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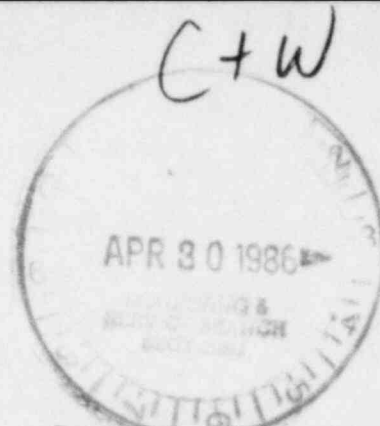
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PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

OFFSITE TRAINING PROGRAM

AGRICULTURAL COMMUNITY



Instructor Note

I. Introduction

A. The purpose of this training session is to inform members of the agricultural community of what actions they should consider taking should a serious incident ever occur at the Limerick Generating Station.

Slide - ECI (31B)

Slide - Limerick site (35R)

B. Most farm families already have emergency plans thought out--if not written down-- for responding to fires, floods, blizzards and droughts.

Emergency Workers-- those persons that perform functions that require special protection throughout an emergency.

C. During an emergency, farm families are concerned not only with protecting the safety of family members, but also with protecting the health of the livestock. For this reason, members of the agricultural community can be certified as emergency workers.

D. During this training program, we intend to present you with enough information that you will be able to develop a plan for how you would respond to an accident at the Limerick Generating Plant that might release radiological materials into either the air or the water.

Slide - Farm & Animals (55Q)

E. Objectives:

At the conclusion of this module, participants should be able to:

1. Identify the types of radiation and radionuclides that can harm both people and livestock.
2. State actions that could be taken to protect the health and safety of family members.
3. List those actions that could be taken to reduce the amount of radiation received by livestock.

Slide - Topics for Discussion (37F)

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Applicants Exh. E-101

NUCLEAR REGULATORY COMMISSION

E-101

Official Est. No. CO

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4. Identify the four levels of emergencies that could occur at a nuclear power plant and the actions that family members should take at each classification.

II. Introduction to Radiation

- A. Radiation is the transmission of energy through space or matter in the form of particles or waves. Light waves and radio waves are forms of radiation. The types of radiation with which we are concerned in this training session are those types that can chemically alter living cells.

Slide - Types of Radiation (10.10)

These types are called "ionizing radiation." Should an incident ever occur at the power plant, state and county officials would be concerned that some sources of ionizing radiation might escape from the plant and affect community residents and livestock.

Slide - Ionizing Radiation (10.11)

- B. Radiation is usually associated with nuclear power plants and nuclear weapons. However, radiation is not a foreign substance, but, in fact, radiation always surrounds us. This is called "background radiation."

Background radiation is radiation arising from natural radioactive materials always present in the air, water and ground, as well as from man-made sources. In a few minutes, we will discuss how much exposure we receive every year from background radiation as well as from man-made sources of radiation. But before we begin to discuss the effects of radiation, we need to define what radiation is.

C. Types of Ionizing Radiation

There are various types of ionizing radiation: alpha, beta, neutron, gamma and X-rays, each with different characteristics. Of these, alpha, beta and gamma are of primary concern should a release ever occur at the Limerick Generating Station.

Slide - Alpha, Beta, Gamma Graphic (10.1B)

1. Alpha radiation consists of positively charged particles and is emitted from naturally occurring elements--such as, uranium and radium as well as from some man-made elements. Alpha radiation will not penetrate the surface of the skin. It can be stopped completely by a sheet

Slide - alpha (10Q)

of paper. However, the potential hazard that alpha-emitting materials present is due to the possibility of their being taken into the body by breathing or swallowing along with food or water.

2. Beta radiation is a small negatively charged particle similar to an electron. It is more penetrating than alpha radiation and can pass through 2 millimeters of water or human flesh.

Slide - beta (10R)

A 1/10 inch sheet of aluminum can stop beta radiation. Beta radiation can cause damage to the skin similar to a burn but cannot penetrate through the skin to affect internal organs unless taken into the body through breathing or swallowing.

3. Gamma radiation can be very penetrating. It can pass through the human body but would be almost completely absorbed by about 40 inches of concrete. Dense materials such as concrete and lead are often used to provide shielding against gamma radiation. Gamma rays are very similar to X-rays.

Slide - gamma (10S)
Slide - comparison of alpha, beta and gamma (penetrations) (10T)

D. Terms Used in Measuring Radiation/Radioactivity

1. Exposure to radiation results in what is called a radiation dose. However, as in the case of coffee, brandy or medicine, the possible effects can be best evaluated when the quantity of the material is known and the rates at which it was received are also known. For example, a single glass of whiskey can be drunk and no significant side effects experienced. But what effects would drinking ten glasses have? Among other things, one would need to know whether they were consumed over 20 minutes or 20 days.

Slide

NOTE: Sunburn example can be used instead of whiskey.

2. A roentgen is the unit of measurement used for exposure. It measures the amount of gamma radiation present in the air.

Slide - roentgen (10N)

3. Frequently, you will hear the term REM (Roentgen Equivalent Man), which equates the effect of a dose of a particular type of radiation, to the living tissue. The rem is a simple way of expressing radiation in terms of its impact on man.

Slide - rem (10-0)

Instructor Note

4. Although these terms have specific technical differences, for offsite purposes both terms can be used to mean the same thing. Slide - 1 Roentgen = 1 Rem (10K)
5. Another term we will be using is the prefix milli usually in the term millirem. Milli is a prefix used in the metric system. One thousand milli equals one. Therefore, 1,000 millirems equal 1 rem. Exposures to radiation are most commonly referred to in units of milliroentgen. Slide - 1000 milli-rem = 1 Rem (10L)
6. Exposure occurs when a person or an object is penetrated by radiation. Exposure to alpha, beta and gamma radiation does not make a person contaminated or radioactive. Since you cannot see, smell, feel or taste radiation, the only way you yourself can know or measure the radiation you are being exposed to is to wear a dosimeter. Dosimeters measures the total amount of radiation the person wearing it has been exposed to. Slide - Radiation vs. Radioactive Material (10.1C)
Demonstrate use of a dosimeter and survey meters.
7. Contamination occurs when radioactive material is deposited on people or things where it is not wanted. Contamination is detected through monitoring the object with a survey meter. If a person is contaminated, he/she can usually be decontaminated by washing with warm water and soap.

E. Biological Effects of Radiation

1. Damage to a human cell caused by ionizing radiation, if left unrepaired, could result in the damaged cell reproducing and eventually leading to a colony of cells retaining the identical defect of the original cell. The most common effect of radiation damage is cell "inactivation," or in other words the cell loses its ability to reproduce and eventually dies. As long as the number of cells inactivated or damaged is kept to reasonable number, the body can withstand the harm done to it. However, it should be emphasized that all radiation has some effect on the cells of the body. Controlled doses for limited periods of time are tolerated well, but any exposure to radiation involves some risk of cellular damage and future effects such as cancer. Slide - Comparison of Radiation Levels (10.1A)

2. Radiation causes damage to livestock the same way it produces damage in humans. Generally, livestock can tolerate exposure to radiation better than humans. Factors such as mass, life span and body chemistry contribute to livestock's resistance to radiation induced effects.
3. Field crops are very resistant to radiation in comparison to animals. Radiation exposures of greater than 1000 roentgen are necessary to effect crop fields.

Slide - Radiation
resistance of
livestock (55I)

Slide - crops
(43K)

F. Natural and Man-Made Sources of Radiation

1. As we discussed earlier, people have always been exposed to very small amounts of radiation through cosmic rays and naturally occurring radioactive minerals. This radiation occurs as a natural part of our environment and this constant occurrence should be no cause for concern.
2. People are also exposed to radiation daily from man-made sources. We are exposed every time we receive a medical X-ray, watch television or use radioactive products.
3. If anyone is interested in determining his/her own personal annual background radiation dose, the "Guide to Emergency Preparedness" booklet contains a chart that will enable you to determine your own personal annual radiation dose.

Slide - Natural
Sources (10I)

Slide - Man-made
Sources (10J)
Discuss Fiesta
Ware and Coleman
Lantern Mantles.

III. Emergency Planning

Compared to other industries, the nuclear industry has experienced a relatively safe history. However, the accident at Three Mile Island proved that even with all the back-up systems, equipment can fail. Shortly after the TMI accident, the federal government prepared planning guidance for state and county emergency management agencies. This guidance set forth criteria that radiological response plans must meet in order to be approved by the federal government.

A. Emergency Planning Zones (EPZ's)

The federal government determined that there are two different zones around a nuclear power plant

Slide - EPZ's
(14H)

for which plans must be written to protect the residents of those areas.

1. Plume Exposure Pathway EPZ

A ten-mile radius around a nuclear power plant where the hazards from a release would be from:

Slide - Limerick
PEP EPZ (54A)

- a. Exposure from a passing plume composed of radioactive materials and gases, or
- b. Breathing air containing radioactive particles or gases from a passing plume.

2. Ingestion Exposure Pathway EPZ

A fifty-mile radius surrounding a nuclear plant site where the main source of exposure would be from eating or drinking contaminated foods or water. Health officials would perform sampling in this area to ensure that no contaminated meats, crops or milk would be present.

B. Protective Actions for the Plume Exposure Pathway EPZ

Those actions taken to avoid or reduce a projected dose of radiation. The selection of a particular protective action depends upon the conditions of the emergency. Basically there are 3 ways of reducing or avoiding a dose of radiation: shielding yourself with dense material to reduce your exposure, moving further away from the radioactive material or waiting for the radioisotopes to stabilize and lose their radioactivity.

Slide - Protective
Actions (15.1D)

Slide - Mass,
Distance, Time
(15A)

1. For the general public

a. Sheltering

Slide - "Shelter-
ing" (15C)

- (1) When this action is recommended, the public will be advised to seek shelter in a permanent, reasonably airtight structure, such as a house, commercial building or office building. The public will be instructed to close doors and windows and to reduce outside air intake from heating or cooling systems.

Slide - Closing
windows (15.1F)

Instructor Note

- (2) Persons traveling by motor vehicle in the risk area will be advised to close windows and vents and to turn off heating or cooling systems. Slide - Person in car (15.1G)
- b. Selective Evacuation Slide - Selective Evacuation (15.1A)
- (1) Selective Evacuation is a protective action that provides for the evacuation of specific elements of the population such as pregnant women and pre-school children. Slide - Pre-school children (15.1E)
- c. Evacuation Slide - General Evacuation (15.1B)
- (1) Evacuation is a protective action which may be recommended to the resident and transient populations of the Plume Exposure Pathway EPZ. When an evacuation is recommended, all members of the public will be advised to leave the risk area until it has been determined that all danger has passed. Slide - Traffic (15M)
- (2) Only the Governor has the authority to order an evacuation of the risk area should such an evacuation become necessary. County Commissioners or municipal elected board of officials may recommend evacuation.
- d. Evacuation Concepts Slide - Evacuation Concepts (56Q)
- (1) Spontaneous Evacuation
- (a) The evacuation of members of the general public on their own and prior to the recommendation or order of public officials.
- (b) Although an evacuation of the general public surrounding Three Mile Island was never recommended by public officials, certain studies estimated that 48-52% of

the general public evacuated without being instructed to do so by the officials. Spontaneous evacuation may substantially reduce the amount of people who would later need to be evacuated.

(2) Main Evacuation Routes

Those roadways identified in advance as the principal routes to evacuate people from the risk area. Specific evacuation routes would be announced at the time. Local conditions would determine actual evacuation routes to be used. Bus drivers will use these routes to get out of risk area and then will proceed to host school or reception center. (Indicate routes appropriate to area.)

Slide - EPZ w/
Main Evacuation
Routes (54B)

(3) Pick-Up Points

Those predesignated locations at which members of the general public without automobiles or other means of transportation will be provided with transportation out of the risk area. If assigned pick-up point run, driver will receive a map from transportation staging area to Municipal EOC. Someone familiar with area will board bus and direct around area to pick up residents.

(4) Traffic Control Points

Those locations on main evacuation routes that would be staffed by local police or the State Police in order to provide ease of access and continued movement of traffic.

Slide - Traffic
Control/Access
Control Points
(54C)

(5) Access Control Points

Those predesignated locations staffed by local police, the State Police, or by the National Guard in order to prevent entry into the risk area during an accident. These points will be located on or immediately beyond the boundary of the risk area. Check

points will stop all people from entering an area, except residents.

(6) Host Schools for Students

Those places where school students and staff will be evacuated to and later reunited with their families.

Slide - Host
Schools/Mass
Care/Reception
Centers (56S)

(7) Reception Centers

Those predesignated sites outside the risk area at which evacuees will be directed to shelters if they need a place to stay. Pick-up runs will be through reception centers to mass care.

Slide - Map (54D)

(8) Mass Care Centers

Those facilities established outside the risk area at the time of an accident for the purpose of providing food, lodging and medical care on a short-term basis for persons evacuating the risk area. Evacuees and their vehicles will be monitored and decontaminated if necessary.

(9) Central Resource Receiving Points

Slide (56R)

A location outside the risk area suitable for receiving and distributing supplies and equipment.

Slide (54F)

(10) Transportation Staging Area

A designated location from which transportation resources are coordinated and/or dispatched. These are located on each of 5 major access roads into the area:

Rt. 422, Rt. 100 (Berks)
Rt. 100 (Chester)
Rt. 63, Rt. 309, Rt. 363/202
(Montgomery)

This is the point where bus drivers will report to receive detailed information and re-assignments.

(11) Decontamination Station

A facility located just outside the risk area where emergency workers undergo any necessary decontamination monitoring or decontamination.

e. Public Alert/Notification System

(1) If an accident were to occur at the LGS, emergency public information activities would be initiated to inform the public of the nature and severity of the accident. Emergency public information will be coordinated through news releases by the State, in addition to facility and key response organization spokespersons.

(2) The Nuclear Regulatory Commission requires that a warning system be installed around every operating nuclear power plant. The system must provide the capability for alerting and providing information to residents of the plume exposure pathway EPZ.

(3) The public alert/notification system refers to sirens primarily for the alert and the Emergency Broadcast System for notification of the general public. Monitors, mobile loudspeakers, and other special provisions for alerting supplement the sirens for public alert.

Slide - siren

Slide - loudspeaker

Slide - EBS system

(4) The siren is designed to alert the population at risk to tune to their Emergency Broadcast System (EBS) for important emergency information. The sounding of sirens does not mean that the public should take shelter or evacuate. The sirens only indicate that people should turn to the EBS for information or instructions.

200 siren will be installed by PECO. They will be placed on top of 50-foot utility poles. The sirens will rotate and can each be heard for a distance of about 4,000 feet. Installation will begin about Feb. 1, 1983, and should be completed by July 1, 1984.

(5) Specifically, this system has been designated for the capability to provide both an alert signal and an informational or instructional message to the population throughout the plume exposure pathway EPZ, within 15 minutes.

- (6) Philadelphia Electric Company, following discussions with County and State officials, will purchase sirens to be installed as the alert portion of the public alert/notification system. Cost of the system will be about \$4 million.
- (7) The siren system would be activated from County Offices. The siren system would produce a 3-5 minute steady tone and would be sounded to advise persons living, working or traveling in risk portions of the County to tune to the EBS stations for further information.
- (8) Should any of the sirens fail to sound, the system would indicate County officials. Route alert teams would then be dispatched to provide public alert through the use of public address systems or bullhorns.
- (9) County officials would activate the public alert/notification system.
- (10) After the activation of the alert/notification system, the County, in coordination with the State, would provide continuing emergency public information through a County Public Information Officer to be located at the County's Media Center.
- (11) If conditions change, the public alert/notification system would again be activated for the purpose of disseminating such recommendations to the public.
- (12) During the next several months, both Philadelphia Electric Company and County officials will be conducting a public education program. The public alert/notification system concept will be extensively discussed throughout the public education program.

2. Specifically for emergency workers

a. Radioprotective Drugs

Slide - "Radioprotective Drugs"
(15F)

- (1) Iodines, whether radioactive or not radioactive, tend to travel to and accumulate in the thyroid gland. Radioactive Iodine could be released during an accident at the Limerick station. Radioprotective drugs are substances which tend to saturate the thyroid with non-radioactive iodine, thus reducing the amount of radioactive iodine absorbed by the thyroid. Potassium iodide (chemical symbol KI) is a substance that may be used for this purpose.

Emergency workers definition is those persons that perform functions that require special protection throughout an emergency.

- (2) Radioprotective drugs may be recommended for emergency workers or institutionalized persons within the plume exposure pathway EPZ at the time of an accident.

b. Limitation to Duration of Exposure

Slide - "Limitation to Duration of Exposure" (15G)

- (1) Limitation to duration of exposures in an identified risk area is a protective action that will be considered for emergency workers.
- (2) Exposure limitation will be imposed for emergency workers when radiation exposure levels approach protective action guide limits for routine operations (25 rem).

c. Double Clothing

Slide - Double Clothing (15.1C)

- (1) Double clothing is a protective action which can be used by itself or along with other protective actions.
- (2) If recommended, workers would be advised to use personal clothing (rain gear, turnout gear, boots or galoshes with pant legs tucked in, winter coats with collars turned up, gloves, etc.) to provide protection by minimizing contamination of the skin or regular street clothing.

d. Respiratory protection

Slide - "Respiratory Protection"
(15D)

- (1) Respiratory protection is an action which is used in conjunction with sheltering.
- (2) When respiratory protection is recommended, people within the risk area will be advised to cover their noses and mouths with handkerchieves, cloth, or other protective materials, and to limit air intake from heating or cooling systems if they are in an enclosed area.
- (3) This action may be recommended for the general public in conjunction with one of the other protective actions.

C. Protective Actions for the Ingestion Exposure Pathway EPZ

Protective actions for the 50 mile EPZ are designed to prevent consumption of contaminated food or water. The responsibilities for establishing applicable protective action for the 50 mile EPZ rests with the Commonwealth of Pennsylvania.

Slide - IEP PA recommendation chart. (56N)

The Pennsylvania Departments of Environmental Resources (DER) and Agriculture would collect samples of agricultural products and water from the affected areas within the 50 mile EPZ. The samples would be analyzed by DER's Bureau of Radiation Protection to determine the types and quantities of radioactive materials contained in the samples. DER would evaluate this information and make recommendations to the Departments of Agriculture and Health. These Departments would then provide their protective action recommendations to the Pennsylvania Emergency Management Agency.

1. Water

Spring and well water should not be affected by a release of radioactive material. Pond or reservoir water may be contaminated and should be tested by state or county officials. Should a water supply be contaminated, uncontaminated

Slide - Water Supplies (14D)

supplies could be rationed, other beverages could be substituted, water could be brought in from safe supplies, or critical users could be identified.

2. Milk and Other Food Products

Slide - Radioisotopes
(10C)

Public officials would also be concerned about the possible contamination of food products, particularly milk and milk products.

Discuss halflives
briefly.
Discuss only I-131
if possible.

- a. Radioactive iodine is a radioactive material that could be released during an accident. If the iodine were deposited on pasture and, the radioactive iodine could be consumed by dairy cattle. The substance could then be passed on to children through the milk. Since children are especially susceptible to radiation, plans call for state inspectors to sample milk supplies to ensure that supplies are safe.
- b. Those milk or other food products that are found to be contaminated would initially be kept from the market. Those contaminated foodstuffs could be processed or stored to allow radioactive decay, diverted to non-human consumption or condemned depending upon the severity of the contamination.

IV. Protective Actions for Livestock

Information on suggested protective actions for livestock would come from the County Agricultural Extension Agent. The County Agent would be basing this suggestion on the latest radiological and weather data available from utility, County, State and federal agencies.

Slide - Livestock
(55T)

Protective actions
for livestock and
crops can be
extended to
include the entire
Ingestion Exposure
Pathway EPZ.

- A. Evacuation of livestock is not generally recommended. Priority is given to the evacuation of the human population of the risk area. In addition, livestock evacuation may be inappropriate due to time constraints and a lack of transportation resources.

Slide - Evacuation
(15B)

- B. Sheltering and providing livestock with uncontaminated feed and water are more acceptable options.
1. Determine which livestock should receive the best shelter. The following priorities are recommended:
- a. Dairy cattle and other milk producing animals
 - b. Egg producing fowl
 - c. Breeding stock
 - d. Other livestock and poultry
2. Some shelters provide more protection than others. The shelters listed below are listed in order of effectiveness.
- a. Large concrete block barns with full hay mounds
 - b. Other large barns and pole sheds
 - c. Small buildings
3. If sheltering of livestock is recommended, the animals should be moved into barns or other available buildings.
4. Once sheltered, provisions must be made for continued care of the animals:
- a. Place the livestock on uncontaminated feed. (Cover all exposed feed if possible.)
 - b. Uncontaminated feeds include those which are covered by a silo, bin or other enclosure. If uncontaminated feed is not available, withhold feed until uncontaminated supplies are available or as long as possible without risking permanent harm to the animal. Most livestock can go four to five days without suffering permanent damage due to the lack of feed.
 - c. Provide uncontaminated water for the animals. Water which is not exposed to
- Slide - Sheltering (15C)
- Slide - Sheltering Priorities (55H)
- Slide - Protective Action for livestock (55G)

the atmosphere such as water from tanks or well water would be the safest. If there is sufficient time, cover other water containers with plastic to protect from contamination. In no case should water be withheld from the livestock. If water is in short supply, reducing feed can reduce the amount of water your livestock will require. For emergency planning purposes, a 48-hour supply of protected feed and water should be available.

- d. Animals also need adequate ventilation to survive. The use of ventilating devices such as fans will decrease the effectiveness of the shelter for reducing radiation exposure and should only be used when necessary. However, it is better to provide the minimum ventilation necessary to ensure survival of the livestock regardless of the radiation present.

V. Protective Actions for Agricultural Products

- A. As we discussed earlier, the major radiological concern would be the presence of Iodine 131 in the milk products. State agricultural officials would sample milk supplies to detect high levels of Iodine 131. If samples indicate a high level, the milk could be stored or processed to allow for radiological decay or the products could be diverted to non-human consumption. If the levels are dangerously high, the supplies might have to be condemned and disposed of.

Slide - If milk
is contaminated
(55J)

- B. Poultry, meat and other food products would also need to be sampled but these are less of a problem than milk. Actions for these include:
 - 1. Covering of crops already harvested
 - 2. Decontamination
 - 3. Diversion to processed food products
 - 4. Confiscation and disposal

Slide - Protective
Actions for food
(14C)

VI. Incident Classifications

The protective actions to be taken during an emergency depend upon the seriousness of the incident at the power plant.

Slide - Incident Classifications (2K)

The provision of information on the level of seriousness is extremely important since it will influence the level of response required. It is the responsibility of the utility to provide essential information to state and county officials concerning the classification of the emergency. Classifications include Unusual Event, Alert, Site Emergency and General Emergency.

A. Unusual Event

1. Unusual Event indicates that a minor change has occurred in the normal plant operating procedures. At this point in time, county and state emergency management officials would be notified by the utility.

Slide - Unusual Event (2C)

B. Alert

1. An Alert means that abnormal plant conditions exist and very small amounts of radiation may be released. During an Alert, emergency response organizations would be placed on standby.

Slide - Alert (2E)

C. Site Emergency

1. Site Emergency means that plant functions needed to protect the public have failed or may fail. Releases of radiological materials from the plant will be in very small amounts; however, protective actions could be recommended at this time depending upon plant, weather and road conditions.

Slide - Site Emergency (2G)

D. General Emergency

1. A General Emergency means that a threat to the general public either currently exists or is likely to occur in the near future. This is the most severe emergency action level and protective actions could be recommended at this time.

Slide - General Emergency (2I)

VII. Incident Classification Actions

A. Unusual Event

1. No action is suggested for the agricultural community during an Unusual Event. Slide - Unusual Event (55A)

B. Alert

1. During an Alert, the County Agricultural Agent would be notified by the County. The County Agent would remain in his/her office, maintain communications with the County EOC and represent county agricultural interests. The Agent would review plans and procedures and answer questions raised by the agricultural community. Slide (55B)

2. Contact locations:

Montgomery County - Joe Way
Agriculture and Home Economic's
Extension Office
Court House Annex
400 Markley Street
Norristown, PA

Chester County - Cheryl Fairvairn
Dagne Building
235 W. Market Street
West Chester, PA 19380

Berks County - Henry Bohn, Jr., Director
USDA Emergency Board
Berks County Agriculture Center
R.D. #1, Leesport, PA

C. Site Emergency

1. Farmers with dairy cattle/goats within two miles from the plant could be notified that animals should be placed on stored feed. Livestock owners should monitor radio news for more information. Slide - Actions (55C)
2. As a precautionary measure, livestock owners may wish to check supplies of stored feeds and water and herd livestock into the general vicinity of the shelters.

D. General Emergency

1. Farmers with dairy cattle/goats within ten miles of the plant would be notified that these animals should be placed on stored feed.
2. As a precautionary measure, shelter all livestock to the extent possible. Provide them with stored feed and water. Improve sheltering capabilities of buildings to the extent possible.
3. Continue to monitor EBS for additional information concerning the protection of residents and livestock.

4. If sheltering of livestock is recommended:

Slide - Actions
(55D)

- a. Ensure that all livestock are sheltered to the extent possible.
- b. Ensure rations of stored feed and water are available to the livestock.
- c. Close doors and windows on barns.
- d. Turn back ventilation fan speed or filter if possible.

5. If sheltering is recommended for you and your family:

Slide - Blank

- a. Seek shelter inside your house.
- b. Close doors and windows and shut off or reduce air intake from heating or cooling systems.
- c. If not done previously, shelter livestock.
- d. Monitor your EBS station for further information.

6. If evacuation is recommended:

Slide - Actions
(55E)

- a. Ensure that livestock are sheltered to the extent possible and have been provided with stored feed and water.

- b. After your family is evacuated, report to the County Agricultural Agent and request Emergency Worker Certification, dosimetry and KI.
- c. Return to the farm only as often and long as necessary to provide essential care to the livestock. Follow instructions for monitoring exposure levels and using KI.
- d. After leaving the farm, report directly to the designated decontamination center for radiological survey and possible decontamination.

VIII. For More Information

- A. Contact the county agriculture extension agent.
- B. A new correspondence course entitled, "Radiation Protection for Family, Food and Farm". This course was developed by Penn State and reviewed by the Pennsylvania Farmers Association. The cost is \$6.75 and can be ordered from RADIATION, Department 5000, University Park, Pennsylvania 16802.