LYCOMING COUNTY
EMERGENCY MANAGEMENT AGENCY
NUCLEAR/RADIOLOGICAL INCIDENT PLAN

TO THE COUNTY EMERGENCY OPERATIONS PLAN

COUNTY SUPPORT PROCEDURES
FOR
NUCLEAR POWER PLANT INCIDENTS

APRIL 1994

Change 6
2008

Summary of Changes

Changes in this plan are designated by the revision bars located in the left margin.

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LYCOMING COUNTY
NUCLEAR / RADIOLOGICAL INCIDENT PLAN
NUCLEAR POWER PLANT INCIDENTS
AT THE SUSQUEHANNA STEAM ELECTRIC STATION

1. PURPOSE

   A. To provide for the housing, feeding, medical, and other social service needs for persons evacuated from Columbia County in response to an incident at Susquehanna Steam Electric Station (SSES).

   B. To specify procedures for establishing reception and mass care support of evacuees from Columbia County for an incident at SSES Nuclear Power Plant.

   C. To provide guidance for the monitoring, decontamination, medical care, and treatment of evacuees exposed to radioactive contamination.

   D. To specify procedures for minimizing the effects of radioactive contamination on milk, agricultural products, water, and food processing plants within Lycoming County.

2. SITUATION

   A. In the event of an evacuation from Columbia County because of an incident at SSES, Lycoming County will provide mass care support for the evacuees.

   B. Lycoming County will open a monitoring/decontamination center at each mass care center within the county.

   C. In order to accomplish these responsibilities, training and practice are necessary. Periodic exercises are conducted to evaluate radiological emergency response capabilities, periodic drills are conducted to develop and maintain these skills, and shortcomings identified as a result will be corrected. In addition to the provisions of the Lycoming County EOP (Basic Plan), the provisions of the State EOP; current PEMA Training Directives; and paragraph II.N. and O., NUREG-0654/FEMA REP-1 apply.

   D. Lycoming County partially lies within the 50-mile radius ingestion exposure pathway emergency planning zone (EPZ) relative to the Susquehanna Steam Electric Station Nuclear Power Plant.

   E. It is estimated that 2562 evacuees from the Emergency Planning Zone (EPZ) of the Susquehanna Steam Electric Station will use mass care in Lycoming County.

3. CONCEPT OF OPERATIONS

A. General

1) Evacuees will enter Lycoming County mass care centers by the way of reception centers in the event of an evacuation of the affected portions of Columbia and Luzerne Counties. See Appendix 1 for evacuation routes and Traffic Control Points (TCPs).

2) Emergency classification levels are defined in Paragraph 8.C of this Annex.

B. Reception Center

The Lycoming Mall will serve as the reception center for designated evacuees from Columbia County. Reception center leaders and staff (see Lycoming County Resource Manual) will provide assistance at the reception center to include providing information and directions to mass care centers. (See Appendices 2 and 3.)

C. Mass Care Center

Sufficient mass care centers have been identified to accommodate the expected influx of evacuees. They will be filled sequentially as the need arises. At the mass care centers, managed by the American Red Cross, personnel will provide emergency services to include registration, lodging, feeding, social services, emergency health care and responses to inquiries regarding names of persons lodged in the center. (See Appendix 6.)

D. Student Pickup Points -- Host Schools

There are no host schools for evacuated students of Columbia or Luzerne Counties situated in Lycoming County.

E. Monitoring/Decontamination Center(s)

1) The Lycoming County EMA will be notified by PEMA when monitoring/decontamination is required. The monitoring/decontamination team will monitor all individuals arriving at the mass care center. Vehicles will be monitored if occupants are found contaminated.

2) Guide service animals, if contaminated, will go through decontamination with their owners.

3) Contaminated vehicles will be isolated. (See Appendix 4).

F. Ingestion Exposure Pathway

State EAS message will advise all persons residing within the ingestion exposure pathway emergency planning zone will be advised regarding precautions to be taken with food and water supplies. Farmers will be advised on the need to shelter livestock and to feed from stored grains and non-contaminated water supplies. Food processors will be directed to ensure that the processed foods distributed for consumption are not contaminated. (See Appendix 9.)

G. Notification

1) PEMA Operations at Headquarters in Harrisburg notifies the support counties on the declaration of any ECL of Alert or higher, on any escalation of an ECL, reduction of an ECL, and demobilization of the emergency.

2) Lycoming County notifies officials and agencies specified in Paragraph 4 in the Basic Plan of the Lycoming County EOP on the declaration of any ECL of Alert or higher, on any escalation of an ECL, reduction of an ECL, and closeout of the emergency.

3) Maintain contact with PEMA Operations at Headquarters in Harrisburg until demobilization of the emergency.

H. Emergency Response Actions, Lycoming County, for ECLs

Staffing of the emergency response positions will be in accordance with the information provided in The Basic Plan.

1) **Unusual Event**

a. No actions are required.

2) **Alert**

a. Acknowledge, verify, and log notification message.
b. See Enclosure 2, Emergency Response Action Matrix.
c. Notify:
   (1) County Commissioners
d. Notify and Operational:
   (1) EMA Coordinator
   (2) EMA Professional Staff
e. Notify and on Standby:
   (1) County Radiological Officers
   (2) EOC Staff (Emergency Support functions) partial or full mobilization per incident assessment.

(3) American Red Cross

(4) Amateur Radio

(5) TCP Personnel

(6) Fire Ambulance Personnel

(7) Mass Care Personnel

(8) Monitoring/Decontamination Teams

(9) Agriculture

f. Activate and Operational:

(1) Public Information

g. Activate:

(1) Hospitals

h. Unmet Needs

Satisfy reported mass care center unmet needs.

i. Review Documents

Review applicable procedures, mutual aid agreements, and letters of understanding.

j. PRDs and Monitoring Equipment

Prepare to distribute PRDs and monitoring equipment to monitoring/ decontamination teams and PRDs to reception center staff.

3) **Site Area Emergency**

a. If this is initial emergency level, perform all actions listed under Alert above.

b. Acknowledge, verify, and log notification message.

c. See Enclosure 2, Emergency Response Action Matrix.

d. Mobilize:

(1) County Commissioners

(2) EMA Professional Staff

(3) EMA Coordinator

e. Operational:

(1) County Radiological Officers

(2) EOC Staff

(3) American Red Cross

(4) Amateur Radio

(5) TCP Personnel

(6) Fire Ambulance Personnel

(7) Mass Care Personnel

(8) Monitoring/Decontamination Teams

(9) Agriculture

f. Issue PRDs/monitoring equipment to monitoring/decontamination teams and PRDs to reception center staff.

g. Send Control Permanent Record Dosimeters (PRDs) to the Area or State EOC.

h. Emergency Public Information (EPI)

Issue EPI advisories, if appropriate.

i. Agriculture Advisories

Issue advisories in coordination with PEMA State EOC.

j. Unmet needs

Report unmet needs of Lycoming County to PEMA State EOC.

4) **General Emergency**

a. If this is the initial emergency level, perform all actions under Alert and Site Area Emergency above.

b. Acknowledge, verify, and log notification message.

c. See Enclosure 2, Emergency Response Action Matrix.

d. Mobilize:

(1) County Radiological Officers

(2) EOC Staff

(3) Fire Ambulance Personnel

(4) Mass Care Personnel

(5) Agriculture

(6) Public Information

e. Mobilize and Deploy:

(1) American Red Cross

(2) Amateur Radio

(3) TCP Personnel

(4) Monitoring/Decontamination Teams

f. Public Information (ESF-15)

Update Public Information, if appropriate.

g. Agricultural Advisories (ESF-11)

Update advisories in coordination with State EOC.

h. Report unmet needs to PEMA Central Region

5) Recovery (ESF-14)

a. Traffic Control Points mobilized.

b. Convey Recovery/Return instructions announced by PEMA through emergency management channels.

c. Records and Reports submitted within 48 hours of incident termination to the Pa. Emergency Management Agency.

d. Review-revise plans if appropriate in accordance with state policy.

4. ORGANIZATION AND RESPONSIBILITY

A. Organization

See Basic Plan, County EOP. The county operates in accordance with the National Incident Management System (NIMS).

B. Responsibilities

1) Lycoming County Board of Commissioners

Refer to Basic Plan, Concept of Operations, County EOP.

2) Emergency Management Coordinator (ESF-5)

a. Refer to County EOP.

b. Notify appropriate staff.

3) Communications Officer/Warning Officer (ESF-2)

a. Refer to County EOP.

b. Establish and maintain communications between the County EOC and the reception, mass care, and monitoring/decontamination centers.

c. Mobilize and deploy supplemental communications personnel and equipment as the situation dictates.

4) Public Information Officer (ESF-15)

Refer to County EOP for coordination arrangements and spokesperson responsibilities.

5) Police Services Officer (ESF-13)

a. Refer to County EOP.

b. Provide traffic control and law enforcement for and at reception, mass care, and monitoring/decontamination centers, and on municipal routes to reception and mass care centers.

c. Provide alternative communications for reception, mass care, and monitoring/decontamination centers.

d. Be prepared to assist in radiological monitoring and decontamination of evacuees when required.

6) Fire-Rescue Officer (ESF 4 & 9)

a. Refer to County EOP.

b. Assist with emergency medical evacuations.

7) Health/Medical Services Officer (ESF-8)

a. Refer to County EOP.

b. Assist in operations of mass care centers with medical, health, and human services staff as required.

c. Coordinate reception of contaminated injured persons with hospitals identified to provide such treatment.

8) Mass Care Officer (ESF-6)

a. Refer to County EOP.

b. Review Appendix 6 of this Annex.

c. Report any additional unmet needs to Lycoming County EMA.

9) Transportation Officer (ESF-1)

a. Refer to County EOP.

10) Radiological Officer (ESF-10)

a. Refer to County EOP.

b. Train and maintain volunteers to conduct radiological monitoring and decontamination activities for personnel and equipment. (See Appendix 4.)

c. Deliver Control PRD and completed Control PRD Form to PEMA State EOC either direct or via Pennsylvania State Police at Site Area Emergency, (see Appendix 4, Attachment E, Tab 1), or to the Pennsylvania State Police Barracks located at Montoursville for road or aerial delivery.

d. Review and update RERP annex and coordinate with all parties assigned responsibilities in this Annex.

e. Notify appropriate monitoring/decontamination team members.

f. Disseminate and maintain records for dosimetry distribution.

g. Coordinate monitoring and decontamination records and forward to PEMA.

11) Resource Officer (ESF-7)

a. Refer to in the Lycoming County EOP.

b. Support with available resources.

12) Public Works/Engineering Officer (ESF-3)

a. Refer to County EOP.

b. Support reception and mass care center managers with materials for vehicle and people control.

13) Agriculture Officer (ESF-11)

a. Refer to County EOP.

b. Supply information and advise on agricultural matters.

c. Coordinate with PEMA EOC on the effects of radiological contaminates within the County's portion of the ingestion exposure pathway EPZ.

d. Be prepared to coordinate with Department of Environmental Protection and Department of Agriculture in the collection of milk, food, and water samples.

14) School Services Officer (ESF-6)

a. Refer to County EOP.

b. Maintain liaison with affected schools serving as mass care centers (if applicable).

15) Pennsylvania State Police Liaison Officer (ESF-13)

a. Refer to County EOP.

b. Ensure operation of designated PSP Traffic Control Points.

c. Coordinate PSP assistance to municipal police in crowd and traffic control at each reception, mass care, and monitoring/decontamination center, if needed.

16) Pennsylvania Army National Guard Liaison Officer

Refer to County EOP.

5. ADMINISTRATION AND LOGISTICS

A. Records

Maintain an EOC log on support operations in the county. Maintain adequate supply of necessary forms and reports.

B. Resource Lists

Maintain agreements and update resources and contact lists. Inventory resources semi-annually.

6. EXERCISE CORRECTION PROCEDURES

A. County Emergency Management Coordinators will forward applicable After Action Reports to other agencies within the county (e.g., school districts, hospitals.) Corrective actions requiring changes to county plans will be returned to the county for appropriate adjustments. County Coordinators will forward corrective actions or rebuttals to PEMA. County plans changes, if any, will be forwarded to PEMA.

B. Remedial training will be scheduled as necessary and included in the county REP Training Plan submitted with the Act 31 of 2007 Annual Report. Appropriate PEMA staff members will attend/participate in the training as appropriate. Prior issues will be demonstrated at the next scheduled exercise and re-evaluated at the next scheduled biennial exercise.

7. REFERENCES

A. Emergency Operations Plan, May 2005, Pennsylvania Emergency Management Agency.

8. DEFINITIONS OF TERMS

A. Acknowledge(ment) - Timely affirmation by the addressee of receipt of a message or announcement.

B. Emergency Planning Zone (EPZ) - A generic area defined about a nuclear power plant to facilitate off-site emergency planning and develop a significant response base. It is defined for the plume and ingestion exposure pathways.

C. Nuclear Power Plant Incident (hereinafter called an "incident") - An incident is an event or condition at a nuclear power plant which could result in impact on public health and safety. Four incident classes have been identified; from the least serious to the most serious they are Unusual Event, Alert, Site Area Emergency, and General Emergency. (Note: Site Area Emergency or General Emergency action levels are not to be confused with a "Declaration of Disaster Emergency" made by the Governor in accordance with 35 Pa. C.S.) Within each class there are specific emergency responses necessary to ensure that public health and safety are protected. Descriptions of the four emergency classification levels are as follows:

1) Unusual Event - Events are in progress or have occurred, that indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection. No release of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occur.

2) Alert - Events are in progress or have occurred, that indicate actual or potential substantial degradation of the level of safety at the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Any release of radioactive material are expected to be limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guidelines (PAG) exposure levels.

3) Site Area Emergency - Events are in progress or which have occurred, that involve actual or likely major failure of plant functions needed for protection of the public or security events that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevents effective access to equipment needed for the protection of the public. Any releases of radioactive material are not expected to exceed EPA PAG exposure levels except near the site boundary.

4) General Emergency - Events are in progress or have occurred, that involve actual or imminent substantial core degradation or melting with potential loss of containment integrity or security events that result in an actual loss of physical control of the facility. Releases of radioactive material can be reasonably expected to exceed EPA PAG exposure levels off-site for more than the immediate area.

D. Ingestion Exposure Pathway EPZ - That area surrounding a nuclear power plant which, as a result of a release of radioactive material, is a potential source of exposure through the ingestion of water and food, such as milk or fresh vegetables originating there. This EPZ consists of a circular area of 50 miles radius around the nuclear power plant.

E. Plume Exposure Pathway EPZ - The area surrounding a nuclear power plant which potentially is subject to radiation exposure as a result of an incident involving radioactive material emanating from the facility. Such potential exposure could involve:

1) Whole body exposure to gamma radiation from the plume and from deposited materials.

2) Inhalation exposure from the passing radioactive plume. The EPZ for this pathway consists of an area of approximately ten miles in radius around the nuclear power plant. (The exact size and configuration of each plume exposure pathway EPZ for the respective nuclear power plant in Pennsylvania were determined in relation to local emergency response needs and capabilities as they are affected by conditions such as demography, topography, access routes, and jurisdictional boundaries. Plume exposure pathway EPZs for the nuclear power plants are shown in of Annex E to the State EOP.)

F. Radiological Emergency Response Procedures (RERP) - Detailed incident response procedures developed by the State and its agencies and county emergency management agencies in coordination with PEMA and the nuclear power plants.

G. Risk Counties - Those counties located partially or wholly within the plume exposure pathway EPZ of a nuclear power plant.

H. Sheltering - Action by the public within the risk counties to take advantage of the protection against radiation exposure afforded by remaining indoors, away from doors and windows, during and following the passage of the radioactive plume. Action taken by farmers to protect livestock.

I. Support County - The county or counties outside the plume exposure pathway EPZ of a nuclear power plant, through prior arrangement, that will provide support to a risk county in the event of an incident. Depending on size and location, the same county may be both a risk and support county.

J. Verification - Follow-up by the addressee to confirm understanding of the contents of a message or announcement.

9. DISTRIBUTION AND CHANGE

A. Distribution

1) **Distributed by Lycoming County EMA**
Lycoming County Commissioners (1)
Lycoming County EMA EOC (5)
Radiological Teams (5)
American Red Cross (1)
Reception Center Leader (1)
Mass Care Center Leaders (3)
Muncy Township Police (1)
Muncy Township Fire Co./Fire Police (1)
Municipal EMC of Participating Municipalities (3)
Municipal Police Departments (3)
Municipal Fire Departments (3)
Radiological Officer (1)
Schools (3)

2) **Distributed by PEMA** *
FEMA Region III (5)
PEMA Eastern Region (1)
PEMA Central Region (1)
PEMA Headquarters (1)
Columbia County EMA (1)
USDA County Emergency Board (1)
State Police (1)

B. While distribution of these plans will be controlled, additional copies can be made available upon specific request and justification to the Lycoming County Emergency Management Agency. As copies are distributed, the name and address of the recipient will be added to the county distribution list.

C. Changes on pages of this document will be shown by a vertical line in the margin. Additionally, the number and date of the change will be put on the lower right corner of each page that is changed.

ENCLOSURES:

1. Emergency Notification Report Form
2. Emergency Response Action Matrix and Staffing Status Flowchart

* Electronic Copies

APPENDICES:

1. Evacuation Traffic Control
2. Reception Centers
3. Reception Center Operations
4. Monitoring/Decontamination Procedures
5. Inventory and Maintenance Procedures
6. Mass Care
7. Medical Response to Radiation-Contaminated Injured Individuals
8. Public Information
9. Ingestion Exposure Pathway Emergency Planning Zone
10. Recovery
11. Agreements and Statements of Understanding

ENCLOSURE 1

Control # _____

EMERGENCY NOTIFICATION REPORT

1. Call Status: ☐ **THIS IS A DRILL** ☐ **THIS IS AN ACTUAL EVENT**

2. This is: _____ at PPL Susquehanna, LLC
(Communicator's Name)

My telephone number is: 570-542- 3 _____
570-759- 4 _____
(Callback telephone number)

Notification time is: _____ .
(Time notification initiated)

3. **EMERGENCY CLASSIFICATION:**
☐ **UNUSUAL EVENT**
☐ **ALERT**
☐ **SITE AREA EMERGENCY**
☐ **GENERAL EMERGENCY**
☐ **The event has been terminated.**

UNIT: ☐ **ONE** ☐ **TWO** ☐ **ONE & TWO**

Declaration Time: _____ (Time classification/ termination declared)

DATE: _____ (Date classification/ termination declared)

THIS REPRESENTS A/AN: ☐ **INITIAL DECLARATION** ☐ **ESCALATION** ☐ **NO CHANGE** } **IN CLASSIFICATION STATUS**

4. **The Classification Designation is**: _____

BRIEF NON-TECHNICAL DESCRIPTION OF THE:
☐ **EMERGENCY EVENT** (Initial declaration and escalations) **OR**
☐ **OTHER SIGNIFICANT EVENT**(No change in emergency classification or classification time)

5. **THERE IS:** ☐ **NO** ☐ **AN AIRBORNE** ☐ **A LIQUID** } **RADIOLOGICAL RELEASE IN PROGRESS DUE TO THE EVENT**

Fuel Clad Barrier **AND Containment** Barrier LOSS, **RCS** Barrier **AND Containment** Barrier LOSS,
an increase in the detected radiation by effluent monitors or sampling that is a result of the event,
any radioactive liquid released beyond the Protected Area that is a result of the event,
RG1, RS1, RA1, RU1, MU7, SBGT initiation on RB Vent hi-rad
Other classifications should be assessed to determine if there is a radiological release due to the event in progress.

6. **WIND DIRECTION IS FROM:** _____ ◦ . **WIND SPEED IS:** _____ **mph.**
(Data from 10 meter meteorological tower, available on PICSY.)

7. **REPEAT:** ☐ **THIS IS A DRILL** ☐ **THIS IS AN ACTUAL EVENT**

APPROVED: _____ (ED, RM, or EOFSS) **Time:** _____ (Time form approved) **Date:** _____ (Date form approved)

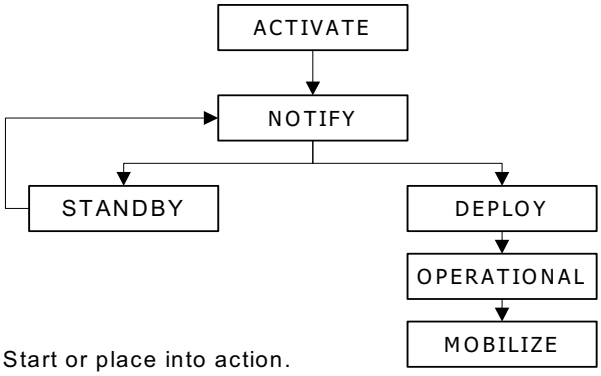
ENCLOSURE 2

EMERGENCY RESPONSE ACTION MATRIX AND STAFFING STATUS FLOWCHART

POSITION	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
County Commissioners	None	**N**	**M**	--
EMA Coordinator (ESF-5)	None	**N, O**	**S**	--
EMA Professional Staff	None	**N, O**	**M**	--
County Radiological Officers (ESF-10)	None	**N, S**	**O**	**M**
EOC Staff	None	**N, S**	**O**	**M**
American Red Cross (ESF-6)	None	**N, S**	**O**	**M, D**
Amateur Radio (ESF-2)	None	**N, S**	**O**	**M, D**
TCP Personnel (ESF-13)	None	**N, S**	**O**	**M, D**
Fire Ambulance Personnel (ESF-4)	None	**N, S**	**O**	**M**
Mass Care Personnel (ESF-6)	None	**N, S**	**O**	**M**
Monitoring/Decontamination Teams (ESF-10)	None	**N, S**	**O**	**M, D**
Agriculture (ESF-11)	None	**N, S**	**O**	**M**
Public Information (ESF-15)	None	**A, O**	--	**M**
Hospitals (ESF-8)	None	**A**	--	--
Host Schools	None	**N/A**	**N/A**	**N/A**

KEY:

N - Notify
S - Standby
A - Activate
O - Operational
M - Mobilized
D - Deployed
N/A - Not Applicable



Activate - Start or place into action.

Notify - To inform of a condition.

Standby - Ready to perform but awaiting further instructions.

Deploy - To move to the assigned location in order to start operations.

Operational - Capable of accepting assignments but with partial staffing.

Mobilized - Fully staffed for 24 hour operation.

EVACUATION TRAFFIC CONTROL

1. Evacuation descriptions and routes to the reception center for the municipalities to be evacuated in Columbia County are in Attachment A.

2. The municipalities, evacuation routes, and the reception center for Columbia County evacuees are contained in Attachment A. A map showing the evacuation routes and traffic control points (TCPs) is at Attachment B. Attachment C lists the TCPs, manning of the TCPs, and the function of each TCP.

ATTACHMENTS:

A. Columbia County Evacuation Route Descriptions

B. Evacuation Route Map with TCPs

C. Traffic Control Points (TCPs)

ATTACHMENT A

COLUMBIA COUNTY EVACUATION ROUTE DESCRIPTIONS

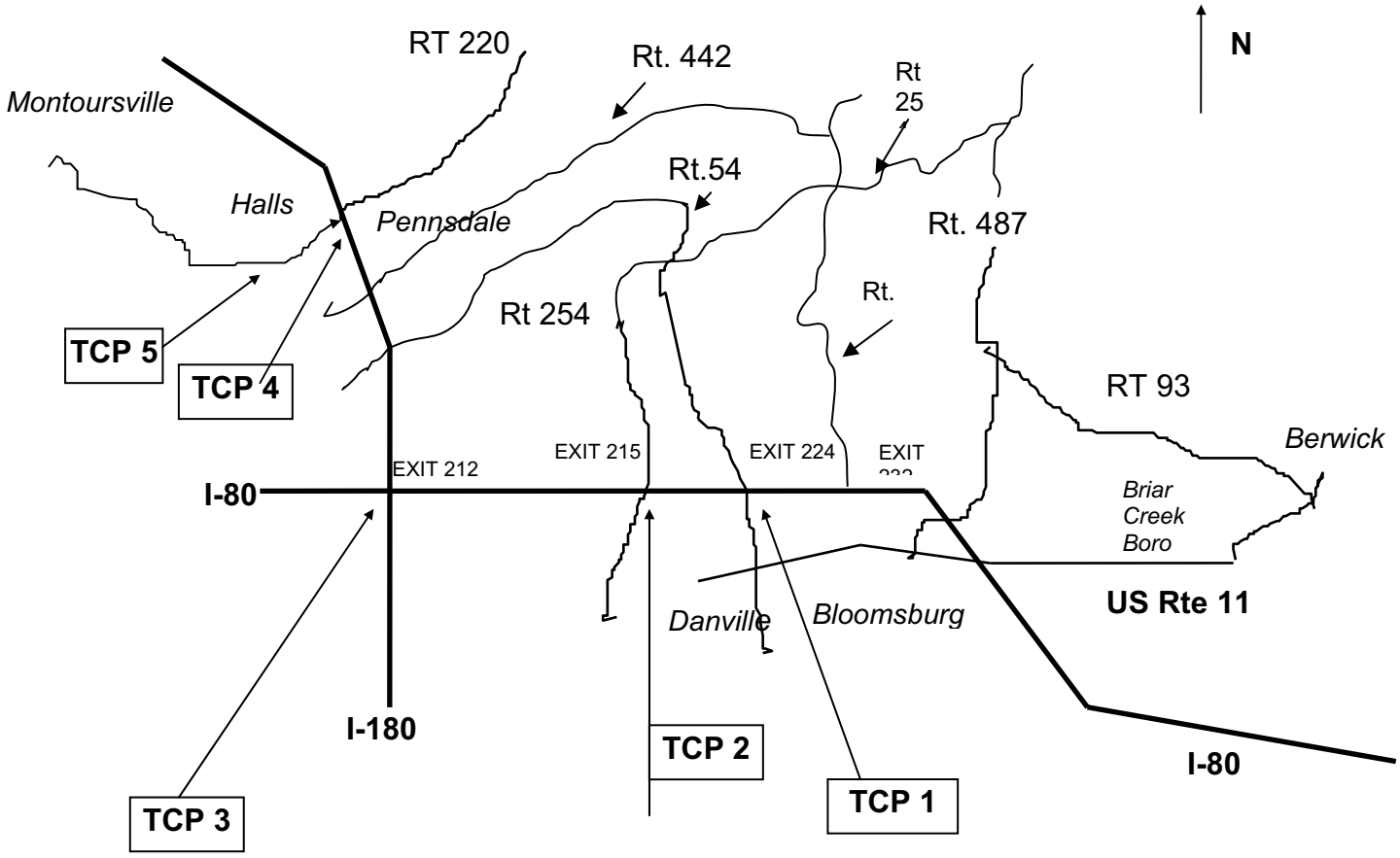
Municipality (Mass Care Requirement)	Evacuation Route	Reception Center
Berwick Borough (2154)	Take State Route 11 south to Route I-80, (or State Route 93 north to State Route 487, south on State Route 487 to Route I-80), west on Route I-80 to Exit 212B to I-180 to Lycoming Mall, Halls (Exit 15).	Lycoming Mall Old Route 220 Halls, PA
Briar Creek Borough (130)	Take State Route 11 south to Route I-80, west on Route I-80 to Exit 212B to I-180, west on Route I-180 to Lycoming Mall, Halls (Exit 15).	Same as above
Fishing Creek Township (278)	Take local routes west to State Route 254. Go west on State Route 254 to State Route 42 in Millville. Take State Route 42 north to State Route 442. Take State Route 442 west to Route I-80. Go north on Route I-80 to Lycoming Mall, Halls (Exit 15).	Same as above.

TOTAL MASS CARE REQUIREMENTS - 2562

Note: The above TCPs include those that are located within Lycoming County and within other non-risk counties through which the evacuees travel.

ATTACHMENT B

EVACUATION ROUTES AND TCPs SCHEMATIC



ATTACHMENT C

TRAFFIC CONTROL POINTS
COLUMBIA COUNTY TO LYCOMING COUNTY

Post No.	Traffic Control Points	Personnel	Instructions
1	West on I-80, Exit 224 (Danville)	2 PSP Troop F	Facilitate traffic west on Interstate 80
2	West on I-80, Exit 215 (Limestoneville)	2 PSP Troop F	Facilitate traffic west on Interstate 80
3	West on I-80, Exit 212B (Muncy/I-180)	2 PSP Troop F	Facilitate traffic off I-80 onto Interstate 180 toward Williamsport
4	I-180 west to Halls Exit 15 (Rt. 220/Pennsdale)	2 PSP Troop F	Facilitate traffic off I-180 onto Old Route 220
5	Intersection of Lycoming Mall Drive and Route 220 at Halls Station	2 PSP Troop F 1 Muncy Twp. PD	Facilitate traffic into the Lycoming Mall Reception Center

NOTE: The above TCPs include only those that are located within Lycoming County and within other non-risk counties through which the evacuees travel.

The limited number of evacuees from Fishing Creek Township does not require additional traffic control points.

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RECEPTION CENTER

1. Evacuees from Columbia County who require mass care, or request monitoring, are instructed to report to the reception center designated in emergency information in telephone book inserts or announced over the Emergency Alert System (EAS). The Reception Center will direct evacuees to available mass care facility. Locations of the reception center are as follows:

Risk County	Reception Center
Columbia	Lycoming Mall Route 220 Halls, PA

2. Parents will have picked up their children prior to arrival in Lycoming County.

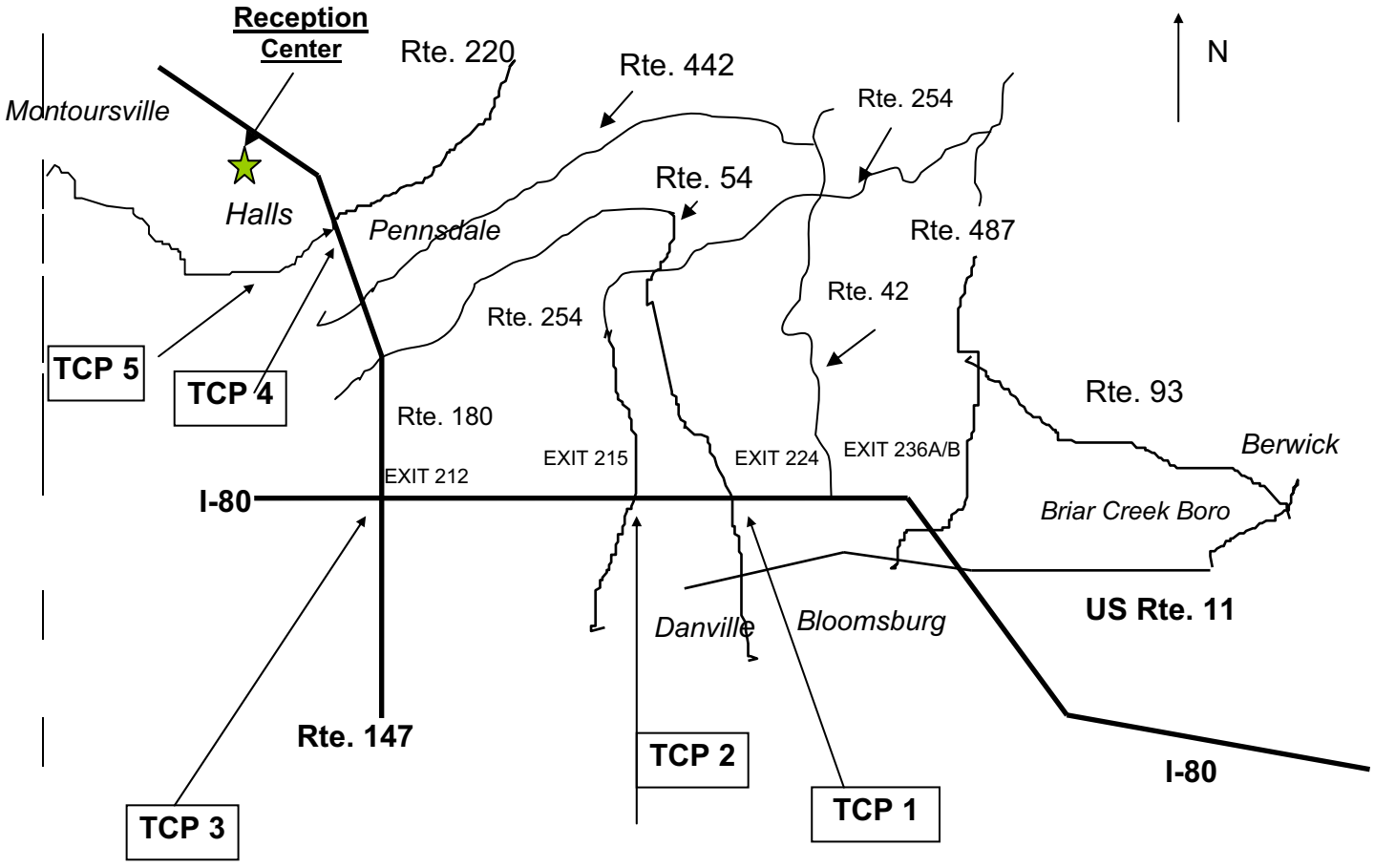
3. A map showing evacuation routes to the reception center is at Attachment A. Details of the reception center/processing site are contained in Attachments B and C.

ATTACHMENTS:

A. Evacuation Routes to the Reception Center Schematic
B. Lycoming Mall Processing Site
C. Schematic of Reception Center Operations & Routes
D. Map of Reception Center to Mass Care Centers
E. Map of McCall Middle School and Montoursville H.S. Mass Care
F. Map of Hughesville Mass Care Center

Attachment A

Evacuation Routes To The Reception Center Schematic



Attachment B

Lycoming Mall Processing Site

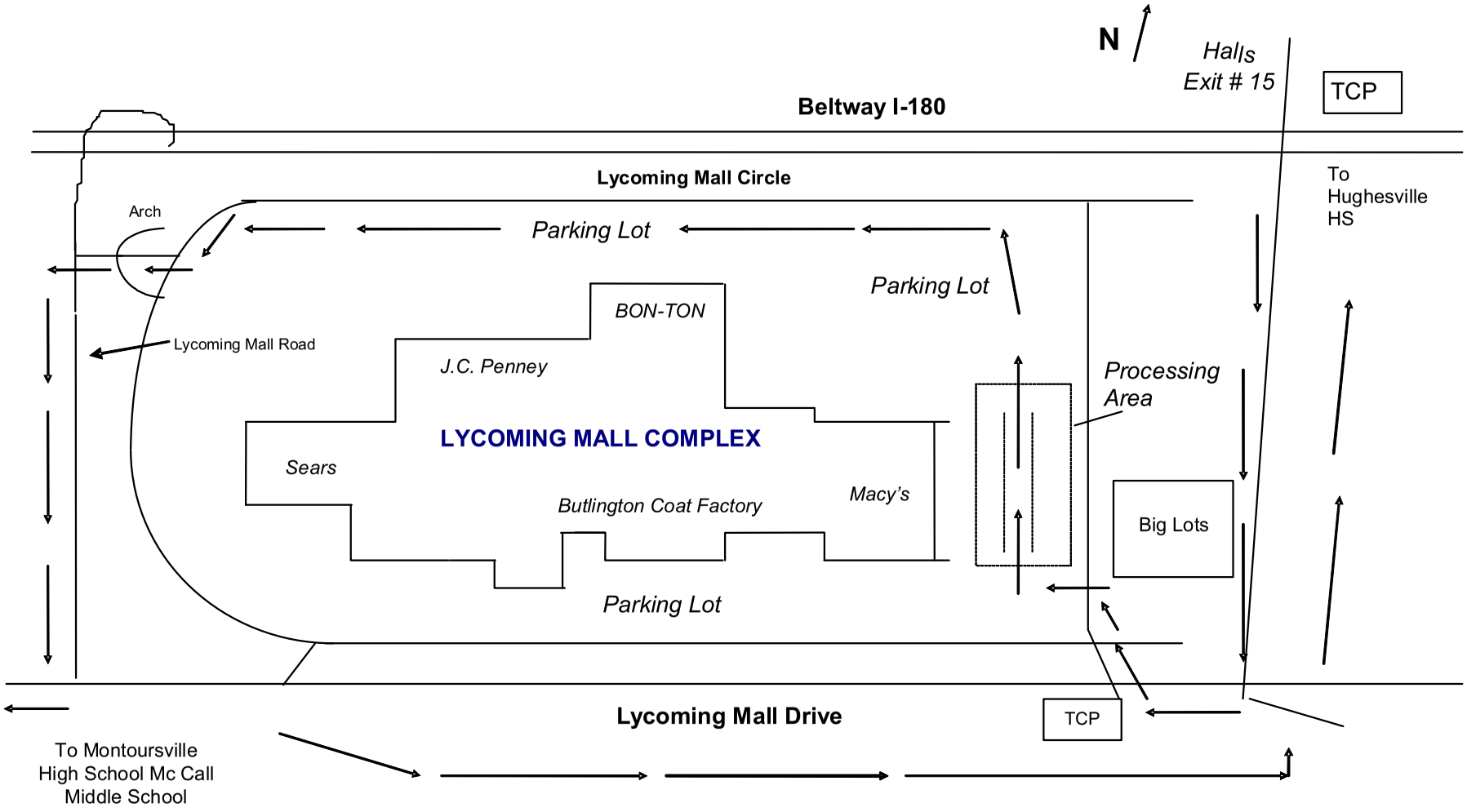
1. TRAFFIC CONTROL - TCP - Traffic Control Points by State Police and/or Fire Police. Direction and Reception Center Route signs by PennDOT.

2. RECEPTION CENTER/PROCESSING POINT - By Lycoming Mall (Facilities) Operation and Manpower by Municipal Emergency Management Agencies.

   - Assignment of Shelter

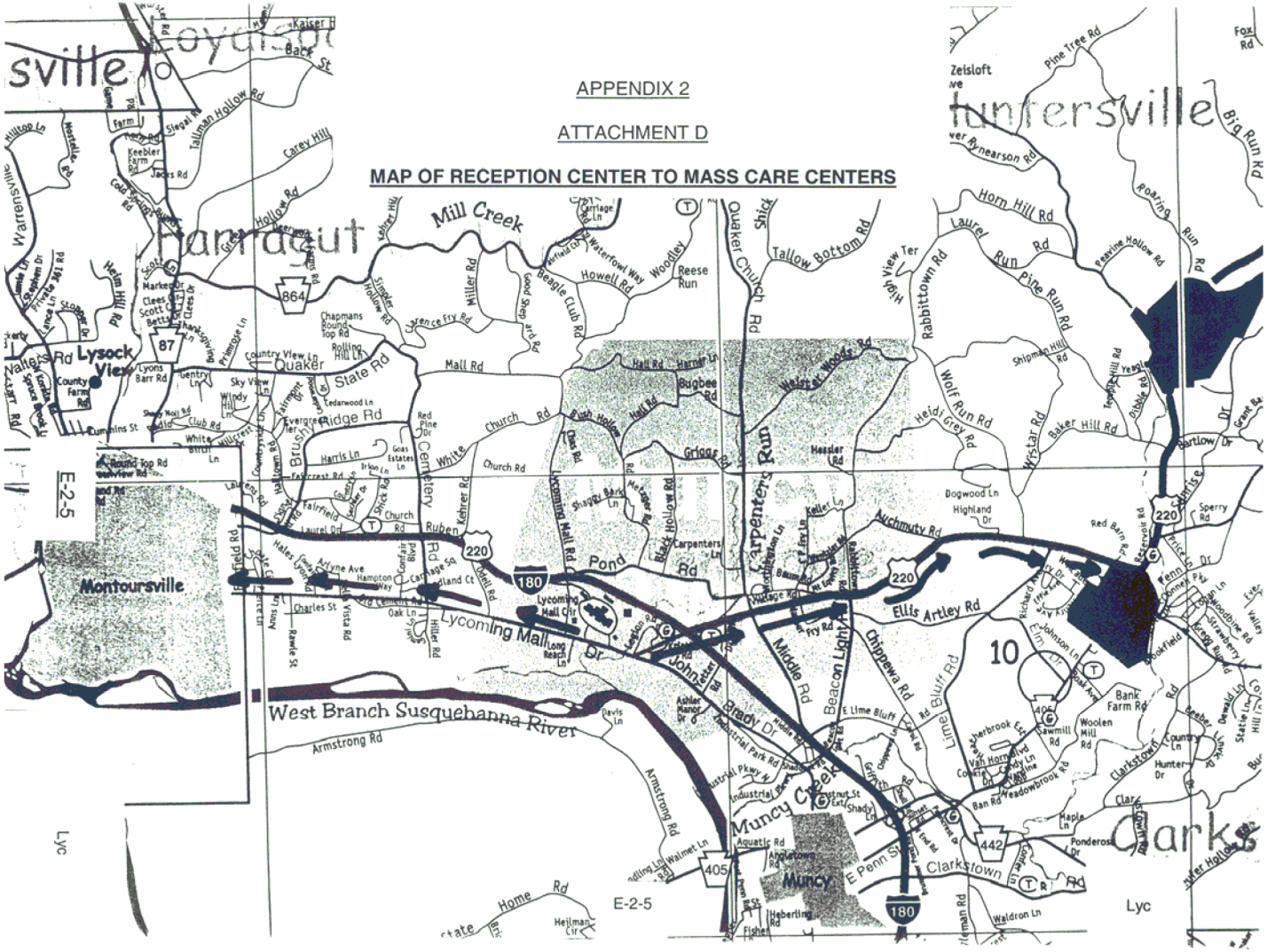
Attachment C

Schematic of Reception Center Operations and Routes



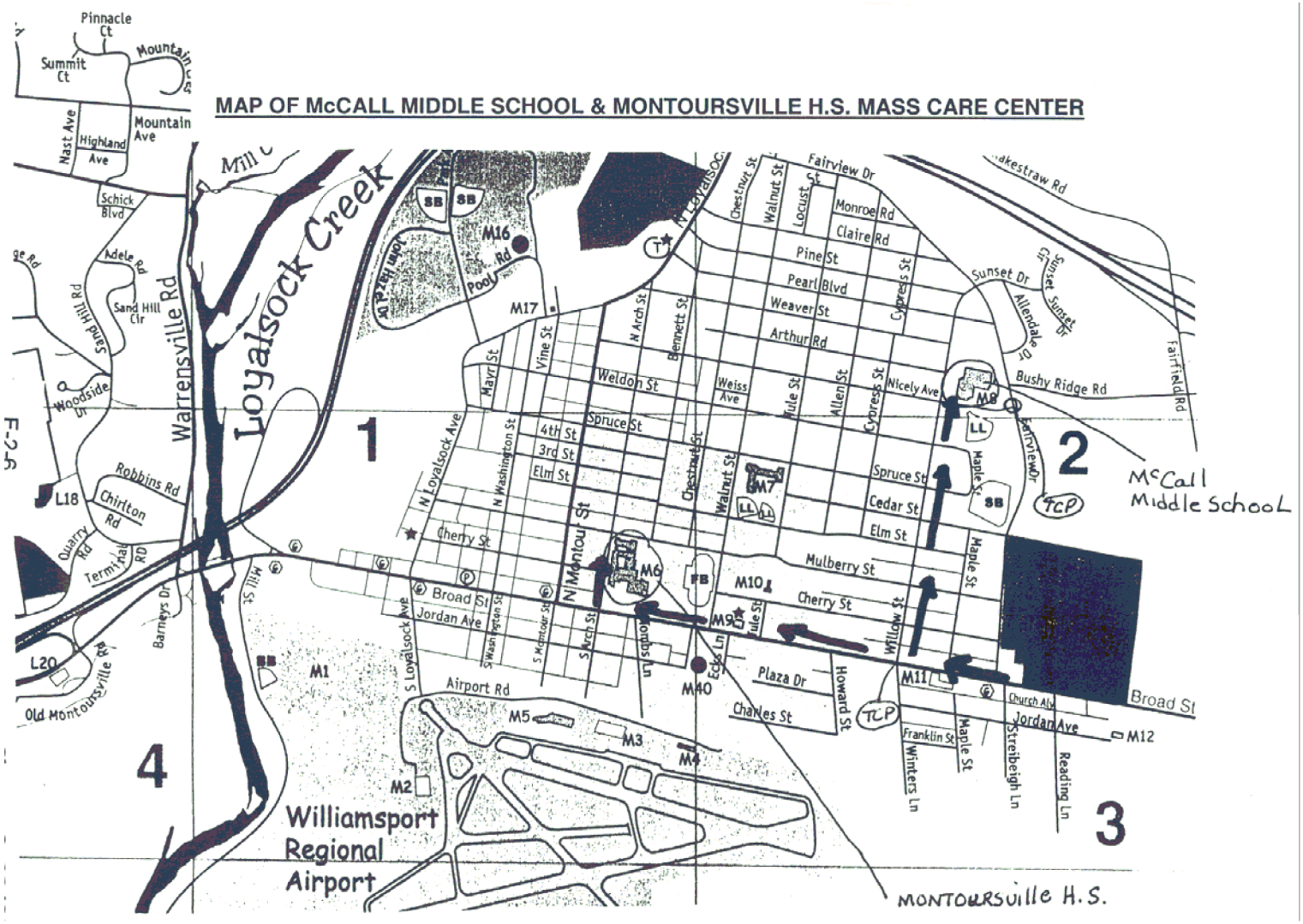
Attachment D

Map Of Reception Center To Mass Care Centers



Attachment E

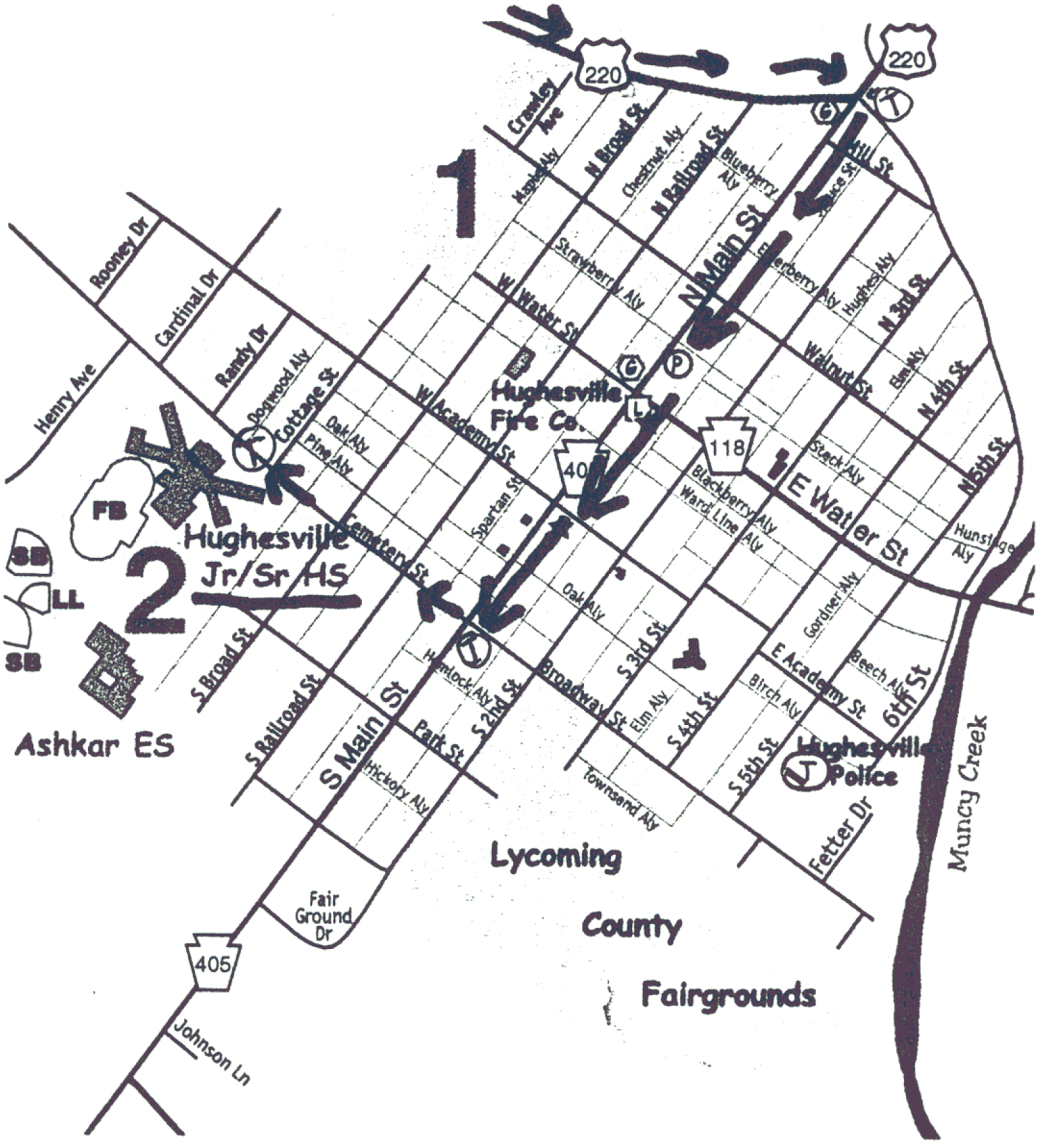
Map of McCall Middle School and Montoursville H.S. Mass Care Center



Attachment F

Map of Hughesville Mass Care Center

Hughesville High School
West Cemetry Street



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RECEPTION CENTER OPERATIONS

1. ACTIVATION

The order to activate the reception center is issued by the Coordinator of the Lycoming County Emergency Management Agency or his designee. Once the order to activate is issued, the County EMA staff will notify the reception center manager. The reception center manager is responsible for notifying and activating the staff.

2. CONCEPT OF OPERATIONS

A. **UNUSUAL EVENT**:

No action required.

B. **ALERT**:

1) 911 center receives call from PEMA and notifies Director of Public Safety, EMA Coordinator.

2) If required, County EMA staff notifies Reception Center Manager informing him of the emergency status and instructing him to contact his respective staffs assuring availability.

3) If required, the Reception Center Manager notifies staff and makes preliminary assignments.

4) If required, the county EMA staff coordinates with Communications/Warning Officer and Police Services Officer on assignment of a Amateur radio team and traffic control personnel at reception centers.

C. **SITE AREA EMERGENCY**:

1) If this is the initial emergency level, perform all actions listed under ALERT above.

2) County EMA staff reports to the EOC and notifies the Reception Center Manager to make the reception center operational.

3) County EMA staff confirms assignment of Amateur radio and traffic control personnel with Communications/Warning Officer and Police Services Officers.

4) County EMA staff contacts reception center facility owner/operator to notify him of the need to utilize the facility.

5) Reception Center Manager notifies staff to report to reception center and picks up strip maps from the county EOC.

6) Upon arrival at reception center, the Reception Center Manager briefs staff on emergency status and reviews responsibilities and procedures.

7) Reception Center Manager provides periodic status reports to the county EOC.

D. **GENERAL EMERGENCY**:

1) If this is the initial emergency level, perform all actions listed under ALERT and SITE AREA EMERGENCY above.

2) Mobilize reception centers:

a. Reception Center Manager will assign staff to distribute strip maps and to assist with internal traffic control.

b. ONE strip map will be given to EACH evacuee. Once all the strip maps to a particular mass care center have been distributed, meaning that mass care center is at its capacity, reception center personnel will begin distribution of the next set of strip maps.

c. Reception Center personnel will not divide family groups when distributing strip maps.

d. Reception Center Managers will keep the County EOC informed of mass care center needs through Amateur radio.

3) Upon closing of the reception center, the Manager will take all necessary steps to return the facility to its original condition.

4) Upon conclusion of duties, the Reception Center Manager should prepare an after-action report to include:

a. Summary of all activities with statistics on the total number of evacuees processed.

b. Names and addresses of participating staff.

c. Message log.

3. LYCOMING MALL PROCESSING SITE

   A. Routes to Mall

   B. Traffic Control - TCP - Traffic Control Points by State Police and/or Fire Police. Direction and Reception Center route signs by PennDOT.

   C. Reception Center/Processing Point - By Lycoming Mall (Facilities) Operations and Manpower by Municipal EMA.

      1) Assignment of Shelter

      2) Emergency Medical Service on-call.

      3) EMA radio and/or amateur radio will provide communications to County EOC and mass care centers.

ATTACHMENTS:

A. Reception Center Call List

B. Reception Center Handout

C. Reception Center Organization

D. Reception Center Manager Checklist

Attachment A

RECEPTION CENTER CALL LIST

1. RECEPTION CENTERS

Facility	Owner/Operator	Emergency Contact
Lycoming Mall Muncy, PA	PREIT Pennsylvania Real Estate Investment Trust	Carole Smith 546-6879

2. RECEPTION CENTER STAFF

A. Reception center will be manned by the Municipal EMA Staff.

B. The reception center team, in addition to the leader, should include at least four individuals for distribution of maps and internal traffic flow. Arrangements for barricades, traffic cones, signs, flashlights, etc., should be made by the reception center manager through appropriate municipal government sources and/or the county EMA.

Attachment B

RECEPTION CENTER HANDOUT

This area is being used as a Reception Center. It is our intent to process everyone through as efficiently as possible. In order to do this, we will need your cooperation in the following areas:

1. PLEASE REMAIN IN THE ESTABLISHED TRAFFIC PATTERNS.

   If you develop car trouble such as running out of gas, overheating of the motor, please indicate this problem to one of the Emergency Management personnel.

2. DO NOT LEAVE YOUR CAR WITHOUT A DRIVER WHILE IN THE ESTABLISHED TRAFFIC PATTERNS.

3. IF YOU HAVE A MEDICAL EMERGENCY WHILE IN THE RECEPTION CENTER, PLEASE INFORM THE EMERGENCY MANAGEMENT PERSONNEL.

4. TOILET FACILITIES AND DRINKING WATER WILL BE AVAILABLE AT THE MASS CARE CENTER.

Once you reach the vicinity of the Mass Care Center, Security personnel will be stationed to direct you to the exact location to park your vehicle. Accommodations for your pets may or may not be available at the Center -- your center leader will be of help in this matter. Pets may be kept in your car in the parking areas at the Mass Care Center.

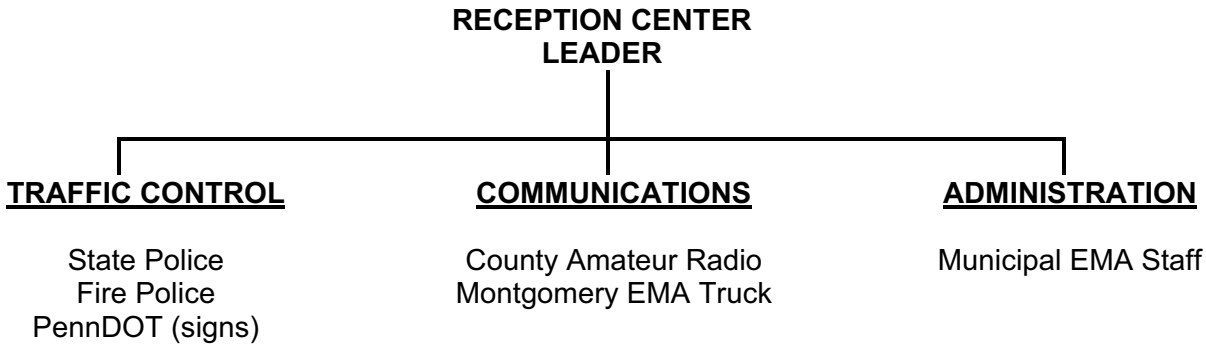
THANK YOU FOR YOUR COOPERATION

LYCOMING COUNTY EMERGENCY MANAGEMENT AGENCY

Attachment C

RECEPTION CENTER ORGANIZATION

LYCOMING MALL



TRAFFIC CONTROL: State Police to have a car on I-180 at the ramp to Route 220. Fire Police to have manpower and traffic cones at:

Route 220	At bottom of I-180 Northbound Ramp.
Route 220	At bottom of I-180 Southbound Ramp.
Route 220	South Entrance to Mall.
Mall	Various locations.

Note: Direction arrow signs and barricades may be available from PennDOT.

COMMUNICATIONS: To County EOC, Red Cross Office, and all shelters provided by County Amateur Radio Operators and the Montgomery EMA Communications Truck.

ADMINISTRATION: (Distribution of strip chart maps) Local EMA staff.

NO PROTECTIVE CLOTHING REQUIRED BY ANY STAFF.
NO RADIOLOGICAL MONITORING REQUIRED.
NO RADIOLOGICAL MONITORING INSTRUMENTS REQUIRED.
NO FIRE EQUIPMENT REQUIRED.
NO AMBULANCE REQUIRED.

Reception center personnel receive a category “C” distribution of dosimetry consisting of one personal record dosimeter for each reception center worker.

Attachment D

RECEPTION CENTER LEADER CHECKLIST

The following checklist is to be used by the Reception Center Leader during an incident that utilizes the Lycoming Mall Reception Center.

- ☐ Receipt of Notification for Activation of Reception Center
- ☐ Contact made for Message Authenticity
- ☐ Contact Lycoming Mall Staff
- ☐ Contact Staff at Reception Center:
  - ☐ Alert Muncy Township Fire Department Staff
  - ☐ Alert Muncy Township EMS Staff
  - ☐ Alert Muncy Township Fire Police Staff
  - ☐ PSP Notification
  - ☐ Alert Muncy Township Police Department
- ☐ Contact the EMA Staff at Lycoming County to Acknowledge Activation
- ☐ Request Assistance from Local Emergency Management Coordinators and their Respective Staffs
- ☐ Registration and Strip Map Information is Available
- ☐ Processing Lanes Have Been Established:
- ☐ Traffic Control Points Established:
  - ☐ Interstate I-80 at Ramp to Route 220 (State Police)
  - ☐ Bottom of Interstate I-80 Northbound Ramp
  - ☐ Bottom of Interstate I-80 Southbound Ramp
  - ☐ South Entrance of Mall
  - ☐ Various Mall Locations
- ☐ Communications Systems are Operational:
  - ☐ HAM/ Amateur Radio Operational
  - ☐ Emergency Management Communications Operational
  - ☐ Fire Police Communications Operational
  - ☐ Commercial Phone Operational
  - ☐ Fire Communications System Operational
  - ☐ All Systems Operational into EOC
  - ☐ Reception Center Command Communications Operational

Attachment D

☐ Other items/points that were used or occurred that should be noted for future exercises are to be documented below:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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MONITORING/DECONTAMINATION PROCEDURES

1. MONITORING/DECONTAMINATION CENTERS

A. Organization at Monitoring/Decontamination Centers

1) Mass care or reception centers for evacuees will serve as points where radioactive contamination monitoring and decontamination will be conducted. When radioactive contamination monitoring is required, evacuees, upon arrival at the center will first be monitored for radiological contamination and, if necessary, be decontaminated after which they can be admitted to the "general living" portion of the mass care center. Trained monitoring teams will conduct the monitoring for radiological contamination, carry out decontamination procedures, and complete associated records. This activity, although sometimes co-located with the mass care centers, is not an integral part of that operation. Monitoring teams take direction from the county radiological officer. Monitoring of evacuees should be completed as soon as possible while monitoring of vehicles can be accomplished after the evacuees have been processed.

2) Monitoring teams will organize their areas and traffic flow patterns so that contaminated persons and those to be monitored will not mix with the contamination-free individuals already admitted to the "general living" section of the mass care center. For example, persons will be sent to the decontamination area (shower) by a route that will not place them in contact with contamination-free areas. Showers used for decontamination will not be available for general use until they are decontaminated.

3) Persons waiting to be monitored must be separated from the monitoring area so that it will not cause false readings on the person being monitored. Care must also be taken to avoid areas where high voltage electrical lines and electrical equipment such as computers are present. Those items can cause false readings on the survey meter.

B. Monitoring Services for Persons Who Are Not Housed at Mass Care Centers

Persons who do not intend to stay at a mass care center, but who wish to be monitored will be extended these services at the monitoring/decontamination centers. The monitoring procedures and record keeping are identical for people who stay or do not stay at mass care centers.

C. Monitoring/Decontamination Stations for Emergency Workers

1) After monitoring procedures have been placed in effect by PEMA, and upon completion of his/her mission, or more often as directed by supervisors, each emergency worker must report to a monitoring station or monitoring center to be monitored for radiological contamination, and, if necessary, be decontaminated.

2) Most emergency workers will be working within the plume exposure pathway of the EPZ, which extends about ten miles in a 360-degree circle around the nuclear power plant. Since the monitoring centers for the public are located 20 or more miles from the nuclear power plant, special monitoring stations for emergency workers are established just outside the plume exposure pathway EPZ. Therefore, emergency workers will not be required to travel the longer distance to monitoring centers.

D. Equipment and Personnel Requirements in Risk Counties

1) Portal monitors or hand held monitors that meet minimum federal specifications may be used for monitoring.

2) A sufficient number of survey meters are available for each monitoring location. If portal monitors are used these requirements should be modified based on the monitoring time required by the manufacturer. Some hand-held survey meters will be required for pinpointing the actual location of contamination, re-monitoring after decontamination attempts, and vehicle and equipment monitoring.

3) Personnel requirements are one trained monitor and one recorder (assistant to the monitor) for each survey meter as a minimum. Personnel performing monitoring duties will be issued a PRD. Recorders who do not monitor will not be issued a PRD.

4) The monitoring teams and equipment available will be capable of monitoring, within about a 12-hour period, all residents and transients arriving at mass care monitoring centers.

5) Inventory, maintenance and property accountability with regard to dosimetry, survey meters and KI are described later in this Appendix.

6) Personnel monitors should wear disposable or plastic gloves while monitoring. Additionally, it is suggested that shirts/blouses with long sleeves and long trousers/slacks be worn. Masks or respirators are not required or recommended.

E. Monitoring/Decontamination Record Keeping

Monitoring team personnel will be responsible for completing a "Monitoring/ Decontamination Report Form" (see Attachment A to this Appendix) for each individual found to be contaminated. The form will be completed, signed by the monitor and individual monitored at each of the steps [(1) initial monitoring, (2) after first decontamination, (3) after second decontamination, (4) medical referral.] Two copies of the form will be prepared. One copy will be given to the individual when decontamination is completed or the individual is sent to a medical facility. The County Emergency Management Agency will retain the original in a historical file. (Support county emergency management agencies are responsible for forwarding these completed forms to PEMA.) Individuals who are found to be free of contamination upon initial monitoring will not need this form completed. However, counties must implement a method whereby these individuals names are recorded to show they were monitored and some method of marking “clean” individuals is used so as to ensure their acceptance into mass care centers.

F. Progress Reports on Monitoring/Decontamination

Monitoring team leaders will verbally report at two-hour intervals to their county emergency management agency on results of monitoring. The report will include the following cumulative data: number of persons monitored; number contaminated; number decontaminated; number referred to a medical facility (for radiation decontamination/treatment); the highest reading on any contaminated individual; and any unusual notable findings. The risk and support county EMCs are responsible for consolidating this information and reporting it immediately to PEMA who in turn will relay the information to BRP.

2. PERSONNEL MONITORING PROCESS

1. Types of Monitoring

a. Quick monitoring – monitoring the head, hands, elbows, hips/buttock area, knees and feet of evacuees

b. Full monitoring – monitoring of evacuees and emergency workers by use of a portal monitor, or if a hand held instrument is used, the entire surface area of the individuals must be monitored.

2. Four-Step Process

Monitoring of individuals for detection and measurement of contamination with portable radiation instruments is a four-step process as follows:

a. A speaker or earphone(s) attached to the instrument is used to audibly announce the presence of contamination. With the beta window open, in accordance with procedures, the detector is passed over a potentially contaminated surface at a specified:

- probe speed;

- ♦ distance between the probe and the contaminated surface; and
- ♦ distance between passes of the probe (path-width).

Instrument / Detector Combination	Parameter Values for Detecting Spot or Widespread Contamination on Individuals			Calculated Time Needed for Full Monitoring of an Adult (minutes)
	Probe Speed (inches/second)	Height of Probe (inches)	Path Width (inches)	
CDV-700 with Side Window Detector	4	0.5	0.6	19
Instruments with Pancake Detectors	6	1	2	3.9

b. If contamination is detected, the earphone(s) or speaker is used to find either the location of the most active spot(s) of contamination or the location of the highest concentration(s) of widespread contamination.

c. A meter reading is then taken with the detector in a fixed position at the location of the highest audible response and at the appropriate distance from the monitored surface. Visual estimation is satisfactory because small errors in this distance will be compensated by conservatism in the decontamination threshold criteria. Measurements at less than one inch will add more conservatism to decisions on the need for decontamination.

d. The meter reading is compared to the decontamination decision criteria.

B. DECONTAMINATION OR RELEASE DECISION CRITERIA

1. Personnel Decontamination or Release Decision Criteria

a. Portal Monitors – monitors that meet the FEMA Portal Monitor Standard (REP-21) may be used for personnel monitoring. All pre-operational checks and calibration must be performed in accordance with the manufacturer recommendations. Portal monitors should be located in low background areas to operate efficiently (background should, if possible, be the same level as when using a CDV-700 or an instrument with a pancake detector). If an individual being monitored with a portal monitor alarms the monitor, the individual should be instructed to re-enter the portal. A second alarm will require decontamination procedures to be initiated.

b. Hand Held Instrumentation

1.) Background – background should not exceed 60 cpm if using a CDV-700 or 100 cpm if using an instrument with pancake detector; if area in which monitoring is to be performed exceeds these background limits, monitoring should be relocated to an area below the values listed above.

2.) CDV-700 – if greater than 300 cpm is detected while monitoring an individual, decontamination procedures shall be initiated.

3.) Instrumentation with pancake detectors - if greater than 300 cpm above background is detected while monitoring an individual, decontamination procedures shall be initiated.

2. Vehicle & Equipment Decontamination or Release Decision Criteria

a. Portal Monitors – shall not be used for vehicle or equipment monitoring.

b. Hand Held Instrumentation

1.) Background – background should not exceed 60 cpm if using a CDV-700 or 100 cpm if using an instrument with pancake detector. If area in which monitoring is to be performed exceeds these background limits, monitoring should be relocated to an area below the values listed above.

2.) CDV-700 – if greater than 300 cpm is detected while monitoring a vehicle or equipment, decontamination procedures shall be initiated.

3.) Instrumentation with pancake detectors - if greater than 300 cpm above background is detected while monitoring a vehicle or equipment, decontamination procedures shall be initiated.

C. CONTAMINATION MONITORING INSTRUMENTATION CAPABILITIES AND LIMITATIONS

1. Portal Monitors

Capabilities – portal monitors that meet the FEMA Portal Monitor Standard and that are checked, operated, and calibrated in accordance with the manufacturer recommendations are capable of monitoring 300 individuals per hour.

Limitations – Portal monitors are ideal for situations in which large numbers of evacuees need to be monitored. In incidents where a limited number of personnel are involved, it may not be practical to use a portal monitor. Portal monitors cannot be used for vehicle or equipment monitoring.

2. Hand Held Instrumentation/CDV-700

Capabilities:

Quick monitoring – 4 minutes per individual (12 per hour);

Full monitoring – 19 minutes per individual (2.5 per hour)

Limitations: Can only be used for personnel monitoring in response to an accident at a nuclear power plant (REP program).

3. Modern instrumentation with pancake detectors

Capabilities:

Quick monitoring – 1 minute per individual (50 per hour, with break);

Full monitoring – 4 minutes per individual (12 per hour, with break)

Limitations: If incident involves pure alpha emitters, alpha survey equipment must be used. If responders are unable to determine if pure alpha emitters are present, PA Department of Environmental Protection/Bureau of Radiation Protection (DEP/BRP) must be contacted.

D. Calculations of the Number of Personnel that can be Monitored in 12 Hours

1. REP Program Instrumentation

Each Offsite Response Organization (ORO) with REP responsibilities should review all instruments capabilities and limitations. It may be necessary to increase the number of monitoring teams for those OROs that currently have only CDV 700s. The previous monitoring time of 2-3 minutes has been replaced with 4 minutes for the quick monitoring method. Any individuals found to be contaminated, and all emergency workers, need to be fully monitored at a rate of 19 minutes per individual.

The highest through-put capable contamination monitoring instrument is a Portal Monitor that meets the FEMA REP-21 standard, with a capacity of 300 per hour.

The ideal monitoring location would have sufficient portal monitors to monitor the required evacuee amount within the 12-hour time period and possess 5 to 10 instruments with pancake detectors for monitoring of individuals that were found to be contaminated by the portal monitors. Each county ORO should perform a cost – benefit analysis to determine the appropriate ratio of instrumentation.

EXAMPLE: County "Z" must monitor 12,000 evacuees (20%) in a 12-hour period. Team = # of individuals needed to perform monitoring duties for each individual. Usually 2: one monitoring; one recording results.

Situation 1 – County Z has only CDV-700s

OLD guidance = 2.5 minutes/ person
= 20/hour/team and team taking a 10 minute break
= 20/hour/team x 12 hours = 240/team
= 12,000/240/team
= 50 teams required

NEW guidance = 4 minutes/person QUICK MONITORING with CDV-700
= 12/hour/team with break
= 12/hour/team x 12 hours = 144/team
= 12,000/ 144/team
= 84 teams required

Situation 2 – County Z has only instrumentation with pancake detectors

= 1 minute/person QUICK MONITORING
= 50/hour per team with break
= 50/hour x 12 hours = 600 per team
= 12,000/600 team = 20 teams

Situation 3 – County Z has Portal Monitors

1 portal monitor = 300 individuals per hour
= 300 per hour x 12 hours = 3600 per portal in a 12 hour period
= 12,000 divided by 3600
= 4 portal monitors needed

2. Non-REP Instrumentation

The values used above for the instruments with pancake detectors and portal numbers are applicable to non-REP incidents and accidents. The ORO needs to decide the equipment used for each type event. As stated previously; portal monitors are valuable where large numbers of evacuees and emergency workers need to be monitored. If the incident does not involve large numbers of individuals that need to be monitored, the instrument with pancake detectors would be the best choice.

I. Disposal of Contaminated Wastes

1) As described previously, clothing and similar materials as well as miscellaneous equipment and vehicles can be decontaminated. If cleaning materials and other items cannot be successfully decontaminated, special handling is necessary.

2) Contaminated waste materials should be packaged in a plastic bag, tied securely at the top, and placed in a metal or plastic container with a snug-fitting lid (garbage can). If any materials cannot be decontaminated by laundering, place it in the same type of plastic bag and container and store in a locked room that is not used for any other purpose until such time as the contaminated waste is disposed of in accordance with instructions from BRP. Accumulation of contaminated waste materials and the need for disposal should be reported through the emergency management channels.

(3) Contaminated wastewater need not be contained or stored. Due to its considerable dilution, it is considered to not pose a danger to public health.

J. Processing of Personal Property

1) This section addresses the processing of personal property such as money, valuable documents, dentures, prosthesis, or jewelry that could be contaminated.

2) If the person is also contaminated, the owner will decontaminate their personal property as follows:

a. Brushing or swabbing.

b. Washing the items in a sink using a commercial detergent.

c. Washing the items while showering to decontaminate the property owner.

3) The activities described in the above paragraph will be conducted in a controlled area so that contaminants will not be spread to contaminant-free general areas.

4) In the event that personal property cannot be decontaminated as described above, the property will be quarantined as follows:

   a. Place the items in a plastic bag and seal the bag.

   b. Complete the Personal Property Inventory form. See Attachment B.

   c. Give the original copy of the inventory form to the property owner. Attach the other copy of the form to the bag holding the property.

   d. Place the bag containing the property in a garbage can, seal the garbage can and place the can in a secure, controlled storage area.

   e. Request guidance from the appropriate county EMA concerning disposition of the property when time permits.

5) Contaminated personal property will not be entered into general living areas used by the public.

ATTACHMENTS:

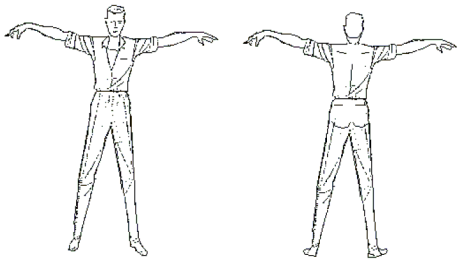
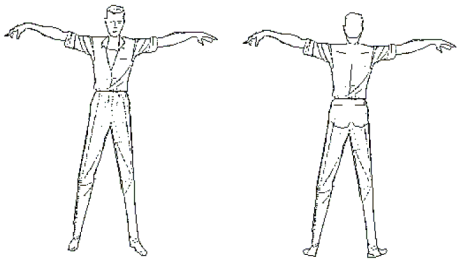
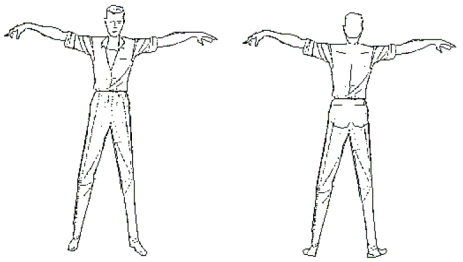
A. Monitoring/Decontamination Report Form
B. Equipment and Personal Property - Decontamination/Accountability Record
C. Dosimetry and Potassium Iodide
D. Dosimetry for Monitoring/Decontamination Teams
E. Emergency Worker Exposure Control
F. Personnel Monitoring Procedure
G. Personnel Decontamination Procedure
H. Vehicle and Equipment Monitoring Procedure

Attachment A

MONITORING/DECONTAMINATION REPORT FORM
NOTE: COMPLETE FOR EACH PERSON MONITORED

NAME OF PERSON MONITORED:	(Print)	(Signature)
SOCIAL SECURITY NUMBER:		
ADDRESS:		
MONITORING LOCATION:		
BACKGROUND:	**cpm**	

NOTE: Mark contamination location and reading from survey meter on outline below

FIRST MONITORING	SECOND MONITORING AFTER DECONTAMINATION (IF NEEDED)	THIRD MONITORING AFTER DECONTAMINATION (IF NEEDED)
		
Monitor's or Recorder's Name _____ (Please Print) Survey Meter Serial No. _____ DATE _____ TIME _____ am/pm	Monitor's or Recorder's Name _____ (Please Print) Survey Meter Serial No. _____ DATE _____ TIME _____ am/pm	Monitor's or Recorder's Name _____ (Please Print) Survey Meter Serial No. _____ DATE _____ TIME _____ am/pm

THYROID GLAND SCREENING CHECK (Emergency Workers Only)

Monitoring includes screening for radioiodine uptake in the thyroid gland and the results recorded here. Medical referral action level for the thyroid check is 0.1 mR/hr or higher when using a CDV 700 survey meter – OR – greater than 300 cpm (above background) when using a modern survey instrument with a pancake probe.

Survey meter Serial No. _____ Reading: _____ Signature of Monitor/Recorder _____

Medical Referral - subject individual sent to _____ hospital for decontamination and/or treatment (Time) _____ am/pm

on (Date) _____ Decontamination Team Chief _____

PEMA-BOP-REP—1a (DRAFT 5/2008)

Attachment B

EQUIPMENT AND PERSONAL PROPERTY - DECONTAMINATION/ACCOUNTABILITY RECORD

DATE	TIME	LOCATION
TYPE OF EQUIPMENT/PROPERTY (INCLUDE MAKE & SERIAL NUMBER)		
WHERE USED		
EQUIPMENT/PROPERTY WAS USED BY (LIST ALL KNOWN USERS)		
BACKGROUND READING: cpm		

EQUIPMENT PART OR PROPERTY (DESCRIBE)	MONITORING FIRST/SUBSEQUENT	EQUIPMENT PART OR PROPERTY (DESCRIBE)	MONITORING FIRST/SUBSEQUENT
1.	(cpm)	9.	(cpm)
2.	(cpm)	10.	(cpm)
3.	(cpm)	11.	(cpm)
4.	(cpm)	12.	(cpm)
5.	(cpm)	13.	(cpm)
6.	(cpm)	14.	(cpm)
7.	(cpm)	15.	(cpm)
8.	(cpm)	16.	(cpm)

CHECK APPROPRIATE FINAL ACTION: (Enter appropriate item number from previous block)	
	EQUIPMENT OR PROPERTY DECONTAMINATED
	EQUIPMENT OR PROPERTY QUARANTINED-UNABLE TO DECONTAMINATE SURFACES
SIGNATURE OF TEAM RECORDER	
PRINTED NAME OF TEAM RECORDER	
EQUIPMENT/PROPERTY OWNER	
ADDRESS:	STREET
	CITY/STATE/ZIPCODE

NOTE: BRING THIS FORM WITH YOU WHEN YOU CLAIM YOUR EQUIPMENT OR PROPERTY

RELEASE OF EQUIPMENT OR PROPERTY TO OWNER

I hereby state that I am again in full possession of my equipment/personal property which was left at the decontamination site to be decontaminated.

Signature

Witness	Date

PEMA-BOP-REP-2 (DRAFT 5/2008)

DOSIMETRY AND POTASSIUM IODIDE

1. GENERAL INFORMATION

Each emergency worker assigned tasks within and around the plume exposure pathway EPZ will be equipped commensurate with one of three specific categories during the plume phase. These categories incorporate the "area concept", as approved by the Pennsylvania Emergency Management Council on July 10, l990. The categories and guidelines below represent the minimum acceptable standard which may be augmented. This can be done by appropriate justification from the county EMC. A control PRD will be provided for each storage location.

A. CATEGORY A

Emergency responders located within the EPZ, or those who may enter the EPZ, functioning in a mobile capacity with a potential for individual radiation exposure, such as: police, fire fighters, emergency medical persons, plus state workers, farmers, and industrial workers on a selected basis. Each location that issues direct-reading dosimeters (DRD) will have at least one DRD charger, with a minimum of one per 100 DRD issue. (If location is very isolated, a backup charger may be appropriate.)

Category A Standard Issue:

PRD - 1 per emergency responder

*20R Direct-reading dosimeter - 1 per emergency responder

KI - 1 unit (14-day supply) per emergency responder

* AREA EQUIPAGE - where more than 2 Category A emergency workers respond together and remain in the same area, the area concept will be used for equipage: that is, the group will have a minimum of two 0-20 DRDs. However, each person will still be issued a PRD and a unit of KI.

B. CATEGORY B

Collectively grouped persons located within the EPZ who may be exposed at facilities and institutions such as: hospitals, nursing homes, prisons, municipal and county EOCs, fire stations, police stations, and ambulance stations within the EPZ.

Category B Standard Issue:

PRD - 1 per staff member

KI - 1 unit (14-day supply) per staff member

Each Category B facility and institution where emergency workers will remain until after completion of the evacuation of the general public will be issued, at a minimum, one Area Kit. An Area Kit contains:

1 - PRD

2 - 0-20R DRDs

1 - DRD Charger

1 – Dosimetry / KI Report Form

C. CATEGORY C

Emergency responders located outside the EPZ who, due to assigned taskings during a nuclear emergency, have only limited potential for radiation exposure, e.g., monitoring/decontamination teams.

Category C Standard Issue:

PRD - 1 per emergency responder

Monitoring/Decontamination Teams

Each individual who meets/directs/monitors possibly contaminated people or vehicles will receive a Category C Standard Issue.

2. DISTRIBUTION OF DOSIMETRY-POTASSIUM IODIDE AND RELATED PROCEDURES

A. Distribution

1) The PRDs, and Dosimetry-KI Report Form, have been predistributed by PEMA to the risk and support county emergency management agencies (EMAs) in support of response to nuclear power plant incidents. At Site Area Emergency monitoring teams are activated and the county EMA distributes the appropriate numbers of PRDs, survey meters, Dosimetry - KI Report Forms, Equipment and Personal Property Decontamination/Accountability Report, and Monitoring Decontamination Report Forms to each team.

2) Specific additional allocations will be as follows:

a. For computing Monitoring/Decontamination Team requirements, one hand-held survey meter will be required for each 250 persons to be monitored at monitoring/decontamination centers; one will be required for each 50 emergency workers at the monitoring/decontamination stations. This monitoring is to be performed in a 12-hour period at each monitoring/ decontamination location. Also, one or more hand-held survey meters must be included for monitoring persons after showers and additional hand-held survey meters for monitoring of vehicles and equipment. As a minimum, two PRDs per hand-held survey meter will be required. If portal monitors are used, these requirements should be modified based on the monitoring time required by the manufacturer. Some hand-held survey meters will be required for pinpointing the actual location of contamination, re-monitoring after decontamination attempts, and vehicle and equipment monitoring. Survey meters are not required for Ambulance/Emergency Response Vehicles either in EPZ or in support of MS-1 Hospitals.

B. Property Control

1) Property accountability must be maintained in the distribution process. "Receipt Form for Dosimetry-Survey Meters-KI (Bulk Issue)," is designed for transfer of quantities of equipment from agency to agency, such as from the county to hospitals, nursing homes, municipalities, and monitoring teams, and from municipalities to emergency response organizations (fire, police, ambulance). "Acknowledgment of Receipt by Emergency Workers for Dosimetry-KI and Survey Meters (Individual Issue)," is used to maintain accountability when distributing the equipment-KI to their individual emergency workers.

2) The county, municipality, or other agency which stores and maintains the PRDs and Survey Meters is the responsible agency for assuring return of all equipment upon termination of an incident.

C. Control PRDs

1) Control PRDs are equal in number to about one percent of the total amount allotted for distribution. A control PRD will be provided for each PRD storage location. Each "control PRD" is so labeled and the serial numbers are not in the same sequential batch as the PRDs meant for distribution to emergency workers. As coordinated by PEMA, the control PRDs will be forwarded to the Commonwealth's Radiological Officer located in the State EOC. The county EMA will complete the "Control PRD Form" (see Tab 3) and forward it with the control PRDs, or in the case of pre-distribution, the agency holding the PRDs will complete the form and forward it to the appropriate county EMA along with the "Control PRDs."

2) The purpose of "Control PRDs" is to allow measurement of a "baseline" of *any radiation that the PRDs have been exposed to prior to distribution for the emergency*. *The amount of radiation exposure denoted* by the control PRDs

will be subtracted from the reading obtained for each emergency worker in that county. This procedure can be characterized as a "mathematical zeroing" of the PRD.

3) At the time of an incident the county *or municipal* EMA will take reasonable steps so that the control PRDs are not exposed to radiation other than background radiation. Specifically, if the PRDs are stored at a *location*, which happens to be inside the plume exposure pathway EPZ, they should be moved to a location outside the EPZ. This move should be accomplished at Alert. Where PRDs are stored outside the plume exposure pathway EPZ, care should be taken so that the control PRDs are not moved inside the EPZ.

4) Control PRDs may be delivered by air to the PEMA EOC by the PSP if aircraft are available. In the event aerial delivery is approved by the PSP, risk counties will deliver their control PRDs to the sites indicated below. Support counties will deliver their control PRDs to the below site that is most convenient.

3. DOSIMETRY FOR LYCOMING COUNTY

A. Category C Status as a Support County

1) As a support county for the an Susquehanna Steam Electric Station, Lycoming County lies entirely outside the plume exposure pathway EPZ thus requires no dosimetry except for those Category C emergency workers who staff the monitoring and decontamination teams. Each individual monitor will receive a Category C Standard Issue of one PRD and a Dosimetry-KI Report Form.

2) The Permanent Record Dosimeter (PRD) is:

a. To record official exposure.

b. Only to be worn by person issued to.

c. To be worn in the chest area.

d. To be turned in at the end of an incident for reading - cannot be read in the field.

4. POTASSIUM IODIDE (KI) **(KI NOT ISSUED TO SUPPORT COUNTIES OR ANY AREA OUTSIDE 10 MILE EPZ)**

Attachment D

DOSIMETRY FOR MONITORING/DECONTAMINATION TEAMS

Members of Monitoring/Decontamination Teams who use the hand-held survey meter are considered emergency workers and will be issued an individual Permanent Record dosimeter (PRD). Because monitors will occasionally need to be relieved during the twelve hours when evacuees are expected to arrive at the mass care center, two PRDs are issued with each hand-held survey monitor.

Team members used to record monitoring results, those who direct flow of personnel into the mass care center or to showers, and those operating showers and vehicle wash facilities are expected to remain away from any potentially contaminated area and will not be issued dosimetry.

Lycoming County will be prepared to monitor at least 2562 evacuees. within a 12-hour period.

Monitoring/Decontamination Centers for Lycoming County

C		R	R R	C R R R
Montoursville High School	3	6	3	900
Evacuee Monitoring	1			
Vehicle Monitoring *	0			
Post Mon/Decon Monitoring [2]	2			
McCall Middle School	3	6	3	900
Evacuee Monitoring	1			
Vehicle Monitoring *	0			
Post Mon/Decon Monitoring [2]	2			
Hughesville High School	3	6	3	900
Evacuee Monitoring	1			
Vehicle Monitoring *	0			
Post Mon/Decon Monitoring [2]	2			
Lycoming Mall Reception Center	30	30	0	0
TOTAL	39	48	9	2,700

*	Vehicle monitoring will be performed by existing teams after evacuees.
1	Portal Monitor used @ first site then moved to next site as required. (Lycoming has 2 Portal Monitors)
2	2 male - 1 female

EMERGENCY WORKER EXPOSURE CONTROL

1. DOSE LIMITS FOR EMERGENCY WORKERS

A. The dose limits for emergency workers are for radiation doses received during the emergency phase. They are considered to be once-in-a-lifetime doses, and are separate and distinct from occupational exposures received under subsequent non-emergency conditions.

B. Emergency workers and supervisors are cautioned that dose limits should not be construed as "license" to incur radiation exposure unnecessarily. Emergency workers and supervisors should attempt to keep exposure As Low As Reasonably Achievable (ALARA). This concept means that exposure to radiation should be kept to a minimum for all persons and that any one individual should not receive a total dose far in excess of other emergency workers if circumstances permit substitution of personnel, termination of the assignment, or other protective action. ALARA applies to the decision chain for emergency worker exposure in subsection F.

C. BRP reports projected radiation doses that a person will receive if they remain in a specific area. PEMA reports this information to the appropriate county for further relay to municipalities. This information is to be used in the management of emergency workers doses.

D. Whole Body Dose Limits

1) Whole body dose limits specified by the Environmental Protection Agency (EPA-400) and BRP are expressed as Total Effective Dose Equivalent (TEDE). TEDE whole body dose includes external exposure from the plume, external exposure from ground deposition and internal exposure from inhalation.

2) The emergency worker dose limit for whole body exposure is 5 rem TEDE.

3) Some situations may justify exceeding the 5-rem TEDE whole body dose limit for emergency workers. These include protection of valuable property such as livestock, protection of large populations or lifesaving missions. Until evacuation of the general public is complete, the emergency worker whole body dose limits will be based solely on external gamma radiation exposure, as measured by a direct-reading dosimeter, without regard to additional dose that may be received from inhalation.

a. The emergency worker dose limit for protection of valuable property, valuable functions or care of special groups is 10 rem TEDE.

b. The emergency worker dose limit for lifesaving or protection of large populations is 25 rem TEDE.

c. For extraordinary circumstances situations may occur in which a dose in excess of 25 rem for emergency exposure would be unavoidable in order to carry out a life saving operation or to avoid extensive exposure of large populations. It is not possible to prejudge the risk that one should be allowed to take to save the lives of others. Reference EPA 400 (May 1992), page 2-11. The emergency worker shall be a volunteer with full awareness of the risks of acute and late effects of the dose.

4) In situations where the internal exposure from inhalation is significant, emergency workers entering the plume after evacuation is completed are assigned a predetermined administrative whole body dose limit, from external gamma only, that is lower than the maximum TEDE dose for the emergency worker activity to be performed. BRP will calculate the appropriate DRD reading corresponding to the emergency worker dose limits, using a correction factor for the specific radionuclide mix in the plume. The licensee will provide the correction factor to BRP as soon as it is available, but not later than the completion of the evacuation. The predetermined administrative dose limits account for dose already received and the calculated ratio of external dose to TEDE. PEMA will disseminate this information to county and municipal emergency workers in affected areas.

E. Thyroid Gland Dose Limits

1) The dose limit for thyroid exposure specified by the Environmental Protection Agency (EPA 400) and by BRP is 25 rem Committed Dose Equivalent (CDE). CDE is the total thyroid exposure from inhalation of radioactive iodine.

2) There is no specific upper limit for thyroid exposure in a lifesaving mission. An upper limit is not given for thyroid exposure since complete thyroid loss might be acceptable during lifesaving activities.

F. Decision Chain for Emergency Worker Exposure

1) 1-5 Rem TEDE Exposure - It is through State authorization that volunteer emergency workers may be exposed to up to 5 Rem TEDE (whole body) in performance of their duties. The municipal emergency management coordinator, however, must ascertain the following conditions.

a. The activity, mission, or task is essential to providing for public safety.

b. The immediate supervisors of emergency workers (fire chiefs, police chiefs, etc.) are managing radiation exposure so that it is kept to a minimum for all persons, and that any one worker should not receive a total dose far in excess of their other emergency workers within the municipality.

2) 5+ to 25 Rem TEDE Exposure - The County Emergency Management Coordinator, upon the advice of the County Radiological Officer, may authorize municipalities or other responsible organizations such as fire companies, etc., each independently, to exceed the 5 Rem TEDE dose limit up to 25 Rem TEDE. The following conditions, however, must be ascertained by the County EMC.

   a. Upon a request from a municipality for an individual to exceed the 5 Rem TEDE limit, ascertain that the activity, mission, or task is essential to providing for public safety.

   b. The municipality is managing radiation exposure so that it is kept to a minimum for all persons; and that any one worker should not receive a total dose far in excess of other emergency workers within the municipality.

   c. Another municipal emergency worker force, that could still maintain their emergency worker exposure below 5 Rem TEDE, cannot be deployed in a timely manner in order to assume the mission.

3) Greater than 25 Rem TEDE Exposure - It is anticipated that exceeding the 25 Rem TEDE limit in order to conduct a lifesaving mission will be an extremely rare event. Lifesaving response is of such urgency that it is not practical to go through an elaborate decision-making process. The decision will have to be made on the scene by the senior supervisor (Police Chief, Fire Chief, etc.) in charge of, or person closest to the situation. If no supervisory personnel are available on the scene, an individual may have to make the decision. The person making the decision will consider the following conditions:

   a. The mission must be life saving, i.e. failure to act will result in loss of human life.

   b. Alternative solutions have been exhausted, i.e. if time is available, another emergency worker(s), that could still maintain their emergency worker exposure below 25 Rem, cannot be deployed in a timely manner in order to assume the lifesaving mission.

   c. The lifesaving mission must be accomplished by a volunteer(s).

   d. The volunteer should be a healthy adult. Volunteers must be advised of the possible long term effect on reproductive capability, and the potential for genetic damage in their future children.

   e. Women of reproductive capacity must be fully advised of the increased potential for genetic damage and fetal exposure.

   f. The volunteer(s) selected should be persons whose normal duties might involve such missions, e.g., police, fire and rescue personnel.

g. The volunteer(s) selected must have received the lowest total dose in comparison to other volunteers for the mission.

h. The mission must be accomplished in the least amount of "stay time."

i. The volunteer(s) must be knowledgeable of and accept the increased risk of exceeding the 25 Rem PAG.

NOTE: It is intended that emergency workers be informed on the above conditions during training prior to an incident. There may not be time to repeat those instructions during an actual incident.

G. Information to be Provided Emergency Workers

Standard Operating Procedures (SOPs) developed for emergency worker missions should provide the following:

1) Prior to departure on a mission, each emergency worker will:

a. Be provided with an update on the status of the incident.

b. Be provided with Potassium Iodide (KI) in accordance with the policy established by the Secretary of Health; and

c. Be informed of emergency worker PAG levels of radiation exposure, procedures and frequency for reading dosimeters, where to report after the mission is completed, and what may be required if decontamination of the worker or equipment is necessary.

2) During the conduct of the mission:

How each emergency worker or team will be provided updates on the accident status and any special protective actions.

3) At the conclusion of the mission:

a. The monitoring of each emergency worker to include farmers and industrial workers who reenter the EPZ, equipment, and vehicles used, and what will be required if decontamination is necessary; and

b. Determination if each emergency worker has exceeded his or her allowable exposure, and whether or not each has any remaining "stay time" in controlled areas.

c. Determination if each emergency worker will be referred to a medical facility for radiation exposure treatment.

2. INCREASED RISKS DUE TO RADIATION EXPOSURE

Information concerning the possible consequences of emergency workers' exposure to radiation during a nuclear power plant incident is organized below into three categories - (A) immediate somatic effects, (B) long term somatic effects, and (C) genetic effects. Somatic are characteristics of or effects on the body of the individual actually exposed, as distinguished from genetic characteristics or genetic effects that are manifested in future offspring (descendants).

A. Representative Relationships between a Brief one-time Radiation Exposure and Immediate Somatic Effects

Represent ti e sor e ose o o e o y R i tion	ture o ect
5-25 rem	Minimal dose detectable by chromosome analysis or other specialized analysis.
50-75 rem	Minimal acute dose readily detectable in a specific individual (e.g., one who is a possible exposure case.
75-125 rem	Minimal acute dose likely to produce vomiting in about 10% of people so exposed.
150-200 rem	Acute dose likely to produce transient disability and clear hematological changes in a majority of people so exposed.

B. Long Term Somatic Risks as a Result of a one-time Exposure to Radiation

Current knowledge about the long-term health effects resulting from a one-time radiation exposure below 25 rem indicates that development of health problems, such as cancer, in adults to exposed is extremely unlikely. There is not direct clinical evidence of low level radiation (in this case meaning a one-time exposure below the whole body dose protective action guide of 25 rem) causing health problems years after the exposure.

C. Genetic Effects of Radiation

The cause of chromosome and gene abnormalities (mutations) is thought to be radiation exposure of reproductive cells of ovaries and testes. Persons exposed to any radiation should avoid the possibility of conception during the first three months after exposure to virtually eliminate any possible genetic risk.

3. DOSIMETRY AND KI RECORD KEEPING

A. Each emergency worker is responsible for completing a Dosimetry-KI Report Form (see Tab 1) and returning it with the dosimetry to his organization at the termination of his/her services. Each emergency organization will forward the forms and PRDs to the appropriate county EMA, which in turn will deliver the PRDs and forms to PEMA. PEMA will deliver the forms from all counties to BRP and will deliver the PRDs to the PRD service contractor for reading. All dosimetry records will be forwarded through emergency management channels to BRP for the purposes of record keeping, analysis, reporting and storage. Direct-reading dosimeters will be retained at county or other agency level, as appropriate.

B. Weather and other conditions may make it difficult if not impossible for an emergency worker to use the Dosimetry-KI Report Form while deployed on a mission. All efforts must be taken to keep the form dry and legible. If necessary, at the completion of the mission, data will be transferred onto a clean copy of the Dosimetry-KI Report Form when conditions allow it to be completed.

C. BRP will retain all original copies and will be the permanent record keeper of the completed Dosimetry-KI Report Forms along with BRP's explanation of each; the PRD service contractor generated information and all related material. The records of individuals will be kept confidential.

D. BRP will use the Dosimetry-KI Report Form to select PRDs for immediate reading. The highest priority will be given to PRDs worn by persons whose direct-reading dosimetry indicates 25 R or more, or where medical authority has requested immediate reading, or where other circumstances warrant. In these cases, PEMA will expedite delivery of the PRDs to the PRD service contractor and readings will be received within 24 hours after the contractor's receipt of the PRDs. BRP will promptly relay the readings, with their interpretation to the individual and appropriate medical authorities. All other PRDs will be in the "routine" category of five days turnaround time from the PRD service contractor; individuals will be informed of the PRD readings.

E. If emergency workers turn in their PRDs for reading and are later employed in an area where dosimetry is needed, they will be issued new PRDs.

4. DOSIMETRY READING PROCEDURES

Direct-reading dosimeters will measure the external exposure from the plume and ground deposition. The internal exposure from inhalation cannot be measured with a DRD. In situations where the internal exposure from inhalation is significant, the exposure measured by the DRD will under-report the total whole body exposure. Emergency workers should use the direct-reading dosimeter(s) to ensure that whole body exposure is minimized and that the whole body dose limits are not exceeded. By regularly checking the DRD, the emergency worker can make reasonable judgments about how much radiation, if any has been received.

A. Prior to use, direct-reading dosimeters should be "zeroed". If zeroing is not possible due to lack of a charger and the dosimeter reading is less than 10% of full scale, the dosimeter may be used but the initial reading must be recorded and subsequently subtracted from exposure reading. If the reading is more than 10% of full scale, do not use the dosimeter.

B. Dosimeters contained in other than area kits should be worn clipped to the upper torso of an outer garment from the time of issue until the worker is released from the mission requiring reading of the dosimeter. Dosimetry contained in area kits should be read until PEMA says dosimetry reading is no longer necessary. Dosimetry may be worn inside protective gear if there are no outer pockets on protective gear, and must be worn inside protective gear if temperatures outside the protective gear exceed 130 degrees Fahrenheit. In no case will the same PRD be worn by more than one person since it would be impossible to ascertain later how much of the dose recorded on the PRD was received by each individual.

C. Emergency workers responsible for doing so should read the direct-reading dosimeters at least once every 30 minutes after having been advised to begin reading and record the reading before and after each mission.

D. Two direct-reading dosimeters provide redundancy. Where the Area Concept is applied, workers will heed the higher measurement taken from the two dosimeters. It is possible for dosimeters of this type to have "electrical leakage" that will register a reading not caused by radiation. Nonetheless, workers are to "err on the side of caution" by heeding the higher reading.

5. FARMER AND INDUSTRIAL WORKER ACCESS TO THE PLUME EXPOSURE PATHWAY EPZ

A. Farmers and Industrial Workers as Emergency Workers

Farmers with livestock within the plume exposure pathway EPZ and industrial workers needed to maintain or shut down equipment will be designated emergency workers if the EPZ is evacuated. The county EMA will provide these emergency workers with dosimetry and KI and identification enabling them to stay within or exit and reenter the evacuated area.

B. Distribution of Dosimetry-KI and Farmers/Industrial Workers "Pass" to the Evacuated Area

Following the completion of evacuation, each risk county EMA will establish a "Contact and Dosimetry-KI Distribution Point for Farmers/Industrial Workers", which will be outside the plume exposure pathway EPZ at a location easily accessible and known to the workers. If an evacuation is necessary, an Emergency Alert System (EAS) or other announcement will instruct the emergency workers to report to the designated location(s). Utilizing its EOC agriculture representative or designated county representative, the county EMA will distribute the dosimetry-KI to the emergency workers and provide instructions on their use. A "Farmer/Emergency Worker Authorization/Industrial Worker Authorization" (see Tab 6) will be completed in duplicate for each emergency worker and serve as a pass for access to the evacuated area. The agriculture or county representative as the basis for property control will retain the duplicate.

C. Limitation on Access to the Plume Exposure Pathway EPZ

The farmer/industrial workers' emergency worker status and authorization to be in the EPZ can be suspended if the incident becomes serious enough to warrant this action.

TABS:

1. Dosimetry-KI Report Form
2. Dosimetry-KI Instructions for Emergency Workers
3. Control PRD Form
4. Receipt for Dosimetry-Survey Meters-KI (Bulk Issue)
5. Acknowledgment of Receipt by Emergency Workers for Dosimetry-KI and Survey Meters (Individual Issue)*
6. Farmer/Emergency Worker Authorization/Industrial Worker Authorization
7. KI Decision Flow Chart

DOSIMETRY – KI REPORT FORM

(Please Print Legibly)	
Emergency's Worker Name or Name of Facility Where Area Kit is Located:	Mailing Address or Area Kit Location:
Social Security Number	Emergency Worker's Organization
Emergency Worker's Signature	

Mission		0-20R Direct Reading Dosimeter			0-200R Direct Reading Dosimeter		
# / Description	Date	Serial No.	BEFORE AFTER	Mission Total	Serial No.	BEFORE AFTER	Mission Total
			R	R		R	R
			R	R		R	R
			R	R		R	R
			R	R		R	R
			R	R		R	R
			R	R		R	R
			R	R		R	R
			Total	R		**Total**	R

PRD (Personal Record Dosimeters)		
Serial No. of PRD:		
	Date/Time	**Person/Organization**
Issued		By:
Turned In		To:
LABORATORY READING OF PRD		
m/Rem		
Date of Reading		

DOSIMETRY INSTRUCTIONS: Read the 0-20R and/or 0-200R direct-reading dosimeter each half hour. Do not exceed 5R cumulative total without authorization. The PRD gives an accurate reading of the total dose and therefore should be used by only by one person. Forward the PRD with this form (see distribution below). Upon completion of the mission, or as directed, each emergency worker must report to a monitoring station or a mass care monitoring center to be monitored for radiological contamination and, if necessary, be decontaminated. Monitoring personnel at these locations will complete a "Monitoring/Decontamination Report Form" for you that will be turned in with this form to the Bureau of Radiation Protection (BRP).

DOSIMETRY-KI REPORT FORM DISTRIBUTION: Complete this form and forward the original copy with the PRD through emergency management channels to BRP. If the direct-reading dosimetry indicates total exposure to 5R or more, expedite delivery to BRP. BRP will forward to the individual and to the county EMA the PRD reading as well as an explanation of the reading. When expedited delivery is made to BRP and where otherwise warranted, BRP will report the PRD reading within 24 hours. Routine reporting may take a week or more. Copy 2 is retained by the County Emergency Management Agency. Copy 3 is retained by the individual.

KI INSTRUCTIONS: Take KI only on the direction of the Secretary of the Department of Health. Take one tablet (130 mg.) or 2 tablets (65 mg.) once a day. If you have any adverse reaction to the drug, discontinue taking KI and report to your supervisor.

COPY 2 (EMA)

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	Date	Time	Amount Taken
Day 1			___ Tablet(s)/ ___ mg
Day 2			___ Tablet(s)/ ___ mg
Day 3			___ Tablet(s)/ ___ mg
Day 4			___ Tablet(s)/ ___ mg
Day 5			___ Tablet(s)/ ___ mg
Day 6			___ Tablet(s)/ ___ mg
Day 7			___ Tablet(s)/ ___ mg
Day 8			___ Tablet(s) / ___ mg
Day 9			___ Tablet(s)/ ___ mg
Day 10			___ Tablet(s)/ ___ mg
Day 11			___ Tablet(s)/ ___ mg
Day 12			___ Tablet(s)/ ___ mg
Day 13			___ Tablet(s)/ ___ mg
Day 14			___ Tablet(s)/ ___ mg

DOSIMETRY-KI INSTRUCTIONS FOR EMERGENCY WORKERS

1. PURPOSE

To provide emergency workers instructions on recording radiation dose exposure, thyroid gland screening, and use of potassium iodide and processing of PRDs.

2. GENERAL

A. Instructions on when to commence radiological monitoring operations will be issued by PEMA through EMA channels. Upon receipt of that instruction, emergency workers will commence recording the data indicated on the Dosimetry-KI Report Form.

B. The Dosimetry-KI Report Form will not always be usable under field conditions; in that event, the form will be completed as soon as possible after each mission is completed. Supervisory personnel must ensure that the forms are completed and processed.

3. INSTRUCTIONS

A. Dosimetry

1) Read all direct-reading dosimeters each half-hour.

2) Do not exceed 5R TEDE dose exposure without county emergency management coordinator's (EMC) approval.

3) Do not exceed 25R TEDE dose exposure except in the case of a lifesaving mission or protection of large populations. Approval by the senior person at the scene is required.

4) Record total dose upon completion of each mission.

5) Record grand total dose upon completion of all missions.

6) If the TEDE dose is 25R or more, expedite delivery of the Dosimetry-KI Report Form to BRP and refer the emergency worker to a medical facility for treatment.

B. Permanent Record Dosimeter (PRD)

1) Record date/time of issue to emergency worker and turn in to supervisor/EMA.

2) Forward form and PRD to BRP through EMA channels.

3) The PRD contractor accomplishes PRD reading.

4. DISTRIBUTION OF DOSIMETRY-KI REPORT FORM

   A. BRP - copy 1

   B. County EMA - copy 2

   C. Emergency Worker - copy 3

Attachment E, Tab 3

CONTROL PRD FORM

When PRDs are **issued to emergency workers**, the **CONTROL** PRDs, along with a completed copy of this form, must be forwarded by the municipality/organization to the appropriate county EMA. The county EMA is then responsible for delivering the municipal/organizational Control PRDs, along with any held by the county EMA, to PEMA.

NOTE: If the county EOC is inside the plume exposure pathway EPZ, the county should designate an alternate site **outside** the EPZ to which Control PRDs are to be delivered.

Control PRD(s) included with this form:			
Serial #		thru	
Serial #		thru	
Serial #		thru	

COUNTY/MUNICIPALITY/ORGANIZATION

The PRD stock, with which the above listed control PRDs were stored, was located at:

Address:

At the time PRDs were issued to emergency workers, the CONTROL PRDs were moved to: (enter/check as appropriate)

a. _____ COUNTY EOC

-or-

ALTERNATE LOCATION

b. _____

-and-

c. PEMA EOC

Receipt for CONTROL PRDS:

a. SIGNATURE	**ORGANIZATION (date/time)**

-and-

b. SIGNATURE	**PEMA EOC (date/time)**

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Attachment E, Tab 4

RECEIPT FOR DOSIMETRY-SURVEY METERS-KI (Bulk Issue)

Issued by:	Issued to:
Address:	Address:
Responsible Individual:	
Telephone:	

INSTRUCTIONS: During a nuclear power plant incident, use this form to maintain property control when distributing the items listed below to municipalities and monitoring/decontamination centers and stations. This form should be used for transfer of these items in bulk form from: (1) the county emergency management agency to risk municipalities and monitoring/ decontamination centers and stations; and (2) the municipalities to their local emergency response organizations (such as fire, police and ambulance associations).

NOTE: The form listed on item 12 below should be used when issuing dosimetry-KI to individual emergency workers.

NOTE: For return of items described: [✓] by the appropriate line item indicates return of the item(s).

LINE NUMBER	DESCRIPTION	✓	QUANTITY
1	0-20R Direct Reading Dosimeter		
2	0-200R Direct Reading Dosimeter		
3	Dosimeter Charger - type		
4	PRD (Permanent Dosimeter) Serial Numbers Through		
5	Potassium Iodide (KI)		
6	Survey Meter - type		
7	Monitoring/Decontamination Report Form		
8	Equipment & Personal Property Decontamination/Accountability Record		
9	Dosimetry-KI Report Form		
10	Control PRD Form		
11	Receipt for Dosimetry-Survey Meters-KI (Bulk Issue)		
12	Acknowledgment of Receipt by Emergency Workers for Dosimetry-KI and Survey Meters (Individual Issue)		
13	Farmer/Emergency Worker Authorization Form - Industrial Worker Authorization Form		
14	Radiological Equipment/KI/Forms Inventory Record		

RECEIVED BY:	TITLE:
SIGNATURE:	DATE:

PEMA-BOP-REP-5 (DRAFT 5/2008)

Attachment E, Tab 5

ACKNOWLEDGMENT OF RECEIPT BY EMERGENCY WORKERS FOR DOSIMETRY-KI AND SURVEY METERS (INDIVIDUAL ISSUE)

Instructions for Use: Record the serial number of the dosimeter being issued in columns 1, 2 and 5. Enter (1) or (0) in columns 3 and 6. By signing column 8, the individual accepts responsibility for each item indicated on the respective line and agrees to return these items (less the KI authorized to be used) upon request and automatically when the nuclear power plant incident is terminated.	**DATE:**
NAME OF EMERGENCY ORGANIZATION:	**RESPONSIBLE INDIVIDUAL:**
ORGANIZATIONAL ADDRESS:	**INSTRUCTIONS FOR THE RETURN OF ITEMS DESCRIBED: (✓) by the organization's responsible individual indicates return of each item.**

1		2		3		4		5		6		7	8
R er nent Recor osi eter	✓	R C R C R R	✓	ot ssiu o i e ott es o ets	✓	R R R	✓	R R C R R R	✓	R R R	✓	rint e i y	R
						1 EACH							
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						1 EACH							

PEMA-BOP-REP-6 (DRAFT 5/2008)

Attachment E, Tab 6

Farmer/Emergency Worker Authorization Form
Industrial Worker Authorization Form

This Is to certify that (name) _____,
(address) _____,
is authorized access to the plume exposure pathway emergency planning zone (EPZ) surrounding the _____ nuclear power plant for the period extending from _____ (date) _____ (time) am/pm to _____ (date) _____ (time) am/pm.

This individual has been issued dosimetry and KI and is authorized access to the evacuated area for the exclusive purpose of tending to livestock or maintaining/closing down industrial or other authorized operations located at:

(FARM LOCATION OR INDUSTRY OR OTHER LOCATION) _____

_____

METHOD OF CONTACT:

IDENTIFICATION DATA:		**Eye Color**	
Sex	☐**MALE** ☐**FEMALE**	**Hair Color**	
Height	_____**ft** _____**in**	**State Automobile Operator's License No.**	
Weight	_____**lbs.**	**Social Security No. (Last 4 digits)**	

RADIOLOGICAL EQUIPMENT ISSUED

Model & Serial No. of Direct Reading Dosimeter	
PRD Serial No	
Dosimetry-KI Report Form	
Potassium Iodide (KI) Quantity	**To be taken only when directed by Secretary of the Department of Health. Discontinue taking KI and report to supervisor if you have adverse reaction.**
Individual's Signature	
Approving Authority	
Agriculture Representative's or County Coordinator's Signature (as appropriate)	

NOTE: LISTEN TO THE COUNTY EAS STATION WHEN INSIDE THE EPZ

PEMA-BOP-REP-7 (DRAFT 5/2008)

Attachment F

PERSONNEL MONITORING PROCEDURE

This document provides guidelines for monitoring personnel for contamination in the event of an unplanned release of radioactive materials.

A. Considerations

Considerations include, but are not limited to the following:

1. Setting up an Incident Command Center in accordance with applicable ORO plans and procedures.

2. Establishing communications for responders.

3. Evaluating other hazards that may be present in the affected area.

4. Establishing access and egress control points.

5. Determining how many people are affected.

6. Establishing cold, warm and hot zones as appropriate.

7. Establishing decontamination and staging areas for personnel and equipment.

8. Determining which instruments will provide adequate detection capabilities for radionuclides that may be present.

9. Determining how many monitoring teams are needed.

10. Determining if outside agency (e.g. DEP / BRP or contract consultants) assistance is required and obtaining outside assistance as needed.

11. Emergency workers exposed to a plume containing radioiodine shall have thyroid monitoring performed after any necessary decontamination attempts.

B. Prerequisites

1. Personnel performing monitoring should be properly trained and qualified in accordance with OROs' emergency plans and procedures.

2. Personnel should review Flow Chart Tabs A, B, C and D of the procedure prior to commencement of monitoring.

3. Monitoring equipment must be in good physical condition.

4. Monitoring equipment calibration must be current.

5. Monitoring equipment pre-operational / source checks must be performed satisfactorily.

6. Instrument audio / speaker features (if available) should be used during monitoring.

7. Monitoring area background levels should not exceed 60 cpm if CDV-700 is used or 100 cpm if instruments with pancake detectors are used.

8. Background levels and monitoring floor areas must be re-checked at 30 minutes intervals and after contaminated individuals are sent to shower(s) / decontamination stations.

9. Appropriate ORO forms must be available for documentation of individuals who are contaminated.

C. Precautions

1. Default monitoring times/distances listed are within the body of the procedure. CDV-700s WILL NOT BE USED FOR NON-REP INCIDENTS.

2. Soles of the shoes are the areas most likely to be contaminated and should be monitored last.

3. Exercise care to control the spread of contamination when sending individuals to shower(s) and decontamination stations.

4. Maintain a distance of at least ten feet between the individual being monitored and those waiting to be monitored to minimize the possibility of increasing instrument background.

D. Procedure

1. Initial Monitoring of Evacuees or Emergency Workers for Contamination Using Portal Monitors

   a. Ensure prerequisites of this procedure have been met.

   b. Determine and record the background radiation level in the monitoring area.

   c. Instruct individuals who are waiting to be monitored to stay at least ten feet away from portal monitor, to minimize effects on background levels.

   d. Instruct individuals to proceed, single file, through portal monitor.

   e. Release individuals who do not alarm portal monitors in accordance with ORO plans and procedures.

   f. Instruct individuals who alarm portal monitor to walk through monitor a second time.

   g. Release individuals who do not alarm portal monitors in accordance with ORO plans and procedures

h. If individuals alarm the portal monitor a second time, take precautions to prevent the spread of contamination.

i. Instruct individuals who alarm the portal monitor twice to proceed to decontamination area(s).

j. Ensure portal monitor area is free of contamination after individuals are sent to decontamination area(s).

k. Conduct follow-up monitoring of individuals in accordance with Section 3 of this procedure.

2. Initial Monitoring of Evacuees Using Hand Held Instruments

a. Ensure that the prerequisites of this procedure have been met.

b. If instruments are equipped with audio / speaker capabilities, ensure this feature is turned on and used during monitoring.

c. Place a thin plastic cover over the probe(s) to prevent it from being contaminated.

d. Determine and record the background radiation level in the monitoring area.

e. Instruct individuals to line up, single file, at least ten feet away from other individuals being monitored.

f. Instruct individuals to proceed, one at a time, through the monitoring line.

g. Perform a:

- 1 minute survey with a pancake detector/instrument

OR

- 4 minute survey with a CDV-700 of the individual in accordance with the steps listed below.

h. Keep the probe approximately:

- 1 inch away with a pancake detector/instrument

OR

- 1/2 inch away with a CDV-700 from surface being monitored.

i. Beginning at the head, monitor for the presence of contamination in excess of release limits:

- 300 cpm above background with pancake detector/instrument

OR

- 300 cpm with a CDV-700.

j. Continue monitoring the hands, elbows, hips/buttock area where hands may have touched and knees.

k. Monitor the soles of the shoes.

l. Release non-contaminated individuals in accordance with ORO plans and procedures.

m. If individual is contaminated, take precautions to prevent the spread of contamination.

n. Ensure monitoring area is free of contamination.

o. Instruct contaminated individuals to proceed to decontamination area(s).

p. Conduct follow-up (post–decontamination) monitoring in accordance with Section 3 of this procedure.

3. Initial Monitoring of Emergency Workers or follow-up Monitoring of Individuals Found to be Contaminated Using Hand Held Instrumentation

Note: Portal monitors may be used for this purpose.

a. Ensure that the prerequisites of this procedure have been met.

b. If instruments are equipped with audio / speaker capabilities, ensure this feature is activated.

c. Place a thin plastic cover over the probe(s) to prevent it from being contaminated.

d. Determine and record the background radiation level in the monitoring area.

e. Perform a :

- 4 minute survey with a pancake detector/instrument

OR

- 19 minute survey with a CDV-700 of the whole body of the individual in accordance with the steps listed below.

f. Keep the probe approximately:

- 1 inch away with a pancake detector/instrument

OR

- 1/2 inch away with a CDV-700 from surface being monitored.

NOTE: If individuals are contaminated, initiate proper form(s), and document all areas where contamination is in excess of release limits.

g. Beginning at the head, monitor for the presence of contamination in excess of release limits.

h. After monitoring the head, instruct the individual to extend his / her arms away from the body.

i. Continue monitoring the front of the whole body (neck to feet), except for the soles of the shoes.

j. Instruct the individual to turn around and monitor the back of the whole body.

k. Monitor the soles of the shoes (leaving shoe covers on, if used).

l. If contamination is not found, remove each shoe cover (if used) and monitor the soles of each shoe again.

m. If the soles of the shoes are contaminated, take precautions to prevent the spread of contamination.

n. Instruct contaminated individuals in decontamination methods.

o. Ensure that the monitoring area is free of contamination.

p. Release non-contaminated individuals in accordance with ORO plans and procedures.

NOTE: Complete form(s) for individuals who are successfully decontaminated and released in accordance with ORO plans and procedures.

q. Monitor individuals who undergo decontamination attempt(s) in accordance with steps e through p of this procedure section.

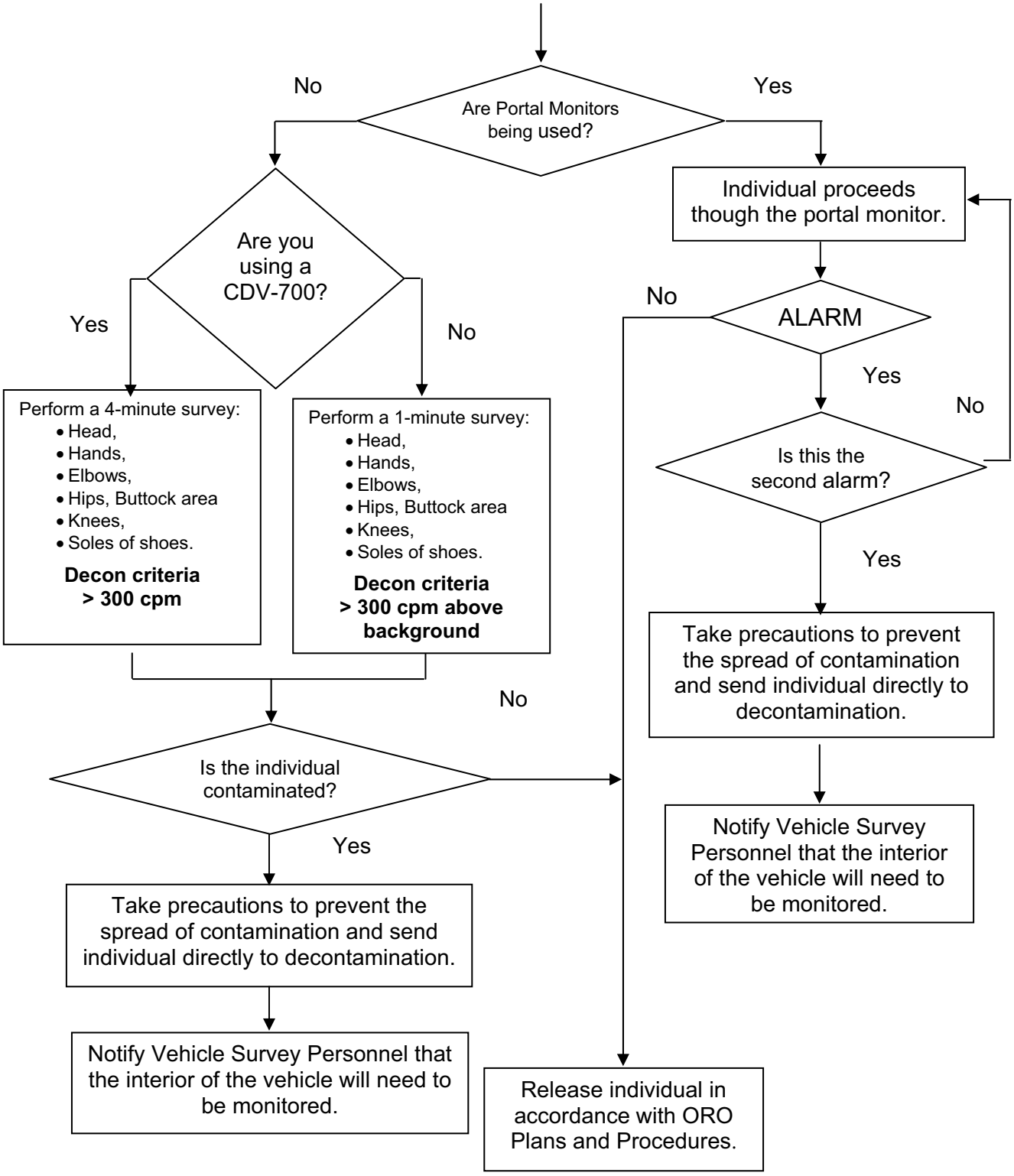
r. If additional contamination is found, document on proper forms and instruct individuals to return to decontamination station(s) for a second decontamination attempt.

s. Monitor individuals who undergo a second decontamination attempt in accordance with steps e through p of this procedure section.

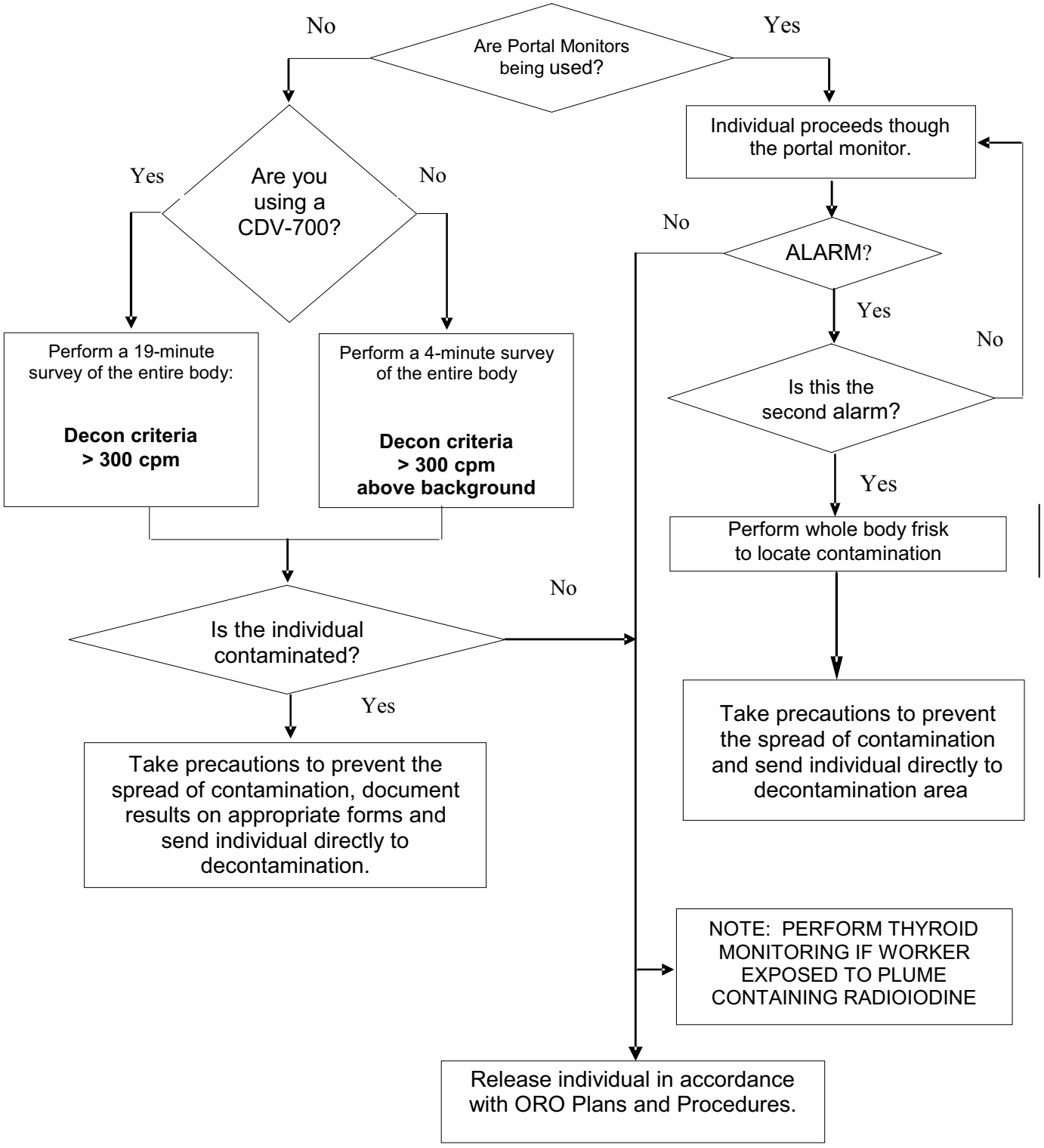
NOTE: Complete form(s) for individuals who are successfully decontaminated and released in accordance with ORO plans and procedures.

t. Refer individuals who are still contaminated after second decontamination effort to appropriate medical facility in accordance with ORO plans and procedures.

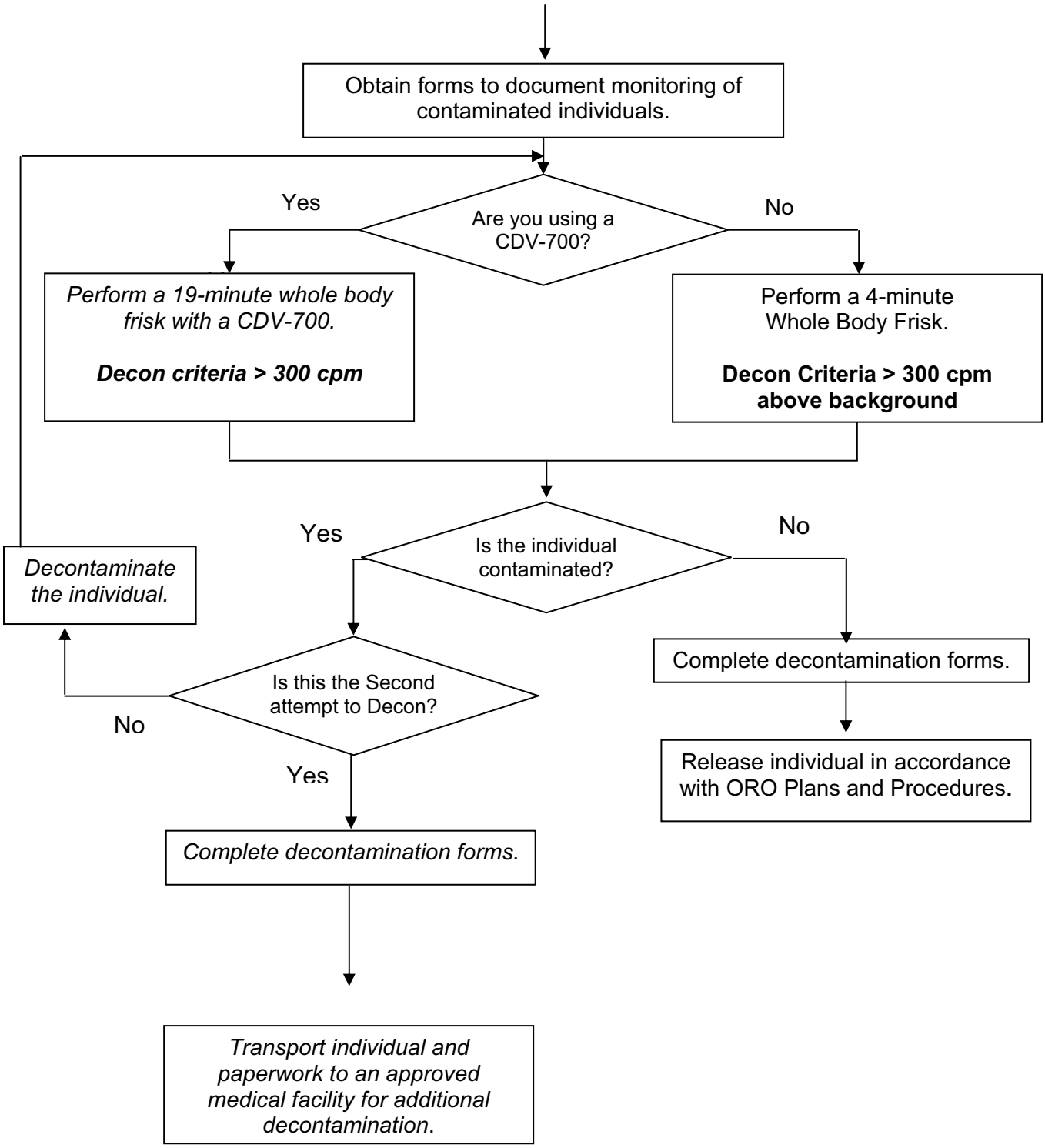
Initial Monitoring of Evacuees



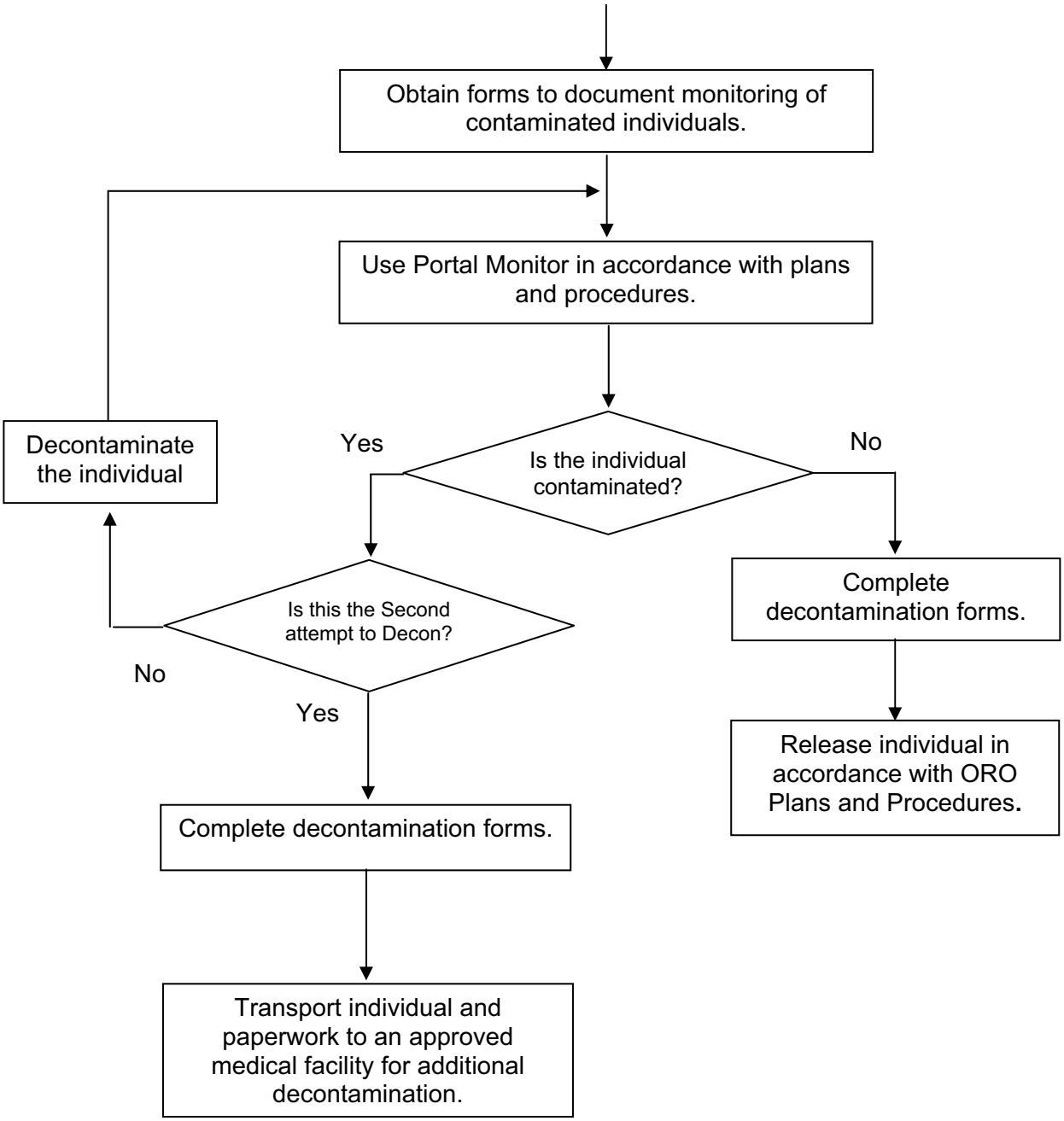
Initial Monitoring Of Emergency Workers



Post Decontamination Monitoring Using Hand Held Instrumentation of Individuals found to be Contaminated



Post Decontamination Monitoring using Portal Monitors of Individuals found to be Contaminated



Attachment G

PERSONNEL DECONTAMINATION PROCEDURE

This document provides guidelines for personnel decontamination.

A. Prerequisites

1. Each individual must be fully monitored and contamination levels documented in accordance with ORO plans and procedures prior to any decontamination.

2. Decontamination facility must be setup for contamination control.

3. Decontamination facility must have appropriate equipment ready.

4. Personnel performing monitoring must be properly trained and qualified in accordance with OROs emergency plans and procedures.

B. Precautions

1. Extreme care should be taken to prevent the spread of contamination to any skin or body opening.

2. Lukewarm or room temperature water should be used for all washing and rinsing. Hot water causes the skin pores to open, driving contamination deeper into the skin. Cold water closes the pores, trapping contamination in the skin.

3. Thorough washing with nonabrasive soap and lukewarm water is the best general method of decontamination of the hands and other parts of the body. If the contaminant is localized, it is often more practical to mask off the affected area, and cleanse with swabs, rather than risk the danger of spreading the contaminant by general washing. Special attention must be given to the areas between the fingers and around the nails. The outer edges of the hands are readily contaminated, and must not be neglected in the washing.

Attachment G

C. Personnel Decontamination Procedure

Note: In incidents with mass evacuees that are contaminated, it is acceptable to have individuals found to be contaminated to immediately decontaminate by disrobing and using shower facilities. After decontamination attempt individual should be fully monitored. The following procedure allows for spot and dry initial decontamination attempts.

The following steps are from the Commonwealth's Emergency Operations Plan, Annex E, "Radiological Emergency Response to Nuclear Power Plant Incidents". Refer to Annex E for additional decontamination guidance.

1. If the identified contaminated area(s) are covered by clothing or footwear, instruct the individual to carefully remove the article of clothing or footwear while wearing exam type gloves. Have the individual place the article(s) in a bag or container along with the glove(s). Move the bag/container away from the immediate monitoring field.

2. Fully monitor the individual.

3. If the individual is found to be free of contamination, or if the readings are below the decontamination/release criteria, release the individual in accordance with ORO plans and procedures.

4. If the individual is found to have readings above the decontamination/release criteria, consider the use of "dry-decontamination" methods. These include:

   a. The removal of additional layers of clothing, if present.

   b. The use of a masking type tape to remove contaminants by carefully lifting the material(s) from the contaminated area(s).

   c. The use of an adhesive step-off pad for contaminate found on the bottoms of the shoes.

   d. The use of a damp "wash-cloth" or "paper towel" to dab or wipe the suspect area.

5. Place any used "dry-Decontamination" materials in a bag or container and remove it from the immediate area. Re-monitor the individual.

6. If the individual is found to be free of contaminants, or if the readings are below the decontamination/release criteria, release the individual in accordance with ORO plans and procedures.

7. If contamination persists, follow the steps below:

   a. Contaminated persons should wash with a mild, non-abrasive soap and warm water (a thorough shower should be sufficient). Emphasis should be placed on any specific spots found to be contaminated in the monitoring process. Also, special attention should be given to the hair, hands and fingernails.

   b. After thorough cleansing and drying, the individual will be monitored again. If some contamination still remains, the individual should shower again, using a mild, non-abrasive soap. If monitoring after the second thorough cleansing indicates that the contamination is still present, the individual should be sent to the nearest medical facility capable of treating contaminated persons.

   c. Care should be taken that persons who are decontaminated do not become re-contaminated by dressing in contaminated clothing or by touching contaminated clothing or other contaminated items. If the individual does not have contamination free clothing, clothing should be issued to the individual until such time as their clothing can be decontaminated.

D. Decontamination Procedures for Wounds

Persons with contaminated wounds will be referred to an appropriate medical facility for decontamination and treatment.

E. Eye Decontamination

Any eye contamination should be directed to a physician.

F. Hair Decontamination

Decontaminate hair by repeated application of liquid soap and rinse water, using towels to keep water from running onto face and shoulders.

VEHICLE AND EQUIPMENT MONITORING PROCEDURE

This document provides guidelines for monitoring vehicles for contamination in the event of an unplanned release of radioactive materials. Vehicles are monitored only if occupants are found contaminated.

A. Considerations

1. Portal monitors cannot be used for vehicle monitoring.
2. Establish (one way) access and egress traffic flow patterns for incoming and outgoing vehicles.
3. Assign designated parking areas for all incoming (unmonitored) vehicles.
4. Assign (separate) designated monitoring areas for vehicles that are required to be surveyed and / or decontaminated.

B. Prerequisites

1. Vehicle occupants must be monitored prior to monitoring vehicles.
2. Privately owned vehicles and equipment whose occupants are contaminated must be surveyed prior to release.
3. All emergency response vehicles and equipment must be surveyed prior to release or reassignment to additional crews.
4. Personnel performing monitoring must be properly trained and qualified in accordance with OROs emergency plans and procedures.
5. Personnel must review Flow Chart Tabs A and B of this procedure prior to commencement of vehicle monitoring.
6. Monitoring equipment must be in good physical condition.
7. Monitoring equipment calibration must be current.
8. Monitoring equipment preoperational / source checks must be performed satisfactorily.
9. Instrument audio / speaker features (if available) should be used during monitoring.
10. Monitoring area background levels should not exceed 60 cpm as measured with CDV-700 or 100 cpm if using instrument with pancake detector hand held monitoring instruments.
11. Background levels must be rechecked at a minimum of every 30 minutes.
12. Appropriate ORO forms must be available for documentation of vehicles and equipment that are contaminated.

C. Precautions

1. Take precautions (e.g. wear gloves and do not brush against surfaces being surveyed) to prevent cross contamination of survey instruments and personnel performing monitoring, especially when surveying vehicle interiors.
2. Default monitoring times/distances are listed within the body of the procedure.
3. Maintain a distance of at least ten feet between vehicles that are being monitored to minimize increases in background levels from adjacent vehicles.
4. The vehicle should be parked and the engine turned off prior to surveying.
5. Use the following tables for decontamination criteria/release decision levels. Table 1 is for the initial surveys prior to decontamination.
6. Table 2 may be used only after decontamination efforts have been implemented and levels remain greater than those listed in Table 1.

Table 1 - Recommended Detection Parameters for Loose plus Fixed Widespread Contamination on Vehicles, Equipment and other Possessions

		etection r eters	
nstru ent etector ype	ecision Criteri	i u ro e ei t inc es	i u ro e pee inc es secon
CDV-700 with side Window detector	300 cpm	1	6
Modern instruments w/pancake detector	300 cpm above background	1	24

Note: The decision criteria listed is for loose plus fixed contamination monitoring.

Table 2 - Recommended Detection Parameters for Fixed Contamination on Vehicles, Equipment and other Possessions

		etection r eters	
nstru ent etector ype	ecision Criteri	i u ro e ei t inc es	i u ro e pee inc es secon
CDV-700 with side Window detector	1000 cpm	1	6
Modern instruments w/pancake detector	1000 cpm above background	1	24

Note: The decision criteria listed is for fixed contamination monitoring.

D. VEHICLE MONITORING PROCEDURE

1. Ensure prerequisites of this procedure have been met.

2. Determine and record the background radiation level in the monitoring area.

3. Ensure proper vehicle monitoring form(s) are available in accordance with ORO plans and procedures.

4. Ensure vehicle is at least ten feet away from adjacent vehicles.

5. Place an appropriate (thin ply) plastic cover over the instrument probe.

6. Ensure that the instrument audio / speaker function is used, if available.

7. Ensure beta shield (non pancake detector) is in the open position, if applicable.

   NOTE: Any contamination levels in excess of release limits should be documented on vehicle survey form(s).

   Limits:

   - 300 cpm above background with pancake detector/instrument

     OR

   - 300 cpm with a CDV-700.

8. Starting at the left front wheel well, place the detector probe approximately:

   - 1 inch away with pancake detector/instrument

     OR

   - 1 inch away with CDV-700 from the wheel well.

9. Survey wheel well, using a probe speed of approximately:

   - 24 inches per second with pancake detector/instrument

     OR

   - 6 inches per second with a CDV-700.

10. Survey the left rear wheel well.

11. Survey the right rear wheel well.

12. Survey the right front wheel well.

13. Monitor any loose items located in the front portion of the vehicle interior (e.g. personal items) and bag items that are contaminated.

14. Mark bagged items in accordance with ORO plans and procedures.

15. Survey the front (driver side) seat, floor mat, hand and foot controls.

16. Monitor any loose items located in rear portion of vehicle interior (e.g. personal items) and bag items that are contaminated.

17. Mark bagged items in accordance with ORO plans and procedures.

18. Survey the rear (driver side) seat and floor mat.

19. Survey the rear (passenger side) seat and floor mat.

20. Survey the front (passenger side) seat and floor mat.

21. Decontaminate vehicle interior and exterior in accordance with ORO plans and procedures.

22. Document decontamination of vehicle interior on appropriate form(s).

23. If vehicle is still greater than Table 1 criteria after decontamination, OROs in accordance with plans and procedures may use limits contained within Table 2. Contamination that remains in vehicle is assumed to be fixed contamination.

24. Release vehicles in accordance with ORO plans and procedures.

E. EQUIPMENT MONITORING PROCEDURE

Note: Examples of equipment - air packs, turn-out gear, communication gear. Priority should be given to monitoring emergency worker equipment.

1. Ensure prerequisites of this procedure have been met.

2. Determine and record the background radiation level in the monitoring area.

3. Ensure proper survey form(s) are available in accordance with ORO plans and procedures.

4. Ensure equipment is not surveyed near other contaminated equipment.

5. Place an appropriate (thin ply) plastic cover over the instrument probe.

6. Ensure that the instrument audio / speaker function is used, if available.

7. Ensure beta shield (non-pancake detector) is in the open position, if applicable.

   NOTE: Any contamination levels in excess of release limits should be documented on equipment survey form(s).

   Limits:

   - 300 cpm above background with a pancake detector/instrument

     OR

   - 300 cpm with a CDV-700.

8. Starting at closest surface, place the detector probe approximately:
   - 1 inch away with a pancake detector/instrument

     OR
   - 1 inch away with a CDV-700.

9. Survey equipment, using a probe speed of approximately:
   - 24 inches per second with a pancake detector/instrument

     OR
   - 6 inches per second with a CDV-700.

10. Monitor remaining items surfaces and bag/wrap if found contaminated.

11. Mark items in accordance with ORO plans and procedures.

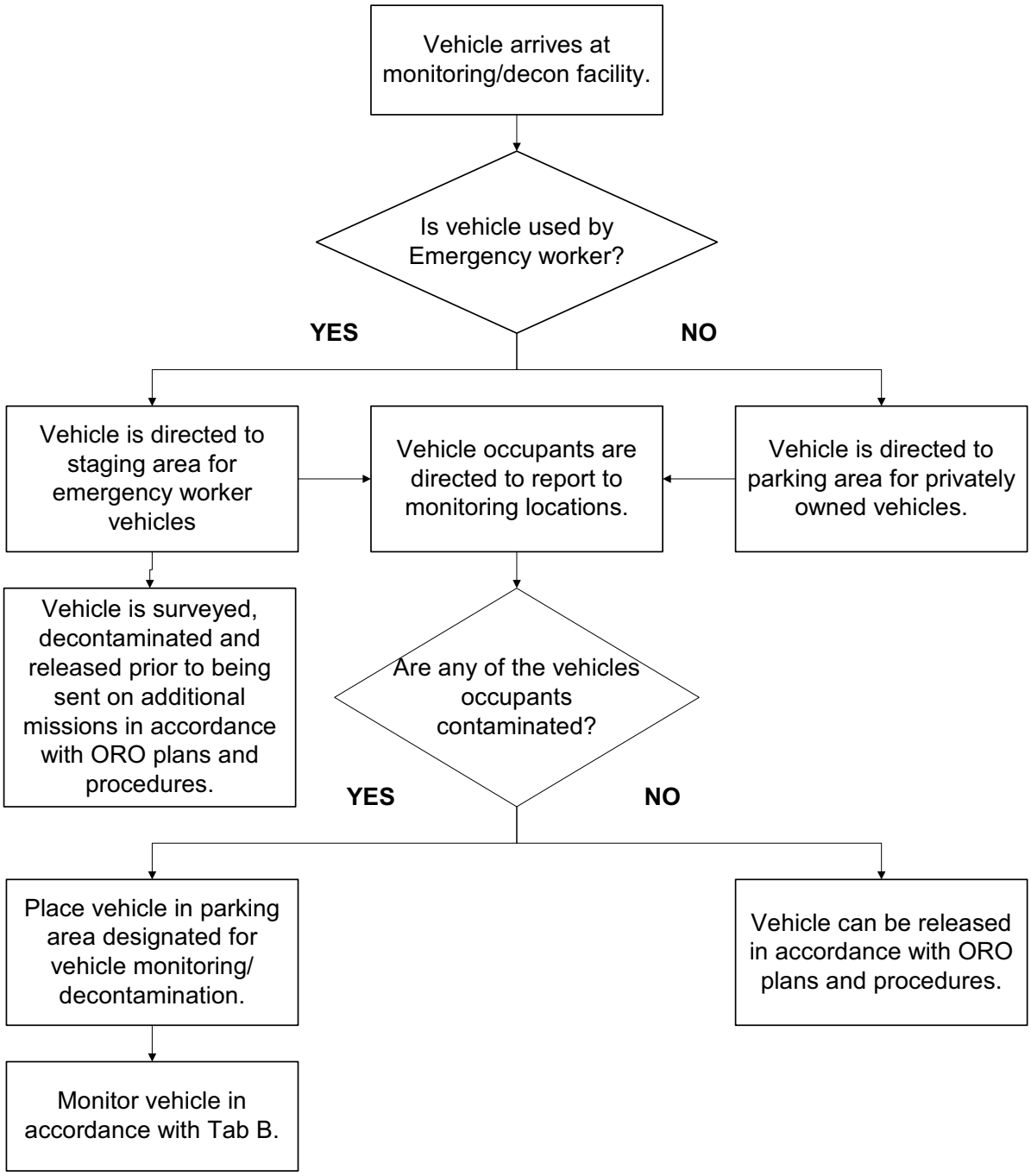
12. If time permits decontaminate equipment in accordance with ORO plans and procedures.

13. Document decontamination of vehicle interior on appropriate form(s).

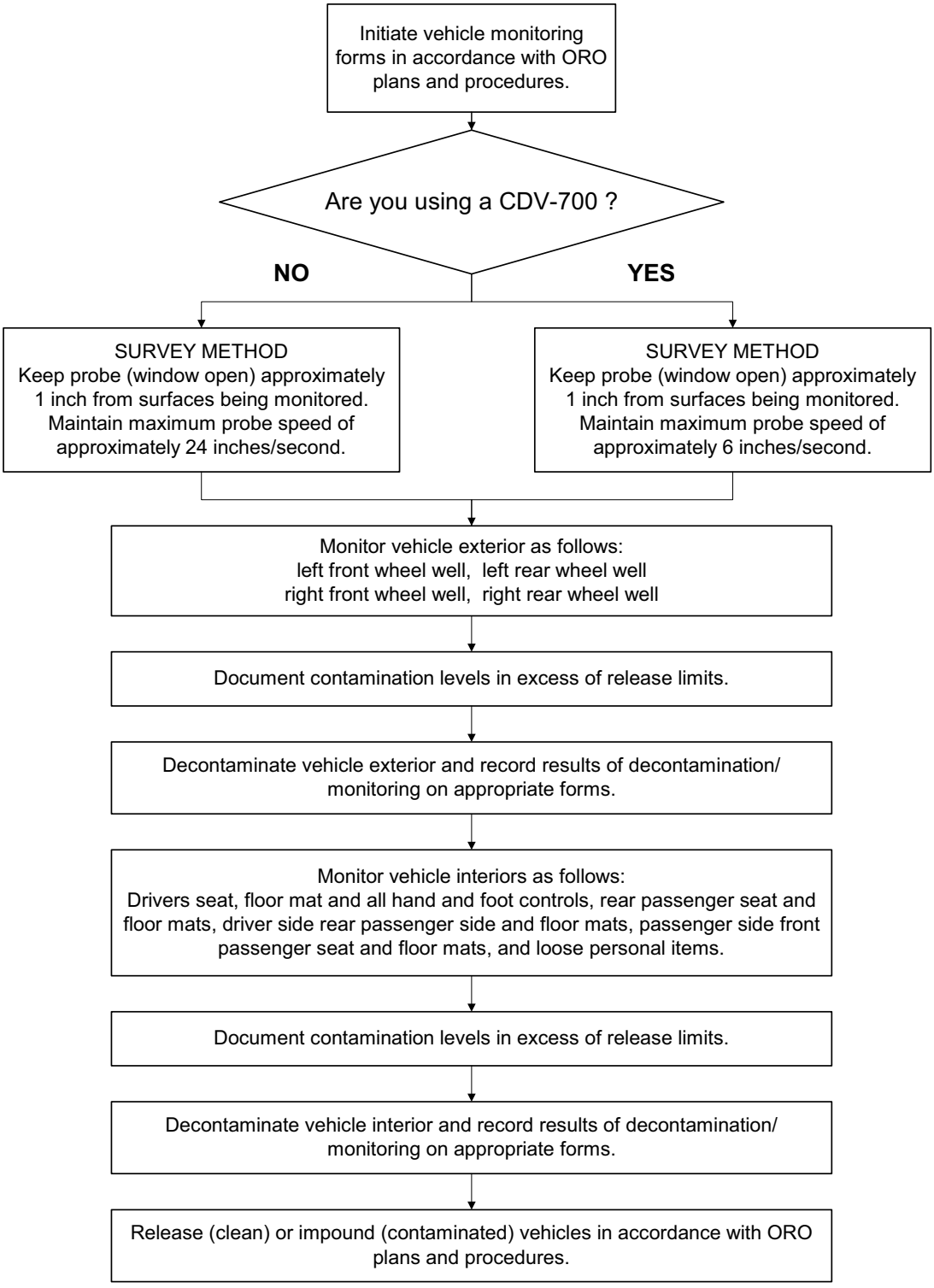
14. If equipment is still greater than Table 1 criteria after decontamination, OROs in accordance with plans and procedures may use limits contained within Table 2. Contamination that remains is assumed to be fixed contamination.

15. Release vehicles in accordance with ORO plans and procedures.

Vehicle Processing at Monitoring/Decontamination Centers



VEHICLE MONITORING



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INVENTORY AND MAINTENANCE PROCEDURES

1. PURPOSE

To prescribe procedures for inventory and maintenance of the dosimetry, dosimeter chargers, survey meters and potassium iodide (KI) intended for use in response to incidents at nuclear power plants.

2. GENERAL

For the purpose of this attachment, the following criteria are applicable:

A. Inspection - A visual check for physical damage and missing accessories to include batteries for DRD chargers and survey meters which should be stored separately.

B. Inventory - An accounting for the equipment and material on hand.

C. Operational Check

1) Direct-reading Dosimeters - The dosimeter is operational if the hairline can be moved to or close to zero using a dosimeter charger.

2) Dosimeter Charger - The charger is operational if the light source for reading dosimeters is working and the charger can move the hairline on a direct-reading dosimeter to or close to zero.

3) Survey Meter – Operational checks consist of a physical inspection of the meter and probe, battery test if applicable, and a source response check. Manufacturer's instructions should be followed.

4) Portal Monitors and Other Hand-Held Survey Meters – Follow the manufacturer's instructions.

D. RERP Issue - Refers to dosimeters, dosimeter chargers and survey meters that are either emergency management or commercial equipment issued to selected counties for the express purpose of response to nuclear power plants incidents.

3. INVENTORY AND MAINTENANCE PROCEDURES

A. At least once each year and after each use, for an exercise or actual emergency, emergency response equipment/instruments will be inventoried, inspected and operationally checked by each agency having RERP issue on hand.

B. At present sufficient reserves of equipment/instruments will be maintained by the utilities to replace those which are undergoing calibration or repair.

C. The above procedures (A and B) pertain only to the RERP equipment for response to nuclear power plant incidents and in no way change or alter other established procedures for radiological equipment.

4. INSTRUMENT CALIBRATION

Frequency of calibration is as prescribed by the manufacturer. The manufacturers standard for the CD V-700 is every four years. The calibration date must be visible on the instrument. For portal monitors and other hand-held survey meters follow the manufacturer's calibration recommendations. Calibration, repair, and replacement of these instruments are the responsibility of the agency that owns them.

5. PERMANENT RECORD DOSIMETERS

Each year, based on the original issue date, PEMA will purchase and coordinate an exchange of new-for-old PRDs. After the annual replacements are received from the PRD service contractor the old PRDs will be immediately returned to the manufacturer. Failure to accomplish this return will result in an additional charge.

There are no maintenance requirements for the PRDs and all are replaced, one for one, annually.

ATTACHMENT:

A. Radiological Equipment/KI/Forms Inventory Record

Attachment A

RADIOLOGICAL EQUIPMENT/KI/FORMS INVENTORY RECORD

COUNTY/MUNICIPALITY/AGENCY

I, as the person who conducted the inventory, certify that a physical inventory of radiological equipment and KI issued to this organization specifically for response to nuclear power plant incidents was conducted on _____ and the results of such inventory are as follows:

	EQUIPMENT/KI/FORMS	QUANTITY ISSUED	PHYSICAL INVENTORY QUANTITY
1.	0-20R Direct-Reading Dosimeter		
2.	0-200R Direct-Reading Dosimeter		
3.	Dosimeter Charger - type		
4.	PRD (Permanent Record Dosimeter) Serial number _____ through _____ and _____ through _____		
5.	Potassium Iodide (KI)		
6.	Survey Meter - type		
7.	Monitoring/Decontamination Report Form		
8.	Equipment & Personal Property Decontamination/Accountability Record		
9.	Dosimetry-KI Report Form		
10.	Control PRD Form		
11.	Receipt for Dosimetry-Survey Meters-KI (Bulk Issue)		
12.	Acknowledgment of Receipt of Emergency Workers for Dosimetry-KI and Survey Meters (Individual Issue)		
13.	Farmer/Emergency Worker Authorization Form - Industrial Worker Authorization Form		
14.	Radiological Equipment - KI Forms Inventory Record		

NAME OF INVENTORY CLERK: **(PLEASE PRINT OR TYPE)**

INVENTORY CLERK'S SIGNATURE:	**DATE:**
SIGNATURE OF COUNTY/MUNICIPAL COORDINATOR OR AGENCY MANAGER:	**DATE:**

PEMA-BOP-REP-8 (DRAFT 5/2008)

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MASS CARE

1. Lycoming County mass care centers designated for care of Columbia County evacuees are listed in Attachment A to this Appendix.

2. The centers will be filled sequentially.

3. A map of mass care centers, TCPs, and strip maps from the reception center to mass care centers are in Tabs 1 through 4 in Attachment A.

ATTACHMENTS:

A. Mass Care Centers for Lycoming County

B. Mass Care Organization Chart

Attachment A

MASS CARE CENTERS FOR LYCOMING COUNTY

Facility	Location	Capacity Sleeping/Feeding*
McCall Middle School	600 Willow Street Montoursville, Pa	900
Montoursville High School	100 N. Arch Street Montoursville, PA	900
Hughesville High School	West Cemetery Street Hughesville, PA	900

* These numbers indicate both sleeping and feeding capabilities.

TABS:

1. Strip Map - McCall Middle School
2. Strip Map - Montoursville Jr. and Sr. High School
3. Strip Map - Hughesville High School

STRIP MAP - McCALL MIDDLE SCHOOL (MASS CARE CENTER)

TCP 1 - Lycoming Mall Western Exit to SR 2014/Lycoming Mall Road

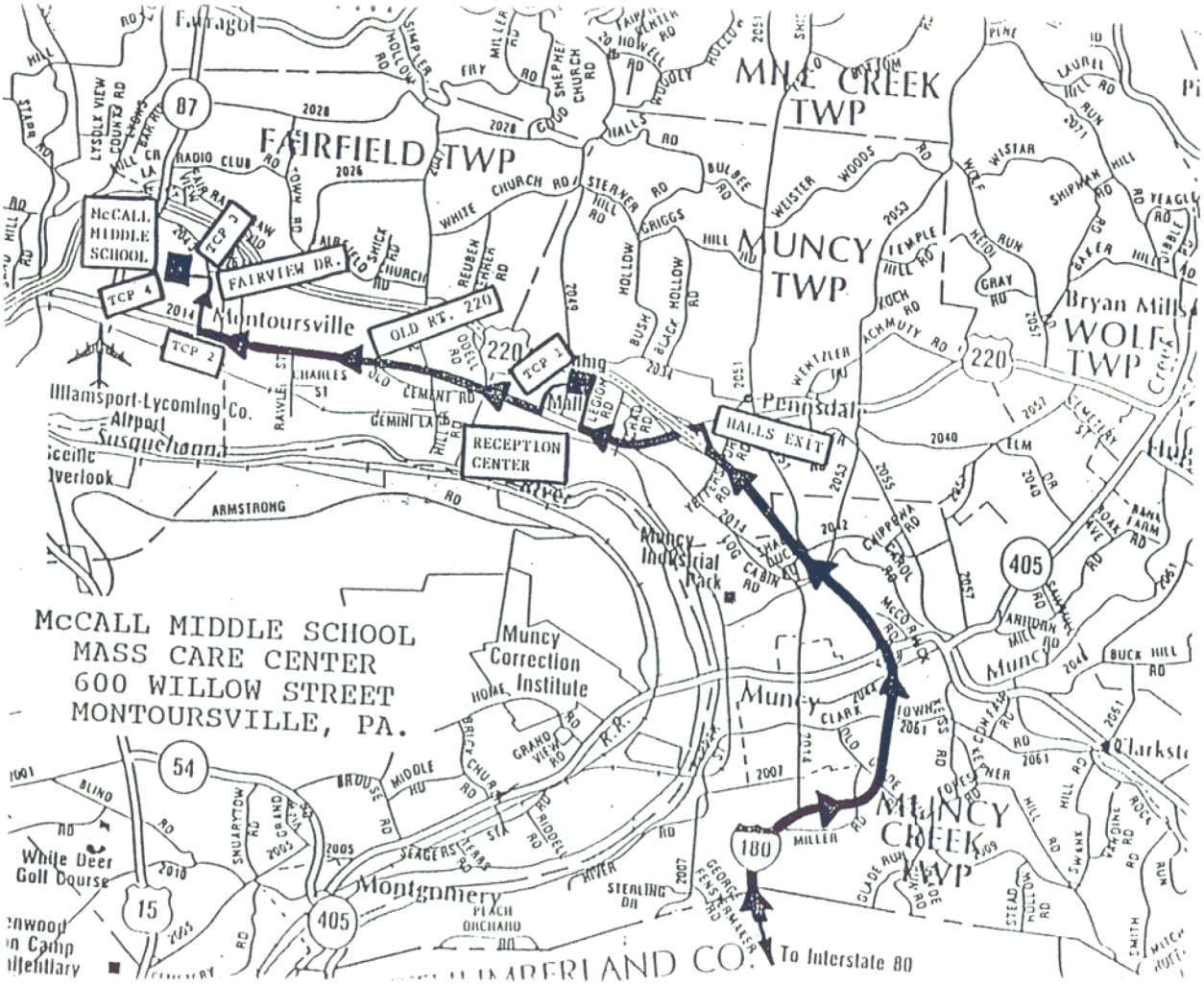
TCP 2 - Intersection of SR 2014/Lycoming Mall Road or Broad Street and Fairview Drive

TCP 3 - Intersection of Fairview Drive and Nicely Avenue

TCP 4 - Nicely Avenue at Parking Lot Entrance to McCall Middle School

Attachment A, Tab 1

McCall Middle School Map



STRIP MAP - MONTOURSVILLE JR AND SR HIGH SCHOOL (MASS CARE CENTER)

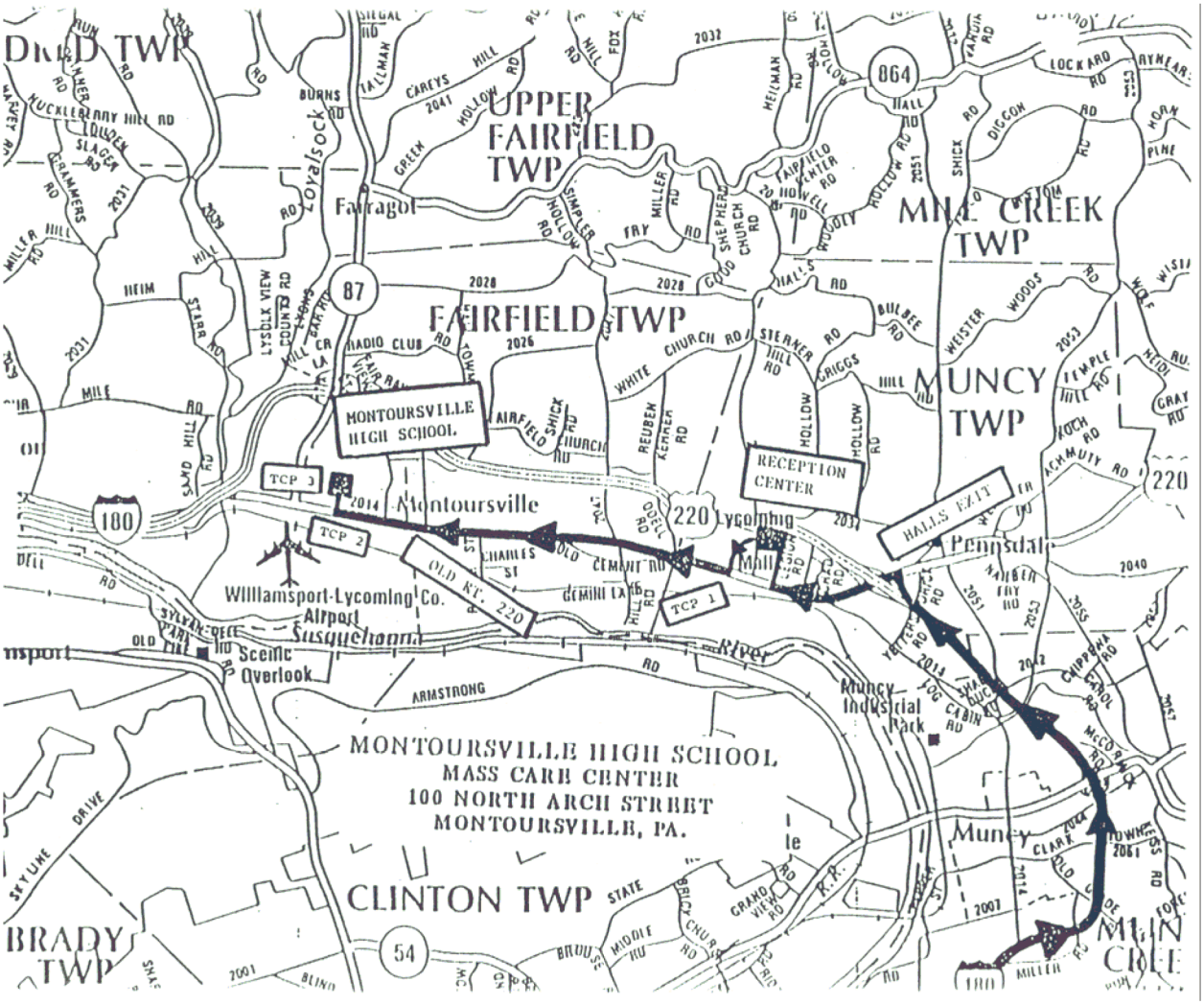
TCP 1 - Lycoming Mall Western Exit to SR 2014/Lycoming Mall Road

TCP 2 - Intersection of Broad Street/Lycoming Mall Road and Arch Street

TCP 3 - Arch Street at Entrance to the Montoursville High School

Attachment A, Tab 2

Mountoursville Jr & Sr. High School Map



STRIP MAP - HUGHESVILLE HIGH SCHOOL (MASS CARE CENTER)

TCP 1 - Lycoming Mall Western Exit to SR 2014/Lycoming Mall Road

TCP 2 - Intersection of SR 2014/Lycoming Mall Road and Route 220

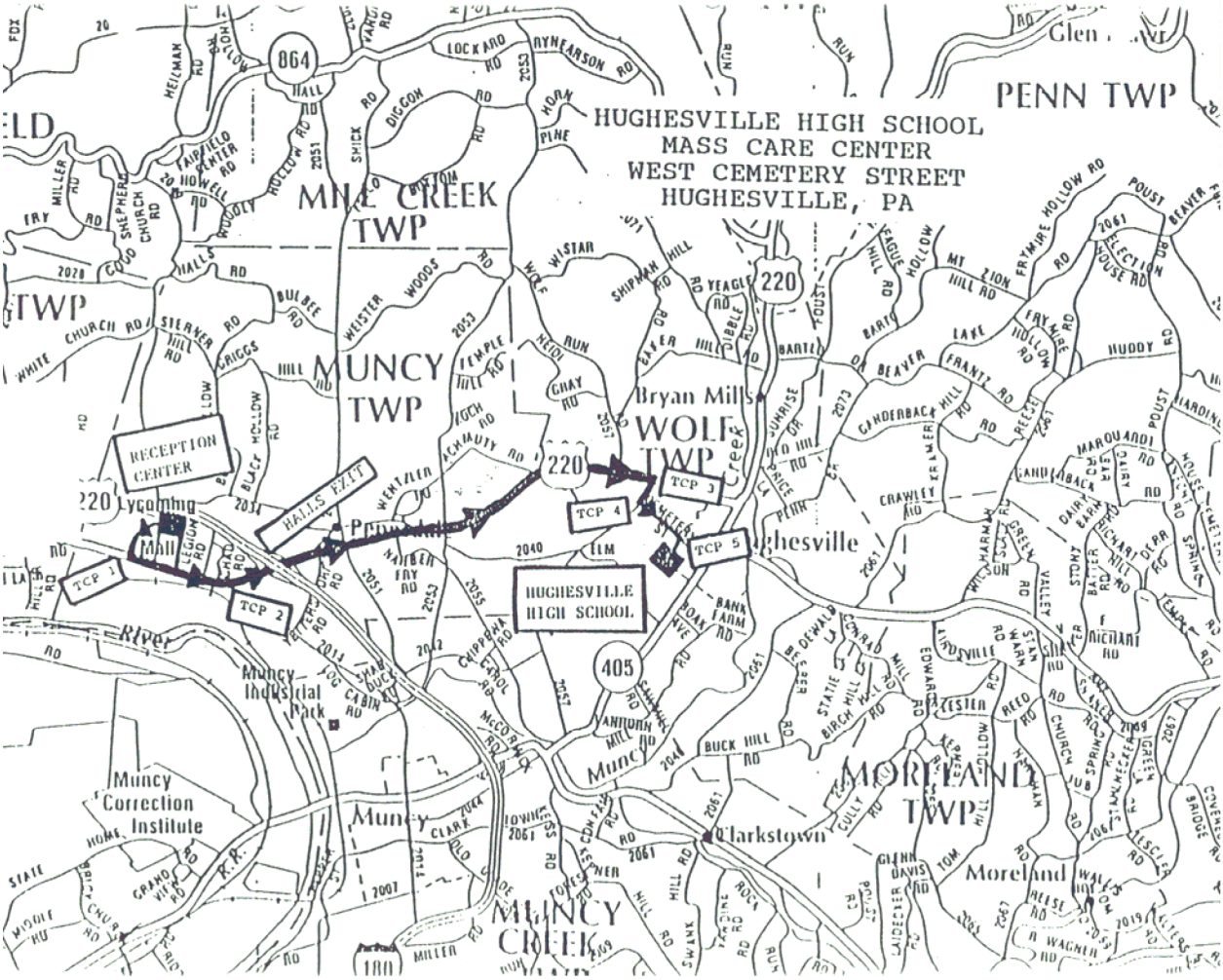
TCP 3 - Intersection of Route 220 and Lime Bluff Road

TCP 4 - Intersection of Lime Bluff Road and West Cemetery Street

TCP 5 - West Cemetery Street at Entrance to the Hughesville High School

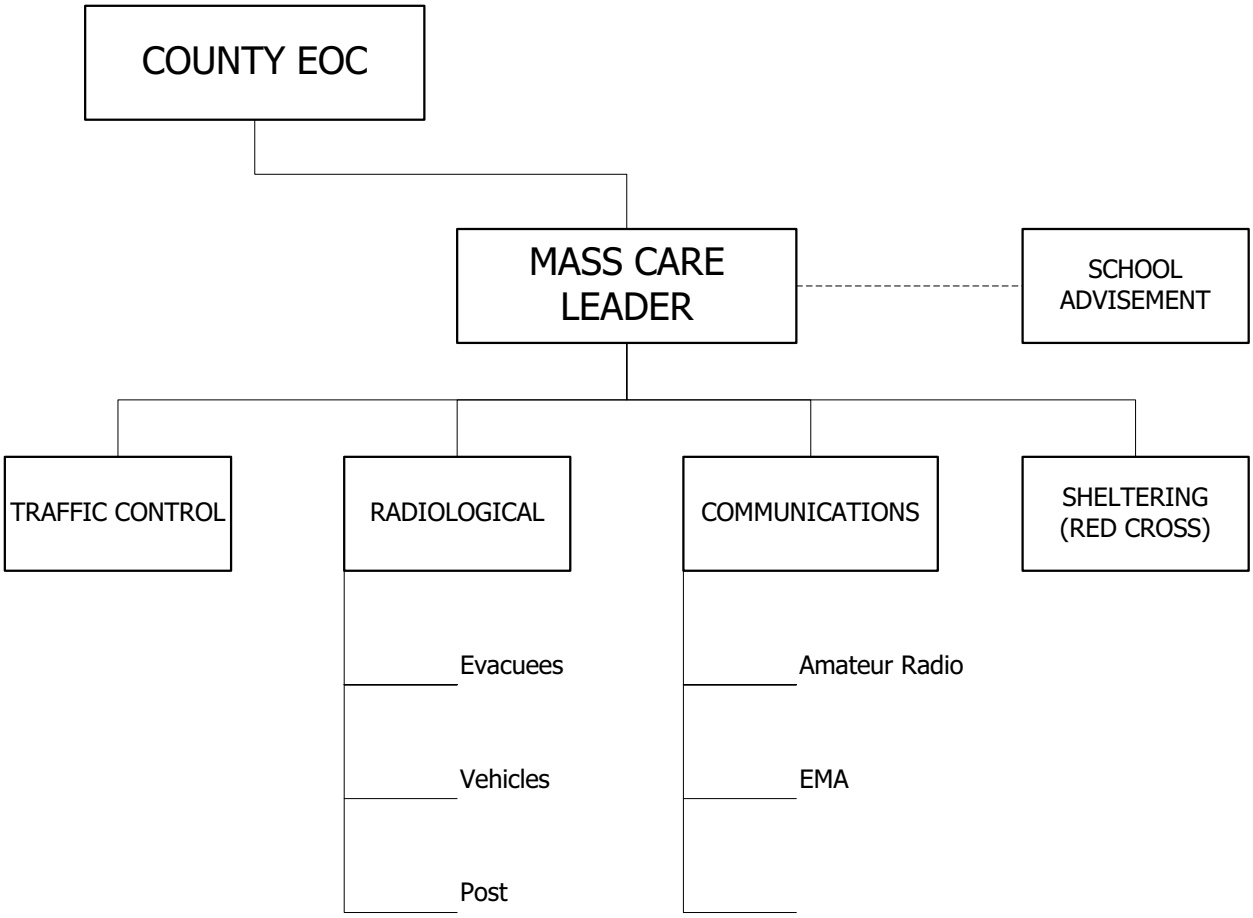
Attachment A, Tab 3

MAP - Hughesville High School



Attachment B

MASS CARE ORGANIZATION CHART



NOTE: The mass care leader interfaces with the mass care E_ S.F. # 6 in the County EOC.

G:\Procs\EPlan-Offsite\County\Support\Lycoming\2008\LycomingAppendix06-2008.doc

MEDICAL RESPONSE TO RADIATION ACCIDENTS
CONTAMINATED INJURED INDIVIDUALS

Ambulance-rescue squad personnel are usually the first persons of the medical team to see the case of radiation exposure or radioactive contamination.

1. For the Patient

   A. The first priority in a radiation accident is care and concern for the patient. Do not act afraid of or reluctant to touch the patient. If contamination is suspected, wear gloves and wrap patient in a blanket to avoid contamination. Do not delay treatment because of lack of a survey meter or gloves. If removal of contaminated clothing and initial decontamination has occurred at the accident site, so much the better. If no onsite decontamination was done, the victim should be placed in a sheet or blanket and the litter and surrounding floor covered with plastic sheeting to prevent serious contamination of the ambulance and its attendants. The rescue-squad personnel are to give lifesaving emergency assistance if needed, determine the extent of physical injury, and obtain pertinent information on the nature of the accident. If possible, a radiation survey should be done.

   B. Give lifesaving emergency assistance if needed.

   C. Secure pertinent information including rough measurement from those in attendance.

   D. Determine if physical injury or open wounds are involved. Cover wound with clean dressing; use elastic bandage to hold wound-cover in place; do not use adhesive.

   E. Cover stretcher, including pillow, with open blanket; wrap victim in blanket to limit spread of contamination.

   F. Notify hospital by radio or telephone of available information.

2. For Emergency Medical Personnel (upon arrival of the ambulance at the hospital)

   A. Perform survey of ambulance crew clothing, ambulance, etc., on arrival at hospital before undertaking further activity.

   B. If contaminated, discard clothing in container marked "Radioactive--Do Not Discard." Cleanse self by washing and/or showering, as appropriate.

   C. If contamination is found or suspected, rescue squad personnel must be surveyed by radiation-survey meter; measurements must be recorded. Cleansing must continue until responsible physician indicates person may leave.

   D. If the ambulance or rescue squad that picks up the radiation accident case has a radio or telephone, your emergency room will be alerted to expect a patient who have had radiation exposure or radioactive contamination.

E. It is the responsibility of the senior hospital emergency room person on duty, nurse or physician, on receipt of notification of the momentary arrival of case involving radiation exposure or contamination, to:

1) Notify responsible staff physician or nurse and aides (trained health physicists or trained technicians from x-ray or nuclear medicine departments, if the hospital has such persons on its staff).

2) Get appropriate survey meter, if one is on hand in the hospital. If hospital has no meter, notify hospital administrator or responsible hospital official so he or she may obtain a survey meter and other pertinent equipment by calling the County EMA.

3) Notify the hospital administrator so he or she may seek expert professional consultation for technical management of the case.

4) If contamination is suspected, prepare separate space, using either isolation room or cubicle if available. Some hospitals use the morgue, since the autopsy table lends itself to washing with water. The morgue entrance would then be used rather than the emergency room. When morgue is used, the patient and his or her family must be reassured of why that space is used. If no separate space is available, cover a floor area immediately adjacent to the entrance way to the emergency room with absorbent paper. The area must be adequate for stretcher-cart, disposal hampers, and working space for professional attendants. Mark and close off this area. If dust is involved, be prepared to shut off air circulation system to prevent spread of contamination.

F. On ambulance arrival, the responsible physician or nurse in the emergency room should:

1) Check patient on stretcher for contamination (preferably as stretcher is removed from the ambulance) by use of a survey meter.

2) If seriously injured, give emergency lifesaving assistance immediately.

3) Handle contaminated patient and wound as one would a surgical procedure, i.e., gown, gloves, cap, mask, etc.

4) If possible, when external contamination is involved, save all clothing and bedding from ambulance, blood, urine, stool, vomitus, and all metal objects (e.g., jewelry, belt buckles, dental plates, etc). Label with name, body location, time, and date. Save each in appropriate containers; mark containers clearly, "Radioactive--Do Not Discard."

5) Decontamination should start, if medical status permits, with cleansing and scrubbing the area of highest contamination first. If an extremity alone is involved, clothing may serve as an effective barrier and the affected limb alone may be scrubbed and cleansed. Initial cleansing should be done with soap and warm water. If the body, as a whole, is involved or clothing generally permeated by contaminated material, showering and scrubbing will be necessary.

Pay special attention to hair parts, body orifices, and body folds areas. Remeasure and record measurement after each washing or showering. Wash water waste, unless markedly radioactive, may be flushed into community sewage system where dilution will obviate any hazard effect.

If a wound is involved, prepare and cover the wound with self-adhering disposable surgical drape. Cleanse neighboring surfaces of skin. Seal off cleansed areas with self-adhering disposable surgical drapes. Remove wound covering and irrigate wound with sterile water, catching the irrigating fluid in a basin. Washings can be marked and handled as described in rule 4 or 5 above. Each step in the decontamination should be preceded and followed by monitoring and recording of the location and extent of information.

6) Save physicians', nurses', and attendants' scrub or protective clothing, as described for patients. Nurses, doctors, and attendants must follow the same monitoring and decontamination routine as the patients.

7) The physician in attendance in the emergency room, if confronted with a grossly contaminated wound with dirt particles and crushed tissue, should be prepared to do a preliminary simple wet debridement. An emergency minor surgical set should be used. Further measurements may necessitate sophisticated wound counting detection instruments supplied by the consultant who will advise if further definitive debridement is necessary.

PUBLIC INFORMATION (ESF #15) (EXTERNAL AFFAIRS)

The Lycoming County Public Information for emergency situations is covered in detail in Annex D of the Lycoming County EOP. This staff information is available at the State and County EOCs.

ATTACHMENTS:

A. General Information
B. Media Listing
C. Support County Media Advisory, Sample
D. Return Media Advisory, Sample

Attachment A

GENERAL INFORMATION

1. The Lycoming County Board of Commissioners and the Coordinator of the County Emergency Management Agency, in consultation with PEMA, are responsible for the release of prepared instructions to the public, in the event of an incident at the Susquehanna Steam Electric Station Nuclear Power Plant.

2. The Lycoming County PIO, supported by the EMA Coordinator, with the assistance of PEMA, will prepare and update prepared statements for broadcast in the event of an emergency.

3. If an incident reaches the Site Area Emergency or the General Emergency level, and an evacuation is imminent or has been declared, the Lycoming County Commissioners, assisted by the county EMA and PIO, may commence issuing public information statements explaining the governmental actions being taken by the county. The purpose of these statements is to provide accurate information, prevent panic, and to counteract misinformation and rumors.

4. The Chairman of the County Board of Commissioners, or his designee, will serve as the county spokesperson in the event of an incident at the Susquehanna Steam Electric Station Nuclear Power Plant. The county spokesperson will be briefed by the county PIO prior to the release of information to the public during an emergency.

5. A Public Inquiry Center (PIC) will be established by the county EMA whenever the EOC is activated in support of this plan. The PIO is responsible for the staffing and operation of the rumor control telephone. The rumor control telephone number for Lycoming County will be assigned during operation in cooperation with the county Public Information Officer.

Attachment B

MEDIA LISTING

INFORMATION AVAILABLE AT EOC

Attachment C

SUPPORT COUNTY MEDIA ADVISORY, SAMPLE

(This advisory is intended for use by support county news media.)

This (is)(is not) an exercise. This advisory has been released by the _____ County Emergency Management Agency.

There has been an emergency at the SSES nuclear power plant requiring evacuation of residents within ten miles of the plant. This evacuation does not directly affect the residents of _____ County and is provided for public information purposes only.

Residents should be aware of this additional traffic in the county and cooperate with authorities as requested.

This (is)(is not) an exercise.

Attachment D

RETURN MEDIA ADVISORY, SAMPLE

(This advisory is intended for use by support and risk county news media.)

This (is)(is not) an exercise. The following advisory has been released by the _____ County Emergency Management Agency and affects residents who evacuated the area around the SSES nuclear power plant.

The governor has announced that the residents of the following municipalities may begin the orderly return to their homes:

1. _____ Township 2. _____ Borough

Procedures for reentry to the evacuated area have been planned to ensure the safety of all returning evacuees. Persons in mass care centers will be notified of their scheduled return. They should wait for notification before proceeding.

It is requested that each family cooperate with the municipalities that have been your hosts during this emergency by helping to restore evacuation facilities to their original condition and by assisting with general area cleanup before leaving.

Until further notice, residents of the following municipalities should not return home at this time:

1. _____ Township 2. _____ Borough

The preceding has been an advisory by the _____ County Emergency Management Agency.

This (is)(is not) an exercise.

INGESTION EXPOSURE PATHWAY EMERGENCY PLANNING ZONE

1. PURPOSE

To describe the means to be used in Lycoming County in minimizing the effects of radioactive contamination of the human food chain, including animal feeds and water, resulting from an incident at a nuclear power plant.

2. SITUATION

A. Pennsylvania Nuclear Power Plants

There are five 50-mile radius ingestion exposure pathway emergency planning zones (EPZ) associated with the five nuclear power plants within the Commonwealth. The EPZ for the Susquehanna Steam Electric Station lies entirely within Pennsylvania. The Three Mile Island Nuclear Station EPZ extends into Maryland; the Peach Bottom Atomic Power Station EPZ extends into Maryland, Delaware, and New Jersey; the Limerick Generating Station EPZ extends into Delaware, Maryland, and New Jersey; and the Beaver Valley Power Station EPZ extends into Ohio and West Virginia. (See Attachment A, Tabs 1 and 2.)

B. Out of State Nuclear Power Plants

Portions of Pennsylvania also lie within the 50 mile ingestion exposure pathway EPZs of four nuclear power plants located beyond the boundaries of the Commonwealth. These four plants are the Artificial Island Nuclear Generating Station and Oyster Creek Nuclear Generating Station in New Jersey; the Indian Point Nuclear Power Station in New York; and the Perry Nuclear Power Plant in Ohio. (See Attachment A, Tab 2.)

C. Counties within the 50-mile EPZs

There are 49 counties within Pennsylvania that lie wholly or partially inside the 50-mile radius of one or more nuclear power plants. Additionally, as a result of the Chernobyl disaster in 1986, the Governor has determined that all 67 counties within the Commonwealth are to be designated as ingestion counties. (See Attachment A, Tab 2.)

D. Lycoming County

Lycoming County lies partially within the 50-mile radius of Susquehanna Steam Electric Station.

E. Ingestion

In the event of a radioactive release from one of the above mentioned sources, the deposition of radiocontaminants on crops, other vegetation, bodies of surface water, and ground surfaces could occur and result in the ingestion of contaminated food products, milk and water.

F. County Response

Affected counties have the responsibility to take protective actions in the event that a radiological incident causes contamination of human food and animal feeds. They are assisted by PEMA and the County Emergency Board (CEB) in the discharge of that responsibility.

3. CONCEPT OF OPERATIONS

A. General

1) Emergency response operations within the ingestion exposure pathway EPZ involve the identification of areas in which food and/or water may have become contaminated. Once contaminated areas are identified, protective actions will be taken to minimize further contamination in those areas and to place restrictions, appropriate for protecting the public health, upon the use of contaminated food or water.

2) At the State Level, PEMA serves as the operative arm in responding to and recovering from the ingestion exposure problem. Emergency response operations will be coordinated through the State EOC. The Pennsylvania Department of Agriculture (PDA), State Emergency Board, as well as the USDA component of the Federal Radiological Monitoring and Assessment Center (FRMAC) will provide assistance in the form of personnel and agricultural expertise.

3) At the County Level, the county EMA serves as the operative arm in responding to and recovering from the ingestion exposure problem. The USDA Services located in the county - Agricultural Stabilization and Conservation Services (ASCS), Cooperative Extension Service (CES), Farmers Home Administration (FHA) and the Soil Conservation Service(SCS) - will provide assistance in the form of personnel and agricultural expertise. Collectively, these services comprise the county Food and Agriculture Council (FAC). The term County Emergency board (CEB) is used to denote these services in their emergency work to assist the agricultural community within the county. A member of the CEB (usually the ASCS County Executive Director) serves as the Agricultural Staff Officer on the County EOC staff. In this document, the terms FAC and CEB will be used interchangeably.

B. Protective Actions

1) The United States Food and Drug Administration (FDA) recommends two levels of protective response which apply to all food pathways. They are:

a. Preventive protective actions - Actions taken to prevent or reduce contamination of milk and food products.

b. Emergency protective actions - Actions taken by public officials to isolate food to prevent its introduction into commerce and to determine whether condemnation or other disposition is appropriate.

2) Protective actions, as announced by PEMA, may require modifications of food production, processing, and distribution cycle pathways in affected areas both within and outside of the ingestion exposure pathway EPZ.

3) Protective actions will be based upon known releases to the environment, radiological measurements, laboratory analyses, and/or integrated dose projections.

4) Protective actions will not be taken without verification by PEMA in coordination with BRP and federal agencies involved, of the measured levels for both preventive or emergency protective actions and a consideration of the health, economic, and social impacts of such actions.

5) In this appendix "protective action" is used in the generic sense unless specifically referred to as "preventive" or "emergency" protective action.

C. Notification

The public in both the plume and ingestion exposure EPZs will be notified about initial preventive and emergency protective actions by means of broadcast and print media. These include commercial radio ad television stations, cable TV systems, National Oceanic and Atmospheric Administration (NOAA) radio, and newspapers. The Emergency Alert System (EAS) can be used in those counties having appropriate alerting systems (e.g., primary route alerting or sirens). Agricultural organizations such as Grange Associations and County and Community Farmers Committees can provide an alternate means of notification.

D. Target Audiences

Target audiences for public information concerning radiocontamination through ingestion exposure are farmers, food processors and distributors, feed processors and distributors, water suppliers, and members of the general public located within the ingestion exposure EPZ.

4. ORGANIZATION AND RESPONSIBILITIES

A. Organization

1) Pennsylvania Emergency Management Agency

The Pennsylvania Emergency Management Agency serves as the lead state agency in coordination with State and Federal agencies in the public education of and response to problems associated with the ingestion exposure pathway emergency planning zone. PEMA also provides direction and control over the ingestion response and recovery activities (through its Region Offices for support and ingestion counties, and directly for risk counties) of all counties in the Commonwealth.

2) PEMA Region Offices

The PEMA Region Offices provide overall direction and control over the ingestion response and recovery activities of support and ingestion counties located within the boundaries of their respective operational areas. This includes the initial and follow-up notification of ECLs.

3) Pennsylvania Department of Agriculture (PDA)

The Pennsylvania Department of Agriculture serves as the state coordinating agency in problems relevant to the agricultural community. The PDA works in close coordination with the State Emergency Board (SEB), PEMA, BRP, and the Pennsylvania Department of Health (DOH) in the development and issuance of guidance to counties concerning response procedures and action necessary to evaluate and prevent radioactive contamination of agricultural, dairy and food products. The PDA also issues guidance (through PEMA) concerning the control and disposition of such products should they become contaminated.

4) Bureau of Radiation Protection (BRP)

The Bureau of Radiation Protection provides accident assessment and ingestion exposure information as it relates and pertains to the food chain to PEMA, PDA, DOH, and other appropriate bureaus of the Department of Environmental Protection (DEP). This information will guide the PDA and Bureau of Community Environmental Control in the conduct of initial sampling procedures and in continuing operations. BRP also reviews laboratory test results and consults with PEMA, PDA, and DOH in developing ingestion protective action recommendations.

5) State Emergency Board (SEB)

The State Emergency Board is chaired by the ASCS State Executive Director and provides advice, leadership, and coordination to the county emergency boards (CEBs). The ASCS State Executive Director (or his/her designated representative) serves as a member of the Agricultural Response Cell in the State EOC. In this capacity, he/she assists and provides information to State government officials and coordinates USDA radiological emergency programs at the State level. He/she is also the primary emergency contact for State officials in the event that Federal agricultural assistance is required.

6) Lycoming County Emergency Management Agency

The Lycoming County Emergency Management Agency serves as the lead county agency in coordination with State and County agencies in the public education of and response to problems associated with the ingestion exposure pathway emergency planning zone.

7) Lycoming County Emergency Board

The Lycoming County Emergency Board is chaired by the ASCS County Executive Director and assists and provides agricultural information to local governments in the event of a radiological incident. The CEB also coordinates emergency programs at the local level. The ASCS County Executive Director (or his/her designated representative) serves as the Agricultural Staff Officer on the Lycoming County EOC staff. In this capacity, he/she assists and provides information to county government officials and coordinates USDA radiological emergency programs at the county level. He/she is also the primary emergency contact for county officials in the event that State CEB agricultural assistance is required.

B. Responsibilities

1) Pennsylvania Emergency Management Agency

a. Act as lead agency in coordination with Federal and Commonwealth agencies and departments in public education of and response to problems associated with the ingestion exposure pathway EPZ.

b. Provide overall direction and control during ingestion response and recovery operations.

c. Establish procedures and the capability to disseminate information on preventive and emergency protective actions to cope with the efforts of radiological contamination of human food, water and animal feed. This will be accomplished annually for risk counties.

d. In coordination with BRP, DOH, and PDA/USDA, issue guidance to ingestion exposure pathway counties on procedures and actions necessary to prevent or mitigate radioactive contamination of milk, food, and water.

e. Maintain (in coordination with PDA/USDA) files cross-indexed to maps showing agricultural land use, e.g., farms, dairies, slaughter houses, and meat processing plants within the ingestion pathway EPZs.

f. Maintain (in coordination with PDA/USDA) files cross-indexed to maps showing names and locations of all facilities processing milk products, large amounts of food, or agricultural products (to include fertilizer, feed, or seed) originating anywhere in the 50-mile ingestion pathway EPZs.

g. At General Emergency, disseminate to the target audience in the ingestion exposure pathway EPZ, public education information about radiation hazards in the ingestion pathway; protective actions to take; and, locations of contact points where additional information on the subject may be obtained. This will be accomplished at Site Area Emergency for risk counties.

h. In coordination with PDA/USDA, DMA, and PSP, assist BRP in the transportation of milk, food/feed products, and water samples to the Bureau of Laboratories (BOL) or Federal Radiological Monitoring and Assessment Center (FRMAC).

2) PDA/State Emergency Board

a. Develop and issue (through county emergency boards) guidance to county EMAs and the agricultural community concerning response procedures and actions necessary to prevent radioactive contamination of agricultural, dairy, and food products.

b. Develop and issue (through county emergency boards) guidance to county EMAs and the agricultural community concerning the control and disposition of radiologically contaminated agricultural, dairy, and food products.

c. Maintain (in coordination with the appropriate CEB) a site-specific list and map of the location of dairy herds within the ingestion exposure pathway EPZ of nuclear power plants located within the boundaries of the Commonwealth.

d. Maintain (in coordination with the appropriate CEB) a site-specific list and map of the location of food and foodstuff processors handling agricultural, dairy, and other food products grown or raised within the ingestion exposure pathway EPZ of nuclear power plants located within or beyond the boundaries of the Commonwealth.

e. Develop plans and/or response procedures to implement control of the processing or use of the above mentioned products should they become contaminated during an incident.

f. Develop (in coordination with PEMA and BRP) guidance to ingestion exposure counties on procedures and actions necessary to prevent or mitigate radiocontamination of milk, food, and feed products.

g. Develop/distribute (in coordination with PEMA, BRP, and the appropriate CEB) information about radiation hazards in the ingestion pathway and protective actions to take.

h. Assist (in coordination with PEMA, BRP, and the appropriate CEB) in the development and execution of an agricultural sampling plan aimed at determining the safety of the food supply.

i. Provide field personnel for sampling agricultural, dairy, and food products for BRP analysis and in support of BRP radiological monitoring efforts.

j. Coordinate (with PEMA, BRP, and affected county EMAs) the delivery of agricultural and water samples to the Bureau of Laboratories or FRMAC.

k. Train and maintain a pool (at least two per county) of trained agricultural samplers.

l. Establish (in coordination with PEMA) procedures and the capability to conduct surge training for additional agricultural samplers.

3) Bureau of Radiation Protection

a. Provide (to PEMA, PDA, DOH, and other appropriate Bureaus of DEP) accident assessment and plume exposure information as it relates and pertains to the food chain.

b. Prioritize the analytic and sampling efforts to be conducted.

c. Develop and issue guidance (through PEMA and PDA) to ingestion exposure pathway counties regarding initial and continuing agricultural product sampling.

d. Develop and issue guidance (through the BRP Emergency Response Coordinator) to CEC and WOM regarding initial and continuing water sampling.

e. Review laboratory test results and consult with PEMA, PDA, and DOH in developing protective action recommendations.

f. Develop and issue guidance (through PEMA and PDA) to ingestion exposure counties regarding actions necessary to prevent or mitigate radioactive contamination of milk, food, and water.

g. Recommend preventive or emergency protective actions, if required, to be taken within the ingestion exposure pathway EPZ.

h. Prepare (in coordination with PEMA, PDA, and DOH) public education information about radiation hazards in the ingestion exposure pathway EPZ.

4) Bureau of Community Environmental Control (CEC)

   a. Alert affected water suppliers.

   b. Collect (as directed by BRP) appropriate public drinking water samples for incident assessment.

   c. Collect other samples as directed.

5) Bureau of Water Quality Management (WQM)

   a. Collect (as directed by BRP) appropriate surface water samples for incident assessment.

   b. Coordinate (with PEMA, BRP, and affected county EMAs) the delivery of water samples to the Bureau of Laboratories or FRMAC.

   c. Collect other samples as directed.

6) Pennsylvania State Police (PSP)

   Provide (upon request of PEMA) aerial or ground vehicle delivery of agricultural samples from affected counties to the FRMAC, or DEP's Bureau of Laboratories, within capabilities.

7) Lycoming County EMA

   a. Act as lead county agency in coordination with State and County agencies and departments in public education of and response to problems associated with portions of the County located within the ingestion exposure EPZ.

   b. Provide overall direction and control during county ingestion response and recovery operations.

   c. Develop/maintain a working relationship with the County Emergency board and attend quarterly CEB coordination meetings.

   d. Understand the capabilities available from the USDA Services which comprise the CEB.

   e. Develop a working knowledge of the agricultural entities within the county which could be affected by the introduction/deposition of radionuclides.

   f. When possible, assist the CEB in maintaining files cross-indexed to maps showing the location of all farms, dairies, slaughter houses, and meat processing plants within the ingestion exposure EPZ. This information should be contained in the appropriate electronic data base (i.e., EIS-c/e) and backed-up with hard copy media.

g. When possible, assist the CEB in maintaining files cross-indexed to maps showing the names and locations of all facilities processing milk products, large amounts of food, or agricultural products (to include fertilizer, feed, or seed) within the ingestion exposure EPZ. This information should be contained in the appropriate electronic data base (i.e., EIS-c/e) and backed-up with hard copy media.

h. Establish (in coordination with PEMA and the CEB) procedures and the capability to disseminate information on preventive and emergency protective actions to cope with the effects of radiological contamination of human food, water, and animal feed.

i. Issue (in coordination with PEMA and the CEB) guidance on procedures and actions necessary to prevent or mitigate radiological contamination of human food, water, and animal feed.

j. Issue (in coordination with PEMA and the CEB) instructions concerning the control and disposition of radioactively, contaminated agricultural, dairy, and food products.

k. Assist the CEB, when applicable, in the registration of farmers requesting authorization to reenter restricted areas for the purpose of tending livestock.

l. Assist the agricultural sampling effort by:

(1) Providing a PRD and radiological situation report for incoming agricultural samplers.

(2) Providing incoming agricultural samplers with a mobile communications source.

(3) Providing a guide to assist incoming agricultural samplers with navigation.

NOTE: Amateur radio organizations provide an excellent resource in the accomplishment of (2) and (3) above.

(4) Providing sample-taking equipment (plastic bags, bottles), if necessary.

(5) Conducting radiological monitoring of agricultural samplers upon mission completion.

(6) Designating/coordinating agricultural sample drop-off points with PEMA, PDA, and BRP.

8) County Emergency Board (CEB)

a. Agricultural Stabilization and Conservation Service (ASCS)

(1) Develop and maintain a working relationship with the appropriate County EMA.

(2) Develop and maintain files cross-indexed to maps showing the names and locations of all farms, dairies, slaughter houses, and meat processing plants within the county. Ensure the County EMA has access to same.

(3) Develop and maintain files cross-indexed to maps showing the names and locations of all facilities processing milk products, large amounts of food, or agricultural products (to include fertilizer, feed, or seed) within the county. Ensure the County EMA has access to same.

(4) Maintain local information on crop production, acreage, and farm capability.

(5) Develop and maintain a list of food, feed, or seed processing facilities located within the county which receive raw materials from sources located outside the county. Identify the location of those sources.

(6) Maintain contact with local food processing storage and wholesale distribution facilities and determine availability and disposition of supplies.

(7) Provide an Agricultural Staff Officer to the County EOC upon notification of the General Emergency ECL.

(8) Designate (if required) local FAC personnel to assist in agricultural sampling of the affected area.

(9) Serve as the primary point of contact for incoming agricultural sample-taking personnel and assist the sampling effort by:

(a) Ensuring sample takers understand their mission instructions and have the necessary equipment.

(b) Providing pertinent information concerning sample locations (name of owner, location of farm, point of contact, etc.)

(c) Contacting sample location owners and informing him/her that sample takers are enroute.

b. Cooperative Extension Service (CES)

(1) Disseminate (in coordination with the County EMA) guidance to the agricultural community concerning response procedures and actions necessary to prevent radioactive contamination.

(2) Disseminate (in coordination with the County EMA) guidance to the agricultural community concerning the control and disposition of radiologically contaminated agricultural, dairy, and food products.

(3) Disseminate (in coordination with the County EMA) information to the agricultural community concerning radiation hazards in the ingestion exposure pathway EPZ and the protective actions that should be taken.

c. Farmers Home Administration (FHA)

Provide temporary housing for farm family evacuees who have been displaced from their homes as a result of a radiological incident, if requested.

d. Soil Conservation Service (SCS)

Estimate (in coordination with the SEB and BRP) the effects of radiation on soils and the agricultural water supply.

5. REFERENCES

A. Federal Guidelines

1) Federal Register, August 13, 1998, pages 47073 - 47083 Department of Health and Human Services, Food and Drug Administration:

Accidental Radioactive Contamination of Human Food and Animal Feeds and Recommendations for State and Local Governments.

2) U.S. Department of Health and Human Services:

Background for Protective Action Recommendations: Accidental Radioactive Contamination of Food and Animal Feeds, HHS Publication, 8196, August 13, 1998.

3) U.S. Environmental Protection Agency:

National Interim Primary Drinking Water Regulation, EPA Publication 57019-76-003, Appendix B.

4) Federal Emergency Management Agency:

Guidance on Offsite Emergency Radiation Measurement Systems, Phase I - Airborne Release, FEMA-REP-2, July 1987.

Guidance on Offsite Emergency Radiation Measurement Systems, Phase 2 - The Milk Pathway, FEMA-REP-12 September 1987.

Guidance on Offsite Emergency Radiation Measurement Systems, Phase 3, Water and Non-Dairy Food Pathway, WINCO - 1012, October 1984.*

Guidance Memorandum IN-1: the Ingestion Exposure Pathway, February 26, 1988.

* WINCO is the acronym for Westinghouse Idaho Nuclear Company

B. Commonwealth of Pennsylvania Guidelines

1) Department of Agriculture, Plan for Nuclear Power Generating Station Incidents.

2) Department of Environmental Protection, Emergency Management Plan.

3) Department of Environmental Resources, Bureau of Radiation Protection. "Technical Assessment and Protective Actions," (see Appendix 6).

4) Commonwealth of Pennsylvania, Department of Health, Disaster Preparedness and Recovery Plan.

C. Information for Farmers

1) The Cooperative Extension Service, Pennsylvania State University in cooperation with the Extension Service, U.S. Department of Agriculture, and the Defense Civil Preparedness Agency, Department of Defense, "Disaster Handbook for Extension Agents,".

2) United States Department of Agriculture and Federal Emergency Management Agency, Radiological Emergency Information For Farmers, Food Processors, and Distributors.

ATTACHMENTS:

A. Maps

B. Pathways for Ingestion

C. Preventive and Emergency Protective Actions

D. Information for Farmers

E. Food Protection

Attachment A

MAPS

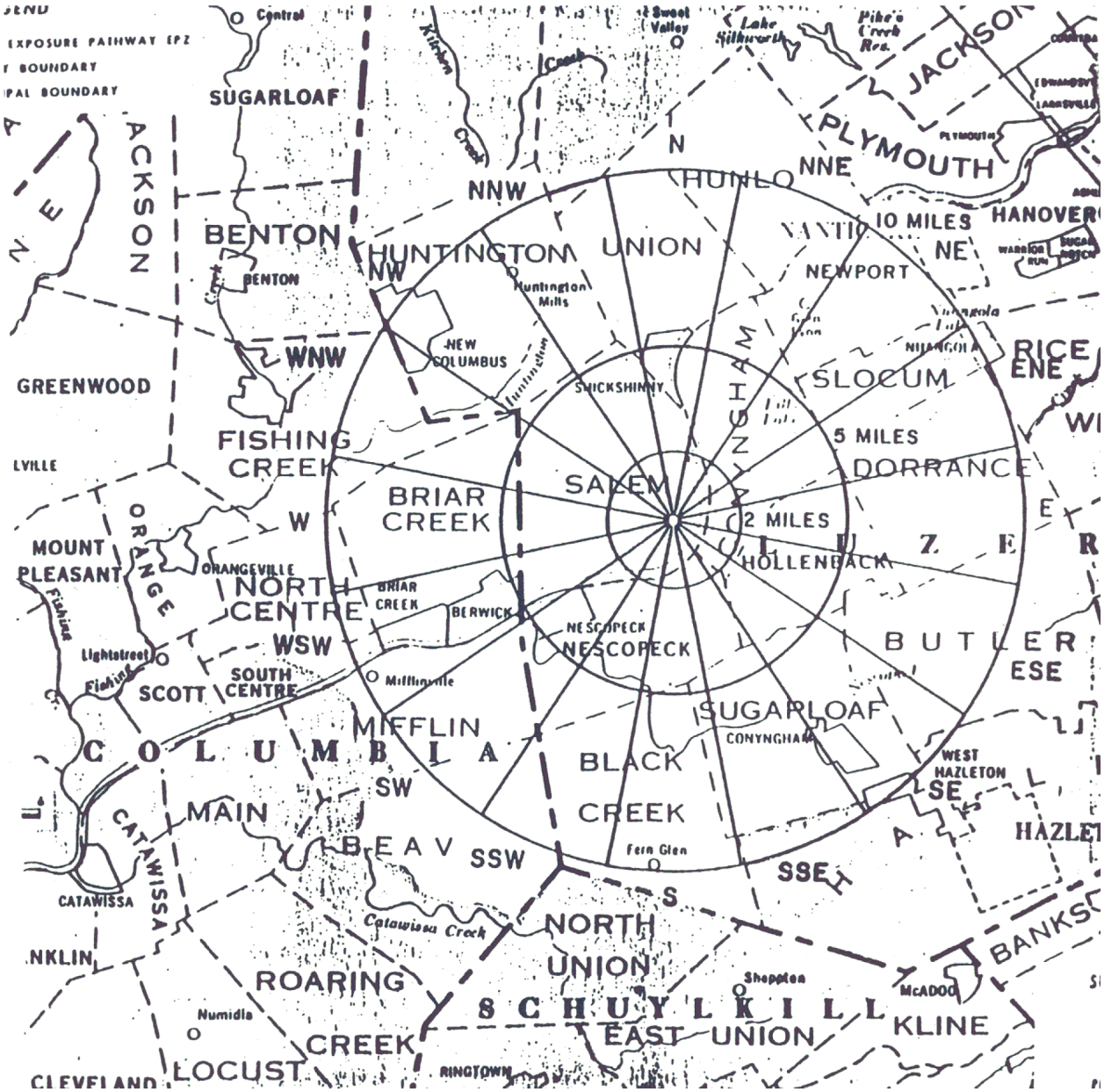
Maps of the plume exposure and ingestion exposure pathways are attached.

TABS:

1. Plume Exposure Pathway EPZ
2. Ingestion Exposure Pathway EPZ
3. Evacuation Plan Map

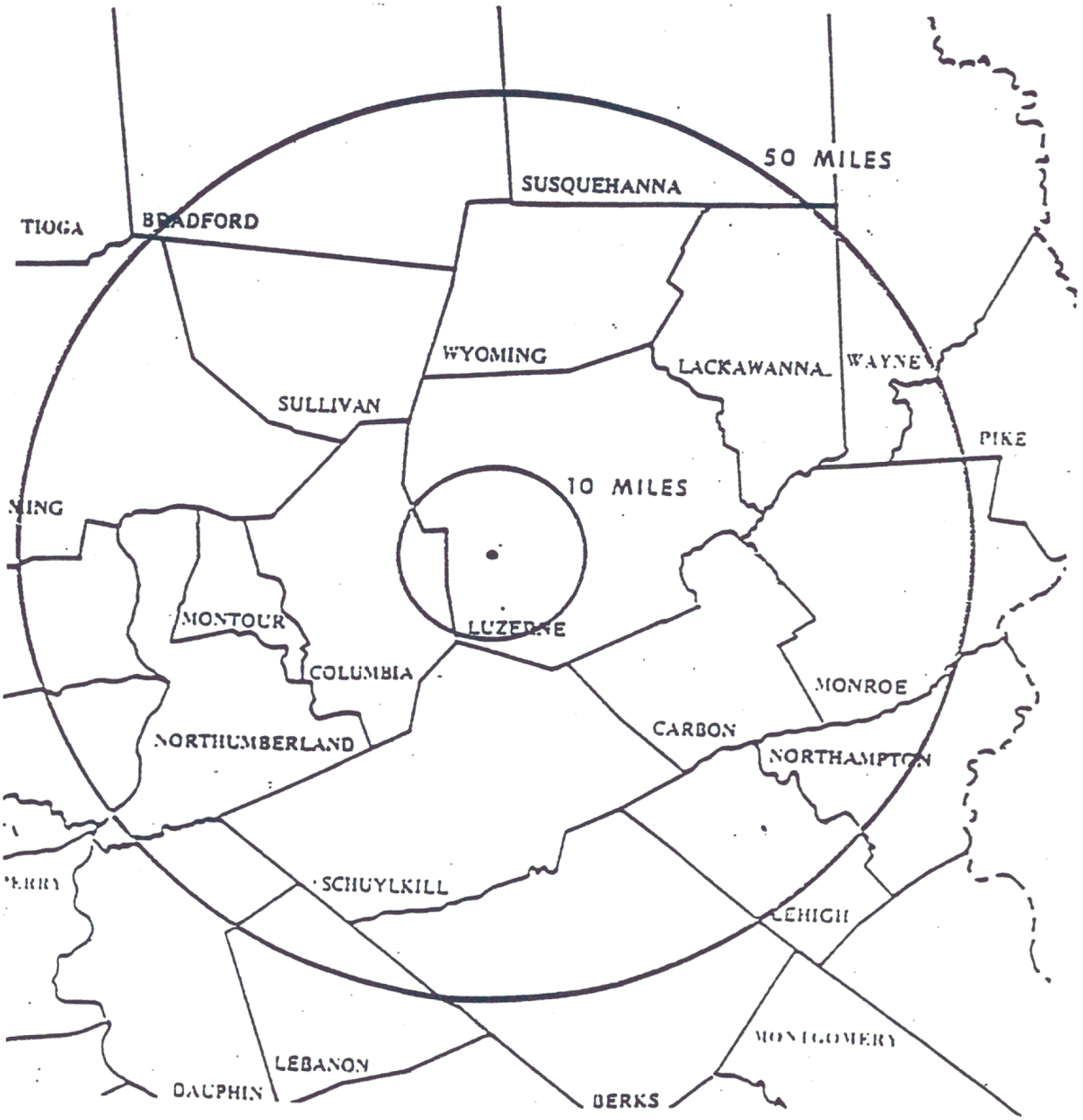
Attachment A, Tab 1

MAP OF PLUME EXPOSURE PATHWAY EPZ



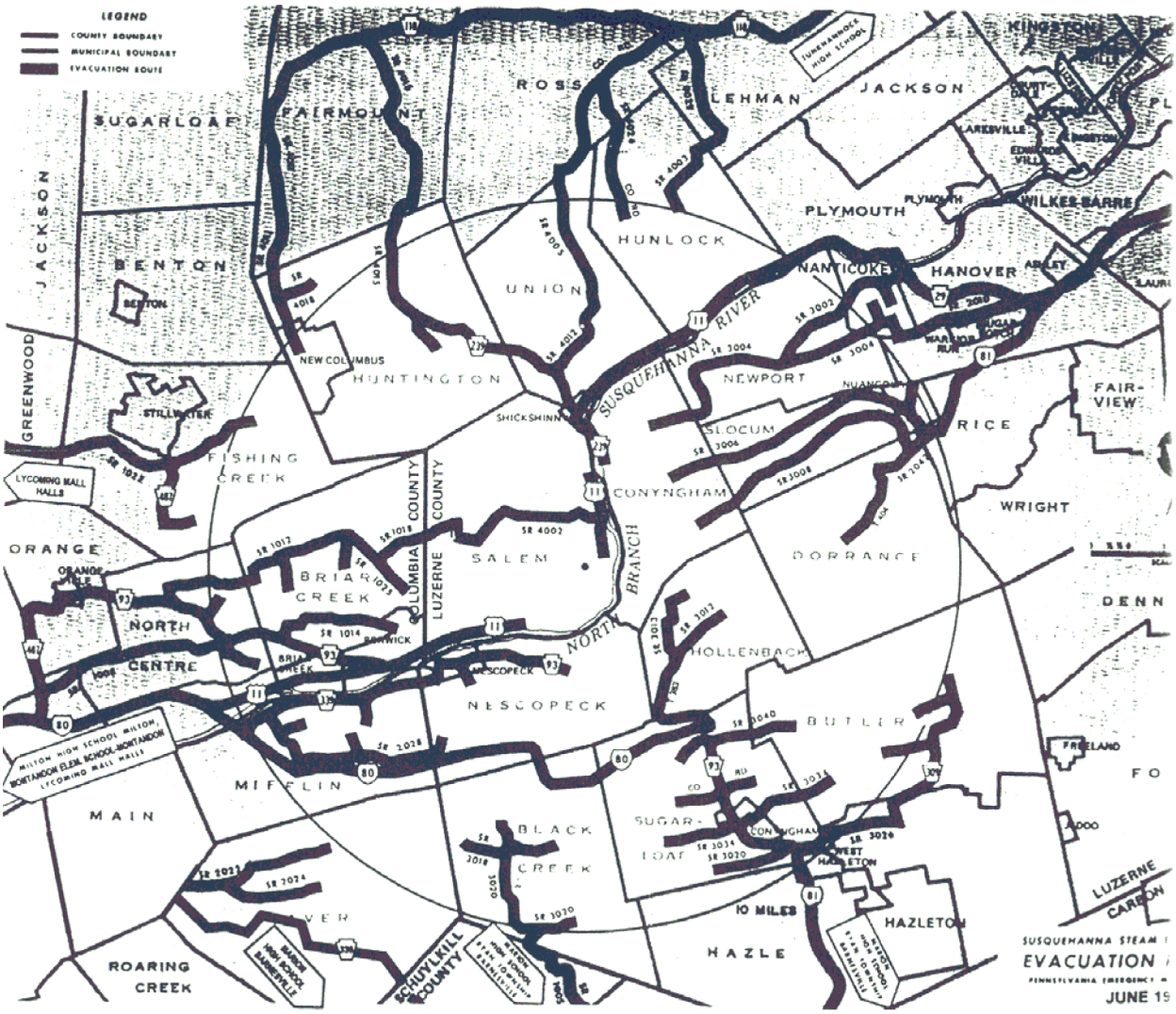
Attachment A, Tab 2

MAP OF INGESTION EXPOSURE PATHWAY EPZ



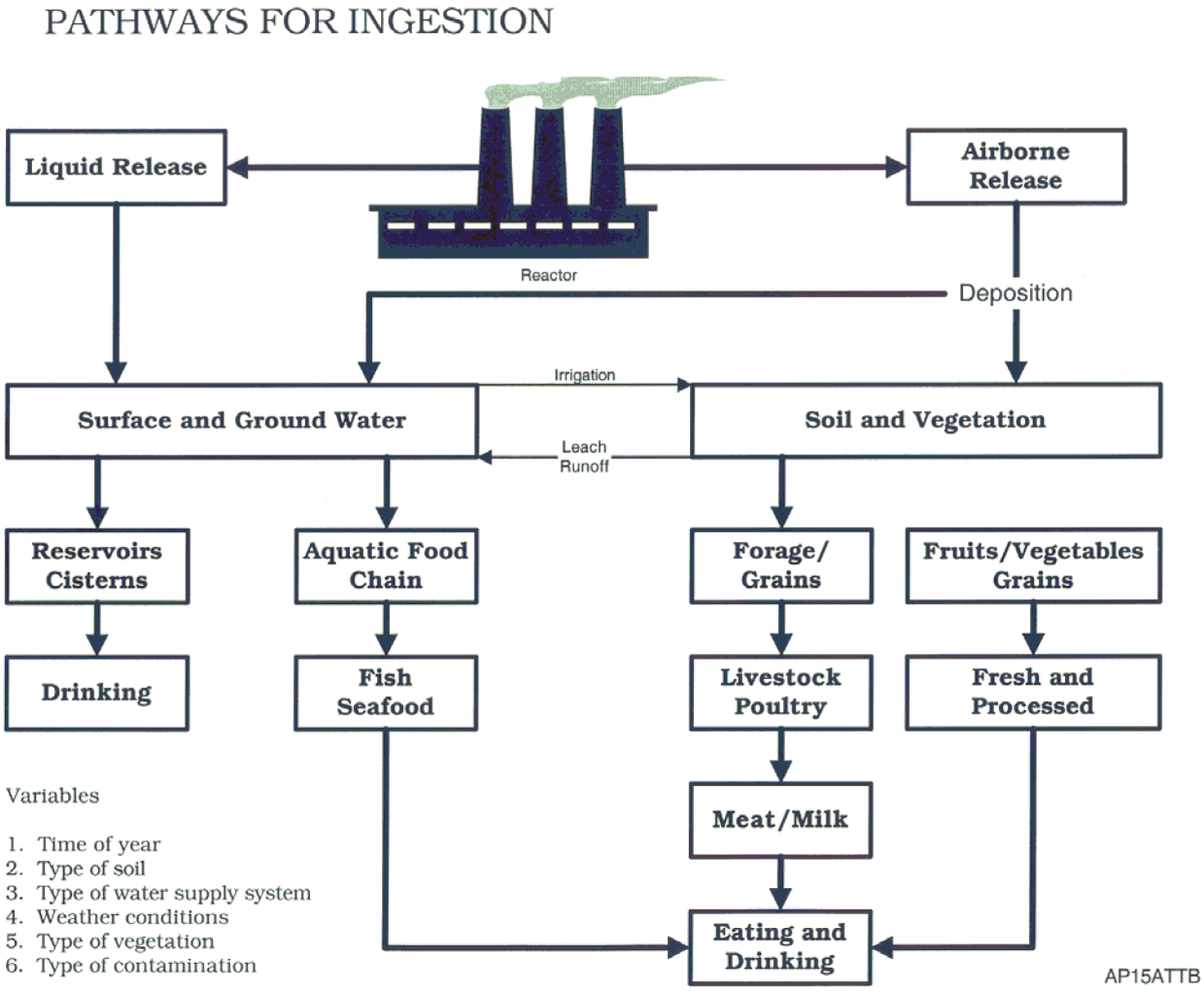
Attachment A, Tab 3

EVACUATION PLAN MAP



Attachment B

PATHWAYS FOR INGESTION



PREVENTIVE AND EMERGENCY PROTECTIVE ACTIONS

1. INTRODUCTION

   A. Protective actions for the ingestion exposure pathway EPZ are designed to reduce opportunities for consumption of radiologically contaminated food and water by humans and livestock.

   B. The need to apply protective actions in the event of a nuclear power plant accident will be determined on a case-by-case basis.

   C. Protective action recommendations are designed to be implemented within hours or days from the time the incident is recognized. The recommended actions should be continued long enough to avoid most of the projected dose.

   D. Determination of when to cease a protective action must be made on a case-by-case basis considering the nuclear incident and the food supply contaminated.

2. GENERAL INFORMATION

   A. Protective Action Guides (PAGs)

      1) PAGs represent FDA judgments on the level of food contamination resulting from radiation incidents at which protective action should be taken to protect public health.

      2) A basic assumption in the development of protective actions is that the condition requiring their implementation is unusual and should not occur frequently.

      3) A Protective Action Guide never implies an acceptable dose. The PAG is based on a dose and is used to minimize the risk from an event. If an event has occurred, PAGs should be implemented to ameliorate the impact on already exposed or yet to be exposed populations. The minimization of effects implies that the radiation exposure under consideration is avoidable. Protective actions should be implemented as soon as possible to be most effective.

      4) To permit flexibility of actions in reducing radiation exposure to the public via the food pathway caused by a nuclear incident, the FDA (47 FR 47073, August 13, 1998) adopted Preventive and Emergency PAGs for an exposed individual in the population. See paragraphs B.1.a and b below.

B. Response Levels Equivalent to PAGs

1) The basic PAG recommendations are given in terms of projected dose equivalents. It is more convenient to use specific radionuclide concentrations upon which to initiate protective actions. The Food and Drug Administration (FDA) derived response levels equivalent to the PAGs for radionuclides of interest in the ingestion exposure pathway EPZ. They are accepted by the Commonwealth and will be used in any ingestion exposure incident for both Preventive and Emergency PAGs.

a. Response levels for Preventive PAGs:

Preventive PAGs for the ingestion of food, water, and milk are 0.5 Rem projected dose to the whole body, bone marrow, or other organ, and 1.5 Rem projected dose to the thyroid.

b. Response levels for Emergency PAGs:

Emergency PAGs for the ingestion of food, water, and milk are 5 Rem projected dose to the whole body, bone marrow, or other organ and 15 Rem projected dose to the thyroid. For these PAGs the infant values are used for the general population, while the adult values are offered to permit flexibility in cases where the higher exposures can be limited to adults only.

c. Response levels for Drinking Water PAGs

The basis for criteria for drinking water concentration is the USEPA National Interim Primary Drinking Water Regulations, EPA-570/9-76-003, Appendix B.

C. Implementation

BRP will perform the procedure for estimating projected total intake for targeted radionuclides and recommended the implementation of preventive or emergency protective actions as necessary.

D. Implementing Protective Actions when PAGs exceeded:

Actions are appropriate when the health benefit associated with the achievable reduction in dose outweighs the undesirable health, economic, and social factors. Protective actions listed below should be considered for implementation in order to reduce the consequences in the ingestion pathway if the preventive or emergency PAGs are exceeded. Several of the actions are easily implemented and may be considered for implementation as precautionary measures during the time period when post-plume data are being evaluated, or when it is reasonable to assume from early field data that the level of radioactive material in the environment is likely to approach or exceed the PAGs. Once protective actions are initiated, they continue for a time period sufficient to mitigate the radiological consequences via the ingestion pathway.

1) Preventive Protective Actions

a. For pasture: Removal of lactating dairy cows from contaminated pastures and substitute uncontaminated stored feed.

Substitute source of covered uncontaminated water. Do not use surface waters.

b. For milk: Withholding of contaminated milk from the market. Disposition of the milk would be addressed depending upon the situation at the time of the incident and after evaluation by BRP and the Department of Agriculture in coordination with PEMA.

Storage for prolonged times at reduced temperatures also is feasible provided ultrahigh temperature pasteurization techniques are employed for processing.

c. For fruits and vegetables: Washing, brushing, scrubbing, or peeling to remove surface contamination.

Preservation by canning, freezing, and dehydration or storage to permit radioactive decay of short-lived radionuclides.

d. For grains: Milling and polishing.

e. For drinking water: Avoid use of surface water (streams, lakes, ponds) for human and animal consumption.

Limit ingestion of potable water until source has been approved for consumption.

Use bottled water and canned beverages and juices as water sources.

f. For other food products: Process to remove surface contamination.

g. For meat and meat products: Intake of Cesium-134 and Cesium-137 by an adult via the meat pathway may exceed that of the milk pathway; therefore, levels of cesium in milk which approach the "response level" should cause surveillance and protective actions for meat as appropriate.

h. For animal feed other than pasture: Action should be on a case-by-case basis taking into consideration the relationship between the radionuclide concentration in the animal feed and the concentration of the radionuclide in human food.

i. For fish and shellfish: Suspend fishing operations of commercial fish firms and charter fishing boats until resumption is recommended.

Check the catch made on the day of the accident.

2) Emergency Protective Actions

Responsible officials from the Department of Agriculture will isolate food containing radioactive material to prevent its introduction into commerce and determine whether condemnation or another disposition is appropriate. Before taking this action, the following factors will be considered.

a. The availability of other possible protective actions.

b. The relative proportion of the total diet by weight represented by the item in question.

c. The importance of the particular food in nutrition and the availability of uncontaminated food or substitutes having the same nutritional properties.

d. The relative contribution of other foods and other radionuclides to the total projected dose.

e. The time and effort required to implement corrective action.

E. Recovery

Consideration will be given to removing restrictions on harvesting, processing, and consumption of food and water, on a case-by-case basis. Criteria include termination of the release on measurable and consistent decline in concentrations and commodities. Removal of restrictions will be directed by the Governor or his designee, based upon recommendations from PEMA in coordination with BRP and the Departments of Agriculture and Health. In addition, the assistance of Federal Agencies, including EPA and FDA, will be used, as needed.

INFORMATION FOR FARMERS

1. INTRODUCTION

This attachment provides information for farmers that will assist in the protection of their livestock and crops from radiocontamination.

2. GENERAL INFORMATION

A. PEMA, in coordination with the licensee, BRP, and other state agencies, will provide specific information following an incident concerning amounts and types of radiocontaminant releases. This information will contain available warning time, the probable duration of discharge, the quantities of radiocontaminant discharged, and the mix of radiocontaminant discharge. Generally, in a nuclear power plant incident radioiodine will be the major contaminant, although it is possible that other radiocontaminants will be released also.

B. Experience has shown that the time from the depositing of radioiodines on the pasture to the appearance of significant quantities of radioiodine in cow's milk may be as short as the time lapse between milkings (12 hours). It is extremely important, therefore, that actions to minimize milk contamination be taken at the earliest possible time.

C. Several options are available for the protection of the public from exposure to radioiodine through the milk food chain.

1) Removal of dairy cattle and other milk producing animals from the pasture in the affected area as soon as possible and provide feed and water from sources that are not contaminated.

2) Disposal of contaminated milk, as determined by an analysis of a sample to be taken by the appropriate state agency.

D. Suggested priorities for sheltering and feeding farm animals with stored food and water.

1) Dairy cattle and other milk producing animals.

2) Egg producing fowl.

3) Breeding stock.

4) Other livestock and poultry.

E. No attempts should be made to evacuate farm animals from the ingestion exposure pathway EPZ.

F. A shelter can be a barn, shed, garage, or other building. If these are not available, a roadway underpass or a wooded area can be better than no cover at all.

G. Crops that have been harvested before the accident should be covered or put in a covered area, if possible. An emergency supply of water should also be kept in covered containers, e.g., barrels, cisterns, and wells.

H. The Emergency Alert System (EAS) will broadcast the State Department of Agriculture advisories and guidance through EMA channels in coordination with BRP and PEMA. If more information is needed, the farmer should ask the County EMA for help.

3. FARMERS AS EMERGENCY WORKERS

Protection of Farmers as Emergency Workers in the Event of Evacuation will consist of the following:

A. Although everyone will be asked to evacuate the affected area, farmers may be allowed to reenter the area to take care of their livestock.

B. Dosimetry and KI will be available for those personnel who reenter. The procedure for acquiring dosimetry and KI along with the authorization to reenter through access control points is described in Appendix 5, Radiological Exposure Control, in the Columbia County Annex E Plan.

FOOD PROTECTION

1. INTRODUCTION

This attachment is intended to serve as guidance and be an information source to be utilized at the time of an emergency. It contains protective action information which may be used by the general public as a precaution to minimize exposure to contaminated agricultural, dairy and other food products through ingestion. When considering public information releases on food protection measures, careful thought should be given to the possibility of arousing undue and unnecessary public concern regarding the suitability of consumption of food. On the other hand, where food contamination has occurred, the public must be warned and issued appropriate protective action information.

2. GENERAL INFORMATION

A. Foods stored in the home will virtually always be free of radiocontamination and therefore suitable for immediate use. This pertains to food stored in a normal manner (i.e., food stored in the refrigerator, cabinets, and containers or packages), but not necessarily to foods in the open such as fruit, cookies, or candy in uncovered dishes. Therefore, unless advised otherwise, the public can assume that no special measures are necessary in preparing stored foods for consumption.

B. Food not stored indoors or similarly protected, such as garden vegetables, fruit on trees, or food products obtained outside the home after the incident, could be contaminated. Contamination, however, does not render such foods unusable. Most foods can easily be decontaminated by fairly simple food preparation procedures. These procedures are described in Tab 1 to this Attachment.

C. In nuclear power plant incidents involving the release of radioiodine, cows may ingest the contaminant and produce milk with some degree of contamination. Only milk produced after any exposure of the cows to contaminated feed (not milk stored in the home or already packaged milk at the dairy or store) is subject to radioiodine contamination. The Department of Agriculture, in coordination with BRP and PEMA, will issue advisories on the amount of contamination, if any, and the suitability of the milk for consumption. Specific information intended for use by farmers and food processors on protective actions for milk is contained in Attachment C to this Appendix.

D. The "Department of Agriculture Plan for Nuclear Power Generating Station Incidents" also contains information pertaining to food protection and will be a valuable reference at the time of an incident.

3. INFORMATION FOR FOOD PROCESSORS

The primary objective of the food processor must be to prevent the contamination of the public through the processing of contaminated food. Guidance is provided in the Departments of Agriculture and Environmental Resources Plans for Nuclear Power Generating Station Incidents. Questions not answered in the referenced documents should be addressed to the emergency management agency at the county EOC.

TAB:

1. Recommended Protective Action for Food

RECOMMENDED PROTECTIVE ACTION FOR FOOD

The following procedures for various food types are generally considered to be effective protective measures in assuring that food is free of contamination and suitable for consumption.

TYPE OF FOOD	RECOMMENDED PROTECTIVE ACTION
a. Root crops	Thoroughly wash, brush, scrub, or peel (potatoes, carrots, etc.) to remove surface contamination. Root crops are the least susceptible to contamination since the soil protects the edible portion from immediate contamination. Care should be taken in digging and storing to prevent contact with contaminated surface.
b. Fruits and vegetables	Thoroughly wash, brush, scrub, or peel to remove surface contamination. These food products are susceptible to contamination due to the exposure surface area of the edible portion.
c. Canned or packaged foods	Thoroughly clean the surface of the package by washing, vacuuming, or using a damp cloth to remove surface contamination prior to opening.
d. Frozen foods	Frozen foods packaged prior to an incident involving radioactive contamination will be safe as long as they were kept in a freezer. If the surface becomes contaminated, or is suspected of being contaminated, it should be thoroughly cleaned off prior to opening to prevent contaminating the contents.
e. Unpackaged stored foods	These foods will be safe to eat if outside air has been excluded from the storage area. If the storage area has become contaminated, they may be able to be salvaged by washing, scrubbing, peeling, etc. This will depend upon the type of food item involved.

RECOVERY

1. PURPOSE

To provide guidance concerning activities which Lycoming County must undertake in order to assist risk counties in their efforts to return areas affected by an incident at the Susquehanna Steam Electric Station to their pre-incident condition.

2. SITUATION

A. An incident at the Susquehanna Steam Electric Station involving the uncontrolled release of radiocontaminants to the off-site area has occurred requiring evacuation of affected populations.

B. Mass care centers located within the county have been activated and are housing residents of Columbia County.

C. The uncontrolled release has been terminated and further uncontrolled release of radiocontaminants from the site is unlikely.

D. The Governor has determined that recovery operations may begin.

3. CONCEPT OF OPERATIONS

A. The Chairman of the State Recovery Task Force (SRTF), acting on behalf of the Governor of Pennsylvania, shall provide direction and control of all recovery activities conducted within the boundaries of the Commonwealth.

B. The Director, Bureau of Operations, Pennsylvania Emergency Management Agency, by means of the State Emergency Operations Center, shall act as the operational arm of the SRTF. As such, he shall exercise direction and control over affected risk counties. Direction and control of support counties shall be exercised through the appropriate State Region Office.

4. RESPONSIBILITIES

A. Lycoming County

1) Upon receipt and verification from the PEMA Central Region EOC of the decision to allow the return of evacuees to their municipalities, notify affected mass care centers located within the county.

NOTE: Mass care center managers are not to disseminate this information until given instructions to do so.

2) Once given authorization to do so, effect direct final, detailed coordination with the Columbia County EMA. Such coordination shall include but not be limited to the following:

   a. Date and time return will commence.

   b. Affected municipalities.

   c. Ingress routes to be used during return.

   d. Needed transportation or other resources.

3) Prepare and disseminate coordinated media releases informing county residents of return operations.

B. Columbia County American Red Cross

1) Maintain contact with appropriate county EMA staff elements.

2) Ensure information regarding return of the public is disseminated at the appropriate mass care center(s).

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AGREEMENTS AND STATEMENTS OF UNDERSTANDING

Lycoming County has entered into Agreements, Letters of Intent, or Statements of Understanding with the organizations listed below. The complete documents are on file in the Lycoming County EOC.

1. Lycoming County Area Chapter American Red Cross

   Summary - The American Red Cross has agreed to help the Lycoming County Emergency Management Agency to feed, clothe, shelter, administer first aid, and other basic elements for comfort and survival of victims and emergency workers in advance of a disaster or immediately after the disaster has struck.

2. Crown America Corporation

   Summary - Crown America Corporation, operator of Lycoming Mall (Reception Center), will allow the Lycoming County Emergency Management Agency to use the Mall Community room and a portion of the parking lot in the event that an emergency at SSES requires an evacuation of the general public.

3. East Lycoming School District

   Summary - The East Lycoming School District has entered into an agreement with the Lycoming County Emergency Management Agency regarding the use of their school building and facilities for mass care in the event of public evacuation due to disaster emergencies of all kinds.

4. Montoursville Area School District

   Summary - The Montoursville Area School District has entered into an agreement with the Lycoming County Emergency Management Agency regarding the use of their school buildings and facilities for mass care in the event of public evacuation due to disaster emergencies of all kinds.

5. Emergency Alert System

   State EAS System

6. Amateur Radio

   Summary - The Lycoming County Amateur Radion Group has agreed to provide communications support to the Lycoming County Emergency Management Agency during periods of disaster emergencies.

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ANNEX MAINTENANCE AND CONCURRENCE

Responsibility for the Radiological Emergency Response Procedures Annex has been assigned to the Radiological Officer by the Lycoming County Board of Commissioners. The Annex will be revised and updated as necessary, but at least annually. Whenever the Annex is implemented during an emergency response or for an exercise, a review will be conducted to determine what changes, if any, are necessary. Reviews and updates by the Radiological Officer will be coordinated with all parties assigned responsibilities in this Annex, for example, municipalities, school districts, hospitals, nursing homes, daycare centers, and holders of letters of agreement/intent, and with the County Emergency Management Coordinator.

Development, maintenance, and implementation of this Annex will be in accordance with and under the auspices of the Lycoming County Emergency Operations Plan, developed in consonance with the Commonwealth of Pennsylvania's Emergency Management Services Code and Radiation Protection Act, the Federal Civil Defense Act of 1950, and Disaster Relief Act of 1974, as amended, the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA), Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654, FEMA-REP-1), and other applicable regulations of the Federal Emergency Management Agency and the Nuclear Regulatory Commission. This annex is part of and to be used with the basic county Emergency Operations Plan. The Annex pertains only to a specific response requirement in support of Columbia County.

We, the undersigned, adopt, accept, concur with, and support the provisions of this Annex as part of the Lycoming County Emergency Operations Plan.

Radiological Officer	Date
Lycoming County Emergency Management Coordinator	Date
Chairman, Lycoming County Board of Commissioners	Date