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221 - 221 - NEARSITE EMERGENCY MONITORING TEAM:
EMERGENCY PLAN-POSITION SPECIFIC PROCEDURE

REMOVE MANUAL TABLE OF CONTENTS DATE: 09/12/2002

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CATEGORY: PROCEDURES TYPE: EP
ID: EP-PS-221
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PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC	NUCLEAR DEPARTMENT PROCEDURE	
ENVIRONMENTAL SAMPLING TEAM: Emergency Plan-Position Specific Instruction		EP-PS-221 Revision 12 Page 1 of 3
<u>QUALITY CLASSIFICATION:</u> () QA Program (X) Non-QA Program	<u>APPROVAL CLASSIFICATION:</u> () Plant () Non-Plant (X) Instruction	
EFFECTIVE DATE: <u>4-22-2003</u> PERIODIC REVIEW FREQUENCY: <u>2 Years</u> PERIODIC REVIEW DUE DATE: <u>4-22-2005</u>		
<u>RECOMMENDED REVIEWS:</u> All		
Procedure Owner: <u>Nuclear Emergency Planning</u> Responsible Supervisor: <u>Primary Dose Assessment Supervisor</u> Responsible FUM: <u>Supv.-Nuclear Emergency Planning</u> Responsible Approver: <u>Primary-Recovery Manager</u>		

ENVIRONMENTAL SAMPLING TEAM: Emergency Plan-Position Specific Procedure

WHEN: EOF Activation and/or an Unusual Liquid Release

HOW NOTIFIED: Telenotification

REPORT TO: Field Team Director* at the EOF or Project Director - SSES Environmental Laboratory

WHERE TO REPORT: Emergency Operations Facility

OVERALL DUTY:

Provide environmental sampling support as directed by the Field Team Director in the EOF following an airborne release and/or an **unusual liquid release**.

MAJOR TASKS:

TAB:

REVISION:

Collect emergency environmental samples in response to an airborne release.

TAB A

6

Collect river water and sediment samples downstream of the SSES following an **unusual liquid release**.

TAB B

9

Prepare emergency environmental samples for transport to the offsite radioanalytical laboratory.

TAB C

7

* Field Team Director while releases to the environment are ongoing (plume phase), then Environmental Sample Director (post-plume phase). The position titles are interchangeable throughout this procedure.

SUPPORTING INFORMATION:

TAB:

Environmental Sampling Kit Inventory	TAB 1
Emergency Environmental Sampling Form Flow	TAB 2
Emergency Environmental Sampling Forms	TAB 3
• Sample Collection Field Sheet	
• APF/CC Collection Field Sheet	
• TLD Collection/Transfer Sheet	
• Emergency Environmental Sample Transport Log	
• Sample Packing List	
• Environmental Team Briefing Sheet	
Environmental Sampling Locations	TAB 4
Direct Radiation Sampling Instructions	TAB 5
County Decontamination Facility Locations	TAB 6
Air Particulate Filters and Charcoal Cartridges Instructions	TAB 7
Precipitation Sampling Instructions	TAB 8
Snow Sampling Instructions	TAB 9
Soil Sampling Instructions	TAB 10
Pasture Grass (Forageable Material) Sampling Instructions	TAB 11
Milk Sampling Instructions	TAB 12
Food Products and Vegetation Sampling Instructions	TAB 13
Surface and Drinking Water Sampling Instructions	TAB 14
Sediment Sampling Instructions	TAB 15

MAJOR TASK:

Collect emergency environmental samples in response to an airborne release.

SPECIFIC TASKS:

HOW:

1. Report to the Field Team Director (FTD) at the EOF to receive sampling assignments.

NOTE:

Promptly notify the Field Team Director if any steps in this procedure cannot be completed.

HELP

Emergency Monitoring Locations
See TAB 4

2. Determine whether or not the sampling assignments can be completed during the daylight hours.

- 2a. For sampling in the **non-affected** sectors, consider the routes to travel to the monitoring locations that will avoid the affected sector(s), based on experience performing routine REMP sampling, familiarity with the area's roads, and weather conditions.

NOTE:

Consider visiting locations closest to the affected sector(s) last.

3. Decide with the FTD the order in which the monitoring locations will be visited and the desired route to travel.

- 2b. Inform the FTD of the sampling and sampling locations that can practically be handled.
- 3a. Number the locations on TAB 4 in the order that they will be visited. (These will become the Sample Numbers.) Label TAB 4 with the team's designation.
- 3b. Copy TAB 4 after all annotations have been made. Keep the original of the annotated TAB and provide the FTD with the copy.
- 3c. Estimate the time necessary to complete the sampling assignment and provide this estimate to the FTD.

SPECIFIC TASKS:

HOW:

4. Obtain briefing from FTD/DAST, personnel dosimetry and the required protective clothing.

4a. Sign in on RWP #8002 for field team activities.

4b. Discuss with the FTD/DAST whether a cell phone (available from the EOF HP Supply Room) would be helpful in communicating with the team.

HELP

Environmental Team Briefing SHEET
See TAB 3

5. Obtain replacement emergency TLDs (located in the EOF supply room) for the ones that will be collected in the field.

5a. Count the TLDs, located in the EOF HP supply room, to ensure that a sufficient number are available for exchange with those in the field. Obtain additional TLDs, if necessary.

6. Locate an EREMP Kit.

6a. If the seal is broken, compare the list of "EREMP Sample Collection Kit Contents" in TAB 1 with the supplies actually in the kits.

6b. Replace missing or faulty items in the kits from available supplies at the EOF, if possible.

6c. Check to ensure the watch in the kit is working.

6d. Refer to the "Equipment Needed" sections of "HELP" TABS 5 through 15 and the list of monitoring locations and samples which may be obtained to determine what supplies may be needed.

6e. Consult the "EREMP Sample Collection Items not in kits" in TAB 1 to determine additional supplies that it may be necessary to obtain.

SPECIFIC TASKS:

HOW:

NOTE:

Additional supplies not in the kit(s) may have to be obtained as necessary.

- | | | | |
|-----|---|--------------|---|
| 7. | Locate and inspect the emergency vehicle to be used. | 6f. | Obtain the additional supplies needed prior to departing the EOF. |
| 7. | Locate and inspect the emergency vehicle to be used. | 7a. | Check the following, if it has not already been checked, prior to loading the vehicle with sampling equipment and supplies:
(1) vehicle starts,
(2) vehicle's VHF radio,
(3) vehicle's lights,
(4) vehicle's wipers, and
(5) amount of gas in the vehicle. |
| 8. | Put on the required protective clothing. | 8a. | Rainsuits are located in the kit(s). Safety vests, jumpsuits and boots are available in the supply room. |
| 9. | Inform the FTD that preparations for being dispatched have been completed. | | |
| 10. | If monitoring in an affected sector, ensure a rad monitoring individual is assigned to the team. | | |
| 11. | Leave for the sampling location(s). | NOTE: | Annotated Tab 4 is necessary for completion of sampling assignment. |
| 12. | Routinely monitor and report SRD readings of the team members to the FTD unless directed otherwise. | | |
| 13. | Collect the samples, TLDs, and/or data at the assigned monitoring locations. | 13a. | Use the sampling procedures in "HELP" Tabs 5-15, as appropriate. |

SPECIFIC TASKS:

HOW:

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| 14. Follow all directions from radiological monitoring personnel regarding radiological concerns. | 13b. Label each sample, except for TLDs, with the following information:
(1) sample number
(2) sample type and size,
(3) sampling location,
(4) sampling start and stop times,
(5) initials of sample collector(s),
(6) PP&L/SSES, EMERGENCY PROCESS IMMEDIATELY,
(7) any sample additives. |
| 15. Return samples collected from the non-affected sector(s) directly to the Administrative Coordinator - SSES Environmental Laboratory at the EOF upon completion of sampling, unless otherwise directed by the FTD. | 14a. Directions may include canceling planned sampling or suspending sampling in progress. |
| 16. Take samples collected in the affected sector(s) to a county decontamination facility or other location to which the FTD directs the team. | 15a. Assist the Administrative Coordinator as requested until given another assignment by the FTD. If the Administrative Coordinator is not available, perform the functions in Tab C of this procedure.

16a. Prepare for double-bagging of the samples at the decontamination facility if smearing of the sample containers or bags indicates external contamination of the containers or bags.

16b. Samples must be cleared for transport beyond the EPZ and properly packaged. (Reference Tab C) |

HELP

County Decontamination
Facility Locations
See TAB 6

MAJOR TASK:

Collect river water and sediment samples, as directed, following an **unusual liquid release**.

SPECIFIC TASK:

HOW:

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|--|---|
| 1. Report to the Field Team Director (FTD) at the EOF in person or by radio from the SSES Environmental Laboratory to receive briefing and sampling assignments. | 1a. NOTIFY the Field Team Director if any items in this procedure cannot be completed. |
| | 1b. Sign in on RWP #8002 for field team activities. |
| | 1c. Discuss with the FTD whether a cell phone (available from the EOF HP Supply Room) would be helpful in communicating with the team. |
| 2. In the event of an airborne release, determine the routes to travel to the monitoring locations that will avoid any affected sector(s) if possible. | 2a. Advise the FTD of the routes to take based on experience performing routine REMP sampling, familiarity with the area's roads, and weather conditions. |
| 3. If sampling in an affected sector, ensure rad monitoring person is a team member. | |
| 4. Obtain dosimetry for personal exposure monitoring and the protective clothing if required. | |
| 5. Obtain an EREMP Kit, (EOF or Environmental Lab). | |
| | 5a. If seal is broken, compare the contents of the "EREMP sample collection kit" with the "Environmental Sampling Kit Inventory Form located in "HELP" TAB 1. |
| | 5b. Replace missing or faulty items in the EREMP kits from available supplies at the EOF or Environmental Lab, if possible. |
| | 5c. Check that the watch in the kit is working. |

HELP

Environmental Team Briefing Sheet
See TAB 3

SPECIFIC TASK:-

HOW:

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|----|--|-----|--|
| 6. | Locate and inspect the emergency vehicle to be used. | 5d. | Refer to the "Equipment Needed" sections of the "HELP" Tabs 14 and 15 (as necessary) and the list of monitoring locations and samples to be obtained to determine what supplies may be needed to perform sampling. |
| | | 5e. | Consult the "EREMP Sample Collection Items Not in Kits" in TAB 1 to determine additional supplies that it may be necessary to obtain. |
| 7. | Put on the required protective clothing. | 6a. | Check the following, if it has not already been checked, prior to loading the vehicle with sampling equipment and supplies:
(1) vehicle starts,
(2) vehicle's VHF radio,
(3) vehicle's lights,
(4) vehicle's wipers, and
(5) amount of gas in vehicle. |
| 8. | Inform the FTD when preparations for being dispatched have been completed. | 7a. | Rainsuits are located in the EREMP Kits. Safety vests, jumpsuits, and boots must be obtained from the EOF HP Supply Room. |
| 9. | Collect the sample(s) at the assigned monitoring location(s). | 9a. | Use the sampling procedures in TABs 14 and 15, as appropriate. |
| | | 9.b | Label each sample with the following information:
(1) sample number
(2) sample type and size
(3) sampling location
(4) sampling start and stop times
(5) sample collector initials,
(6) "PPL/SSES EMERGENCY PROCESS IMMEDIATELY"
(7) sample additives |

SPECIFIC TASK:

HOW:

- | | |
|--|---|
| 10. Follow all directions regarding radiological concerns from radiological monitoring personnel. | 10a. Directions may include canceling planned sampling or suspending sampling in progress. |
| 11. Return samples collected from the non-affected sector(s) directly to the Administrative Coordinator - SSES Environmental Laboratory unless otherwise directed by the FTD. | 11a. Assist the Administrative Coordinator as requested until given another assignment by the FTD.
11b. Perform the functions in TAB C of this procedure if the Administrative Coordinator is not available. |
| 12. Take samples collected in the affected sector(s) to a county decontamination facility or other location at the FTD's directions. | 12a. Prepare for bagging the sample containers at the decontamination facility if smearing of the sample containers indicates external contamination of the containers.
12b. Samples must be properly packaged and cleared for transport beyond the EPZ. |

NOTE:

Reference TAB C for guidance on the preparation of Emergency environmental samples for transportation to offsite radioanalytical laboratory.

HELP

County Decontamination
Facility Locations
See TAB 6

MAJOR TASK:

Prepare emergency environmental samples for transport to the offsite radioanalytical laboratory.

SPECIFIC TASK:

HOW:

1. Review the appropriate forms to be sent with each sample for completeness.

1a. Verify that the proper forms have been used.

NOTE:

A separate "Sample Collection Field Sheet" or APF/CC Collection Sheet" is required for each sample. A sample may include one or more containers. Each container of the same sample (same sample number, location, collection date and time) may require different analysis.

1b. Contact the FTD at the EOF to determine required sample analyses to indicate on the appropriate forms from step 1a.

HELP

Emergency Environmental Sampling
Form Flow
See TAB 2

1c. Determine in discussion with the FTD, whether Effluents Technology personnel need to be involved with sample packaging and transport.

2. Fill in all applicable portions of a "Sample Collection Field Sheet or APF/CC Collection Sheet" for each sample to permit a chain of custody to be established for each.

2a. Obtain the necessary information to complete this record from the forms in step 1a of this TAB and Effluents Technology personnel if they are involved with the sample.

SPECIFIC TASK:

HOW:

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| 3. | Review "TLD Collection/Transfer Sheets" to be delivered with emergency TLDs for processing at PPL's Corporate Dosimetry Laboratory for completeness. | 2b. | Ensure that one of the sample collection persons delivering the sample to the Coordinator signs as the first individual to relinquish custody of the sample. |
| | | 2c. | Obtain the address of the offsite laboratory to receive the samples from the FTD if not already known. |
| | | 3a. | "TLD Collection/Transfer Sheets" are the sole sources of information regarding the ends of the monitoring periods for the TLD locations listed on the Sheets. The Sheets also document the chain of custody for the listed TLDs. |
| | | 3b. | Ensure that one of the persons delivering the TLDs to the Coordinator signs as the first individual to relinquish custody of the sample. |
| 4. | Package samples in the appropriate containers for transport to an offsite laboratory. | 4a. | Complete a "Sample Packing List" for each package. |
| | | 4b. | Copy the list of sample numbers to the "Emergency Environmental Sample Transport Log." |
| | | 4c. | Place a "Sample Packing List" in each package. |
| | | 4d. | Ensure that the Sample and APF/CC Collection Field Sheets and TLD Collection/Transfer Sheets are enclosed with the samples/TLDs in the packages, as appropriate, and stamped "Emergency Process Immediately." |
| | | 4e. | Seal the package promptly after inserting the completed "Sample Packing List" into it. |

SPECIFIC TASK:

HOW:

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| 5. Complete the "Emergency Environmental Sample Transport Log" prior to sending the packaged samples for analysis. | 5a. Make a separate entry on the Log for each package. Assign shipment numbers consecutively, in the order that the shipments are made. |
| 6. Arrange for transporting samples commercially with the permission of the FTD if a courier can't be provided for the packages comprising a shipment. | 6a. Effluents Technology will arrange commercial transportation of samples if they are involved in the preparation and shipment of the samples. |
| 7. Refer to the "Emergency Environmental Sample Transport Log" if questions arise concerning the disposition or status of samples. | 7a. Deliver the Log to the FTD at the conclusion of the emergency response effort. |

EREMP SAMPLE COLLECTION KIT CONTENTS

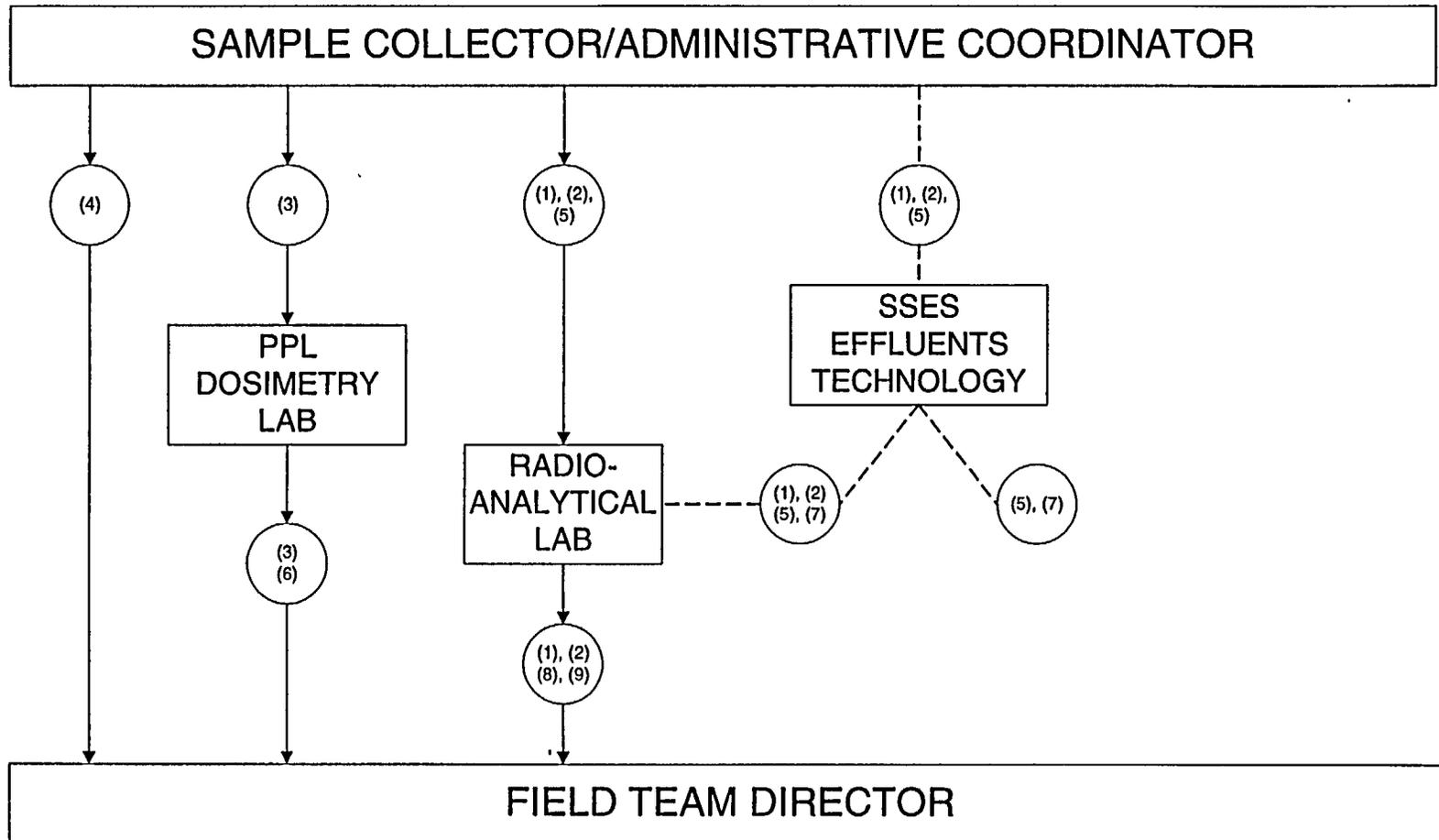
ITEM	QUANTITY
Pennsylvania Maps	2
EREMP Forms: Sample Collection Field Sheet, APF/CC Collection Field Sheet, TLD Collection/Transfer Sheet	20 each
Emergency Process Immediately Labels	50
Plastic Gloves	25 pair
Plastic Sealable Sample Bags (1 gallon size)	10
Large Plastic Sample Bags (20-30 gallon size)	10
Plastic Sealable Waste Bags	2
Standard Screwdriver	1
Tape Measure	1
Flashlight/Extra Batteries	1/2
Small Notebook and Clipboard	1
Plastic Beaker (1000 ml)	1
Air Particulate Filter Papers in Glassine Envelopes	10
Charcoal Cartridges	10
TLD Container	1
Pliers	1
Light Wire	1
Shears	1
Black markers	2
Black Pens	2
Pencils	2
Knife	1
Onion Bag	1
Funnels	2
Scale (1020 g capacity)	1
Rainsuits	2
Hi Range PIC	2
Low Range PIC	2
Milk Collection Container	1
Forceps	1
Watch (with elapsed time feature)	1
Quadrats (1 m ² string)	2
Detergent	1
Scoop	1
Paper Towels	1 roll
1-gram Measuring Spoon	1

ITEM	QUANTITY
Sodium Bisulfite (80-g packets)	2
Sodium Bisulfite (40 grams - for water samples only)	1
Safety Glasses	2
Masking Tape	1 roll
Key (air monitoring cabinet)	1
Key (#50)	1
Key (#3769 for PPL TLD box)	1
Key (#P848 for DEP/BRP TLD box)	1
Key (#2532 for PPL boat stored at Bloomsburg Service Center)	1

EREMP SAMPLE COLLECTION ITEMS NOT IN KITS

Plastic Spray Bottles	Emergency Environmental Sample Transport Log
Sample Packing List	Sample Containers (1 gallon, 2 gallon)
Push Stick (for soil sampling)	Extra Paper Towels
Buckets	Extra Plastic Bags
Bucket with Rope	Extra Air Particulate Filters and Charcoal Cartridges
Lead Pigs	Extra Emergency Process Immediately Labels
Replacement TLDs	Extra Gloves
Extra Masking Tape	5-gallon Containers for Water and Wastewater
Extra Sodium Bisulfite	5-gallon Replacement Precipitation Collection Containers
Shovels	Teledyne Brown Engineering Address Stamp
Soil Augers	Shipping Boxes (large and small)
PPL Shipping Labels	Packaging Stapler/Staples
Packaging Tape	Emergency Process Immediately Stamp
Coveralls and Boots	

EMERGENCY ENVIRONMENTAL SAMPLING FORM FLOW



- (1) SAMPLE COLLECTION FIELD SHEET
- (2) APF/CC COLLECTION FIELD SHEET
- (3) TLD COLLECTION/TRANSFER SHEET
- (4) SAMPLE TRANSPORT LOG
- (5) SAMPLE PACKING LIST

- (6) TLD PROCESSING RESULTS
- (7) RADIOACTIVE MATERIALS SHIPPING RECORD
- (8) REPORT OF ANALYSIS (TELEDYNE)
- (9) OTHER ANALYSIS LAB REPORTS