Emergency Implementation Procedures

Revision Sheet

TITLE: Activation of Emergency Plan, EI-1

Revision	PRC Date	Approved by Gen. Manager
0	10/30/80	RW Montross 11/19/80
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EMERGENCY IMPLEMENTATION PROCEDURE EI-1
ACTIVATION OF EMERGENCY PLAN
Revision 6

1.0 PERSONNEL RESPONSIBILITY

1. Activation of the of the Site Emergency Plan is the responsibility of the on-shift Shift Supervisor until relieved by the Site Emergency Director.

2. The formal line of succession for the Site Emergency Director (SED) is as follows in order of decreasing preference:

   a. General Manager (or Duty and Call Superintendent)

   b. Operations/Maintenance Superintendent (First Alternate)

   c. Operations Superintendent (Second Alternate)

   d. Technical Superintendent (Third Alternate)

   e. Technical Engineer (Fourth Alternate)

   f. On-shift Shift Supervisor (Fifth Alternate)

2.0 PURPOSE

To classify those emergency action levels that will necessitate activation of the Emergency Plan and to list actions that may be taken to mitigate the consequences of the emergency.

3.0 ATTACHMENTS AND RECORDS

Attachment 1, Classification of Emergency Conditions

4.0 SPECIAL INSTRUCTIONS

The Site Emergency Director will determine, based on reports and conditions, whether to upgrade/downgrade the emergency classification or to secure from the Emergency Plan.

5.0 PROCEDURE

5.1 The Shift Supervisor, based on reports from the Operators and the condition of the plant, will make the inital decision to activate the Emergency Plan and will activate the plan as follows:

   a. Determine the classification of the condition, using "key word," "Emergency Action Level", and "Event" as listed on Attachment 1.

   b. Perform the actions, as listed on this procedure and EI-2, necessary to minimize the effects of the emergency on members of the general public.

j. Fnsuring that, for a Site or General Emergency, Security establishes a point to control all entrances to and exits from the plant and that the Chemistry/Health Physics Department establishes a central access point to monitor vehicles and personnel (when radiological conditions exist) exiting the plant during the Site or General Emergency conditions.

k. Request Federal assistance as necessary. Refer to EI-2 and EI-3. (Communicator)

*l. Authorization for emergency workers to receive doses in excess of 10CFR20 limits. Refer to EI-6, Attachment 6.

m. Ensuring onsite first aid is performed and accident victims are transported to hospitals as necessary. Refer to EI-14.

n. Dispatch a CPCo liaison to principle offsite emergency operations centers: State, Van Buren County, Berrien County and Allegan County.

* Indicates a responsibility that may not be delegated.

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
Alarm Annunciators	•Observation	All alarm annunciators lost for more than 15 minutes while plant is not in cold shutdown and transient initiated or in progress.	Site Area Emergency
Containment Integrity	•Observation •Surveillance test results	Loss of containment integrity requiring plant shutdown.	Unusual Event
	•Detection method dependent upon which barriers fail and, to some extent, upon mechanism which causes failure.	Loss of 2 fission product barriers with a potential loss of the third barrier (for exapmle, loss of core geometry and PCS boundary and a high potential for loss of containment).	General Emergency
Engineered Safeguards	•Observation •Annunciation (Scheme K13, Panel C13).	Loss of engineered safety feature requiring plant shutdown.	Unusual Event
	•Nuclear instrumentation •Rod position indication •RPS alarms	Failure of RPS to initiate and complete a scram, such that the reactor is not made subcritical.	ALERT
	•Loss of Auxiliary Feed System and Shutdown Cooling System	Loss of functions needed to attain or maintain cold shutdown (for example loss of Bus Y01).	ALERT
	•Observation	Loss of functions needed for plant hot shutdown.	Site Area Emergency
Fire	•Annunciators (smoke detectors) •Observation	Any fire requiring outside assistance.	Unusual Event
		Fire which affects or threatens to affect safety systems.	ALERT
		A fire incapacitating safety systems required to achieve safe shutdown.	Site Area Emergency
Fuel Damage	•Failed fuel monitor (RIA0202) alarm confirmed by radiochemistry sample analysis.	Coolant activity greater than 1.0 µCi/gram dose equivalent I-131 for more than 72 continuous hours.	Unusual Event

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
	•Failed fuel monitor (RIA0202) off scale, confirmed by primary coolant sample analysis.	Severe loss of fuel cladding resulting in 300 µCi/cc equivalent I-131, or 1% failed fuel in 30 minutes or 5% total failed fuel.	ALERT
	•Stack monitor (RIA2318) reads 20 times alarm setpoint ≦ setpoint of 0.5 MPC for a period of two or more hours, and meteorological tower ΔT is less than positive 2.0.	Any fuel handling accident with release of radioactivity to containment or fuel handling building.	ALERT
	•Observation confirmed by primary coolant sample analysis.	Primary coolant pump seizure leading to fuel failure.	ALERT
	•Subcooled margin monitor indicates PCS temperature greater than saturation temperature.	Degraded core with possible loss of coolable geometry.	Site Area Emergency
	•Observation of damage.	Major damage to spent fuel in containment or fuel handling building.	Site Area Emergency
High Radiation Levels	•Area radiation monitors, reading >1000 times background.	High radiation levels or high airborne contamination which indicate a severe degradation in the control of radioactive materials.	ALERT
Man-Made External Hazards	•Observation	Aircraft crash, train derailment or explosion onsite which does not damage any safety-related buildings or structures.	Unusual Event
	•Observation and measurement by portable instruments (onsite). •Notification by offsite authorities (offsite releases).	Toxic gas release onsite or close to plant site not affecting any plant operating personnel.	Unusual Event
	•Observation	Aircraft crash or missile impact on facility which involves a building or structure, but not resulting in inoperable equipment required to achieve safe shutdown.	ALERT

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
	•Observation	Explosion which damages facility, but does not render inoperable equipment needed to achieve safe shutdown.	ALERT
	•Observation and measurement with portable instruments.	Entry of toxic gas into facility.	ALERT
	•Observation •Annunciation (for example, turbine rotor position eccentricity).	Turbine failure which results in casing penetration.	ALERT
	•Observation	Aircraft crash, missiles or explosions severely damaging safety-related structures.	Site Area Emergency
	•Observation	Entry of toxic gas into areas which are required to be manned in order to maintain plant in safe configuration.	Site Area Emergency
Natural Phenomena	•Observation	Earthquake	Unusual Event
	•Observation	Seiche(tidal wave).	Unusual Event
	•Observation	Tornado near site.	Unusual Event
	•Observation •Notification by civil authorities.	Sieche (tidal wave) threating to flood plant structures.	ALERT
	•Observation	Tornado striking facility	ALERT
	•Observation	Seiche (tidal wave) resulting in incapacitation of equipment needed to achieve or maintain safe shutdown.	Site Area Emergency
Personnel Hazards Injuries	•Observation •Notification from injured's Supervisor.	Transportation of contaminated individual to hospital.	Unusual Event
	•Various, depending upon hazard (for example, observation of smoke, radiation area monitors, observation of toxic gas).	Conditions resulting in Control Room evacuation.	ALERT

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
Primary Coolant System(PCS) Integrity	•Daily PCS leak rate determination	PCS leakage in excess of Technical Specification limits, but <50gpm.	Unusual Event
	•S/G secondary water activity greater than 0.1 μCi/gram dose equivalent I-131	Primary to secondary leakage in excess of Technical Specification limits.	Unusual Event
	•Containment sump high-level alarms (LIA 0358, 0359, LS 0358, 0360), with •Mismatch between charging flow (FIA 0202) and letdown flow (FIC 0202).	PCS leak rate >50 gpm, but <capacity of operable charging pumps.	ALERT
	•Off-gas monitor (RIA 0631) alarm, and •Pressurizer low level (LI 0103A).	Steam generator tube rupture resulting in primary to secondary leak rate of several hundred gpm.	ALERT
	•Low-low pressurizer level (LIC 0101A)* (Panel C-12). •Safety injection actuation alarm (Panel C-13). •Pressurizer low-pressure alarm (Panel C-12). •Containment high-pressure alarm (Panel C-13). *Pressurizer level may not be a true indication of PCS fluid inventory.	Loss of Coolant accident which exceeds charging pump capacity.	Site Area Emergency
Primary Coolant System(PCS) Temperature or Pressure	•OPPS operation annunciation (SV and/or PORV open).	Any challenge to Over-pressure Protection System (OPPS).	Unusual Event
	•Temperature recorder (TR 0121 or TR 0111).	Critical operation at PCS temperature <525°F (except for physics tests).	Unusual Event
	•Annunciation (RPS alarms). •Event recorder	Reactor high-pressure trip. (Initiating event).	Unusual Event

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
	•Acoustical monitors (FI 1039, 1040, 1041). •Quench tank high level (LIA 0116). •Quench tank high pressure (PIA 0116). •Quench tank high temperature (TIA 0116). •Discharge temperture alarms (TIA 0107, 0108, 0109).	Pressurizer code safety operation.	Unusual Event
	•Subcooling margin alarm	PCS temperature <50°F subcooled; sustained for more than 5 minutes or <50°F subcooled, and subcooling margin decreasing. Not applicable when plant is in cold shutdown or refueling shutdown condition.	ALERT
Public Interest Notifications	•Observation •Instrumentation (for example, (TR 0111, TR 0121).	Plant shutdown under uncontrolled conditions (for example, exceeding cooldown limits).	Unusual Event
	•Observation	Any plant shutdown required by a Technical Specifications LCO.	Unusual Event
Releases	•Stack monitor (RIA 2318) reaches alarm setpoint for two or more hours. Confirmed by lab sample analysis. •Liquid waste discharge monitor (RIA 1049) reaches alarm setpoint and automatic discharge trip function fails. Confirmed by lab sample analysis.	Short term radiological effluent Technical Specifications exceeded.	Unusual Event
	•Observation confirmed by survey results.	Significant solid or liquid waste spill outside restricted areas with threatened offsite release.	Unusual Event

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
	•Stack monitor (RIA 2318) reaches 10 times the alarm setpoint for 2 or more hours. Confirmed by lab sample analysis. •Liquid waste discharge monitor (RIA 1049) reaches 10 times alarm setpoint and automatic discharge trip function fails. Confirmed by lab sample analysis.	Radiological effluents greater than 10 times Technical Specification limits (an instantaneous rate which, if continued over two hours, would result in a dose of approximately 1 mR at the site boundary under average meteorological conditions).	ALERT
	•Stack monitor reached 850 times the alarm setpoint (RIA 2318) for 1/2 hour or more. Confirmed by sample analysis. Meteorological is adverse when ΔT is 1.5°C or greater.	Effluent monitors detect levels corresponding to >50mr/hr for 1/2 hour or >500 mr/hr whole body for 2 minutes (or five times these levels to the child thyroid) at the site boundary for adverse meteorological conditions.	Site Area Emergency
	•Accident Assessment	Projection of above dose rates based on appropriate parameters (for example, containment building radiation level with containment leak rate appropriate for existing containment pressure).	Site Area Emergency
	•Monitoring teams with survey instruments	Measurement of above dose rated in environs.	Site Area Emergency
	•Stack monitor reads 50 times alarm setpoint (RIA 2318) and the meteorological tower ΔT is > positive 4.0 or using Emergency Implementation Procedure. The high-range stack monitor reads 1.3 mR/hr and the meteorological tower ΔT is >4.0 or 170 mR/h and the meteorological tower ΔT is >0.	Effluent monitors detect levels corresponding to 0.5 R/2 h, or 5 R/30 days, 250 mR/h for 2 hours or 7 mR/hr 30 days to the wholebody at the site boundary under actual meteorological conditions.	General Emergency

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
	•Accident assessment procedures.	A dose rate of 1 R/h to the wholebody at the site boundary projected from radiation levels in containment combined with leak rate appropriate for the existing containment pressure.	General Emergency
	•Survey teams.	1 R/h measured at the site boundary.	General Emergency
Safety Injection System (SIS)	•Annunciation (SI initiated; Ckt 1, Ckt 2).	Safety injection	Unusual Event
Secondary Side	•Low steam generator pressure alarm	Rapid depressurization of secondary side.	Unusual Event
	•Observation. •Steam generator pressure instruments. •SIS actuation alarm. •Feedwater flow/steam flow instruments. •S/G activity determined by analysis (radiochemistry).	Steam line break with secondary system activity <0.1 μCi/gm.	ALERT
	•Off-gas monitor (RIA 0681) alarm and pressurizer low level (LI 0103A), and •Switchyard noncritical alarms or startup transformer trouble alarm or automatic start of emergency D/G.	Steam generator tube rupture with loss of offsite power.	ALERT
	•Safety injection actuation alarms •Steam generator pressure indicators. •Feedwater flow and steam flow instruments. •Activity determined by analysis.	Steam line break with >50 gpm primary to secondary leakage and secondary system activity ≥.1 μCi/gm dose equivalent I-131.	Site Area Emergency

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
Security	•Activation of Security Plan. •Observation	Security threat or attempted entry or attempted sabotage.	Unusual Event
	•Activation of Security Plan and notification by Security of ongoing security compromise.	Ongoing security compromise. (For example, discovery of bomb inside fence perimeter, evidence of forced entry into the protected area or a vital area.)	ALERT
	•Observation •Security alarms.	Imminent loss of physical control of the facility.	Site Area Emergency
	•Activation of Security Plan and loss of capability to shutdown plant.	Loss of physical control of facility.	General Emergency
Radioactive Offsite Spent Fuel and/or Resin Shipping Cask Incident		Release of radioactive material to the environs. Possible exposure to offsite personnel.	ALERT
Station Power	•Annunciation switchyard non-critical alarms, or startup transformer trouble alarm, or •Automatic start of emergency D/G.	Loss of all offsite power and PCS temperature >325°F.	Unusual Event
	•Loss of both emergency D/G	Loss of all onsite a-c sources and PCS temperature >325°F.	Unusual Event
	•D-C lighting energized. •Bus voltage indication. •Alarms on all bus sections. •Loss of both emergency D/G.	Loss of all offsite power and all onsite a-c power sources (natural circulation maintained).	ALERT
	•Loss of annunciator panels.	Loss of all d-c power.	ALERT
	•Observation.	Loss of all alarm annunciators for more than 15 minutes.	ALERT
	Voltage and current indicators. •Loss of both emergency D/G.	Loss of <u>all</u> a-c power sources, and loss of both station batteries for more than 15 minutes, and PCS and plant not in cold shutdown or refueling shutdown.	Site Area Emergency

KEY WORD	EMERGENCY ACTION LEVEL	EVENT	CLASSIFICATION
Other Hazards	•As determined by Site Emergency Director.	Plant conditions exist that warrant activation of emergency facilities, deployment of radiation monitoring teams and precautionary public notification.	Site Area Emergency
	•Observation	Evacuation of Control Room and control of shutdown systems not established from local stations in 15 minutes.	Site Area Emergency
	•Control Room instrumentation.	Other plant conditions which make release of large amounts of radioactivity in a short-time interval possible (for example, any core melt condition).	General Emergency

UNUSUAL EVENT

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
UNUSUAL EVENT Class Description Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs. Purpose Purpose of off-site notification is to (1) assure that the first step in any response later found to be necessary has been carried out, (2) bring the operating staff to a state of readiness and (3) provide systematic handling of Unusual Events information and decision making.	1. Promptly inform State and/or local off-site authorities of nature of unusual condition as soon as discovered. 2. Augment on-shift resources as needed. 3. Assess and respond. 4. Escalate to a more severe class, if appropriate, or 5. Close out with verbal summary to off-site authorities; followed by written summary.	1. Provide fire or security assistance if requested. 2. Escalate to a more severe class, if appropriate. 3. Stand by until verbal closeout.

ALERT

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
ALERT Class Description Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels. Purpose Purpose of off-site alert is to (1) assure that emergency personnel are readily available to respond if situation becomes more serious or to perform confirmatory radiation monitoring if required, and (2) provide off-site authorities current status information.	1. Promptly inform State and/or local authorities of alert status and reason for alert as soon as discovered. 2. Augment resources and activate on-site Technical Support Center and on-site Operational Support Center. Bring Emergency Operations Facility (EOF) and other key emergency personnel to standby status. 3. Assess and respond. 4. Dispatch on-site monitoring teams and associated communications. 5. Provide periodic plant status updates to off-site authorities (at least every 15 minutes). 6. Provide periodic meteorological assessments to off-site authorities and, if any releases are occurring, dose estimates for actual releases.	1. Provide fire or security assistance if requested. 2. Augment resources and bring primary response centers and Emergency Broadcast System (EBS) to standby status. 3. Alert to standby status key emergency personnel including monitoring teams and associated communications. 4. Provide confirmatory off-site radiation monitoring and injestion pathway dose projections if actual releases sub stantially exceed Tech nical Specification limits. 5. Escalate to a more severe

ALERT

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
		class, if appropriate.
	7. Escalate to a more severe class, if appropriate.	6. Maintain Alert status until verbal closeout or reduction of emergency class.
	8. Close out or recommend reduction in emergency class by verbal summary to off-site authorities followed by written summary.	

SITE AREA EMERGENCY

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
SITE AREA EMERGENCY Class Description Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary. Purpose Purpose of the Site Area Emergency declaration is to (1) assure that response centers are manned, (2) assure that monitoring teams are dispatched, (3) assure that personnel required for evacuation of near-site areas	1. Promptly inform State and/or local off-site authorities of Site Area Emergency status and reason for emergency as soon as discovered. 2. Augment resources by activating on-site Technical Support Center, on-site Operational Support Center and near-site Emergency Operations Facility (EOF). 3 Assess and respond. 4. Dispatch on-site and off-site monitoring teams and associated communications. 5. Designate an individual for plant status updates to off-site authorities and periodic press briefings (perhaps joint with off-site authorities). 6. Make senior technical and management staff on site available for consultation with NRC and State on a periodic basis. 7. Provide meteorological and dose estimates to	1. Provide any assistance requested. 2. If sheltering near the site is desirable, activate public notification system within at least two miles of the plant. 3. Provide public within at least about 10 miles periodic updates on emergency status. 4. Augment resources by activating primary response centers. 5. Dispatch key emergency personnel including monitoring teams and associated communications. 6. Alert to standby status other emergency personnel (eg, those needed for evacuation) and dispatch personnel to near-site duty stations. 7. Provide off-site monitoring results to licensee, DOE and others and jointly assess them. 8. Continuously assess information from licensee and off-site monitoring with regard to changes

SITE AREA EMERGENCY

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
are at duty stations if situation becomes more serious, (4) provide consultation with off-site authorities and (5) provide updates for the public through off-site authorities.	off-site authorities for actual releases via a designated individual or automated data transmission. 8. Provide release and dose projections based on available plant condition information and foreseeable contingencies. 9. Escalate to General Emergency class, if appropriate, or 10. Close out or recommend reduction in emergency class by briefing of off-site authorities at EOF and by phone followed by written summary.	to protective actions already initiated for public and mobilizing evacuation resources. 9. Recommend placing milk animals within two miles on stored feed and assess need to extend distance. 10. Provide press briefings, perhaps with licensee. 11. Escalate to General Emergency class, if appropriate. 12. Maintain Site Area Emergency status until closeout or reduction of emergency class.

GENERAL EMERGENCY

Class	Licensee Actions	State and/or Local Off-Site Authority Actions
GENERAL EMERGENCY Class Description Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels off site for more than the immediate site area. Purpose Purpose of the General Emergency declaration is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of information from licensee and off-site organization measurements, (3) initiate additional measures as indicated by	1. Promptly inform State and local off-site authorities of General Emergency status and reason for emergency as soon as discovered (parallel notification of State/local). 2. Augment resources by activating on-site Technical Support Center, on-site Operational Support Center and near-site Emergency Operations Facility (EOF). 3. Assess and respond. 4. Dispatch on-site and off-site monitoring teams and associated communications. 5. Designate an individual for plant status updates to off-site authorities and periodic press briefings (perhaps joint with off-site authorities). 6. Make senior technical and management staff on site available for consultation with NRC and State on a periodic basis. 7. Provide meteorological and dose estimates to off-site authorities for actual releases via a designated individual or	1. Provide any assistance requested. 2. Activate immediate public notification of Emergency status and provide public periodic updates. 3. Recommend sheltering for two-mile radius and five miles downwind and assess need to extend distances. Consider advisability of evacuation (projected time available vs estimated evacuation times). 4. Augment resources by activating primary response centers. 5. Dispatch key emergency personnel including monitoring teams and associated communications. 6. Dispatch other emergency personnel to duty stations within five-mile radius and alert all others to standby status. 7. Provide off-site monitoring results to licensee, DOE and others and jointly assess them. 8. Continuously assess information from licensee and off-site monitoring with regard to changes

GENERAL EMERGENCY

Class	Licensee Action	State and/or Local Off-Site Authority Actions
actual or potential releases, (4) provide consultation with off-site authorities and (5) provide updates for the public through off-site authorities.	automated data transmission. 8. Provide release and dose projections based on available plant condition information and foreseeable contingencies. 9. Close out or recommend reduction in emergency class by briefing of off-site authorities at EOF and by phone followed by written summary.	to protective actions already initiated for public and mobilizing evacuation resources. 9. Recommend placing milk animals within 10 miles on stored feed and assess need to extend distance. 10. Provide press briefings with licensee. 11. Maintain General Emergency status until closeout or reduction of emergency class.

FSAR ACCIDENTS AND EMERGENCY CLASSIFICATIONS

The accidents listed below are discussed in detail in Section 14 of the Palisades Plant Final Safety Analysis Report (FSAR).

Accident	Consequences	Emergency Classification
Radioactive Liquid Spill On Site	1. Contamination of area, personnel or equipment. 2. Spread of contamination.	Unusual Event
Steam Line Rupture Incident	1. No fuel damage. 2. Slight, if any, release of radioactivity off site.	Alert
Loss of Coolant Accident Greater Than 133 Gpm (Charging Pump Capacity)	1. Possible fuel damage. 2. Possible fission product release. 3. Slight, if any, release of radioactivity off site.	Alert
Loss of Coolant Accident (4-Inch to 43-Inch Break)	1. Fuel damage resulting in small fission product release. 2. Slight, if any, release of radioactivity off site.	Site Area
Waste Gas Incident	1. Uncontrolled release of radioactivity to the atmosphere. 2. Maximum site boundary dose 0.500 rem whole body.	Site Area
Fuel Handling Incident	1. Damage to fuel bundle. 2. Maximum off-site doses less than 0.500 rem whole body.	Site Area
Steam Generator Tube Rupture Incident	1. Radioactivity is released in small amounts from steam dump valves and air ejector discharge. 2. Maximum site boundary dose 0.500 rem whole body.	Site Area
MHA (Maximum Hypothetical Accident) (Major Loss of Coolant Accident, 42-Inch Break)	1. Release of core fission products. 2. Two-hour doses at the site boundary of up to 282 rem thyroid, 2 rem whole body.	General

FSAR ACCIDENTS AND EMERGENCY CLASSIFICATIONS

Accident	Consequences	Emergency Classification
Waste Liquid Accident	1. Uncontrolled release of liquid waste to the lake in excess of 10 CFR 20 limits. 2. No measurable effect on the nearest water supply intakes (South Haven).	Unusual Event
Radioactive Off-Site Spills - Spent Fuel and/ or Resin Shipping Cask Incident	1. Release of radioactive material to the environs. 2. Possible exposure to off-site personnel.	Alert
Turbine Generator Overspeed Incident w/Casing Penetration	1. No off-site consequences.	Alert
Control Room Fire	1. No off-site consequences.	Unusual Event/ Alert
Acts of Nature	1. Flooding, tornado, etc.	Unusual Event/ Alert
Civil Disturbances	1. Possible loss of physical control of plant.	Unusual Event/ Alert

Emergency Implementation Procedures

Revision Sheet

TITLE: Palisades Plant Actions/Notifications During an Emergency, EI-2.1

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EMERGENCY IMPLEMENTATION PROCEDURE EI-2.1
PALISADES PLANT ACTIONS/NOTIFICATIONS DURING AN EMERGENCY
REVISION 8

1.0 PERSONNEL RESPONSIBILITY

The Site Emergency Director is responsible for determining actions to be taken during an emergency at Palisades Plant.

2.0 PURPOSE

To provide the Site Emergency Director with a prepared course of action for each classification of emergency condition.

3.0 ATTACHMENTS AND RECORDS

1. Attachment 1, Immediate Facility Action/Notification Checklist

2. Attachment 2, Subsequent Facility Action/Notification Checklist

4.0 SPECIAL INSTRUCTIONS

1. Definitions:

   a. Immediate Actions - actions performed within one hour. These actions are primarily notifications.

   b. Subsequent Actions - actions performed in an expeditious manner depending on the emergency.

   c. If Necessary Actions - actions that are not required, but could possibly be needed.

5.0 PROCEDURE

5.1 Use the emergency classification obtained in EI-1, (ie, Unusual Event, Alert, Site Area Emergency, or General Emergency) to identify Mandatory/Subsequent/If Needed, Actions on Attachment 1.

5.2 Indicate the actions to be taken in the left column of Attachment 2. Use an 'M' to indicate a Mandatory Action, use an 'S' to indicate a Subsequent Action and an 'I' to indicate an If Needed Action.

5.3 Date Attachment 2.

5.4 As the specific action is performed, the following are recorded on Attachment 2.

1. Time action was initiated.

2. Person performing the action.

3. Any comments pertinent to the action.

5.5 Upon activation of the Emergency Operations Facility, appropriate Actions may be assigned to the EOF to relieve the burden on the Technical Support Center.

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT / IF NEEDED, ACTIONS
SIS	Safety Injection.	. Annunciation (SI initiated: Ckt. 1, Ckt. 2). . Pressurizer low pressure (1605 Psia) (PI 0103A)	Mandatory: 1,2,3,5,10, 17 Subsequent: 38 ,39
Releases	Radiological Effluent Tech Specs. Significant solid or liquid waste spill outside [illegible] affected areas with threatened off-site [illegible].	. Radwaste discharge monitor (RE-1049)* . Waste Gas monitor (RIA 1113)* . Confirmation by lab sample analysis . Observation. . Confirmation by survey results. * Setpoint determined for each planned release based on 1 MPC at site boundary.	Mandatory: 1,2,3,5,10,17 Subsequent: 38 , 39
Fuel Damage	Coolant [illegible] greater than 1.0 uc/gram dose equivalent I-131 for more than 72 continuous hours.	. Failed fuel monitor (RIA 0202) confirmed by radiochemistry sample analysis.	Mandatory: 1,2,3,5,10, 17 Subsequent: 38 , 39
PCS, Temperature or Pressure	Any challenge to overpressure protection system (OPPS). Critical operation at PCS temperature < 525° (except for physics tests). Reactor high-pressure trip. Pressurizer code safety operation.	. OPPS operation annunciation (SV and/or PORV open). . Temperature recorder (TR 0121 or TR 0111). . Annunciation (RPS alarms). . Event recorder. . Accoustical monitors (Fl 1039, 1040, 1041). . Quench tank high level (LIA 0116). . Quench tank high pressure (PIA 0116). . Quench tank high temperature (TIA 0116). . Discharge temperature alarms (TIA 0107, 0108, 0109).	Mandatory: 1,2,3,5,10 Subsequent: 38, 39
PCS Integrity	PCS leakage in excess of Technical Specification limits, but less than 50 gpm. Primary to secondary leakage in excess of Technical Specification limits	. Daily PCS leak rate determination from Surveillance Procedure D-W-1. . S/G secondary water activity greater than 0.1 uc/gram dose equivalent I-131.	Mandatory: 1,2,3,5,10,17 Subsequent: 38, 39
Station Power	Loss of all off-site power and PCS temperature > 325°F. Loss of all on-site a-c sources and PCS temperature > 325°F.	. Annunciation switchyard noncritical alarms, start-up transformer trouble alarm. . Automatic start of emergency D/G. . Current and voltage indicators.	Mandatory: 1,2,3,5,10 Subsequent: 38 ,39

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT / IF NEEDED, ACTIONS
Containment Integrity	Loss of containment integrity requiring plant shutdown.	. Observation. . Surveillance test results	Mandatory: 1,2,3,5,10 Subsequent: 38 ,39
Engineered Safeguards System	Loss of engineered safety feature requ.ring plant shutdown.	. Surveillance test results. . Annunciation (Scheme K13, Panel C13).	Mandatory: 1,2,3,5,10 Subsequent: 38 , 39
Fire	Any fire requiring outside assistance.	. Annunciation (smoke detectors). . Observation	Mandatory: 1,2,3,5,8,10, 18,30 Subsequent: 38 ,39 Refer to Fire Protection Implementing Procedures, Sections 1 & 2.
Security	Bomb threat. Unannounced demonstrations at plant site.	. Telephone notification. . Observation	Mandatory: 1,2,3,5,10,18 Subsequent: 38 ,39 Refer to Safeguards Contingency Procedures, Bomb Threat Section 1, Demontrations Section 4.
Natural Phenomena	Earthquake Seiche (tidal wave). Tornado near site.	. Observation. . Observation. . Observation	Mandatory: 1,2,3,5,10,18 Subsequent: 38 ,39 If Needed: 14,15
Man-Made External Hazards	Aircraft crash, train derailment or explosion on site which does not damage any safety-related buildings or structures. Toxic gas release on site or close to plant site, not affecting any plant operating personnel.	. Observation . Observation (on site). . Notification by off-site authorities (off-site release).	Mandatory: 1,2,3, 5,10,18 Subsequent: 38 ,39 If Needed: 14,15 ,17 Refer to Safeguards Contingency Procedures, Section 8
Public Interest Notifications	Plant shutdown under uncontrolled conditions (eg, exceeding cooldown limits). Any plant shutdown required by a Technical Specification LCO.	. Observation. . Instrumentation (eg, TR 0111, TR 0121). . Observation.	Mandatory: 1,2,3,5,10 Subsequent: 38 ,39
Personnel Injuries	Transportation of contaminated injured individual to hospital. Any fatality occurring on site.	. Observation. . Notification from injured's supervisor. . Observation.	Mandatory: 1,2,3,5,8,9,10,17, 18 Subsequent: 38 ,39 If needed: 6,7,36 (notify county where victim taken).

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT/IF NEEDED ACTION
Releases	Radiological effluent greater than 10 times Technical Specification limits (an instantaneous rate, which if continued over two hours, would result in a dose of approximately 1 mR at the site boundary under average meteorological conditions) which indicate severe degradation in the control of radioactive materials.		Mandatory: 1,2,3,5,10,11, 17, 18,19,20,22,24,25,27,32 Subsequent: 26,28,38,39
Fuel Damage	Severe loss of fuel cladding resulting in 300 µc/cc equivalent I-131, or 1% failed fuel in 30 minutes or 5% total failed fuel. Any fuel handling accident with release of radioactivity to containment or fuel handling building,	. Failed fuel monitor (RIA 0202) off scale, confirmed by primary coolant sample analysis. . Stack monitor (RIA-2318) reads 20 times alarm setpoint $\leq$ setpoint of 0.5 MPC for a period of two or more hours, and meteorological tower Delta T is less than positive 2.	Mandatory: 1,2,3,5,10,17 18,19,20,22,24,27,32 Subsequent: 38,39 If Needed: 25,26,28,31
PCS Temperature or Pressure	PCS temperature less than 50°F subcooled; sustained for more than 5 minutes, or $< 50^{\circ}$ subcooled, and subcooling margin decreasing. Not applicable when plant in cold shutdown or refueling shutdown condition.	. Subcooling margin meter.	Mandatory: 1,2,3,5,10, 18,19,20,22,24,27,32 Subsequent: 38,39 If Needed: 31
PCS Integrity	PCS leak rate greater than 50 gpm, but less than capacity of operable charging pumps. Steam generator tube rupture resulting in primary to secondary leak rate of several hundred gpm.	. Containment sump high level alarms (LIA 0358, 0359, LS 0358, 0360). . Mismatch between charging flow (FIA 0202) and letdown flow (FIC 0202). . Off-gas monitor (RIA 0631) . Pressurizer low level (LI 0103A).	Mandatory: 1,2,3,5,10,17, 18,19,20, 22,24,27,32 Subsequent: 38,39 If Needed: 25,26,28,31
Station Power	Loss of all off-site power and all on-site a-c power sources (natural circulation maintained). Loss of all d-c power.	. D-C lighting energized. . Bus voltage indication . Alarms on all bus sections. . Loss of annunciator panels.	Mandatory: 1,2,3,5,10,18,19,20 22,24,27,32 Subsequent: 16,29,38,39

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT, IF NEEDED, ACTIONS
Engineered Safeguards Systems	Failure of RPS to initiate and complete a scram, such that the reactor is not made subcritical. Loss of functions needed to attain or maintain cold shutdown (eg, loss of bus Y01).	. Nuclear instrumentation. . Rod position indication. . RPS alarms. . Annunciators (various depending on function which is lost).	Mandatory: 1,2,3,5,10,18, 19,20,22,24,27,32 Subsequent: 38,39 If Needed: 31
Fire	Fire which affects or threatens to affect safety systems.	. Annunciators (smoke detectors). . Observation.	Mandatory: 1,2,3,5,8,10,18, 19,20,22,24,27,30,32 Subsequent: 38,39 If Needed: 31,34,17 Refer to Fire Protection Implementing Procedures, Sections 1 and 2.
Security	On-going security compromise, eg, discovery of bomb inside fence perimeter, evidence of forced entry into the protected area or a vital area.	. Observation . Security alarms	Mandatory: 1,2,3,5,10,18,19, 20,22,24,27,32 Subsequent: 38,39 If Needed: 31 Refer to Safeguards Contingency Procedures, Bomb Inside Fence - Section 2, Forced Entry - Sections 6 & 10
Natural Phenomena	Seiche (tidal wave) threatening to flood plant structures. Tornado striking facility.	. Observation. . Notification by civil authorities. . Observation	Mandatory: 1,2,3,5,10,18,19 20,22,24,27 Subsequent: 38,39 If Needed: 14,15,31,32
Man-Made External Hazards	Aircraft crash or missile impact on facility which involves a building or structure, but not resulting in inoperable equipment required to achieve safe shutdown. Explosion which damages facility, but does not render inoperable equipment needed to achieve safe shutdown. Entry of toxic gas into facility. Turbine failure which results in casing penetration.	. Observation. . Observation . Observation . Observation. . Annunciation (eg, turbine rotor position eccentricity).	Mandatory: 1,2,3,5,10,18,19 20,22,24,27,32 Subsequent: 38,39 If Needed: 9,14,15,16 Refer to Safeguards Contingency Procedures, Section 8.

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT/IF NEEDED ACTIONS
Personal Injury/ Hazards	Conditions resulting in Control Room evacuation.	. Various depending upon hazard (eg, observation of smoke, radiation area monitors, observation of toxic gas).	Mandatory: 1,2,3,5,10,17,18,19 20,22,24,27,32 (notify Subsequent: 38, 39 county where If Needed: 6,7,31,36 taken)
Secondary Side	Steam line break with secondary system activity 0.1 μc/gm	. Observation. . Steam generator pressure instruments. . SIS actuation alarm . Feedwater flow/Steam flow instruments . S/G activity determined by analysis (radiochemistry).	Mandatory: 1,2,3,5,10,17,18,19 20,22,24,27,32 Subsequent: 38, 39 If Needed: 25,26,28,31

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT/IF NEEDED ACTIONS
SIS	Safety Injection	. Annunciation (SI initiated: Ckt.1, Ckt. 2). . Pressurizer low pressure (1605 psia) (PI0103A)	Mandatory: 1,2,3,4,5,10,17,18,19 20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35
Releases	Effluent monitors detect levels corresponding to greater than 50 mR/h for 1/2 hour or greater than 500 mR/h to the thyroid (or five times those levels to the thyroid) at the site boundary for adverse meteorological conditions. Projection of above dose rates based on appropriate parameters (eg, containment building radiation level with containment leak rate appropriate for existing containment pressure). Measurement of above dose rates in environs.	. Stack monitor (RIA 2318) reads 11 times alarm setpoint of less than or of equal to 1/2 hour, or 100 times alarm setpoint for 2 minutes, and meteorology tower Delta T is positive 2.0 or greater, less than 0.5 MPC for 1/2 hour or 100. . Accident assessment. . Monitoring teams with survey instruments.	Mandatory: 1,2,3,4,5,10,11,17, 18,19,20,21,22,23,24,25 Subsequent: 26,28,33,34,38,39 If Needed: 12,13,14,15,16,31, 35
Fuel Damage	Degraded core with possible loss of coolable geometry.	. Subcooled margin monitor indicates PCS temperature greater than saturation temperature.	Mandatory: 1,2,3,4,5,10,17,18, 19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35
PCS Integrity	Loss of coolant accident which exceeds charging pump capacity.	. Low-low pressurizer level (LIC 0101A: 2%) (Panel C-12). . Safety injection actuation alarm (Panel C-13). . Pressurizer low-pressure alarm (Panel C-12). . Containment high-pressure alarm (Panel C-13). Pressurizer level may not be a true indication of PCS fluid inventory.	Mandatory: 1,2,3,4,5,10,17,18, 19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35
Station Power	Loss of all a-c power sources, and loss of both station batteries for more than 15 minutes, and PCS, and plant not in cold shutdown or refueling shutdown.	. Voltage and current indicators.	Mandatory: 1,2,3,4,5,10,18, 19,20,21,22,23,24,25,27,32 Subsequent: 16,26,28,33,34,38, 39 If Needed: 17,31,35

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT / IF NEEDED, ACTIONS
Fire	A fire incapacitating safety systems required to achieve safe shutdown.	. Smoke detectors (annunciation) . Observation	Mandatory: 1,2,3,4,5,8,10,18, 19,20,21,22,23,24,25,27,30,32 Subsequent: 26,28,33,34,38,39 If Needed:17,31,35 Refer to Fire Protection Implementing Procedures, Sections 1 and 2.
Security	Imminent loss of physical control of the facility.	. Observation . Security alarms	Mandatory: 1,2,3,4,5,10,18, 19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed:17,31,35 Refer to Safeguards Contingency Procedures, Sections 6 and 10
Natural Phenomena	Seiche (tidal wave) resulting in incapacitation of equipment needed to achieve or maintain safe shutdown.	. Observation	Mandatory: 1,2,3,4,5,10,18, 19,20,21,22,23,24,25,27 Subsequent: 26,28,33,34,38,39 If Needed: 14,15,31,32,33,35,17
Man-Made External Hazards	Aircraft crash, missiles or explosions severely damaging safety-related structures. Entry of toxic gas into areas which are required to be manned in order to maintain plant in safe configuration.	. Observation . Observation	Mandatory: 1,2,3,4,5,10,18, 19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 8,9,14,15,16,17,31 35,36 Refer to Safeguards Contingency Procedures, Section 8
Secondary Side	Steam line break with $\geq$50 gpm primary to secondary leakage and secondary system activity $\geq$.1 uc/gm dose equivalent I-131.	. Safety injection actuation alarms. . Steam generator pressure indicators . Feedwater flow and steam flow instruments . Activity determined by analysis.	Mandatory: 1,2,3,4,5,10,17,18, 19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35

KEY WORD	EVENT	DETECTION	MANDATORY/SUBSEQUENT / IF NEEDED, ACTIONS
SIS	See Unusual Event		Mandatory: 1,2,3,5,10,17,18,19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35
Releases	Effluent monitors detect levels corresponding to 0.5 R/2 h, or 5 R/30 days, 25 mR/h for 2 hours or 7 mR/hr 30 days to the wholebody at the site boundary under actual meteorological conditions. A dose rate of 1 R/h to the wholebody at the site boundary projected from radiation levels in containment combined with leak rate appropriate for the existing containment pressure. 1 R/h measured at the site boundary.	. Stack monitor (RIA-2318) reads 50 times alarm setpoint and the meteorological tower Delta T is greater than positive 4.0 or using Procedure EI8-4. The high-range stack monitor reads 1.3 mR/h and the meteorological tower Delta T is greater than positive 4.0 or 170 mR/h and the meteorological tower Delta T is greater than 0. . Accident assessment procedures. . Survey teams.	Mandatory: 1,2,3,4,5,10,11,17,18,19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Necessary: 12,13,14,15,16,31,35
Fuel Damage	See Site Emergency		
PCS Integrity	See Site Emergency		
Containment Integrity	Loss of 2 fission product barriers with a potential loss of the third barrier (eg, loss of core geometry and PCS boundary and a high potential for loss of containment).	. Detection method dependent upon which barriers fail and to some extent, upon mechanism which causes failurd.	Mandatory: 1,2,3,4,5,10,17,18,19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 31,35
Station Power	See Site Emergency		
Engineered Safeguards System	See Alert		
Fire	See Site Emergency		
Security	Loss of physical control of facility.	. Observation. . Notification by Security forces.	Mandatory: 1,2,3,4,5,10,18,19,20,21,22,23,24,25,27,32 Subsequent: 26,28,33,34,38,39 If Needed: 17,31,35 Refer to Safeguards Contingency Procedures, Sections 6 and 10.
Other	Other plant conditions which make releases or large amounts of radioactivity in a short time interval possible (eg, any core melt condition)	. Control Room Instrumentation.	

NOTES: To General Emergency Classifications

1. For sequences where significant releases are not yet taking place and large amounts of fission products not yet in containment atmosphere, consider 2 mile precautionary evacuation. Consider 5 mile downwind evacuation (45° to 90° sector) if large amounts of fission products are in the containment atmosphere. Recommend sheltering in other parts of the plume exposure Emergency Planning Zone under this circumstance.

2. For sequences where significant releases are not yet taking place and containment failure leading to a direct atmospheric release is likely in the sequence but not imminent and large amounts of fission products in addition to noble gases are in the containment atmosphere consider precautionary evacuation to 5 miles and 10 miles downwind evacuation (45° to 90° sector).

3. For sequences where large amounts of fission products other than noble gases are in the containment atmosphere and containment failure is judged imminent, recommend shelter for those areas where evacuation cannot be completed before transport of activity to that location.

ion pe ,orI)	Action	Telephone No./ Reference	Time Action Init.	Person Perform Action	Comments
	1. Notify Duty and Call Superintendent	Duty Call List			
	2. Power Controller (for GO respone) Note: perform notification #4 once General Office Control Center is notified.	Red Telephone or			
	3. Nuclear Regulatory Commission (listed in order of decreasing preference)	1. Direct Line (red telephone) 2. Bethesda Op. Ctr. 3. Silver Springs 4. Health Physics Network Phone * (touch tone) (dial phone) 5. Bethesda Central Office			
	4. General Office Control Center/Temporary Emergency Operations Facility				
	5. Ven Buren County Sheriff	Dedicated telephone or			
	6. Berrien County Sheriff				
	7. Allegan County Sheriff				
	8. Covert Fire Dept. & Ambulance Service				
	9. Hospitals: Mercy Hospital South Haven Community Hospital				
	10. Michigan State Police: South Haven Post (initial notifications)	Dedicated telephone or [illegible] or radio in Security			

Emergency Implementation Procedures

Revision Sheet

TITLE: Activation of the On-Site Operations Support Center, EI-4.2

Revision	PRC Date	Approved by Gen. Manager
0	10/30/80	R.W. Mantron 10/13/80
1	12/21/81	J.S. Reay for R.W. Mantron 1/22/82
2	6/10/82	R.W. Mantron SEP 2 1982

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EMERGENCY IMPLEMENTATION PROCEDURE EI-4.2
ACTIVATION OF THE ON-SITE OPERATIONS SUPPORT CENTER
(Assembly Areas III, IV, V, VI)
Rev 2

1.0 PERSONNEL RESPONSIBILITY

The Radiation Protection Supervisor or designated alternate is responsible for implementation of this procedure.

2.0 PURPOSE

1. To describe actions to be taken to activate the On-Site Operations Support Center (OSC) and to list the emergency facilities available for use at the OSC.

2. The OSC is activated for use in dealing with Site and general emergency and certain alert conditions at Palisades Plant.

3.0 ATTACHMENTS AND RECORDS

1. Attachment 1, Floor Plan of Operations Support Center

2. Attachment 2, Preferred and Alternate Methods of Communication

3. Attachment 2.1, Key to Attachment 2

4. Attachment 3, Personnel Assigned to the Operations Support Center

4.0 SPECIAL INSTRUCTIONS

If airborne radiation levels warrant or the radiation levels exceed 100 mr/hr in the OSC an alternate center can be established at the Feedwater Purity Building with concurrence of the Site Emergency Director.

5.0 PROCEDURE

5.1 ACTIVATION OF THE ON-SITE OPERATIONS SUPPORT CENTER

5.1.1 Emergency equipment and communication systems in the OSC are always available for use and do not require activation.

5.1.2 Upon sounding of the emergency siren, the following actions will be performed to activate the OSC:

1. Personnel assigned will proceed to individual assembly areas within the OSC.

2. A personnel accountability check will be performed and the results reported to the Property Protection Supervisor/Security Lieutenant.

3. A radiation survey will be performed to determine habitability of the OSC. If radiation dose rate is greater than 100 mr/hr or airborne levels warrant, the OSC will be evacuated in accordance with Section 5.2 of this procedure.

4. Personnel will leave the area only when directed by Assembly Area Leaders.

5.2 EVACUATION OF THE OPERATIONS SUPPORT CENTER

5.2.1 If the airborne radiation levels warrant or the radiation levels exceed 100 mr/hr in the OSC (any area), the following actions will be taken:

1. The OSC will be transferred to the second floor of the Feedwater Purity Building.

2. If the Feedwater Purity Building is not habitable, the SED will designate the alternate OSC location.

5.3 COMMUNICATIONS

5.3.1 The following communication systems are available for use in the OSC.

1. Intraplant telephone

2. Intercom to the Control Room

3. Portable Radios (available in Control Room)

4. General Telephone telephones(independent outside lines and available in adjacent offices)

5.3.2 The preferred and alternate methods of communicating between the OSC and other areas combatting the emergency condition are shown on Attachment 2.

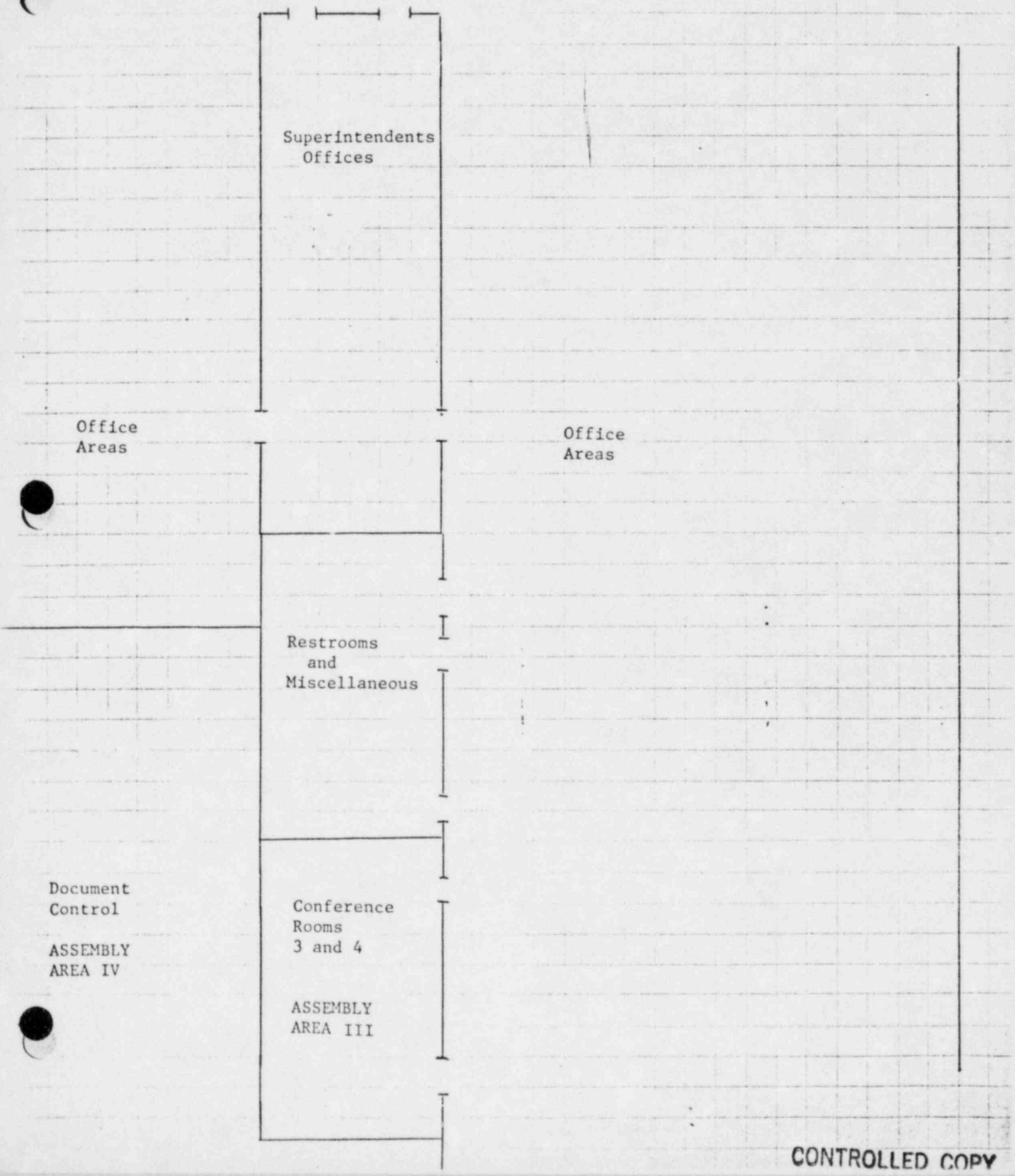
5.4 EMERGENCY EQUIPMENT

5.4.1 There is a radiological emergency monitoring kit stored in the OSC.

5.4.2 All necessary plant documentation is available in the office cubicle area surrounding the top floor OSC.

ATTACHMENT 1

Floor Plan of Operations
Support Center



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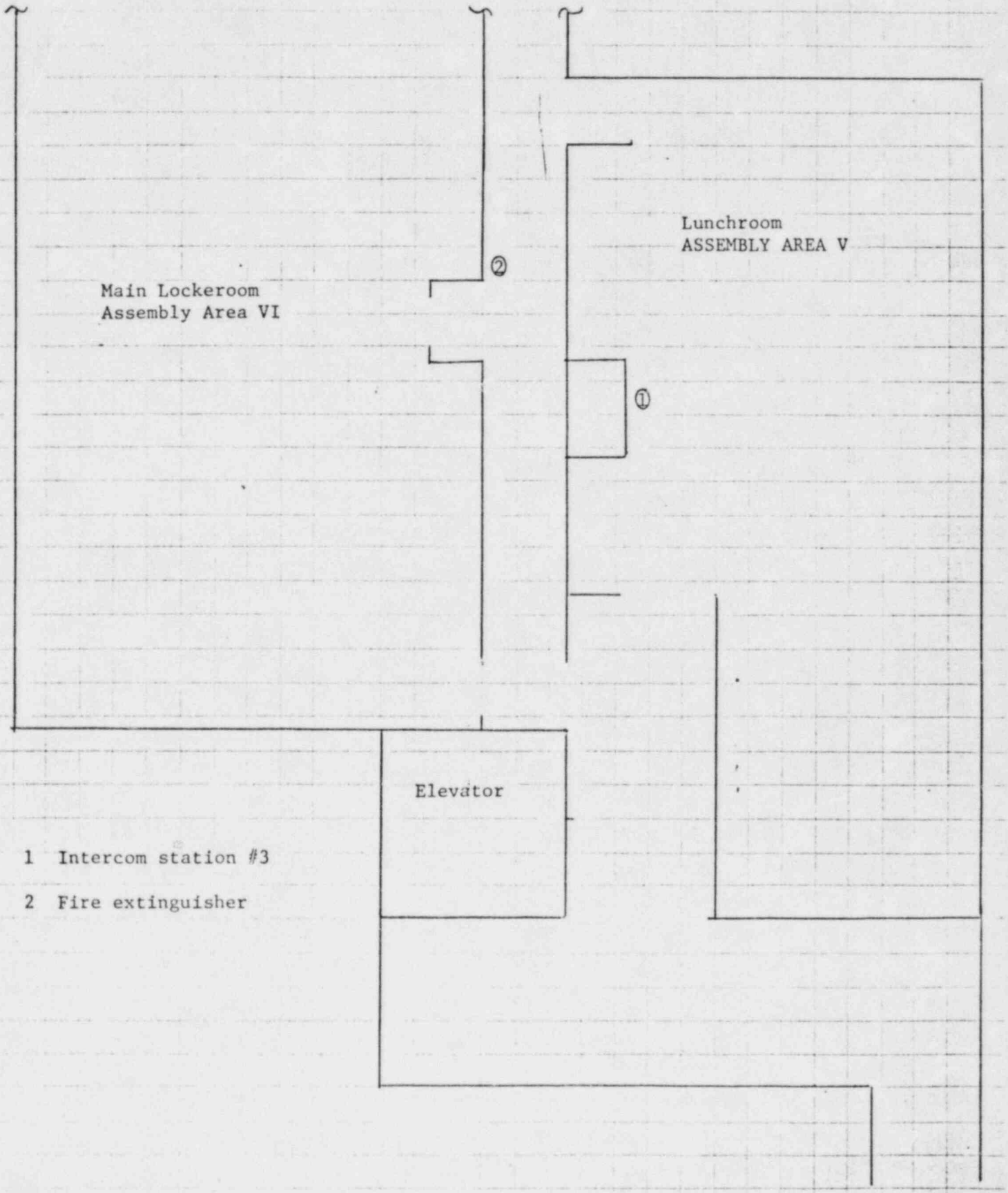
ATTACHMENT 1

Floor Plan of Operations Support Center



1 Intercom station #3

2 Fire extinguisher

ATTACHMENT 2

Preferred and Alternate Methods of Communication

Communication FROM: TO	Control Room	Tech Supp Center	Ops Supp Center	Emergency Operations Facility	Control Ctr Jackson	NRC	Mich State Police/Dept of Health	Van Buren Emergency Services
Control Room	1.--- 2.---	1. F to F 2. Intra 3. Sound	1. Intra 2. Walkie	1. Intra/Gen 2. Radio	1. Dedic 2. Gen	1. Dedic 2. Gen	1. Gen 2. **	1. Dedic 2. Gen
Technical Support Center	1. F to F 2. Intra	1. --- 2. ---	1. Intra 2. Walkie	1. Intra 2. Gen	1. Gen 2. ---	1. Dedic 2. Gen	1. Gen 2. **	1. Gen 2. ---
Operations Support Center	1. Intra 2. Walkie	1. Intra 2. Walkie	1. --- 2. ---	1. Intra 2. Gen	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. **	1. Gen 2. --
Emergency Operations Facility	1. Intra/ Gen 2. Radio	1. Intra 2. Gen	1. Intra 2. Gen	1. --- 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. **	1. Gen 2. ---
Control Center Jackson	1. Dedic 2. Gen	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. --- 2. ---	1. Gen 2. ---	1. Gen 2. **	1. Gen 2. ---
NRC	1. Dedic 2. Gen	1. Dedic 2. Gen	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. --- 2. ---	1. Gen 2. ---	1. Gen 2. ---
Michigan State Police/Dept of Health	1. Gen 2. **	1. Gen 2. **	1. Gen 2. **	1. Gen 2. **	1. Gen 2. **	1. Gen 2. ---	1. --- 2. ---	1. Gen 2. **
Van Buren County Emergency Services	1. Dedic 2. Gen	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. ---	1. Gen 2. **	1. --- 2. ---

ATTACHMENT 2.1

KEY

Key:	F to F	= Face to face
	Intra	= Intraplant telephone
	Dedic	= Dedicated telephone
	Walkie	= Portable radio
	Gen	= Normal outside telepone line
	**	= State Police radio bank (available through plant security)
	Radio	= Company radio
	Sound	= Sound-powered telephone

NOTE: Portable radios are available in the Control Room for communications to and from any area within the plant. In addition, the Control Room is the principle communication center for the plant, therefore all methods of communication available in the Control Room can be used as backup for any plant assembly area to any offsite location.

ATTACHMENT 3

PERSONNEL ASSIGNED TO THE OPERATIONS SUPPORT CENTER

1. The following groups of personnel are assigned to the four assembly areas in the OSC:

   a. Assembly Area III (Conference Rooms 3 and 4)

      1. Senior Engineer (in charge)
      2. Environmental Supervisor (first alternate)
      3. Administrative Supervisor (second alternate)
      4. Maintenance Supervisors
      5. Document Control Supervisor
      6. Material Services Supervisor
      7. Quality Control Supervisor
      8. Buildings and Grounds Supervisor

   b. Assembly Area IV (Conference Area, Document Control)

      1. Senior Engineer (in charge)
      2. Engineers/Technologists
      3. Quality Assurance Superintendent (first alternate)
      4. Personnel Director/Assistant (second alternate)
      5. Quality Assurance Engineers
      6. Quality Control Inspectors
      7. Clerks
      8. Comptroller/Assistant
      9. Buildings and Grounds Personnel

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ATTACHMENT 3

PERSONNEL ASSIGNED TO THE OPERATIONS SUPPORT CENTER

c. Assembly Area V (Lunchroom)

1. Radiation Protection Supervisor (in Charge)

2. Instrument and Control Supervisor (first alternate)

3. Chemistry Supervisor (second alternate)

4. Chemistry/Radiation Protection Technicians

5. Instrument and Control Technicians

d. Assembly Area VI (Main Locker Room)

1. Assistant Maintenance Supervisor(s) (in charge)

2. Assistant Maintenance Supervisor(s) (alternate(s))

3. Repairmen

4. Stockmen

2. Personnel assigned to the OSC will be a pool of personnel available to help minimize the effects of the accident and to help in recovery. After initial assembly, those personnel not required for accident recovery will be released to their homes on a standby basis.