ANNEX W
TRAINING AND EXERCISING

I. SITUATION AND ASSUMPTIONS

Trained personnel are essential to the successful execution of the county EOP. Natural hazards and technological hazards, including hazardous materials, are unpredictable and occur in every county of the state. The Commonwealth and its counties can also be affected by national security incidents, ranging from terrorism to nuclear attack. Therefore, a continuous state of preparedness must be maintained. The key to this preparedness is pre-disaster training for each individual assigned an emergency disaster responsibility.

II. MISSION

To demonstrate assurances that every individual involved in disaster operations is adequately prepared to accomplish their assigned tasks.

III. DIRECTION AND CONTROL

A. The KyDES Training Officer is responsible for insuring that adequate training is available for KyDES personnel and local DES personnel.

B. KyDES will, in conjunction with other units of state, federal, and local governments, provide training to those agencies with emergency management responsibilities.

C. The County DES Director/Training Officer is responsible for insuring that all local agencies are adequately trained to carry out their disaster missions.

D. The county needs to be aware of the hazards in the county and to reflect these hazards in the county EOP and to use an exercise program to test the effectiveness of the EOP's hazardous materials guidance.

IV. CONCEPT OF OPERATION

Training may be available for emergency response from a variety of sources. This training will vary depending on the hazards identified for the county and the level of emergency response capability the county has.

A. Training may be conducted in two phases.

1. The first phase consists of that training

required to initially train those agencies and organizational elements of local government with an assigned support mission in a disaster operation with the county. This training will be tested at the agency level to assure acceptable performance capabilities. A minimum of one simulation exercise per year at the local level is needed to identify further training needs, determining areas for training revision and providing input for annually updating the EOP and applicable SOP's.

2. The second phase is the requirement for recurring or refresher training. The requirement may stem from turnover in personnel, as well as the generally accepted need for periodic refresher training to prepare for non-routine operations.

B. Training will not be limited to the Preparedness Phase, but will also be conducted during all phases of an emergency, based on the need.

C. Organization

1. Local Government

a. Develop overall jurisdictional emergency training policies and goals, and provide support and assistance to training and exercise programs.

b. Assure the conduct of necessary training by units of local government and private organization providing emergency services to the community.

c. Assist, encourage, and cooperate in training programs and exercises conducted by local private organizations as appropriate.

d. Maintain training records and assure required qualifications are documented and current.

e. Provide qualified individuals to attend training courses offered by state, federal, and private organizations.

f. Notify the appropriate state department of any training problems and request information and assistance when deemed necessary.

2. State Government

a. Kentucky DES

1) Serves as the lead department for emergency and disaster training matters.

2) Establishes general emergency training objectives, and provides guidance and assistance to state agencies and to local governments.

3) Arranges and coordinates the conduct of state-level, multi-agency training exercises.

4) Provides instructions for the submission of training reports and maintains data on training programs.

5) Maintains liaison with federal agencies involved in Emergency Management training programs.

D. Training is available for those emergency responders with haz/mat responsibilities. These responders are required to attend training on the level of their haz/mat response responsibilities.

1. Ky OSHA conducts workshops on state/federal OSHA regulations for haz/mat response personnel.

2. Federal OSHA offers training courses in the state to qualify response personnel for:

a. First Responder Awareness Level

b. First Responder Operations Level

c. On Scene Incident Commander, and

d. An eight hour refresher training course available for response personnel.

3. U.S. EPA makes available the 40-hour course, Hazardous Materials Response for First Responders.

4. Murray State University offers a variety of hazardous materials response courses designed to train emergency responders. Other colleges in the state also offer courses with haz/mat applications.

5. FEMA, through a grant to the state Emergency Response Commission, provides funds for train-

ing programs for state agencies, local response personnel, and local emergency planning committees. FEMA also provides training via the Emergency Management Institute, Home Study Courses and through the National Fire Academy.

6. State Government (through KyDES, the State Fire Marshall, and Natural Resources and Environmental Protection Cabinet) has developed training courses to meet anticipated duties during haz/mat-related operations. The Department of Vocational Education provides training to emergency response agencies throughout the state.

7. Local governments will offer training periodically.

8. Many local fire departments conduct periodic haz/mat training course to prepare members for haz/mat response.

9. Private Industries have offered training on haz/mats that they deal with.

10. U.S. Department of Transportation offers haz/mat training for first responders.

E. Training is offered for other type of emergencies by a variety of organizations, including:

1. KyDES

2. State Fire Marshal's Office

3. Ky Vocational Education

4. American Red Cross

5. National Weather Service

6. FEMA

   a. Emergency Management Institute

   b. Home Study Courses

7. Colleges/Universities

8. Local governments

9. Private Industry

F. There are five elements of an effective exercise program. They are:

1. Orientation Seminars that are designed to allow participants to evaluate plans and procedures and to resolve questions of coordination and assignment of responsibilities under low stress.

2. Drills that are characterized by activity that tests, develops, or maintains skills in a single emergency response procedure. Drills are considered part of necessary on-going training.

3. Tabletop exercises that are used to simulate emergency situations away from the field. They are used to evaluate plans and procedures, assignments of responsibility and coordination.

4. Functional exercises that are intended to evaluate the capability of an individual function, or complex activity. These are best evaluated when the activity or function can be isolated from other emergency management activities. This involves individuals working together as a group to solve a problem or series of problems.

5. Full-scale exercises are used to evaluate the operational capability of emergency management systems in an interactive manner over a substantial period of time. This involves actual movement of personnel, equipment and at least five areas of the response community.

G. A functional or full-scale exercise is required, by FEMA and by Kentucky statute, in each county receiving EMA funding. The exercise must deal with a natural hazard, a technological hazard, or deal with national security. These three types of exercises are to be rotated so that a national security exercise be conducted every third year. FEMA requires that a full-scale exercise be conducted at least once every four years in EMA-funded jurisdictions.

H. A written evaluation must be done as soon as practical after an exercise has been conducted.

I. After each of these elements are completed the EOP will be updated to correct any deficiencies found. All standard operating procedures should be evaluated and updated at this time also.

V. ADMINISTRATIVE SUPPORT

A. Each unit of government will have to help develop its own training support staff. This staff should be developed through and in cooperation with KyDES.

B. Augmentation and training of emergency organizations will be carried out under guidance set forth in CPG 1-5, "Objectives for Local Emergency Management," and CPG 1-7, "Guide for Increasing Local Government Civil Defense Readiness During Periods of International Crisis."

VI. GUIDANCE DOCUMENTS

A. 29 CFR

B. OSHA Standards 1910.120

C. National Fire Protection Administration Codes 471 and 472

D. KRS Chapter 39

E. Exercise Design Course, Guide to Emergency Management Exercises; FEMA SM-170.2

F. Exercise Design Course, Exercise Scenarios; FEMA SM-170.3

G. Hazardous Materials Contingency Planning; FEMA SM-111

ANNEX X
FIXED NUCLEAR FACILITIES

I. SITUATION AND ASSUMPTIONS

A. With the abandonment of the Marble Hill Power Plant near Madison, Indiana and the Zimmer Plant at Moscow, Ohio, no nuclear power plants exist within 30 miles of the Commonwealth. Federal law requires planning for direct protection of the populace only if citizens live within 10 miles of the plant, therefore, no such planning is being done in Kentucky.

B. The three nuclear power plants located along the Kentucky-Tennessee border in Tennessee at Hartsville, Oak Ridge and Surgoinsville have been placed in mothballs. Date to restart construction is unknown.

C. There are no nuclear power plant in operation or under construction within 50 miles of Kentucky. Planning for protection of the food chain, as required by federal law, is not required beyond the 50 mile limit.

D. The gaseous diffusion plants at Paducah, Kentucky, Oak Ridge, Tennessee and Portsmouth, Ohio are not considered fixed nuclear facilities under federal criteria. However, specialized response plans are being developed by DOE and local and state officials for these facilities. The effects of an accident at these plants will be handled under Annex Q, Hazardous Materials.

E. There is, therefore, no need to develop a Fixed Nuclear Facility Annex for Kentucky at this time. A draft plan for this contingency, titled - Kentucky Radiological Emergency Plan, does exist. This draft was developed for the Zimmer Plant.

II. TAB

X-1 Paducah Gaseaous Diffusion Plant Event Classification

APPENDIX X-1
PADUCAH GASEOUS DIFFUSION PLANT
EVENT CLASSIFICATION

I. CONCEPT OF OPERATIONS

A response to an incident at the Paducah Gaseous Diffusion Plant will be in accordance with Annex Q, Hazardous Materials, of the Kentucky Emergency Operations Plan (KyEOP). This Appendix contains information on the DOE Event Classification System and notification to the public.

II. EVENT RESPONSE LEVELS.

The manner of response to an event will depend on the nature and severity of potential, real, or perceived consequences including potential adverse public or media reaction.

III. USDOE EVENT CLASSIFICATION.

A. Emergency

Emergencies are the most serious occurrences and require an increased alert status for on-site personnel and, in specified cases, for off-site authorities. To assist in the specific classification and activation of the emergency response organization, emergencies are further classified as an alert, site area emergency, and general emergency.

1. General Emergency (GE).

A general emergency represents events which are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity or catastrophic degradation of facility protection systems. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate Protective Action Guideline (PAG) or Emergency Response Planning Guideline (ERPG).

A general emergency could result in off-site releases of radioactive or toxic materials which exceed Protective Response Recommendation Guides. Declaration of a general emergency will initiate activation of all resources re-

quired to effectively mitigate the consequences of emergency conditions and assure protection of on-site and/or off-site personnel.

2. Site Area Emergency

A site area emergency represents events which are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of on-site personnel, the public health and safety, the environment, or national security. Any environmental releases of hazardous materials are not expected to exceed the appropriate PAG or ERPG exposure levels off-site.

Declaration of a site area emergency activates the EOC and other appropriate personnel and resources as required to mitigate and monitor the situation.

3. Alert

An alert represents events in progress or having occurred which involve an actual or potential substantial reduction for the level of facility safety and protection. Any environmental release of hazardous materials are expected to be limited to small fractions of the appropriate PAG or ERPG on-site.

Declaration of an alert will ensure appropriate on-site, off-site, and DOE personnel and resources are properly advised and available for activation if the situation becomes more serious.

Tab X-1-1 shows the emergency action level (EAL) for the plant. These levels are reviewed/updated annually.

B. Unusual Occurrence

An unusual occurrence is a nonemergency occurrence that has significant impact or potential for impact on safety, environment, health, security, or operations. Unusual occurrences will be reviewed in accordance with the EAL tables and may reach the alert level. If the unusual occurrence does not meet the classification criteria at any level, the requirements of DOE 5000.3A will be followed.

C. Off-Normal Occurrence

Off-normal occurrences are abnormal or unplanned events or conditions that adversely affect, potentially affect, or are indicative of degradation in the safety, security, environmental, or health protection performance or operation of the plant. Off-normal occurrences will be reviewed in accordance with the EAL tables. If the off-normal event does not meet the classification criteria at any level, the requirements of DOE 5000.3A will be followed.

D. Nonroutine Occurrences

If an occurrence does not meet the criteria of any of the previous categories, but meets the definition of an occurrence, then it is considered a nonroutine occurrence.

IV. NOTIFICATION METHODS

This section describes the methods used for notifica tion of Paducah Gaseous Diffusion Plant (PGDP) emergency response personnel and appropriate local, state, and federal emergency response centers. Actual methods and sequencing of notifications are covered in specific facility emergency response implementing procedures. Tab X-1-2 is an example of the form used for off-site notifications.

A. Notification of PGDP Personnel

The plant shift superintendent (PSS) is responsible for classifying an event in the appropriate emergency category and then notifying plant personnel as needed. This notification could involve sounding the appropriate facility alarm signal, making announcements over the plant radio system or utilizing the plant telephone system. The present means for notification of on-site personnel within PGDP is the Plant Emergency Alarm System consisting of several distinct alarms and the use of a public address system.

Visitors within PGDP property are assigned an escort. This escort is responsible for informing the visitors of emergencies when they occur and for taking action as necessary. Each visitor must attend the visitor's orientation briefing and receive a card certifying attendance before being permitted to enter the plant.

Paducah and contractor personnel are trained on actions to be taken in an emergency prior to their work assignments. Otherwise, they must be escorted by an individual who has been trained in emergency response procedures. The training includes instructions on methods of notification and the required actions in the event of an emergency.

B. Notification of Martin Marietta Energy Systems Inc. (MMES) Corporate Personnel

MMES corporate personnel are contacted for various types of emergencies. The types of emergencies include any event/occurrence requiring notification of Oak Ridge (OR) and several other events of specific nature and interest to MMES. Details of corporate notification are located in the appropriate implementing procedures.

C. The PSS, or designee, will promptly notify the director of the Paducah/McCracken County DES, the director of the Ballard County DES, and the KyDES duty officer when required. These notifications will occur as soon as possible, but not more than 15 minutes after an event is declared an alert or higher classification. The specifics of this notification process are outlined in the appropriate implementing procedure.

NOTE: An emergency should be categorized as soon as possible. The PSS shall not delay categorization of an event to allow activation of the EOC if information is available that indicates an emergency condition exists. The crisis manager (or PSS if the EOC is not operational) may upgrade emergency categories and may recommend categories be downgraded. The recommendation to downgrade an emergency category shall be reviewed with McCracken County DES, Ballard County DES, and the Kentucky EOC before being implemented by local officials.

D. Notification of Oak Ridge (OR) EOC

The PSS, or designee, will promptly notify the OR 24-hour EOC, which is staffed by the OR duty officer. For events or situations classified as "emergencies," (reference DOE 5000.3A), the PSS will notify the OR duty officer within 15 minutes from the time of categorization.

E. Notification of the Public

PGDP will provide appropriate off-site authorities with supporting information for public notification. A combination of outdoor warning siren systems and the emergency broadcast system will be utilized for the notification of the public. The public will be continuously updated on the situation via a Joint Public Information Center (JPIC) staffed by MMES, KyDES, and McCracken County DES at the Paducah Community College. Rumor control will also be managed from the JPIC.

V. EMERGENCY PLANNING ZONES

A. Two off-site EPZs are defined for the area surrounding PGDP which could be affected by credible hazardous materials incidents. Plans for both the two-mile immediate notification zone and the five-mile planning zone are designed to minimize external exposures from a hazardous material plume and deposited material and skin absorption/inhalation exposures. The EPZs around PGDP are established to assist in public notification, warning and instructions for protective actions.

B. Two-Mile Immediate Notification Zone

PGDP will recommend protective actions for the public within the immediate notification zone. Decision-making will be based on accident assessment. The primary protective actions for the immediate notification zone are sheltering and evacuation. Sheltering is accomplished by going inside a building and reducing exposure to outside air. Evacuation is accomplished by exiting the area by prescribed routes and reporting to a designated congregate care facility/shelter. Tab X-1-1 shows the immediate notification zone with associated evacuation routes and sirens for alerting the general public.

The immediate notification zone, or Zone 1, includes all off-site land within approximately two miles of the plant boundary. This zone is wholly within McCracken County. Zone 1 provides for a graded response so those members of the general public most at risk (based on the incident type and wind direction) receive instructions addressed specifically to their zone. This enhances protective actions such as evacuation since only those

people in the identified zone should be on the evacuation routes instead of the population of the entire five-mile radius.

C. Five-Mile Emergency Planning Zone

The affected county is responsible for determining and recommending protective actions for the public within the five-mile EPZ. (PGDP provides recommendations based on accident assessment to aid the county in the decision-making process.) The primary protective actions are sheltering and evacuation. Tab X-1-1 defines the five-mile EPZ. This covers all areas within an approximately five-mile radius from the center of PGDP and includes primarily McCracken County, a small section of Ballard County and the Ohio River.

VI. REFERENCES

A. DOE 5000.3A " Occurrence Reporting and Processing of Operations Information", May 30, 1990, assigns responsibilities and authorities and prescribes policy and procedures for a system of reporting occurrences.

B. DOE 5480.3 "Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous and Hazardous Wastes", July 9, 1985, contains notification procedures for shipment and receipt of radioactive materials.

C. DOE 5500.2B "Emergency Categories Classes and Notification and Reporting Requirements", April 30, 1991 contains notification and reporting requirements.

D. Paducah Gaseous Diffusion Plant Emergency Management Plan June 1992.

E. Paducah Gaseous Diffusion Plant Emergency Action Level P-ESH-525.

F. An Emergency Preparedness Guide - Directions What to do if the sirens sounds for PGDP.

VII. TABS

Tab X-1-1 Emergency Action Levels

Tab X-1-2 Emergency Notification Form

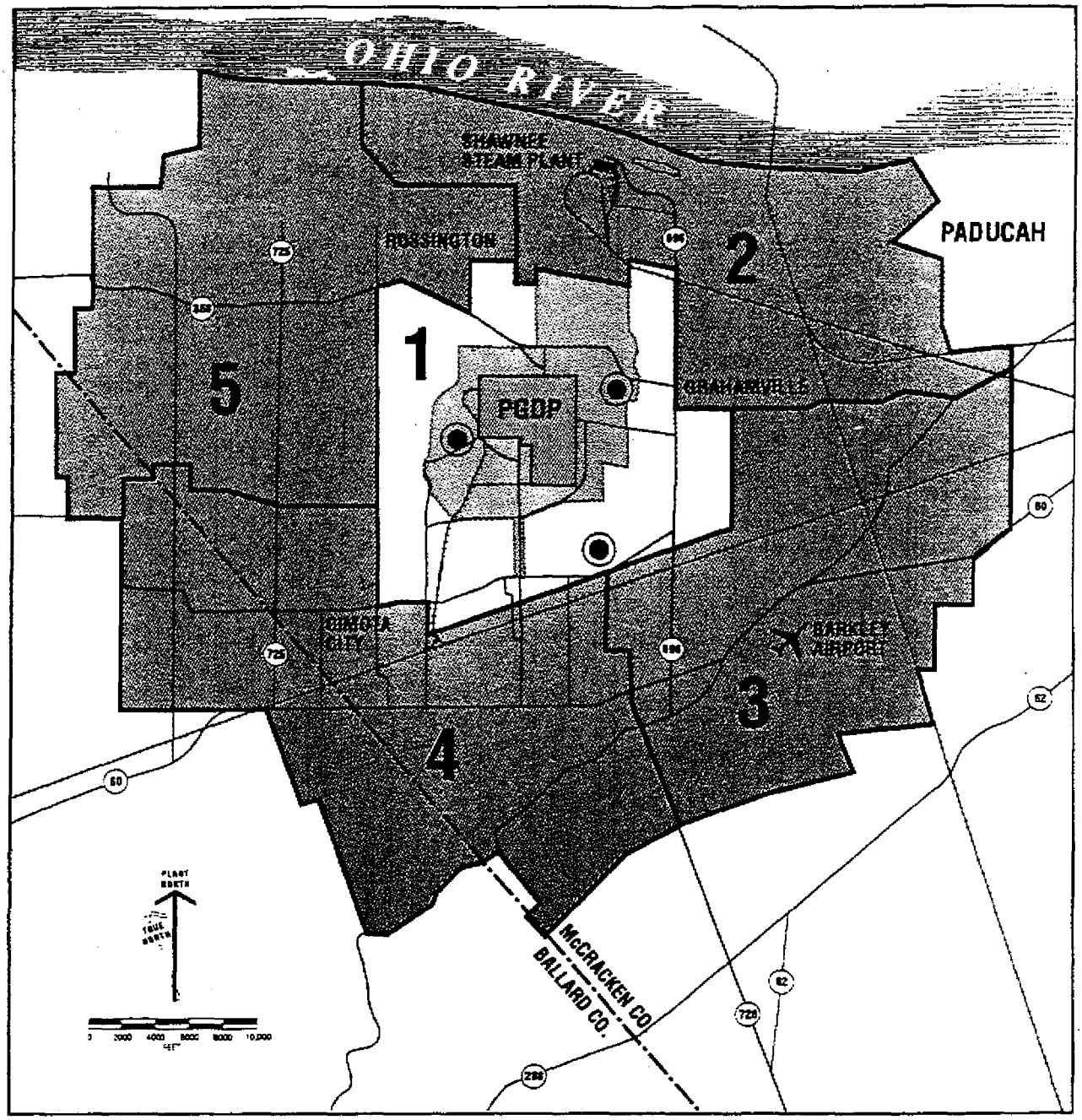
TAB X-1-1

EMERGENCY ACTION LEVEL

Event Class	Hazardous Materials						
	Cl_2	ClF_3	F_2	HF	HNO_3	TCE	UF_6
Alert	Feedline rupture or significant leakage during connection or disconnection of a valve.	Significant leakage during connection or disconnection of a valve in C-350 building.	Significant leakage from transfer line.	Significant leakage of a cylinder.	Break in transfer piping to day tank.	C-400 basement degreaser rupture.	Significant release from instrument or transfer lines in C-315 or C-310 withdrawal areas.
Site Area Emergency	Rupture of a 150-pound cylinder. Damaged (but not ruptured) 1-ton cylinder releasing contents very rapidly.	C-350 Pipeline rupture. C-350 Storage tank failure (including ClF_3/F_2 tank) or liquid cylinder rupture with no loss of containment.	Rupture process building pipeline Rupture storage tank pipeline. Storage tank rupture.	Cracked transfer line north of C-410 with significant release.	Break in C-400 vessel supply piping. Tank rupture (diked area)	C-400 tank rupture (diked or undiked area)	Cell overheat and rupture.
General Emergency	Rupture of 1-ton cylinder anywhere on plant site.	Major release in C-350 resulting in contents of one or more cylinder being released from the building.	Will have no off-site impact.	Liquid cylinder rupture. Severed transfer line north of C-410.	Will have no off-site impact.	Will have no off-site impact.	Liquid cylinder drop resulting in cylinder rupture.

			Natural Phenomenon		Nuclear Event	
Category	Fire	Safeguards and Security	Earthquake	Tornado	Criticality	Radiological
Alert	Free burning fire in major plant structure (process bldgs., C-720, C-100, C-200, C-300, etc.). No danger of cascade system involvement.	Classified material theft or loss. Extortion or kidnapping. Malevolent riot or labor activity. Aircraft crash on plant site.	Seismic switch release earthquake.	Tornado or downburst wind causing significant damage.	(1)	(1)
Site Area Emergency	Fire in major plant structure with potential for release of hazardous material.	Security Level #1. Terrorist attack. Credible bomb threat.	See specific hazardous material guidance.	See specific hazardous material guidance.	Criticality	Fission fragment plume from a criticality, >50 mr/hr beta-gamma at site boundary.
General Emergency	Fire in major plant structure with actual or imminent release of hazardous material.	See specific hazardous material guidance.	See specific hazardous material guidance.	See specific hazardous material guidance.	See specific hazardous material guidance	No credible scenario results in off-site impact.

1. No event has been identified that would result in this emergency categorization.



LEGEND

- TWO-MILE IMMEDIATE NOTIFICATION ZONE — Area 1
- FIVE-MILE PLANNING ZONE — Area 2, 3, 4, 5
- PGDP RESERVATION
- PRINCIPAL PLANT AREA
- SIREN

Two-mile immediate notification zone and five-mile planning zone.

TAB X-1-2

EMERGENCY NOTIFICATIONS

EMERGENCY NOTIFICATION FORM

P-ESH-526

ACTIVATE EMERGENCY OPERATIONS CENTER: TIME _____

DATE: _____ TIME: _____ NUMBER: _____

This is _____ from Paducah Gaseous Diffusion Plant, located on Hobbs Road, calling with information regarding an emergency at the plant.

1. THE EMERGENCY CATEGORY IS:
   (A) EMERGENCY EVENT
   - ☐ Alert
   - ☐ Site Area Emergency
   - ☐ General Emergency

   (B) UNCATEGORIZED EVENT
   _____
   _____
   _____

2. EVENT DESCRIPTION: _____
   _____
   _____

3. EMERGENCY CONDITION: (A) Improving (B) Stable (C) Degrading (D) Undetermined

4. EMERGENCY INVOLVES: (A) No Release (B) Potential Release (C) Release Occurring (D) Release Occurred

5. TYPE OF RELEASE: ☐ Surface ☐ Water ☐ Air ☐ Other

6. PLANT STATUS: ☐ Operating ☐ Shutdown ☐ Being Shutdown

7. RECOMMENDED PROTECTIVE ACTIONS:
   - ☐ No protective action necessary at this time
   - ☐ Offsite Sheltering, for the following areas: _____
     _____
   - ☐ Offsite evacuation, for the following areas: _____
     _____
   - ☐ Other

8. PUBLIC WARNING SIRENS ACTIVATED (TIME): _____

9. EBS MESSAGE:
   - ☐ Message 2, No Action Needed
   - ☐ Message 3, Sheltering Required
   - ☐ Message 4, Local Evacuation Necessary
   - ☐ Message 6, Cleared For Reentry

10. EVENT TERMINATED AT: TIME: _____ DATE: _____

11. APPROVED BY: _____ TIME: _____ DATE: _____
    CRISIS MANAGER OR PSS

NOTIFICATION SENT TO:
- ☐ Kentucky DES
- ☐ Illinois
- ☐ DOE/OR EOC
- ☐ McCracken DES
- ☐ Massac County Sheriff
- ☐ Shawnee Steam Plant
- ☐ Ballard DES
- ☐ JIC

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