE OF CONTENTS, Pages 1, 2, 3 and 4, Rev 3
REMOVE:	TAB C, REV 1
ADD:	TAB C, REV 2
REMOVE:	TAB D, REV 1
ADD:	TAB D, REV 2
REMOVE:	TAB 1, REV 1 (pages 1 & 2)
ADD:	TAB 1, REV 2 (pages 1 & 2)
REMOVE:	PCAF 2002-1201

PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC	NUCLEAR DEPARTMENT PROCEDURE	
DOSE ASSESSMENT SUPERVISOR: Emergency-Plan-Position-Specific-Instruction		EP-PS-245 Revision 3 Page 1 of 4

QUALITY CLASSIFICATION:	APPROVAL CLASSIFICATION:
( ) QA Program (X) Non-QA Program	( ) Plant ( ) Non-Plant (X) Instruction

EFFECTIVE DATE: 5-23-2002

PERIODIC REVIEW FREQUENCY: Two Years

PERIODIC REVIEW DUE DATE: 5-23-2004

RECOMMENDED REVIEWS:
All

Procedure Owner: Nuclear Emergency Planning

Responsible Supervisor: Primary Dose Assessment Supervisor

Responsible FUM: Supervisor-Nuclear Emergency Planning

Responsible Approver: VP-Nuclear Site Operations

DOSE ASSESSMENT SUPERVISOR: Emergency-Plan-Position-Specific Instruction

WHEN: EOF is activated

HOW NOTIFIED: Paged/telephone

REPORT TO: Recovery manager

WHERE TO REPORT: Emergency Operations Facility

OVERALL DUTY:

Manage radiological functions in the EOF, which includes providing Radiological component of the protective action recommendation to the Recovery Manager.

MAJOR TASKS:	TAB:	REVISION:
Obtain, then keep current, information you will need to manage the radiological functions in the EOF.	TAB A	1
Recommend changes to the emergency classification to the Recovery Manager, if needed.	TAB B	0
Recommend public protective actions to the Recovery Manager.	TAB C	2
Manage assessing and communicating radiological information from the EOF.	TAB D	2
Recommend protective actions for PPL emergency personnel to the Recovery Manager.	TAB E	1
Provide direction for field monitoring strategy.	TAB F	0
Support termination activities.	TAB G	0
Assist re-entry/recovery efforts.	TAB H	0
Make sure information and functions that are in progress during shift relief are turned over smoothly.	TAB I	0

SUPPORTING INFORMATION:	TAB:
EOF Dose Assessment Flowchart	TAB 1
Emergency Classification	TAB 2
Public Protective Action Recommendation Guide	TAB 3
Supplementary Meteorological Information Table	TAB 4
Emergency Forms	TAB 5
* Shift Takeover Checklist	

REFERENCES:

EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001 May 1992)

FDA Guidance: "Accidental Radioactive Contamination of Human Food and Animal Feed and Recommendations for State and Local Governments." Federal Register, pp 47073-47083, October 22, 1982

ICRP Publication 28, The Principles and General Procedures for Handling Emergency and Accidental Exposures of Workers. International Commission on Radiation Protection. (1978)

IE Notice 83-28

NCRP Report 55, Protection of the Thyroid Gland in the Event of Releases of Radioiodine, National Council Radiation Protection and Measurements. (1977)

NUMARC Graded Response Study

NUREG-0654, Planning Standards and Evaluation Criteria

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

Radiological Assessment Reference Book

Spray Pond Blowdown Water Outlet Flow Rate PLI 50258 (May 8, 1987)

Susquehanna SES Emergency Plan

10 CFR 20 Appendix B

Study of Travel Time and Mixing Characteristics for the Susquehanna River below the Susquehanna SES - SUTRON CORPORATION - November 1985

NDAP-QA-1190, Nuclear Department Radiation Protection Program and Policies

NDAP-QA-1191, ALARA Program and Policy

NEPM-QA-1014, Radiological Environmental Monitoring Program

SSES Emergency Plan

National Interim Primary Drinking Water Regulations, EPA 570/9-76-003 (U.S.) Environmental Protection Agency, Washington, D.C. 1976

Commonwealth of Pennsylvania State Emergency Operations Plan, Appendix 6 to Annex E - BRP Technical Assessments and Protective Actions, September 22, 1988.

EC-ENVR-1047, Protective Action Guides, (PAGs), for the Evaluation of Abnormal, Unusual, or Unplanned Liquid Releases to the Susquehanna River

MAJOR TASK:

Recommend public protective actions to Recovery Manager.

SPECIFIC TASKS:	HOW:
1. Obtain the pertinent data needed to assess the magnitude and anticipated duration of offsite releases. **NOTE:** **The Dose Assessment Staffer is responsible to provide hard copy reports and assumptions to support PAR recommendation.**	1a. Consider the following information as a minimum: (1) Release rates/trends. (2) Prognosis for release/continued release. (3) In-plant source terms and leakage pathway(s). (4) Meteorological and/or river flow data. (5) Dose calculations. (6) Field data (a) For Public Protective Action Recommendations, (6 hour projected dose to the child thyroid), 0.5 rem =120 frisker cpm[1]. **HELP** **Public Protective Action Recommendation Guide** **See TAB 3**
2. Participate in the PAR decision-making process at the Command and Control Table.	2a. Use the communication guidelines in TAB B Item 3a. 2b. Provide radiological input required to determine the appropriate protective actions.

[1] Reference Technical Basis PLI-78461

SPECIFIC TASKS:	HOW:
	2c. Complete or ensure the "Radiological Liaison:" (1) Completes "Protective Action Recommendation" Form. (2) Obtains Recovery Manager's approval on the Form for any Protective Action. (3) Communicates the approved PAR form to PA DEP/BRP.
3. When the Field Team Director identifies the need for liquid release or agricultural protective actions, relay recommendation to the Recovery Manager.	3a. Determine action required. 3b. Complete or ensure "Radiological Liaison": (1) Completes "Protective Action Recommendation" Form. (2) Obtains Recovery Manager's approval on the Form for any Protective Action. (3) Communicates the approved PAR form to PA DEP/BRP.
	HELP **Public Protective Action Recommendation Guide** **See TAB 3**
4. Assess if a protective action recommendation beyond ten miles is appropriate.	4a. Confirm dose projections for distances greater than ten miles are reasonably accurate. 4b. Consult with Engineering Support Supervisor, Recovery Manager and/or Operations and Technical Support Coordinators to verify that dose projections are consistent with plant conditions.

SPECIFIC TASKS:	HOW:	
	4c.	Insure that PAR's have been made for distances up to ten miles.
	4d.	Recommend a PAR rounding out the distance to the nearest five mile increment until dose projections are less than PAG's.

MAJOR TASK:

Manage assessing and communicating radiological information from the EOF.

SPECIFIC TASKS:	HOW:
1. **Instruct** Administrative Assistant to call out additional offsite monitoring teams, and/or Dose Assessment Staff if they are needed.	
2. Communicate with or ensure the Radiation Liaison communicates with PA DEP/BRP.	2a. Approximately every thirty minutes, telephone DEP/BRP and relay information contained in the "Protective Action Recommendation" form. 2b. Advise DEP/BRP when projected thyroid dose is 25 rem or higher outside the EPB. **NOTE:** **PA DEP/BRP representative may request that updates should be provided solely to their representative at the EOF upon their arrival. That practice is acceptable upon verification by telephone with PA DEP/BRP.**
3. Maintain ongoing communication with the Dose Assessment Staffer and Field Team Director regarding calculations and field readings.	3a. Determine status of dose calculations and field surveys. 3b. Provide needed direction to efforts. **NOTE:** **Use of the headsets available to the DAST and DASU may facilitate communications when face-to-face discussions are difficult to arrange.**
4. **Notify** Recovery Manager of significant changes.	4a. Changes to note would include: (1) Release rates or indications of an unmonitored release. (2) Field Team readings. (3) Projected doses or weather. (4) The approaching of any related EALs and PAGs.

SPECIFIC TASKS:	HOW:	
		(5) Significant environmental sample analysis results.
5. **Maintain** ongoing communications with the Radiological Liaison and RPC.		
6. Periodically **update** the Dose Assessment Staffer and Field Team Director.	6a. Include this information when updating:	(1) Plant status.
		(2) What mitigative or protective actions are being considered.
		(3) Any other information that might affect dose assessment.

EOF DOSE ASSESSMENT FLOWCHART

TAB 1
EP-PS-245-1

FACILITY STATUS

Dose Assessment Supervisor
- Recovery Manager Info and Target Takeover Time

Dose Assessment Staffer
- Phones/Fax

Field Team Director
- RMS/Radio/Phones

EOF Dose Calculator
- MIDAS/PICSY

Rad Liaison
- Phones/DEP-BRP

"A" and "B" Field Teams
- Kits/Vehicles/Phones

EVENT STATUS

RPC to DASU
TSC DC to DAST
HP Radioman to FTD
"A" and "B" Team Briefing
Staff Briefing and Info Exchange

TURNOVER RPC to DASU

Fwd Calc - TSC or EOF
Back Calcs - TSC or EOF
OSCAR Control
DEP/BRP Communications
Event/Source Term Agreement
Liquid/Airborne Release
Previous Data Transferred

Turnover Time ___ : ___

A

MONITOR EFFLUENT RELEASE AND PLANT STATUS
* PICSY Met Vent Data
* Field Team and Fixed Monitor Data
* In-Plant Conditions

Default Accident Calculation MIDAS Menu D

> Default Accident triggers (note 3)? YES / NO

> NUREG 1228 Triggers? (note 5)? YES / NO

NUREG 1228 Calculation MIDAS Menu C

Blowout Panel Release? YES / NO

Use Blowout Panel Design Basis Release Rates

Liquid Release > TR? (note 2) YES / NO

FORWARD CALCULATION MIDAS B

SPING Data Is White? NO / YES

Consult with Engineering on Low Confidence (white) Data

Vent Realease? (note 1) YES / NO

FORWARD CALCULATION MIDAS B

Vent Totals Valid? YES / NO

Alternate Data Available? YES / NO

GO TO A

Concurrent Activities

> RMS or Field Team Triggers? (note 4) YES / NO

UNMONITORED RELEASE MIDAS E - W Back Calculation

GO TO B

Verify with Field Data and USE WITH CAUTION

(Ref. Emerg Classification Section 1.0)

* Evaluate for PAR
* Notify RM
* Notify Danville
* Assemble Sampling Teams
* Evaluate need for second FTD

Calculate Measured/Projected Ratio

Ratio between 0.1 and 5? YES / NO

Ratio > 5 YES / NO

B

High Field Readings
UNMONITORED RELEASE
MIDAS EW Back Calculation

Low Field Readings < 0.1
FTD LOCATE PLUME

Plume Located? NO / YES

Use Forward Calculation Data

* Select appropriate TEDE and THY CDE
* Discuss Release Pathway and Source Term with Engineering Support Supervisor
* Report Classification and PAR Triggers to RM
* Select PAR at Command and Control Table per PAR Guide

* Approve PAR Forms
* Contact DEP/BRP
  - About every 30 Minutes
  - Classification or PAR Change

* Control Exposure and Dose
  < 2 Rem WB - w/o Extension
  < 4 Rem WB - w/Extension
  > 4 Rem WB - w/Emerg. Extension
  < 5 Rem Thy CDE/Shift
  < 25 Rem Thy CDE Total
* Initiate Thy CDE Tracking
  > 1000 mrem/hr Thy CDE
  > 1200 ncpm (cartridge)
*Consider WBC

Release Terminated? NO / YES

* Consider transition from plume to post-plume phase for Env. Sampling Teams

NOTE 1	NOTE 2	NOTE 3	NOTE 4	NOTE 5
VENT RELEASE TRIGGERS	LIQUID RELEASE TRIGGERS	DEFAULT ACCIDENT TRIGGERS	RMS/FIELD TRIGGERS	NUREG 1228 TRIGGERS
♦ AIRBORNE RELEASE >8.51E5 uci/min NG >1.04E2 uci/min Iodine >7.72E2 uci/min Part.	♦ LIQUID RELEASE Liquid Effl. ≥ TRM		♦ AIRBORNE RELEASE ≥ 0.1 mrem/hr WB ≥ 68.4 mrem/hr Thy CDE ≥ 100 ncpm on 1 Cartridge	♦ CORE UNCOVERED > 15 MINUTES
♦ EAL 15.1 FOR 60 min. >1.70E6 uci/min NG >2.08E2 uci/min Iodine >1.54E3 uci/min Part.	♦ EAL 15.1 Liquid Effl. ≥ TRM			♦ SPENT FUEL POOL RELEASE
♦ EAL 15.2 for 15 min. >1.70E8 uci/min NG >2.08E4 uci/min Iodine >1.54E5 uci/min Part.	♦ EAL 15.2 Liquid Effl. ≥ 10 x TRM	♦ EAL 3.2 SEVERE CLAD DEGRADATION >200 R/hr CHRM >300 uci/cc DE I-131		
♦ EAL 15.3 Projected dose rates @ EPB >100 mrem/hr TEDE for 30min or >500 mrem/hr THY CDE for 30min or >15 rem/hr TEDE for 2min or >75 rem/hr THY CDE for 2min Projected dose @ EPB >500 mrem TEDE within 1 hour		♦ EAL 3.3 SEVERLY DEGRADED CORE > 400 R/hr CHRM > 1000 uci/cc DE I-131		
♦ EAL 15.4 Projected Dose @ EPB ≥ 1 Rem TEDE ≥ 5 Rem THY CDE		♦ EAL 3.4 CORE MELT >400R/hr CHRM >1000uci/cc DE Iodine-131 > 2000 R/hr CHRM		