

INDIANA & MICHIGAN POWER COMPANY  
DONALD C. COOK NUCLEAR PLANT

PLANT MANAGER PROCEDURE

Index

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PMP 2080 EPP.001	Emergency Plan Activation and Condition Classification	Revision 2 . 4-27-82	
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**INDIANA & MICHIGAN**  
ELECTRIC COMPANY  
**DONALD C. COOK NUCLEAR PLANT**

**PROCEDURE COVER SHEET**

Procedure No. PMP 2080 EPP.001

Revision No. 2

TITLE EMERGENCY PLAN ACTIVATION AND CONDITION  
CLASSIFICATION

SCOPE OF REVISION

Rev. 1: Complete Revision to clarify Operations responsibilities in case of emergency.

Rev. 2: Incorporated Temporary Sheets. Clarified Emergency Condition categories and activation of emergency centers.

**DCR**

MAY 05 1981

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
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INDIANA & MICHIGAN ELECTRIC COMPANY  
DONALD C. COOK NUCLEAR PLANT

EMERGENCY PLAN ACTIVATION AND CONDITION CLASSIFICATION

1.0 OBJECTIVES

The objectives of this procedure are to ensure that proper actions are taken to place the plant in a safe condition; minimize the hazard to the public and plant personnel; assist injured personnel; and obtain adequate support to cope with the emergency.

2.0 RESPONSIBILITIES

- 2.1 The Shift Supervisor is responsible for initiation of this procedure.
- 2.2 The Shift Supervisor shall act as the On-Site Emergency Coordinator (OSEC) until relieved of this responsibility as described in PMP 2080 EPP.015, Responsibilities of the On-Site Emergency Coordinator.
- 2.3 The Shift Technical Advisor (STA) is responsible for reviewing and making an independent diagnosis of plant conditions. The STA then determines whether operator responses are correct and advises the SS/OSEC accordingly.

3.0 APPLICABILITY

This procedure is to be initiated any time the S.S. recognizes the existence of, or potential for, off-normal conditions which may directly lead to, meet, or exceed the Emergency Action Levels shown in Exhibit A.

4.0 INSTRUCTIONS

- 4.1 Implement Abnormal and/or Emergency Operating Procedures as dictated by plant conditions or indications.
- 4.2 In the event of:
  - 4.2.1 Radiological Hazard requiring personnel to evacuate their work areas:
    - 4.2.1.1 Evacuate personnel by PA if the condition is local, or
    - 4.2.1.2 Evacuate by use of the Nuclear Emergency Alarm, if the condition includes significant portions of the plant, and initiate PMP 2081 EPP.005 Personnel Evacuation

- 4.2.2 Fire or Explosion: Sound the fire alarm and announce the condition over the P.A. Implement PMP 2080 EPP.009, Fire Emergency Guidelines.
- 4.2.3 Personnel Injury: Implement PMP 2080 EPP.014, Personnel Injury.
- 4.2.4 Toxic Gas Release: Implement PMP 2080 EPP.010, Toxic Gas Release.
- 4.2.5 Gaseous Release: Determine any off-site dose effects as per PMP-2080 EPP.006. Initial Dose Assessments (Gaseous).
- 4.2.6 Liquid Release: Notify the Chemical Lab to implement PMP 2080 EPP.007, Initial Release Assessments (Liquid).
- 4.2.7 Natural Emergency: Implement PMP 2080 EPP.011, Natural Emergency Guidelines.
- 4.3 Classify the Emergency Condition, using Exhibit A, according to the highest classification (Unusual Event, Alert, Site Emergency or General Emergency) the condition exceeds.
  - 4.3.1 In the event of :
    - 4.3.1.1 An Alert condition: Activation of the Technical Support Center (TSC) is required.
    - 4.3.1.2 A Site Emergency: Activation of the Emergency Control Center, Joint Public Information Center, the American Electric Power Emergency Response Organization, and the TSC is required.
    - 4.3.1.3 A General Emergency: Activation of the above centers is required. Additionally, the Berrien County Sheriff's Department and the Michigan State Police should be advised to recommend sheltering within a two mile radius of the plant and five miles downwind.

NOTE

See PMP 2080.EPP.015, Exhibit A, Responsibility of the On-Site Emergency Coordinator for a listing of on-site and off-site actions for each emergency condition.

- 4.4 Implement PMP 2080 EPP.008, Calling Off-Duty Plant Personnel.
- 4.5 Implement PMP 2080 EPP.012, Initial Off-Site Notifications if the Plant Manager or Operations Superintendent cannot be reached promptly.

- 4.6 Notify the NRC via red telephone within 1 hour. Be prepared to provide one person full time to communicate information over this phone to the NRC if so requested.
- 4.7 Be prepared to provide updates or additional information to the Michigan Department of Public Health if so requested.
- 4.8 Start trend blocks 12 through 16 on the Prodac. Start the TSC printers.
- 4.9 Upon arrival of support personnel:
  - 4.9.1 Activate the Technical Support Center Operation as per PMP 2081 EPP.020 by designating an interim TSC Manager.
  - 4.9.2 The SS shall continue to act as the On-Site Emergency Coordinator until appropriately relieved as per PMP 2080 EPP.015, Responsibilities of the On-Site Emergency Coordinator.
- 4.10 Continue to monitor plant conditions:
  - 4.10.1 Ensure notification of the Berrien County Sheriff's Department, Michigan State Police, and NRC if emergency classification changes.
  - 4.10.2 If significant state, local, and federal sources have been activated, attempt to obtain concurrence between all parties prior to de-escalation and entry into the recovery phase of operations.
- 4.11 Terminate use of this procedure when plant conditions are safe and/or within normal operating parameters.

EMERGENCY CONDITION CATEGORIES

ECC-1	Aircraft Crash or Missiles from any source
ECC-2	Control Room Evacuation
ECC-3	Earthquake
ECC-4	Explosion
ECC-5	Fire
ECC-6	Seiche
ECC-7	Security Threat or Compromise
ECC-8	Tornado or Severe Winds
ECC-9	Toxic Gas
ECC-10	Loss of AC Power
ECC-11	Loss of DC Power
ECC-12	Loss of Plant Shutdown Functions
ECC-13	Other Conditions or Systems required by Tech. Specs.
ECC-14	Fission Product) and Loss of Coolant Accident Barriers )
ECC-15	Fuel Damage
ECC-16	Loss of Secondary Coolant
ECC-17	Steam Generator Tube Rupture
ECC-18	Fuel Handling Accident
ECC-19	Radiation Releases
ECC-20	Personnel Injury
ECC-21	Other Hazards
ECC-22	Loss of Control Room Annunciators/Alarm
ECC-23	Liquid Release

ECC-1: AIRCRAFT CRASH OR MISSILES FROM ANY SOURCE

Unusual Event

1. Aircraft crash on-site.
2. Unusual aircraft activity by SS's judgment.

Alert

1. Aircraft crash in the protected area or switchgear 345KV, 765KV or Emergency power yards.
2. Missiles from any source landing in the protected area.

Site Emergency

1. Aircraft crash which, in the judgment of the SS, affects the Aux. Building or Containment.
2. Missile damage which, in the judgment of the SS, causes damage to safe shutdown equipment such that it cannot fulfill its safety function.

General Emergency

N/A

ECC-2: CONTROL ROOM EVACUATION

Unusual Event

N/A

Alert

1. Evacuation of Control Room is anticipated.
2. Evacuation of Control Room is required with control of unit shutdown systems at local station established within 15 minutes.

Site Emergency

1. The Control Room is evacuated and control of all the following systems or equipment is not established within 15 minutes:
  - a. Auxiliary Feedwater and
  - b. Boric Acid Transfer Pumps and
  - c. Pressurizer Heaters and
  - d. Atmospheric Steam Dump Valves and
  - e. Charging Pumps and
  - f. Charging Flow Control Valve and
  - g. Letdown Isolation Valves.

General Emergency

N/A

ECC-3: EARTHQUAKE

Unusual Event

1. Any actuation of seismic instrumentation that is verified to be the result of an earthquake.

Alert

1. Earthquake that is readily felt but does not cause observable damage to the plant or surrounding structures.

Site Emergency

1. Earthquake that is of sufficient magnitude to cause significant damage to the plant or surrounding structures. It may cause an automatic trip of the reactor and/or turbine due to equipment or instrumentation malfunctions.

General Emergency

N/A



ECC-4: EXPLOSION

Unusual Event

1. Any explosion Near or On Site

Alert

1. Explosion damage to the plant affecting unit operation or offsite power supplies.

Site Emergency

1. Explosion damage which, in the judgment of the SS, causes damage to safe shut-down equipment such that it cannot fulfill its safety function.

General Emergency

N/A

ECC-5: FIRE

Unusual Event

1. Any significant fire lasting more than 10 minutes on plant site (protected area) or switchgear yards.

Alert

1. Fire potentially affecting safety systems as judged by the SS.

Site Emergency

1. Fire affecting any safety system as judged by the SS.

General Emergency

N/A

ECC-6: SEICHE

Unusual Event

1. Lake level deviation, from operating levels (on screen house water level monitor) by more than 5 ft. up or down but less than 8 ft. up or down.

Alert

1. Screen house level indication shows a deviation between 8 ft. and 11 ft.

Site Emergency

1. Screen house level indication shows a deviation greater than 11 ft.

General Emergency

N/A

ECC-7: SECURITY THREAT OR COMPROMISE

Unusual Event

1. Security threat, attempted entry, or attempted sabotage in the judgment of the SS and/or shift security supervisor.

Alert

1. Ongoing security compromise in the judgment of the SS and/or shift security supervisor.

Site Emergency

1. Loss of physical control of the facility is likely in the judgment of the SS based on the advice of the shift security supervisor.

General Emergency

1. Loss of physical control of the facility as determined by the S.S. based on advice from the shift security supervisor.

ECC-8: TORNADO OR SEVERE WINDS

Unusual Event

1. Any tornado near or on site.

Alert

1. Tornado damage to the plant affecting unit operation or offsite power supplies.
2. Sustained winds in excess of 85 mph.

Site Emergency

1. Sustained winds in excess of 100 mph.

General Emergency

N/A

ECC-9: TOXIC GAS

Unusual Event

1. Near or on-site toxic or flammable gas release.

Alert

1. Entry into the protected area of lethal or concentrated volumes of toxic or flammable gas.

Site Emergency

1. Entry into vital areas of lethal or concentrated volumes of toxic or flammable gas which in the judgment of the SS affects operation of the safe shutdown equipment.

General Emergency

N/A

ECC-10: LOSS OF AC POWER

Unusual Event

1. Loss of all off-site power or loss of all on-site AC power supplies.

Alert

1. Loss of all off-site power supplies with  
a) rapid increase of primary to secondary  
tube leakage to several gpm, and b) off-  
scale readings on R-15 (SJAЕ Monitor), and  
c) large increase on Steam Generator Blow-  
down Monitor R-19, and d) confirmation of  
high radiation levels.
2. Loss of off-site power and loss of on-site AC  
power capacity as indicated by failure of  
Emergency Diesel Generators to start, and load  
ammeters for buses 1A, 1B, 1C, 1D for Unit 1  
and buses 2A, 2B, 2C, 2D for Unit 2 are at zero.

Site Emergency

1. Loss of off-site power is indicated by all  
ammeters for the 4160 buses reading 0 amps;  
and

Steam Generator tube rupture indicated by  
readings on the Condenser Air Ejector Moni-  
tor (R-15) greater than  $1 \times 10^6$  cpm and  
these readings have been confirmed; and

SI initiated by the Engineered Safety Fea-  
ture Actuation System

2. Ammeters for 4160V buses all read 0 amps, and  
Voltsmeters for 4160 V buses read 0 volts, and  
Above conditions last for more than 15 minutes.

General Emergency

N/A



ECC-11: LOSS OF DC POWER (A & B TRAIN BATTERIES)

Unusual Event

N/A

Alert

1. All battery voltmeters read zero, and  
board indicating lights are off.

Site Emergency

1. All battery voltmeters indicate 0 volts and  
no indication of availability of backup DC  
voltage, and the condition lasts for more  
than 15 minutes.

General Emergency

N/A

ECC-12: LOSS OF PLANT SHUTDOWN FUNCTIONS

Unusual Event

1. Plant shutdown as required by Technical Specification for loss of essential assessment or communication capabilities, such as:
  - a. Reactor trip instrumentation
  - b. Engineered Safety Feature Actuation Instrumentation
  - c. Radiation Monitoring Channels
  - d. Post Accident Monitoring Channels
  - e. Essential communication to off-site authorities including back-up capability.

Alert

1. Loss of all Residual Heat Removal (RHR) pumps, heat exchangers and/or controls, with loss of all auxiliary feedwater capacity needed.

Site Emergency

1. Loss of all the following systems, equipment or controls:
  - a. Auxiliary Feedwater System
  - b. Boric Acid Transfer Pumps
  - c. Pressurizer Heaters
  - d. Atmospheric Steam Dump Valve
  - e. Charging Pumps
  - f. Letdown Isolation Valves or Letdown Flow Control

General Emergency

N/A

ECC-13: OTHER CONDITIONS OR SYSTEMS REQUIRED BY TECHNICAL SPECIFICATIONS

Unusual Event

1. ECCS initiation by valid signal as listed in Technical Specifications Tables 3.3-3 and 3.3-4.
2. Environmental Technical Specification 2.4.1 (liquid waste effluent limits) or 2.4.3 (gaseous effluent limits) possibly have been exceeded with verification by Radiation Protection analysis, as indicated by readings on any of:
  - a. Condenser air ejector monitor (R-15)  
exceeds  $1 \times 10^6$  cpm
  - b. WDS liquid effluent monitor (R-18)  
exceeds  $1 \times 10^4$  cpm
  - c. Blowdown Liquid Monitor (R-19)  
exceeds  $1 \times 10^4$  cpm
  - d. ESW monitors (R-20 and R-28) exceed  
300 cpm
  - e. Blowdown treatment monitor (R-24)  
exceeds  $7 \times 10^4$  cpm
  - f. Unit vent air particulate (R-25)  
exceeds  $1.3 \times 10^4$  cpm
  - g. Unit vent gas monitor (R-26)  
exceeds:  
  
 $1 \times 10^4$  cpm (fresh gas) or  
 $1 \times 10^3$  cpm (old gas)

## EXHIBIT A

ECC-13: OTHER CONDITIONS OR SYSTEMS REQUIRED BY TECHNICAL SPECIFICATIONS (CONT'D)

Use the "old gas" criterion for:

1. Release originating from a gas decay tank shown by unexplained GDT pressure decrease seen on recorders MR058 or MR059.
2. Release originating from a CVCS holdup tank, shown by unexplained CVCS holdup tank header pressure decrease (QPA 600) and possibly excessive cover gas demand.

Use "fresh gas" condition for:

1. Releases from sources other than those listed above.

- h. Unit vent radio-iodine (R-32) exceeds  $2 \times 10^3$  cpm

NOTE

Before applying this criterion, ensure the "window" selector is set to .4, and the "input mode" (iodine) selector is set to N.

3. Abnormal coolant temperature, pressure, and/or abnormal fuel temperatures exceeding Technical Specification 2.1.1 or 2.1.2 safety limits exceeded and exceeding Limiting Safety Systems Settings listed in Technical Specification 2.2.1, without a unit trip, with the excursion confirmed.

ECC-13 OTHER CONDITIONS OR SYSTEMS REQUIRED BY TECHNICAL SPECIFICATIONS (CONT'D)

4. Containment integrity Technical Specifications exceeded with a unit shutdown required by the associated Technical Specification.
5. Engineered Safety Features or Fire Protection System causing unit shutdown due to associated action statement in the applicable Technical Specification caused by malfunction, procedural error, or personnel error.
6. Reactor Coolant Leakage exceeds Tech. Spec. 3.4.6.2 and the Unit is shut down for this reason.

Alert

1. Radiation monitoring channels exceed indicated levels with confirmational analysis by radiation protection.
  - a. R-1 (Control Room Area Monitor) exceeds 10mR/hr.
  - b. R-3 (Radiochemistry Lab) exceeds 100 mR/hr.
  - c. R-4 (Charging Pump Room) exceeds 1 R/hr.
  - d. R-5 (Spent Fuel Area) exceeds 100 mR/hr.
  - e. R-6 (Nuclear Sampling Room) exceeds 1 R/hr.
  - f. R-26 (Unit Vent Gas Monitor) exceeds  $10^5$  cpm.
2. Failure of the reactor trip logic to provide a reactor trip when a signal is received for a setpoint as listed in Technical Specification Table 2.2-1, with rod indication showing no trip has occurred and manual trip circuitry fails to provide a trip.
3. Analysis of effluent samples confirms that instantaneous limits stated in Environmental Technical Specification 2.4.1 and 2.4.3 have been exceeded by a factor of 10.

Site Emergency

N/A

General Emergency

N/A

ECC-14: FISSION PRODUCT BARRIERS/LOSS OF COOLANT

Unusual Event

1. Technical Specification Limits 3.4.6.2a, b, c, & d are exceeded and the unit is shutdown for these reasons.
2. Pressurizer safety valves or power operated relief valves stay open as indicated by temperature in the line and by the acoustic monitor.

Alert

1. Rapid increase of primary to secondary leakage to several gpm with off-scale readings on steam jet air ejector monitor (R-15) and large increase on steam generator blowdown monitor R-19 with confirmation of high radiation levels and with loss of off-site power.
2. Large primary to secondary leak rate likely as indicated by an increase to maximum of charging flow and off-scale radiation readings on R-15 and R-19 confirmed.
3. Steam line break as indicated by a Safety Injection (SI) for Technical Specification listed in Table 3.3-4 with primary to secondary leak rate in excess of 10 gpm as calculated by the most recent leak rate.
4. Primary Coolant leak rate is too high for one charging pump to maintain level in pressurizer above 22% (leak rate is greater than 50 gpm over that total allowed in Technical Specification 3.4.6.2), or a second charging pump has to be started to maintain pressurizer level above 22%.

Site Emergency

1. Safety Injection (SI) initiation followed by containment spray (and Phase B) initiation due to high (2.9 psig) containment pressure, with increasing containment sump levels and increasing radiation levels in containment.

General Emergency

1. Loss of 2 out of 3 fission product barriers with a potential loss of the third barrier.
  - a. Confirmed loss of core geometry, and
  - b. Confirmed loss of Reactor Coolant System integrity, and
  - c. High potential for loss of Containment integrity

ECC-15: FUEL DAMAGE

Unusual Event

1. Unit is shutdown as required by Tech. Spec. 3.4.8.
2. An increase in failed fuel detector gross gamma readings to off-scale and by chemical laboratory analysis indicating an increase of greater than .1% failed fuel within 30 minutes.

Alert

1. Very high coolant activity (exceeds 300  $\mu\text{Ci/cc}$  dose equivalent Iodine).
2. A sudden increase in possible failed fuel as indicated by a rapid gross gamma reading increase on failed fuel monitor and rapid increase on Charging Pump Room Area Monitor radiation levels.
3. Loss of flow in one or more reactor coolant loops initiates a reactor trip (manual below 50% power) followed by specific activity of the primary coolant increasing to greater than 300  $\mu\text{Ci/cc}$  equivalent of I-131.

Site Emergency

1. Core saturation curve or core subcooling monitor indicates subcooling of 0°F or less and this reading is confirmed.

General Emergency

N/A



ECC-16: STEAM LINE BREAK

Unusual Event

1. Steam generator safety valves, or power operated relief valves stay open with significant gpm primary to secondary leakage existing as indicated by off-scale readings on condenser air ejector and gland steam seal radiogas monitors.

Alert

1. Steam line break as indicated by a safety injection with primary to secondary leak rate in excess of 10 gpm as per latest calculated rate.
2. Steam line break with failure of steam line isolation valve to close as indicated by continued high steam line flow on the flow meters.

Site Emergency

1. Steam line break as indicated by any of following SI conditions: High steam line flow coincident with steam line pressure or coincident with Low Tavg, or high differential pressure between steam generators (both units), or  
low pressurizer press (both units) as per Technical Specification Table 3.3-4 setpoints, and
2. Calculated primary to secondary leak of 50 gpm, and
3. Fuel damage as indicated by Reactor Coolant dose equivalent I-131 greater than 300  $\mu$ c/g.

General Emergency

N/A

ECC-17: STEAM GENERATOR TUBE RUPTURE

Unusual Event

1. Tech. Spec. 3.4.6.2.c exceeded.

Alert

1. Primary to secondary leak rate in excess of 10 gpm as per latest calculated rate with steam line break as indicated by a Safety Injection (SI) for Technical Specification listed in Table 3.3-4.
2. Rapid increase of primary to secondary leakage to several gpm with off-scale readings on Steam Jet Air Ejector Monitor (R-15) and large increase on Steam Generator Blowdown Monitor (R-19) and confirmed high radiation levels with loss of off-site power.
3. Large primary to secondary leak rate likely as indicated by an increase to maximum of charging flow and off-scale radiation readings on R-15 and R-19 confirmed.

Site Emergency

1.
  - a. Steam generator tube rupture indicated by reading on the Steam Jet Air Ejector Monitor (R-15) greater than  $1 \times 10^6$  cpm and these readings have been confirmed; and
  - b. SI initiated by the Engineered Safety Feature Actuation System; and
  - c. Loss of off-site power is indicated by all ammeters for the 4160 volt buses reading 0 amps.
2.
  - a. Calculated primary to secondary leak of 50 gpm; and
  - b. Steam line break as indicated by any of the following SI initiating conditions: High steam line flow coincident with low steam line pressure or coincident with Low Tavg, or high differential pressure between steam generators (both units) or low pressurizer pressure (both units) as per Technical Specification Table 3.3-4 setpoints, and
  - c. Fuel damage indicated by Reactor Coolant dose equivalent I-131 greater than 300  $\mu$ c/g.

General Emergency

N/A

ECC-18 FUEL HANDLING ACCIDENT

Unusual Event

N/A

Alert

1. If an apparent accident occurs and containment area monitor (R-2) shows a reading 100 times previous reading while handling fuel during re-fueling, or R-5 (spent fuel area monitor exceeds 100 times previous reading while moving fuel or objects over spent fuel pit. Analysis confirms fuel failure by detection of fission products.

Site Emergency

1. A heavy object (Technical Specification 3.9.7) impacts spent fuel while the spent fuel is in containment or in the spent fuel pit.
2. Water level in the vessel or spent fuel pit drops below the top of the fuel.

General Emergency

N/A

ECC-19: RADIATION RELEASE

Unusual Event

See also ECC-13 for classifications of specific RMS monitor readings.

Alert

See also ECC-13 for classifications of specific RMS monitor readings.

1. Measured or projected dose rate of 2 mR/hr whole body at site boundary under existing weather conditions.

Site Emergency

1. Measured or projected dose rate of  
50 mR/hr whole body or  
250 mR/hr thyroid  
at the site boundary under existing weather conditions.

General Emergency

1. Measured or projected dose rate of  
250 mR/hr whole body or  
1250 mR/hr thyroid  
at the site boundary under existing conditions.

ECC-20: PERSONNEL INJURY

Unusual Event

1. Transportation of contaminated individual(s) to off-site hospital.
2. Any fatality, or serious injury occurring on site requiring a stay at a medical facility in excess of 48 hours.
3. Any serious personnel radioactive contamination requiring extensive on-site decontamination or outside assistance.

Alert

N/A

Site Emergency

N/A

General Emergency

N/A

ECC-21: OTHER HAZARDS

Unusual Event

1. Turbine failure with resulting damage but not penetrating outside turbine housing.
2. Rapid uncontrolled depressurization of the secondary side.
3. Unit is shut down in an uncontrolled manner or conditions exist which might escalate to a more severe class; such as, uncontrolled rod withdrawal, dropped RCCA assembly or bank, uncontrolled dilution, loss of one or more Reactor Coolant Pumps above 50% power, loss of load, loss of normal feedwater or malfunction (overcooling, excessive load increase), inactive RCS loop startup, steam line break.

Alert

1. Other plant conditions exist that warrant precautionary activation of Technical Support Center and near-site emergency operations center, as per SS judgment.
2. Turbine failure causing damage as judged by the SS penetration outside turbine housing.

Site Emergency

1. SS judgment, i.e., a less severe emergency class has escalated to meet Site Emergency criteria.

General Emergency

1. Loss of Coolant Accident (LOCA), (large or small), with the failure of the Emergency Core Cooling System (ECCS) to function leading to severe core degradation or melt. With core melt sequences, ultimate containment failure likely with several hours available for response.
2. Transient due to loss of the Feedwater System or Condensate System followed by the failure of the Auxiliary Feedwater System for an extended period. Core melting is possible in several hours with ultimate containment failure likely if core melts.

(Cont'd)

ECC-21: OTHER HAZARDS (CONT'D)

3. Transient condition requiring operation of Reactor Protection System with a failure to trip the reactor followed by a failure of ECCS and makeup system which would lead to a core melt.
4. Failure of offsite and onsite power along with total loss of emergency feedwater capability for several hours which would lead to eventual core melt and likely containment failure.
5. Small LOCA with initial ECCS actuation successful with subsequent failure of containment heat removal systems. Ultimate core melting is likely with probable containment failure.



ECC-22: LOSS OF CONTROL ROOM ANNUNCIATORS/ALARMS

Unusual Event

N/A

Alert

1. All annunciator panels in Control Room non-functioning.
2. The unit is undergoing a transient while the annunciators are inoperable.

Site Emergency

N/A

General Emergency

N/A

ECC-23: LIQUID RELEASE

Unusual Event

1. Environmental Technical Specification 2.4.1 (liquid waste effluent limits) or 2.4.3 (gaseous effluent limits) exceeded with verification by radiation protection analysis.

Alert

1. Radioactive liquid effluent releases which exceed 10 X Technical Specification limits.

Site Emergency

1. Radioactive liquid effluent releases which for a single isotope or mixed isotopes exceeds 50 X MPC in water (averaged over 24 hours).

General Emergency

1. Radioactive liquid effluent releases which for a single isotope or mixed isotopes exceeds 500 X MPC in water (averaged over 24 hours).

**INDIANA & MICHIGAN**  
**ELECTRIC COMPANY**  
**DONALD C. COOK NUCLEAR PLANT**

**PROCEDURE COVER SHEET**

Procedure No. PMP 2080.EPP.008

Revision No. 1

TITLE CALLING OFF-DUTY PLANT PERSONNEL

SCOPE OF REVISION

Rev. 1 - Added Graphical Phone Tree. Clarified assembly and call in,  
 activate call list on TSC manning not Nuclear Emergency Alarm.

**DCR**

MAY 05 1981

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	T. Duffy R. Keith	<i>[Signature]</i>		
QUALITY ASSURANCE REVIEW	J. Stietzel	<i>[Signature]</i>		
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.	NA		
DEPARTMENT HEAD APPROVAL	N.A.	NA		
PLANT NUCLEAR SAFETY COMMITTEE	R. Keith	<i>[Signature]</i>		
PLANT MANAGER APPROVAL	B. Svensson	<i>[Signature]</i>		
DATE OF ISSUE	3-31-81	4-29-82		

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INDIANA & MICHIGAN ELECTRIC COMPANY  
DONALD C. COOK NUCLEAR PLANT

CALLING OFF-DUTY PLANT PERSONNEL

1.0 OBJECTIVES

The objective of this procedure is to provide the information that is necessary to summon off-duty plant personnel during emergency conditions.

2.0 RESPONSIBILITIES

The Shift Supervisor (SS)/On-Site Emergency Coordinator (OSEC) is responsible for initiating the emergency call list and providing the required information to the parties called in.

3.0 APPLICABILITY

This procedure applies to any plant emergency event which requires off-duty plant personnel notification. The procedure may be implemented anytime the SS/OSEC determines that it is necessary that on-site emergency personnel resources be augmented by off-duty plant personnel.

4.0 INSTRUCTIONS

- 4.1 Identify the appropriate assembly location for reporting off-duty personnel. This would normally be the Technical Support Center and Control Room.

NOTE: THE PRIMARY ASSEMBLY AREA FOR OFF-DUTY REPORTING, IN THE EVENT OF RADIOLOGICAL EMERGENCIES, IS THE GUARD HOUSE AT I-94 ON THE PLANT ACCESS ROAD. THE ALTERNATE ASSEMBLY AREA IS AT THE STEVENSVILLE SUB-STATION.

- 4.2 Identify appropriate reporting routes.

- 4.3 Determine any immediate requirements for off-duty personnel.

- 4.4 Initiate the predetermined calling sequences for off-duty plant personnel.

NOTE: CALL SEQUENCES ARE SHOWN ON: EXHIBIT A, EMERGENCY CALL LIST FOR EMERGENCIES REQUIRING ACTIVATION OF THE TECHNICAL SUPPORT CENTER. TELEPHONE NUMBERS ARE IN APPENDIX A. EXHIBIT A ALSO CONTAINS A GRAPHICAL REPRESENTATION OF THE PHONE TREE.

- 4.5 Items 1 thru 5 on attached checklist in EXHIBIT B should be used as a guide regarding the information to be supplied.
- 4.6 Alert plant security to set up the Assembly Area for immediate processing of the arriving off-duty personnel if needed.

NOTE: TO PROVIDE RAPID NOTIFICATION OF DEPARTMENTAL PERSONNEL, DEPARTMENT SUPERVISORS MAY ESTABLISH DEPARTMENTAL CALL TREES OR DELEGATE NOTIFICATION TO OTHER DEPARTMENTAL PERSONNEL.

EMERGENCY CALL LIST  
FOR EMERGENCIES REQUIRING ACTIVATION OF THE TSC

When the individuals listed below are notified of an emergency, they in turn will notify other personnel who have been assigned emergency functions or are needed to combat the emergency; for example, after the Shift Supervisor is notified, he will notify either the Plant Manager or the Operations Superintendent who in turn will notify the others. When the caller cannot reach the person called, he must assume responsibility for calling those persons in the next level of the telephone chain.

NOTE: TELEPHONE AND CALL NUMBERS ARE IN APPENDIX A.

Person to Make Call

Shift Supervisor

Persons To Be Called

Plant Manager  
or  
Operations Superintendent

NOTE: PERSON RECEIVING THE CALL NOTIFIES THE OTHER.

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Plant Manager

\*Michigan State Police  
\*Berrien County Sheriff's Dept.  
\*NRC (Resident Inspector)  
Public Affairs  
AEPSC (Asst. V.P. & Chief Nuc. Eng.)  
I & M Elect. Co. (Executive Assistant  
to the Pres.)

NOTE: \*May be delegated to S.S. or S.S. may initiate if, in his judgement, the Plant Manager will not be able to promptly notify these agencies. The S.S. will make the initial NRC notification via the "Red Phone".

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Operations  
Superintendent

Assistant Plant Manager (APM)  
(Technical Support Center,  
Manager)  
Production Supervisors (Ops.)  
Technical Superintendent  
Board Writer and C.R. Talker

NOTE: THE ALERTED APM NOTIFIES THE REMAINING APM. THE OPERATIONS SUPERINTENDENT WILL INDICATE TO APM AND THE TECHNICAL SUPERINTENDENT THE EXTENT OF CALL LIST TO BE ACTIVATED BASED ON EMERGENCY CONDITIONS AND NEEDS.

EMERGENCY CALL LIST (CONT'D)

FOR EMERGENCIES REQUIRING ACTIVATION OF THE TSC

Person to Make Call

Assistant Plant Manager (APM)

Persons To Be Called

Assistant Plant Manager

Maintenance Superintendent

Chief Security Supervisor

Training Coordinator

---

Technical Superintendent

Production Supervisor Technical

Performance Supervising Engineer

Plant R. P. Supervisor

Environmental Coordinator

C & I Engineer

Computer Nuclear Supervisor

Plant Chemical Supervisor

Communicators

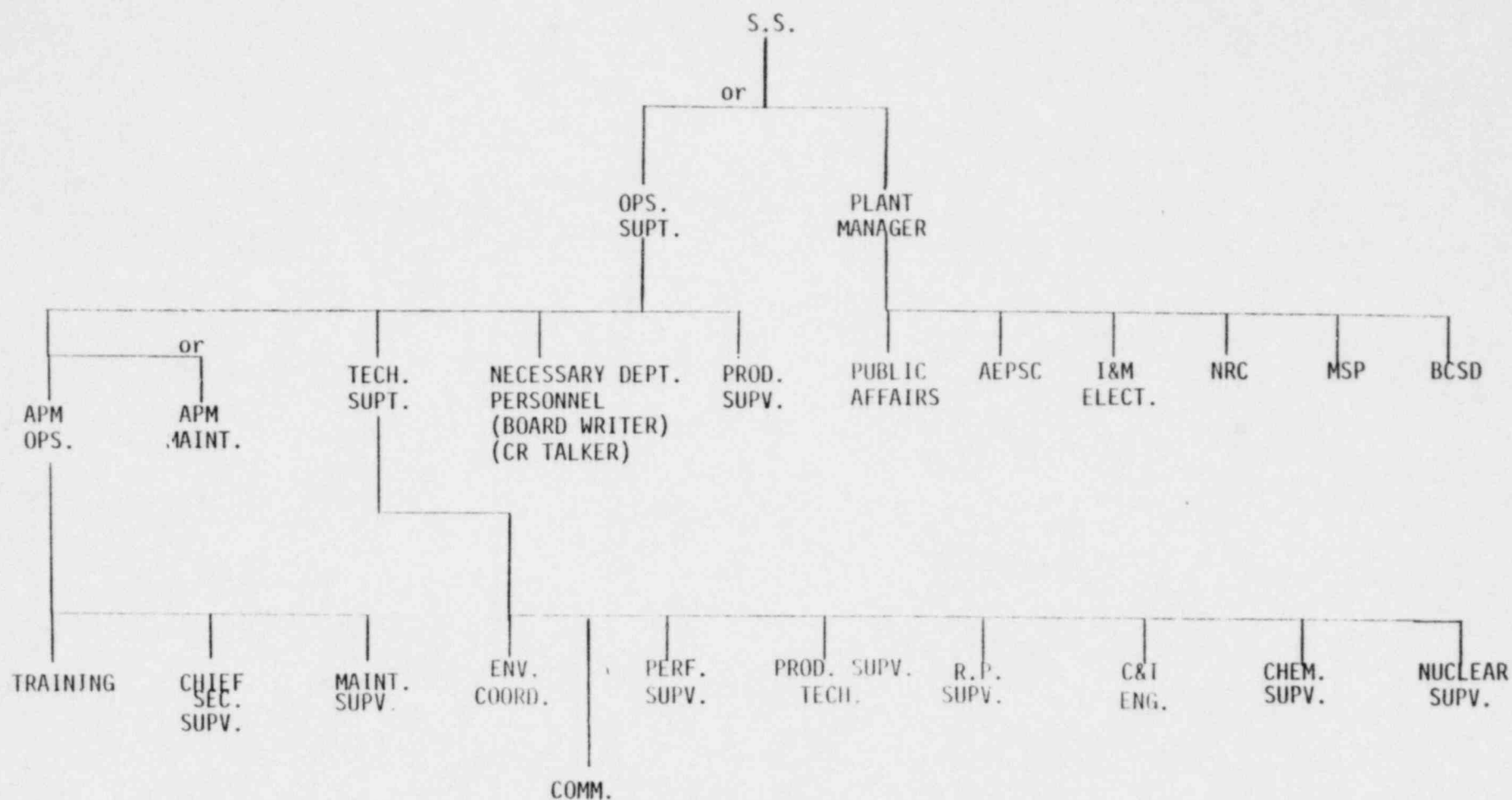
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NOTE: EACH TECHNICAL DEPARTMENT SECTION HEAD WILL CALL IN NECESSARY PERSONNEL FROM THEIR RESPECTIVE SECTION. THE TRAINING COORDINATOR WILL CALL ON NECESSARY PERSONNEL TO ADEQUATELY OPERATE NECESSARY COMMUNICATION LINKS.

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GRAPHICAL PHONE TREE



OFF-DUTY NOTIFICATION CHECKLIST

Plant Manager or Operations Superintendent notified of the following information:

\_\_\_\_\_

Information given to responding personnel:

1. \_\_\_\_\_ Emergency was declared at \_\_\_\_\_  
(Classification) (Time)
2. \_\_\_\_\_  
(Nature of incident and status of plant)  
\_\_\_\_\_
3. Personnel resources needed on high priority \_\_\_\_\_
4. A release to the environment has not occurred \_\_\_\_; has occurred \_\_\_\_: is  
occurring \_\_\_\_; may occur \_\_\_\_.
5. Project Dose Rates at or near the site boundary are \_\_\_\_\_  
\_\_\_\_\_
6. Report to: Security Control Center \_\_\_\_; I-94 Guard House \_\_\_\_;  
Stevensville Substation \_\_\_\_; Operations Staging Area \_\_\_\_; Technical  
Support Center \_\_\_\_; via \_\_\_\_\_  
(Route)

**INDIANA & MICHIGAN**  
ELECTRIC COMPANY  
**DONALD C. COOK NUCLEAR PLANT**

**PROCEDURE COVER SHEET**

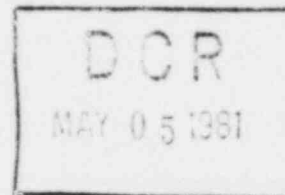
Procedure No. PMP 2080 EPP.012

Revision No. 1

TITLE INITIAL OFF-SITE NOTIFICATIONS

SCOPE OF REVISION

Rev. 1: Incorporated Temporary Sheets. Revised Exhibit A and B.



SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	J.P. DUFFY <sup>NWB</sup>	Richard Regan		
QUALITY ASSURANCE REVIEW	<i>[Signature]</i>	<i>[Signature]</i>		
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.	N.A.		
DEPARTMENT HEAD APPROVAL	N.A.	N.A.		
PLANT NUCLEAR SAFETY COMMITTEE	<i>[Signature]</i>	E. J. Townley		
PLANT MANAGER APPROVAL	<i>[Signature]</i>	<i>[Signature]</i>		
DATE OF ISSUE	3-31-81	4-27-82		

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INDIANA & MICHIGAN ELECTRIC COMPANY  
DONALD C. COOK NUCLEAR PLANT

1.0 OBJECTIVE

This procedure provides guidance to the Plant Manager or Shift Supervisor regarding initial information supplied to off-site support groups. This information is to be supplied upon declaration of an Unusual Event, Alert, Site Emergency, or General Emergency condition.

2.0 RESPONSIBILITIES

- 2.1 The Plant Manager is responsible for the accomplishment of initial off-site notifications to individuals or agencies specified in this procedure.
- 2.2 The Shift Supervisor is responsible for the initial notifications to individuals or agencies specified in this procedure if:
  - a. In the Shift Supervisor's judgement, the Plant Manager will be unable to complete the notifications in a timely manner, or
  - b. The Shift Supervisor is delegated this responsibility by the Plant Manager.

3.0 LIMITATIONS

- 3.1 Initial notification to the Michigan State Police and the Berrien County Sheriff's Department of an Unusual Event is expected to be completed within 60 minutes of event classification.
- 3.2 Initial notifications to the Michigan State Police and the Berrien County Sheriffs Department shall be immediate upon classification of an Alert, Site Emergency or General Emergency Condition and notification of the NRC and appropriate AEP personnel.

4.0 INSTRUCTIONS

- 4.1 Upon declaration of an Unusual Event, Alert, Site Emergency or General Emergency the Plant Manager or SS shall provide all immediately available information from EXHIBIT A, ACCIDENT INFORMATION REPORTING DATA SHEET, to those listed on EXHIBIT B, INITIAL OFF-SITE NOTIFICATION LIST.

NOTE: EXHIBIT A AND EXHIBIT B SHOULD BE COMPLETED AND ROUTED TO THE PLANT MANAGER'S OFFICE UPON EVENT CLOSE-OUT. ✓

NOTE: PHONE NUMBERS FOR ALL PERSONNEL ARE CONTAINED IN APPENDIX A OF THESE EMERGENCY PLAN PROCEDURES.

NOTE: IF PUBLIC AFFAIRS AND NRC AGREE A NEWS RELEASE IS TO BE MADE, THE NUCLEAR CENTER WILL PROVIDE THE RELEASE TO THE MICHIGAN STATE POLICE, THE BERRIEN COUNTY SHERIFF'S DEPARTMENT AND THE NEWS MEDIA.

ACCIDENT INFORMATION REPORTING DATA SHEET

D.C. Cook Unit \_\_\_\_\_ Date \_\_\_\_\_ Time Classified \_\_\_\_\_

Classification \_\_\_\_\_ Classified By \_\_\_\_\_

Description of Event \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Time of Actual Or Projected Release \_\_\_\_\_ Estimation Of Duration Of Release \_\_\_\_\_

Release Involved: Yes \_\_\_\_\_ No \_\_\_\_\_

Release Rate: Noble Gas \_\_\_\_\_ Ci/sec Release Height: Ground Level \_\_\_\_\_  
Iodine \_\_\_\_\_ Ci/sec

Meteorological Conditions: Wind Speed (mph) \_\_\_\_\_  
Wind Direction: From \_\_\_\_\_ To \_\_\_\_\_  
Stability Class:  $\Delta T$  \_\_\_\_\_ Pasquill Cat. \_\_\_\_\_  
Precipitation \_\_\_\_\_

Projected Dose At:

	Site Boundary	2 Miles	5 Miles	10 Miles
Dose Rate, Whole Body	_____	_____	_____	_____
Integrated Dose, Whole Body	_____	_____	_____	_____
Dose Rate, Thyroid	_____	_____	_____	_____
Integrated Dose, Thyroid	_____	_____	_____	_____
Sectors Affected	_____	_____	_____	_____

Injured Personnel \_\_\_\_\_ Radioactivity Contaminated \_\_\_\_\_

Off-Site Emergency Protective Actions Recommended \_\_\_\_\_  
\_\_\_\_\_

Off-Site Support Requested \_\_\_\_\_ Type \_\_\_\_\_

Prognosis For Termination Or Worsening \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INITIAL OFF-SITE NOTIFICATION LIST

Event Classification: Unusual Event \_\_\_\_\_  
Alert \_\_\_\_\_  
Site Emergency \_\_\_\_\_  
General Emergency \_\_\_\_\_

	<u>Event Notification</u> <u>Initials/Time</u>	<u>Event Closed-Out</u> <u>Or Upgraded</u> <u>Initials/Time</u>
Berrien County Sheriff's Department REQUEST CALL BACK VERIFICATION	_____	_____
Michigan State Police, Benton Harbor REQUEST CALL BACK VERIFICATION	_____	_____
Assistant V.P. and Chief Nuclear Engineer Alternate: Assistant Chief Nuclear Engineer Alternate: Executive V.P. - Construction and New York Engineering	* _____	_____
Executive Assistant to the I&MECo President Alternate: I&MECo President Alternate: I&MECo V.P.	* _____	_____
NRC Resident Inspector Alternate: Assistant NRC Resident Inspector	_____	_____
NRC Region III/Washington	_____	_____
Energy Information Center Manager Alternate: Public Affairs Director Alternate: Information Services Manager	_____	_____

\*Optional For Unusual Event

**INDIANA & MICHIGAN**  
ELECTRIC COMPANY  
**DONALD C. COOK NUCLEAR PLANT**

**PROCEDURE COVER SHEET**

Procedure No. PMP-2080 EPP.015

Revision No. 1

TITLE RESPONSIBILITIES OF THE ON-SITE EMERGENCY COORDINATOR

SCOPE OF REVISION

Revision 1 - Clarified the responsibilities of the OSEC to include activation of emergency centers. Also, referenced PMP 2080 EPP.006, Initial Dose Assessment and PMP 2080 EPP.012, Initial Off-Site Notifications. Added Exhibit A.

D C R  
MAY 05 1981

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	<i>Richard Egan</i>	<i>Richard Egan</i>		
QUALITY ASSURANCE REVIEW	<i>J. B. Smith</i>	<i>J. B. Smith</i>		
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.	N.A.		
DEPARTMENT HEAD APPROVAL	N.A.	N.A.		
PLANT NUCLEAR SAFETY COMMITTEE	<i>B. A. Hansen</i>	<i>Richard</i>		
PLANT MANAGER APPROVAL	<i>D. V. Shalle</i>	<i>E. L. Townley</i>		
DATE OF ISSUE	10-27-81	4/29/82		



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INDIANA & MICHIGAN ELECTRIC COMPANY  
DONALD C. COOK NUCLEAR PLANT

RESPONSIBILITIES OF THE ON-SITE EMERGENCY COORDINATOR

1.0 OBJECTIVES

This procedure describes the responsibilities of and line of succession to the On-Site Emergency Coordinator.

2.0 RESPONSIBILITY

The On-Site Emergency Coordinator (OSEC) is responsible for overall plant emergency response functions. As such, the OSEC is responsible for:

- Declaration of an Emergency Condition
- Determination of Protective Actions
- Ensuring Prompt Notification of emergency classification and appropriate protective actions to off-site authorities.
- Overall management of site resources in response to the emergency
- Declaration of entry into a recovery phase (de-escalation of event classification of operations).

The OSEC is additionally responsible for ensuring activation of:

- The Technical Support Center for an Alert Classification.
- The Joint Public Information Center, the American Electric Power Emergency Response Organization, and the Emergency Control Center for a Site Emergency Classification

The S.S. is the individual on site at all times who has the responsibility and authority to carry out the functions of the OSEC. The SS is superseded as the OSEC by senior company personnel as they arrive on site, as follows:

- Executive Vice President - Construction and New York Engineering
- Assistant Vice President and Chief Nuclear Engineer
- D. C. Cook Plant Manager
- Assistant Plant Manager in order of Seniority
- Operations Superintendent
- Production Supervisor of Affected Unit

3.0 APPLICABILITY

This procedure is applicable upon activation of the Emergency Plan.

#### 4.0 ACTIONS

NOTE: See Exhibit A for a summary of each emergency classification; including definition, dose levels, Cook Plant actions, and offsite authority actions.

4.1 The S.S. shall act as the On-Site Emergency Coordinator until relieved of this responsibility by the Plant Manager or his designated alternate, or the emergency condition terminated.

4.1.1 The SS/OSEC shall implement PMP 2080 EPP.001.

4.1.2 If protective actions of the public are appropriate, as determined by PMP 2080 EPP.006, the SS/OSEC shall ensure immediate notification of the Michigan State Police and the Berrien County Sheriff's Department.

4.1.3 The SS/OSEC shall insure implementation of PMP 2080 EPP.012, Initial Off-Site Notifications.

4.2 The Plant Manager or his designated alternate shall replace the SS as OSEC until relieved by the Vice President - Construction and New York Engineering, or the emergency condition terminated.

4.2.1 The PM/OSEC shall additionally implement the below listed procedures as appropriate:

4.2.2 The PM/OSEC shall, after consultation with Federal, State, and County officials, de-escalate emergency classifications thereby entering the recovery stage of operations.

4.2.1.1 PMP 2081 EPP.001 Emergency Telephone Communications

4.2.1.2 PMP 2081 EPP.002 Barring of the PABX

4.2.1.3 PMP 2081 EPP.003 Follow-Up of Off-Site Communications

4.2.1.4 PMP 2081 EPP.004 Protective Action Guides (PAGs) and Protective Actions

4.2.1.5 PMP 2081 EPP.005 Personnel Evacuation

4.2.1.6 PMP 2081 EPP.006 Activation of the Re-entry and Rescue Team

4.2.1.7 PMP 2081 EPP.007 Security Actions During Emergency Conditions

4.2.1.8 PMP 2081 EPP.008 Emergency Medical Plan Guidelines

- 4.2.1.9 PMP 2081 EPP.009 Health Physics Procedures
- 4.2.1.10 PMP 2081 EPP.010 Activation of Radiation Monitoring Teams
- 4.2.1.11 PMP 2081 EPP.011 On-Site Radiological Monitoring
- 4.2.1.12 PMP 2081 EPP.012 Off-Site Radiological Monitoring
- 4.2.1.13 PMP 2081 EPP.013 Environmental Monitoring and Analysis
- 4.2.1.14 PMP 2081 EPP.014 Off-Site Dose Assessments
- 4.2.1.15 PMP 2081 EPP.015 Sampling and Analysis of Waterborne Releases
- 4.2.1.16 PMP 2081 EPP.016 Collection and Analysis of Liquid and Gaseous Samples
- 4.2.1.17 PMP 2081 EPP.017 Interpretation of Liquid and Gaseous Samples
- 4.2.1.18 PMP 2081 EPP.018 Transportation Accidents Involving Radioactive Material
- 4.2.1.19 PMP 2081 EPP.019 AEP Emergency Response Organization Activation and Management
- 4.2.1.20 PMP 2081 EPP.020 Activation and Operation of the Technical Support Center (TSC)
- 4.2.1.21 PMP 2081 EPP.021 Activation and Operation of the Operation Staging Area (OSA) and Personnel Accountability
- 4.2.1.22 PMP 2081 EPP.023 Activation and Operation of the Emergency Control Center (ECC) (An Emergency Operations Facility)
- 4.2.1.23 PMP 2081 EPP.024 Activation and Operation of the Joint Public Information Center (JPIC) (An Emergency Operations Facility)
- 4.2.1.24 PMP 2081.EPP.026 Use of Stable Iodine for Thyroid Blocking During A Radiation Emergency

4.3 The Vice President - Construction and New York Engineering or his designated alternate shall replace the Plant Manager as On-Site Emergency Coordinator, upon his arrival on site and until the emergency condition is terminated.

4.3.1 The VP/OSEC shall additionally implement the following procedures as appropriate:

4.3.1.1 PMP 2081 EPP.022 Activation and Operation of  
The Recovery Center (RC)  
(An Emergency Operations  
Facility)

4.3.2 The VP/OSEC shall, after consultation with Federal, State, and County officials, de-escalate emergency classifications thereby entering the recovery stage of operations.

UNUSUAL EVENT

1.0 Description

- 1.1 Events are in process or have occurred which are defined as an in-Plant occurrence requiring only in-Plant action to mitigate the event. The event does not affect the health and safety of the public.

2.0 Purpose

- 2.1 Assure Plant staff members are notified.
- 2.2 Activate appropriate emergency response.

3.0 Radiological Emergency Action Level at Site Boundary

- 3.1 No radiological releases.

4.0 Protective Action Guide (Limiting Values)

- 4.1 To population due to external and inhalation exposure - none.
- 4.2 For contaminated human and animal food - none.

5.0 Cook Plant Action

- 5.1 Promptly inform State and County Authorities and Plant Staff in accordance with PMP 2080.EPP.012, Initial Off-Site Notifications, and PMP 2080.EPP.008, Calling Off-Duty Plant Personnel.
- 5.2 Verbally notify the NRC. Follow with written notification as required by Technical Specifications and significant events. (10CFR 50.72)
- 5.3 Assess and respond.
- 5.4 Close out by verbal summary to NRC, State/County Authorities, as required.

(or)

- 5.5 Escalate to a more serious level.

6.0 Off-Site Authority Action

- 6.1 Provide assistance, as requested, in accordance with established agreements and emergency plans.
- 6.2 County will notify appropriate State and Local agencies as required.

ALERT

1.0 Description

- 1.1 Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the Plant. The alert could possibly affect the health and safety of the public.

2.0 Purpose

- 2.1 Assure that emergency personnel are readily available to respond, if the situation becomes more serious, or to perform confirmatory radiation monitoring if required.
- 2.2 Provide offsite authorities with current status information.

3.0 Radiological Emergency Action Level at Site Boundary

- 3.1 2mR in one hour.
- (or)
- 3.2 Liquid effluent concentrations greater than 10 times Technical Specification limits for a mixture of radioisotopes or a single isotope.

4.0 Protective Action Guide (Limiting Values)

- 4.1 To population due to external and inhalation exposure:

Whole body dose < 0.5R  
Thyroid dose < 5R

- 4.2 For contaminated human and animal food:

Whole body dose < 0.5R  
Thyroid dose < 1.5R

5.0 Cook Plant Action

- 5.1 Promptly inform State and County Authorities and Plant Staff in accordance with PMP 2080.EPP.012, Initial Off-Site Notifications, and PMP 2080.EPP.008, Calling Off-Duty Plant Personnel.
- 5.2 Verbally notify the NRC. Follow with written notification as required by Technical Specifications and significant events. (10 CFR 50.72)
- 5.3 Assess and respond.



ALERT - Continued

- 5.4 Activate the Technical Support Center.
- 5.5 Activate other emergency functions/resources as required.
- 5.6 Alert appropriate members of the AEP Emergency Response Organization to standby only (not to travel to Cook Plant).
- 5.7 Dispatch on-site monitoring teams and associated communications if necessary.
- 5.8 Provide periodic Plant status updates to off-site authorities.
- 5.9 Provide meteorological and dose estimates to off-site authorities for actual releases, and dose projections on foreseeable contingencies.
- 5.10 Close out by verbal summary to NRC and off-site State/County Authorities.

(or)

- 5.11 Escalate to a more severe level.

6.0 Off-Site Authority Action

- 6.1 Provide assistance as requested in accordance with established agreements and emergency plans.
- 6.2 County will notify appropriate State and Local agencies as required.
- 6.3 Augment State and County EOC's as appropriate.
- 6.4 No protective actions are required for levels below those listed in the Protective Action Guide (Section 3.0 and 4.0 above).
- 6.5 Michigan Department of Public Health (DPH) will monitor and investigate the cause of radiation levels and assure that corrective action measures are progressing.
- 6.6 DPH will consider issuing an advisory to seek shelter or to evacuate.
- 6.7 DPH and Department of Agriculture (DA) will monitor food and milk as required.
- 6.8 Alert to standby status additional resources as appropriate.
- 6.9 Escalate to a more severe level, if necessary.



SITE EMERGENCY

1.0 Description

- 1.1 Events are in process or have occurred which involve actual failures of Plant functions needed to mitigate the events for protection of the public.

2.0 Purpose

- 2.1 Activate the required response centers.  
2.2 Assure that monitoring teams are mobilized.  
2.3 Assure that personnel required for taking protective actions are at duty stations if situation becomes more serious.  
2.4 Provide current information for off-site authorities.

3.0 Radiological Emergency Action Level at Site Boundary

- 3.1 50 mR/hr for 30 minutes whole body.  
250 mR/hr for 30 minutes thyroid.  
(or)  
3.2 500 mR/hr for 2 minutes whole body.  
2.5 R/hr for 2 minutes thyroid.  
(or)  
3.3 500 mR/hr in 30 days whole body.  
2.5 R in 30 days thyroid.  
(or)  
3.4 Containment reading of  $1.03 \times 10^6$  R/hr  
(or)  
3.5 Liquid effluent concentrations greater than 50 times Technical Specification limits for a mixture of radioisotopes or a single isotope.

4.0 Protective Action Guide (Limiting Values)

- 4.1 To population due to external and inhalation exposure:  
.5R  $\leq$  Whole Body Dose < 5R  
1.5  $\leq$  Thyroid Dose < 25R

SITE EMERGENCY - Continued

4.2 For contaminated human and animal food:

0.5R  $\leq$  Whole Body Dose < 5R  
1.5R  $\leq$  Thyroid Dose < 15R

5.0 Cook Plant Action

- 5.1 Promptly inform State and County Authorities, and Plant Staff in accordance with PMP 2080 EPP.012, Initial Off-Site Notifications, and PMP 2080 EPP.008, Calling Off-Duty Plant Personnel.
- 5.2 Verbally notify the NRC. Follow with written notification as required by technical specifications and significant events (10CFR 50.72).
- 5.3 Assess and respond.
- 5.4 Activate the Technical Support Center, Emergency Control Center, Joint Public Information Center, and the American Electric Power Emergency Response Organization.
- 5.5 Activate other emergency functions and resources, as required.
- 5.6 Alert appropriate members of the AEP Emergency Response Organization to standby only (not to travel to Cook Plant).
- 5.7 Dispatch on-site monitoring teams and associated communications if necessary.
- 5.8 Provide periodic Plant status updates to off-site authorities.
- 5.9 Provide meteorological and dose estimates to off-site authorities for actual releases, and dose projections on foreseeable contingencies.
- 5.10 Make Senior Technical and Management Staff available on-site for consultation with NRC, State and County personnel on a periodic basis.
- 5.11 Close out or reduce class category. Provide briefing to off-site authorities.

(or)

5.12 Escalate to General Emergency Level.

6.0 Off-Site Authority Action

- 6.1 Provide assistance as requested in accordance with established agreements and emergency plans.

SITE EMERGENCY - Continued

- 6.2 County will notify appropriate State and Local agencies, as required.
- 6.3 Augment State and County EOC's as appropriate.
- 6.4 Alert to standby status additional resources as appropriate.
- 6.5 Michigan Department of Public Health (DPH) will monitor and investigate the cause of radiation levels and assure that corrective action measures are progressing.
- 6.6 Consult with Cook Plant personnel on results of radiological surveys being conducted.
- 6.7 Assess information provided by all agencies concerned in monitoring of actual releases.
- 6.8 Protective action may be required for the public. Public notification may be deemed necessary.
- 6.9 DPH may advise individuals to seek shelter and await further instructions.
- 6.10 DPH may consider evacuation, particularly for children and pregnant women, based on monitoring results.
- 6.11 Michigan Department of Agriculture (DA) in conjunction with DPH will divert, condemn or dispose of food and issue advisories regarding home-grown foods and protective action of animals if necessary.
- 6.12 DPH and DA will monitor food and especially milk as required.
- 6.13 State Police will control access to areas affected to avoid unnecessary exposure to individuals if necessary.
- 6.14 Provide for press briefings and releases.
- 6.15 Maintain site emergency until closeout or reduction in class.
- 6.16 Escalate to General Emergency if necessary.

GENERAL EMERGENCY1.0 Description

- 1.1 Events are in process or have occurred which involve actual substantial core degradation, or melting with imminent potential for loss of containment integrity.

2.0 Purpose

- 2.1 Initiate protective actions for public.
- 2.2 Provide continuous assessment of information from Cook Plant and off-site measurements.
- 2.3 Initiate additional measures as indicated by actual or potential releases.
- 2.4 Provide current information for off-site authorities.

3.0 Radiological Emergency Action Level at Site Boundary

- 3.1 Whole body dose  $\geq 500$  MR in 2 hours.  
Thyroid dose  $\geq 2.5$  R in 2 hours.  
(or)
- 3.2 Whole body dose  $\geq 5$  R in 30 days.  
Thyroid dose  $\geq 25$  R in 30 days.  
(or)
- 3.3 Containment reading of  $10.4 \times 10^6$  R/HR.
- 3.4 Liquid effluent concentrations greater than 500 times Technical Specification limits for a mixture of radioisotopes or a single isotope.

4.0 Protective Action Guide (Limiting Values)

- 4.1 To population due to external and inhalation exposure

Whole body dose  $\geq 5$  R  
Thyroid dose  $\geq 25$  R

- 4.2 For contaminated human and animal food

Whole body dose  $\geq 5$  R  
Thyroid dose  $\geq 15$  R

GENERAL EMERGENCY - Continued

5.0 Cook Plant Action

- 5.1 Promptly inform State and County Authorities, and Plant Staff in accordance with PMP 2080 EPP.012, Initial Off-Site Notifications, and PMP 2080 EPP.008, Calling Off-Duty Plant Personnel.
- 5.2 Verbally notify the NRC. Follow with written notification as required by technical specifications and significant events (10CFR 50.72).
- 5.3 Assess and respond.
- 5.4 Activate the Technical Support Center, Emergency Control Center, Joint Public Information Center, and the American Electric Power Emergency Response Organization.
- 5.5 Activate other emergency functions and resources, as required.
- 5.6 Alert appropriate members of the AEP Emergency Response Organization to standby only (not to travel to Cook Plant).
- 5.7 Dispatch on-site monitoring teams and associated communications if necessary.
- 5.8 Provide periodic Plant status updates to off-site authorities.
- 5.9 Provide meteorological and dose estimates to off-site authorities for actual releases, and dose projections on foreseeable contingencies.
- 5.10 Make Senior Technical and Management Staff available on-site for consultation with NRC, State and County personnel on a periodic basis.
- 5.11 Recommend sheltering in a two (2) mile radius and five (5) miles downwind.
- 5.12 Close out or recommend reduction of emergency class by briefing of off-site authorities.

6.0 Off-Site Authority Action

- 6.1 Provide assistance as requested in accordance with established agreements and emergency plans.
- 6.2 County will notify appropriate State and Local agencies, as required.
- 6.3 Augment State and County EOC's as appropriate.

GENERAL EMERGENCY - Continued

- 6.4 Alert to standby status additional resources as appropriate.
- 6.5 Michigan Department of Public Health (DPH) will monitor and investigate the cause of radiation levels and assume that corrective action measures are progressing.
- 6.6 Recommend sheltering in a two (2) mile radius and five (5) miles downwind.
- 6.7 Consult with Cook Plant personnel on results of radiological surveys being conducted.
- 6.8 Further protective actions may be required for the public. DPH may consider evacuation, particularly for children and pregnant women, based on monitoring results.
- 6.9 State Police will control access to areas affected to avoid unnecessary exposure to individuals if necessary.
- 6.10 Assess information provided by all agencies concerned in monitoring of actual releases.
- 6.11 DPH will coordinate and perform the monitoring of environmental radiation levels.
- 6.12 Recommend placing milk animals within LPZ on stored feed.
- 6.13 Michigan Department of Agriculture (DA) in conjunction with DPH will divert, condemn or dispose of food, and issue advisories regarding home-grown foods and protective action of animals if necessary.
- 6.14 Provide for press briefings and releases.
- 6.15 Maintain a General Emergency until closeout or reduction of class.