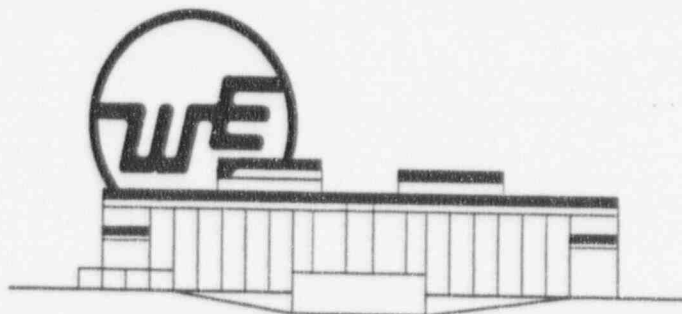




**Wisconsin
Electric
POWER COMPANY**

Point Beach Nuclear Plant

1996 Ingestion Pathway Exercise



August 6 and 7, 1996

PREFACE

The Point Beach Nuclear Plant (PBNP) Emergency Plan describes the nuclear emergency response capabilities at PBNP and at Wisconsin Electric Power Company (WE), including support provided by federal, state and local governments and private organizations. The Plan describes a program of continuous emergency preparedness, one element of which is an annual evaluated exercise.

The conduct of this exercise provides the opportunity to test the emergency plan and its associated implementation procedures, and to activate and enable the evaluation of major portions of the emergency response organization (ERO), as required in 10CFR50.47(b) and Appendix E. This exercise provides an opportunity to further enhance emergency response capabilities of the Wisconsin Electric Power Company, the State of Wisconsin, and Kewaunee and Manitowoc Counties.

The 1996 Point Beach Nuclear Plant (PBNP) emergency exercise to be conducted on August 6 and 7 will be a full-scale, ingestion pathway exercise. This Exercise will test WE/PBNP Emergency Response Organization's ability to assess and respond to emergency conditions and coordinate effort with other agencies for protection and health and safety of the public. This Exercise will also test significant portions of the Radiological Emergency Response Plans/Procedures of the State of Wisconsin, Manitowoc County and Kewaunee County. Some elements of the plans of Ingestion Counties will also be evaluated.

This will be a two-day Ingestion Pathway Exercise. Exercise Day 1 will include full exercise play; Exercise Day 2 will test ingestion pathway response. There will be time jumps such that the exercise will involve accident days one, two and four as follows:

<u>Exercise Day/Time</u>		<u>Accident Day/Time</u>	
Day 1, Tuesday, August 6	0700-1600	Day 1, Tuesday, August 6	0700-1600
Day 2, Wednesday, August 7	0800-1000	Day 2, Wednesday, August 7	0800-1000
Day 2, Wednesday, August 7	1000-1300	Day 4, Friday, August 9	1000-1300

WE/PBNP will fully participate and respond on Exercise Day 1. All WE/PBNP Emergency Response Facilities will be activated as required by the simulated accident. On Exercise Day 2, WE will participate in the JPIC and will provide a "participant/control cell" in the EOF to support State and counties response. The State of Wisconsin will fully participate in Exercise Days 1 and 2. Manitowoc and Kewaunee Counties will fully respond per their objectives on Exercise Day 1 and provide limited response on Exercise Day 2.

This Exercise Manual provides the basis for the conduct of this exercise. This manual is to be used as the control mechanism for the conduct and evaluation of the exercise. This manual is subject to a limited, controlled distribution. Exercise participants will not have prior knowledge of the nature of the simulated accident or any parts thereof.

Note: As exercise efforts progress, minor changes may be required to the Exercise Manual. Any such changes will be identified during pre-exercise briefings and will be noted in the errata package.

1996 SCENARIO DEVELOPMENT TEAM

Renee Milner, Team Leader

Steve Antholt..... State of Wisconsin
Terry Benton Operations
Tim Branam Project Engineer, EPE
Larry Epstein EP Training
Donna Flanagan..... EP Specialist
Steve Goldman Scenario Consultant
Steve Gucwa..... Simulator
Harv Hanneman..... Nuclear Safety Analysis
Tim Lohr Operations
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Carl Onesti Rad Engineering
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Randy Richards Chemistry
Tom Staskal..... Duty & Call Superintendent
Jim Wilson Mechanical Plant Engineering

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1996 Scenario Development Team

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1.0 SCOPE AND OBJECTIVES

The scope of the exercise is defined in Section 1.1. Wisconsin Electric Power Company (WE) Point Beach Nuclear Plant exercise objectives are provided in Section 1.2. State and county objectives are included in the state objectives letter, dated April 30, sent to the Federal Emergency Management Agency (FEMA) and reprinted in Section 1.3.

1.1 Scope

The 1996 Point Beach Nuclear Plant (PBNP) emergency exercise to be conducted on August 6 and 7 will be a full-scale, ingestion pathway exercise. This Exercise will test WE/PBNP Emergency Response Organization's ability to assess and respond to emergency conditions and coordinate efforts with other agencies for protection and health and safety of the public. This Exercise will also test significant portions of the Radiological Emergency Response Plans/Procedures of the State of Wisconsin, Manitowoc County and Kewaunee County. Some elements of the plans of Ingestion Counties will also be evaluated.

The scenario, as driven by the PBNP Control Room Simulator, will depict a simulated sequence of events that result in escalating conditions of sufficient magnitude to warrant mobilization of State and local agencies to respond to the simulated emergency. Whenever practical, the Exercise will incorporate provisions for "Free Play" on the part of the participants.

This will be a two-day Ingestion Pathway Exercise. Exercise Day 1 will include full exercise play; Exercise Day 2 will test ingestion pathway response. There will be time jumps such that the exercise will involve accident days one, two and four as follows:

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WE/PBNP will fully participate and respond on Exercise Day 1. All WE/PBNP Emergency Response Facilities will be activated as required by the simulated accident. On Exercise Day 2, WE will participate in the JPIC and will provide a "participant/control cell" in the EOF to support State and counties response.

The State of Wisconsin will fully participate in Exercise Days 1 and 2. Manitowoc and Kewaunee Counties will fully respond per their objectives on Exercise Day 1 and provide limited response on Exercise Day 2.

1.2 Wisconsin Electric Power Company Objectives

The Point Beach Nuclear Plant 1996 Emergency Preparedness Exercise Program objectives are based on the NRC requirements delineated in 10 CFR 50.47 and 10 CFR 50, Appendix E and Inspection Procedure No. 82302. Additional guidance provided in NUREG-0654, NUREG-0696, and NUREG-0737 Supplement 1, was utilized in developing these objectives.

The overall objective of the Exercise is to evaluate the integrated capability of a major portion of the basic elements existing within the on-site and offsite emergency plans and emergency response organizations. Within this overall objective, individual objectives are specified in this section.

The objectives are divided into subsections as follows:

- 1.2.1 Assessment and Classification
- 1.2.2 Notification and Communications
- 1.2.3 Radiological Assessment and Protective Actions
- 1.2.4 Emergency Facilities
- 1.2.5 Emergency Direction and Control
- 1.2.6 Public Information
- 1.2.7 Reentry and Recovery
- 1.2.8 Offsite Agency Coordination

1.2.1 Assessment and Classification

- a. Demonstrate the ability to assess plant conditions which warrant an emergency classification.
- b. Demonstrate the ability of the ERO staff to correctly classify an emergency event using the EIPs. [LIMITATION: The initial emergency classification may be SITE EMERGENCY].

1.2.2 Notification and Communication

- a. Demonstrate the ability to notify on-site personnel of emergency classification(s) using the plant Gai-tronics system.
- b. Demonstrate the ability to make notification to offsite state and county emergency governments, using EPIP 2.1, within fifteen (15) minutes of declaring an emergency.
- c. Demonstrate the ability to provide information updates and follow-up information to the state and counties at least hourly using the appropriate EPIP forms.
- d. Demonstrate the ability to make notifications to the NRC within one (1) hour of the emergency classification using EPIP 2.2.
- e. Demonstrate the ability to provide information updates to the NRC at least hourly using the appropriate EPIP forms.
- f. Demonstrate the ability of ERO management to provide briefings and updates concerning plant status, event classification, activities, and assumption of responsibilities.
- g. Demonstrate the use of a backup communications system.

1.2.3 Radiological Assessment and Protective Actions

- a. Demonstrate the ability to make appropriate protective action recommendations (PARs) to state/county authorities after completing an offsite dose projection or completion of a PAR determination segment.
- b. Demonstrate the ability to verify the habitability of the plant.
- c. Demonstrate the ability to perform radiological monitoring of site evacuees in accordance with EPIP 6.7 and PBNP Health Physics procedures.
- d. Demonstrate the ability obtain meteorological data.
- e. Demonstrate the ability to provide respiratory protection equipment and protective clothing to emergency personnel.

- f. Demonstrate the ability to authorize personnel exposure beyond 10 CFR 20 limits if scenario events and decisions call for this action.
- g. If exercise response dictates, demonstrate the ability to brief personnel for entry into a high radiation area in accordance with plant policies and appropriate procedures.
- h. Demonstrate the ability to issue personnel dosimetry in accordance with appropriate procedures.
- i. Demonstrate the ability to monitor, track, and document radiation exposure to in-plant teams in accordance with established policies and plant procedures.
- j. Demonstrate the ability to provide for personnel decontamination.
- k. Demonstrate the ability to collect and maintain all in-plant radiological surveys taken in accordance with EPIP 4.2.
- l. Demonstrate the ability to compare estimated doses to the appropriate PACs to determine PARs.
- m. Demonstrate the ability to perform field monitoring, including soil, water and vegetation samples as appropriate.
- n. Demonstrate the ability to detect/measure air sample concentrations in the EPZ as low as $1.0\text{E-}07$ $\mu\text{Ci/cc}$.
- o. Demonstrate the ability to make the decision whether to issue Potassium Iodide (KI) to emergency workers.

1.2.4 Emergency Facilities

- a. Demonstrate the ability to fully alert, mobilize, and staff personnel for both facility and field-based emergency functions based upon specified emergency classifications.
- b. Demonstrate the adequacy of facilities and displays to support emergency operations.

1.2.5 Emergency Direction and Control

- a. Demonstrate the ability to augment the staff to provide a full emergency response organization (ERO) in accordance with the Emergency Plan.
- b. Demonstrate the ability to augment on-site personnel in accordance with Table B-1.
- c. Demonstrate the capability of the ERO staff of 24-hour operations. [**LIMITATION:** This may be demonstrated by the development of relief rosters.]

- d. Demonstrate the ability to contact and secure assistance from offsite emergency response resources.
- e. Demonstrate the ability to determine if site evacuation of non-essential personnel is required in accordance with EPIP 6.2 or EPIP 6.7.
- f. Demonstrate the ability to accomplish personnel accountability within 30 minutes of announcement of plant evacuation.
- g. Demonstrate the ability to prioritize Operations and Maintenance activities during abnormal and emergency situations.
- h. Demonstrate the ability to communicate priorities within and between emergency response facilities.

1.2.6 Public Information

- a. Demonstrate the ability to activate the Joint Public Information Center in a timely manner in accordance with appropriate procedures. (LIMITATION: WE JPIC personnel will be pre-staged.)
- b. Demonstrate the ability to establish and effectively operate the utility's rumor control program.
- c. Demonstrate the ability to brief the media and public in a clear, accurate, and timely manner.
- d. Demonstrate the ability to augment JPIC staff to provide information to the public during a PBNP emergency.
- e. Demonstrate the ability to coordinate and share information among state, county, and utility spokespersons

1.2.7 Reentry and Recovery

- a. Demonstrate the ability to utilize and implement appropriate recovery and reentry procedures.
- b. Demonstrate the ability to analyze core conditions and perform core damage assessment.
- c. Demonstrate the ability to augment staff to provide technical support for planning and recovery/reentry operations.

1.2.8 Offsite Agency Coordination

- a. Demonstrate the ability to perform joint emergency operations with federal, state, and county authorities.

- b. Demonstrate the ability to augment the staff to provide management level interface with government authorities.

1.3 Off-Site Objectives

State and county objectives are included in the State Objectives/Extent of Play letter, dated April 30, sent to the Federal Emergency Management Agency (FEMA). This letter is reprinted following this page.



State of Wisconsin

DEPARTMENT OF MILITARY AFFAIRS
Division of Emergency Government

2400 WRIGHT STREET
P.O. BOX 7865
MADISON, WISCONSIN 53707-7865
TELEPHONE: (608) 242-3232
FACSIMILE: (608) 242-3247
24-HOUR EMERGENCY HOTLINE
1-800-943-0003

April 30, 1996

Mr. Larry Bailey, Chairperson
Regional Assistance Committee
Federal Emergency Management Agency - Region V
175 West Jackson Boulevard, 4th Floor
Chicago, IL 60604

Dear Mr. Bailey:

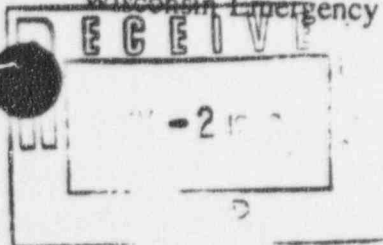
This transmits the objectives and extent of play agreements for the State of Wisconsin, Kewaunee County and Manitowoc County August 6 and 7, 1996, Radiological Emergency Preparedness (REP) Exercise with Wisconsin Electric Power company and the Point Beach Nuclear Plant. These extent of play agreements were discussed at the April 17th Objectives Meeting with Dan Bement and Cleven Lloyd of your staff and reflect the consensus of that meeting.

The exercise will be a two-day ingestion exercise with full participation by the State of Wisconsin, Manitowoc County and Kewaunee County, an overview of the exercise is enclosed.

We look forward to FEMA's approval of the Exercise Objectives. If you have any questions or concerns about this material, please contact Steven Antholt or Marcia Smith, of my staff, at (608) 242-3242 / 3241 respectively. Radiological technical questions may be directed to John Lonenz at the Department of Health and Social Service's Radiation Protection Unit at (608) 267-4794.

Sincerely,

Garrett A. Nielsen, Manager
Radiological Emergency Preparedness Program
Wisconsin Emergency Management



May 1, 1996, Letter to Larry Bailey

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Enclosures: Exercise Overview
State of Wisconsin Objectives
Kewaunee County Objectives
Manitowoc County Objectives

pc: Chris Bacon, Wisconsin DEG (w/o enclosure)
Lyle Schmiling, Kewaunee County
Nancy Crowley, Manitowoc County
Paul Schmidt, Wisconsin DHSS-RPU (w/o enclosure)
John Lorenz, Wisconsin DHSS-RPU
Steve Antholt, Wisconsin DEG
Cleven Lloyd, FEMA Region V
Jim Foster, NRC Region III
Tom Rigney, S.E. Technologies
Renee Hetue, Wisconsin Electric

**Exercise Overview
of the
Point Beach Nuclear Plant (PBNP) Ingestion Exercise**

August 6-7, 1996

General Concept of the Exercise

The PBNP exercise will be a full participation ingestion exercise. Most objectives will be demonstrated in sequence except for Kewaunee County's Reception Center at Algoma High School the evening of August 5. Objectives and locations are summarized in Enclosure 1. The exercise will be conducted during normal work hours. **DAY ONE** will be devoted principally to "Plume Emergency Planning Zone" (EPZ), that is, protecting the population within 10 miles of the plant from exposure to radiation. **DAY TWO** will extend the exercise into the 50-mile Ingestion Planning Zone (IEPZ) and will focus on protecting the public from ingesting radioactive contaminated milk, food and water.

DAY ONE (Tuesday, August 6, 1996)

State and risk county emergency operating centers will provide direction and control for their response to situations generated by the Wisconsin Electric Power Company's onsite scenario. Offsite scenario events and situations will be injected into the exercise. The state will deploy its field teams and mobile laboratory. Risk Counties will activate reception centers and shelters. A Joint Public Information Center (JPIC) will be open with State, County and Utility representatives. In general, Objectives 1-23 will be demonstrated during Day One by the state and/or risk Counties. All state and risk county agency personnel will be fully involved. Some ingestion protective actions may be initiated late on Day One. All ingestion counties will be informed of the situation during Day One and will be on a stand-by status, keeping lines of communication open and responding in accordance with their plans.

A brief self-critique of Day One play may be conducted at each location, as deemed appropriate, once scenario play has ended for the day.

DAY TWO (Wednesday, August 7, 1996)

This will be the ingestion pathway portion of the exercise. The beginning of Day Two will simulate the second day of the incident, to allow for the initiation of ingestion emergency protective actions. A break message will start the exercise play, informing players of what transpired during the night. The state ingestion monitoring and sampling plan will be activated. Ingestion sampling teams from the Wisconsin Departments of Agriculture, Trade and Consumer Protection (DATCP), Natural Resources (DNR), simulated federal teams and Department of Health and Social Services (DHSS) will support that plan. Team and laboratory activities will concentrate on determining the plume limits and evaluating the radioisotopic content and contamination levels in the affected area. Once sufficient time

April 30, 1996

has elapsed to allow the decision makers to demonstrate their ability to interpret data, a break message will be injected identifying levels of radiological deposition in all the affected areas. Once the extent of deposition is known, decision makers will be required to adjust existing protective actions and put in place additional projections. Recovery activity On Day Two will be demonstrated by initiating relocation, re-entry and return discussions as to implementing any decisions based on "day four" data. Decision makers will discuss convening the State and County Recovery Task Forces (i.e., members will be identified but it will not meet).

Scenario weather will determine which ingestion counties will be included in Day Two play. All ingestion counties will remain on a stand-by status, those affected counties will be expected to activate their EOC and provide support as described in their plans. The State EOC will maintain communications with all ingestion counties throughout the exercise.

The JPIC will continue to be fully operational with federal (simulated), state, county and utility PIOs and their staff.

A brief self-critique of Day Two play may be conducted at each organization as deemed appropriate once scenario play has ended for the day.

Significant exercise dates and pre-exercise training events are in Enclosure 2.

April 30, 1996

STATE OF WISCONSIN OFF-SITE OBJECTIVES
for the
1996 POINT BEACH NUCLEAR POWER PLANT EXERCISE
August 6-7, 1996

OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

This will be a full participation ingestion pathway exercise for the State of Wisconsin. Wisconsin Emergency Management staff and representatives of other state agencies will activate the State Emergency Operating Center (EOC). The State EOC located at 2400 Wright Street Madison, WI will be secured for this exercise. The Regional Office in Fond du Lac will serve as a relay point for back-up communications.

On Day One the initial notification will occur via the Dial Select system and will be passed to the Duty Officer. The Duty Officer will follow standing procedures for EOC activation.

The Department of Health and Social Services' Radiation Protection Unit will take the initial call in their offices and move to the State EOC upon activation. Staff will demonstrate the radiological control/dose assessment function in the State EOC. The Forward Operating Center/Mobile Radiological Laboratory and field teams will be deployed.

The Joint Public Information Center (JPIC) will be located at 520 North Adams Street, Green Bay, WI.

Pre-positioned staff for this exercise will be:

- The State Emergency Police Services director will be pre-positioned at the State EOC in Madison. This position will begin play at the time the EOC is activated.

- Wisconsin Emergency Management Regional directors will be pre-positioned at Kewaunee and Manitowoc County EOCs. These positions will begin play at the time the County EOCs are activate.

- State JPIC staff will be pre-positioned in Green Bay WI for the exercise and will be contacted to report to their duty stations at the appropriate time during the exercise per the scenario.

- The Forward Operating Center/Mobile Radiological Laboratory (FOC/MRL) and field and ingestion monitoring teams will be pre-positioned at the Wisconsin Public Service Corporation building, 800 Columbus Street, Two Rivers, Wisconsin.

OBJECTIVE 2:**FACILITIES - EQUIPMENT, DISPLAYS AND WORK ENVIRONMENT**

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

On Days One and Two the State will demonstrate the adequacy of facilities to support operations in the State EOC through the use of maps, status boards and other displays. Appropriate materials will also be located in the FOC/MRL which will be pre-positioned in Manitowoc County.

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

On Days One and Two the State will demonstrate decision-making capabilities in the State EOC. The State will demonstrate coordination between the State EOC, the FOC/MRL, the Joint Public Information Center (JPIC), Kewaunee and Manitowoc Risk County EOCs, the Wisconsin Electric Power Company and the following ingestion counties: Brown, Calumet, Door, Fond du Lac, Marinette, Oconto, Outagamie, Shawano, Sheboygan and Winnebago.

OBJECTIVE 4: COMMUNICATIONS

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

On Days One and Two the State will use a variety of communications means (including Dial-Select, telephone, cellular phone, radio, and facsimile) to communicate with other locations. RACES operators will test Amateur Radio VHF communications between the State and Risk County EOCs and with affected (those counties receiving deposition by the scenario) ingestion counties. The FOC/MRL will demonstrate the communications aspects of its operation from its pre-positioned field location.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

On Day One State field teams will use direct reading and thermoluminescent dosimeters to monitor and control emergency worker exposure. Direct reading dosimeters are calibrated annually by a certified calibration facility. According to Dosimeter Corporation, the manufacturer of our dosimeters, the C-200 mR dosimeters do not have drift problems. We do not use CDV-138 dosimeters which traditionally have drift problems. Dosimetry is available in the field team kits.

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING -- AMBIENT RADIATION MONITORING

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

On Day One State field teams operating in Manitowoc and Kewaunee Counties will demonstrate this objective according to approved field team procedures. State field teams do not use calibrated check sources. Our instruments do not have the capability of open/closed window readings. Three pre-positioned field teams will report to the FOC/MRL at a designated time.

OBJECTIVE 7: PLUME DOSE PROJECTION

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

On Day One the Dose Assessment team, under the direction of the State Radiological Coordinator (SRC), will carry out this objective in the State EOC. Dose modeling will be performed using RASCAL, and backup capability for dose projections will be an alternate computer.

OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING -- AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING

Demonstrate the appropriate use of equipment and procedures for the measurements of airborne radioiodine concentrations as low as 10^{-7} (0.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

On Day One State personnel will demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine in the presence of noble gases and obtain samples of particulate activity in the airborne plume. The state will use RADeCO H-890C Portable Air Sampler. Purging the sampler cartridge is not required (see letter of September 18, 1995, from Stuart A. Rifkind to Leroy E. Conner, Jr).

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to make timely and appropriate protective action decisions.

On Day One the Governor or his designee will demonstrate the ability to make appropriate protective action decisions based on recommendations from the Officer-in-Charge and SRC in the State EOC. Prior to the decision being made, the Wisconsin State EOC will contact the Manitowoc and Kewaunee County EOCs to ensure that the counties are able to fully respond at the designated time. Discussion of and decision-making concerning use of KI will take place under this objective.

OBJECTIVE 10: ALERT AND NOTIFICATION

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

The State will complete the necessary decision-making and notify Kewaunee and Manitowoc Counties with respect to appropriate protective actions.

OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

On Day One, the State will select the appropriate EBS messages which accurately reflect protective action decisions to demonstrate this objective and transmit them to Kewaunee and Manitowoc Counties. The EBS messages use familiar boundaries and landmarks to describe the areas covered by the recommendation. The State does not use its EBS system for rumor control unless the rumor(s) directly interferes with protective actions. See Objective 13 and paragraph III.M.6.b of Attachment D, page D-10 of the State plan.

OBJECTIVE 12: EMERGENCY INFORMATION -- MEDIA

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

On Days One and Two, the State will demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the news media at the JPIC. The State of Wisconsin PIOs in the JPIC will coordinate with the State EOC, and with county and utility PIOs to ensure that the media is briefed in a clear, accurate, and timely manner. Procedures for early notification of the media will be demonstrated in the State EOC prior to the activation of the JPIC.

OBJECTIVE 13: EMERGENCY INFORMATION – RUMOR CONTROL

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

On Days One and Two, the State of Wisconsin rumor control will be coordinated at the JPIC. Rumors or incorrect information are collected from multiple sources including: State and County EOCs, utility, reception centers, the media, the public, etc. Incorrect information will be injected into the JPIC, State EOC and County EOCs. As trends in incorrect information (rumors) are identified at the JPIC, correct factual messages will be composed and their dissemination will be simulated.

OBJECTIVE 14: IMPLEMENTATION OF PROTECTIVE ACTIONS – USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC

On Day One, demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers, institutionalized individuals, and, if the State plan specifies, the general public.

Potassium Iodide is available in the state emergency worker field team kits. The Field Team Coordinator in the FOC/MRL will instruct field teams when they should simulate taking KI. The Wisconsin Radiological Incident Response Plan directs that KI will not be made available to the general public.

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS –SPECIAL POPULATIONS

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

This is a county Day One objective.

OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS –SCHOOLS

Demonstrate the capability and resources necessary to implement protective actions for school children with the plume pathway emergency planning zone (EPZ).

This is a county Day One objective.

OBJECTIVE 17: TRAFFIC AND ACCESS CONTROL

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

This is a county Day One objective. The State will simulate providing additional support for this function if requested by the counties.

OBJECTIVE 18: RECEPTION CENTER -- MONITORING, DECONTAMINATION, AND REGISTRATION

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the radiological monitoring, decontamination and registration of evacuees.

The State of Wisconsin will demonstrate the adequacy of procedures, facilities, equipment and personnel for radiological monitoring and decontamination. The registration portion of this objective is a county responsibility. Three health monitoring teams will demonstrate radiological monitoring and decontamination of evacuees during Day One of the exercise at the Reception Center located in Roncalli High School in Manitowoc County per the procedures set forth in Attachment E of the State Plan. In Kewaunee County this objective will be demonstrated by one monitoring station at Algoma High School in Kewaunee County out of sequence August 5, 1800 to 2200.

The health monitoring teams will include personnel from the Department of Health and Social Services' Radiation Protection Unit (DHSS-RPU) and individuals from the counties who have received training as Auxiliary Health Monitors. The health teams do not use calibrated check sources. The instruments are calibrated annually by a certified calibration facility. The personnel from the county will work under the supervision of DHSS-RPU staff, and should be evaluated as part of the State of Wisconsin's response. Once the reception center is operational and monitors have frisked several evacuees to establish flow, at least six evacuees will be monitored and registered with one evacuee requiring decontamination. Kewaunee County may demonstrate this objective with the use of a portal monitor. Two vehicles will be monitored and one will be decontaminated at each location to meet this objective.

OBJECTIVE 19: CONGREGATE CARE

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

This is a county Day One objective.

OBJECTIVE 20: MEDICAL SERVICES – TRANSPORTATION

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

This is a county Day One objective.

OBJECTIVE 21: MEDICAL SERVICES – FACILITIES

Demonstrate the adequacy of the equipment, procedures, supplies, and personnel of medical facilities responsible for treatment of contaminated, injured, or exposed individuals.

On Day One, medical staff at Two Rivers Community Hospital in Two Rivers, Wisconsin will demonstrate this objective in sequence immediately following delivery of a person with simulated contamination and injury, as part of the Manitowoc County MS-1 drill.

OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES – MONITORING AND DECONTAMINATION

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

On Day One, health monitoring teams will demonstrate this objective at the Reception Centers at Algoma and Roncalli High Schools. The teams will monitor and decontaminate emergency workers at the same location using the same procedure as that for evacuee monitoring and decontamination.

OBJECTIVE 23: SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

On Day Two, demonstrate the capability to identify the need for external assistance and to request such assistance from federal or other support organizations.

The State will demonstrate this objective in the State EOC.

OBJECTIVE 24: POST-EMERGENCY SAMPLING

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that receive deposition from the airborne plume.

The State will deploy four or more ingestion teams to collect samples in the affected counties. Wisconsin ingestion teams are not equipped with low-range portable survey instruments.

Wisconsin ingestion sampling teams would not be sent into any area restricted due to radiological considerations. Sample collection in evacuated areas would be conducted by fully equipped field monitoring teams.

Each of the deployed ingestion teams will collect at least two samples, and transfer them to couriers at predesignated transfer points for transport to the mobile laboratory located at Two Rivers. Types of samples collected will include milk, surface water, vegetation, soil, and in-season produce. Samples will be analyzed at the mobile laboratory or sent (simulated) to another laboratory for analysis according to priority. Sample flow will be thoroughly documented.

OBJECTIVE 25: LABORATORY OPERATIONS

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

On Days One and Two, State staff at the FOC/MRL will demonstrate measurement and gamma analysis of air grab sample, iodine cartridge and particulate filter. Appropriate soil, and vegetation samples will be collected. One sample of each type collected will be measured and analyzed. All scenario sample results will be simulated by controller inject messages. The FOC/MRL will be pre-positioned at the Wisconsin Public Service Corporation building, 800 Columbus Street, Two Rivers, Wisconsin.

State staff at the State Laboratory of Hygiene in Madison will demonstrate laboratory operations, including sample documentation and tracking, at 1000 on August 7. The demonstration will consist of analyzing one of each type of sample (i.e., vegetation, soil, surface water, milk). The samples will be collected in advance and pre-positioned in Madison.

OBJECTIVE 26: INGESTION EXPOSURE PATHWAY – DOSE PROJECTION AND PROTECTIVE ACTION DECISION-MAKING

On Day Two, demonstrate the capability to project dose to the public for the ingestion pathway and to recommend protective measures.

The State Accident Assessment Group will demonstrate its capability to determine dose by using controller data based on simulated laboratory analysis of food samples. A second set of data will simulate radiation levels found in field samples of agricultural products and drinking water plus Department of Energy fly-over data (simulated) to be used in developing protective action recommendations, data sets will depict known data at the beginning of day two and day four.

OBJECTIVE 27: INGESTION EXPOSURE PATHWAY – PROTECTIVE ACTION IMPLEMENTATION

Demonstrate the capability to implement protective actions for ingestion exposure pathway.

On Day Two the State will utilize current lists of farmers, food processors, distributors and water supply within the ingestion pathway EPZ to implement the protective action recommendations developed.

Sample and Camera Ready masters of the "1995 Radiological Emergency Information for Wisconsin Farmers, Food Processors and Distributors Near the Kewaunee and Point Beach Nuclear Power Plants" will be available to the evaluator. The booklet is distributed each year to all farmers and producers within or doing business within the ten mile EPZ, and can be printed for distribution in the ingestion fifty mile IPZ.

The State of Wisconsin Department of Agriculture, Trade and Consumer Protection will demonstrate its capability to control, restrict or prevent the distribution of contaminated foodstuffs by the issuance of protective action orders.

OBJECTIVE 28: RELOCATION, RE-ENTRY, AND RETURN – DECISION-MAKING

Demonstrate the capability to develop decisions on relocation, re-entry, and return.

On Day Two the State will demonstrate this objective using the "day four" data to determine whether the projected dose will exceed the relocation Protective Action Guides upon which to start some relocation, re-entry and return decision making.

Initial access control will be demonstrated by Emergency Police Services to coordinate the staffing access control points in coordination with the counties affected by deposition.

OBJECTIVE 29: RELOCATION, RE-ENTRY, AND RETURN – IMPLEMENTATION

Demonstrate the capability to implement relocation, re-entry and return.

On Day Two, this objective will be demonstrated by initiating relocation, re-entry and return discussions as to implementing any decisions based on "day four" data. Decision makers will discuss convening the State Recovery Task Force.

OBJECTIVE 30: CONTINUOUS, 24-HOUR STAFFING

Demonstrate the capability to maintain staffing on a continuous, 24-hour basis through an actual shift change.

The State will not demonstrate this objective.

OBJECTIVE 31: OFFSITE SUPPORT FOR THE EVACUATION OF ONSITE PERSONNEL

Demonstrate the capability to provide offsite support for the evacuation of onsite personnel.

This is a county objective.

OBJECTIVE 32: UNANNOUNCED EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions in an unannounced exercise or drill.

The State will not demonstrate this objective.

OBJECTIVE 33: OFF-HOURS EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions during an off-hours exercise or drill.

The State will not demonstrate this objective.

MANITOWOC COUNTY OFF-SITE OBJECTIVES
for the
1996 POINT BEACH NUCLEAR POWER PLANT EXERCISE
AUGUST 6-7, 1996

OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

Manitowoc County on Day One will fully activate its Emergency Operating Center (EOC), at 1025 S. 9th Street, Manitowoc WI, and will carry out alerting and staff call-up procedures as outlined in Tab B of the Manitowoc County Plan.

OBJECTIVE 2: FACILITIES - EQUIPMENT, DISPLAYS AND WORK ENVIRONMENT

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

Manitowoc County will on Days One and Two demonstrate its ability to adequately support operations through the use of maps, status boards, and other displays as appropriate.

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

The Manitowoc County EOC on Days One and Two will direct and control emergency operations within the county and will coordinate decisions and emergency activities with the State of Wisconsin, Kewaunee County and the Joint Public Information Center (JPIC).

OBJECTIVE 4: COMMUNICATIONS

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

Manitowoc County on Days One and Two will use a variety of communication systems (including Dial Select, telephone, cellular phone, radio, and facsimile) to communicate with other locations.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

Emergency workers on Day One will use direct reading and thermoluminescent dosimeters to monitor and control emergency worker radiation exposure. Some dosimetry will be pre-distributed; the remainder will be distributed at Roncalli High School in the City of Manitowoc. Our modern 0-200 mR dosimeters are calibrated annually and do not have drift problems requiring a quarterly drift check.

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING -- AMBIENT RADIATION MONITORING

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

This is a state objective.

OBJECTIVE 7: PLUME DOSE PROJECTION

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

This is a state objective.

OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING -- AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING

Demonstrate the appropriate use of equipment and procedures for the measurements of airborne radioiodine concentrations as low as 10^{-7} (0.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

This is a state objective.

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to make timely and appropriate protective action decisions.

This is a state objective.

OBJECTIVE 10: ALERT AND NOTIFICATION

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

The State will complete the necessary decision-making and notify Manitowoc County of the appropriate protective actions that should be taken. Manitowoc County on Day One will growl its sirens and broadcast a test EBS message for the first PAR messages of the exercise. Subsequent siren activation and EBS message transmissions will be simulated. The County will use pre-scripted EBS messages with geographical descriptions for the area affected by the PARs. The County will provide recent successful siren test evidence to the federal evaluator. An aircraft mounted public address system is used to provide back-up to the siren system and provide warning notification for boaters on Lake Michigan.

WCUB - WLTU Radio Station will have staff available for interview during the exercise. A county escort will be available upon request.

OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

Upon recommendation from the State of Wisconsin, the Manitowoc County Emergency Public Information Officer, in conjunction with the Emergency Government Director on Day One will demonstrate the ability to select the appropriate EBS messages and transmit it by appropriate means.

OBJECTIVE 12: EMERGENCY INFORMATION -- MEDIA

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

A Manitowoc County Public Information Officer (PIO) on Days One and Two will be present in the JPIC and will work with State, Kewaunee County and utility PIOs to ensure that County interests and concerns are represented in briefing the media.

OBJECTIVE 13: EMERGENCY INFORMATION -- RUMOR CONTROL

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Manitowoc County will on Days One and Two coordinate its rumor control activities with the State of Wisconsin, Kewaunee County, and utility PIOs at the JPIC. Primary rumor control will be at the JPIC.

OBJECTIVE 14: IMPLEMENTATION OF PROTECTIVE ACTIONS – USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC

Demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers, institutionalized individuals, and, if the State plan specifies, the general public.

Each county emergency worker dosimetry kit contains a simulated individual initial dose of KI. The Manitowoc County EOC on Day One will instruct emergency workers, through their supervisor, when they should take the simulated KI. If the scenario requires it, Manitowoc County will simulate distribution of KI to institutionalized individuals at the Two Rivers Community Hospital and Hamilton Memorial Home. The Wisconsin Radiological Incident Response Plan directs that KI will not be made available to the general public.

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS – SPECIAL POPULATIONS

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

Manitowoc County on Day One will demonstrate the ability and resources to implement appropriate protective actions. The County EOC staff will use a computerized list of persons with special transportation needs and will simulate providing evacuation assistance.

OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS – SCHOOLS

Demonstrate the capability and resources necessary to implement protective actions for school children with the plume pathway emergency planning zone (EPZ).

Manitowoc County will not demonstrate this objective.

OBJECTIVE 17: TRAFFIC AND ACCESS CONTROL

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Manitowoc County on Day One will demonstrate this objective at one location to be designated prior to the exercise, or as a result of play. Evaluators will be informed of the location and timing of this demonstration in the County EOC on the day of the exercise. A county escort will be available upon request.

OBJECTIVE 18: RECEPTION CENTER – MONITORING, DECONTAMINATION, AND REGISTRATION

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the radiological monitoring, decontamination and registration of evacuees.

Manitowoc County will demonstrate this objective in sequence during Day One at Roncalli High School, 2000 Mirro Drive, Manitowoc, WI. Manitowoc County is responsible for registering evacuees and assigning them to appropriate congregate care facilities. The State of Wisconsin is responsible for executing the radiological monitoring and decontamination portions of this objective. Only one-half of the monitoring center (gym) will be demonstrated; i.e., only one shower facility opened.

OBJECTIVE 19: CONGREGATE CARE

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Manitowoc County will on Day One demonstrate this objective by opening Silver Lake College congregate care center in sequence during Day One of the exercise. Since schools in Two Rivers will not be in session, this center will be opened for general evacuees.

OBJECTIVE 20: MEDICAL SERVICES – TRANSPORTATION

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Manitowoc County will demonstrate this objective in sequence during Day One of the exercise, at the Reception Center at Roncalli High School in the City of Manitowoc. Unified ambulance service will prepare and transport a contaminated injured (simulated) person to Two Rivers Hospital in Two Rivers, Wisconsin.

OBJECTIVE 21: MEDICAL SERVICES – FACILITIES

Demonstrate the adequacy of the equipment, procedures, supplies, and personnel of medical facilities responsible for treatment of contaminated, injured, or exposed individuals.

This is a state objective.

OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES – MONITORING AND DECONTAMINATION

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

This is a state objective.

OBJECTIVE 23: SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

Demonstrate the capability to identify the need for external assistance and to request such assistance from federal or other support organizations.

This is a state objective.

OBJECTIVE 24: POST-EMERGENCY SAMPLING

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that receive deposition from the airborne plume.

This is a state objective.

OBJECTIVE 25: LABORATORY OPERATIONS

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

This is a state objective.

OBJECTIVE 26: INGESTION EXPOSURE PATHWAY – DOSE PROJECTION AND PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to project dose to the public for the ingestion pathway and to recommend protective measures.

This is a state objective.

OBJECTIVE 27: INGESTION EXPOSURE PATHWAY – PROTECTIVE ACTION IMPLEMENTATION

Demonstrate the capability to implement protective actions for ingestion exposure pathway.

On day two, this objective will be demonstrated with discussion of county actions necessary to implement protective actions recommended by State decision makers.

OBJECTIVE 28: RELOCATION, RE-ENTRY, AND RETURN – DECISION-MAKING

Demonstrate the capability to develop decisions on relocation, re-entry, and return.

This is a state objective.

OBJECTIVE 29: RELOCATION, RE-ENTRY, AND RETURN – IMPLEMENTATION

Demonstrate the capability to implement relocation, re-entry and return.

On Day Two, this objective will be demonstrated by initiating relocation, re-entry and return discussions as to implementing any decisions based on "day four" data. Decision makers will discuss convening the Manitowoc County Recovery Task Force.

OBJECTIVE 30: CONTINUOUS, 24-HOUR STAFFING

Demonstrate the capability to maintain staffing on a continuous, 24-hour basis through an actual shift change.

Manitowoc County will not demonstrate this objective.

OBJECTIVE 31: OFFSITE SUPPORT FOR THE EVACUATION OF ONSITE PERSONNEL

Demonstrate the capability to provide offsite support for the evacuation of onsite personnel.

Manitowoc County will not demonstrate this objective.

OBJECTIVE 32: UNANNOUNCED EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions in an unannounced exercise or drill.

Manitowoc County will not demonstrate this objective.

OBJECTIVE 33: OFF-HOURS EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions during an off-hours exercise or drill.

Manitowoc County will not demonstrate this objective.

KEWAUNEE COUNTY OFF-SITE OBJECTIVES
for the
1996 POINT BEACH NUCLEAR POWER PLANT EXERCISE
August 6-7, 1996

OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

Kewaunee County on Day One will fully activate its Emergency Operating Center (EOC) at 416 Fremont Street, Algoma, WI and will carry out alerting and staff call-up procedures as outlined in Tab B of the Kewaunee County Plan.

OBJECTIVE 2: FACILITIES - EQUIPMENT, DISPLAYS AND WORK ENVIRONMENT

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

Kewaunee County on Days One and Two will demonstrate its ability to adequately support operations through the use of maps, status boards, and other displays as appropriate.

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

The Kewaunee County EOC on Days One and Two will direct and control emergency operations within the county and coordinate decisions and emergency activities with the State of Wisconsin, Manitowoc County and the Joint Public Information Center (JPIC).

OBJECTIVE 4: COMMUNICATIONS

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

Kewaunee County on Days One and Two will use a variety of communication systems (including Dial-Select, telephone, cellular phone, radio, and facsimile) to communicate with other locations. The County will use computer work stations and electronic mail for internal EOC communications.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

Emergency workers on Day One will use direct reading and thermoluminescent dosimeters in Kewaunee County to monitor and control radiation exposure. Dosimetry will be distributed at the Kewaunee County Courthouse Annex in the City of Kewaunee. If events during the exercise cause an evacuation of the City of Kewaunee, dosimetry will be distributed from the Kewaunee County Mobile Command Post at a location that will be determined by the players based on scenario. Our modern 0-200 mR dosimeters are calibrated annually and do not have drift problems requiring a quarterly drift check.

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING -- AMBIENT RADIATION MONITORING

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

This is a state objective.

OBJECTIVE 7: PLUME DOSE PROJECTION

Demonstrate the capability to develop dose projections and Protective Action Recommendations (PAR) regarding evacuation and sheltering.

This is a state objective.

OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING -- AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING

Demonstrate the appropriate use of equipment and procedures for the measurements of airborne radioiodine concentrations as low as 10^{-7} (0.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

This is a state objective.

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to make timely and appropriate protective action decisions.

This is a state objective.

OBJECTIVE 10: ALERT AND NOTIFICATION

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

The State will complete the necessary decision-making and notify Kewaunee County of the appropriate protective actions to be taken. Kewaunee County will on Day One growl its sirens and broadcast EBS message for the first PAR messages of the exercise. Subsequent siren activation and EBS message transmissions will be simulated. The County will use pre-scripted EBS messages with geographical descriptions for the area affected by the PARs. The County will provide recent successful siren test evidence to the federal evaluator.

The primary EBS radio station, WAUN, will be contacted per the Kewaunee County Plan and will have staff available for interview during the exercise. A county escort will be made available upon request.

OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

Upon recommendation from the State of Wisconsin, the Kewaunee County Emergency Public Information Officer, in conjunction with the Emergency Government Director, will on Day One demonstrate the ability to select the appropriate EBS messages and transmit it by appropriate means.

OBJECTIVE 12: EMERGENCY INFORMATION -- MEDIA

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

A Kewaunee County Public Information Officer (PIO) will on Days One and Two be present at the Joint Public Information Center (JPIC) and will work with State, Manitowoc County and utility PIOs to ensure that County interests and concerns are represented in briefing the media.

OBJECTIVE 13: EMERGENCY INFORMATION – RUMOR CONTROL

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Kewaunee County will on Days One and Two coordinate its rumor control activities with the State of Wisconsin, Manitowoc County, and utility PIOs at the JPIC. Primary rumor control will be at the JPIC.

OBJECTIVE 14: IMPLEMENTATION OF PROTECTIVE ACTIONS – USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC

Demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers, institutionalized individuals, and, if the State plan specifies, the general public.

Each county emergency worker dosimetry kit contains a simulated individual initial dose of KI. The Kewaunee County EOC on Day One will instruct emergency workers, through their supervisor, when they should take the simulated KI. There are no institutionalized individuals within the Point Beach EPZ. The Wisconsin Radiological Incident Response Plan directs that KI will not be made available to the general public.

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS –SPECIAL POPULATIONS

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

Kewaunee County on Day One will demonstrate the ability and resources to implement appropriate protective actions for special populations. The County EOC staff will plan for persons with special transportation needs and will simulate providing evacuation assistance as dictated by the scenario.

OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS –SCHOOLS

Demonstrate the capability and resources necessary to implement protective actions for school children with the plume pathway emergency planning zone (EPZ).

Kewaunee County will not demonstrate this objective.

OBJECTIVE 17: TRAFFIC AND ACCESS CONTROL

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Kewaunee County on Day One will demonstrate this objective at one location to be designated prior to the exercise, or as a result of play. Evaluators will be informed of the location and timing of this demonstration in the County EOC on the day of the exercise. A county escort will be made available upon request.

OBJECTIVE 18: RECEPTION CENTER -- MONITORING, DECONTAMINATION, AND REGISTRATION

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the radiological monitoring, decontamination and registration of evacuees.

Kewaunee County will open its reception center at Algoma High School, 1715 Division St. Algoma, August 5, 1900-2200 for demonstration of this objective. Kewaunee County is responsible for registering evacuees and assigning them to appropriate congregate care facilities. The State of Wisconsin is responsible for executing the radiological monitoring and decontamination portions of this objective.

OBJECTIVE 19: CONGREGATE CARE

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Kewaunee County will open the Algoma High School congregate care center for demonstration and evaluation August 5, 1900 to 2100.

OBJECTIVE 20: MEDICAL SERVICES -- TRANSPORTATION

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Kewaunee County will demonstrate this objective out of sequence between 1900-2200, August 5, Algoma High School in conjunction with the Algoma Reception Center Exercise. Algoma Fire and Rescue Service will prepare a person with simulated contamination and injury. Actual transportation (driving the route) to the hospital will not be demonstrated.

OBJECTIVE 21: MEDICAL SERVICES -- FACILITIES

Demonstrate the adequacy of the equipment, procedures, supplies, and personnel of medical facilities responsible for treatment of contaminated, injured, or exposed individuals.

This is a state objective.

**OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES -
MONITORING AND DECONTAMINATION**

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

This is a state objective.

OBJECTIVE 23: SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

Demonstrate the capability to identify the need for external assistance and to request such assistance from federal or other support organizations.

This is a state objective.

OBJECTIVE 24: POST-EMERGENCY SAMPLING

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that receive deposition from the airborne plume.

This is a state objective.

OBJECTIVE 25: LABORATORY OPERATIONS

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

This is a state objective.

**OBJECTIVE 26: INGESTION EXPOSURE PATHWAY.-- DOSE PROJECTION AND
PROTECTIVE ACTION DECISION-MAKING**

Demonstrate the capability to project dose to the public for the ingestion pathway and to recommend protective measures.

This is a state objective.

OBJECTIVE 27: INGESTION EXPOSURE PATHWAY -- PROTECTIVE ACTION IMPLEMENTATION

Demonstrate the capability to implement protective actions for ingestion exposure pathway.

On day two, this objective will be demonstrated with discussion of county actions necessary to implement protective actions recommended by State decision makers.

OBJECTIVE 28: RELOCATION, RE-ENTRY, AND RETURN -- DECISION-MAKING

Demonstrate the capability to develop decisions on relocation, re-entry, and return.

Kewaunee County will not demonstrate this objective.

OBJECTIVE 29: RELOCATION, RE-ENTRY, AND RETURN -- IMPLEMENTATION

Demonstrate the capability to implement relocation, re-entry and return.

On Day Two, this objective will be demonstrated by initiating relocation, re-entry and return discussions as to implementing any decisions based on "day four" data. Decision makers will discuss convening the Kewaunee County Recovery Task Force.

OBJECTIVE 30: CONTINUOUS, 24-HOUR STAFFING

Demonstrate the capability to maintain staffing on a continuous, 24-hour basis through an actual shift change.

Kewaunee County will not demonstrate this objective.

OBJECTIVE 31: OFFSITE SUPPORT FOR THE EVACUATION OF ONSITE PERSONNEL

Demonstrate the capability to provide offsite support for the evacuation of onsite personnel.

This objective is not applicable since the nuclear power plant is located in Manitowoc County.

OBJECTIVE 32: UNANNOUNCED EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions in an unannounced exercise or drill.

Kewaunee County will not demonstrate this objective.

OBJECTIVE 33: OFF-HOURS EXERCISE OR DRILL

Demonstrate the capability to carry out emergency response functions during an off-hours exercise or drill.

Kewaunee County will not demonstrate this objective.

2.0 EXERCISE INFORMATION

2.1 EXERCISE PARTICIPANTS

The participants in the Exercise will include the following groups.

2.1.1 Wisconsin Electric Power Company (WE)

- a. PBNP staff
- b. PBNP and Corporate Emergency Response Organizations
- c. WE External Affairs

2.1.2 Offsite Organizations

The State of Wisconsin will fully participate in this exercise. State emergency organizations will respond to the events postulated in the scenario as outlined in the State of Wisconsin Radiological Emergency Response Plan (RERP). These may include:

- a. Division of Emergency Government
- b. Section of Radiation Protection
- c. Department of Health and Social Services
- d. Division of Highways
- e. Division of State Patrol
- f. Department of Natural Resources
- g. Department of Agriculture, Trade and Consumer Protection
- h. Department of Military Affairs
- i. Public Service Commission
- j. Emergency Police Services
- k. Public Information
- l. American Red Cross

See the State Objectives (Section 1.3) for limitations.

2.1.4 Kewaunee County will fully respond as required by the scenario events as outlined in their portion of the State RERP. See the Kewaunee County Objectives (Section 1.3) for limitations.

2.1.5 Manitowoc County will fully respond as required by the scenario events as outlined in their portion of the State RERP. See the Manitowoc County objectives (Section 1.3) for limitations.

2.2 EXERCISE ORGANIZATION

The organization for this Exercise will consist of the Exercise Coordinator, the Lead Exercise Controller, other Exercise controllers, participants, and observers. The role of each of these is discussed in this section.

2.2.1 The Exercise Coordinator (EC) will coordinate all preparations for the conduct of the Exercise, including the development of the scenario and Exercise manual. After the Exercise has been completed, the EC will chair the controller de-briefing sessions, and coordinate the compilation of a consolidated critique report delineating strengths and weaknesses identified by these individuals. The EC will also chair the post-Exercise critique meeting. The EC will coordinate the preparation of an itemized list of corrective actions and improvement items identified during the conduct of the Exercise, in accordance with the PBNP Emergency Plan.

2.2.2 The Lead Exercise Controller (LEC) is responsible for the safe conduct of the Exercise. The LEC shall interface, as required, with the Lead Facility Controllers, to resolve any inter-facility questions concerning the Exercise scenario, and shall determine the amount of "free play" that will be permissible on the part of the participants (particularly in the Control Room). The LEC shall have sole authority to terminate the Exercise if, in his/her judgment, events have occurred which require that the Exercise be suspended to direct appropriate resources to resolution of an actual problem or emergency. Upon receiving verification from all Lead Facility Controllers that the objectives have been satisfactorily demonstrated, the LEC shall authorize distribution of the Exercise termination message.

2.2.3 Controllers are qualified personnel selected to perform functions as follows:

- a. A Lead Facility Controller is assigned to each emergency response facility. The Lead Facility Controller is responsible for all Controller and Observer activities for that facility and, if appropriate, its associated teams. Controllers for teams or subareas of a facility report to the Lead Controller of that facility.
- b. The Controllers may deliver verbal Exercise Messages to designated participants at specified times and places during the Exercise and deliver additional contingency messages as may be required to keep the Exercise action moving according to the scenario and Exercise objectives. They will observe the Exercise at their assigned locations and complete evaluation forms. Controllers submit written recommendations to the Lead Facility Controller, who in turn summarizes all comments for submittal to the Exercise Coordinator prior to the scheduled critique.

Controllers will record their observations using evaluation forms provided and will make recommendations. They will evaluate participant performance on the basis of requirements contained in the Emergency Plan, appropriate Implementing Procedures, and Exercise messages as described herein. Each Controller shall keep an on-going record (chronology) of significant events as they occur.

Controllers will be identified by wearing controller vests or hats.

- 2.2.4 Participants include Point Beach Nuclear Plant, Wisconsin Electric Power Company, and state and local personnel assigned to perform emergency functions, as described in the Emergency Plan and Implementing Procedures.

PBNP participants will be identified by wearing orange wrist bands or vests.

- 2.2.5 Observers from the Nuclear Regulatory Commission, Federal Emergency Management Agency (FEMA) and other organizations may be authorized, on a limited basis, to participate in the Exercise solely for the purpose of observing Exercise activity. Observers should contact the PBNP Exercise Coordinator for orientation information and appropriate Exercise publications.

Observers will be identified by wearing observer vests or hats.

2.3 EMERGENCY RESPONSE FACILITIES

During the Exercise, special facilities may be activated to manage, assess, and support emergency response. Figure 2.1 identifies the location of Point Beach Nuclear Plant buildings and facilities.

NOTE: Facility activation will depend upon the decisions and course of action that the participants take.

2.3.1 On-Site Facilities

a. Control Room Simulator

The Control Room simulator is the primary facility at the Point Beach Nuclear Plant in which Exercise conditions are monitored and controlled and corrective actions are taken to mitigate any abnormal occurrence. It is operated under the direction of the Duty Shift Superintendent (DSS) and is the location where initial assessment, emergency classification and emergency response begins.

The controls and instrumentation necessary to operate the plant under the simulated emergency conditions are located in the Control Room simulator. The Control Room simulator is equipped with parameter instrumentation such as area and process radiation monitoring systems and alarm annunciators that give early warning of a potential emergency and provide for a continuing evaluation of the emergency situation. Additional equipment such as meteorological readouts and communications equipment is also located in the Control Room simulator. The Control Room simulator has communication lines to the Technical Support Center (TSC), Operations Support Center (OSC) and Emergency Operations Facility (EOF).

The PBNP Simulator is located in the North Service Building, fifth floor.

b. Technical Support Center

The Technical Support Center (TSC) is located on the El. 8' of the Technical Support Building. This location is in close proximity to the actual Control Room, and further from the control room simulator. It is approximately 960 square feet in area and capable of accommodating more than 30 people. The TSC has the

necessary plant engineering data and safety parameter displays to support Control Room (simulator) operations.

The TSC is activated upon the declaration of an Alert, Site Emergency or General Emergency. It operates under the direction of the Site Manager and serves as the coordination point for technical support activities during emergency (Exercise) operations. The TSC provides the communications interface between the Control Room simulator, the Operations Support Center and the Emergency Operations Facility. Follow-up communications with Federal, State and local response organizations are coordinated in the TSC prior to the activation of the Emergency Operations Facility (EOF). The TSC has communication lines to the Control Room and EOF. It also has direct (dial-select) communication lines to the Manitowoc and Kewaunee County Sheriff's Departments, Emergency Operations Centers (EOC) for both Kewaunee and Manitowoc counties; the State of Wisconsin EOC in Madison; and the Point Beach Nuclear Plant EOF and CEC (AEOF). The dial-select is the primary notification means for Event Declarations, Protective Action Recommendations and Status Update information.

Adequate equipment exists in the TSC to provide the TSC staff with the capability to monitor reactor systems status and to evaluate plant abnormalities. This equipment includes signal display instrumentation, data displays and information storage and retrieval devices. The data displays will provide current indications and time history displays of plant parameters. Terminals will have the capability of displaying selected Exercise data from the plant process computer.

The TSC staff will monitor radiological process and effluent parameters for use in predicting radiological consequences. In addition, the TSC staff will analyze plant information, corrective measures to mitigate the consequences of the incident and make recommendations to the Emergency Support Manager on plant operations.

The TSC is designed to have the same radiological habitability as the Control Room under accident conditions and has permanent monitoring systems which indicate radiation dose rates and airborne radioactivity concentrations. The air purification system design includes particulate and charcoal filters to meet the requirements for post-accident habitability.

c. Operations Support Center

The Operations Support Center (OSC) is located adjacent to the TSC. The OSC is activated during an Alert, Site Emergency or General Emergency. It is operated under the direction of the Operations Support Director and is the primary location for team preparation and dispatch during activation. The OSC serves as a staging area for briefing emergency maintenance and non-shift operating personnel. The OSC has communication links to the Control Room (simulator), TSC and EOF. Since the OSC is in the same building as the TSC, it will be habitable throughout the duration of an incident.

d. Emergency Operations Facility

The Emergency Operations Facility (EOF) is located in the PBNP Site Boundary Control Center located about one mile south of PBNP.

The EOF is activated during a Site Emergency or a General Emergency. It is operated under the direction of the Emergency Support Manager. The EOF has adequate space to accommodate representatives from various Federal, State and local organizations. The EOF is the focal point for the coordination of offsite emergency response activities. Management and technical personnel assigned to the EOF are responsible for protective action recommendations, liaison with offsite governmental organizations and response facilities, and overall management of the emergency organization.

The EOF has communication lines to the Control Room (simulator), TSC, OSC and the Joint Public Information Center. The EOF has direct (dial-select) communication links to the Technical Support Center and Control Room (shared); the Manitowoc and the Kewaunee County Sheriff's Departments, the Kewaunee and the Manitowoc County Emergency Operations Centers (EOC); and the State of Wisconsin EOC in Madison.

e. Joint Public Information Center

The PBNP Joint Public Information Center (JPIC) is located in the Wisconsin Public Service Corporation's JPIC in the Bay Verte Building, 520 North Adams Street, Green Bay, Wisconsin. The JPIC is activated during a Site Emergency or a General Emergency or at the direction of the Emergency Support Manager. The JPIC Director supervises PBNP activities at the JPIC and assists the PBNP Technical Spokesperson(s). The JPIC is utilized to formulate and coordinate the development of news statements for the news media. This facility provides periodic updates of the situation and facilitates the coordination of the general public information activities of PBNP and the appropriate Federal, State and local agencies to ensure that only authorized news statements are released. The general public will be provided with a telephone number to call to receive the most up to date information regarding emergency conditions (rumor control).

f. Corporate Emergency Center (CEC)

The WE Corporate Emergency Center is located in the Nuclear Power Business Unit (NPBU) offices in Milwaukee, WI. NPBU Managers and supporting staff review accident events and provide support to PBNP as required.

g. Milwaukee Communications Center (MCC)

The Milwaukee Communications Center is located in the Wisconsin Electric Corporate Headquarters in Milwaukee, Wisconsin, approximately 100 miles south of the Point Beach Nuclear Plant. The MCC provides complete initial and continued response and support for an emergency at Point Beach Nuclear Plant. The MCC should be activated for an Alert, Site Emergency and General Emergency, but can be activated for an Unusual Event, high-visibility events and non-nuclear related emergencies.

The information sources for the MCC will be the Emergency Support Manager (ESM) initially; the Corporate Emergency Center (CEC) when activated; and finally, the Joint Public Information Center when activated.

2.3.2 State of Wisconsin Facilities

- a. State Emergency Operations Center
Division of Emergency Government
2400 Wright Street
Madison, WI
- b. Joint Public Information Center
Wisconsin Public Service
Bay Verte Building
520 North Adams Street
Green Bay, WI
- c. State Mobile Laboratory/Forward Operating Center
Wisconsin Public Service Corporation
Lakeshore Division Office Building
Two Rivers, WI

2.3.3 Kewaunee County Facilities

- a. Kewaunee County Emergency Operations Center
416 Fremont Street
Algoma, WI
- b. Kewaunee County Courthouse Annex
416 Fremont Street
Algoma, WI
- c. Algoma High School Reception Center/Congregate Care Center
1715 Division Street
Algoma, WI

2.3.4 Manitowoc County Facilities

- a. Manitowoc County Emergency Operations Center
1025 South Ninth Street
Manitowoc, WI
- b. Roncalli High School Reception Center/Congregate Care Center
200 Mirro Drive
Manitowoc, WI
- c. Two Rivers Community Hospital
2500 Garfield
Two Rivers, WI

2.4 EXERCISE CONDUCT

2.4.1 Overview

The Exercise will simulate abnormal incidents at the Point Beach Nuclear Plant and test the capabilities of PBNP staff to respond to a series of postulated events. The Exercise is expected to start at the Site Emergency classification and escalate to a General Emergency with a subsequent release of radioactivity to the environment.

The conduct of the Exercise will demonstrate the effectiveness of selected organizations, personnel, functions, and/or activities. It will also demonstrate the ability of response personnel to implement actions, plans and instructions for the protection of the public's health and safety.

Once the simulated emergency has been brought under control by the participants, the Lead Exercise Controller will review the Exercise objectives and terminate the Exercise as appropriate.

2.4.2 Actions

Emergency response actions during the Exercise may include: recognition and classification of emergency conditions; assessment of on-site/off-site radiological consequences; alert/notification and mobilization of emergency response organizations; implementation of in-plant corrective actions; activation/operation of emergency response facilities and equipment; preparation of reports, messages, and record keeping; and recommendation of protective actions.

2.4.3 Communications

The Exercise will also demonstrate the effective use of communications systems. An actual emergency operation usually requires the extensive use of both telephones and radios. The primary means of communication will be attempted first, then the backup if required. Designated telephone numbers will be used for Controller communications to prevent the participants from learning in advance of the situation to which they are to be subjected during the Exercise. Close cooperation and coordination among Controllers is essential due to the number of persons assigned to the Controller role.

2.4.4 Simulator

Plant operations data will be generated on a real-time basis by the PBNP Control Room Simulator. All Simulator data, except annunciator and control rod status, will be "distributed" to the EOF and the TSC on the "Exercise Plant Process Computer System" screens. The Simulator will be the central point for the distribution of Exercise data and the majority of the message traffic; this facility is, therefore, the key to ensuring that the Exercise remains on schedule.

If the simulator should fail during the Exercise, contingency actions will be as follows:

- a. The Simulator is programmed to take backup "snapshots" of plant status every five minutes. Consequently, the Simulator Drivers will reset the Simulator to the last snapshot and recommence the Exercise from that point. This effort may be transparent to all non-Control Room participants.

b. Plant data (Section 6.1) and Simulator messages (Section 5) will be provided to the Control Room. Simulator messages are noted with a number followed by the letter "S" (e.g., 2S). Plant data will be provided to the TSC and EOF.

2.4.5 Participants

The success of the Exercise is largely dependent upon participant reaction, participant knowledge of their appropriate procedures and an understanding of the purpose of the Exercise. Initial conditions which will affect participant action or reaction will be provided to the participants at the time the Exercise begins. However, most of the elements of the Exercise play will be introduced through the use of controlled casualties on the live simulator and in the field. Participants, therefore, are responsible for initiating actions during the Exercise in accordance with instructions for their particular function. Each Participant will advise his/her Controller prior to performing required emergency actions during the simulated activities to ensure credit for his/her actions.

Participants will be reminded not to be excessively concerned with the mechanics or cause of the Exercise scenario. This Exercise will assess participant effectiveness and response.

The Participants are expected to "free play" response to the extent permitted by their Controller. Reaction to each situation should be as realistic as possible, consistent with personnel and plant safety. Notifications of and contact with supervisors, plant management, and off-site agencies will be made in accordance with applicable procedures and instructions (unless a Controller issues instructions to the contrary). Only those simulations identified by a Controller or specifically identified in briefings are permissible.

2.4.6 Controllers

Lead Facility Controllers are assigned to the Control Room Simulator, OSC, TSC, EOF, MCC, JPIC and other places of Exercise action. Only Lead Facility Controllers, with the concurrence of the Lead Exercise Controller, can modify Exercise messages or initiate "free play" messages. All controllers assigned to a facility or function are responsible to their Lead Facility Controller for ensuring that the actions of participants do not divert the sequence of events. Refer to Table 2.1 for a complete listing of the Controllers assisting in the conduct of this Exercise.

2.4.7 Evaluation and Critique

Controllers will assess participant response and performance on the basis of requirements contained herein.

After the Exercise is completed, the Lead Facility Controllers will conduct a Post-Exercise critique for their respective areas of responsibility. Deficiencies in the Emergency Plan, Implementing Procedures, the emergency preparedness training program, facilities, equipment and/or other areas will be identified through the critique process.

Controllers will prepare evaluation forms and provide them to the Exercise Coordinator. The deficiencies will be documented by the Exercise Coordinator and corrected by the individuals who have responsibility in the area identified.

The schedule for the critiques is shown in Section 3.0.

2.5 PRECAUTIONS AND LIMITATIONS

This section provides rules and guidelines to be followed throughout the conduct of this Exercise. Prior to initiation of the Exercise, a pre-Exercise briefing will be held to review the entire Exercise process with all the Exercise Controllers, Participants and Observers.

- 2.5.1 Should, at any time during the conduct of this Exercise, an actual emergency situation arise, all activities and communications related to the Exercise will be suspended. It will be the responsibility of any Exercise Controller or Observer who becomes aware of an actual emergency to suspend Exercise response in his/her immediate area and to inform the Lead Exercise Controller of the situation. Upon notification of an actual emergency, the Lead Exercise Controller will notify all other Controllers/Observers to suspend all Exercise activities.

The Lead Exercise Controller will make a determination at that point whether to continue, place a temporary hold on, or terminate the Exercise.

- 2.5.2 Should, at any time during the conduct of this Exercise, an Exercise Controller or Observer witness a participant undertake any action which would, in the opinion of the Controller/Observer, place either an individual or component in an unsafe condition, the Controller/Observer is responsible for intervening in the individual's actions and terminating the unsafe activity immediately. Upon termination of the activity, the Controller/Observer is responsible for contacting the Lead Exercise Controller and informing him of the situation.
- 2.5.3 No pressurization of fire hoses, discharging of fire extinguishers, or initiation of any fire suppression systems will be allowed during the Exercise.
- 2.5.4 Manipulation of any plant operating systems, valves, breakers, or controls in response to this Exercise is to be **SIMULATED**. There is to be no alteration of any plant operating equipment, systems, or circuits during the response to this Exercise.
- 2.5.5 All repair activities associated with the scenario will be simulated or performed on equipment mock-ups, with extreme caution emphasized around operating equipment.
- 2.5.6 All telephone communications, radio transmissions, and public address announcements related to the Exercise must begin and end with the statement, "**THIS IS A DRILL**". Should a Controller or Observer witness an Exercise participant not observing this practice, it is the Controller's/Observer's responsibility to remind the individual of the need to follow this procedure.
- 2.5.7 Any motor vehicle response to this Exercise, whether it be ambulance, fire fighting equipment, police/security vehicles or field monitoring teams, should observe all normal motor vehicle operating laws, including posted speed limits, stop lights/signs, one way streets, etc.
- 2.5.8 Should any on-site security actions be required in response to this Exercise, Exercise participants are to cooperate as directed by Site Security.
- 2.5.9 Exercise participants are to inject as much realism into the Exercise as is consistent with its safe performance.

2.5.10 Care must be taken to assure that any non-participating individuals who may observe Exercise activities or overhear Exercise communications are not misled into believing that an actual emergency exists. Any Exercise Controller or Observer who is aware of an individual or group of individuals in the immediate vicinity who may have become alarmed or confused about the situation, should approach that individual or group and explain the nature of the Exercise and its intent.

2.5.11 Entry into high radiation areas or areas posted as having high airborne or surface contamination will be PROHIBITED in this Exercise. All controllers and participants are responsible for ensuring compliance with existing plant procedures and ALARA practices.

2.6 CONTROLLER INSTRUCTIONS

Each controller also evaluates his/her portion of this Exercise. Thus each controller/evaluator should be familiar with the following:

- a. The objectives of the Exercise.
- b. The assumptions and precautions being taken.
- c. The Exercise scenario, including the initiating events and the expected course of action to be taken.
- d. The various locations that will be involved and the specific items to be observed when at those locations.
- e. The purpose and importance of the evaluation checklist and record sheets.

2.6.1 Controller Instructions

- Controllers will preposition themselves at their assigned locations prior to the activation of the facility for which they have responsibility.
- Communications will be tested to ensure satisfactory communications among Controllers prior to Exercise commencement. Note that this does not relieve Participants of their responsibility to verify equipment operability as part of the facility activation process. All watches and clocks will be synchronized with the Plant Process Computer System (PPCS) screen clock as part of the communications testing.
- All Controllers will comply with instructions from the Lead Exercise Controller.
- Each Controller will have copies of the messages controlling the progress of the exercise scenario. No message shall be delivered out of sequence or other than as written unless specifically authorized by the Lead Exercise Controller.
- Messages controlling the progress of the scenario are designated with a number. Contingency messages are noted with a number followed by the letter "C" (e.g., 10C). Contingency messages are delivered only if certain predetermined conditions identified in the "Controller Notes" portion of the Sequence of Events (Section 4.2) have been met.

- Controllers will not provide information to the Participants regarding scenario development or resolution of problem areas encountered in the course of the simulated emergency. The Exercise participants are expected to obtain information through their own organizations and exercise their own judgment in determining response actions and resolving problems. However, exercise controllers may provide information that participants would have if the situation were real; e.g., a controller may have to describe a room as "smoke filled" or state that a (seized) pump shaft is not moving/unmovable. Participants must earn such information by going through the appropriate actions to obtain the data, e.g., enter the room or attempt to view/turn the pump shaft.
- If Participants insist that certain parts of the scenario are unrealistic, the Lead Controllers have the sole authority to clarify any questions regarding scenario content.

2.6.2 Evaluation Instructions

Each Controller will take detailed notes regarding the progress of the Exercise and the response of the Exercise participants at their respective assigned locations. Each Controller should carefully note the arrival and departure times of participants, the times when major activities or milestones occur, and problem areas encountered. The Controllers will retain their notes for the purposes of reconstructing the Exercise chronology and assisting with the written evaluation. Evaluation packages will be provided at pre-Exercise briefings.

The standards below should be used by Controllers to evaluate assigned objectives. A dual purpose will be served by this rating system. First, the capability of each facility or response area will be evaluated, and second, the system will provide a vehicle for guiding and directing improvement. The rating scale is as follows:

Well Done - No problems noted.

Satisfactory - Performance was adequate, but could be improved.

Weak - A few problems were noted, but they would not seriously affect our ability to protect the health and safety of the public and/or plant personnel.

Deficient - Problems were noted which could affect our ability to protect the health and safety of the public and/or plant personnel.

NA - Not Applicable to the situation or no activities related to the objective were observed.

As appropriate, Evaluator comments should consider the demonstration of the following facility and team evaluation elements:

Facility

- Accurate and timely determination of emergency action levels.
- Timely activation and staffing for each emergency action level.
- Familiarity of personnel with appropriate emergency instructions, duties and responsibilities.

- Timely notification of plant, corporate, local, state and federal personnel/agencies (information updates performed).
- Adequacy of internal information systems (i.e., message handling, displays, status boards and maps).
- Properly controlled documentation and accurate, timely record keeping.
- Utilization of correct communications procedures and techniques.
- Capability of facility supervisor/directors to interface with personnel and coordinate facility activities.
- Consideration for personnel safety (exposure control).
- Adequacy of interface between emergency response facilities.
- Adequacy of equipment and supplies.
- Timely initiation of on-site protective/corrective actions.
- Development of protective action recommendations.
- Radiological surveys and assessment of plant damage and hazardous conditions performed.
- Timely request of emergency support services.
- Coordinated, accurate and orderly dissemination of information to the news media.

Team

- Timely notification and activation.
- Adequacy of staffing.
- Familiarity with appropriate emergency instructions, duties and responsibilities.
- Availability and utilization of proper equipment.
- Performance of contamination/decontamination control.
- Proper interface with emergency support personnel.
- Utilization of correct communications instructions and techniques.
- Adequacy of briefing sessions prior to dispatch.
- Direction and control by team leaders.
- Timely requests for off-site assistance.
- Coordination and interface between emergency response team members.
- Proper interface with plant supervisory personnel.
- Availability of reference documents to team members.
- Utilization of proper radiological control practices (i.e., access control, protective clothing, shielding, stay time).
- Performance of radiological surveys.
- Timely and proper performance of damage assessment.
- Properly maintained survey records and maps.

2.7 PERSONNEL ASSIGNMENTS

Table 2.1 lists the Controller Organization assignments for this Exercise.

2.8 REFERENCES

- 2.8.1 Emergency Plan for the Point Beach Nuclear Plant, Wisconsin Electric Power Company.
- 2.8.2 Point Beach Nuclear Plant Emergency Plan Implementing Procedures.
- 2.8.3 Corporate Emergency Center Guidebook, Wisconsin Electric Power Company.
- 2.8.4 Crisis Communications Manual, Wisconsin Electric Power Company.
- 2.8.4 NRC Incident Response Plan.
- 2.8.5 State of Wisconsin Radiological Incident Response Plan Volumes I and II, Department of Military Affairs, Division of Emergency Government.
- 2.8.6 10CFR Part 50.47 and 10CFR Part 50, Appendix E.
- 2.8.7 NUREG-0654, FEMA-REP-1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
- 2.8.8 44CFR Part 350.9.

2.9 LIST OF ABBREVIATIONS

ABVNT	Auxiliary Building Vent	EAL	Emergency Action Level
AC	1) Alternating Current 2) Air Conditioning	EBS	Emergency Broadcast System
AEOF	Alternate Emergency Operations Facility	EC	Energy Center
AgZ	Silver Zeolite	ECCS	Emergency Core Cooling System
AHU	Air Handling Unit	ED	Emergency Director
ALARA	Low As Reasonably Achievable	EDG	Emergency Diesel Generator
AMS	Air Monitoring System	ENS	Emergency Notification System
AO	Auxiliary Operator	EOC	Emergency Operations Center
AOV	Air Operated Valve	EOF	Emergency Operations Facility
ASIP	Auxiliary Safeguards Instrumentation Panel	EOP	Emergency Operating Procedure
AT&T	American Telephone & Telegraph	EP	Emergency Plan
A&E	Architect/Engineer	EPIP	Emergency Plan Implementation Procedure
BAST	Boric Acid Storage Tank	EPMP	Emergency Plan Maintenance Procedure
CAE	Combined Air Ejector	EPP	Emergency Preparedness Program
CAS	Central Alarm Station	EPZ	Emergency Planning Zone
CBO	Contained Breathing Oxygen	ERD	Estimated Release Duration
CCWHX	Component Cooling Water Heat Exchanger	ERP	Emergency Response Plan
CFM	Cubic Feet per Minute	ESIV	Estimated Safety Injection Volume
CFR	Code of Federal Regulations	ESM	Emergency Support Manager
COMB AE	Combined Air Ejector (or CAE)	FCC	Federal Communications Commission
cpm	Counts Per Minute	FEMA	Federal Emergency Management Agency
CPR	Cardiopulmonary Resuscitation	FI	Flow Indicator
CTH	County Trunk Highway	FM	Frequency Modulation
CVCS	Chemical Volume & Control System	FSAR	Final Safety Analysis Report
CW	Circulating Water	GC	Gas Chromatograph
DAM	Data Acquisition Module	GE	General Emergency
DAVNT	Drumming Area Vent	GM	Geiger Mueller
DBA	Design Basis Accident	gpm	Gallons Per Minute
DC	1) Dose Commitment 2) Direct Current	GSBVNT	Gas Stripper Building Vent
DCS	Duty & Call Superintendent	GTE	General Telephone and Electronics
DEG	Division of Emergency Government	HP	Health Physics
DHS	Department of Health & Social Services	HPCAL	Health Physics Calibration Procedure
DI	De-ionized; Demineralized	HPIP	Health Physics Implementation Procedure
DNB	Departure from Nucleate Boiling	HPN	Health Physics Network
DNBR	Departure from Nucleate Boiling Ratio	HVA	Heating Ventilation and Air Conditioning
DOE	Department of Energy	IBM-PC	International Business Machines Personal Computer
DOH	Division of Health	ID	Identification
DPM	Disintegrations Per Minute		
DSS	Duty Shift Superintendent		
DTA	Duty Technical Advisor		

INPO	Institute for Nuclear Power Operations	PBNP	Point Beach Nuclear Plant
I&C	Instrumentation & Control	PBSP	Point Beach Security Procedures
I/O	Input/Output	PBX	Private Branch Exchange
JPIC	Joint Public Information Center	PDP	Portable Data Processor (Digital Equipment Corporation)
KNPP	Kewaunee Nuclear Power Plant	pH	Hydrogen Ion Concentration
kV	Kilovolt	PHA	Pulse Height Analysis
LCD	Liquid Crystal Diode	PI	Pressure Indicator
LCO	Limiting Condition for Operation	PIC	Pressurized Ion Chamber
LI	Level Indicator	POM	Plant Operations Manager
LIN	Location Identification Number	PORV	Power Operated Relief Valve
LLD	Lower Limit of Detection	ppm	Parts Per Million
LOCA	Loss of Coolant Accident	PSB	Public Service Building
LPZ	Low Population Zone	psia	Pounds Per Square Inch (Absolute)
MA	Mega Amps	psig	Pounds Per Square Inch (Gauge)
MAD	Emergency Meteorology and Dose Assessment Program	PSS	Procedure Summary Sheet
MASP	Modified Amended Security Plan	Q	Quart
MCA	Multi-Channel Analyzer	QA	Quality Assurance
MPBB	Maximum Permissible Body Burden	QAD	Quality Assurance Division
		QAS	Quality Assurance Section
		QF	Quality Factor
MPC	Maximum Permissible Concentration	R	Roentgen
MPH	Mile Per Hour	RAP	Regulated Air Pump
mR	Milli-Roentgen	RAS	Regulated Air Sampler
MSA	Mine Safety Appliance	RAT	Radiological Assistance Team
MSR	Moisture Separator Reheater	RCS	Reactor Coolant System
MW	Megawatt	RCT	Radio-Chemical Technician
NFAR	Nuclear First Aid Room	RCWM	Radcon/Waste Manager
NGSD	Noble Gas Skin Dose	RDW	Radioactive Waste
NNSR	Non-Nuclear Safety Related	REM	Roentgen Equivalent Man
NRC	Nuclear Regulatory Commission	RHR	Residual Heat Removal
NSR	Nuclear Safety Related	RM	Radiation Monitor
NSSS	Nuclear Steam Supply System	RMS	Radiation Monitoring System
NWS	National Weather Service	RMSASRB	Radiation Monitoring System Alarm Setpoint Response Book
NA	Not Applicable	RO	1) Reactor Operator 2) Rad Owl (Radiation Survey Instrument)
OA	Outside Air	RTD	Resistance Temperature Detector
OHDP	Offsite Health Physics Director	RWP	Radiation Work Permit
OI	Operating Instruction	RWST	Refueling Water Storage Tank
OP	Operating Procedure	SAF	Site Access Facility (Kewaunee Nuclear Plant)
OPT	Optional		
OSC	Operations Support Center	SAS	Secondary Alarm Station
OSHP	Offsite Health Physics	SBCC	Site Boundary Control Center
OSRC	Offsite Review Committee	SCBA	Self Contained Breathing Apparatus
PA	Public Address, Protected Area		
PAB	Primary Auxiliary Building	SE	Site Emergency
PAC	Portable Alpha Counter	SFP	Spent Fuel Pool
PAG	Protective Action Guides	SG	Steam Generator
PAR	Protective Action Recommendation	SGBD	Steam Generator Blowdown
		SI	Safety Injection

SNM	Special Nuclear Material	XMTR	Transmitter
SOER	Significant Operating Experience Report	X/Q	Wind Dispersion Factor (CHI/Q)
SP	Surveillance Procedures		
SPING	System Particulate Iodine and Noble Gas		
SRO	Senior Reactor Operator		
SRV	Safety Relief Valve		
SS	Shift Supervisor		
SSE	Safe Shutdown Earthquake		
SOP	1) Standard Operating Procedure 2) Step Off Pad		
SP	State Patrol		
SRC	State Radiological Coordinator		
SRD	Self Reading Dosimeter		
SRO	Senior Reactor Operator		
STH	State Highway		
STP	Standard Temperature and Pressure		
Tc	Temperature, cold leg		
TC	Thermocouple		
Th	Temperature, hot leg		
TI	Temperature Indicator		
TID	Temperature Indicating Device		
TLD	Thermoluminescent Dosimeter		
TR	Temperature Recorder		
TS	Technical Specification		
TSC	Technical Support Center		
TLD	Thermo-Luminescent Dosimeter		
TMI	Three Mile Island		
TSC	Technical Support Center		
USAR	Updated Safety Analysis Report		
UE	Unusual Event		
ULD	Upper Level of Detection		
USCG	United States Coast Guard		
USEPA	United States Environmental Protection Agency		
USNRC	United States Nuclear Regulatory Commission		
V	Volt		
V AC	Volts, Alternating Current		
VAMP	Victoreen Area Monitor Package		
V DC	Volts, Direct Current		
WB	Whole Body		
WE	Wisconsin Electric		
WEPCO	Wisconsin Electric Power Company		
WIS STATS	Wisconsin Statutes		
WOG	Westinghouse Owners Group		
WPS	Wisconsin Public Service		
WT	Water Treatment		
XFMR	Transformer		

2.10 DEFINITIONS

Accident: An unforeseen and/or unintentional event and its consequences that may result in an emergency.

Administrative and Logistics Manager: A designated officer or senior manager of WE who is responsible for providing administrative, logistic, communications, and personnel support for the emergency response and recovery operations.

Alert: The occurrence of an event or events that involve an actual or potentially substantial degradation of the level of safety of the plant. The consideration is to prepare to cope with potentially more serious emergencies. Any radioactive releases are expected to be limited to a small fraction of the EPA Protective Action Levels.

Assessment Actions: Those actions taken during or after an accident to obtain and process information that is necessary to make decisions to implement specific emergency measures and the making of those decisions.

Clean Area: That area within the protected area excluding the controlled area.

Contamination: Ingestion, inhalation, or direct contact with water, air, soil, or tangible objects which contain radioactive material. A contaminated object has a level of radioactive material adhering to its surface higher than an established limit.

Control Room: The control room is operated under the direction of the shift superintendent. It is the primary place where conditions are monitored and corrective actions for both units are taken to mitigate any abnormal occurrence. It is the location where primary assessment and classification of an accident begins. Its purpose is to monitor the conditions of both units and provide the main communications link between the plant and the TSC concerning analysis of reactor system problems, as well as long- and short-term guidance on corrective actions.

Control Room Simulator: The on-site location which is physically set up to reflect the actual unit control room. The simulator, located in the Nuclear Services Building, Fifth floor, will be used as the control room for the purposes of the Exercise.

Controller: A member of the Exercise control group. Each controller may be assigned to one or more activities or functions for the purpose of keeping the action going according to a scenario, resolving scenario discrepancies, and supervising the actions of the participants.

Controlled Area (Controlled Zone): The area within the protected area in which radioactive materials and radiation are present or could normally be expected to be present in sufficient quantities to require protective measures. This area typically includes the containments, facades, auxiliary building, the area surrounding these buildings, and parts of the service building. This area is controlled by administrative means.

Corrective Actions: Those emergency measures taken to improve or terminate an emergency situation at or near the source of the problem in order to prevent or mitigate any release of radioactive material or to reduce the magnitude of the emergency situation, e.g., shutting down equipment, fire fighting, repair, and damage control.

Decontamination: The process by which the body or an object is relieved of radioactive substances.

Design, Construction and Planning Manager (DCPM): A designated manager who coordinates the activities of plant modifications or other design and construction support required for the emergency response and recovery operations. He also has the requisite authority to coordinate and expedite plans and schedules for the site manager.

Dose Assessment: The process of estimating the amount of radiation a person will potentially receive as a result of a radiological release.

Drill: A supervised event aimed at evaluating, developing, and maintaining skills in a particular operation.

Emergency: The situation or condition which may result in damage to property or risk to the health and safety of the general public or plant personnel.

Emergency Actions: Those steps taken, as a result of exceeding an emergency action level in a plant emergency operating procedure or in this Emergency Plan, to assess the situation and ensure that the proper corrective and/or protective actions are taken.

Emergency Action Level (EAL): A predetermined set of initiating conditions which places the plant in a given emergency class. An EAL can be an instrument reading, equipment status, measurable parameter either on or offsite, an observable event or other phenomenon which, if it occurs, indicates entry into a particular emergency class.

Emergency Classification System: A classification system that arranges accidents according to their severity. Four emergency classifications are defined under this system. They are, in order of increasing severity:

- Unusual Event
- Alert
- Site Emergency
- General Emergency

Emergency Director: A designated corporate manager of the Company with the requisite authority to activate the WE emergency organization for PBNP and provide Emergency Plan management direction to the on-site emergency organization.

Emergency Operations Center (EOC): An offsite location utilized by State, County and other government agencies and organizations to perform assessments of radiological conditions and to coordinate offsite activities (access, evacuation, etc.).

Emergency Operations Facility (EOF): This facility is located at the south exclusion area boundary access road, approximately one mile southwest of the plant. It is called the Site Boundary Control Center during normal operation. This facility is operated by the emergency support manager for evaluating and controlling emergency situations that may affect the public. For example, radiological dose projections and verifications will be performed at the EOF and results will be provided to local, state, and federal agencies as required for implementation of offsite emergency plans. The EOF also serves as the command center for direction of recovery operations. It serves as a clearing center for evacuated plant contractor personnel, public visitors, and a center for offsite environmental monitoring by Health Physics personnel. It may also serve as a Health Physics control point for individuals entering or leaving the site. The facility is equipped with emergency radiation monitoring and sampling equipment, health physics supplies, protective and all-weather clothing, and other miscellaneous supplies for use during an emergency situation. Teams are

dispatched from this facility to monitor radiological conditions around PBNP and within the 10-mile EPZ.

Emergency Plan Implementing Procedures (EPIPs): Specific procedures providing actions to implement this Emergency Plan in order to mitigate or terminate an emergency situation.

Emergency Plan Maintenance Procedure (EPMPs): Specific procedures providing information and actions designed to maintain equipment and facilities prepared to respond to an emergency situation.

Emergency Planning Zone (EPZ): Offsite area surrounding PBNP for which planning is conducted to ensure that prompt and effective actions can be taken to protect the public in the event of an accident. For the plume exposure pathway, the EPZ has a radius of approximately 10 miles; and for the ingestion exposure pathway, the EPZ has a radius of approximately 50 miles (see Appendix C and Appendix J).

Emergency Response Facility: Any of several on-site and offsite centers which are activated to coordinate emergency actions. Included in this category are the Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility, Joint Public Information Center, and State and local Emergency Operations Centers.

Emergency Support Manager (ESM): A designated senior manager of the Company who operates the EOF and serves as the official utility contact with state and local governments.

Environmental Monitoring Teams (ENVTs): Two-person teams responsible for monitoring radiation levels in the environment and (in some cases) for collecting soil, air, and water samples for laboratory analysis.

Exclusion Area: The area within the site boundary surrounding PBNP in which the plant personnel have the authority to determine all activities including exclusion or removal of personnel and property from the area. At PBNP, the outer boundary of the exclusion area is coincident with the site boundary (see Appendix C).

Exercise: An exercise is a simulated event or series of events that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations.

Gatehouse: A building at the perimeter of the protected area manned by security force personnel and used for normal access to and egress from the protected area. There are two gatehouses, one to the north of the plant, the other to the south.

General Emergency: The most severe level of emergency classification which indicates that events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.

Release of radioactive material can be reasonably expected to exceed PAG exposure levels offsite.

General Office (WE): Wisconsin Electric Power Company (WE) corporate headquarters located at 231 West Michigan Street, Milwaukee, Wisconsin, 53201.

Host County: One of two counties in Wisconsin which adjoin one of the "risk" counties and which have agreed to "host" a share of the "risk" county population in the event that a nuclear plant incident requires the evacuation of the "risk" county population.

Ingestion County: One of 26 Wisconsin counties all or part of which lies within the ingestion EPZ (see below) of a nuclear power plant (NPP). The "risk" and "host" counties are also considered to be ingestion counties.

Ingestion Emergency Protective Action: An action taken to isolate food, feed and water and prevent their introduction into commerce and to determine whether decontamination or other disposition is appropriate. The FDA emergency PAGs are 15 rem to the thyroid and five rem to the whole body and other organs.

Ingestion Exposure Pathway: The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk, livestock feed, or vegetables. Depending on the magnitude and nature of the radiological emergency, the time of potential exposure may range in duration from hours to months.

Ingestion Exposure Pathway Emergency Planning Zone: A circular area, having a radius of about 50 miles measured from a nuclear power plant. In the event of a plant incident which results in a radioactive release, human foods and animal feed and water in this area may be contaminated and actions to protect the public from the ingestion of these contaminated materials may need to be instituted.

Ingestion Preventative Protective Action: An action taken to prevent or reduce contamination of food, feed and water. The FDA preventive PAGs are 1.5 rem to the thyroid and 0.5 rem to the whole body and other organs.

Joint Public Information Center (JPIC): This facility is under the direction of the JPIC Director and functions as a single-point contact for disseminating information to the public during more severe emergencies.

JPIC Director: A designated officer or senior manager of WE who is responsible for providing accurate and timely information to the public through the news media and coordinating news releases with federal, state, and local public relations officials.

Limited Plant Evacuation: The orderly withdrawal of personnel from a room, plant area, or building in the protected area.

Low Population Zone (LPZ): The area immediately surrounding the exclusion area which includes a residential population of which the total number and density are such that appropriate protective actions can be readily taken in the event of a serious radiological accident (see Appendix C and Appendix J).

Observer: Any individual who is authorized to observe the Exercise, but is not authorized to interact with the participants.

Off-site: The area beyond the exclusion area of PBNP.

On-site: All areas at PBNP within the exclusion area.

Operations Support Center (OSC) (Staging Area) (El. 8' of the TSC building): This facility is an area for preparation and deployment of reentry teams. Communications are provided to the TSC.

Operations Support Director (OSD): A designated manager of the Company with requisite authority, management ability, and technical knowledge to direct the operations support center in support of plant emergency response and recovery operations.

Owner Controlled Area: The area continuous to the Protected Area designated by the owner organization to be controlled for security purposes.

Participant: All individuals (Point Beach Nuclear Plant, WE Company personnel, and individuals from offsite organizations and agencies) who are assigned to perform functions of the emergency response organization, as described in the appropriate Emergency Plan and Emergency Plan Implementing Procedures.

Plant Evacuation: The orderly withdrawal of all personnel from areas within the fenced protected area, except personnel immediately involved in the emergency organization.

Plant Operations Manager (POM): A designated manager of the Company with the requisite authority, plant operating experience, and qualifications to direct plant operations appropriately.

Plume Exposure Pathway: The principal exposures from this pathway are whole body external exposure to gamma radiation from the plume and from deposited material, and internal exposure from inhalation of radioactive gas from the passing radioactive plume. Depending on the nature of the meteorological and radiological conditions, the time of potential exposure could range from hours to days.

Population-at-Risk: Those persons for whom protective actions are being, or would be, taken.

Projected Dose: The estimated dose that would be received by individuals if no protective actions were taken following a release of radioactive material.

Protected Area: The area within the PBNP security fence. This is sometimes referred to as "on-site" by the utility industry. However in this Plan, "on-site" is a defined term.

Protective Actions: Those measures taken in anticipation of or after an inadvertent release of radioactive material for the purpose of preventing or minimizing radiological exposures to persons that potentially could occur if the actions were not taken.

Protective Action Guides (PAGs): The projected radiological dose (including dose commitment values) at or above which protective actions may be warranted.

RadCon/Waste Manager (RCWM): A designated manager who has the requisite authority, nuclear experience, and technical expertise to manage the radioactive waste and radiological controls aspects of the emergency response and recovery operations.

Radiological Emergency: A radiological emergency is defined as an accident that may result in some loss of control of radioactive materials or may involve a hazard or potential hazard to the health and safety of people, or to the safety of property or environment.

Recovery Actions: Those actions taken after an emergency to restore the plant as nearly as possible to pre-emergency conditions.

Re-entry Actions: The return to an evacuated area, in either the plant or site, for such actions as search and rescue, first aid, firefighting, manipulation or repair of critical equipment or systems, and assess conditions in preparation for recovery operations.

Recovery Operations: Those operations taken after the emergency to restore the plant as nearly as possible to its pre-emergency condition.

"Risk" County: One of four counties in Wisconsin, part of which is included in the 10-mile plume exposure pathway EPZ of a nuclear power plant. Special radiological emergency response plans have been developed for those counties. These plans are exercised biannually in cooperation with State government and the licensee.

Secondary Alarm Station (SAS): The continuously manned security station where all initial offsite and Emergency Response personnel notifications are conducted. The SAS is located near the Control Room.

Security Building (Extension Building): The building inside the protected area containing the central alarm station and the security supervisor's office. Office areas unrelated to security are also in the building.

Site Boundary Control Center (SBCC): This building is located approximately one mile southwest of PBNP at the south entrance to the plant site. During normal operations, it functions as a training center. During an emergency, the building functions as an EOF as well as an assembly area for visitors and contractor personnel during a plant evacuation.

Site Emergency: The occurrence of an event or events which involve actual or likely major failures of plant functions needed for the protection of the public. The potential for a situation hazardous to the general public is the major concern of the Site Emergency classification. Radioactive releases are not expected to exceed the EPA Protective Action Guideline levels except within the Site Boundary.

Site Manager: A designated officer or senior manager of the Company who has the requisite authority, management ability, and technical knowledge to manage the plant emergency response and recovery operations.

System Control: The WE facility located in Pewaukee which controls and coordinates the generation and transmission within the WE system and with neighboring utilities.

Technical Support Center (TSC): This facility is within two minutes walking distance of the control room and operates under the direction of the site manager. The facility has the capability to supply and display technical information for use by technical and designated management personnel in support of reactor operations and control room functions during emergency and recovery operations.

Technical Support Center Building: This three-story building houses the TSC proper, the OSC, word processing and document control facilities and administrative offices. The entire building is within the TSC post-accident ventilation system envelope.

Unusual Event: The occurrence of an event or events which indicate a potential degradation of the level of safety of the plant. Unusual event emergencies involve minor situations that have the potential to escalate to more serious emergencies. No releases of radioactive material requiring

offsite response or monitoring are expected unless further degradation of safety systems occur. (The Unusual Event classification corresponds to the Notification of Unusual Event classification specified in federal guidance.)

2.11 TRAVEL INFORMATION

This section of the Exercise Manual provides travel information to those individuals from V/E, other utilities, local/State/Federal government, and/or other organizations who will participate in the exercise either as participants, evaluators or observers.

Permission to observe portions of the exercise must be obtained from the WE Exercise Coordinator or lead federal, state or county agency involved.

2.11.1 Directions to the Point Beach Nuclear Plant

The Point Beach Nuclear Plant is located on the west shore of Lake Michigan approximately 90 miles north of Milwaukee, WI, in the town of Two Creeks, WI. The plant is approximately 40 miles southeast of the city of Green Bay. Several airlines provide passenger service to Austin Straubel International Airport in Green Bay, WI, and General Mitchell International Airport in Milwaukee, WI. Car rental agencies are available at both the Green Bay and Milwaukee airports to provide rental vehicles for ground transportation.

a. Directions from Austin Straubel Airport (Green Bay) to PBNP:

Take HWY 172 east (right out of the airport) to I-43 south. Take I-43 south to HWY 147. Take 147 south to 163. Take 163 north to Nuclear Road. Take Nuclear Road east until the Site Boundary Control Center. Go left (north), following the signs for the Main (south) plant entrance.

Approximate distance is 40 miles (See Figure 2.2).

b. Directions from General Mitchell Airport (Milwaukee) to PBNP:

Exit Airport on HWY 119 to Interstate 94. Take Interstate 94 North to Interstate 43. Take I-43 north to Route 42 north (at Manitowoc). Take Route 42 north through Two Rivers. Approximately 10 miles north of Two Rivers, turn right onto Nuclear Road. Take Nuclear Road east until the Site Boundary Control Center. Go left (north), following the signs for the Main (south) plant entrance.

Total approximate distance is 100 miles (See Figure 2.2).

2.11.2 Directions to the PBNP Joint Public Information Center

The PBNP Joint Public Information Center is located at the Wisconsin Public Service Corporation's JPIC in Green Bay, WI.

a. Directions from Austin Straubel Airport (Green Bay) to the PBNP JPIC:

Take HWY 172 East to Ashland Avenue north (HWY 32). Take Ashland Avenue north to Dousman Street east. Take Dousman Street east (right) across the Fox River to the first stop light. Turn left onto Adams Street. The JPIC is at the corner of North Adams and Elm Streets.

Approximate distance is 10 miles (See Figure 2.3).

b. Directions from General Mitchell Airport (Milwaukee) to the PBNP JPIC:

Exit Airport on HWY 119 to Interstate 94. Take Interstate 94 North to Interstate 43. Take I-43 north to Green Bay Exit 187 Webster Avenue. Go south to University Avenue. Take University Avenue west across the East River to the next intersection, Elm Street. Take Elm Street east to Adams Street. The JPIC is at the corner of North Adams and Elm Streets.

Total approximate distance is 120 miles (See Figure 2.3).

2.11.3 Accommodations

a. Manitowoc and Surrounding Areas:

Fox Hills Resort
Mishicot, WI
(414) 755-2376

Inn on Maritime Bay
101 Maritime Drive
Manitowoc, WI
(414) 682-7000

Holiday Inn
I-43 & US 151
Manitowoc, WI
(414) 682-6000

Lighthouse Inn
1515 Memorial Drive
Two Rivers, WI
(414) 793-4524

b. Green Bay Area:

Best Western Downtowner
321 S. Washington Street
(414) 437-8771

Regency Suites
333 Main Street
(414) 432-4555

Days Inn
406 Washington St.
(414) 435-4484

Holiday Inn City Center
200 Main Street
(414) 437-5900

Econo Lodge
119 N. Monroe Ave.
(414) 437-0525

Marriott Residence Inn
335 W. St. Joseph St.
(414) 435-2222

Figure 2.1
Point Beach Nuclear Plant Facilities

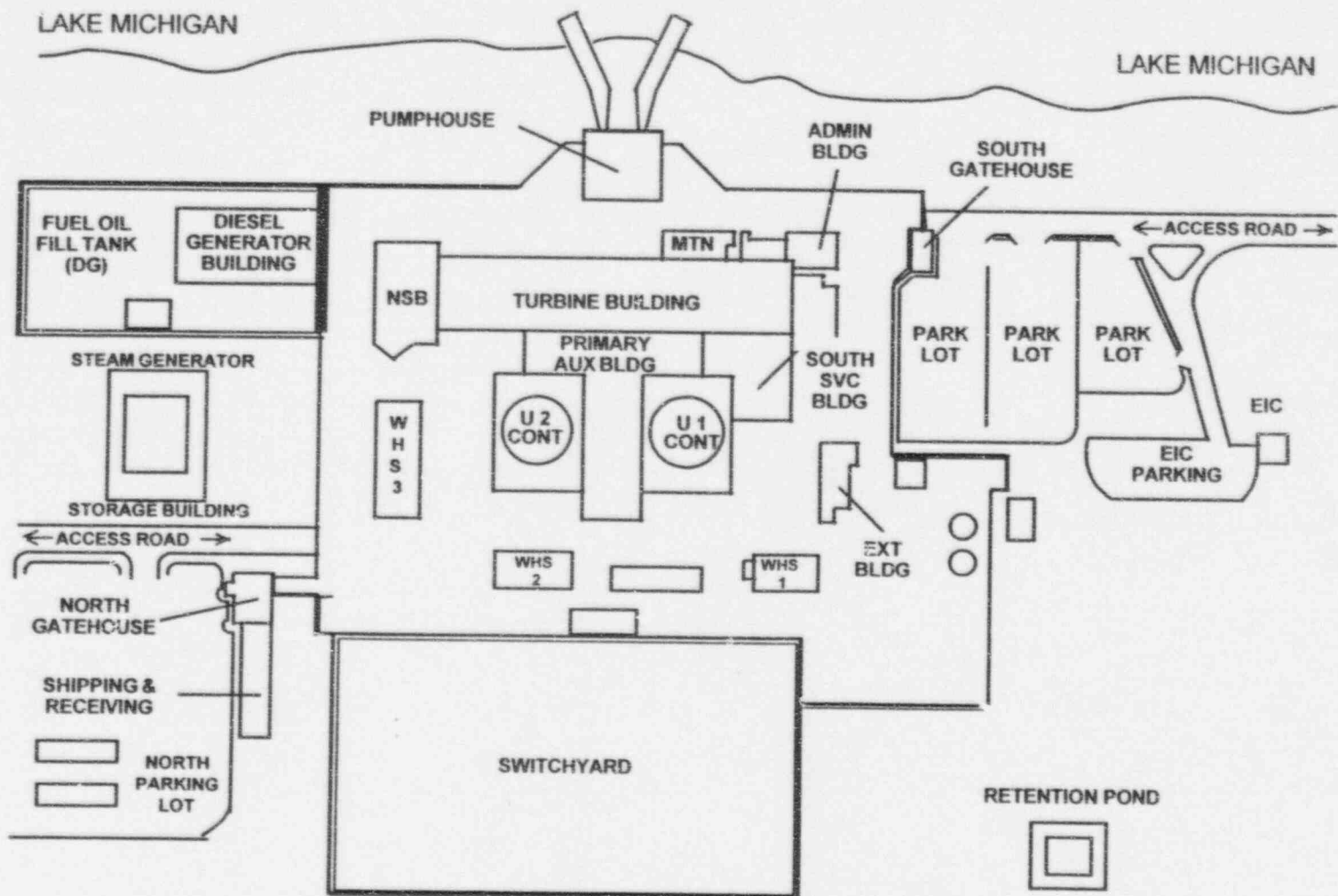
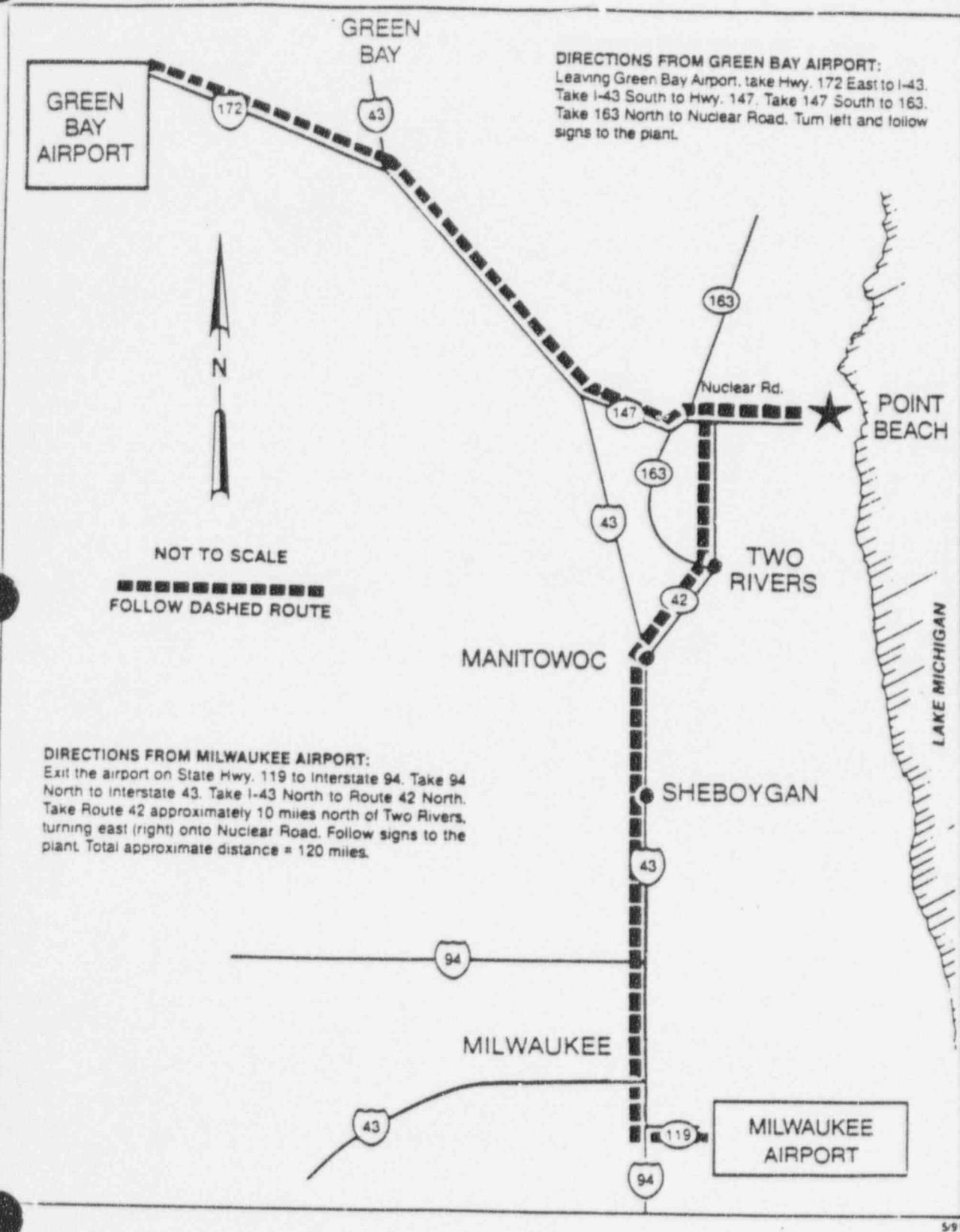
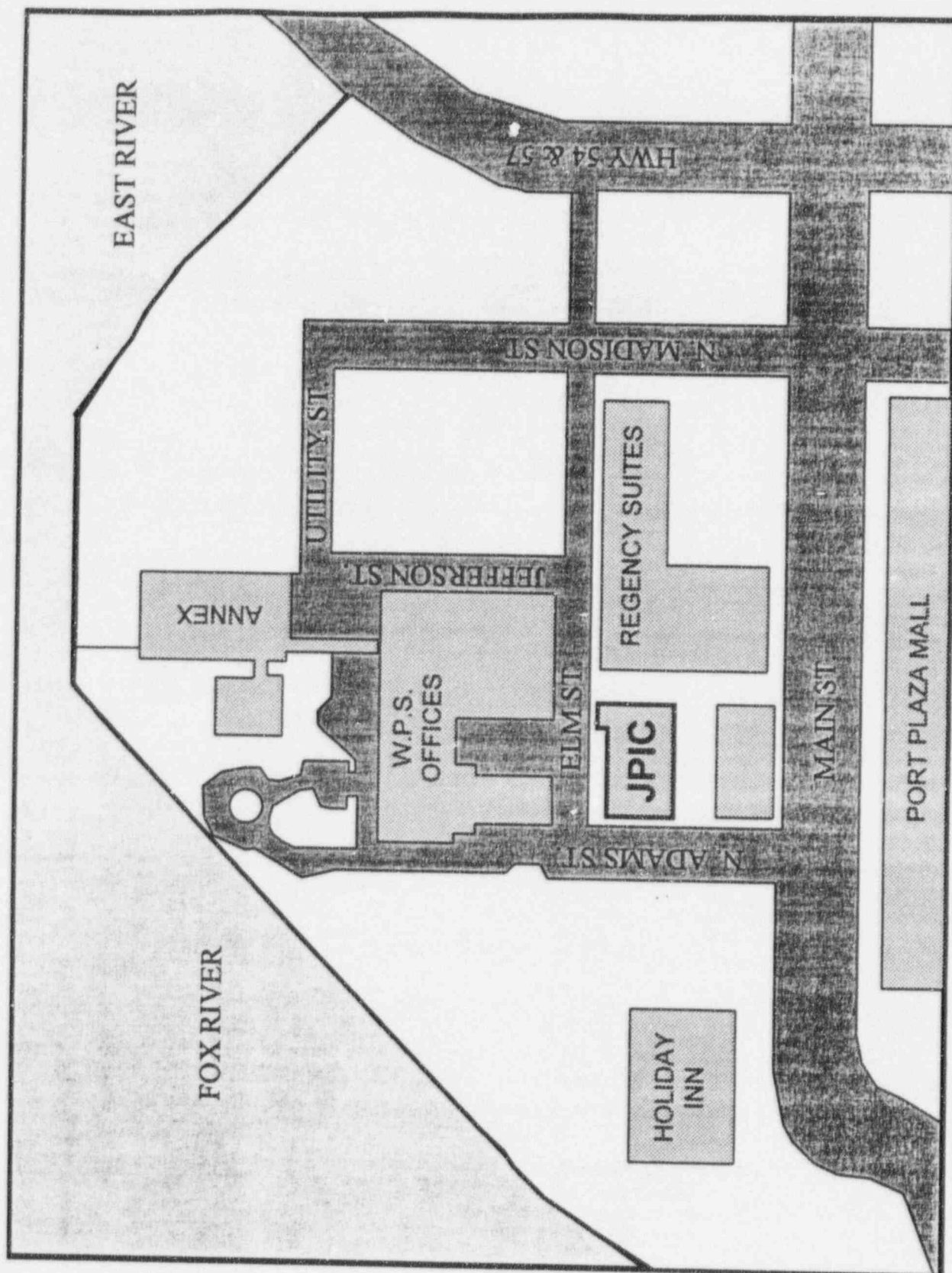


Figure 2.2
Map to the Point Beach Nuclear Plant



5/91

Figure 2.3
Map to the PBNP Joint Public Information Center



3.0 SCHEDULE

Thursday, August 1

0800 - 1200	PBNP Controller/Evaluator Briefing	PBNP TSC
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Friday, August 2

0800 - 0900	JPIC/MCC Players' Briefing	Milwaukee A058; PBNP FOCR
0900 - 1000	JPIC/MCC Controller Briefing	Milwaukee A058

Monday, August 5

1000 - 1100	PBNP Players' Briefing	PBNP Energy Center
1100 - 1200	Final PBNP Controller/Evaluator Briefing	PBNP Energy Center
1300 - 1400	NRC Entrance Meeting	PBNP TSC
1400 - 1500	NRC Badging; Events Walkdown	PBNP
1500 - 1630	FEMA Evaluation Team Briefing	Fox Hills, Mishicot; EOC, Madison
1900 - 2200	Kewaunee County Reception and Congregate Care Center Demonstration	Algoma High School

Tuesday, August 6

0645 - 0700	PBNP Simulator Crew Briefing	Simulator
0700 - 1500	Exercise: Accident Day 1	All Emergency Response Facilities
1500 - 1600	In-Facility Critique.	↓

Wednesday, August 7

0800 - 0830	Break Message Briefing	EOF; State and County EOC's
0830 - 1000	Exercise: Accident Day 4	
1000 - 1030	Break Message Briefing	
1030 - 1300	Exercise: Accident Day 4	
1300 - 1400	In-Facility Critiques	
1300 - 1600	WE Controller/Evaluator Debriefing	↓ TSC

Thursday, August 8

0800 - 1000	WE Formal Critique Presentation	PBNP Energy Center
1000 - 1100	NRC Critique/Exit Meeting	PBNP Energy Center

Friday, August 9

0900 - 1030	State/County/FEMA/WE Debriefing	Manitowoc County EOC
1030 - 1200	FEMA/NRC Public Meeting	Manitowoc County EOC

4.0 SCENARIO

The contents of this section are as follows:

- 4.1 Initial Conditions
- 4.2 Scenario Time Line
- 4.3 Challenging Aspects of the 1996 PBNP Exercise Scenario
- 4.4 Termination Criteria

4.1 Initial Conditions

Unit 1

1. Unit 1 continues to operate at full rated power, having done so since returning from Refueling Outage U1R23 last April.
2. Charging pump 1P-2B was taken out of service on Monday August 5 for pump seal leakage. The pump is currently disassembled, awaiting parts from the vendor. The pump is scheduled to be returned to service on Wednesday, August 7.
3. All other Unit 1 systems and components are operable/available.

Unit 2

1. Unit 2 is operating at about 90% power. The core is at end-of-life as the unit is scheduled to be shut down for refueling and steam generator replacement on September 24.
2. Diesel Generator G-02 was declared out of service on Friday August 2 when it failed Surveillance TS-82 "Emergency Diesel Generator G-02 Monthly" due to oil being found in the test ports. The Diesel Generator is currently disassembled to address potential jacket lining scoring. Diesel Generator G-01 was tested with no problems and was aligned as the emergency power source for Bus 2A05.
3. All other Unit 2 systems and components are operable/available.

Common

1. All other common systems and components are operable/available.
2. At 0610, WE System Control notified PBNP that a severe thunderstorm warning is in effect for Manitowoc County. Plant operators implemented the tasks of AOP-13C "Severe Weather Conditions".
3. Today's meteorological information and forecast is as follows:
 - Today: It is raining moderately. Severe thunderstorms are expected this morning. Later today the storms should pass and overcast skies are predicted for the remainder of the day. High temperatures should be in the low 80's. Winds are expected generally from the south.
 - Tonight: Overcast skies will continue into early evening. Moderate conditions with 6 to 10 mile per hour winds from the south are forecast.
 - Tomorrow: Seasonably warm and sunny weather is predicted for the northeast Wisconsin area

4.2 Scenario Time Line

Time	Event	Reference
✓ 0645	Initial conditions are established for the oncoming Control Room shift turnover. Commence the Point Beach Nuclear Plant Evaluated Exercise.	Initial conditions; mini-scenario #1.
✓ 0705	The National Weather Service notifies WE System Control and the State of Wisconsin that a severe thunderstorm warning is in effect for Manitowoc, Kewaunee and Door Counties. System Control should inform PBNP; plant operators should reference AOP-13C "Severe Weather Conditions".	
✓ 0710	Both PBNP units receive (generator) Field Forcing Alarms due to lightning-induced transients.	
✓ 0720	Lightning strikes transformer 1X03, resulting in a transformer lockout and damaging the transformer. A fast bus transfer occurs on the 13.8 kV system as designed; there is no immediate effect on the plant. An operator should be dispatched to investigate. Operators should contact the Duty & Call Maintenance Superintendent; they may later call the Appleton Service Center for 1X03 support.	Mini-scenario #2
✓ 0721	Control Room operators should start the G-05 Gas Turbine to provide greater electrical system reliability.	
✓ 0722	The Gas Turbine trips due to a combustor problem.	Mini-scenario #3
✓ 0725	Both PBNP units again receive (generator) Field Forcing Alarms.	
✓ 0726	WE System Control notifies PBNP that lightning has struck the Kewaunee Nuclear Power Plant (KNPP) capacitor bank. KNPP is reducing load to about 90% and will investigate for damage.	
0730	Operators should assess plant conditions and identify a Technical Specification Unit 1 shutdown requirement due to the losses of 1X03 and G-05. <i>Shutdown</i>	

Time	Event	Reference
✓ 0740	<p>Water ingress into the underground cables connecting Diesel Building Bus 1A06 to 1X14 causes a short circuit. Stress on bus 1A06 causes the marginal insulator to fail, resulting in a 3 phase bus fault. Consequently the following occur on Unit 1:</p> <ul style="list-style-type: none"> - Safeguards Bus 1A06 locks out (due to bus bar failure/vaporization) - Safeguards Bus 1B04 loses its supply power - The "B" train of Unit 1 safeguards is lost - Charging pump 1P-2C trips on undervoltage - Breaker 1A52-54 trips on overcurrent. <p>Operators should assess plant conditions and identify a Technical Specification Unit 1 shutdown requirement due to the loss of the safeguards bus.</p> <p>Operators should be dispatched to the new diesel building. Note: There is no fire.</p>	Mini-scenario #4
0750	Tornado sightings are reported in central Manitowoc County.	
0800	<p>A tornado touches down northwest of the plant in the contractor parking lot. Wind-driven projectiles damage Bus section 5. As a result:</p> <ul style="list-style-type: none"> • A loss of off-site power on Unit 1 occurs (per the ECA-0.0 procedural definition, when buses 1B03 and 1B04 are lost) • The electrical transient induces a spurious Unit 2 generator trip which causes a turbine trip and reactor trip • Unit 1 remains at power • Diesel generator G-01 starts but does not load due to a field flashing relay/lockout problem. • When 1B03 loses power, both Unit 1 Reactor Coolant Pumps seals lose their cooling due to the loss of the charging and component cooling water pumps. Consequently the Unit 1 Reactor Coolant Pumps seals fail due to excessive heating. <p>The tornado also causes damage to the Unit 1 facade. Although not visible from the outside area, facade debris damages the instrument air line to the containment purge supply valves.</p>	<p>Mini-scenario #5</p> <p>Mini-scenario #6</p>
0801	Per ECA-0.0, operators should trip Unit 1 and shut its Main Steam Isolation valves.	

Time**Event****Reference**

0805

Unit 1 status summary:

- There is no power to Unit 1, other than emergency lights and instrumentation on station batteries.
- Reactor coolant inventory is being lost through the failed Reactor Coolant Pumps seals, and there are no available makeup capabilities from injection systems.

Mini-scenario #7

Unit 2 status summary:

- Diesel generator G-04 starts to supply safeguards power to the Unit 2 "B" train components
- The unit can be maintained in a stable, hot shutdown condition on natural circulation.
- With the power loss, instrument air is lost. Consequently, an operator may be dispatched to manually start the instrument air compressor.

Common systems status summary:

- The following are available/operable:
 - ◊ Gai-tronics
 - ◊ Telephones
 - ◊ Radios
 - ◊ All security functions, including keycards and doors
 - ◊ Emergency lighting
 - ◊ Control Room ventilation.
- Note that - except for the Control Room (and later the TSC and OSC) - no fans are available; therefore building temperatures will get much warmer than normal.

Emergency status:

At this point, the plant is technically in an **ALERT** classification per Category 6, "Loss of off-site power and loss of all on-site AC power for less than 15 minutes" or per Category 1 "Primary system leakage greater than 50 gpm". However, the Control Room priority should be to restore power and thus the classification process may be delayed. On the other hand, plant personnel may not wait for the 15 minutes to declare a **SITE EMERGENCY**.

TSC/OSC status:

The TSC and OSC have lost normal power. The G-05 auxiliary diesel (G501) would normally supply emergency backup power to the TSC/OSC. However when G501 senses the undervoltage condition on bus B500, it automatically starts and transfers load to supply power to the gas turbine auxiliaries. This results in the emergency backup power to the TSC being unavailable. (Normal TSC power is supplied from 1B01; emergency power would have been from G501).

Mini-scenario #8

Time	Event	Reference
0815	With no power to the TSC and with the Gas Turbine inoperable, the Duty Technical Advisor should request that Control Room Operators locally re-align diesel G501 to provide power to the TSC/OSC. <u>NOTE</u> : Do not let participants relocate to the EOF.	
0830	The DSS (acting Plant Operations Manager) should declare a SITE EMERGENCY (Category 6, "Loss of off-site power and loss of all on-site AC power for greater than 15 minutes"). All WE, State and County Emergency Response Facilities should be directed to be activated.	
0830 to 1000	<ul style="list-style-type: none"> • <u>Unit 1 reactor vessel water level</u> continues to decrease slowly. Per procedures, operators should cool down and depressurize the reactor coolant system to conserve water inventory. • <u>Diesel generator status</u>: <ul style="list-style-type: none"> -G-01 started but did not load due to a field flashing relay/lockout problem -G-02 is out of service due to jacket lining scoring -G-03 started, but does not supply power to the faulted 1A06 bus -G-04 started, loaded and is supplying power to the Unit 2 "B" safeguards components -G-05 (gas turbine) failed on startup -G501 is supplying power to the TSC/OSC. (Note: at full load this diesel requires manual fuel refilling about every 3 hours. Gravity fill will work.) • <u>Plant response</u> should focus on the restoration of power. Efforts may include: <ul style="list-style-type: none"> -Restore off-site power by repairing 1X03 -Correcting the diesel G-01 failure -Re-assembling diesel G-02 -Correcting the gas turbine G05 failure 	
1010	The reactor vessel water level depletion results in core uncover. Consequently thermocouple temperatures increase and clad damage begins. At 1800 °F, hydrogen generation occurs.	
1025	When thermocouple temperatures exceed 2500 °F, the thermocouples become unreliable. Core damage is underway. Hydrogen concentration exceeds the detector limit of 10%.	
1030	The Plant Operations Manager should declare a GENERAL EMERGENCY in accordance with Category 3 "Core Fuel Damage".	
	WE should make default Protective Action Recommendations to the State.	

Time	Event	Reference
1108	Power is restored. [Note: the component(s) restored will depend upon the efforts of the PBNP Emergency Responders].	
1108+	When power is restored, electrically operated valves will energize and re-position. As a consequence, a hydrogen detonation event occurs in containment. Containment pressure will peak at about 130 psig.	
1109	Due to the containment overpressurization, the containment purge supply valves (1VNPSE-3245 and -3244) are forced open. The pressure also forces open the purge supply line inspection port. An unmonitored release of radiation is underway as follows: reactor vessel → failed reactor coolant pump seals → containment → containment purge supply valves → inspection port → facade → damaged facade roof → environment.	Mini-scenario #9 Mini-scenario #10
1110	Operators should start safeguards systems to cool the core and/or lower containment pressure.	
1130	WE should make revised Protective Action Recommendations.	
1230 to 1245	The wind shifts sufficiently such that WE should make a revised Protective Action Recommendation to the State.	
1315	The release is minimized when containment pressure drops below atmospheric pressure. The release path remains open, however. <i>Note: Although the release is technically terminated at this time, the plant staff may make the conservative decision to consider the release as still in progress until they can definitively close the release path.</i>	
1400	The release path is isolated and the release is verified terminated when one of the containment purge supply valves closes.	
1415	<i>For on-site Exercise purposes:</i> On-site recovery actions and discussions should be underway.	
1500	Exercise Day 1 is terminated. Note: Off-site actions will continue until 1600.	

Time	Event	Reference
0800	Establish Initial Conditions for Accident Day 2 .	Break Message 1
0830	Commence Accident Day 2.	
	<i>Sequence provided in the State Exercise Manual.</i>	
1000	Establish Initial Conditions for Accident Day 4 .	Break Message 2
1030	Commence Accident Day 4.	
	<i>Sequence provided in the State Exercise Manual.</i>	
1300	Terminate Exercise.	

4.3 Challenging Aspects of the 1996 PBNP Exercise

A discussion of what Wisconsin Electric Power Company (WE) and the Point Beach Nuclear Plant (PBNP) considers challenging aspects of the 1996 Exercise is provided below to assist the reviewer in judging the adequacy of the scenario to meet the objectives in Section 1.0. This section also provides verification that the Exercise will furnish an effective test of the WE/PBNP Emergency Preparedness Program.

4.3.1 Exercise Logistics

- a. To prevent the Exercise from interfering with normal plant operations and to enhance the reality of the Exercise, the Exercise will be conducted from the Point Beach Nuclear Plant Simulator. The PBNP simulator is a state-of-the-art simulator; for example in addition to its vast modeling capabilities, it is one of a few simulators that can actively model two nuclear units. The simulator will be used to run the Exercise scenario on a real time basis. The Simulator/Control Room staff will therefore be required to respond more realistically to postulated scenario events. The PBNP simulator is equipped with communications equipment similar to that of the actual Control Room, including plant Gai-tronics and evacuation alarms; thus communications efforts will be as close to real as possible.
- b. Plant operations and radiological data generated by the Simulator will be transmitted to designated "Exercise" Plant Process Computer System (PPCS) terminals located in the Technical Support Center (TSC) and Emergency Operations Facility (EOF). As such, Exercise participants will be able to access real time Exercise data using normal data acquisition methods, thereby eliminating the need for data sheet handouts.

The Exercise Manual provides a description of how Exercise data will be presented to the Exercise participants using PPCS and outlines alternate methods for data acquisition in the event of a failure of the Simulator computers.
- c. Communications with the NRC Operations Center and the Region III Incident Response Center will be simulated on a real time basis using dedicated Emergency Notification System (ENS) and Health Physics Network (HPN) controllers. The PBNP Emergency Response Organization will therefore be required to demonstrate its ability to staff those circuits and to relay technically accurate information to the NRC in a timely manner.
- d. Particularly challenging to the Exercise is that the scenario will involve both units. Operations personnel will experience equipment failures on both units requiring action and will need to coordinate actions.
- e. A "Control Cell" of Exercise Controllers will be available to make and answer telephone calls and act as non-participating WE Departments, members of the public, vendors and various industry organizations. See Section 10 for further details.

4.3.2 Mini-Scenarios

- a. Section 8 of the Exercise Manual contains mini-scenario packages for the several detailed events that occur in this Exercise. These mini-scenarios were crafted to allow for enhanced realism, participant free play and effective control of the various key events. Since this Exercise is "Event Driven," relatively few mini-scenarios are needed.

Each mini-scenario generally contains the following parts as applicable:

- Approximate Time
- Location
- Event Summary
- Objective (purpose of the mini-scenario)
- Setup
- Initial Indications/Notifications
- Postulated Events
- Controller Notes
- Restoration Guidelines
- References
- Attachments (describing or picturing the event or problem).

Each mini-scenario has been designed to allow for maximum participant free play

- b. The mini-scenarios will require participants to analyze, classify and notify appropriate offsite agencies. Interface with State and County officials, offsite monitoring teams and the media will challenge participants throughout the Exercise.
- c. Limited use of equipment mockups will also be employed. OSC teams responding to equipment failures in-plant will be required to troubleshoot the suspected component, identify the source of the problem, and initiate repairs. OSC team personnel will also be required to access the site warehouse and plant tool cribs to obtain necessary replacement parts, materials, or tools.

4.3.3 Public Information/Rumor Control

- a. PBNP and WE Public Information efforts to support the Exercise will be on an actual response basis. External Affairs will participate and respond as they would if the event were real and on a real time basis except for the JPIC. JPIC personnel will be pre-staged at the facility. Representatives from WE, the State of Wisconsin, Kewaunee County and Manitowoc County will participate. The challenge is to coordinate information, actions and response among these agencies should be obvious.
- b. In addition to performing its exercise objectives, the Corporate External Affairs department, the JPIC and state and county staffs will be tested in their rumor control and media monitoring function. A bank of specially trained mock "Citizens" and "Reporters" will call the rumor control and media response personnel. These callers are instructed to ask emergency and non-emergency related questions. Additionally, special media report messages will be given to the media monitors, simulating reports which one could expect on television news. Some of these reports contain incorrect information. JPIC participants must respond to the reports, verify accuracy, and correct misinformation. Included are messages for rumor controllers who must assess and address citizens' concerns. Finally, specially trained "reporters" will participate at the media briefing center relentlessly testing the JPIC information process in general and spokesperson's skills in particular.
- c. Throughout the Exercise, various requests for information are injected. These requests come from citizens, the media, politicians, neighboring utilities, industry organizations,

vendors, etc. These inquiries test the information flow process internally and externally. Participants must prioritize these requests in relation to other emergency-related activities. Generally, these requests require interaction among various members/facilities of the WE Emergency Response Organization and off-site agencies.

4.3.4 Ingestion Pathway Exercise

- a. This will be a two-day Ingestion Pathway Exercise. Exercise Day 1 will include full exercise play; Exercise Day 2 will test ingestion pathway response. There will be time jumps such that the exercise will involve accident days one, two and four as follows:

<u>Exercise Day/Time</u>		<u>Accident Day/Time</u>	
Day 1, Tuesday, August 6	0700-1600	Day 1, Tuesday, August 6	0700-1600
Day 2, Wednesday, August 7	0800-1000	Day 2, Wednesday, August 7	0800-1000
Day 2, Wednesday, August 7	1000-1300	Day 4, Friday, August 9	1000-1300

- b. WE/PBNP will fully participate and respond on Exercise Day 1. All WE/PBNP Emergency Response Facilities will be activated as required by the simulated accident. On Exercise Day 2, WE will participate in the JPIC and will provide a "Control Cell" in the EOF to support State and counties response.

The State of Wisconsin will fully participate in Exercise Days 1 and 2. Manitowoc and Kewaunee Counties will fully respond per their objectives on Exercise Day 1 and provide limited response on Exercise Day 2.

- c. This Ingestion Pathway Exercise will involve the immediate response of the State of Wisconsin, Kewaunee and Manitowoc Counties. The participation of these off-site organizations will test the ability of the WE/PBNP Emergency Response Organization (ERO) to interface effectively with local emergency responders, as well as providing the opportunity to assess the ability of the WE/PBNP Emergency Response Facilities to support off-site response activities.

- d. Local agencies will activate and respond as required by their plans and procedures. Several activities will be demonstrated, including:

- Notifications
- Activation/Operation/Coordination of Emergency Response Facilities including state and counties Emergency Operations Centers
- Ambulance response to a contaminated injured victim
- Hospital response to a contaminated injured victim
- Protective action decision-making and implementation
- Field monitoring/plume tracking
- Airborne and ingestion sampling and analysis
- Reception Center activities
- Congregate Care Center activities
- School District activities
- Emergency worker monitoring/decontamination
- Shift change roster
- Recovery discussions
- Ingestion sampling in the field

- Ingestion data reduction and analysis
- Ingestion decision making and protective action recommendations
- Relocation and re-entry decision making, recommendations and actions.

See Section 1.3 for a complete discussion of state and county objectives. Some of these activities will be accomplished out of sequence; see Section 4.0 for the Exercise activity schedule.

4.3.5 Emergency Response

Additionally the Exercise also poses the "usual" emergency response challenges such as emergency recognition, reaction and coordination with state, local agencies and simulated federal agencies. Based upon participants' decisions and response, challenges of dose assessment, plant accountability, protective action recommendation considerations, public information coordination, and recovery planning will be demonstrated.

4.4 Termination Criteria

4.4.1 Termination Criteria

The following are criteria for terminating the 1996 Point Beach Exercise. These are generally applicable to Exercise Day 1. Termination on Exercise Day 2 is at the discretion of the Facility Controllers.

A real event occurs at the plant that, in the opinion of the (actual) Duty Shift Superintendent, presents a threat to personnel or plant safety and/or requires the declaration of a real emergency.

OR

The Sequence of Events and the Mini-scenarios have been initiated and played out to their expected conclusion/resolution

AND

Lead Facility Controllers have determined that the objectives of the Exercise:

- have been met
- have been met to the extent that they are likely to be
- have not been met and the reasons therewith are understood

AND

Exercise termination is appropriate based upon participant decisions and responses.

4.4.2 Termination Actions

A. Prior to delivering the termination message, the Lead Exercise Controller should:

- _____ Poll all WE Lead Facility Controllers and confirm that their Exercise objectives have been met to the extent possible. Get a consensus that the PBNP and EOF/JPIC portion of the Exercise can be terminated.
- _____ Contact the Lead Off-Site Controller and confirm that off-site Exercise objectives have been met to the extent possible. Determine and set a time that the Exercise can be terminated. Verify that the Lead Off-Site Controller will notify all Off-site Controllers.
- _____ Notify all WE Lead Facility Controllers about the designated termination time. **Use the Controller Phone Tree listed on Page 4.14.**

B. At the designated termination time, the Lead Exercise Controller should:

- _____ Verify that all WE and off-site facilities are notified. **Use the Controller Phone Tree listed on Page 4.14.**
- _____ Verify that a plant page announcement has been made.

C. Controller Phone Tree

Lead Exercise Controller: → Simulator → Security
→ Plant Page

→ TSC → OSC

→ EOF → CEC
→ OSHPF → Field Teams

→ JPIC → MCC
→ Control Cell

Controller names and telephone numbers are listed in Section 2.

5.0 MESSAGES

This section contains the messages and data used to drive the on-site technical aspects of the scenario.

- ◆ Section 5.1 contains the (on-site) Master Sequence of Events, which controls the progress of the scenario.

- Contingency messages are noted with a message number followed by the letter "C" (e.g., 10-C). Contingency messages are delivered only if certain predetermined conditions identified in the "Controller Notes" have been met.

- Simulator Messages are noted with a message number followed by the letter "S" (e.g., 2-S). Simulator messages are delivered to the Simulator operators only if the Simulator is not operable.

- Other messages are handed out per the instructions listed in the "Controllers Notes" portion of the Master Sequence of Events, or are for information for the Exercise Controllers.

- Other information which may be given to a Participant only if earned is provided in the individual Mini-scenarios.

- Messages to Controllers are for information only. Message forms are not printed for these.

- ◆ Section 5.2 contains the individual WE/PBNP Message Forms which are to be handed out in accordance with the instructions in the Controllers Notes of Section 5.1.

The State of Wisconsin Messages and the Kewaunee and Manitowoc Counties Messages are found in the State Of Wisconsin Exercise Manual.

Public Information-related messages and scripts are located in Section 9 of this manual.

5.1 Master Sequence of Events

The Master Sequence of Events begins in tabular format on the next page.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
1	0645	Simulator Operating Crew	Lead Simulator Controller	<p>Attached are the following documents for turnover:</p> <ul style="list-style-type: none"> •Unit 1 Shift Turnover Checklist •Unit 2 Shift Turnover Checklist •Unit 1 Control Room Shift Log •Unit 2 Control Room Shift Log •Safeguards Shift Log 	<p>1. The Shift Turnover Package reflects the Initial Conditions.</p> <p>2. The most recent chemistry analyses are as found from normal plant chemistry procedures.</p> <p>3. If participants request meteorological information and properly describe how they would access it, provide the data from Section 7.3.</p> <p>4. If the simulator is not in operation for the exercise, see Message 2-S.</p> <p>5. Just prior to the Exercise, (controller) Jim Wilson will brief (participant) Jeff Roberts about the G-02 situation. Subsequently, Jeff Roberts will brief the on-coming simulator Control Room shift, as would actually occur.</p>	<p>1. Simulator controllers are to review initial conditions and ensure all participants understand them.</p> <p>2. Provide additional information if requested for the following:</p> <ul style="list-style-type: none"> • Diesel Generator G-02 out of service; refer to Mini-Scenario # 1 • Charging Pump 1P-2B out of service • Other plant evolutions.
2-S	0645	Simulator Operating Crew	Lead Simulator Controller	<p>See data sheets for initial plant conditions.</p> <ul style="list-style-type: none"> •Plant Operations Data •Radiological Data 	<p>The referenced data is to be delivered to the simulator staff only if the simulator is not operable for the exercise.</p>	

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
3	0700	Simulator Operating Crew	Lead Simulator Controller	<p>1. Notify the (actual) Control Room Supervisor of the commencement of the exercise.</p> <p>2. Make the following PA announcement:</p> <p>"Attention, attention all personnel. We are now commencing the 1996 Emergency Plan Exercise. All announcements prefaced by 'This is a Drill' are for designated participants only."</p> <p>Repeat the announcement.</p>	<p>1. Controller to verify that the Simulator Shift Supervisor notifies the on-shift Control Room Supervisor of the commencement of the exercise.</p> <p>2. Verify that the PA announcement is made.</p>	
4	0700	Simulator Operating Crew	Lead Simulator Controller	<p>For Exercise purposes, Auxiliary Operators dispatched from the Control Room Simulator are to report to the Simulator Booth until the OSC is activated.</p>	<p>Controllers in the Simulator Booth will provide field information to AO's dispatched from the Control Room. This is being implemented for controller purposes only.</p>	

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
5	0705	Simulator Operating Crew	WE System Control	"Please be advised that at 0705 we have been notified by the National Weather Service that a severe thunderstorm warning is in effect for Manitowoc, Kewaunee and Door Counties. This condition is expected to be in effect until 0900 hours"	WE System Control will be portrayed by the Simulator Driver.	Plant operators should reference AOP-13C "Severe Weather Conditions".
6-S	0710	Simulator Operating Crew	Lead Simulator Controller	The following annunciators have been received: •UNIT 1 FIELD FORCING •UNIT 2 FIELD FORCING	Both PBNP units receive (generator) Field Forcing Alarms due to lightning-induced transients.	Operators should implement procedure ARB-C01-A2 and C01-A3.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
7-S	0720	Simulator Operating Crew	Lead Simulator Controller	<p>1. The following annunciators have been received:</p> <ul style="list-style-type: none"> •IX-03 HIGH VOLTAGE STATION AUX TRANS LOCKOUT •13.8 KV MAIN OR TIE BREAKER TRIP •345 KV BREAKER TRIP <p>2. The following Unit 2, Panel C-02, breaker indicating lights change from RED to GREEN:</p> <p>F52-111 F52-BS-1-2 H52-05 H52-20</p>	<p>1. Lightning strikes transformer 1X03, resulting in a transformer lockout and damaging the transformer.</p> <p>2. A fast bus transfer occurs on the 13.8 kV system as designed; there is no immediate effect on the plant.</p> <p>3. See Mini-scenario #2 for further information.</p>	<p>1. An operator should be dispatched to investigate.</p> <p>2. Control Room operators may start the G-05 Gas Turbine to provide greater electrical system reliability.</p> <p>3. Operators should contact the Duty & Call Maintenance Superintendent; they may later call the Appleton Service Center for 1X03 support.</p>
8-C	0722	Simulator Operating Crew	Lead Simulator Controller	<p>The following annunciator has been received:</p> <p><u>Panel C-02</u> G-05 GAS TURBINE GENERATOR</p> <p><u>Panel C-02R</u> The "G-05 GT READY TO START" light is extinguished.</p>	<p>1. Deliver this message about one minute after operators start the G-05 Gas Turbine</p> <p>2. The Gas Turbine trips due to a combustor problem.</p> <p>3. Operators may attempt to restart the G-05 Gas Turbine later; this message is repeated then.</p>	<p>1. Operators should investigate the cause of the malfunction. See Mini-scenario #3 for further information.</p> <p>2. Operators should also assess plant conditions and identify a Technical Specification Unit 1 shutdown requirement due to the losses of 1X03 and G-05.</p>

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
9-S	0725	Simulator Operating Crew	Lead Simulator Controller	The following annunciators have been received: •UNIT 1 FIELD FORCING •UNIT 2 FIELD FORCING	Both PBNP units again receive (generator) Field Forcing Alarms.	Operators should again refer to procedures ARB-C01-A2 and C01-A3.
10	0726	Simulator Operating Crew	WE System Control	"Please be advised that we have been notified by WPS' System Control that lightning has struck the Kewaunee Plant capacitor bank. Kewaunee is reducing power to 90% and will investigate. No other damage or effects are reported."	1. WE System Control will be portrayed by the Simulator Driver. 2. If asked, System Control will state that there are no power supply problems on the WE, WPS or other utility grids.	

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
11-S	0740	Simulator Operating Crew	Lead Simulator Controller	<p>The following annunciators have been received:</p> <ul style="list-style-type: none"> •UNIT 1 480V BUS UNDERVOLTAGE •UNIT 1 4.16 KV BUS UNDERVOLTAGE •UNIT 1 4.16 KV BUS LOCKOUT •G-03 EMERGENCY DIESEL •UNIT 1 NON-SAFEGUARDS MCC SUPPLY BREAKER TRIP •D-108 BATTERY CHARGER TROUBLE •D-02/D-04 125V DC BUS UNDER/OVER VOLTAGE 	<p>1. Water ingress into the underground cables connecting Diesel Building Bus 1A06 to 1X14 causes a short circuit.</p> <p>2. Stress on bus 1A06 causes the marginal insulator to fail, resulting in a 3 phase bus fault. Consequently the following occur on Unit 1:</p> <ul style="list-style-type: none"> - Safeguards Bus 1A06 locks out (due to bus bar failure/ vaporization) - Safeguards Bus 1B04 loses its supply power - The "B" train of Unit 1 safeguards is lost - Charging pump 1P-2C trips on undervoltage - Breaker 1A52-54 trips on overcurrent. <p>Note: There is no fire.</p>	<p>1. Operators should assess plant conditions and identify a Technical Specification Unit 1 shutdown requirement.</p> <p>2. Operators should be dispatched to the new diesel building to investigate.</p> <p>3. See Mini-scenario #4 for detailed symptoms and response actions.</p>
12-C	0740	Simulator Operating Crew	Lead Simulator Controller	There is no fire. Do not activate the Fire Brigade.	Deliver this message only if the plant operators/personnel are seriously considering activating the plant Fire Brigade.	
13	0755	<ul style="list-style-type: none"> •North Gate Personnel •South Gate Personnel •Personnel outside the plant 	Exercise Controllers	You see and feel heavy winds and rains; you see paper, leaves, branches, etc. flying about.	Between 0755 and 0802, Controllers are to describe heavy winds, rain, flying objects, etc. to anyone who would witness the tornado, for example North Gate and South Gate personnel.	Security may report this to the Central Alarm Station (CAS).

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
14-S	0800	Simulator Operating Crew	Lead Simulator Controller	Unit 1 alarms and indications suggest a loss of all AC power. Unit 2 has tripped; all indications are as expected.	A tornado touches down northwest of the plant in the contractor parking lot. Wind-driven projectiles damage Bus section 5.	See Mini-scenario #5 for information on the tornado and its damage.
15	0755	Simulator Operating Crew	System Control	"Be advised that the National Weather Service reports tornadoes have been sighted in central Manitowoc County."	WE System Control will be portrayed by the Simulator Driver.	
16	0800	Simulator Operating Crew	Lead Simulator Controller	The following annunciators have been received: • G-01 EMERGENCY DIESEL • G-01 EMERGENCY DIESEL TRIP OR LOCKOUT	Diesel generator G-01 starts but does not load due to a field flashing relay/lockout problem.	See Mini-scenario #6 for details on the failure of Diesel generator G-01 to load.
17	0800	Energy Center	Control Cell	All power is lost in the Energy Center.	This message informs Energy Center staff about the loss of power.	
18	0801	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	1. See Mini-scenario #7 for information on the Unit 1 power loss. 2. Diesel generator G-04 starts to supply safeguards power to the Unit 2 "B" train components. The unit can be maintained in a stable, hot shutdown condition on natural circulation.	Per ECA-0.0, operators should trip Unit 1 and shut its Main Steam Isolation valves.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
19	0805	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	At this point, the plant is technically in an ALERT classification per Category 6, "Loss of off-site power and loss of all on-site AC power for less than 15 minutes" or per Category 1 "Primary system leakage greater than 50 gpm".	However, the Control Room priority should be to restore power and thus the classification process may be delayed. On the other hand, plant personnel may not wait for the 15 minutes to declare a SITE EMERGENCY .
20	0815	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	With no power to the TSC and with the Gas Turbine inoperable, the Duty Technical Advisor should request that Control Room Operators locally re-align diesel G501 to provide power to the TSC/OSC. NOTE: Do not let participants relocate to the EOF.	If not started already, Operators should start the Gas Turbine. This effort will take about 15 minutes. However, the component trips one minute after start. See Mini-scenario #3 and Message #8-C.
21-C	0815	DSS/Plant Operations Manager	Lead TSC Controller	Do not relocate the TSC to the EOF. Power can be made available to the TSC per procedures.	Deliver this message to the DSS/Plant Operations Manager or to whoever makes the decision to relocate the TSC to the EOF.	See Mini-scenario #8 for details on the TSC/OSC power situation.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
22	0830	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	The DSS (acting POM) should declare a SITE EMERGENCY (Category 6, "Loss of off-site power and loss of all on-site AC power for greater than 15 minutes").	The Duty Shift Superintendent should: <ul style="list-style-type: none"> • Implement appropriate EPIP Procedures. • Direct that all WE Emergency Response Facilities be activated. • Direct the evacuation of non-essential plant personnel. • Implement personnel assembly/site accountability. • Ensure that WE and off-site notifications are made. • Recommend default Protective Actions to the State of Wisconsin.
23	0830 to 1000	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	Unit 1 reactor vessel water level continues to decrease slowly.	Per procedures, operators should cool down and depressurize the reactor coolant system to conserve water inventory.
24-C	0845	Duty Shift Superintendent	Lead Simulator Controller	Declare a SITE EMERGENCY (Category 6, "Loss of off-site power and loss of all on-site AC power for greater than 15 minutes").	Deliver this message to the Duty Shift Superintendent <u>only</u> if he/she has not declared a SITE EMERGENCY by now OR if emergency classification discussions will not draw to the appropriate conclusion very soon.	See "Actions Expected", Message No. 22.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
25	0915	PBNP ENS Communicator	NRC Region III (via ENS)	"Please inform PBNP Management that an NRC Region III Site Team on its way to your site. Please make appropriate arrangements for our staff. Expected arrival time is 1530."	This message should be delivered by the NRC (simulated by the Control Cell) via the ENS telephone at approximately this time.	PBNP Management and Security staffs should make appropriate arrangements.
26	1010	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	The reactor vessel water level depletion results in core uncover. Consequently thermocouple temperatures increase and clad damage begins. At 1800 °F, hydrogen generation occurs.	
27	1025	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	When thermocouple temperatures exceed 2500 °F, the thermocouples become unreliable. Core damage is underway. Hydrogen concentration exceeds the detector limit of 10%.	
28	1030	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	The Plant Operations Manager should declare a GENERAL EMERGENCY in accordance with Category 3 "Core Fuel Damage".	WE should make default Protective Action Recommendations to the State.
29-C	1045	Plant Operations Manager	Lead TSC Controller	Declare a GENERAL EMERGENCY (Category 3 "Core Fuel Damage").	Deliver this message to the Plant Operations Manager <u>only if</u> he/she has not declared a GENERAL EMERGENCY by now OR if emergency classification discussions will not draw to the appropriate conclusion very soon.	See "Actions Expected", Message No. 28.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
30-C	1108	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	Power is restored. [Note: the component(s) restored will depend upon the efforts of the PBNP Emergency Responders].	IMPORTANT NOTE: If plant responders have not made appropriate efforts to restore power, the Controller acting as the Appleton crew will report that bus section 5 is repaired.
31	1108+	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	When power is restored, electrically operated valves will energize and re-position. As a consequence, a hydrogen detonation event occurs in containment. Containment pressure will peak at about 130 psig.	
32-S	1109	Simulator Operating Crew	Lead Simulator Controller	<p>1. Status light on C01 and indication lights on back of 1-C04 for VNPSE-3245 and -3244 indicate that the valves are open.</p> <p>2. Status lights on C01 and indication lights for IA-3047 and IA-3046 indicates that the purge supply valves are open.</p>	<p>1. Due to the containment overpressurization, the containment purge supply valves (1VNPSE-3245 and -3244) are forced open. See Mini-scenario #9 for information.</p> <p>2. An unmonitored release of radiation is underway as follows: reactor vessel → failed reactor coolant pump seals → containment → containment purge supply valves → inspection port → facade → damaged facade roof → environment. See Mini-scenario #10 for details and a diagram.</p>	<p>1. Operators should start safeguards systems to cool the core and/or lower containment pressure.</p> <p>2. WE should make revised Protective Action Recommendations to the State.</p>
33	1230 to 1245	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>		The wind shifts sufficiently such that WE should make a revised Protective Action Recommendation to the State.

Msg #	Time	Message to:	Message from:	Message	Controller Notes	Actions Expected
34	1315	Exercise Controllers	Lead Simulator Controller	<i>(Message for Controller information only).</i>	<p>1. The release is minimized when containment pressure drops below atmospheric pressure. The release path remains open, however.</p> <p>2. Field readings do not change from what is listed in Section 7 of this Manual.</p>	Although the release is technically terminated at this time, the plant staff may make the conservative decision to consider the release as still in progress until they can definitively close the release path.
35-S	1400	Simulator Operating Crew	Lead Simulator Controller	<p>The following indications have been received:</p> <p>The status light on C01 and indication lights on back of 1-C04 for VNPSE-3244 indicate that the valve is closed.</p>	The release path is isolated and the release is verified terminated when one of the containment purge supply valves closes. See Mini-scenario #9	
36	1500	Emergency Facility Managers	Exercise Controllers	The exercise may be terminated. Notify all participants. Verify that an exercise termination announcement is made over the plant PA system.		<p>At the designated termination time, the Lead Exercise Controller shall:</p> <ul style="list-style-type: none"> •Verify that all on-site and off-site facilities are notified. •Initiate in-facility critiques.

5.2 WE/PBNP Message Forms

Individual Message Forms as a function of time begin on the next page.

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0645

Message No. = 1

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

Attached are the following documents for turnover:

- Unit 1 Shift Turnover Checklist
- Unit 2 Shift Turnover Checklist
- Unit 1 Control Room Shift Log
- Unit 2 Control Room Shift Log
- Safeguards Shift Log

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0645

Message No. = 2-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

See data sheets for initial plant conditions.

- Plant Operations Data
- Radiological Data

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0700

Message No. = 3

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

1. Notify the (actual) Control Room Supervisor of the commencement of the exercise.

2. Make the following PA announcement:

"Attention, attention all personnel. We are now commencing the 1996 Emergency Plan Exercise. All announcements prefaced by 'This is a Drill' are for designated participants only."

Repeat the announcement.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0700

Message No. = 4

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

For Exercise purposes, Auxiliary Operators dispatched from the Control Room Simulator are to report to the Simulator Booth until the OSC is activated.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0705

Message No. = 5

Message For: Simulator Operating Crew

Message From: WE System Control

Message:

"Please be advised that at 0705 we have been notified by the National Weather Service that a severe thunderstorm warning is in effect for Manitowoc, Kewaunee and Door Counties. This condition is expected to be in effect until 0900 hours"

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0710

Message No. = 6-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following annunciators have been received:

- UNIT 1 FIELD FORCING
- UNIT 2 FIELD FORCING

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0720

Message No. = 7-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

1. The following annunciators have been received:
 - 1X-03 HIGH VOLTAGE STATION AUX TRANS LOCKOUT
 - 13.8 KV MAIN OR TIE BREAKER TRIP
 - 345 KV BREAKER TRIP
2. The following Unit 2, Panel C-O2, breaker indicating lights change from RED to GREEN:
 - F52-111
 - F52-BS-1-2
 - H52-05
 - H52-20

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0722

Message No. = 8-C

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following annunciators have been received:

Panel C-02

G-05 GAS TURBINE GENERATOR

Panel C-02R

The "G-05 GT READY TO START" light is extinguished.

*** THIS IS A DRILL ***

*** THI RILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0725

Message No. = 9-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following annunciators have been received:

- UNIT 1 FIELD FORCING
- UNIT 2 FIELD FORCING

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0726

Message No. = 10

Message For: Simulator Operating Crew

Message From: WE System Control

Message:

"Please be advised that we have been notified by WPS' System Control that lightning has struck the Kewaunee Plant capacitor bank. Kewaunee is reducing power to 90% and will investigate. No other damage or effects are reported."

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0740

Message No. = 11-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following annunciators have been received:

- UNIT 1 480V BUS UNDERVOLTAGE
- UNIT 1 4.16 KV BUS UNDERVOLTAGE
- UNIT 1 4.16 KV BUS LOCKOUT
- G-03 EMERGENCY DIESEL
- UNIT 1 NON-SAFEGUARDS MCC SUPPLY BREAKER TRIP
- D-108 BATTERY CHARGER TROUBLE
- D-02/D-04 125V DC BUS UNDER/OVER VOLTAGE

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0740

Message No. = 12-C

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

There is no fire. Do not activate the Fire Brigade.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0755

Message No. = 13

Message For:

- North Gate Personnel
- South Gate Personnel
- Personnel outside the plant

Message From: Exercise Controllers

Message:

You see and feel heavy winds and rains; you see paper, leaves, branches, etc. flying about.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0800

Message No. = 14-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

Unit 1 alarms and indications suggest a loss of all AC power.

Unit 2 has tripped; all indications are as expected.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0755

Message No. = 15

Message For: Simulator Operating Crew

Message From: System Control

Message:

"Be advised that the National Weather Service reports tornadoes have been sighted in central Manitowoc County."

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0800

Message No. = 16

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following annunciators have been received:

- G-01 EMERGENCY DIESEL
- G-01 EMERGENCY DIESEL TRIP OR LOCKOUT

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0800

Message No. = 17

Message For: Energy Center

Message From: Control Cell

Message:

All power is lost in the Energy Center

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0815

Message No. = 21-C

Message For: DSS/Plant Operations Manager

Message From: Lead TSC Controller

Message:

Do not relocate the TSC to the EOF. Power can be made available to the TSC per procedures.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0845

Message No. = 24-C

Message For: Duty Shift Superintendent

Message From: Lead Simulator Controller

Message:

Declare a SITE EMERGENCY (Category 6, "Loss of off-site power and loss of all on-site AC power for greater than 15 minutes").

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 0915

Message No. = 25

Message For: PBNP ENS Communicator

Message From: NRC Region III (via ENS)

Message:

"Please inform PBNP Management that an NRC Region III Site Team on its way to your site. Please make appropriate arrangements for our staff. Expected arrival time is 1530."

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 1045

Message No. = 29-C

Message For: Plant Operations Manager

Message From: Lead TSC Controller

Message:

Declare a GENERAL EMERGENCY (Category 3 "Core Fuel Damage").

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT

1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 1109

Message No. = 32-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

1. Status light on C01 and indication lights on back of 1-C04 for VNPSE-3245 and -3244 indicate that the valves are open.
2. Status lights on C01 and indication lights for IA-3047 and IA-3046 indicates that the purge supply valves are open.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 1400

Message No. = 35-S

Message For: Simulator Operating Crew

Message From: Lead Simulator Controller

Message:

The following indications have been received:

The status light on C01 and indication lights on back of 1-C04 for VNPSE-3244 indicate that the valve is closed.

*** THIS IS A DRILL ***

*** THIS IS A DRILL ***

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE - MESSAGE FORM

Time = 1500

Message No. = 36

Message For: Emergency Facility Managers

Message From: Exercise Controllers

Message:

The exercise may be terminated. Notify all participants. Verify that an exercise termination announcement is made over the plant PA system.

*** THIS IS A DRILL ***

6.0 PLANT DATA

The contents of this section are as follows:

- 6.1 Exercise Plant Data
- 6.2 Simulator Instructions

Section 6.1 tabulates Exercise plant data as a function of time. These data are provided in case the Simulator fails during the Exercise. If the simulator should fail during the Exercise, contingency actions will be as follows:

- ♦ The Simulator is programmed to take backup "snapshots" of plant status every five minutes. Consequently, the Simulator Drivers will reset the Simulator to the last snapshot and recommence the Exercise from that point. This effort may be transparent to all non-Control Room participants.
- ♦ Plant data (Section 6.1) and Simulator messages (Section 5) will be provided to the Control Room. Simulator messages are noted with a number followed by the letter "S" (e.g., 2S). Plant data will be provided to the TSC and EOF.

Section 6.2 outlines the Simulator instructions needed to drive this Exercise.

6.1 Exercise Plant Data

6.2 Simulator Instructions

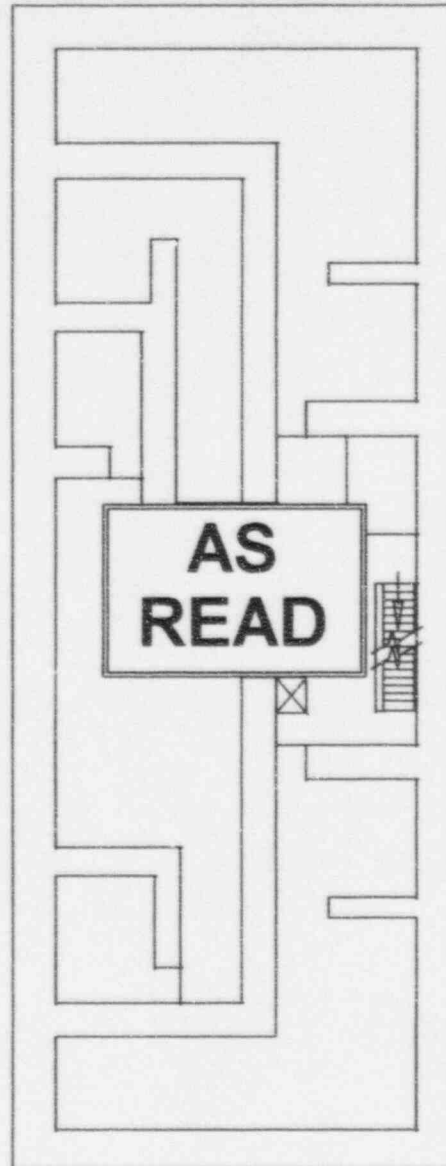
7.0 RADIOLOGICAL DATA

The contents of this section are as follows:

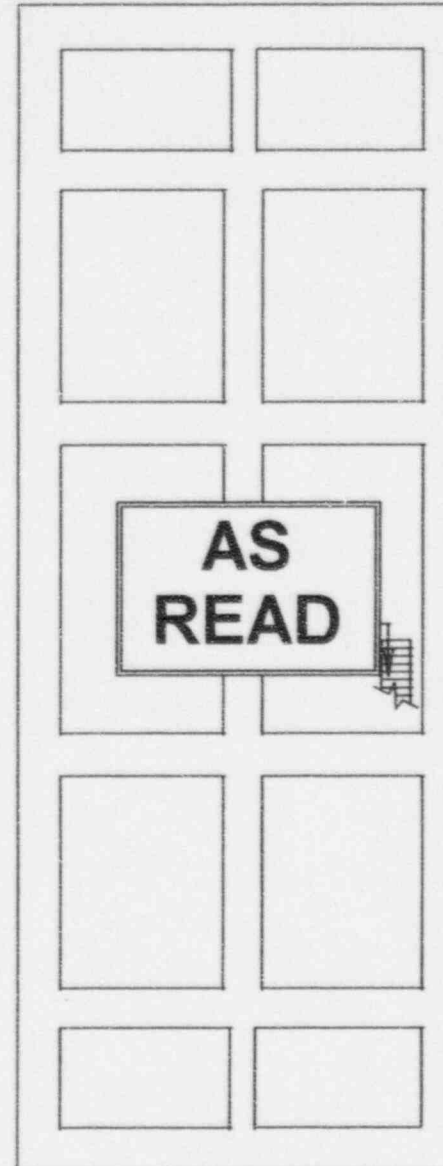
- 7.1 In-Plant Radiological Data
- 7.2 Chemistry/Effluent Sample Data
- 7.3 Meteorology
- 7.4 Site Radiological Data
- 7.5 Plume Maps/Field Team Data
- 7.6 Dose Projection Data

7.1 In-Plant Radiological Data

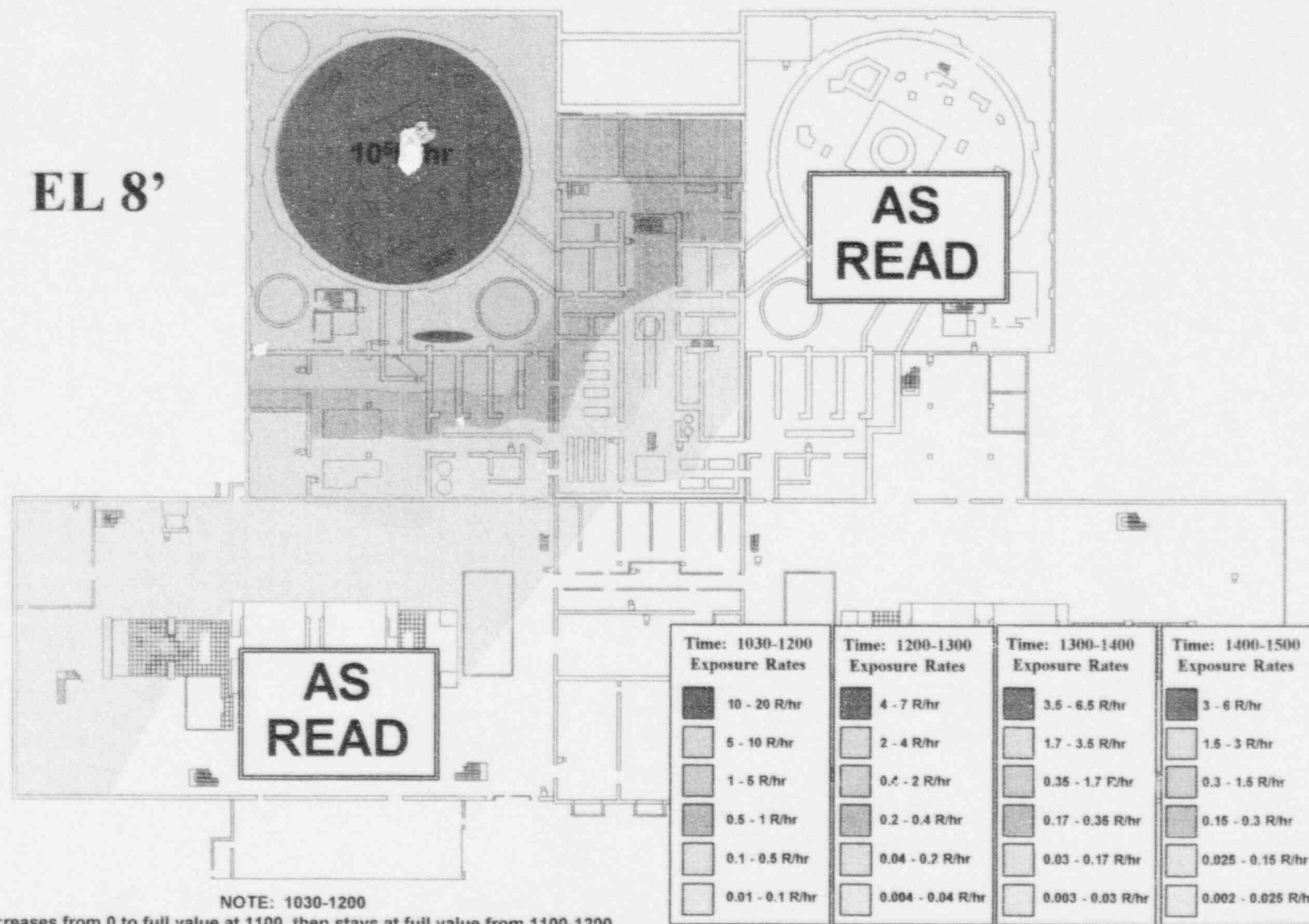
El. -5'-3"



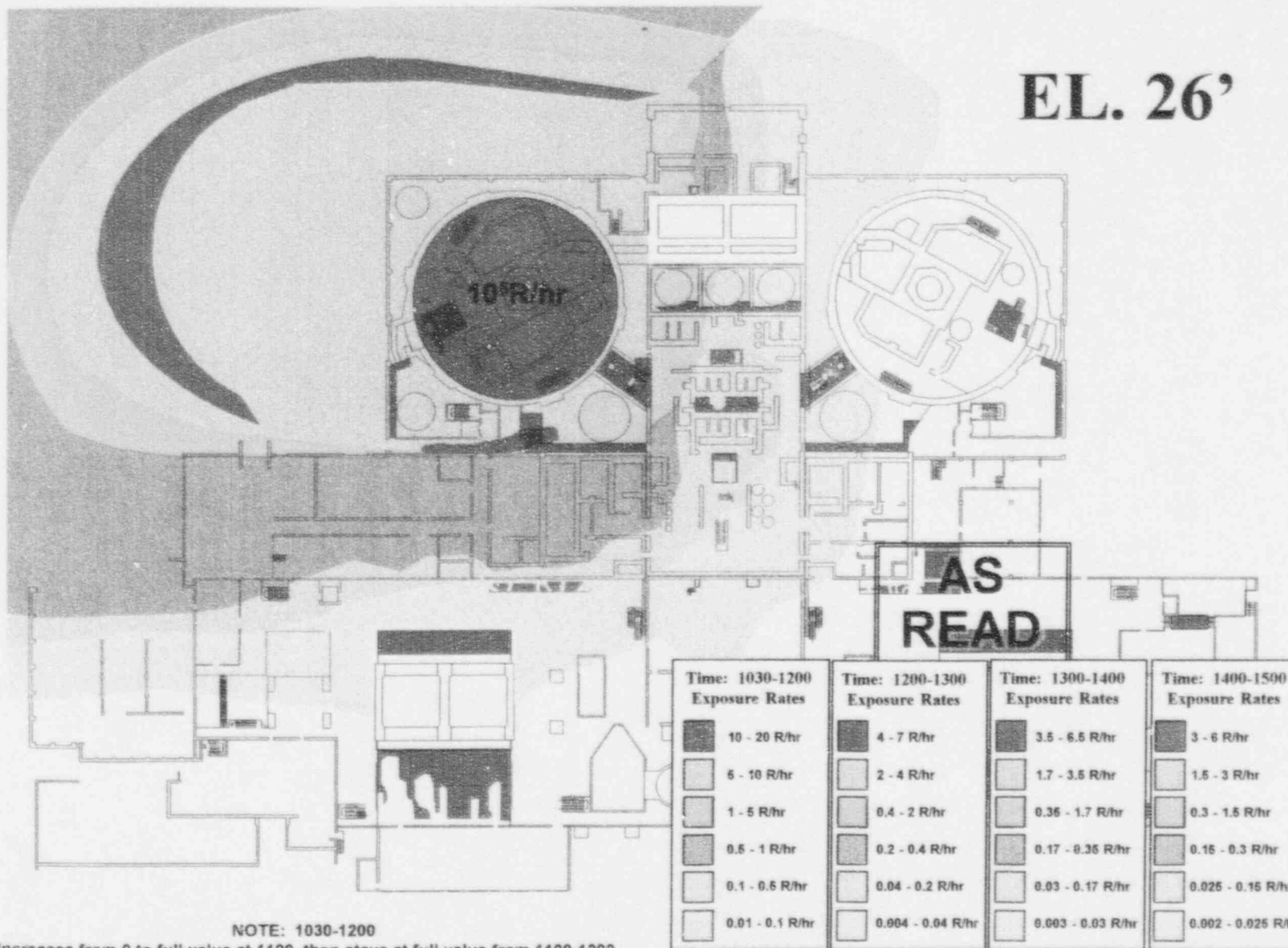
El. -19'-3"



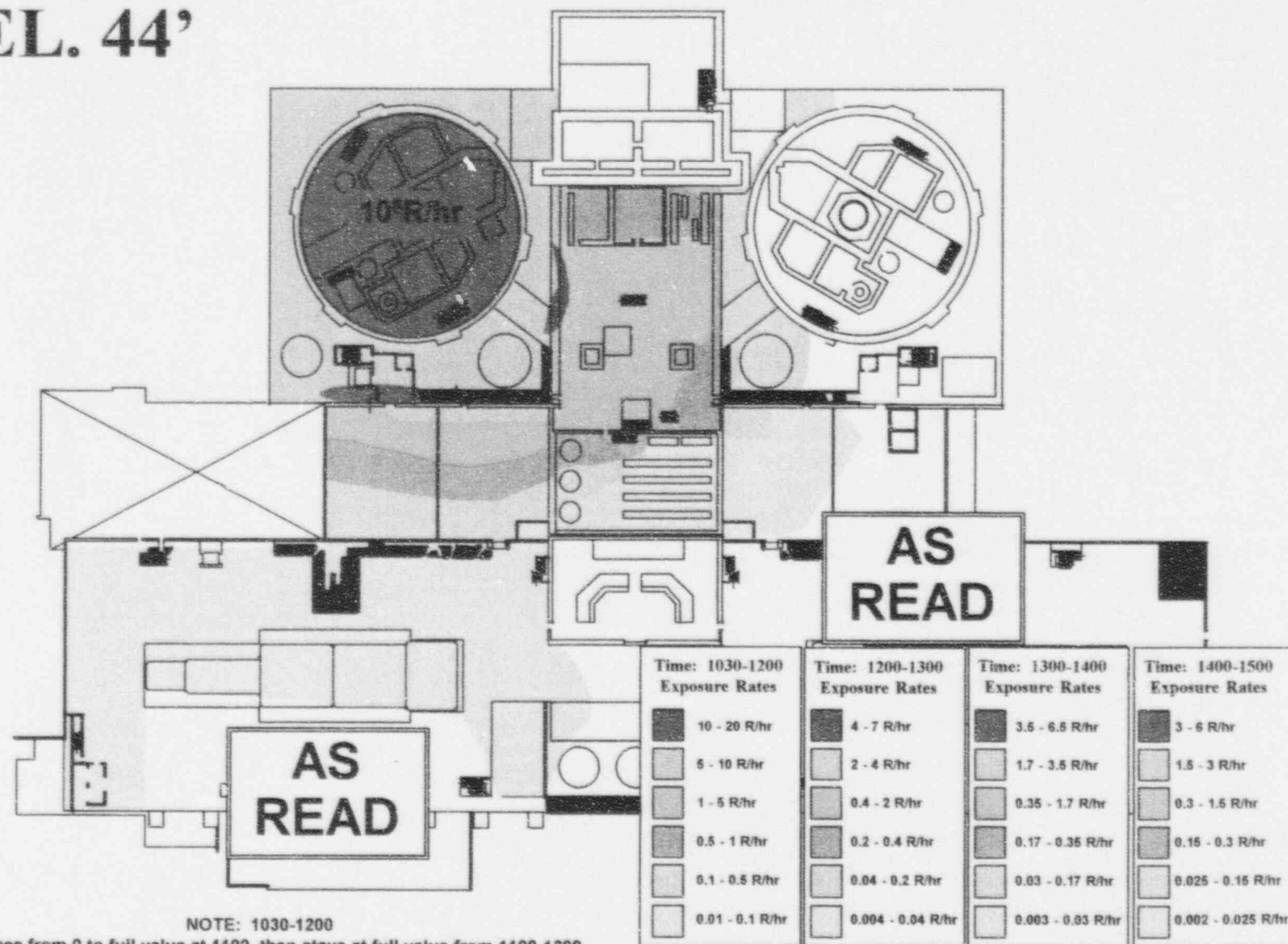
EL 8'



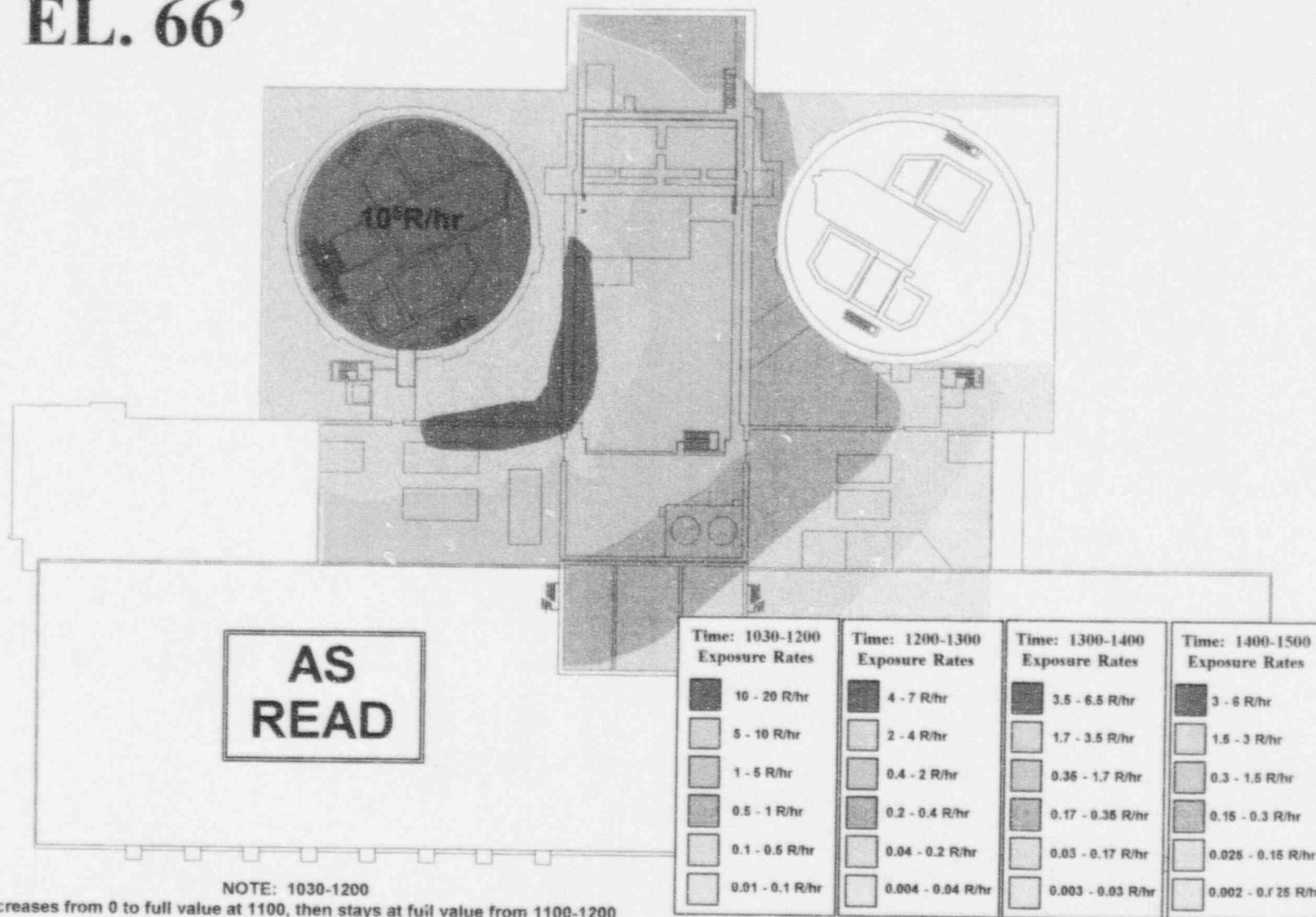
EL. 26'



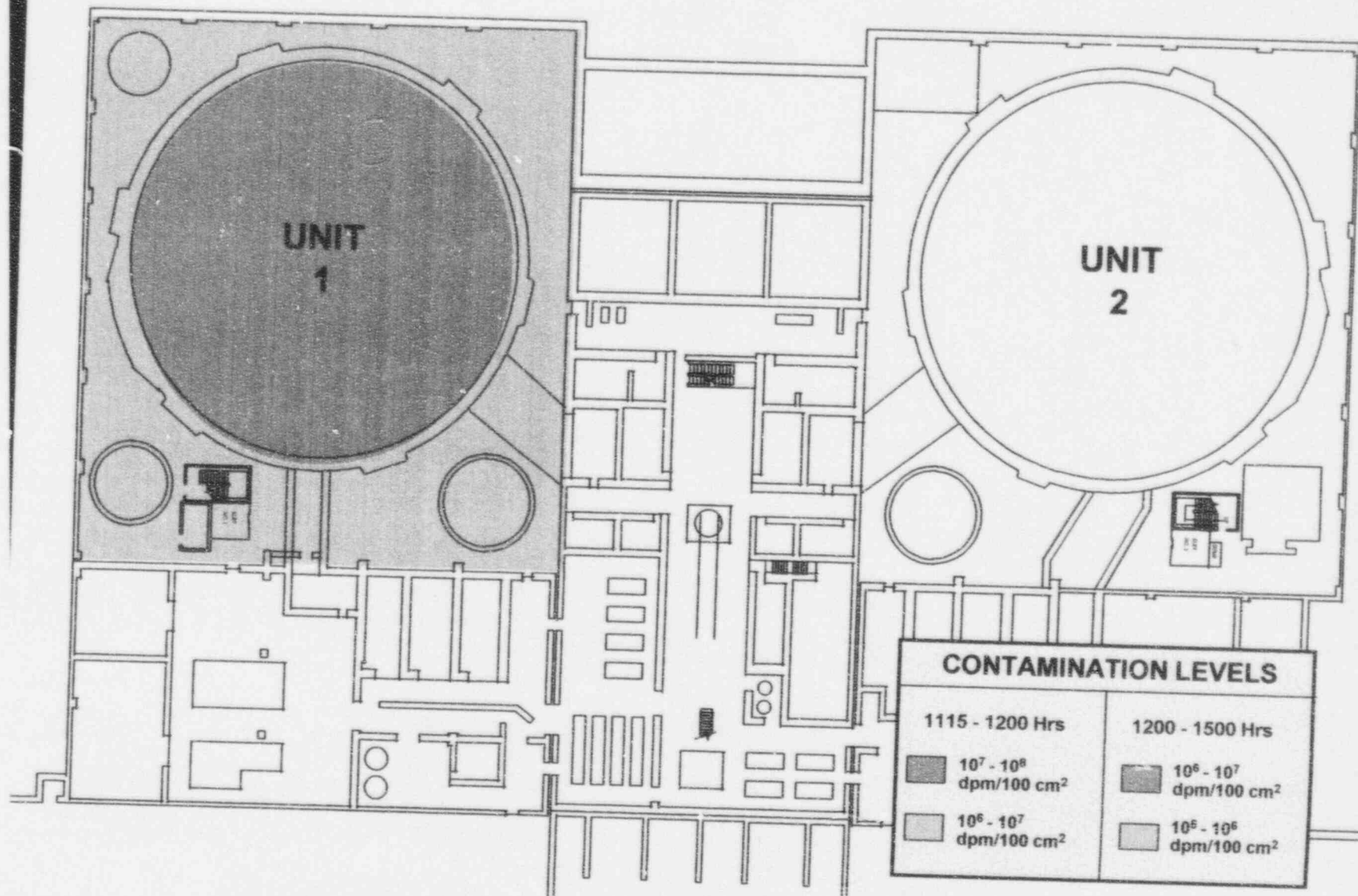
EL. 44'



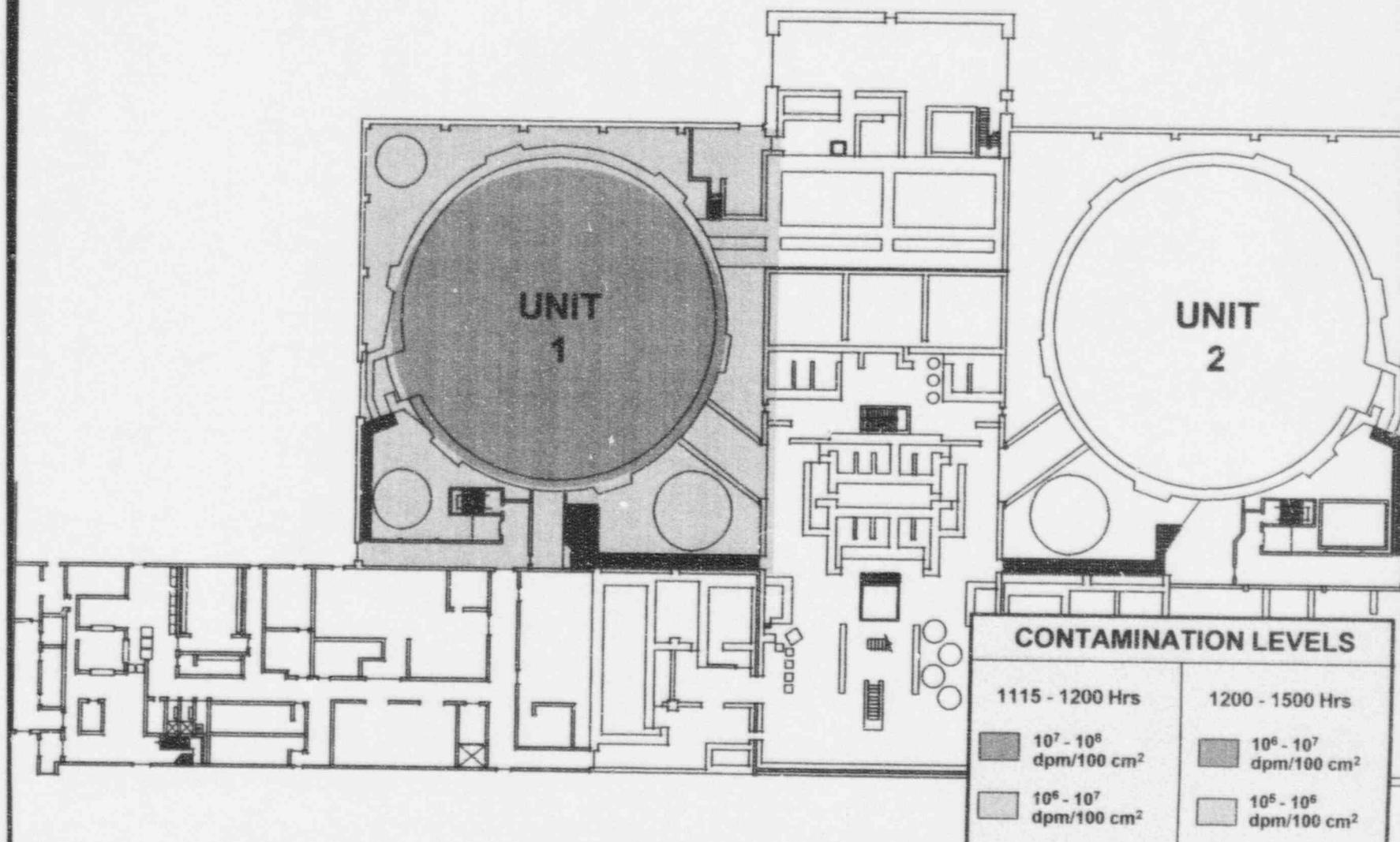
EL. 66'



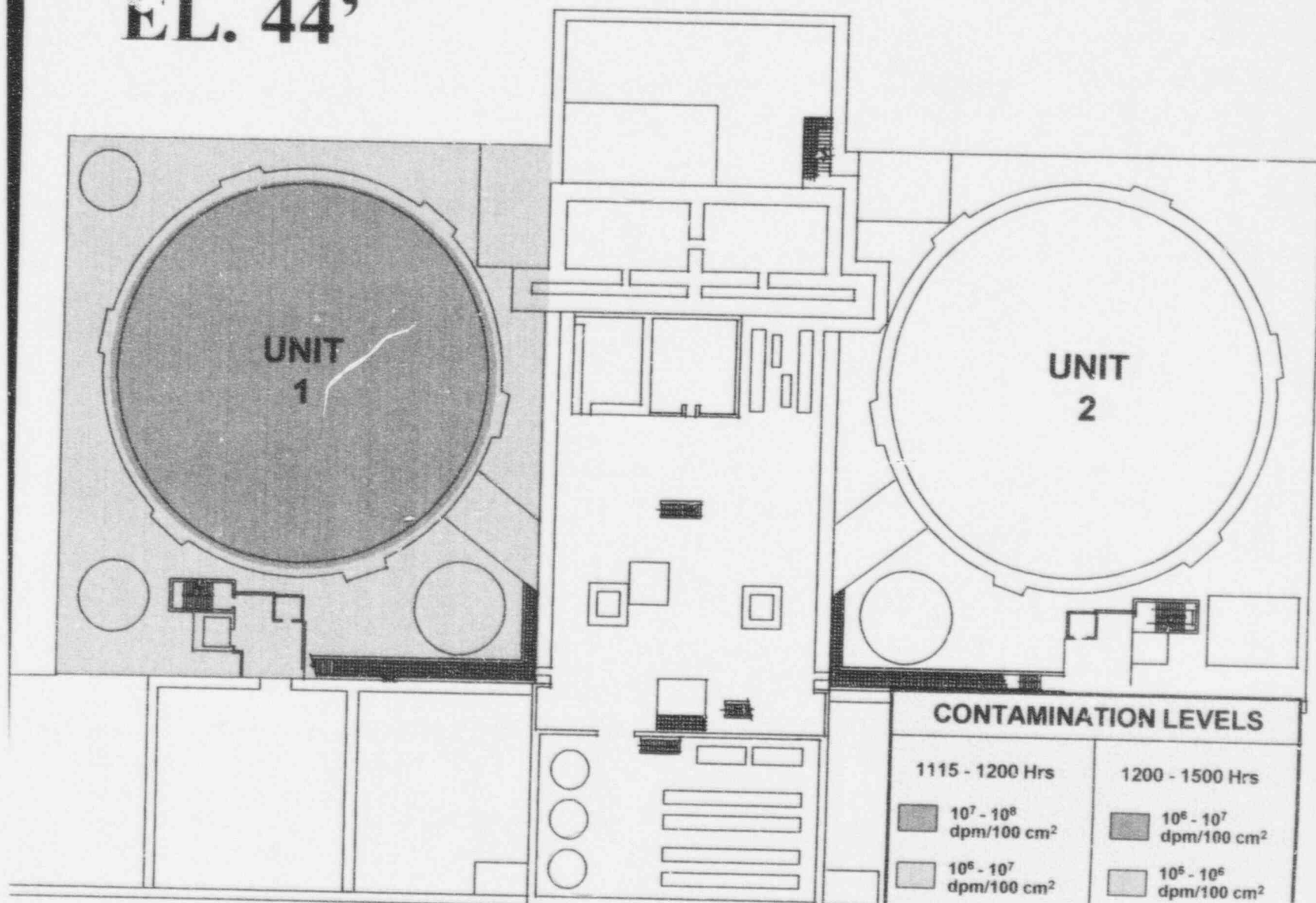
EL. 8'



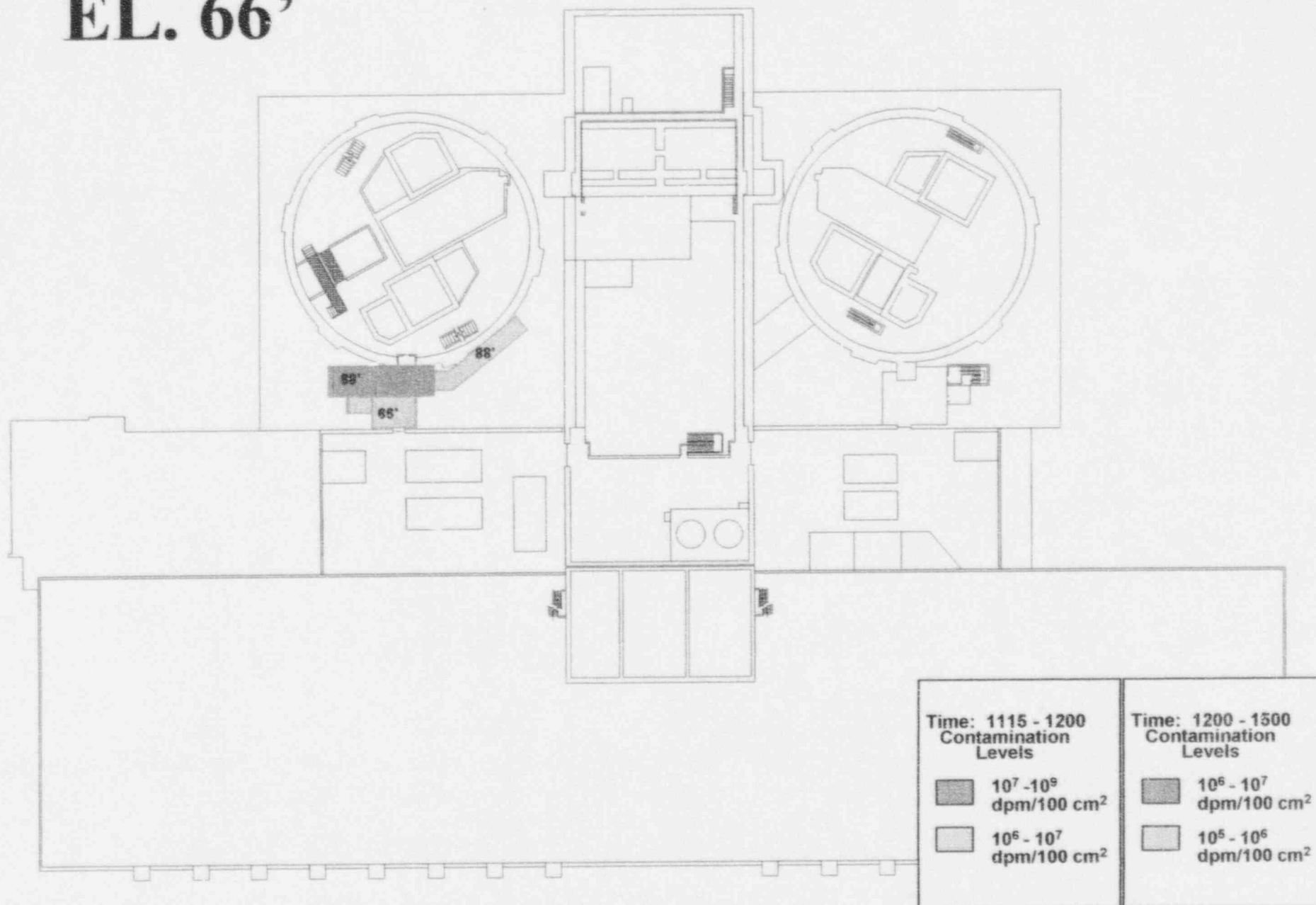
EL. 26'



EL. 44'



EL. 66'



7.2 Chemistry/Effluent Sample Data

Table 1A lists the results of a reactor coolant liquid activity sample for Day 1. Note that the analysis process takes about two hours.

Table 1B lists the results of a reactor coolant liquid activity sample for Day 2.

Table 2 outlines the results of a containment air sample.

Table 3 outlines the results of a facade air sample after the plume has been released to the environment.

CHEMISTRY DATA FOR E-PLAN EXERCISE : AUGUST 1996

TABLE 1A DAY 1 (AFTER 1000)

Liquid Coolant Activity (Iodines, Noble gas, Particulate)

isotope	concentration ($\mu\text{Ci/cc}$)	isotope	concentration ($\mu\text{Ci/cc}$)
I - 131	3.00E - 01	Cs - 134	2.00E - 02
I - 132	1.00E + 00	Cs - 137	4.00E - 02
I - 133	8.00E - 01	Ba - 140	3.00E - 03
I - 134	3.00E + 00	La - 140	1.00E - 04
I - 135	1.50E + 00	Ba - 142	2.00E - 03
		La - 141	7.00E - 04
F-18	8.00E + 00	La - 142	6.00E - 03
Na - 24	1.00E - 03		
Co - 57	2.00E - 03		
Co - 58	2.00E + 00		
Co - 60	1.00E - 01		
Rb - 88	5.00E - 01		
Rb - 89	3.00E - 01	Ar - 41	4.00E + 00
Nb - 95	2.00E - 04	Kr - 85m	4.00E - 02
Zr - 95	2.00E - 03	Kr - 87	3.00E - 01
Nb - 97	6.00E - 03	Kr - 88	1.00E + 00
Zr - 97	4.00E - 03	Xe - 131m	5.00E - 04
Mo - 99	7.00E - 03	Xe - 133	3.00E - 01
Tc - 99m	6.00E - 03	Xe - 135	3.00E + 00
Te - 132	1.00E - 02	Xe - 135m	2.00E - 01
		Xe - 138	2.00E + 00
30min $\beta\gamma$	30.5		

TABLE 1B DAY 2

Liquid Coolant Activity (Iodines, Noble gas, Particulate)

isotope	concentration ($\mu\text{Ci/cc}$)	isotope	concentration ($\mu\text{Ci/cc}$)
I - 131	2.50E - 03	Cs - 134	6.00E - 03
I - 132	4.50E - 03	Cs - 137	4.00E - 03
I - 133	2.00E - 02	Ba - 140	1.00E - 03
I - 134	2.00E - 03	La - 140	4.00E - 04
I - 135	2.00E - 02	Ba - 142	2.00E - 05
F-18	2.00E - 01	La - 141	7.00E - 05
Na - 24	1.00E - 04	La - 142	2.00E - 04
Co - 57	2.00E - 04		
Co - 58	2.00E - 02		
Co - 60	1.00E - 02		
Rb - 88	5.00E - 04	Ar - 41	3.00E - 02
Rb - 89	3.00E - 04	Kr - 85m	4.00E - 03
Nb - 95	3.00E - 05	Kr - 87	3.00E - 02
Zr - 95	2.00E - 04	Kr - 88	8.00E - 03
Nb - 97	5.00E - 03	Xe - 131m	2.50E - 04
Zr - 97	3.00E - 04	Xe - 133	4.00E - 02
Mo - 99	4.00E - 03	Xe - 135	8.00E - 03
Tc - 99m	3.00E - 03	Xe - 135m	2.00E - 05
Te - 132	9.00E - 03	Xe - 138	2.00E - 05
30min $\beta\gamma$	2.5		

CONTAINMENT ATMOSPHERE (1010 - 1100)

TABLE 2

HYDROGEN, RADIO-IODINES, NOBLE GAS

ISOTOPES	($\mu\text{Ci/cc}$)	($\mu\text{Ci/cc}$)	($\mu\text{Ci/cc}$)	($\mu\text{Ci/cc}$)	($\mu\text{Ci/cc}$)	($\mu\text{Ci/cc}$)
	1000 - 1010	1011 - 1020	1021 - 1030	1031 - 1040	1041 - 1050	1051 - 1100
I - 131	2.00E - 03	4.00E - 03	2.00E - 02	3.00E - 02	8.00E - 02	9.00E - 02
I - 132	4.00E - 03	8.00E - 03	3.00E - 02	4.00E - 02	9.00E - 02	9.50E - 02
I - 133	8.00E - 03	1.50E - 02	5.00E - 02	6.00E - 02	7.00E - 02	8.00E - 02
I - 134	4.00E - 03	8.00E - 03	2.50E - 02	5.00E - 02	6.00E - 02	7.50E - 02
I - 135	3.00E - 02	6.00E - 02	7.00E - 02	8.00E - 02	9.00E - 02	9.50E - 02
Ar - 41	4.00E - 04	8.00E - 04	2.00E - 03	3.00E - 03	6.00E - 03	3.00E - 02
Kr - 85m	4.00E - 05	8.00E - 05	4.00E - 04	5.00E - 04	1.00E - 03	3.00E - 03
Kr - 87	3.00E - 04	6.00E - 04	1.00E - 03	2.00E - 03	6.00E - 03	1.00E - 02
Kr - 88	8.00E - 05	3.00E - 04	9.00E - 04	2.00E - 03	6.50E - 03	2.00E - 02
Xe - 131m	2.50E - 06	5.00E - 06	5.00E - 05	7.00E - 05	8.00E - 05	8.50E - 05
Xe - 133	4.00E - 04	8.00E - 04	5.00E - 03	8.00E - 03	8.50E - 03	9.00E - 03
Xe - 135	8.00E - 05	3.00E - 04	3.00E - 03	6.00E - 03	2.00E - 02	2.50E - 02
Xe - 135m	1.00E - 06	3.00E - 06	4.50E - 05	1.00E - 04	3.00E - 03	6.00E - 03
Xe - 138	1.00E - 06	6.00E - 06	5.00E - 05	1.00E - 04	7.00E - 04	4.00E - 03
	%	%	%	%	%	%
Hydrogen	2.0	3.0	5.0	7.0	9.5	13.4
Oxygen	20.0	20.0	20.0	19.5	19.5	19.6
Nitrogen	78.0	77.0	75.0	73.5	71.0	67.0

FACADE AIR SAMPLE RESULTS (AFTER 1110) : PRIOR TO 1110 ALL < MDA

TABLE 3 (Noble gas, particulate, iodine)

ISOTOPE	($\mu\text{Ci/cc}$)		($\mu\text{Ci/cc}$)
Radio - iodines		particulate	
I - 131	8.00E - 03	Co - 58	3.00E - 04
I - 132	8.50E - 03	Rb - 88	1.00E - 03
I - 133	7.00E - 03	Nb - 95	3.00E - 05
I - 134	7.00E - 03	Zr - 95	2.00E - 05
I - 135	9.00E - 03	Nb - 97	1.00E - 05
Noble gases		Zr - 97	2.00E - 05
Ar - 41	5.00E - 03	Cs - 134	8.00E - 04
Kr - 85	7.00E - 04	Cs - 137	9.00E - 04
Kr - 85m	3.00E - 03		
Kr - 87	4.00E - 03		
Kr - 88	5.00E - 03		
Xe - 131m	1.00E - 05		
Xe - 133	9.50E - 04		
Xe - 135	4.00E - 03		
Xe 135m	5.00E - 04		
Xe - 138	5.00E - 04		

7.3 Meteorology

The next two pages list Exercise Day 1 meteorological data as PBNP participants would access it. This information will be input to the Simulator data bank and thus will be available on the Plant Process Computer (PPC). This information is then transmitted to the State and Counties via status updates.

Exercise Day 2 (Accident Days 2 and 4) meteorological data will be the actual as-read data for the day, and should be accessed by normal means.

1996 EVALUATED EXERCISE METEOROLOGICAL DATA

DAY I

<u>TIME</u>	<u>WIND SPEED *</u>	<u>WIND DIRECTION *</u>	<u>STABILITY CLASS</u>	<u>EVENT</u>	<u>C/L</u>
0700	10-15 mph	Southwest (220°)	B	Initial condition	(C)
0710	20-30 mph (35 mph gusts)	Southwest (215°)	↓	Thunder Storm	(C)
0720	10-15 mph	Southwest (210°)		Heavy Rain	(B)
0730	8-10 mph	South (183°)		Light Rain	A
0740	4-8 mph	South (179°)		Light Rain	A
0745	2-4 mph (calm)	Variable (170-200°)	F	Calm	A
0800	10-50 mph (increasing)	Variable (150-300°)	A	Tornado in vicinity	(C)
0801	50-80 mph	Variable (160-350°)	A	Tornado hits	(C)
0815	10-20 mph	South-southwest (195°)	A	Heavy Rain	(B)
0830	6-8 mph	South (190°)	B	Rain	A
0845	6-8 mph	South (190°)	B	Rain	A
0900	6-8 mph	South (189°)	B	Rain	A
0915	6-8 mph	South (188°)	↓	Rain	A
0930	6-8 mph	South (185°)		Sprinkles	A
0945	6-8 mph	South (180°)		↓	A
1000	6-8 mph	South (181°)			A
1015	6-8 mph	South (185°)			A
1030	6-8 mph	South (180°)			A
1045	6-8 mph	South (179°)			A
1100	8-10 mph	South (178°)			A
1115	5-12 mph	South (175°)		↓	A
1130	6-11 mph	Southsoutheast (167°)			R
1145	9-10 mph	Southsoutheast (165°)			R
1200	7-8 mph	Southsoutheast (159°)			R
1215	5-7 mph	Southsoutheast (155°)	↓	↓	R
1230	6-9 mph	Southsoutheast (150°)			R
1245	5-7 mph	Southeast (135°)	B		Q
1300	8-10 mph	Southeast (133°)	B	Partly Cloudy	Q
1315	7-9 mph	Southeast (130°)	B	Partly Cloudy	Q
1330	5-7 mph	Southeast (125°)	B	Partly Cloudy	Q

* Some deviation in these ranges

DAY 1 (continued)

<u>TIME</u>	<u>WIND SPEED *</u>	<u>WIND DIRECTION *</u>	<u>STABILITY CLASS</u>	<u>EVENT</u>	<u>C/L</u>
1345	5-7 mph	Eastsoutheast (120°)	B	Partly Cloudy	P
1400	5-7 mph	Eastsoutheast (110°)	B	Scattered showers	P
to				predicted for early	
2100	6-10	Switching to South	C	evening tonight	
to					
2400					

* Some deviation in these ranges

DAY 2

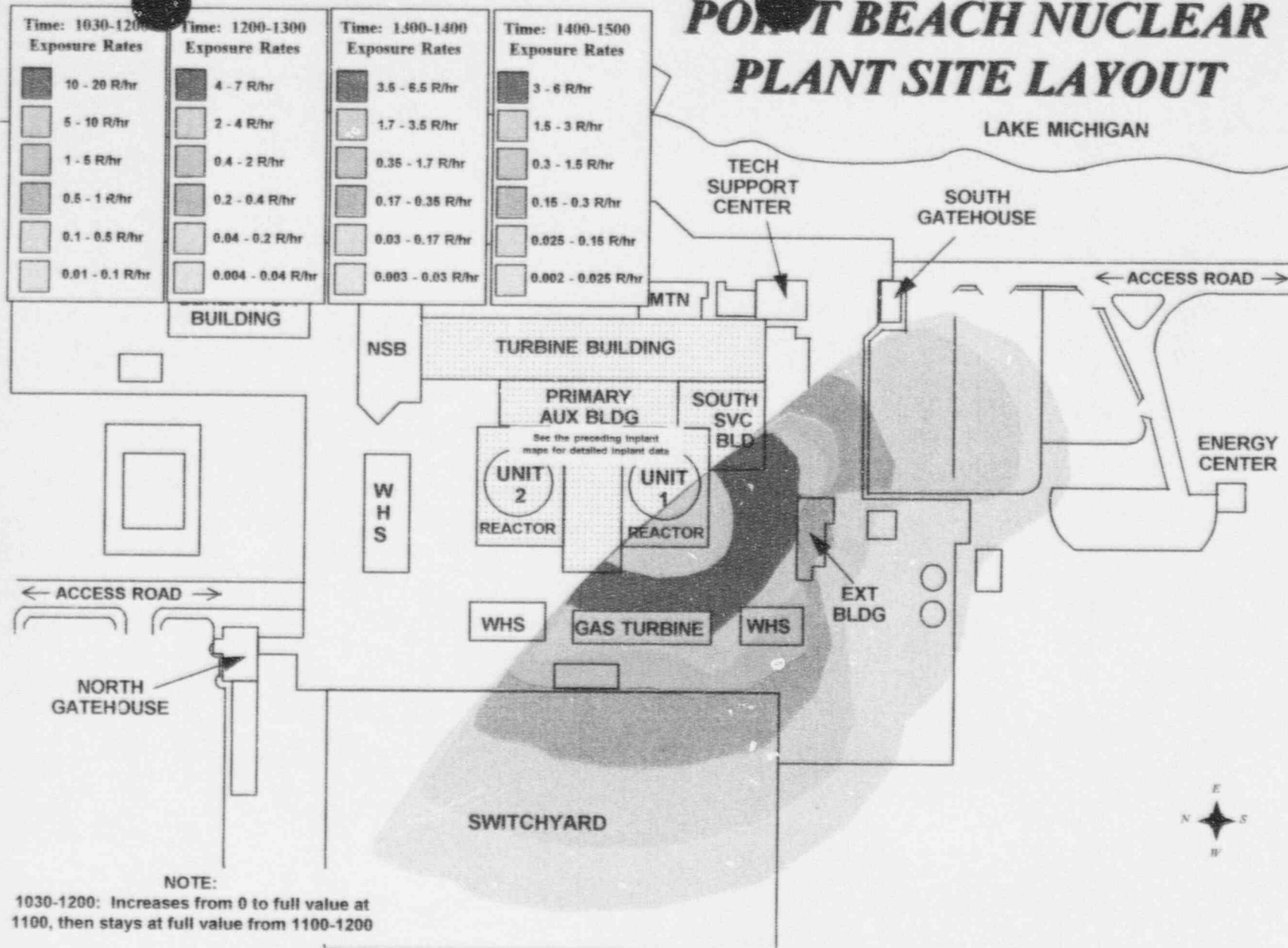
<u>TIME</u>	<u>WIND SPEED</u>	<u>WIND DIRECTION</u>	<u>STABILITY CLASS</u>	<u>EVENT</u>
0800		As observed locally		
to				
1000				

DAY 4

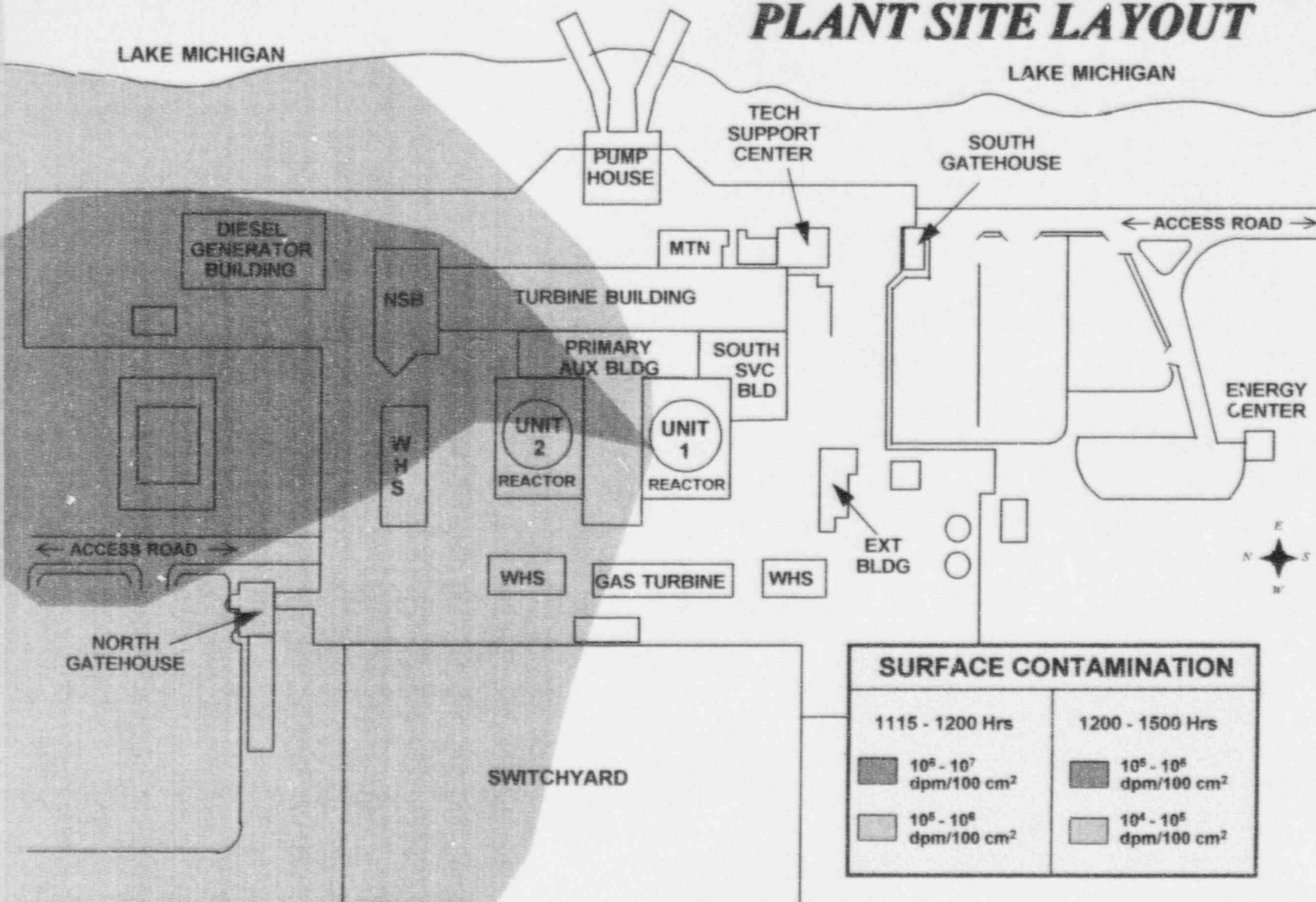
<u>TIME</u>	<u>WIND SPEED</u>	<u>WIND DIRECTION</u>	<u>STABILITY CLASS</u>	<u>EVENT</u>
1000		As observed locally		
to				
1300				

7.4 Site Radiological Data

POINT BEACH NUCLEAR PLANT SITE LAYOUT



POINT BEACH NUCLEAR PLANT SITE LAYOUT



SURFACE CONTAMINATION

1115 - 1200 Hrs

$10^5 - 10^7$
dpm/100 cm²

$10^5 - 10^6$
dpm/100 cm²

1200 - 1500 Hrs

$10^5 - 10^6$
dpm/100 cm²


$10^4 - 10^5$
dpm/100 cm²


HIGHWAY 42

Note:
See 10 mile deposition
maps for contamination
levels at 1- 10 miles from
the site.


CONTAMINATION LEVELS


1115 - 1200 Hrs

 $10^6 - 10^7$
dpm/100 cm²

 $10^5 - 10^6$
dpm/100 cm²

1200 - 1500 Hrs

 $10^5 - 10^6$
dpm/100 cm²

 $10^4 - 10^5$
dpm/100 cm²

FROM
TWO
RIVERS

GATE

TAPAWINGO ROAD

LAKESHORE ROAD

PLANT ACCESS ROAD

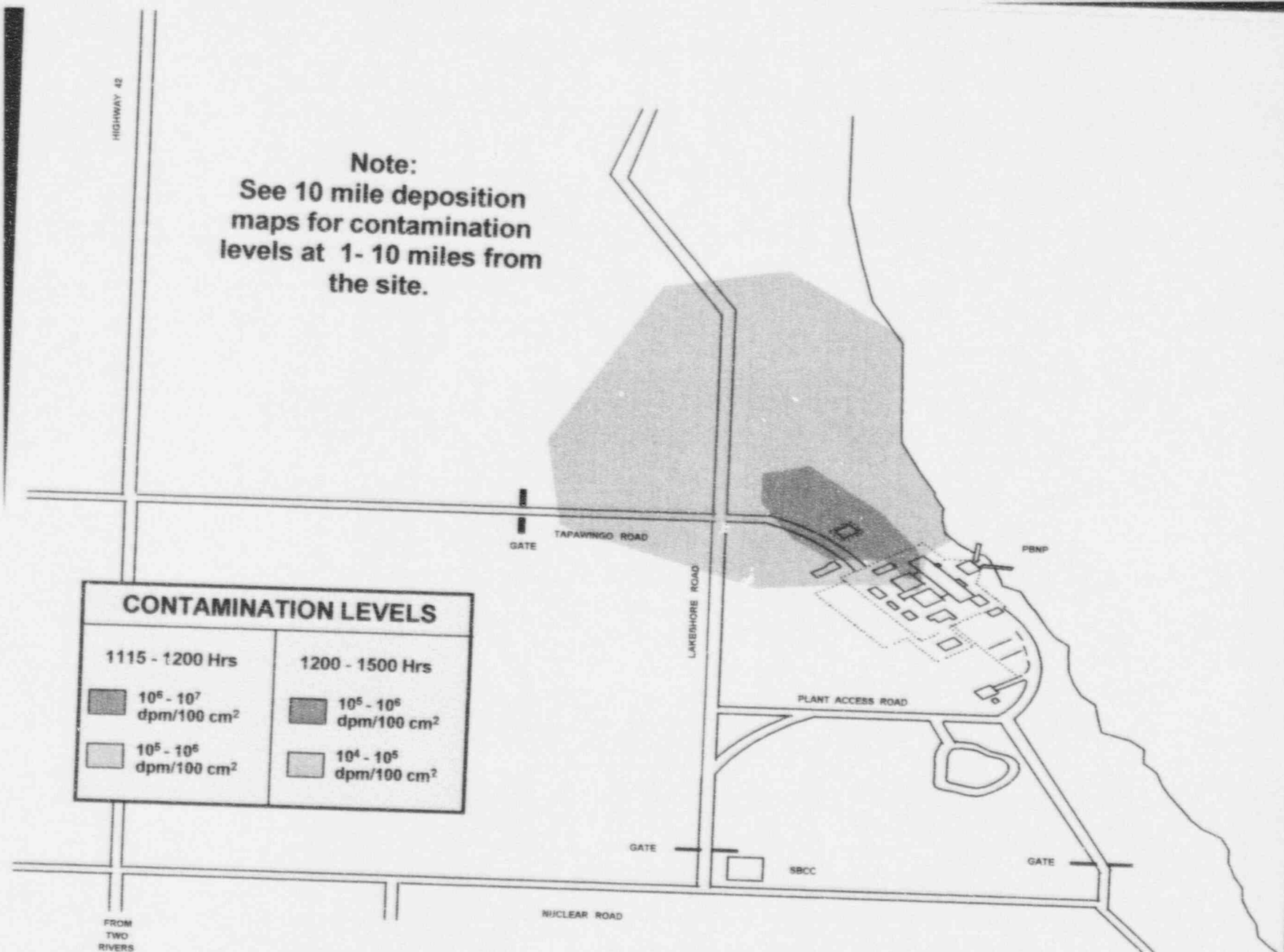
PBNP

GATE

SBCC

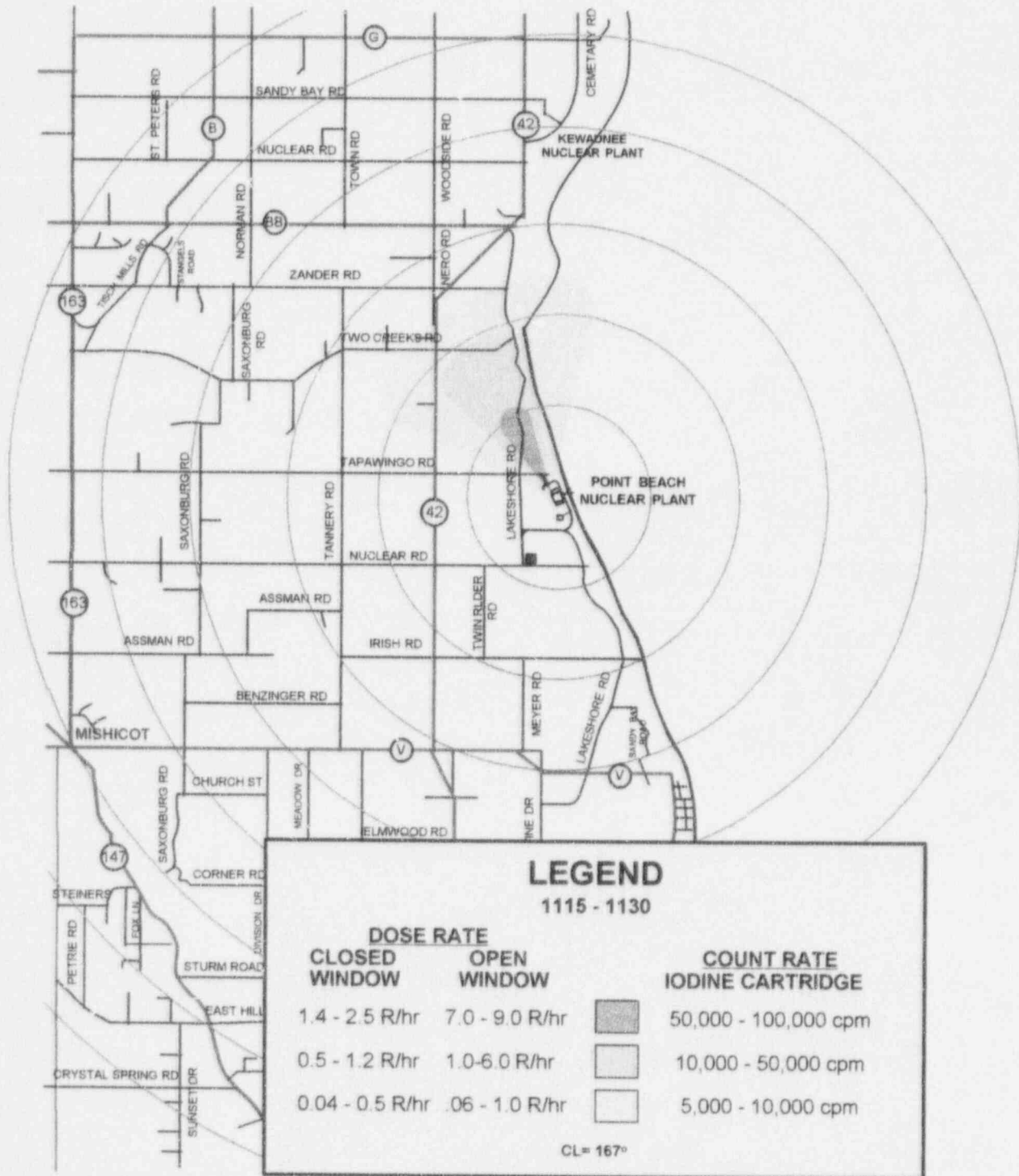
GATE

NUCLEAR ROAD

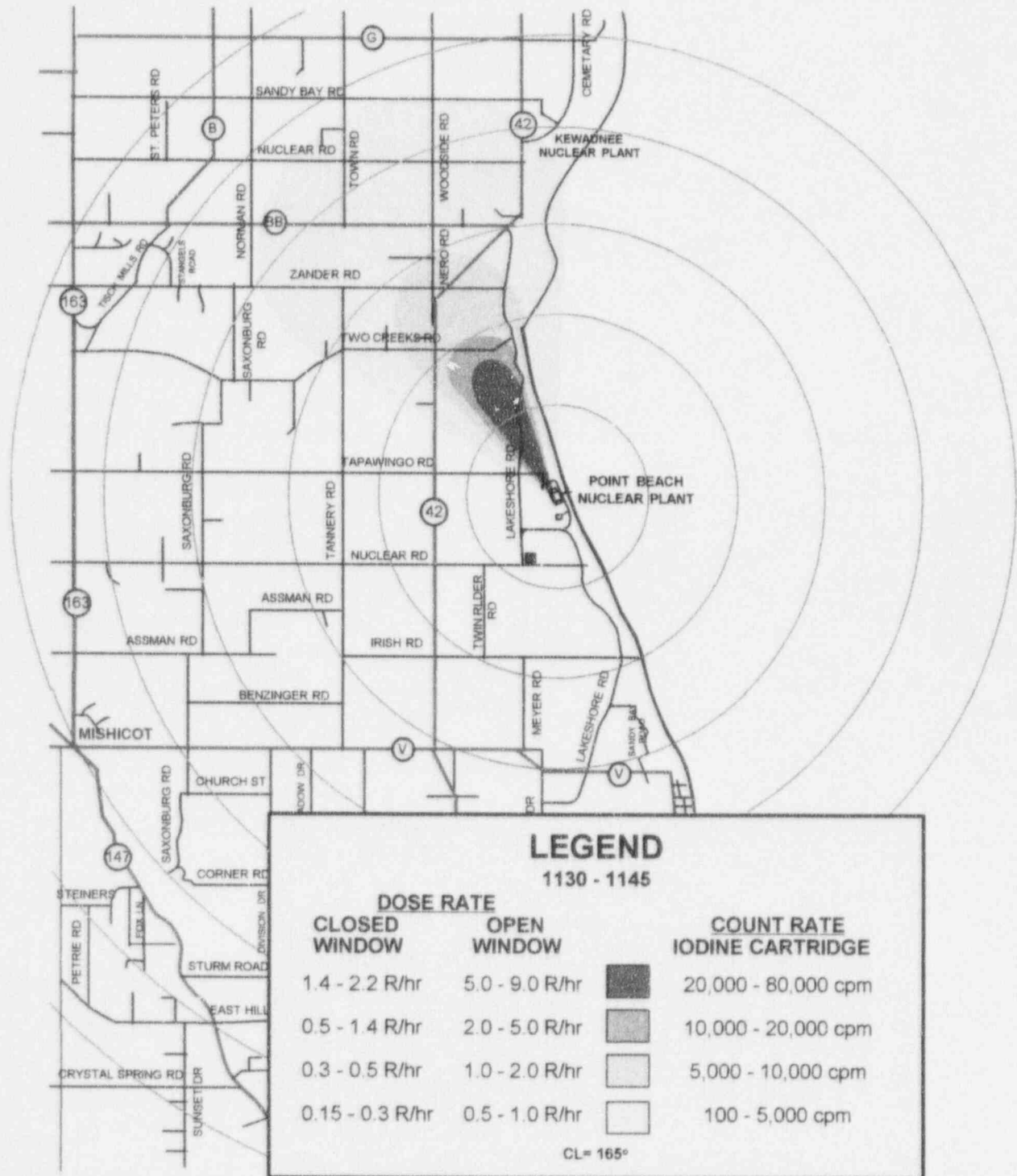


7.5 Plume Maps/Field Team Data

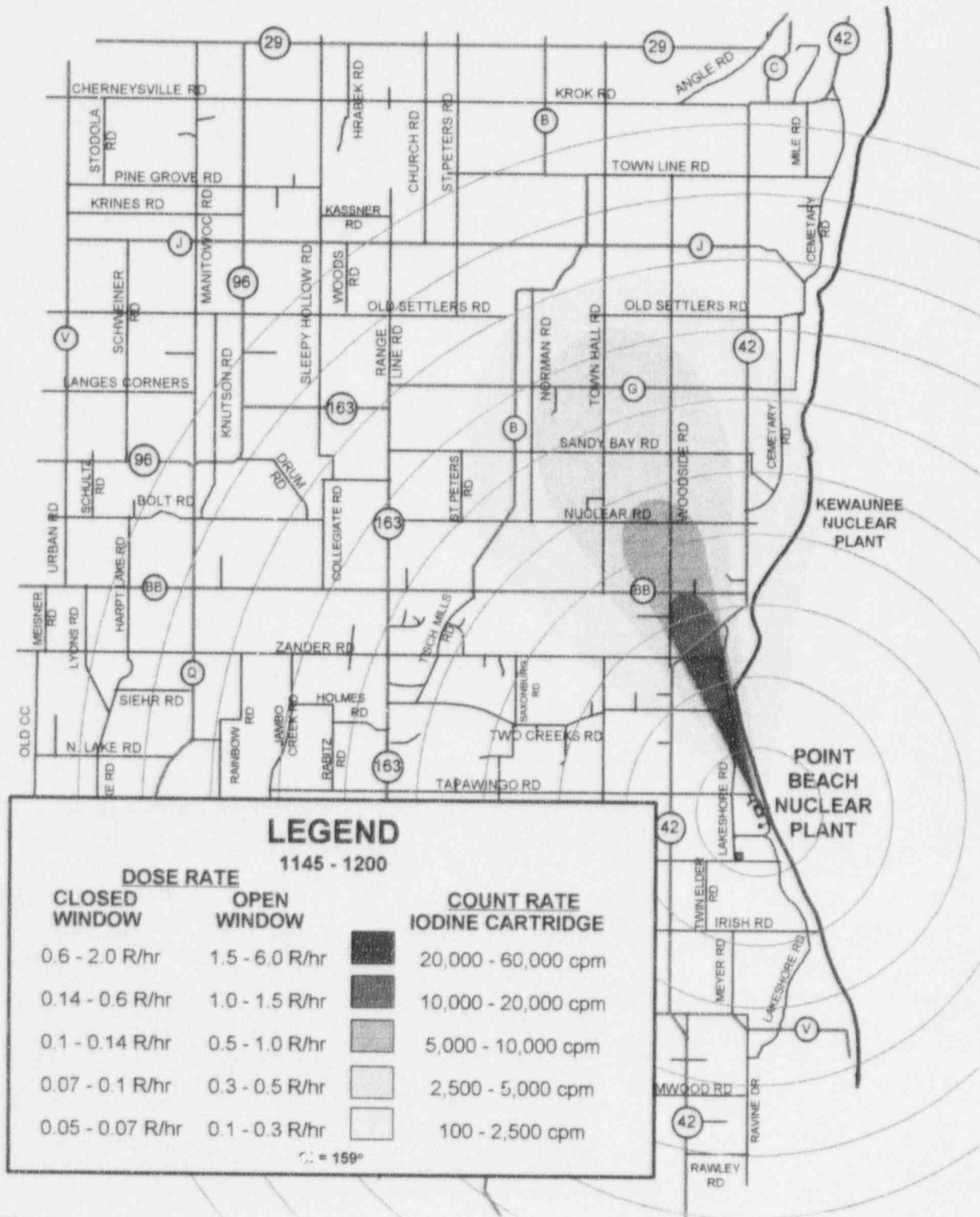
PLUME #1



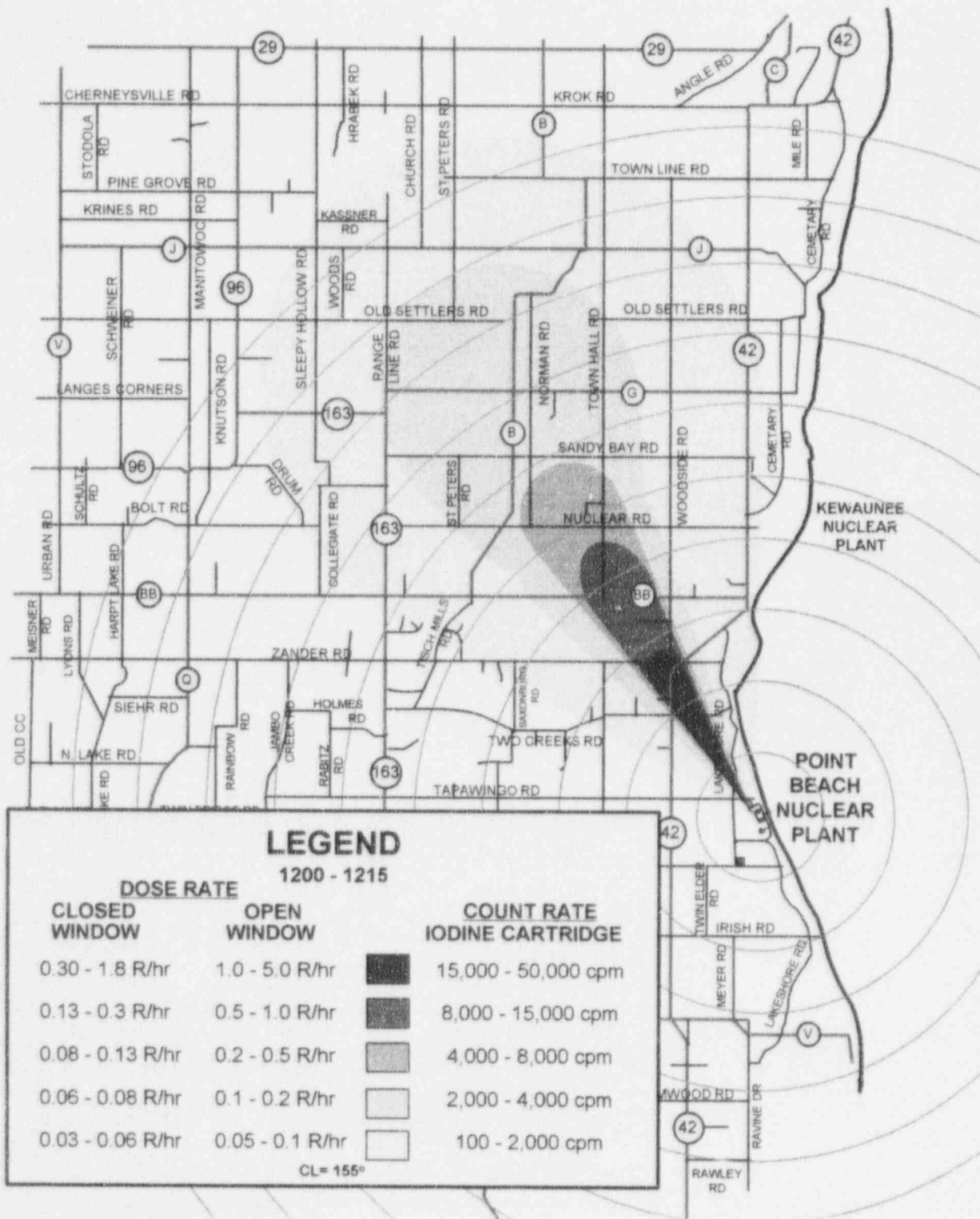
PLUME #2



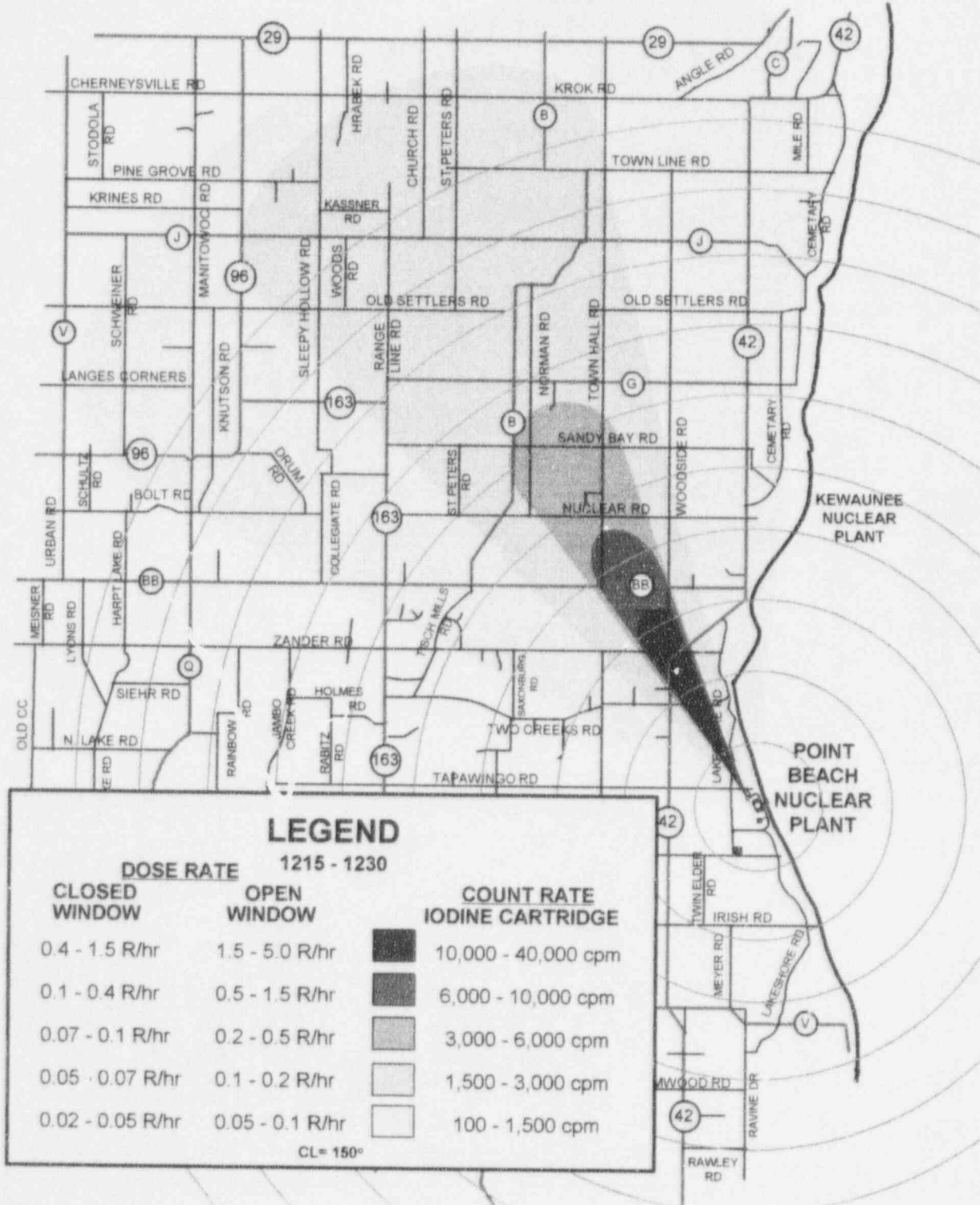
PLUME #3



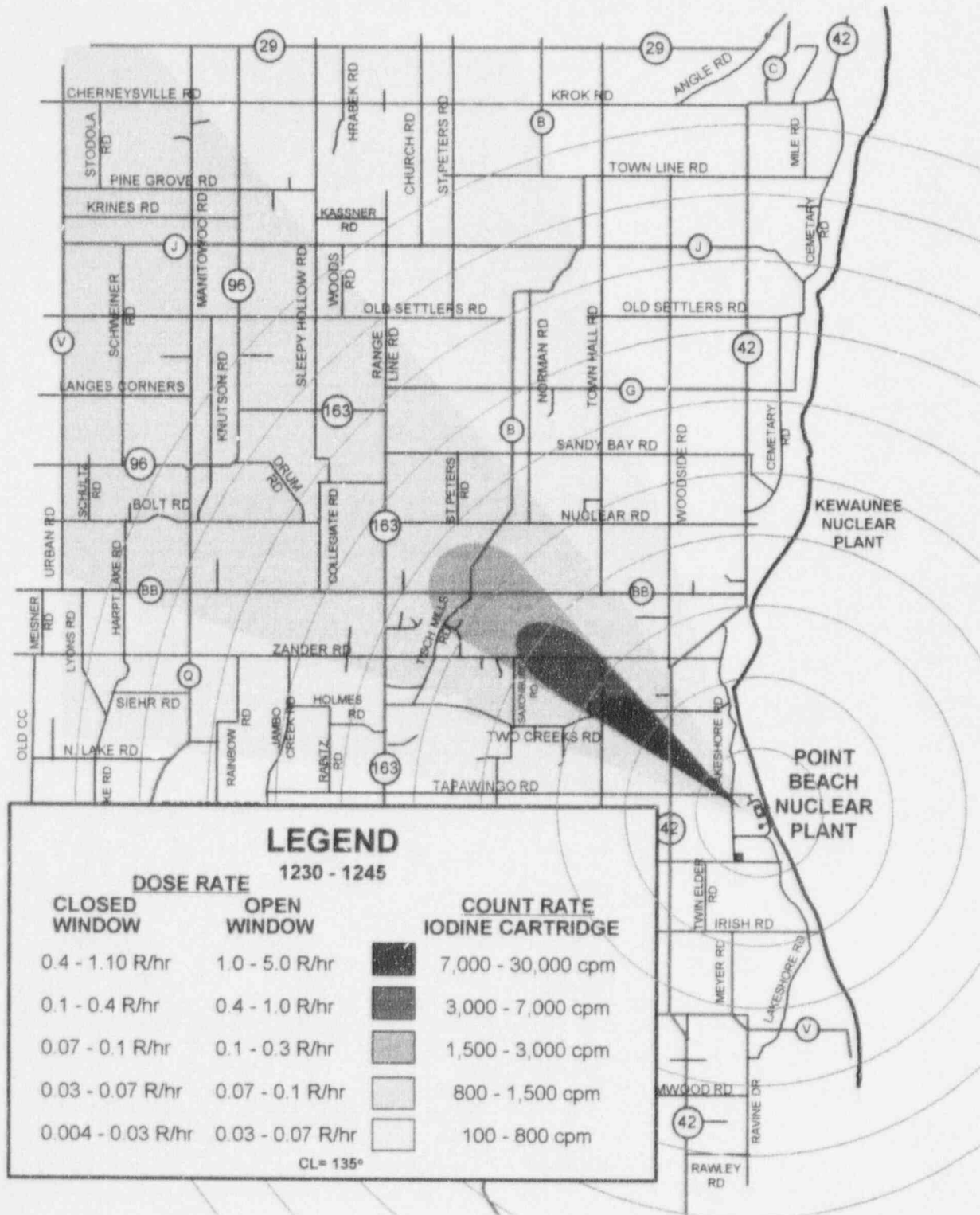
PLUME #4



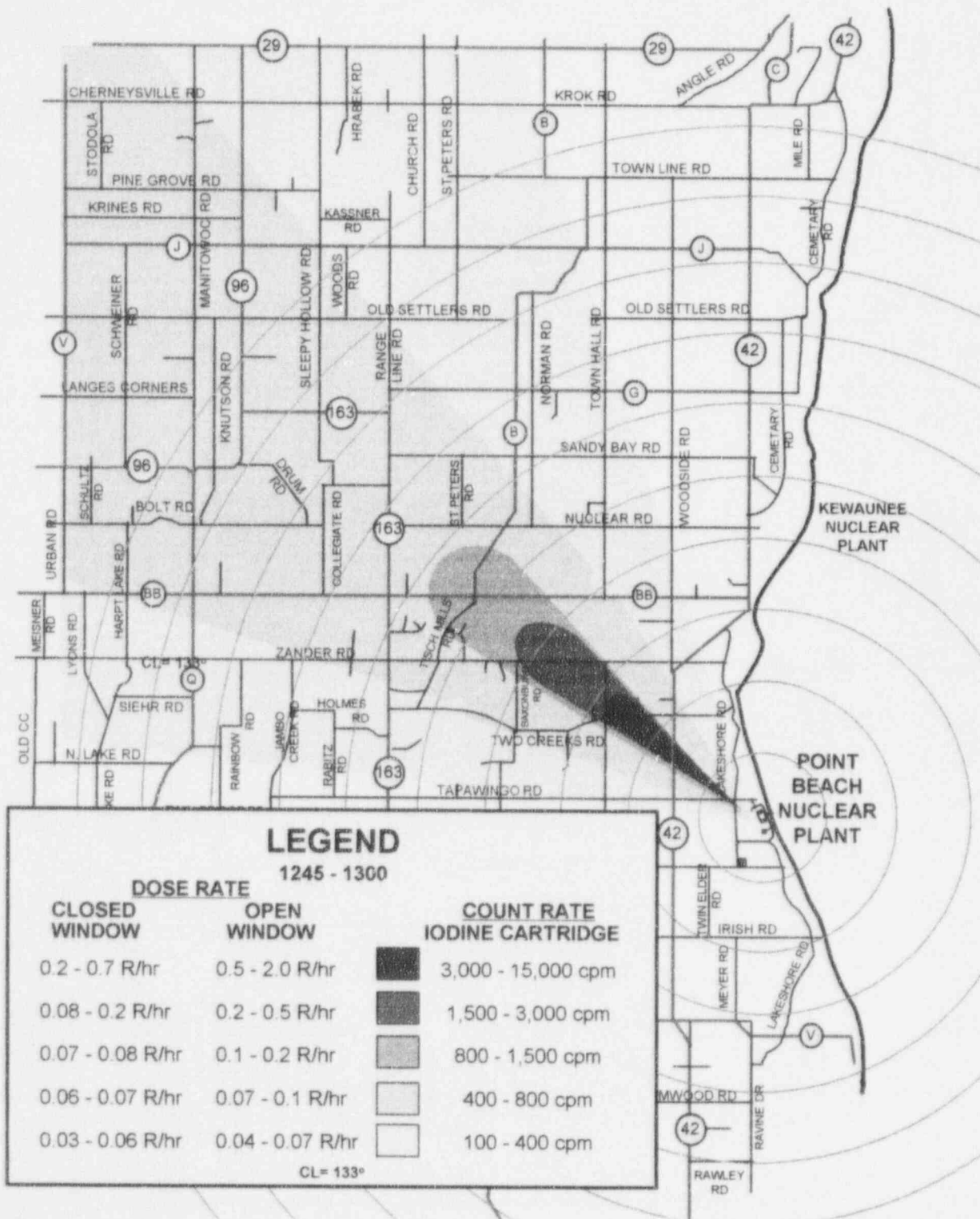
PLUME #5



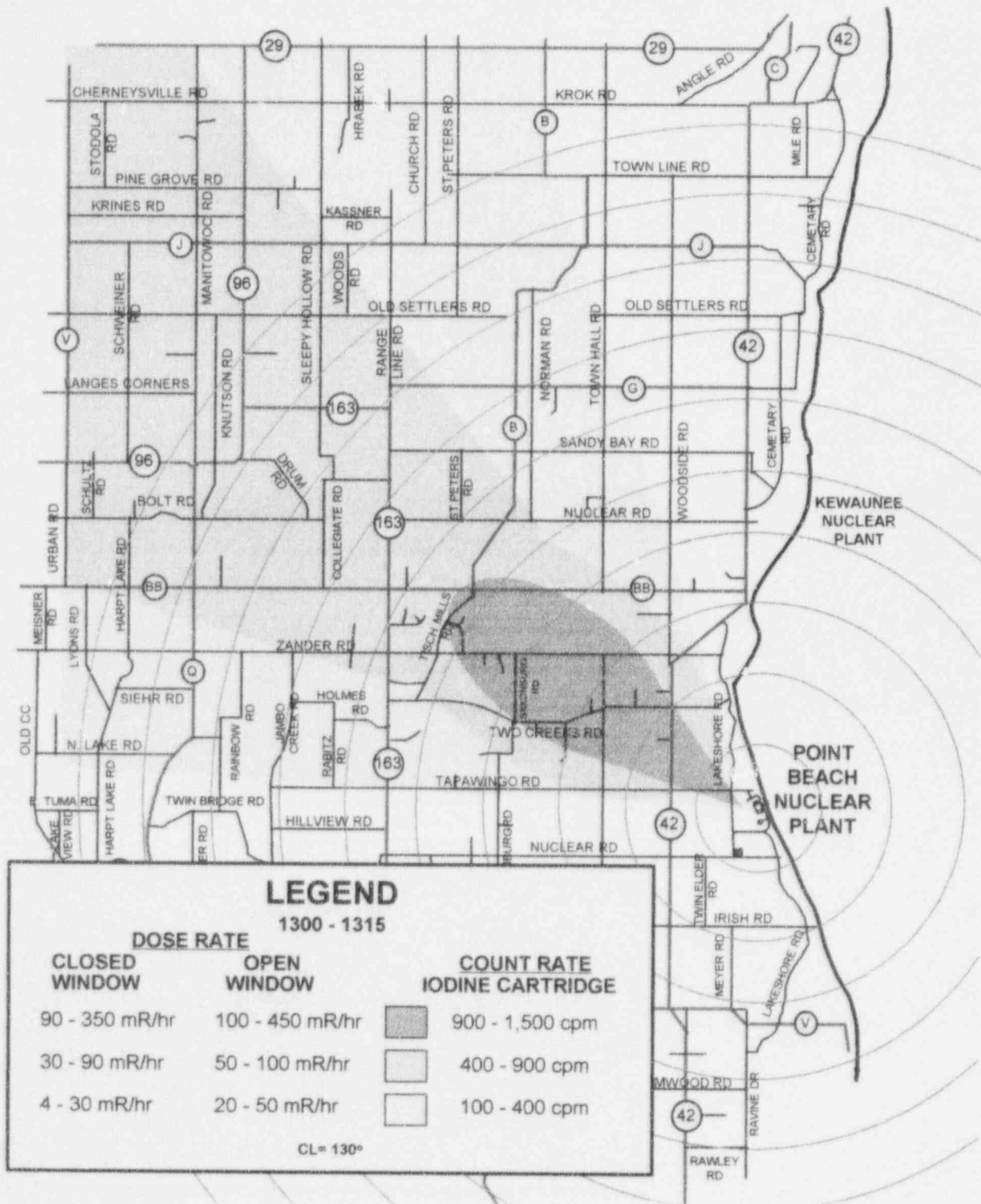
PLUME #6



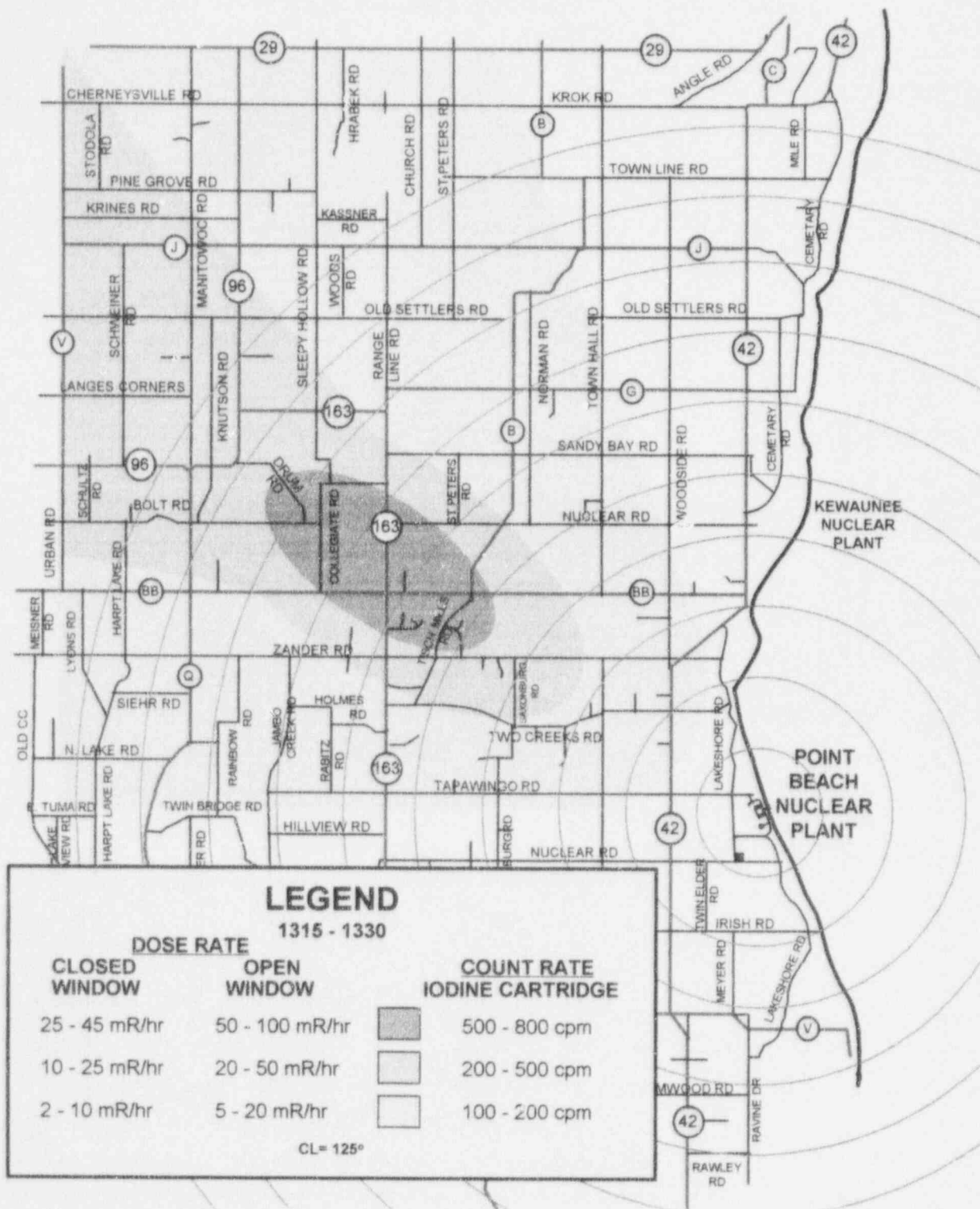
PLUME #7



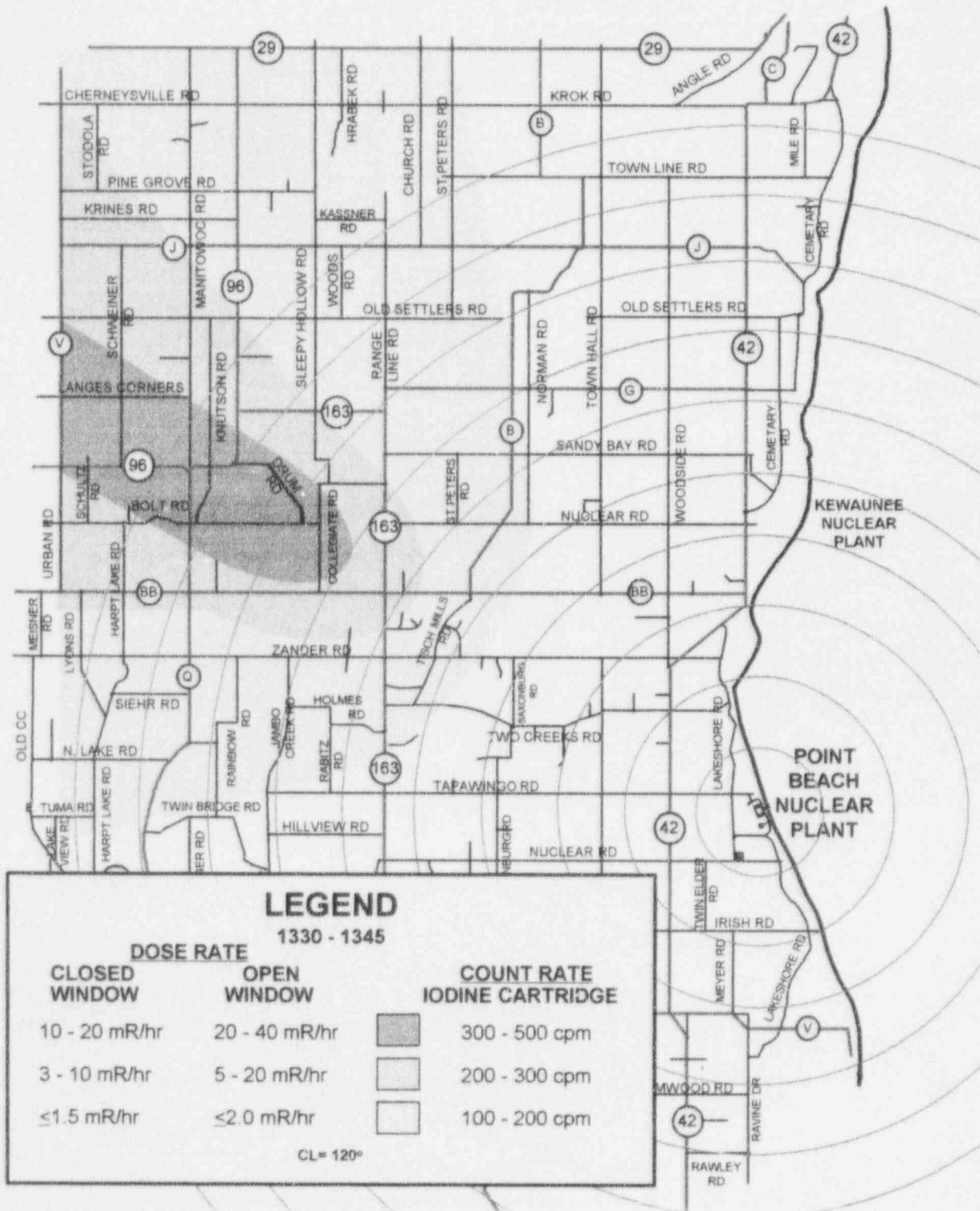
PLUME #8



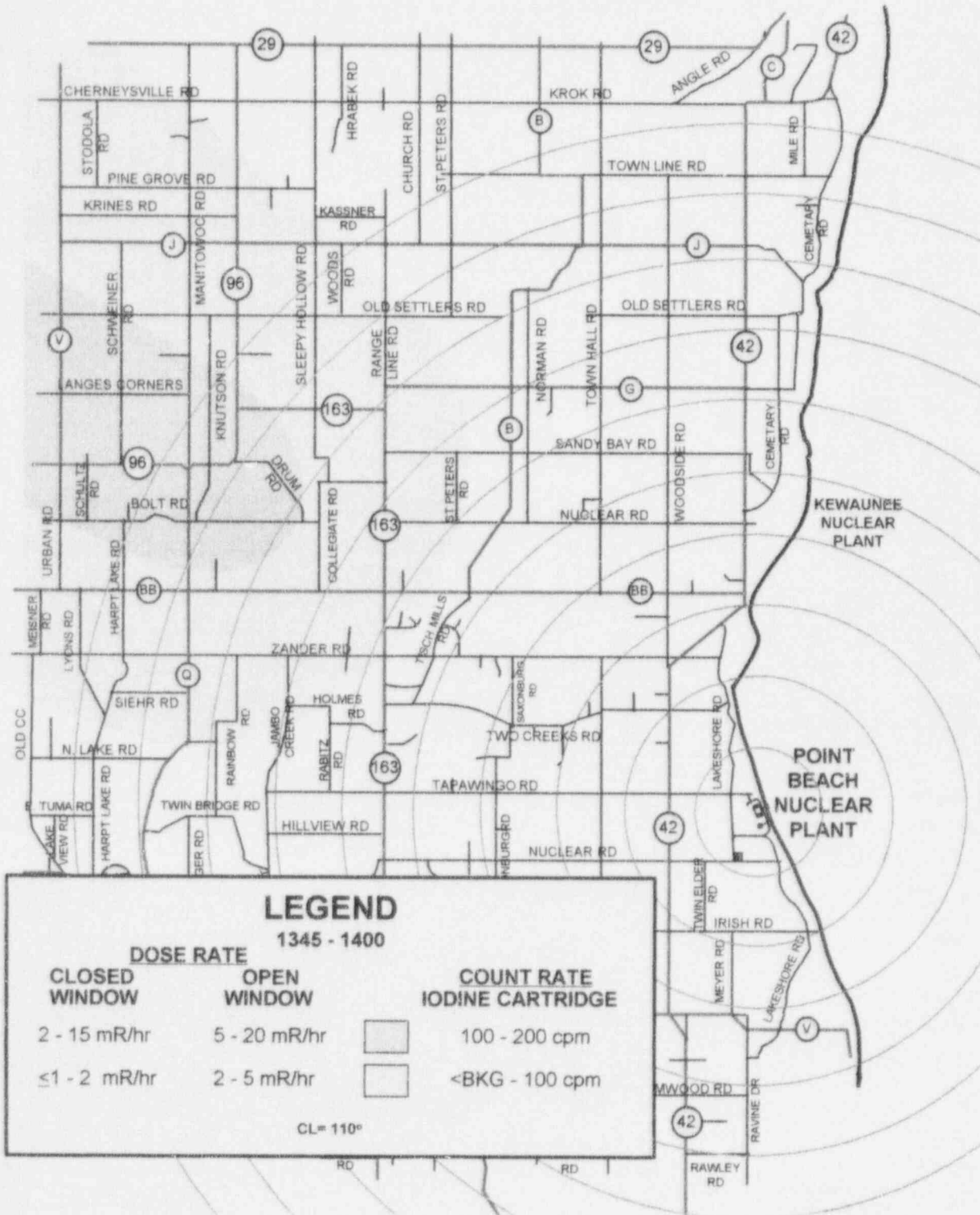
PLUME #9



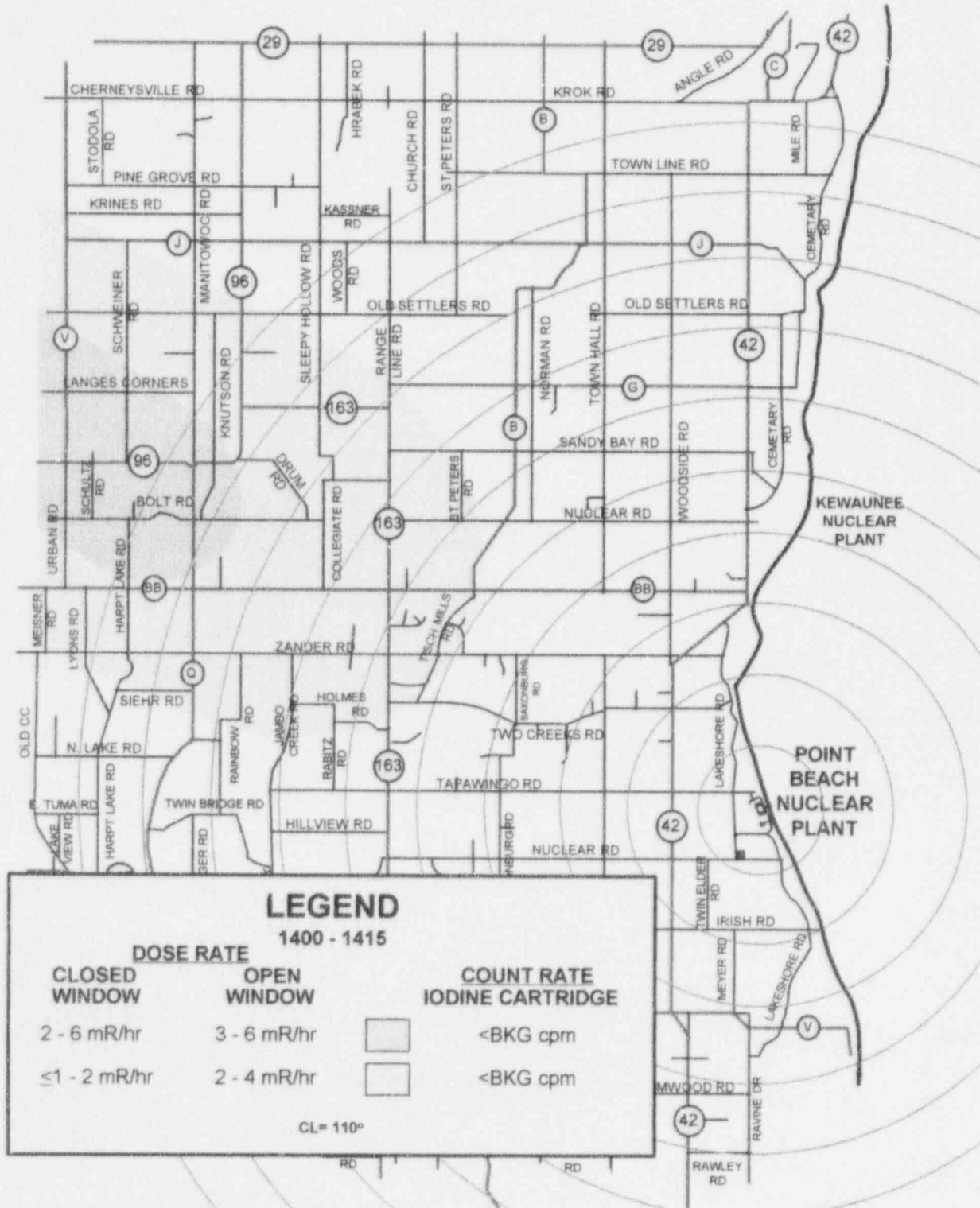
PLUME #10



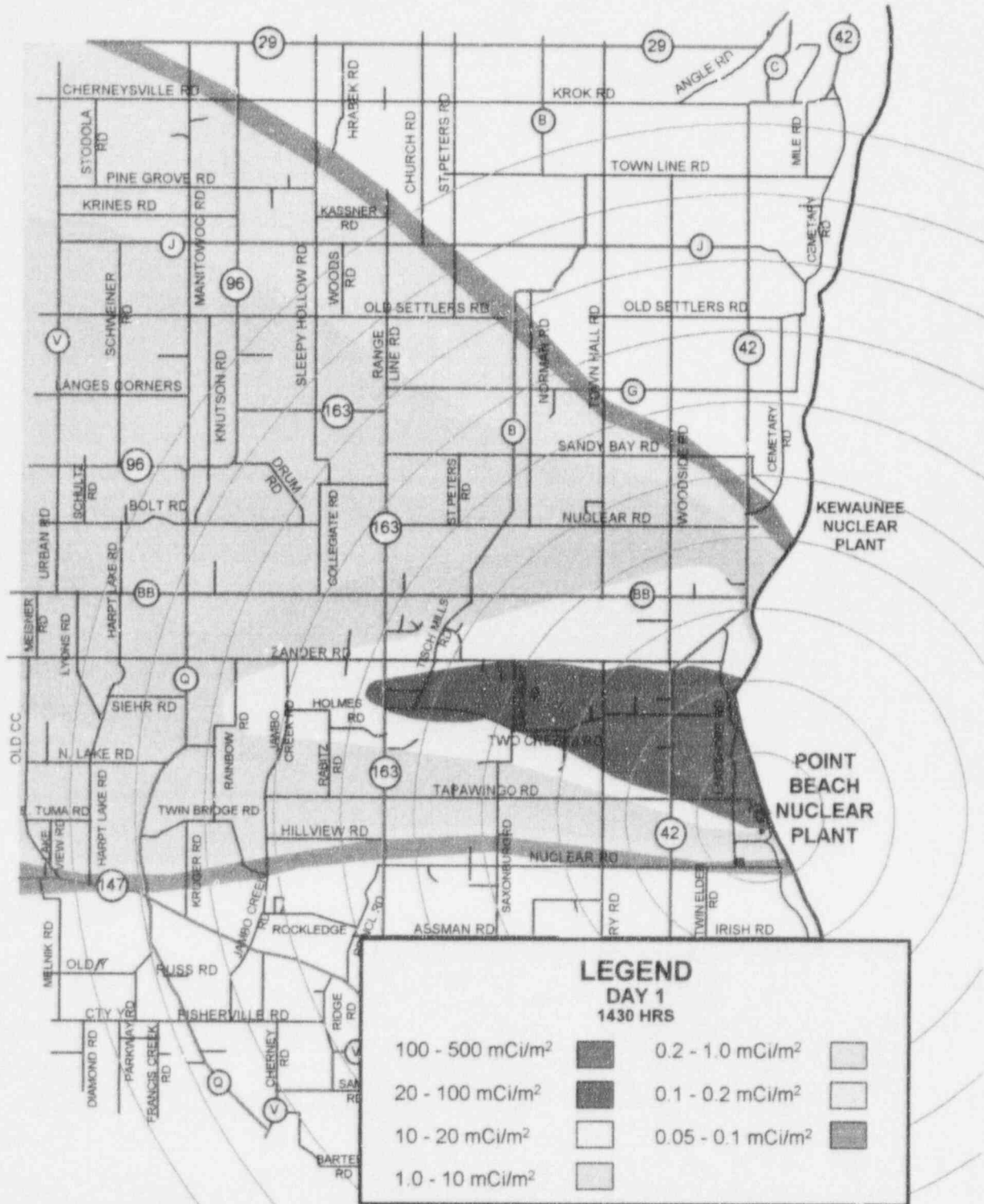
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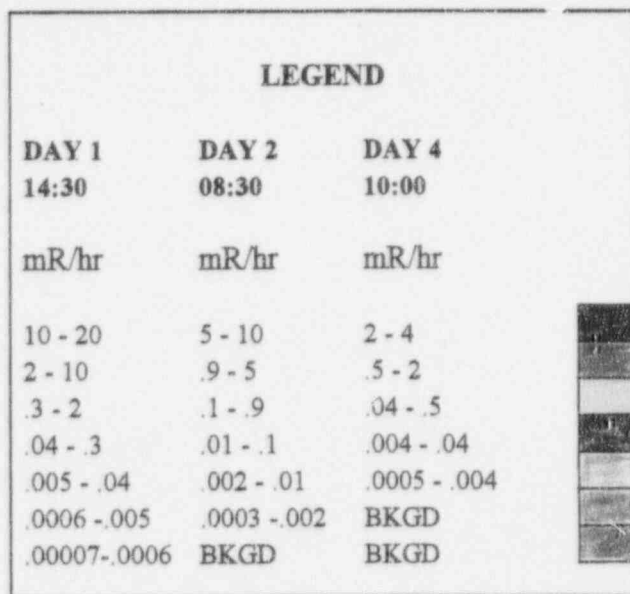


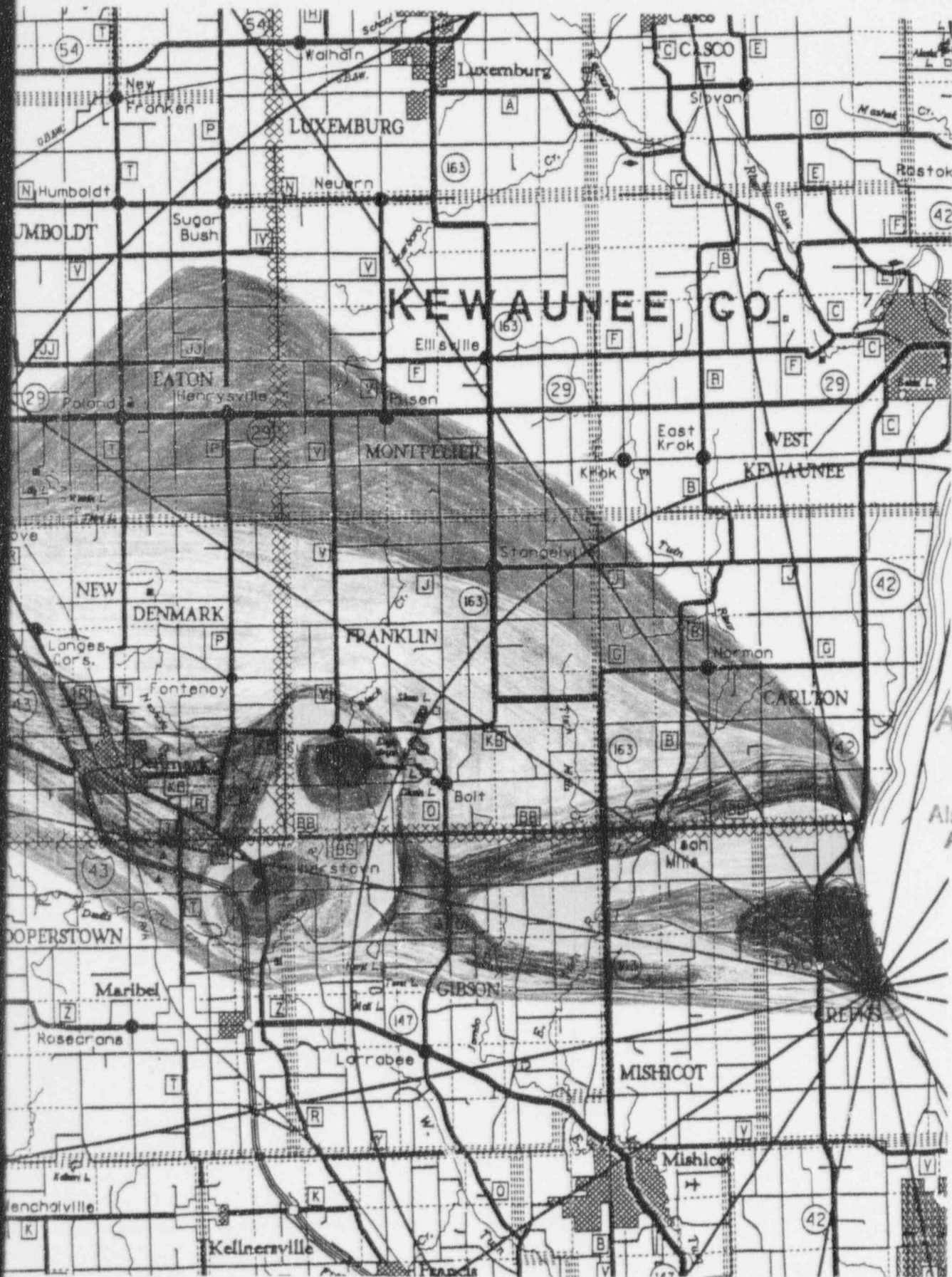
PLUME #12



DEPOSITION - DAY 1



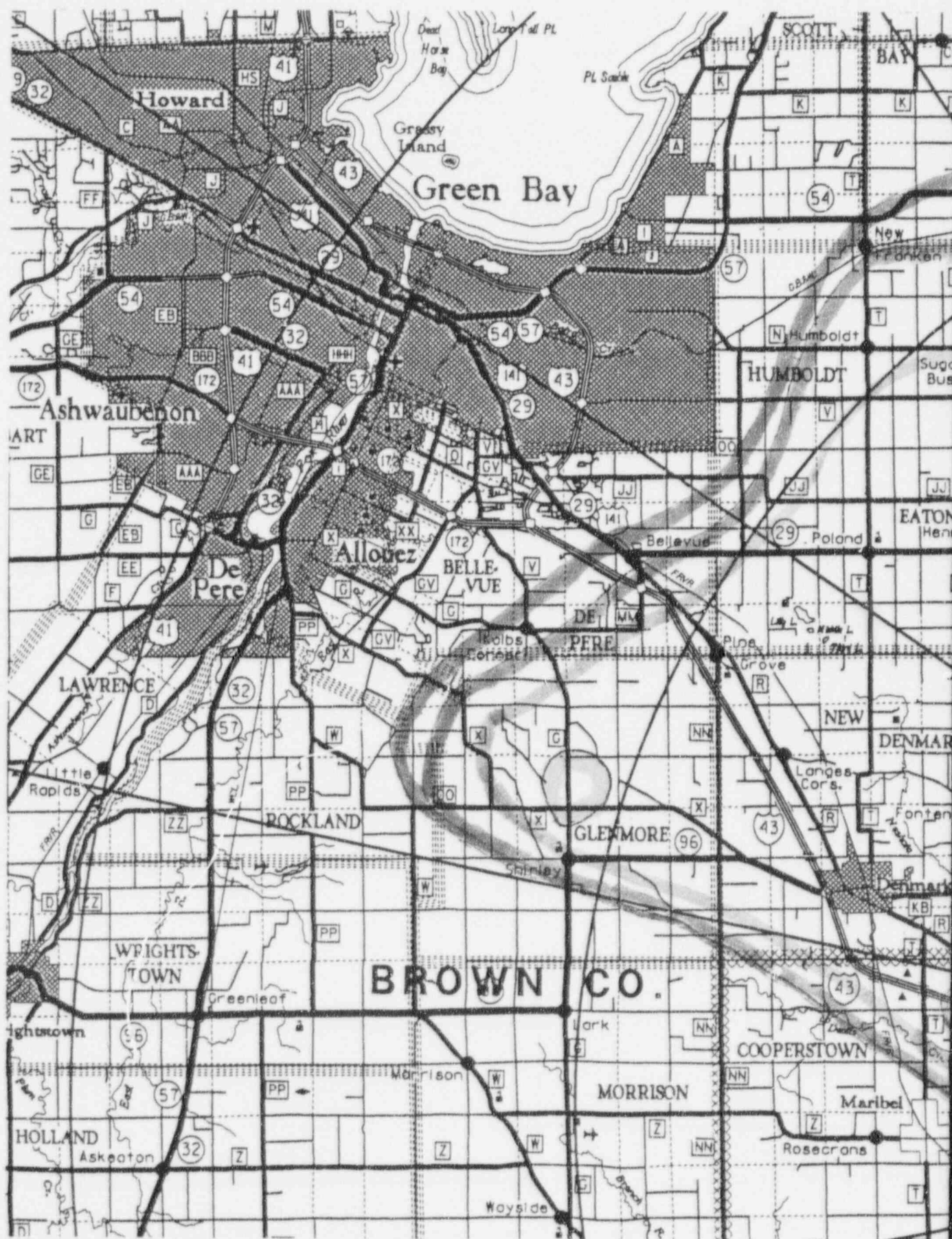


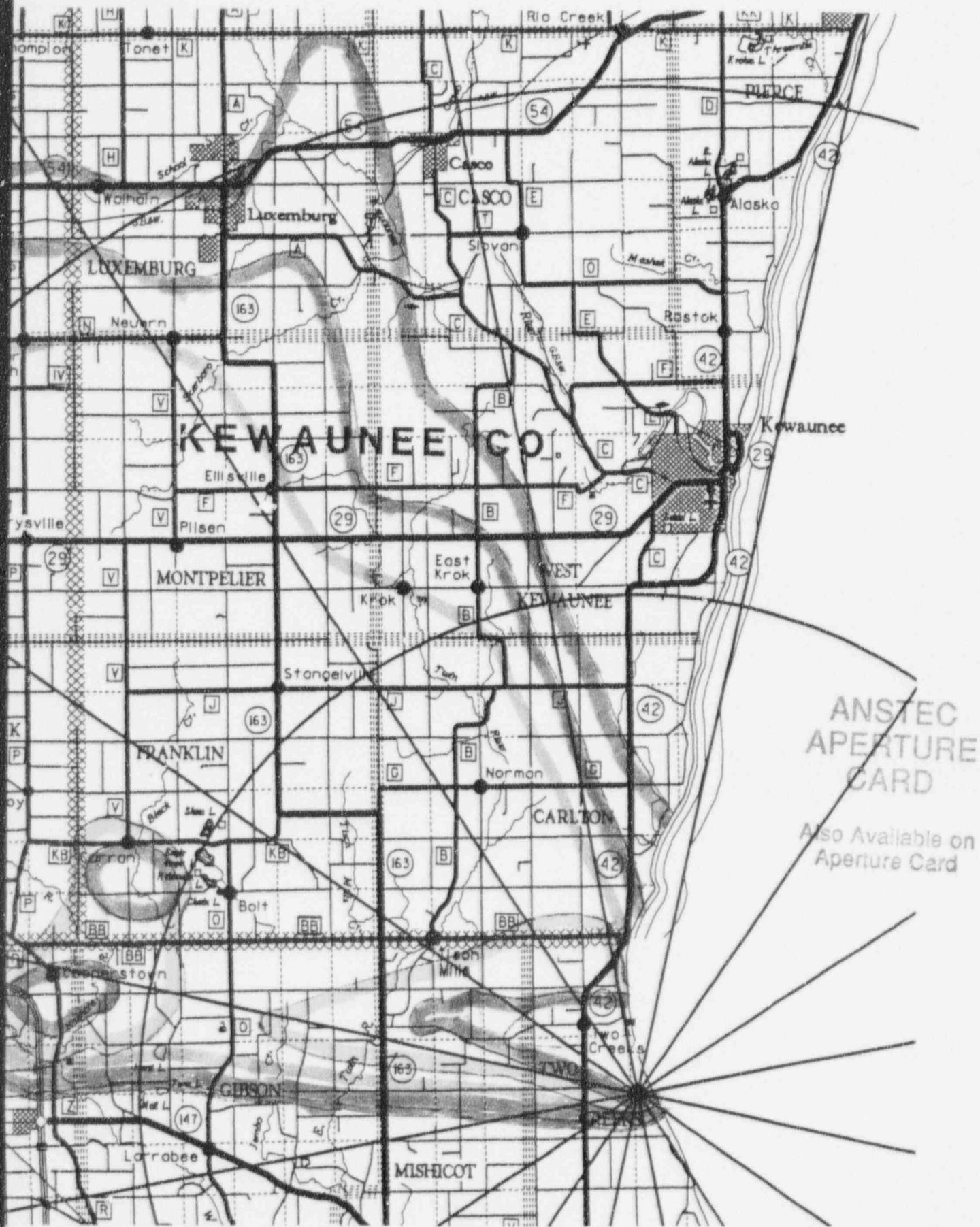


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Aperture Card

96D8190124-01





9608190124-02





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7.6 Dose Projection Data

SUMMARY - CASE 1Case Data :

Case Number : 1
 Case Title: Scenario Case 1
 Case Date : 7/25/96 19:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 3.25 hours.
 Stability class determined from user selection.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 19:30
Last passage of this case's plume @ 10 miles:	7/25/96 8:45 PM

Micrological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	8 mph
Wind Direction :	120° (wind is from the ESE to the WNW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	7.51E-01	Xe138	8.17E-03
Kr85m	9.69E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	5.44E+00	Te129	7.87E-01	Cs136	1.88E-01
Kr88	2.08E+01	Te131m	4.54E-01	Cs137	3.04E-01
Rb88	2.33E+01	I131	7.37E+00	Ba137m	2.87E-01
Sr89	7.05E-01	Xe131m	6.61E-01	Ba140	1.60E+00
Sr90	2.73E-02	Te132	4.43E+00	La140	8.05E-02
Sr91	6.65E-01	I132	1.05E+01	Ce144	2.13E-01
Y91	6.07E-02	I133	1.36E+01	Pr144	2.13E-01
Mo99	3.11E-01	Xe133m	3.97E+00	Np239	4.01E+00
Tc99m	3.09E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	1.28E+00	Total	2.75E+02
Ru106	4.86E-02	I135	9.45E+00		
Rh106	4.86E-02	Xe135m	1.62E+00		
Sb127	2.22E-01	Xe135	3.58E+01		

SUMMARY - CASE 1Case Data :

Case Number : 1
 Case Title: Scenario Case 1
 Case Date : 7/25/96 19:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	1.10E-02	1.77E-03	5.05E-04	1.81E-04	7.36E-05
W	4.64E-01	1.21E-01	5.65E-02	3.32E-02	2.22E-02
WNW	1.77E+00	4.71E-01	2.22E-01	1.31E-01	8.81E-02
NW	1.77E+00	4.71E-01	2.22E-01	1.31E-01	8.81E-02
NNW	4.64E-01	1.21E-01	5.65E-02	3.32E-02	2.22E-02
N	1.10E-02	1.77E-03	5.05E-04	1.81E-04	7.26E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	3.24E-05	1.50E-05	7.23E-06	3.59E-06	1.82E-06
W	1.60E-02	1.22E-02	9.70E-03	7.92E-03	6.62E-03
WNW	6.38E-02	4.88E-02	3.87E-02	3.17E-02	2.65E-02
NW	6.38E-02	4.88E-02	3.87E-02	3.17E-02	2.65E-02
NNW	1.60E-02	1.22E-02	9.70E-03	7.92E-03	6.62E-03
N	3.24E-05	1.50E-05	7.23E-06	3.59E-06	1.82E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	1.70E-01	2.74E-02	7.81E-03	2.80E-03	1.14E-03
W	7.17E+00	1.88E+00	8.74E-01	5.14E-01	3.43E-01
WNW	2.73E+01	7.29E+00	3.43E+00	2.03E+00	1.36E+00
NW	2.73E+01	7.29E+00	3.43E+00	2.03E+00	1.36E+00
NNW	7.17E+00	1.88E+00	8.74E-01	5.14E-01	3.43E-01
N	1.70E-01	2.74E-02	7.81E-03	2.80E-03	1.14E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	5.01E-04	2.32E-04	1.12E-04	5.55E-05	2.82E-05
W	2.48E-01	1.89E-01	1.50E-01	1.23E-01	1.02E-01
WNW	9.88E-01	7.55E-01	5.99E-01	4.90E-01	4.10E-01
NW	9.88E-01	7.55E-01	5.99E-01	4.90E-01	4.10E-01
NNW	2.48E-01	1.89E-01	1.50E-01	1.23E-01	1.02E-01
N	5.01E-04	2.32E-04	1.12E-04	5.55E-05	2.82E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 1Case Data :

Case Number : 1
 Case Title: Scenario Case 1
 Case Date : 7/25/96 19:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	2.74E-03	4.42E-04	1.26E-04	4.53E-05	1.84E-05
W	1.16E-01	3.03E-02	1.41E-02	8.30E-03	5.54E-03
WNW	4.42E-01	1.18E-01	5.54E-02	3.28E-02	2.20E-02
NW	4.42E-01	1.18E-01	5.54E-02	3.28E-02	2.20E-02
NNW	1.16E-01	3.03E-02	1.41E-02	8.30E-03	5.54E-03
N	2.74E-03	4.42E-04	1.26E-04	4.53E-05	1.84E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	8.09E-06	3.75E-06	1.81E-06	8.97E-07	4.55E-07
W	4.01E-03	3.06E-03	2.42E-03	1.98E-03	1.66E-03
WNW	1.60E-02	1.22E-02	9.68E-03	7.92E-03	6.62E-03
NW	1.60E-02	1.22E-02	9.68E-03	7.92E-03	6.62E-03
NNW	4.01E-03	3.06E-03	2.42E-03	1.98E-03	1.66E-03
N	8.09E-06	3.75E-06	1.81E-06	8.97E-07	4.55E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	4.24E-02	6.85E-03	1.95E-03	7.01E-04	2.85E-04
W	1.79E+00	4.69E-01	2.18E-01	1.28E-01	8.58E-02
WNW	6.83E+00	1.82E+00	8.58E-01	5.08E-01	3.41E-01
NW	6.83E+00	1.82E+00	8.58E-01	5.08E-01	3.41E-01
NNW	1.79E+00	4.69E-01	2.18E-01	1.28E-01	8.58E-02
N	4.24E-02	6.85E-03	1.95E-03	7.01E-04	2.85E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	1.25E-04	5.81E-05	2.80E-05	1.39E-05	7.05E-06
W	6.20E-02	4.73E-02	3.75E-02	3.07E-02	2.56E-02
WNW	2.47E-01	1.89E-01	1.50E-01	1.23E-01	1.02E-01
NW	2.47E-01	1.89E-01	1.50E-01	1.23E-01	1.02E-01
NNW	6.20E-02	4.73E-02	3.75E-02	3.07E-02	2.56E-02
N	1.25E-04	5.81E-05	2.80E-05	1.39E-05	7.05E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 2Case Data :

Case Number : 2
 Case Title: Scenario Case 2
 Case Date : 7/25/96 19:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 3.50 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 19:45
Last passage of this case's plume @ 10 miles:	7/25/96 9:00:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	E
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	8 mph
Wind Direction :	125° (wind is from the SE to the NW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	7.22E-01	Xe138	3.92E-03
Kr85m	9.33E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	4.75E+00	Te129	7.81E-01	Cs136	1.88E-01
Kr88	1.96E+01	Te131m	4.52E-01	Cs137	3.04E-01
Rb88	2.19E+01	I131	7.36E+00	Ba137m	2.87E-01
Sr89	7.05E-01	Xe131m	6.61E-01	Ba140	1.60E+00
Sr90	2.73E-02	Te132	4.42E+00	La140	8.05E-02
Sr91	6.53E-01	I132	1.05E+01	Ce144	2.13E-01
Y91	6.07E-02	I133	1.35E+01	Pr144	2.13E-01
Mo99	3.10E-01	Xe133m	3.97E+00	Np239	4.00E+00
Tc99m	3.08E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	1.05E+00	Total	2.71E+02
Ru106	4.86E-02	I135	9.21E+00		
Rh106	4.86E-02	Xe135m	1.58E+00		
Sb127	2.22E-01	Xe135	3.64E+01		

SUMMARY - CASE 2

Case Data :

Case Number : 2
 Case Title: Scenario Case 2
 Case Date : 7/25/96 19:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	1.09E-02	1.76E-03	5.01E-04	1.80E-04	7.32E-05
W	4.61E-01	1.21E-01	5.61E-02	3.30E-02	2.20E-02
WNW	1.76E+00	4.68E-01	2.20E-01	1.31E-01	8.75E-02
NW	1.76E+00	4.68E-01	2.20E-01	1.31E-01	8.75E-02
NNW	4.61E-01	1.21E-01	5.61E-02	3.30E-02	2.20E-02
N	1.09E-02	1.76E-03	5.01E-04	1.80E-04	7.32E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	3.22E-05	1.49E-05	7.19E-06	3.57E-06	1.81E-06
W	1.59E-02	1.21E-02	9.64E-03	7.87E-03	6.58E-03
WNW	6.34E-02	4.85E-02	3.85E-02	3.15E-02	2.63E-02
NW	6.34E-02	4.85E-02	3.85E-02	3.15E-02	2.63E-02
NNW	1.59E-02	1.21E-02	9.64E-03	7.87E-03	6.58E-03
N	3.22E-05	1.49E-05	7.19E-06	3.57E-06	1.81E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	1.69E-01	2.73E-02	7.78E-03	2.79E-03	1.14E-03
W	7.15E+00	1.87E+00	8.71E-01	5.12E-01	3.42E-01
WNW	2.72E+01	7.27E+00	3.42E+00	2.03E+00	1.36E+00
NW	2.72E+01	7.27E+00	3.42E+00	2.03E+00	1.36E+00
NNW	7.15E+00	1.87E+00	8.71E-01	5.12E-01	3.42E-01
N	1.69E-01	2.73E-02	7.78E-03	2.79E-03	1.14E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	4.99E-04	2.32E-04	1.12E-04	5.54E-05	2.81E-05
W	2.47E-01	1.89E-01	1.50E-01	1.22E-01	1.02E-01
WNW	9.85E-01	7.53E-01	5.98E-01	4.88E-01	4.08E-01
NW	9.85E-01	7.53E-01	5.98E-01	4.88E-01	4.08E-01
NNW	2.47E-01	1.89E-01	1.50E-01	1.22E-01	1.02E-01
N	4.99E-04	2.32E-04	1.12E-04	5.54E-05	2.81E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 2

Case Data :

Case Number : 2
 Case Title: Scenario Case 2
 Case Date : 7/25/96 19:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	2.72E-03	4.40E-04	1.25E-04	4.50E-05	1.83E-05
W	1.15E-01	3.01E-02	1.40E-02	8.25E-03	5.51E-03
WNW	4.39E-01	1.17E-01	5.51E-02	3.26E-02	2.19E-02
NW	4.39E-01	1.17E-01	5.51E-02	3.26E-02	2.19E-02
NNW	1.15E-01	3.01E-02	1.40E-02	8.25E-03	5.51E-03
N	2.72E-03	4.40E-04	1.25E-04	4.50E-05	1.83E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	8.04E-06	3.73E-06	1.80E-06	8.92E-07	4.53E-07
W	3.98E-03	3.04E-03	2.41E-03	1.97E-03	1.65E-03
WNW	1.59E-02	1.21E-02	9.62E-03	7.87E-03	6.58E-03
NW	1.59E-02	1.21E-02	9.62E-03	7.87E-03	6.58E-03
NNW	3.98E-03	3.04E-03	2.41E-03	1.97E-03	1.65E-03
N	8.04E-06	3.73E-06	1.80E-06	8.92E-07	4.53E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	4.23E-02	6.82E-03	1.95E-03	6.98E-04	2.84E-04
W	1.79E+00	4.68E-01	2.18E-01	1.28E-01	8.55E-02
WNW	6.81E+00	1.82E+00	8.55E-01	5.07E-01	3.40E-01
NW	6.81E+00	1.82E+00	8.55E-01	5.07E-01	3.40E-01
NNW	1.79E+00	4.68E-01	2.18E-01	1.28E-01	8.55E-02
N	4.23E-02	6.82E-03	1.95E-03	6.98E-04	2.84E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	1.25E-04	5.79E-05	2.79E-05	1.38E-05	7.03E-06
W	6.18E-02	4.72E-02	3.74E-02	3.06E-02	2.55E-02
WNW	2.46E-01	1.88E-01	1.49E-01	1.22E-01	1.02E-01
NW	2.46E-01	1.88E-01	1.49E-01	1.22E-01	1.02E-01
NNW	6.18E-02	4.72E-02	3.74E-02	3.06E-02	2.55E-02
N	1.25E-04	5.79E-05	2.79E-05	1.38E-05	7.03E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 3Case Data :

Number : 3
 Title: Scenario Case 3
 Case Date : 7/25/96 19:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 3.75 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 20:00
Last passage of this case's plume @ 10 miles:	7/25/96 9:03:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	9.5 mph
Wind Direction :	120° (wind is from the ESE to the WNW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	6.94E-01	Xe138	1.88E-03
Kr85m	8.97E+00	Tel29m	2.05E-01	Cs134	4.74E-01
Kr87	4.14E+00	Tel29	7.72E-01	Cs136	1.88E-01
Kr88	1.85E+01	Tel31m	4.49E-01	Cs137	3.04E-01
Rb88	2.06E+01	I131	7.36E+00	Ba137m	2.87E-01
Sr89	7.05E-01	Xe131m	6.61E-01	Ba140	1.60E+00
Sr90	2.73E-02	Tel32	4.41E+00	La140	8.05E-02
Sr91	6.41E-01	I132	1.05E+01	Ce144	2.13E-01
Y91	6.07E-02	I133	1.34E+01	Pr144	2.13E-01
Mo99	3.09E-01	Xe133m	3.96E+00	Np239	3.99E+00
Tc99m	3.07E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	8.64E-01	Total	2.67E+02
Ru106	4.86E-02	I135	8.97E+00		
Rh106	4.86E-02	Xe135m	1.54E+00		
Sb127	2.21E-01	Xe135	3.70E+01		

SUMMARY - CASE 3

Case Data :

Case Number : 3
 Case Title : Scenario Case 3
 Case Date : 7/25/96 19:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	9.12E-03	1.47E-03	4.20E-04	1.51E-04	6.13E-05
W	3.86E-01	1.01E-01	4.70E-02	2.76E-02	1.84E-02
WNW	1.47E+00	3.92E-01	1.84E-01	1.09E-01	7.33E-02
NW	1.47E+00	3.92E-01	1.84E-01	1.09E-01	7.33E-02
NNW	3.86E-01	1.01E-01	4.70E-02	2.76E-02	1.84E-02
N	9.12E-03	1.47E-03	4.20E-04	1.51E-04	6.13E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	2.69E-05	1.25E-05	6.02E-06	2.99E-06	1.52E-06
W	1.33E-02	1.02E-02	8.07E-03	6.59E-03	5.51E-03
WNW	5.31E-02	4.06E-02	3.22E-02	2.63E-02	2.20E-02
NW	5.31E-02	4.06E-02	3.22E-02	2.63E-02	2.20E-02
NNW	1.33E-02	1.02E-02	8.07E-03	6.59E-03	5.51E-03
N	2.69E-05	1.25E-05	6.02E-06	2.99E-06	1.52E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WSW	1.42E-01	2.29E-02	6.53E-03	2.35E-03	9.54E-04
W	6.00E+00	1.57E+00	7.31E-01	4.30E-01	2.87E-01
WNW	2.29E+01	6.10E+00	2.87E+00	1.70E+00	1.14E+00
NW	2.29E+01	6.10E+00	2.87E+00	1.70E+00	1.14E+00
NNW	6.00E+00	1.57E+00	7.31E-01	4.30E-01	2.87E-01
N	1.42E-01	2.29E-02	6.53E-03	2.35E-03	9.54E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WSW	4.19E-04	1.94E-04	9.37E-05	4.65E-05	2.36E-05
W	2.08E-01	1.58E-01	1.26E-01	1.03E-01	8.58E-02
WNW	8.27E-01	6.32E-01	5.02E-01	4.10E-01	3.43E-01
NW	8.27E-01	6.32E-01	5.02E-01	4.10E-01	3.43E-01
NNW	2.08E-01	1.58E-01	1.26E-01	1.03E-01	8.58E-02
N	4.19E-04	1.94E-04	9.37E-05	4.65E-05	2.36E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 3Case Data :

Case Number : 3
 Case Title: Scenario Case 3
 Case Date : 7/25/96 19:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	<u>Downwind Distance (miles)</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	2.28E-03	3.68E-04	1.05E-04	3.77E-05	1.53E-05
W	9.64E-02	2.52E-02	1.17E-02	6.90E-03	4.61E-03
WNW	3.67E-01	9.80E-02	4.61E-02	2.73E-02	1.83E-02
NW	3.67E-01	9.80E-02	4.61E-02	2.73E-02	1.83E-02
NNW	9.64E-02	2.52E-02	1.17E-02	6.90E-03	4.61E-03
N	2.28E-03	3.68E-04	1.05E-04	3.77E-05	1.53E-05

Sector	<u>Downwind Distance (miles)</u>				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	6.73E-06	3.12E-06	1.50E-06	7.46E-07	3.79E-07
W	3.33E-03	2.54E-03	2.02E-03	1.65E-03	1.38E-03
WNW	1.33E-02	1.01E-02	8.06E-03	6.59E-03	5.51E-03
NW	1.33E-02	1.01E-02	8.06E-03	6.59E-03	5.51E-03
NNW	3.33E-03	2.54E-03	2.02E-03	1.65E-03	1.38E-03
N	6.73E-06	3.12E-06	1.50E-06	7.46E-07	3.79E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	<u>Downwind Distance (miles)</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WSW	3.55E-02	5.73E-03	1.63E-03	5.86E-04	2.38E-04
W	1.50E+00	3.93E-01	1.83E-01	1.07E-01	7.18E-02
WNW	5.72E+00	1.53E+00	7.18E-01	4.25E-01	2.85E-01
NW	5.72E+00	1.53E+00	7.18E-01	4.25E-01	2.85E-01
NNW	1.50E+00	3.93E-01	1.83E-01	1.07E-01	7.18E-02
N	3.55E-02	5.73E-03	1.63E-03	5.86E-04	2.38E-04

Sector	<u>Downwind Distance (miles)</u>				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WSW	1.05E-04	4.86E-05	2.34E-05	1.16E-05	5.90E-06
W	5.19E-02	3.96E-02	3.14E-02	2.57E-02	2.14E-02
WNW	2.07E-01	1.58E-01	1.25E-01	1.03E-01	8.57E-02
NW	2.07E-01	1.58E-01	1.25E-01	1.03E-01	8.57E-02
NNW	5.19E-02	3.96E-02	3.14E-02	2.57E-02	2.14E-02
N	1.05E-04	4.86E-05	2.34E-05	1.16E-05	5.90E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 4Case Data :

Case Number : 4
 Case Title: Scenario Case 4
 Case Date : 7/25/96 20:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 4.00 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 20:15
Last passage of this case's plume @ 10 miles:	7/25/96 9:30:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	8 mph
Wind Direction :	130° (wind is from the SE to the NW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	6.67E-01	Xe138	9.03E-04
Kr85m	8.63E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	3.61E+00	Te129	7.61E-01	Cs136	1.88E-01
Kr88	1.74E+01	Te131m	4.46E-01	Cs137	3.04E-01
Rb88	1.94E+01	I131	7.35E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.60E+00
Sr90	2.73E-02	Te132	4.40E+00	La140	8.05E-02
Sr91	6.29E-01	I132	1.05E+01	Ce144	2.13E-01
Y91	6.07E-02	I133	1.33E+01	Pr144	2.13E-01
Mo99	0.09E-01	Xe133m	3.96E+00	Np239	3.98E+00
Tc99m	0.06E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	7.09E-01	Total	2.64E+02
Ru106	4.86E-02	I135	8.73E+00		
Rh106	4.86E-02	Xe135m	1.50E+00		
Sb127	2.21E-01	Xe135	3.76E+01		

SUMMARY - CASE 4

Case Data :

Case Number : 4
 Case Title: Scenario Case 4
 Case Date : 7/25/96 20:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.08E-02	1.74E-03	4.95E-04	1.78E-04	7.23E-05
WNW	4.55E-01	1.19E-01	5.54E-02	3.26E-02	2.18E-02
NW	1.73E+00	4.63E-01	2.18E-01	1.29E-01	8.65E-02
NNW	4.55E-01	1.19E-01	5.54E-02	3.26E-02	2.18E-02
N	1.08E-02	1.74E-03	4.95E-04	1.78E-04	7.23E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	3.18E-05	1.47E-05	7.10E-06	3.52E-06	1.79E-06
WNW	1.57E-02	1.20E-02	9.53E-03	7.78E-03	6.51E-03
NW	6.27E-02	4.79E-02	3.80E-02	3.11E-02	2.60E-02
NNW	1.57E-02	1.20E-02	9.53E-03	7.78E-03	6.51E-03
N	3.18E-05	1.47E-05	7.10E-06	3.52E-06	1.79E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.68E-01	2.71E-02	7.73E-03	2.78E-03	1.13E-03
WNW	7.11E+00	1.86E+00	8.66E-01	5.09E-01	3.40E-01
NW	2.71E+01	7.22E+00	3.40E+00	2.01E+00	1.35E+00
NNW	7.11E+00	1.86E+00	8.66E-01	5.09E-01	3.40E-01
N	1.68E-01	2.71E-02	7.73E-03	2.78E-03	1.13E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	4.96E-04	2.30E-04	1.11E-04	5.50E-05	2.79E-05
WNW	2.46E-01	1.87E-01	1.49E-01	1.21E-01	1.02E-01
NW	9.79E-01	7.48E-01	5.94E-01	4.85E-01	4.06E-01
NNW	2.46E-01	1.87E-01	1.49E-01	1.21E-01	1.02E-01
N	4.96E-04	2.30E-04	1.11E-04	5.50E-05	2.79E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 4Case Data :

Case Number : 4
 Case Title: Scenario Case 4
 Case Date : 7/25/96 20:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	2.69E-03	4.34E-04	1.24E-04	4.45E-05	1.81E-05
WNW	1.14E-01	2.98E-02	1.39E-02	8.15E-03	5.44E-03
NW	4.34E-01	1.16E-01	5.45E-02	3.23E-02	2.16E-02
NNW	1.14E-01	2.98E-02	1.39E-02	8.15E-03	5.44E-03
N	2.69E-03	4.34E-04	1.24E-04	4.45E-05	1.81E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	7.95E-06	3.69E-06	1.78E-06	8.81E-07	4.47E-07
WNW	3.93E-03	3.00E-03	2.38E-03	1.95E-03	1.63E-03
NW	1.57E-02	1.20E-02	9.51E-03	7.78E-03	6.50E-03
NNW	3.93E-03	3.00E-03	2.38E-03	1.95E-03	1.63E-03
N	7.95E-06	3.69E-06	1.78E-06	8.81E-07	4.47E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	4.20E-02	6.78E-03	1.93E-03	6.94E-04	2.82E-04
WNW	1.78E+00	4.65E-01	2.16E-01	1.27E-01	8.50E-02
NW	6.77E+00	1.81E+00	8.50E-01	5.03E-01	3.38E-01
NNW	1.78E+00	4.65E-01	2.16E-01	1.27E-01	8.50E-02
N	4.20E-02	6.78E-03	1.93E-03	6.94E-04	2.82E-04

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	1.24E-04	5.75E-05	2.77E-05	1.38E-05	6.98E-06
WNW	6.14E-02	4.69E-02	3.72E-02	3.04E-02	2.54E-02
NW	2.45E-01	1.87E-01	1.48E-01	1.21E-01	1.01E-01
NNW	6.14E-02	4.69E-02	3.72E-02	3.04E-02	2.54E-02
N	1.24E-04	5.75E-05	2.77E-05	1.38E-05	6.98E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 5

Case Data :

Case Number : 5
 Case Title: Scenario Case 5
 Case Date : 7/25/96 20:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time (s) : 4.25 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 20:30
Last passage of this case's plume @ 10 miles:	7/25/96 9:55:00 PM

Meteorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7 mph
Wind Direction :	140° (wind is from the SE to the NW)

Release Rate Data (in units of Ci/g):

Kr85	3.81E-01	Sb129	6.41E-01	Xe138	4.33E-04
Kr85m	8.30E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	3.15E+00	Te129	7.49E-01	Cs136	1.88E-01
Kr88	1.63E+01	Te131m	4.44E-01	Cs137	3.04E-01
Rb88	1.82E+01	I131	7.34E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Te132	4.39E+00	La140	8.05E-02
Sr91	6.18E-01	I132	1.05E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.31E+01	Pr144	2.13E-01
Mo99	3.08E-01	Xe133m	3.96E+00	Np239	3.96E+00
Tc99m	3.05E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	5.82E-01	Total	2.61E+02
Ru106	4.86E-02	I135	8.51E+00		
Rh106	4.86E-02	Xe135m	1.46E+00		
Sb127	2.21E-01	Xe135	3.81E+01		

SUMMARY - CASE 5

Case Data :

Case Number : 5
 Case Title: Scenario Case 5
 Case Date : 7/25/96 20:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.22E-02	1.98E-03	5.63E-04	2.02E-04	8.22E-05
WNW	5.17E-01	1.35E-01	6.30E-02	3.71E-02	2.47E-02
NW	1.97E+00	5.26E-01	2.48E-01	1.47E-01	9.83E-02
NNW	5.17E-01	1.35E-01	6.30E-02	3.71E-02	2.47E-02
N	1.22E-02	1.98E-03	5.63E-04	2.02E-04	8.22E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	3.61E-05	1.68E-05	8.07E-06	4.01E-06	2.03E-06
WNW	1.79E-02	1.36E-02	1.08E-02	8.85E-03	7.39E-03
NW	7.13E-02	5.45E-02	4.32E-02	3.53E-02	2.96E-02
NNW	1.79E-02	1.36E-02	1.08E-02	8.85E-03	7.39E-03
N	3.61E-05	1.68E-05	8.07E-06	4.01E-06	2.03E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.91E-01	3.09E-02	8.81E-03	3.16E-03	1.29E-03
WNW	8.10E+00	2.12E+00	9.86E-01	5.80E-01	3.87E-01
NW	3.09E+01	8.23E+00	3.87E+00	2.29E+00	1.54E+00
NNW	8.10E+00	2.12E+00	9.86E-01	5.80E-01	3.87E-01
N	1.91E-01	3.09E-02	8.81E-03	3.16E-03	1.29E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	5.65E-04	2.62E-04	1.26E-04	6.27E-05	3.18E-05
WNW	2.80E-01	2.14E-01	1.69E-01	1.38E-01	1.16E-01
NW	1.12E+00	8.52E-01	6.77E-01	5.53E-01	4.63E-01
NNW	2.80E-01	2.14E-01	1.69E-01	1.38E-01	1.16E-01
N	5.65E-04	2.62E-04	1.26E-04	6.27E-05	3.18E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 5

Case Data :

Case Number : 5
 Case Title: Scenario Case 5
 Case Date : 7/25/96 20:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	3.06E-03	4.94E-04	1.41E-04	5.05E-05	2.05E-05
WNW	1.29E-01	3.39E-02	1.58E-02	9.27E-03	6.19E-03
NW	4.93E-01	1.31E-01	6.19E-02	3.67E-02	2.46E-02
NNW	1.29E-01	3.39E-02	1.58E-02	9.27E-03	6.19E-03
N	3.06E-03	4.94E-04	1.41E-04	5.05E-05	2.05E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	9.03E-06	4.19E-06	2.02E-06	1.00E-06	5.08E-07
WNW	4.47E-03	3.41E-03	2.71E-03	2.21E-03	1.85E-03
NW	1.78E-02	1.36E-02	1.08E-02	8.84E-03	7.39E-03
NNW	4.47E-03	3.41E-03	2.71E-03	2.21E-03	1.85E-03
N	9.03E-06	4.19E-06	2.02E-06	1.00E-06	5.08E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	4.79E-02	7.73E-03	2.20E-03	7.91E-04	3.22E-04
WNW	2.02E+00	5.30E-01	2.47E-01	1.45E-01	9.68E-02
NW	7.71E+00	2.06E+00	9.69E-01	5.74E-01	3.85E-01
NNW	2.02E+00	5.30E-01	2.47E-01	1.45E-01	9.68E-02
N	4.79E-02	7.73E-03	2.20E-03	7.91E-04	3.22E-04

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	1.41E-04	6.55E-05	3.16E-05	1.57E-05	7.96E-06
WNW	7.00E-02	5.34E-02	4.24E-02	3.46E-02	2.89E-02
NW	2.79E-01	2.13E-01	1.69E-01	1.38E-01	1.16E-01
NNW	7.00E-02	5.34E-02	4.24E-02	3.46E-02	2.89E-02
N	1.41E-04	6.55E-05	3.16E-05	1.57E-05	7.96E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 6Case Data :

Case Number : 6
 Case Title: Scenario Case 6
 Case Date : 7/25/96 20:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 4.50 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 20:45
Last passage of this case's plume @ 10 miles:	7/25/96 10:05:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7.5 mph
Wind Direction :	150° (wind is from the SSE to the NNW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	6.17E-01	Xe138	2.08E-04
Kr85m	7.99E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	2.75E+00	Te129	7.36E-01	Cs136	1.88E-01
Kr88	1.54E+01	Te131m	4.41E-01	Cs137	3.04E-01
Rb88	1.72E+01	I131	7.34E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Te132	4.38E+00	La140	8.04E-02
Sr91	6.07E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.30E+01	Pr144	2.13E-01
Mo99	3.07E-01	Xe133m	3.95E+00	Np239	3.95E+00
Tc99m	3.04E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	4.78E-01	Total	2.58E+02
Ru106	4.86E-02	I135	8.29E+00		
Rh106	4.86E-02	Xe135m	1.42E+00		
Sb127	2.20E-01	Xe135	3.86E+01		

SUMMARY - CASE 6

Case Data :

Case Number : 6
 Case Title: Scenario Case 6
 Case Date : 7/25/96 20:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.14E-02	1.83E-03	5.23E-04	1.88E-04	7.63E-05
WNW	4.80E-01	1.26E-01	5.35E-02	3.44E-02	2.30E-02
NW	1.83E+00	4.88E-01	2.30E-01	1.36E-01	9.13E-02
NNW	1.83E+00	4.88E-01	2.30E-01	1.36E-01	9.13E-02
N	4.80E-01	1.26E-01	5.85E-02	3.44E-02	2.30E-02
NNE	1.14E-02	1.83E-03	5.23E-04	1.88E-04	7.63E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	3.35E-05	1.56E-05	7.50E-06	3.72E-06	1.89E-06
WNW	1.66E-02	1.27E-02	1.01E-02	8.21E-03	6.86E-03
NW	6.62E-02	5.06E-02	4.01E-02	3.28E-02	2.74E-02
NNW	6.62E-02	5.06E-02	4.01E-02	3.28E-02	2.74E-02
N	1.66E-02	1.27E-02	1.01E-02	8.21E-03	6.86E-03
NNE	3.35E-05	1.56E-05	7.50E-06	3.72E-06	1.89E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
W	1.78E-01	2.88E-02	8.20E-03	2.94E-03	1.20E-03
WNW	7.53E+00	1.97E+00	9.18E-01	5.40E-01	3.60E-01
NW	2.87E+01	7.66E+00	3.61E+00	2.14E+00	1.43E+00
NNW	2.87E+01	7.66E+00	3.61E+00	2.14E+00	1.43E+00
N	7.53E+00	1.97E+00	9.18E-01	5.40E-01	3.60E-01
NNE	1.78E-01	2.88E-02	8.20E-03	2.94E-03	1.20E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
W	5.26E-04	2.44E-04	1.18E-04	5.83E-05	2.96E-05
WNW	2.60E-01	1.99E-01	1.58E-01	1.29E-01	1.08E-01
NW	1.04E+00	7.93E-01	6.30E-01	5.15E-01	4.30E-01
NNW	1.04E+00	7.93E-01	6.30E-01	5.15E-01	4.30E-01
N	2.60E-01	1.99E-01	1.58E-01	1.29E-01	1.08E-01
NNE	5.26E-04	2.44E-04	1.18E-04	5.83E-05	2.96E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 6

Case Data :

Case Number : 6
 Case Title: Scenario Case 6
 Case Date : 7/25/96 20:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
W	2.84E-03	4.58E-04	1.31E-04	4.69E-05	1.91E-05
WNW	1.20E-01	3.14E-02	1.46E-02	8.60E-03	5.74E-03
NW	4.58E-01	1.22E-01	5.75E-02	3.40E-02	2.28E-02
NNW	4.58E-01	1.22E-01	5.75E-02	3.40E-02	2.28E-02
N	1.20E-01	3.14E-02	1.46E-02	8.60E-03	5.74E-03
NNE	2.84E-03	4.58E-04	1.31E-04	4.69E-05	1.91E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
W	8.39E-06	3.89E-06	1.87E-06	9.30E-07	4.72E-07
WNW	4.15E-03	3.17E-03	2.51E-03	2.05E-03	1.72E-03
NW	1.65E-02	1.26E-02	1.00E-02	8.20E-03	6.86E-03
NNW	1.65E-02	1.26E-02	1.00E-02	8.20E-03	6.86E-03
N	4.15E-03	3.17E-03	2.51E-03	2.05E-03	1.72E-03
NNE	8.39E-06	3.89E-06	1.87E-06	9.30E-07	4.72E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
W	4.45E-02	7.19E-03	2.05E-03	7.36E-04	2.99E-04
WNW	1.88E+00	4.93E-01	2.29E-01	1.35E-01	9.01E-02
NW	7.18E+00	1.91E+00	9.01E-01	5.34E-01	3.58E-01
NNW	7.18E+00	1.91E+00	9.01E-01	5.34E-01	3.58E-01
N	1.88E+00	4.93E-01	2.29E-01	1.35E-01	9.01E-02
NNE	4.45E-02	7.19E-03	2.05E-03	7.36E-04	2.99E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
W	1.32E-04	6.10E-05	2.94E-05	1.46E-05	7.40E-06
WNW	6.51E-02	4.97E-02	3.94E-02	3.22E-02	2.69E-02
NW	2.59E-01	1.98E-01	1.57E-01	1.29E-01	1.08E-01
NNW	2.59E-01	1.98E-01	1.57E-01	1.29E-01	1.08E-01
N	6.51E-02	4.97E-02	3.94E-02	3.22E-02	2.69E-02
NNE	1.32E-04	6.10E-05	2.94E-05	1.46E-05	7.40E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 7Case Data :

Case Number : 7
 Case Title: Scenario Case 7
 Case Date : 7/25/96 20:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containmentment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 4.75 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 21:00
Last passage of this case's plume @ 10 miles:	7/25/96 10:25:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7 mph
Wind Direction :	155°(wind is from the SSE to the NNW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	5.93E-01	Xe138	9.97E-05
Kr85m	7.69E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	2.40E+00	Te129	7.22E-01	Cs136	1.88E-01
Kr88	1.45E+01	Te131m	4.39E-01	Cs137	3.04E-01
Rb88	1.61E+01	I131	7.33E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Te132	4.37E+00	La140	8.04E-02
Sr91	5.96E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.29E+01	Pr144	2.12E-01
Mo99	3.06E-01	Xe133m	3.95E+00	Np239	3.94E+00
Tc99m	3.03E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	3.92E-01	Total	2.55E+02
Ru106	4.86E-02	I135	8.07E+00		
Rh106	4.86E-02	Xe135m	1.39E+00		
Sb127	2.20E-01	Xe135	3.91E+01		

SUMMARY - CASE 7Case Data :

Case Number : 7
 Case Title: Scenario Case 7
 Case Date : 7/25/96 20:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.21E-02	1.95E-03	5.57E-04	2.00E-04	8.14E-05
NW	5.12E-01	1.34E-01	6.24E-02	3.67E-02	2.45E-02
NNW	1.95E+00	5.21E-01	2.45E-01	1.45E-01	9.73E-02
N	5.12E-01	1.34E-01	6.24E-02	3.67E-02	2.45E-02
NNE	1.21E-02	1.95E-03	5.57E-04	2.00E-04	8.14E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	3.58E-05	1.66E-05	7.99E-06	3.96E-06	2.01E-06
NW	1.77E-02	1.35E-02	1.07E-02	8.75E-03	7.32E-03
NNW	7.05E-02	5.39E-02	4.28E-02	3.50E-02	2.93E-02
N	1.77E-02	1.35E-02	1.07E-02	8.75E-03	7.32E-03
NNE	3.58E-05	1.66E-05	7.99E-06	3.96E-06	2.01E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.90E-01	3.07E-02	8.76E-03	3.14E-03	1.28E-03
NW	8.05E+00	2.11E+00	9.80E-01	5.76E-01	3.85E-01
NNW	3.07E+01	8.18E+00	3.85E+00	2.28E+00	1.53E+00
N	8.05E+00	2.11E+00	9.80E-01	5.76E-01	3.85E-01
NNE	1.90E-01	3.07E-02	8.76E-03	3.14E-03	1.28E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	5.62E-04	2.61E-04	1.26E-04	6.23E-05	3.16E-05
NW	2.78E-01	2.12E-01	1.68E-01	1.38E-01	1.15E-01
NNW	1.11E+00	8.47E-01	6.73E-01	5.50E-01	4.60E-01
N	2.78E-01	2.12E-01	1.68E-01	1.38E-01	1.15E-01
NNE	5.62E-04	2.61E-04	1.26E-04	6.23E-05	3.16E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a **General Emergency** classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 7

Case Data :

Case Number : 7
 Case Title: Scenario Case 7
 Case Date : 7/25/96 20:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WNW	3.03E-03	4.89E-04	1.39E-04	5.00E-05	2.03E-05
NW	1.28E-01	3.35E-02	1.56E-02	9.17E-03	6.12E-03
NNW	4.88E-01	1.30E-01	6.13E-02	3.63E-02	2.43E-02
N	1.28E-01	3.35E-02	1.56E-02	9.17E-03	6.12E-03
NNE	3.03E-03	4.89E-04	1.39E-04	5.00E-05	2.03E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WNW	8.94E-06	4.15E-06	2.00E-06	9.91E-07	5.03E-07
NW	4.43E-03	3.38E-03	2.68E-03	2.19E-03	1.83E-03
NNW	1.76E-02	1.35E-02	1.07E-02	8.75E-03	7.31E-03
N	4.43E-03	3.38E-03	2.68E-03	2.19E-03	1.83E-03
NNE	8.94E-06	4.15E-06	2.00E-06	9.91E-07	5.03E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WNW	4.76E-02	7.68E-03	2.19E-03	7.86E-04	3.20E-04
NW	2.01E+00	5.27E-01	2.45E-01	1.44E-01	9.62E-02
NNW	7.67E+00	2.05E+00	9.63E-01	5.70E-01	3.82E-01
N	2.01E+00	5.27E-01	2.45E-01	1.44E-01	9.62E-02
NNE	4.76E-02	7.68E-03	2.19E-03	7.86E-04	3.20E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WNW	1.41E-04	6.52E-05	3.14E-05	1.56E-05	7.91E-06
NW	6.96E-02	5.31E-02	4.21E-02	3.44E-02	2.88E-02
NNW	2.77E-01	2.12E-01	1.68E-01	1.37E-01	1.15E-01
N	6.96E-02	5.31E-02	4.21E-02	3.44E-02	2.88E-02
NNE	1.41E-04	6.52E-05	3.14E-05	1.56E-05	7.91E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 8Case Data :

Case Number : 8
 Case Title: Scenario Case 8
 Case Date : 7/25/96 21:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 5.00 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 21:15
Last passage of this case's plume @ 10 miles:	7/25/96 10:30:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	8 mph
Wind Direction :	165° (wind is from the SSE to the NNW)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	5.70E-01	Xe138	4.79E-05
Kr85m	7.39E+00	Tel29m	2.05E-01	Cs134	4.74E-01
Kr87	2.09E+00	Tel29	7.07E-01	Cs136	1.88E-01
Kr88	1.36E+01	Tel31m	4.36E-01	Cs137	3.04E-01
Rb88	1.52E+01	I131	7.33E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Tel32	4.36E+00	La140	8.04E-02
Sr91	5.85E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.28E+01	Pr144	2.12E-01
Mo99	3.05E-01	Xe133m	3.95E+00	Np239	3.93E+00
Tc99m	3.02E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	3.22E-01	Total	2.53E+02
Ru106	4.86E-02	I135	7.87E+00		
Rh106	4.86E-02	Xe135m	1.35E+00		
Sb127	2.19E-01	Xe135	3.95E+01		

SUMMARY - CASE 8Case Data :

Number : 8
 Title: Scenario Case 8
 Case Date : 7/25/96 21:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	<u>Downwind Distance (miles)</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.05E-02	1.70E-03	4.85E-04	1.74E-04	7.08E-05
NW	4.46E-01	1.17E-01	5.43E-02	3.19E-02	2.13E-02
NNW	1.70E+00	4.53E-01	2.13E-01	1.26E-01	8.47E-02
N	1.70E+00	4.53E-01	2.13E-01	1.26E-01	8.47E-02
NNE	4.46E-01	1.17E-01	5.43E-02	3.19E-02	2.13E-02
NE	1.05E-02	1.70E-03	4.85E-04	1.74E-04	7.08E-05

Sector	<u>Downwind Distance (miles)</u>				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	3.11E-05	1.44E-05	6.96E-06	3.45E-06	1.75E-06
NW	1.54E-02	1.18E-02	9.33E-03	7.62E-03	6.37E-03
NNW	6.14E-02	4.69E-02	3.73E-02	3.05E-02	2.55E-02
N	6.14E-02	4.69E-02	3.73E-02	3.05E-02	2.55E-02
NNE	1.54E-02	1.18E-02	9.33E-03	7.62E-03	6.37E-03
NE	3.11E-05	1.44E-05	6.96E-06	3.45E-06	1.75E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	<u>Downwind Distance (miles)</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.66E-01	2.68E-02	7.64E-03	2.74E-03	1.12E-03
NW	7.02E+00	1.84E+00	8.55E-01	5.03E-01	3.36E-01
NNW	2.68E+01	7.14E+00	3.36E+00	1.99E+00	1.33E+00
N	2.68E+01	7.14E+00	3.36E+00	1.99E+00	1.33E+00
NNE	7.02E+00	1.84E+00	8.55E-01	5.03E-01	3.36E-01
NE	1.66E-01	2.68E-02	7.64E-03	2.74E-03	1.12E-03

Sector	<u>Downwind Distance (miles)</u>				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	4.90E-04	2.27E-04	1.10E-04	5.44E-05	2.76E-05
NW	2.43E-01	1.85E-01	1.47E-01	1.20E-01	1.00E-01
NNW	9.67E-01	7.39E-01	5.87E-01	4.80E-01	4.01E-01
N	9.67E-01	7.39E-01	5.87E-01	4.80E-01	4.01E-01
NNE	2.43E-01	1.85E-01	1.47E-01	1.20E-01	1.00E-01
NE	4.90E-04	2.27E-04	1.10E-04	5.44E-05	2.76E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 8Case Data :

Case Number : 8
 Case Title: Scenario Case 8
 Case Date : 7/25/96 21:00
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	2.64E-03	4.26E-04	1.21E-04	4.36E-05	1.77E-05
NW	1.11E-01	2.92E-02	1.36E-02	7.98E-03	5.33E-03
NNW	4.25E-01	1.13E-01	5.33E-02	3.16E-02	2.12E-02
N	4.25E-01	1.13E-01	5.33E-02	3.16E-02	2.12E-02
NNE	1.11E-01	2.92E-02	1.36E-02	7.98E-03	5.33E-03
NE	2.64E-03	4.26E-04	1.21E-04	4.36E-05	1.77E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	7.79E-06	3.61E-06	1.74E-06	8.63E-07	4.38E-07
NW	3.85E-03	2.94E-03	2.33E-03	1.91E-03	1.59E-03
NNW	1.54E-02	1.17E-02	9.32E-03	7.62E-03	6.37E-03
N	1.54E-02	1.17E-02	9.32E-03	7.62E-03	6.37E-03
NNE	3.85E-03	2.94E-03	2.33E-03	1.91E-03	1.59E-03
NE	7.79E-06	3.61E-06	1.74E-06	8.63E-07	4.38E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	4.15E-02	6.70E-03	1.91E-03	6.86E-04	2.79E-04
NW	1.76E+00	4.60E-01	2.14E-01	1.26E-01	8.40E-02
NNW	6.69E+00	1.78E+00	8.40E-01	4.97E-01	3.34E-01
N	6.69E+00	1.78E+00	8.40E-01	4.97E-01	3.34E-01
NNE	1.76E+00	4.60E-01	2.14E-01	1.26E-01	8.40E-02
NE	4.15E-02	6.70E-03	1.91E-03	6.86E-04	2.79E-04

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	1.23E-04	5.68E-05	2.74E-05	1.36E-05	6.90E-06
NW	6.07E-02	4.63E-02	3.67E-02	3.00E-02	2.51E-02
NNW	2.42E-01	1.85E-01	1.47E-01	1.20E-01	1.00E-01
N	2.42E-01	1.85E-01	1.47E-01	1.20E-01	1.00E-01
NNE	6.07E-02	4.63E-02	3.67E-02	3.00E-02	2.51E-02
NE	1.23E-04	5.68E-05	2.74E-05	1.36E-05	6.90E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 9Case Data :

Case Number : 9
 Case Title: Scenario Case 9
 Case Date : 7/25/96 21:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 5.25 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 21:30
Last passage of this case's plume @ 10 miles:	7/25/96 10:55:00 PM

Micrological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7 mph
Wind Direction :	170° (wind is from the S to the N)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	5.48E-01	Xe138	2.30E-05
Kr85m	7.11E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	1.83E+00	Te129	6.91E-01	Cs136	1.88E-01
Kr88	1.28E+01	Te131m	4.34E-01	Cs137	3.04E-01
Rb88	1.43E+01	I131	7.32E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Te132	4.35E+00	La140	8.04E-02
Sr91	5.75E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.27E+01	Pr144	2.12E-01
Mo99	3.05E-01	Xe133m	3.94E+00	Np239	3.92E+00
Tc99m	3.01E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	2.64E-01	Total	2.50E+02
Ru106	4.86E-02	I135	7.66E+00		
Rh106	4.86E-02	Xe135m	1.32E+00		
Sb127	2.19E-01	Xe135	3.98E+01		

SUMMARY - CASE 9Case Data :

Case Number : 9
 Case Title: Scenario Case 9
 Case Date : 7/25/96 21:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.20E-02	1.94E-03	5.52E-04	1.98E-04	8.06E-05
NW	5.07E-01	1.33E-01	6.18E-02	3.63E-02	2.43E-02
NNW	1.93E+00	5.16E-01	2.43E-01	1.44E-01	9.64E-02
N	1.93E+00	5.16E-01	2.43E-01	1.44E-01	9.64E-02
NNE	5.07E-01	1.33E-01	6.18E-02	3.63E-02	2.43E-02
NE	1.20E-02	1.94E-03	5.52E-04	1.98E-04	8.06E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	3.54E-05	1.64E-05	7.91E-06	3.93E-06	1.99E-06
NW	1.75E-02	1.34E-02	1.06E-02	8.67E-03	7.25E-03
NNW	6.99E-02	5.34E-02	4.24E-02	3.47E-02	2.90E-02
N	6.99E-02	5.34E-02	4.24E-02	3.47E-02	2.90E-02
NNE	1.75E-02	1.34E-02	1.06E-02	8.67E-03	7.25E-03
NE	3.54E-05	1.64E-05	7.91E-06	3.93E-06	1.99E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
WNW	1.89E-01	3.05E-02	8.71E-03	3.13E-03	1.27E-03
NW	8.00E+00	2.09E+00	9.75E-01	5.73E-01	3.83E-01
NNW	3.05E+01	8.13E+00	3.83E+00	2.27E+00	1.52E+00
N	3.05E+01	8.13E+00	3.83E+00	2.27E+00	1.52E+00
NNE	8.00E+00	2.09E+00	9.75E-01	5.73E-01	3.83E-01
NE	1.89E-01	3.05E-02	8.71E-03	3.13E-03	1.27E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
WNW	5.59E-04	2.59E-04	1.25E-04	6.19E-05	3.14E-05
NW	2.77E-01	2.11E-01	1.67E-01	1.37E-01	1.14E-01
NNW	1.10E+00	8.42E-01	6.69E-01	5.47E-01	4.57E-01
N	1.10E+00	8.42E-01	6.69E-01	5.47E-01	4.57E-01
NNE	2.77E-01	2.11E-01	1.67E-01	1.37E-01	1.14E-01
NE	5.59E-04	2.59E-04	1.25E-04	6.19E-05	3.14E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a **General Emergency** classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 9

Case Data

Number : 9
 Title: Scenario Case 9
 Case Date : 7/25/96 21:15
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WNW	3.00E-03	4.84E-04	1.38E-04	4.95E-05	2.01E-05
NW	1.27E-01	3.32E-02	1.54E-02	9.08E-03	6.06E-03
NNW	4.83E-01	1.29E-01	6.07E-02	3.59E-02	2.41E-02
N	4.83E-01	1.29E-01	6.07E-02	3.59E-02	2.41E-02
NNE	1.27E-01	3.32E-02	1.54E-02	9.08E-03	6.06E-03
NE	3.00E-03	4.84E-04	1.38E-04	4.95E-05	2.01E-05

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WNW	8.86E-06	4.11E-06	1.98E-06	9.82E-07	4.98E-07
NW	4.38E-03	3.34E-03	2.65E-03	2.17E-03	1.81E-03
NNW	1.75E-02	1.33E-02	1.06E-02	8.66E-03	7.24E-03
N	1.75E-02	1.33E-02	1.06E-02	8.66E-03	7.24E-03
NNE	4.38E-03	3.34E-03	2.65E-03	2.17E-03	1.81E-03
NE	8.86E-06	4.11E-06	1.98E-06	9.82E-07	4.98E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
WNW	4.73E-02	7.64E-03	2.18E-03	7.81E-04	3.18E-04
NW	2.00E+00	5.24E-01	2.44E-01	1.43E-01	9.57E-02
NNW	7.62E+00	2.03E+00	9.57E-01	5.67E-01	3.80E-01
N	7.62E+00	2.03E+00	9.57E-01	5.67E-01	3.80E-01
NNE	2.00E+00	5.24E-01	2.44E-01	1.43E-01	9.57E-02
NE	4.73E-02	7.64E-03	2.18E-03	7.81E-04	3.18E-04

Sector	Downwind Distance (miles)				
	6	7	8	9	10
WNW	1.40E-04	6.48E-05	3.12E-05	1.55E-05	7.86E-06
NW	6.92E-02	5.28E-02	4.19E-02	3.42E-02	2.86E-02
NNW	2.75E-01	2.11E-01	1.67E-01	1.37E-01	1.14E-01
N	2.75E-01	2.11E-01	1.67E-01	1.37E-01	1.14E-01
NNE	6.92E-02	5.28E-02	4.19E-02	3.42E-02	2.86E-02
NE	1.40E-04	6.48E-05	3.12E-05	1.55E-05	7.86E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 10Case Data :

Case Number : 10
 Case Title : Scenario Case 10
 Case Date : 7/25/96 21:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 5.50 hours.
 Stability class is default setting.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
Case end:	7/25/96 21:45
Last passage of this case's plume @ 10 miles:	7/25/96 11:10:00 PM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	B
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7 mph
Wind Direction :	180° (wind is from the S to the N)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	5.27E-01	Xe138	1.10E-05
Kr85m	6.84E+00	Te129m	2.05E-01	Cs134	4.74E-01
Kr87	1.59E+00	Te129	6.75E-01	Cs136	1.89E-01
Kr88	1.20E+01	Te131m	4.31E-01	Cs137	3.04E-01
Rb88	1.34E+01	I131	7.32E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.61E-01	Ba140	1.59E+00
Sr90	2.73E-02	Te132	4.34E+00	La140	8.04E-02
Sr91	5.64E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.26E+01	Pr144	2.12E-01
Mo99	3.04E-01	Xe133m	3.94E+00	Np239	3.90E+00
Tc99m	3.01E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	2.17E-01	Total	2.48E+02
Ru106	4.86E-02	I135	7.46E+00		
Rh106	4.86E-02	Xe135m	1.28E+00		
Sb127	2.18E-01	Xe135	4.02E+01		

SUMMARY - CASE 10

Case Data :

Number : 10
 Title: Scenario Case 10
 Case Date : 7/25/96 21:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	1.19E-02	1.93E-03	5.50E-04	1.97E-04	8.02E-05
NNW	5.05E-01	1.32E-01	6.15E-02	3.62E-02	2.41E-02
N	1.92E+00	5.13E-01	2.42E-01	1.43E-01	9.59E-02
NNE	5.05E-01	1.32E-01	6.15E-02	3.62E-02	2.41E-02
NE	1.19E-02	1.93E-03	5.50E-04	1.97E-04	8.02E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	3.53E-05	1.63E-05	7.88E-06	3.91E-06	1.98E-06
NNW	1.75E-02	1.33E-02	1.06E-02	8.63E-03	7.21E-03
N	6.95E-02	5.31E-02	4.22E-02	3.45E-02	2.88E-02
NNE	1.75E-02	1.33E-02	1.06E-02	8.63E-03	7.21E-03
NE	3.53E-05	1.63E-05	7.88E-06	3.91E-06	1.98E-06

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	1.89E-01	3.05E-02	8.68E-03	3.12E-03	1.27E-03
NNW	7.98E+00	2.09E+00	9.72E-01	5.71E-01	3.82E-01
N	3.04E+01	8.11E+00	3.82E+00	2.26E+00	1.52E+00
NNE	7.98E+00	2.09E+00	9.72E-01	5.71E-01	3.82E-01
NE	1.89E-01	3.05E-02	8.68E-03	3.12E-03	1.27E-03

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	5.57E-04	2.58E-04	1.24E-04	6.18E-05	3.14E-05
NNW	2.76E-01	2.10E-01	1.67E-01	1.36E-01	1.14E-01
N	1.10E+00	8.40E-01	6.67E-01	5.45E-01	4.56E-01
NNE	2.76E-01	2.10E-01	1.67E-01	1.36E-01	1.14E-01
NE	5.57E-04	2.58E-04	1.24E-04	6.18E-05	3.14E-05

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 10

Case Data :

Case Number : 10
 Case Title: Scenario Case 10
 Case Date : 7/25/96 21:30
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 0.25 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	2.98E-03	4.82E-04	1.37E-04	4.93E-05	2.01E-05
NNW	1.26E-01	3.30E-02	1.54E-02	9.04E-03	6.04E-03
N	4.81E-01	1.28E-01	6.04E-02	3.58E-02	2.40E-02
NNE	1.26E-01	3.30E-02	1.54E-02	9.04E-03	6.04E-03
NE	2.98E-03	4.82E-04	1.37E-04	4.93E-05	2.01E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	8.82E-06	4.09E-06	1.97E-06	9.77E-07	4.96E-07
NNW	4.36E-03	3.33E-03	2.64E-03	2.16E-03	1.80E-03
N	1.74E-02	1.33E-02	1.05E-02	8.62E-03	7.21E-03
NNE	4.36E-03	3.33E-03	2.64E-03	2.16E-03	1.80E-03
NE	8.82E-06	4.09E-06	1.97E-06	9.77E-07	4.96E-07

Release duration time is 0.25 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	4.72E-02	7.61E-03	2.17E-03	7.79E-04	3.17E-04
NNW	1.99E+00	5.22E-01	2.43E-01	1.43E-01	9.54E-02
N	7.60E+00	2.03E+00	9.54E-01	5.65E-01	3.79E-01
NNE	1.99E+00	5.22E-01	2.43E-01	1.43E-01	9.54E-02
NE	4.72E-02	7.61E-03	2.17E-03	7.79E-04	3.17E-04

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	1.39E-04	6.46E-05	3.11E-05	1.54E-05	7.84E-06
NNW	6.89E-02	5.26E-02	4.17E-02	3.41E-02	2.85E-02
N	2.75E-01	2.10E-01	1.67E-01	1.36E-01	1.14E-01
NNE	6.89E-02	5.26E-02	4.17E-02	3.41E-02	2.85E-02
NE	1.39E-04	6.46E-05	3.11E-05	1.54E-05	7.84E-06

Protective Action Recommendations (PARs)

No recommended protective actions for the general public.

SUMMARY - CASE 11Case Data :

Case Number : 11
 Case Title: Scenario Case 11
 Case Date : 7/25/96 21:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Accident Data :

Accident type: LOCA/GAP inside the containment building
 Source term based on in-vessel severe core damage (fuel uncovered for greater than 30 minutes).
 Containment leak rate : 0.5 % per hour.
 Containment Spray : Not operational or operational with no NaOH addition.
 Release pathway: Containment building -----> facade/atmosphere.
 Decay time is : 5.75 hours.
 Stability class determined from user selection.
 Wake effect not invoked.

Event Time Data

Shutdown:	7/25/96 16:00
Start of the event:	7/25/96 16:56
Start of the release to the environment:	7/25/96 16:56
End of the release to the environment:	7/26/96 1:45
End of the exposure (last passage of plume @ 10 miles):	7/26/96 3:10 AM

Metorological Data :

Data Date :	7/25/96 16:56
Stability Class :	C
Sigma Theta :	0
Lapse Rate :	0
Precipitation :	No
Lake Breeze in effect ?	No
Wind Speed :	7 mph
Wind Direction :	180° (wind is from the S to the N)

Release Rate Data (in units of Ci/s):

Kr85	3.81E-01	Sb129	5.06E-01	Xe138	5.29E-06
Kr85m	6.58E+00	Tel129m	2.05E-01	Cs134	4.74E-01
Kr87	1.39E+00	Tel129	6.59E-01	Cs136	1.87E-01
Kr88	1.13E+01	Tel131m	4.29E-01	Cs137	3.04E-01
Rb88	1.26E+01	I131	7.31E+00	Ba137m	2.87E-01
Sr89	7.04E-01	Xe131m	6.60E-01	Ba140	1.59E+00
Sr90	2.73E-02	Tel132	4.33E+00	La140	8.04E-02
Sr91	5.54E-01	I132	1.04E+01	Ce144	2.12E-01
Y91	6.07E-02	I133	1.25E+01	Pr144	2.12E-01
Mo99	3.03E-01	Xe133m	3.93E+00	Np239	3.89E+00
Tc99m	3.00E-01	Xe133	1.14E+02		
Ru103	2.24E-01	I134	1.78E-01	Total	2.46E+02
Ru106	4.86E-02	I135	7.27E+00		
Rh106	4.86E-02	Xe135m	1.25E+00		
Sb127	2.18E-01	Xe135	4.05E+01		

SUMMARY - CASE 11

Case Data :

Number : 11
 Title: Scenario Case 11
 Case Date : 7/25/96 21:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Committed Effective Dose Equivalent Rate - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
NW	4.03E-04	4.14E-05	7.37E-06	1.63E-06	4.06E-07
NNW	1.20E+00	3.57E-01	1.84E-01	1.18E-01	8.42E-02
N	4.80E+00	1.43E+00	7.36E-01	4.70E-01	3.37E-01
NNE	1.20E+00	3.57E-01	1.84E-01	1.18E-01	8.42E-02
NE	4.03E-04	4.14E-05	7.37E-06	1.63E-06	4.06E-07

Sector	Downwind Distance (miles)				
	6	7	8	9	10
NW	1.08E-07	3.03E-08	8.77E-09	2.60E-09	7.88E-10
NNW	6.46E-02	5.20E-02	4.33E-02	3.70E-02	3.22E-02
N	2.59E-01	2.08E-01	1.73E-01	1.48E-01	1.29E-01
NNE	6.46E-02	5.20E-02	4.33E-02	3.70E-02	3.22E-02
NE	1.08E-07	3.03E-08	8.77E-09	2.60E-09	7.88E-10

Committed Dose Equivalent Rate to the Thyroid - Downwind Sectors (rem/hour)

Sector	Downwind Distance (miles)				
	1	2	3	4	5
NW	6.55E-03	6.55E-04	1.17E-04	2.58E-05	6.42E-06
NNW	1.30E+01	5.66E+00	2.91E+00	1.86E+00	1.33E+00
N	7.60E+01	2.26E+01	1.16E+01	7.44E+00	5.33E+00
NNE	1.90E+01	5.66E+00	2.91E+00	1.86E+00	1.33E+00
NE	6.38E-03	6.55E-04	1.17E-04	2.58E-05	6.42E-06

Sector	Downwind Distance (miles)				
	6	7	8	9	10
NW	1.71E-06	4.79E-07	1.39E-07	4.12E-08	1.25E-08
NNW	1.02E+00	8.24E-01	6.86E-01	5.85E-01	5.09E-01
N	4.09E+00	3.29E+00	2.74E+00	2.34E+00	2.04E+00
NNE	1.02E+00	8.24E-01	6.86E-01	5.85E-01	5.09E-01
NE	1.71E-06	4.79E-07	1.39E-07	4.12E-08	1.25E-08

Event Classification (Abnormal Effluent Category of Table 1.2-1)

Consider a General Emergency classification based on greater than 1 R/hr TEDE or greater than 5 R/hr Thyroid-CDE at the site boundary under actual meteorological conditions.

SUMMARY - CASE 11

Case Data :

Case Number : 11
 Case Title: Scenario Case 11
 Case Date : 7/25/96 21:45
 Case Basis: Release rates based on LOCA/GAP accident assessment using plant conditions.

Release duration time is 4.0 hours.

Committed Effective Dose Equivalent - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	1.61E-03	1.66E-04	2.95E-05	6.53E-06	1.62E-06
NNW	4.81E+00	1.43E+00	7.36E-01	4.70E-01	3.37E-01
N	1.92E+01	5.72E+00	2.94E+00	1.88E+00	1.35E+00
NNE	4.81E+00	1.43E+00	7.36E-01	4.70E-01	3.37E-01
NE	1.61E-03	1.66E-04	2.95E-05	6.53E-06	1.62E-06

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	4.33E-07	1.21E-07	3.51E-08	1.04E-08	3.15E-09
NNW	2.59E-01	2.08E-01	1.73E-01	1.48E-01	1.29E-01
N	1.03E+00	8.33E-01	6.93E-01	5.92E-01	5.15E-01
NNE	2.59E-01	2.08E-01	1.73E-01	1.48E-01	1.29E-01
NE	4.33E-07	1.21E-07	3.51E-08	1.04E-08	3.15E-09

Case duration time is 4.0 hours.

Committed Dose Equivalent to the Thyroid - Downwind Sectors (rem)

Sector	Downwind Distance (miles)				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
NW	2.55E-02	2.62E-03	4.67E-04	1.03E-04	2.57E-05
NNW	7.61E+01	2.26E+01	1.16E+01	7.44E+00	5.33E+00
N	3.04E+02	9.05E+01	4.66E+01	2.98E+01	2.13E+01
NNE	7.61E+01	2.26E+01	1.16E+01	7.44E+00	5.33E+00
NE	2.55E-02	2.62E-03	4.67E-04	1.03E-04	2.57E-05

Sector	Downwind Distance (miles)				
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NW	6.85E-06	1.92E-06	5.55E-07	1.65E-07	4.99E-08
NNW	4.09E+00	3.29E+00	2.74E+00	2.34E+00	2.04E+00
N	1.64E+01	1.32E+01	1.10E+01	9.36E+00	8.14E+00
NNE	4.09E+00	3.29E+00	2.74E+00	2.34E+00	2.04E+00
NE	6.85E-06	1.92E-06	5.55E-07	1.65E-07	4.99E-08

Protective Action Recommendations (PARs)

Evacuate the general public 0 to 2 miles, all sectors, and 2 to 10 miles in downwind sectors R, A and B.

Recommend the issuance of KJ to emergency workers within 0 to 2 miles of the plant, all sectors, and 2 to 5 miles in downwind sectors R, A and B.

8.0 Mini-Scenarios

The following are the mini-scenario packages for the several detailed events that occur in this Exercise. The mini-scenarios were created to allow for enhanced realism and control of the various key events. Each mini-scenario has been designed to allow for participant free play.

No.	Title	Success Path Possible
1	Diesel Generator G-02 Out of Service (Initial Condition)	Yes
2	Lightning Strike on Transformer 1X03	Yes
3	Gas Turbine Trip	Yes
4	Bus 1A06 Lockout and Ground	Yes
5	Tornado Damage	No
6	Failure of Diesel Generator G-01 to Load	Yes
7	Loss of Unit 1 Off-site/On-site AC Power	Yes
8	TSC Power	Yes
9	Containment Purge Supply Valves Failure	Yes
10	Radiation Release Path	N/A

Each mini-scenario generally contains the following parts as applicable:

- ◆ Responsible Controller
- ◆ Approximate Time (of event start)
- ◆ Location
- ◆ Event Summary
- ◆ Objective (purpose of the mini-scenario)
- ◆ Required Setup
- ◆ Initial Indications/Notification
- ◆ Postulated Events
- ◆ Controller Notes
- ◆ Restoration Guidelines
- ◆ References
- ◆ Attachments (picturing the event or problem)

Mini-Scenario #1

Diesel Generator G-02 Out of Service (Initial Condition)

Approximate Time: Initial Condition

Location: Diesel Generator G-02 Room

Summary: Diesel Generator G-02 is out of service after it failed monthly Surveillance TS-82 "Emergency Diesel Generator G-02 Monthly" due to oil being found in the test ports.

Objective/Purpose: The purpose of this initial condition is to have this power source unavailable from the plant.

Setup: Just prior to the Exercise, a Controller acting as the Responsible Engineer will brief the on-coming simulator Control Room shift, as would actually occur.

Initial Indications: This is an exercise initial condition known to participants.

Postulated Events:

1. Diesel Generator G-02 was declared out of service on Friday August 2 when it failed Surveillance TS-82, "Emergency Diesel Generator G-02 Monthly," due to oil having been found in the test ports. The Diesel Generator is currently disassembled to address potential jacket lining scoring.
2. Diesel Generator G-01 was tested with no problems and was aligned as the emergency power source for Bus 2A05. All other diesels were inspected and successfully tested as part of the Condition Report. A simulated Diesel Operability Analysis Report is shown as Attachment 1.
3. Upon disassembly of the engine, excessive amounts of deposits were discovered throughout the power pack portions of the engine. The scuffing was determined to be a result of excessive piston deposits. The deposits pushed the piston rings out, causing them to scuff the cylinder liner during engine operation.
4. It has been determined that the excessive deposits buildup was due to incompatibility between the lubrication oil and the fuel oil. A batch of fuel oil with a lower-than-normal sulfur content exacerbated the incompatibility.
5. The diesel engine has been cleaned and is in the process of being re-assembled.
6. Records of all the other diesel generators were examined; equipment manufacturers were contacted. There are no problems since the lubricating oil used on Diesel Generator G-02 (Amoco Super 13) was used only on G-02. All other engines are using the newer "Mobilguard SHC 120."

Controller Notes:

1. The field controller must coordinate component repair with the Simulator Drivers before technicians inform the Control Room/OSC of the evolution.

Restoration:

1. The engine is scheduled to be returned to service by 1800. Under emergency conditions, it would take about 3 hours to have the generator producing power.
2. This component can be restored to service any time after 1108.

Reference:

OE-7807; BGE Calvert Cliffs Nuclear Plant; 04-22-96; "Lubricating Oil Fuel Oil Incompatibility in Emergency Diesel Generator Set."

Attachments: Diesel Operability Analysis Report

Attachment 1
Diesel Operability Analysis Report

Diesel	Action	Result
G-01	Inspected, tested	Passed: Available. Aligned for 2A05
G-02	Inspected	Declared out of service
G-03	Inspected, tested	Passed: Available
G-04	Inspected, tested	Passed: Available
G-05	Inspected, tested	Passed: Available
G-501	Inspected, tested	Passed: Available

Mini-Scenario #2

Lightning Strike on Transformer 1X03

Approximate Time: 0720

Location: Point Beach Switchyard, south end, connected to Bus Section 1

Summary: Lightning strikes transformer 1X03 damaging two insulators. The resultant transformer lockout signal opens breaker H05, line 111 and bus section 1-2 breakers.

Objective/Purpose: This event removes 1 of 3 power supplies to the 13.8 kV system.

Setup: None

Initial Indications:

1. At 0710, the System Control Supervisor (SCS) calls to confirm a National Weather Service notification of severe thunderstorms in the area.
2. The following annunciators are received in the (Simulator) Control Room:
1X-03 HIGH VOLTAGE STATION AUX TRANS LOCKOUT
13.8 KV MAIN OR TIE BREAKER TRIP
345 KV BREAKER TRIP
3. The following Panel C-02, breaker indicating lights change from RED to GREEN:
F52-111
F52-BS-1-2
H52-05
H52-20

Postulated Events:

1. As stated, lightning strikes transformer 1X03.
2. Two insulators are damaged. The resultant transformer lockout signal opens breaker H05, line 111 and bus section 1-2 breakers.
3. A fast bus transfer on the 13.8 kV system occurs as designed; there is no immediate effect on the plant.
4. Operators may attempt to confirm the lightning strike by dispatching personnel to the switchyard, or possibly by calling Security. NOTE: Security has the keys for entry; this effort must be coordinated between Operations and Security.
5. In accordance with the DCS Handbook, Control Room operators should start the G-05 Gas Turbine to provide greater electrical system reliability. If so, see Mini-scenario #3.

6. Operators will have to call the Appleton Service Center for 1X03 support.
7. NOTE: If PBNP does not call the Appleton Service Center for 1X03 support, it will be assumed that System Control calls them. System Control (simulated by the Controllers) will call the Simulator Operators to inform them of the upcoming 1X03 support. At about 0900, the Appleton Crew will contact plant operators and Security informing them of the Crew's arrival.

Controller Notes:

1. The north and center insulators are obviously damaged. Chunks of porcelain are scattered on the gravel. There was or is no fire. The remaining portions of the insulators are cracked and blackened.
2. There is an insignificant amount of oil on the ground from the insulators. A hazardous materials spill is not a concern.
3. The intent of this mini-scenario is not to have the Fire Brigade called out. **Do not let participants activate the Fire Brigade!**
4. The Appleton Service Center crew arrives about one hour after notified, or by about 0900. Any Appleton Service Center responders will be simulated by the Control Cell. This Control Cell will simulate in-field damage surveys, notifications and response by the Appleton crew. If asked, the Control Cell will apprise PBNP as to status and prognosis.
5. PBNP Field responders should periodically contact (Drill) Control letting them know crew status, i.e., dispatched, on-site, any tagouts, completion. NOTE: The field controller must coordinate component repair or status with the Simulator Drivers before technicians inform the Control Room/OSC of the evolution.
6. PBNP responders must consider the Appleton crew during a site evacuation or as the plume impacts the switchyard.

Restoration:

1. Appleton line personnel will have sufficient parts to make repairs. They must also test the transformer oil.
2. If PBNP notifications, response and support for the Appleton crew warrant, this component can be restored to service any time after 1108.
3. If no other PBNP efforts appear likely to restore power by 1108, the Appleton repair effort will restore 1X03 at about 1105. This message will be injected by the Appleton Crew (Control Cell).

Attachments: None

Mini-Scenario #3

Gas Turbine Trip

Approximate Time: 0722 (or about 1 minute after component start)

Location: Simulator Control Room
Gas Turbine Generator Building

Summary: As directed by the DCS Handbook for the loss of 1X03, Operations should start G-05 gas turbine generator remotely from the Control Room per OI-110, "Gas Turbine Operation." G-05 trips about one minute later. A local start attempt (if tried) also fails due to a failure of combustor No. 6, which requires an emergency repair.

Objective/Purpose: This event ensures the loss of one possible alternate source of AC power to Unit 1.

Setup: None

Initial Indications:

1. Simulator Control Room annunciator panel C02: "G-05 GAS TURBINE GENERATOR" alarm one minute after start.
2. Simulator Control Room panel C02R: The "G-05 GT Ready to Start" light is extinguished.
3. Gas Turbine Building Gas Turbine Control Panel C500: "COMBUSTOR OUT FIRE" alarm; "Flame Detector Out Fire No. 6" light out.

Postulated Events:

1. As stated, Operators start G-05 gas turbine generator remotely from the Control Room. This should occur after 0720 when lightning strikes transformer 1X03 or at about 0815 when the loss of power occurs.
2. One minute after the G-05 component is started, it automatically shuts down due to a Combustor No. 6 out fire.
3. G-05 will also automatically shut down or be manually shutdown per ARB C500 I-5 for any local start attempts from the Gas Turbine Building.
4. An Emergency Work Order may be written to investigate and repair cause of the trip. A Maintenance Team may be dispatched.

Controller Notes:

1. Any local start attempts of G-05 fail.
2. A local start attempt can not be initiated until the gas turbine stops rotating; this will take about 15 minutes after the machine trips.

Restoration:

1. Maintenance must identify and replace the failed combustor No. 6 on G-05, which takes about four hours if spare parts are available on-site. This can be expedited, but see the next note.
2. This component can be re-tored any time after 1108. **NOTE:** The field controller must coordinate component repair or status with the Simulator Drivers before technicians inform the Control Room/OSC of the evolution.
3. **NOTE:** If G-05 is utilized as the success path for power restoration, power to the TSC/OSC will be lost from G-05 start initiation until G-05 is at full power. This occurs because when G-05 is started, the G501 Gas Turbine Auxiliaries ("dinky") diesel powering the TSC/OSC transfers to supply startup power to G-05.

References:

1. OI-110 (Rev. 1, 1/12/96), "Gas Turbine Operation."
2. Westinghouse Drawing 2A98719, Sheets 3 and 4, "W251A Normal Start Sequence"

Mini-Scenario #4

Bus 1A06 Lockout and Ground

Approximate Time: 0740

Location: Emergency Diesel Generator Building

Summary: A 3-phase fault occurs on bus 1A06; this results in the loss of power to Unit 1 "B" safeguards equipment.

Objective/Purpose: This loss of Bus 1A06:

1. results in the loss of power to Unit 1 "B" safeguards equipment;
2. isolates Diesel Generators G-03 and G-04 from supplying power to Unit 1.

Setup: None.

Initial Indications:

The following major annunciators are received in the (Simulator) Control Room:

UNIT 1 480V BUS UNDERVOLTAGE
UNIT 1 4.16 KV BUS UNDERVOLTAGE
UNIT 1 4.16 KV BUS LOCKOUT
G-03 EMERGENCY DIESEL
UNIT 1 NON-SAFEGUARDS MCC SUPPLY BREAKER TRIP
D-108 BATTERY CHARGER TROUBLE
D-02/D-04 125V DC BUS UNDER/OVER VOLTAGE

Postulated Events:

1. A short circuit occurs on the underground cables connecting Diesel Building Bus 1A06 to 1X14.
2. Subsequent internal stress causes the marginal insulator to fail, resulting in a phase-to-phase fault at Bus 1A06. This then degenerates into a 3-phase fault.
3. Consequently:
 - Safeguards Bus 1A06 locks out (due to bus bar failure/vaporization)
 - Safeguards Bus 1B04 loses its supply power
 - The "B" train of Unit 1 safeguards is lost
 - Charging pump 1P-2C trips on undervoltage
 - Breaker 1A52-54 trips on overcurrent.
4. Operators may notice that breakers 1A52-54, 1A52-77 and 1A52-84 are open. If operators reclose 1A52-54 and 1A52-77, then 1A52-54, 1A52-77 and 1A52-56 trip. If operators subsequently try to close 1A52-56, it will remain closed.

5. Responders inspecting the 1A06 and G-03 rooms find that only half the normal lighting is operating and the 1A06 room smells acrid. **There is no fire.** All (EDG) Building emergency lights are illuminated.

6. Investigations will later show that the short circuit was caused by cable degradation due to insulation breakdown from water ingress into the cableway.

Controller Notes:

1. If the load side of 1A52-84 is meggered to ground, technicians will measure 0 ohms.
2. The intent of this mini-scenario is not to have the Fire Brigade called out. **Do not let participants activate the Fire Brigade!**

Restoration:

1. The bus bar is partially vaporized; repairs may take several days.

Attachments: None

Mini-Scenario #5 Tornado Damage

Approximate Time: 0800

Location: Switchyard Bus Section 5

Summary: A tornado touches down northwest of the plant in the Contractor parking lot, causing much facility damage.

Objective/Purpose: The purpose of this event is two-fold:

1. Ensure the loss of other offsite power sources;
2. Provide one portion of the release path.

Setup:

1. North Gate controller to place yellow caution ribbon with signs stating "damaged" around several cars in the north Contractor parking lot, simulating car damage.
1. At 0750, controller inject messages will report tornado sightings in central Manitowoc County.
2. Between 0755 and 0802, Controllers are to describe heavy winds, rain, flying objects, etc. to anyone who would witness the tornado, for example North Gate and South Gate personnel.
3. After 0800, Controllers are to show to participants (who would see the damage) attached Figures 1, 2, and 3 of damage done by the tornado.

Initial Indications:

1. The Control Room receives indications of a loss of Unit 1 Safeguards AC power (Mini-scenario #7).
2. Security/plant personnel view the tornado and wind damage per attached Figures 1, 2, and 3.
The following breakers are damaged:
 - F52-151
 - F52-BS-4-5
 - F89-152
 - H06
 - H30

Postulated Events:

1. A tornado strikes the facility.
2. Wind-driven projectiles damage Bus Section 5, causing a loss of Safeguards AC power to Unit 1 (See Mini-scenario #7).

3. The winds also cause damage to the Unit 1 facade. Although not visible from the outside area, facade debris falls and severs an instrument air line to the containment purge supply valves (Mini-scenario #9).
4. An auxiliary operator(s) should be dispatched to investigate the damage. OSC teams (when activated) may assess/repair damage as determined.
5. Operators/TSC (when activated) should call the Appleton Service Center for repairs to Bus Section 5. If so, the Appleton Service Center crew arrives about one hour after notified, unless they were notified earlier from the damage to transformer 1X03 (See Mini-scenario #2).

Controller Notes:

1. As outlined in Mini-scenario #2, any Appleton Service Center responders will be simulated by a designated OSC Controller. This Controller will simulate in-field damage surveys, notifications and response by the Appleton crew. If asked, the Controller will apprise PBNP as to status and prognosis.
2. PBNP Field responders should periodically contact (Drill) Control letting them know crew status and actions. NOTE: The field controller must coordinate component repair or status with the Simulator Drivers before responders inform the Control Room/OSC of the evolution.
3. Oil and chemical drums are located and scattered in the vicinity; however, there will NOT be any spills.
4. There is no damage to any of the security fence or perimeter boundaries. Plant security should be discussed but is not meant to be an issue.
5. Controllers must delay the repair of the containment purge supply piping until after 1110.
6. PBNP responders must consider the Appleton crew during a site evacuation or as the plume impacts the switchyard.
7. All off-site sirens are undamaged and will work .
8. If queried, WPS will report sporadic localized power outages, but nothing major. WPS power supplies to WE are not affected.

Restoration:

1. Appleton Service Center field responders will be designated to make the repairs.
2. If PBNP notifications, response and support for the Appleton crew warrant, the power can be restored to service any time after 1108.

Attachments:

1. Figure 1 - View of the switchyard damage.
2. Figure 2 - View of the area north of the switchyard.
3. Figure 3 - View of the Unit 1 facade damage.

Figure 1
View of the Switchyard Damage

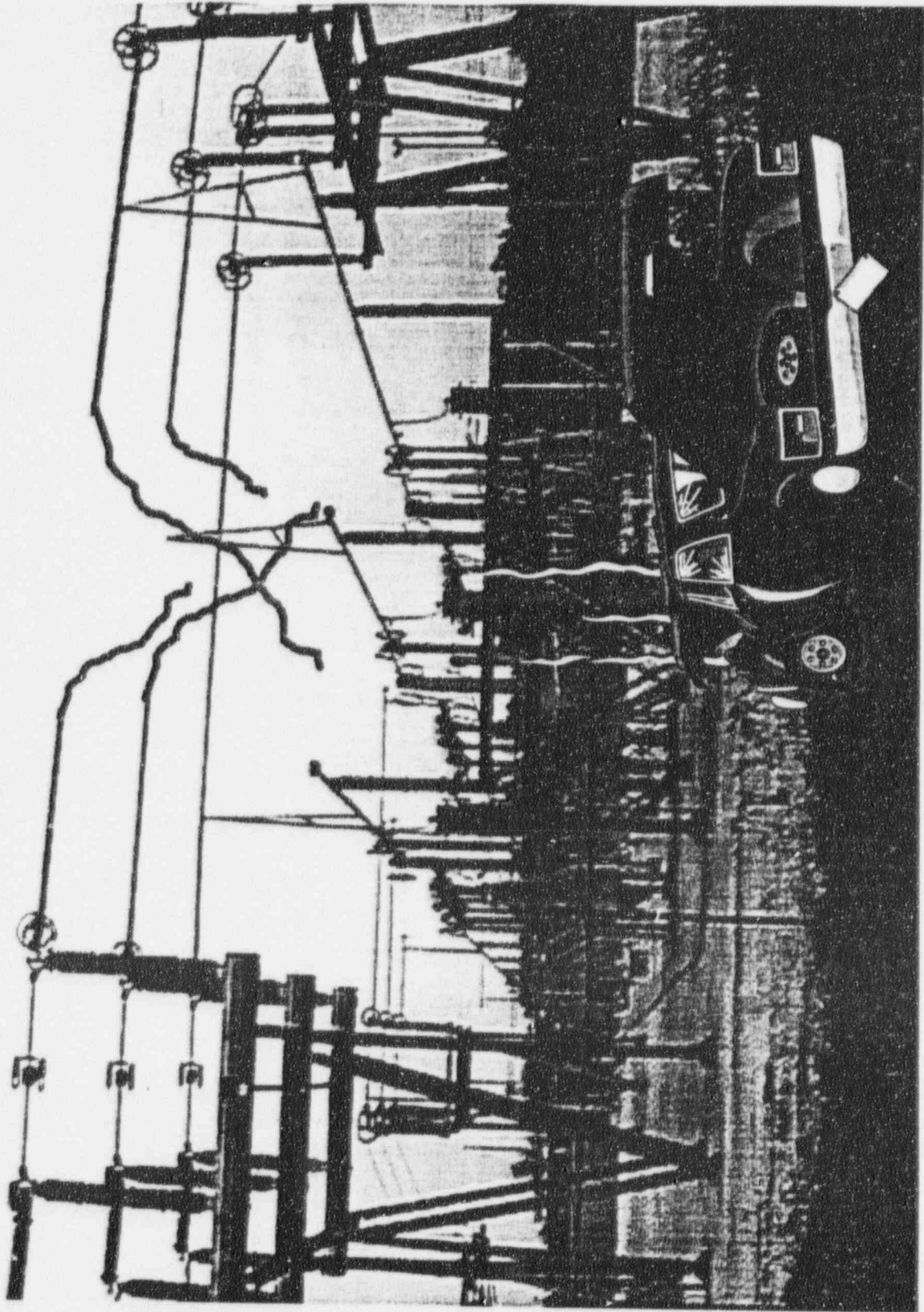


Figure 2
View of the Area North of the Switchyard

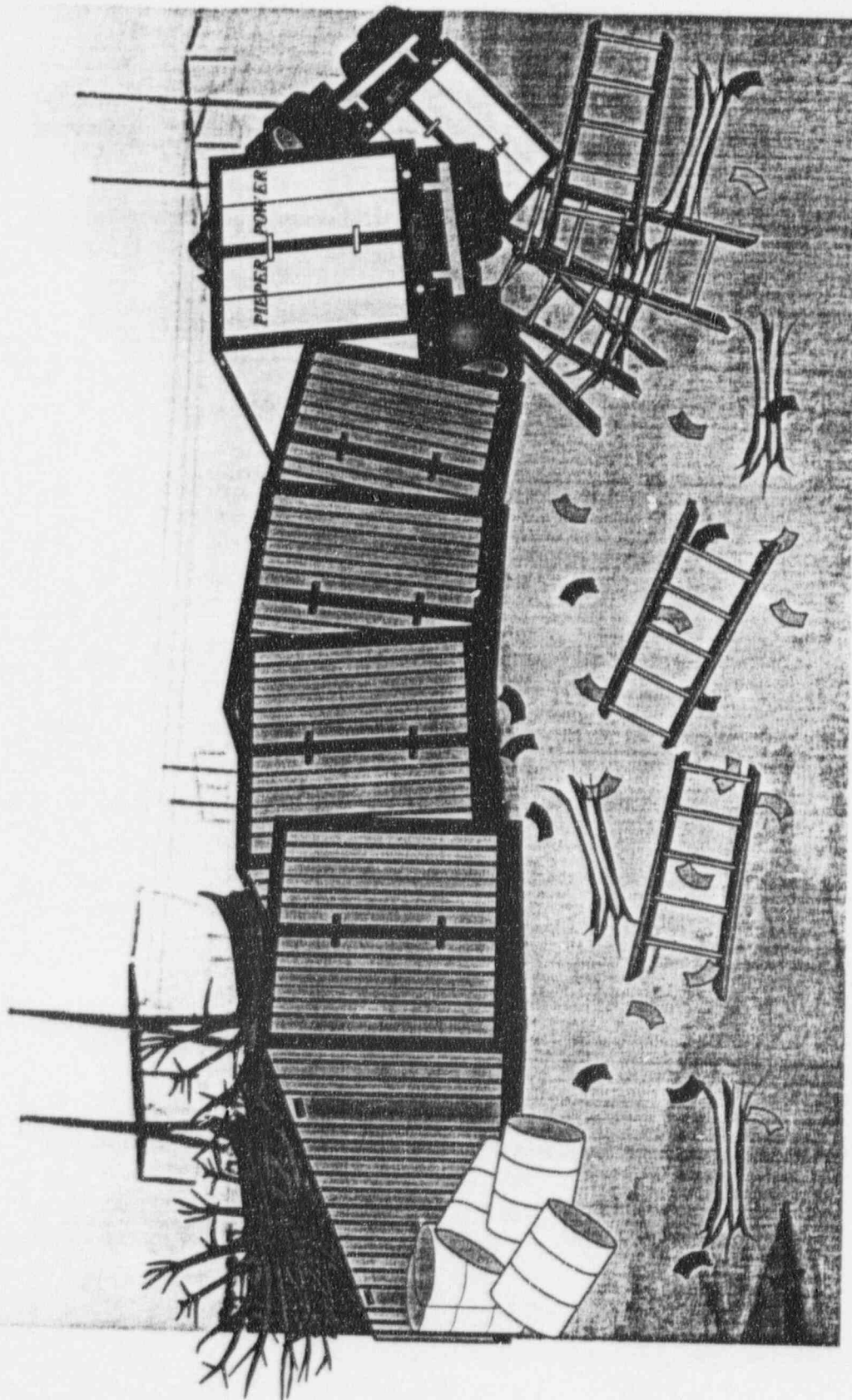
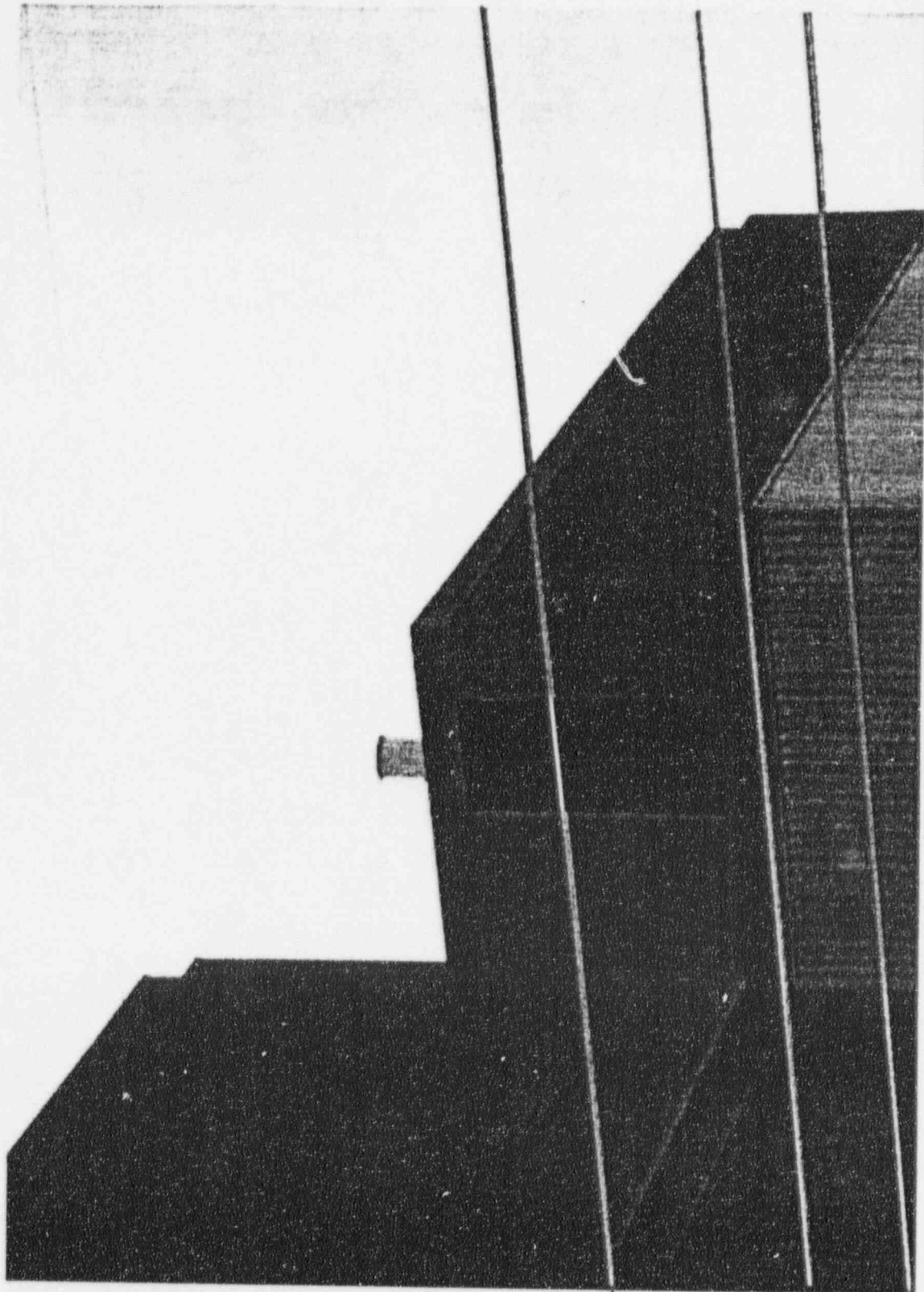


Figure 3
View of the Unit 1 Facade Damage



Mini-Scenario #6

Failure of Diesel Generator G-01 to Load

Approximate Time: 0800

Location: Simulator; Diesel Generator G-01 Room

Summary: A loss of off-site power occurs at 0800. Diesel generator G-01 starts as designed but does not load due to a field flashing relay/lockout problem.

Objective/Purpose: This event disables Diesel Generator G-01 and prevents power from reaching Unit 1 Safeguards components.

Setup: None.

Initial Indications:

Simulator - The following annunciators are lit:

On panel C-02: G-01 EMERGENCY DIESEL

G-01 EMERGENCY DIESEL TRIP OR LOCKOUT

Diesel Generator G-01 Room, Panel C64 - The following annunciators are lit:

NO FIELD

START FAILURE

Postulated Events:

1. At 0800, Diesel generator G-01 starts as designed but does not load. The above indications are received.
2. Investigations will show the following:
 - The 100 amp fuses are blown.
 - A resistance check between FAC and FAB measures 360Ω .
 - Diode CR-7 check satisfactorily.
 - A resistance check between FA and FB measures 0.4Ω . Normally this resistance should be closer to 1Ω .
 - An inspection of the generator lead box finds no apparent problems.
3. Maintenance or Engineering may conclude that the field circuit is totally faulted. If so, responders should disconnect the field leads in the generator lead box; the re-checked resistance between FA and FB now measures 8Ω .
4. Responders should then pull/inspect the cables in the trench between C34 and the Diesel Generator.

5. Cable inspection will show that the F1 and the F2 leads have worn and (at some locations) have bare conductors. It appears that mice or squirrels have chewed through the cable insulation. The short circuit occurred when two bare conductors touched each other.

Controller Notes:

1. If operators start G-01 prior to checking resistance between FAB and FAC, the annunciators listed above reflash.
2. The resistor between FAB and FAC is physically located on the top rear of Panel C34. The resistor is not in stock; a replacement will have to be obtained from G-02.

Restoration:

1. The cables may be replaced or spliced; this effort will take between 30 to 60 minutes.
2. Restoring the field connections at the generator will take an additional 15 to 20 minutes.
3. This component can be restored any time after 1108. NOTE: The field controller must coordinate component repair or status with the Simulator Drivers before technicians inform the Control Room/OSC of the evolution.

Attachments: None

Mini-Scenario #7

Loss of Unit 1 Off-site/On-site AC Power

Approximate Time: 0800

Location: Throughout the plant

Summary: In combination with the previously described events plus the trip of Unit 2, a Loss of Unit 1 Off-site/On-site AC Power occurs.

Objective/Purpose: This event sets up the conditions for the subsequent core degradation and fuel failure due to the lack of core cooling. The purpose of this mini-scenario is to provide guidance to Exercise Controllers as to what areas/components have lighting/power.

Setup:

1. Post yellow caution tape around several cars in the Contractor parking lot; have signs stating "This is a Drill. Damaged". This will simulate tornado damage.
2. Post signs at all elevators stating: "This is a Drill. This elevator is inoperable".
3. Turn out all TSC and OSC lights.

Initial Indications: Power is lost to several plant areas/components as described below.

Postulated Events:

1. A Loss of Unit 1 Off-site/On-site AC Power occurs when the events previously described occur. (See Controller Note 1).
2. Attachment 1 lists the plant areas/components that have or do not have power.
3. Power must be restored at 1108, depending on responder priorities and actions; see the Restoration Notes.

Controller Notes:

1. The "Loss of AC Power" is per the ECA-0.0 procedural definition, when in combination with the power loss events, buses 1B03 and 1B04 are lost for Unit 1.
2. From a Controller point of view, simulating a loss of power is challenging. In-plant controllers must know the areas/components that have lighting/power and must describe the situation to the participants. Use Attachment 1 as guidance. As responders enter an area, inform them that an area is dark, lit or on emergency lighting as appropriate. As responders view or (could) hear a component, tell them what they would see/hear. Note that if an area were dark, responders would need flashlights to see, and that they would walk cautiously; have responders act accordingly.

3. There is no power to any cooling fans except those for the Control Room. Therefore, building temperatures will get much higher than normal. Controllers should tell responders about the high ambient temperatures. (When TSC and OSC power is restored, fans there will operate).
4. Station batteries should last for 4 to 6 hours. Power will be out for a little over three hours, so battery power should be a concern for participants but not for Exercise purposes.
5. Unit 1 will use condensate storage tank (CST) water for steam generator cooling.

Restoration:

1. As stated, power will be restored at 1108. The exact method will depend upon responder priorities and actions. NOTE: The field controller must coordinate power restoration, component repair or status with the Simulator Drivers before technicians inform the Control Room/OSC of the evolution.
2. Power may be restored from 2A06 to 1B04 by the following path:
 - 2A06 > BKR 96 and 49 > 2A04 > BKR 52 > 1A04 > BKR 55
 - BKR 55 > 1A02 > BKR 15 > 1X12 > BKR 1B52-5
 - BKR 1B52-5 > 1B02 > BKR 1B52-18C > 1B04.

If this evolution is tried, BKR 55 cannot be closed and any breaker plugged into this cubicle will not close until 1108.

3. If no substantial progress is made to restore power, it will be assumed that the Appleton crew restores 1X03 at 1108.

Attachment:

1. Areas/Components Affected by the Loss of AC Power

Attachment 1

Areas/Components Affected by the Loss of AC Power

Unit 1:

Powered:

- Emergency Lighting
- Service Air (if restored by Operators)

Not Powered:

- Station Transformer and associated loads
- Unit Transformer and associated loads
- Normal lighting systems
- (Basically, there is no power to Unit 1 except for emergency lighting).

Unit 2:

Powered:

- "B" Safeguards Components
- Emergency Lighting

Not Powered:

- "A" Safeguards Components
- Normal lighting systems

Common Equipment/Areas:

Powered:

- Control Room instrumentation
- Radios
- Gai-tronics
- Telephone system, but not powered features
- Emergency Lighting
- All security functions, including keycards and doors
- Diesel-driven fire pump; fire water is available and operable
- Meteorological Tower
- Trailers and Quonset Huts
- South Service Building/#1 Warehouse
- Site Boundary Control Center/EOF

Not Powered:

- Instrument Air (but can be restored)
- Building Cooling Fans (except those in the Control Room)
- All elevators
- Energy Center

Mini-Scenario #8

TSC Power

Approximate Time: 0800

Location: Technical Support Center/Operations Support Center

Summary: The normal and backup power supplies to the TSC building become unavailable. Responders must implement appropriate procedures to restore TSC power.

Objective/Purpose: This mini-scenario outlines the events leading to the loss of power to the Technical Support Center and subsequent power restoration.

Setup: At 0800, the Lead TSC Controller will turn off the lights in the TSC and OSC to simulate normal TSC power being unavailable.

Initial Indications: The TSC and OSC are dark. However the telephones, radios and Gai-tronics work.

Postulated Events:

1. When bus section 5 was damaged by the tornado, a loss of Unit 1 AC power occurs.
2. The TSC/OSC lose normal power when the Unit 1 main generator breaker is tripped.
3. The G-65 auxiliary diesel (G501) would normally supply backup power to the TSC/OSC. However when G501 senses the undervoltage condition on bus B500, it automatically starts and transfers load to supply power to the gas turbine auxiliaries. This results in the emergency backup power to the TSC being unavailable. (Normal TSC power is supplied from 1B01; emergency power would have been from G501).
3. Operators should start the Gas Turbine. However, it trips on start up and is inoperable (Mini-scenario #1).
4. With no power to the TSC and with the Gas Turbine inoperable, the Duty Technical Advisor should request that Control Room Operators locally re-align diesel G501 to provide power to the TSC/OSC. This effort should be accomplished using EPIP 4.1, "Technical Support Center Activation", Emergency Power Supply section.
5. Power should then be restored to the TSC/OSC.

Controller Notes:

1. At 0800 the Lead TSC Controller will turn off the lights in the TSC and OSC to simulate backup power being unavailable.
2. Upon successful completion of EPIP 4.1, the field controller must notify the Lead TSC controller. They will coordinate the time when the TSC/OSC lights can be turned on.
3. Relocation of facilities is **not** an Exercise objective. **Do not let participants relocate to the EOF.**
4. NOTE: If Gas Turbine G-05 is utilized as the success path for power restoration, power to the TSC/OSC will be lost from G-05 start initiation until G-05 is at full power. This occurs because when G-05 is started, the G501 Gas Turbine Auxiliaries ("dinky") diesel powering the TSC/OSC transfers to supply startup power to G-05.

Restoration: Power would be restored upon successful completion of EPIP 4.1.

Attachments: None

Mini-Scenario #9

Containment Purge Supply Valves Failure

Approximate Time: 1109

Location: Unit 1 Containment and Facade, east side, El. 88'
Unit 1 Facade fan room, El. 66'

Summary: When containment pressure peaks at about 130 psig, the containment purge supply valves (VNPSE-3245 and -3244) are forced open. An unmonitored release of radiation commences.

Objective/Purpose: These forced-open valves provide a critical portion of the release path.

Setup: None

Initial Indications:

1. Status light on C01 and indication lights on back of 1-C04 for VNPSE-3245 and -3244 indicate that the valves are open.

Postulated Events:

1. Per Mini-scenario #5, the tornado causes damage in the Unit 1 facade. Additionally, the 1" instrument air supply line downstream of IA-78 is sheared.
2. The referenced instrument air line goes to a HVAC control panel. This break prevents the Unit 1 air header from pressurizing.
3. As stated, the containment high pressure forces the containment purge supply valves open.
4. The valves remain open even after the containment depressurizes. The valve positioning cylinder does not hold/close because of the lack of instrument air pressure.

Controller Notes:

1. Before the release starts and after the release stops (containment pressure reaches zero), participants may attempt to inspect the facade area. Controllers should describe the facade area per Mini-scenario #5 and above.
2. One of the purge valves must be closed by 1400 for offsite objective purposes. It can be closed between 1300 and 1400.
3. To stop the release, responders can:
 - manually close outboard valve VNPSE-3244
 - restore instrument air and close the valve(s).

However, after the release the Unit 1 facade area will be contaminated and have extensive condensation. See Section 7.1 for area radiological data.

4. If closure efforts are untried or unsuccessful, the outboard valve VNPSE-3244 will close on its own at 1400.

Restoration:

As stated, participants can close one of the valves no earlier than 1300 or no later than 1400. Otherwise one valve will be closed at 1400.

Attachments: None

Mini-Scenario #10

Radiation Release Path

Approximate Time: 1109

Location: Simulator, Containment, Facade

Summary: A release of radioactivity occurs when containment purge supply valves are forced open after a containment hydrogen detonation.

Objective/Purpose: This mini-scenario outlines the radioactive release path.

Setup: None

Initial Indications:

1. Containment pressure decreases.
2. Field monitoring teams detect radiation.

Postulated Events:

1. Containment pressure peaks at about 130 psig, due to the hydrogen detonation.
2. Because of the high pressure, the containment purge supply valves are forced open (Mini-scenario # 9). Consequently, the containment purge supply line inspection port blows out.
3. An unmonitored, unfiltered release of radiation is underway as follows: Reactor vessel → failed reactor coolant pump seals → containment → forced open containment purge supply valves → forced open inspection port → facade → damaged facade roof → environment.
4. The release continues until containment depressurizes and pressure drops below atmospheric pressure. The release is "officially" terminated at 1400 when the outboard containment purge supply valve closes at 1400 (Mini-scenario No. 9).

Controller Notes:

1. Note that this release is unfiltered and unmonitored.
2. Release information and data are found in Section 7 of this manual.

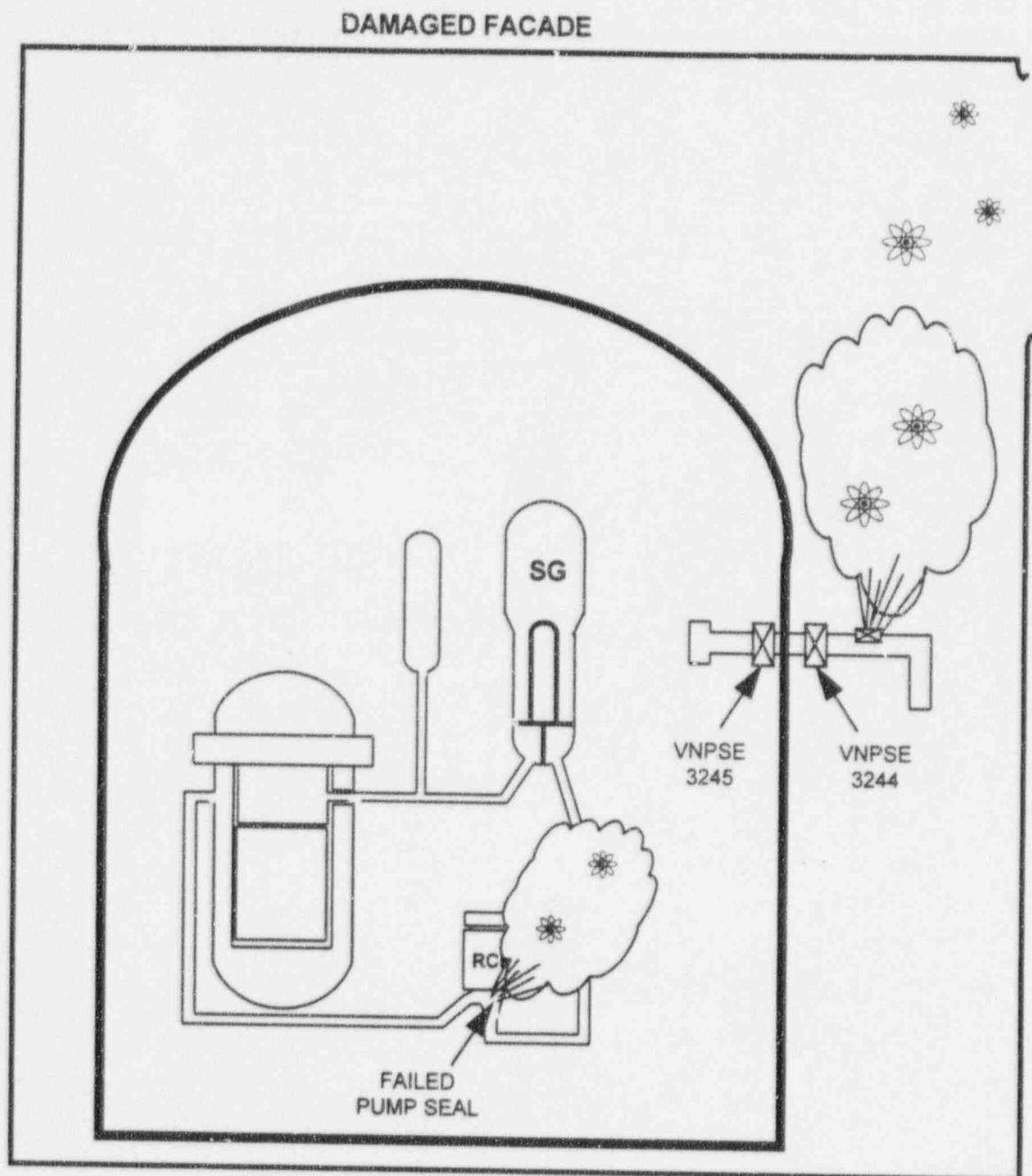
Restoration:

1. For the short-term, participants must keep containment pressure below atmospheric pressure to contain the release.
2. The outboard purge supply valve closes at 1400.
3. Closure of the inboard purge supply valve will be a recovery task.

Attachments:

1. Radioactive release path.

Attachment 1 Radioactive Release Path



9.0 PUBLIC INFORMATION MESSAGES

Providing the news media and the public with accurate and timely information about an accident is one of the most important aspects of emergency response. The public's reactions and perceptions are influenced by the information relayed to them. To that end, this Exercise will test public information response to ensure that Wisconsin Electric Power Company is prepared for an emergency at the Point Beach Nuclear Plant. The External Affairs Department, Milwaukee Communications Center (MCC) and the Joint Public Information Center (JPIC) will be activated.

Controllers will pose questions to participants as concerned citizens, employees, members of the legal and financial communities, government officials, and as members of the media. The phone numbers to be used for each group being tested will be provided to callers during training sessions prior to the Exercise. A name and affiliation must always be used when calls are made.

The following pages include questions for callers to test MCC and JPIC response activities, and for mock media to pose at the news briefings. The questions are grouped in relation to specific events in the Exercise scenario. Free play by callers is encouraged. Additionally, general questions about WE, the state or counties, background of Point Beach, radiation, nuclear power accidents, rates and protective actions can be asked. The State and Counties are fully participating during this Exercise; thus, controllers should press for off-site spokespersons and information.

Callers should document calls and comment on the responses. Always precede and complete call-in questions with "This is a drill."

Message and Controller forms have been provided here to inject problems into the scenario or to cause the exercising of a certain response aspect. The lead MCC and JPIC controllers have responsibility for handling these messages.

This section contains the following subsections:

- 9.1 WE Media, Citizen and Officials Calls
- 9.2 WE Media Monitor Scripts

State and County rumor control messages are provided in the State of Wisconsin Exercise Manual, submitted under separate cover.

9.1 WE Media, citizen and officials calls

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

0900 - 0945

1. TO THE TELEPHONE CENTER - 221-3700

This is WLTU Radio in Manitowoc. Was there an accident at the plant today?

- What happened?
- Has anyone been injured?
- Has any radiation been released?
- What is the status of the plant?

2. TO THE GENERAL WE NUMBER - 221-3700

My name is Mary Hatch. I live near the nuclear plant, and I know something's up. What information can you give me?

3. TO POINT BEACH NUCLEAR PLANT - 755-2321

Has there been an accident? I heard it on my scanner. How bad is it?

4. TO THE TELEPHONE CENTER - 221-3700

This is WBAY TV in Green Bay. We've got a photographer on the way to the plant. Can you give him clearance to access the property?

5. TO THE TELEPHONE CENTER - 221-3700

This is WBAY again. Are the residents around the plant in danger? When are you issuing another news release? Can you call me when it goes out?

6. TO THE TELEPHONE CENTER - 221-3700

This is WLTU Radio. We'd like information for our morning newsbreak. Can you give us a full run down of the events?

7. TO THE TELEPHONE CENTER - 221-3700

I am a WE customer. I heard something about an emergency at Point Beach. Is this true?

8. TO THE TELEPHONE CENTER - 221-3700

This is WCUB Radio. What is the latest information you have regarding Point Beach?

9. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

I am scheduled to work second shift today. Should I go in?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

0945 - 1030

1. TO THE TELEPHONE CENTER - 221-3700

This is the Associated Press. We heard about the accident. Is your news center at the Hamilton House in Two Rivers activated? Will the state and federal agencies be there as well?

2. TO THE TELEPHONE CENTER - 221-3700

This is WAUN Radio. I heard there is no power at the power plant?? Is this true? How is that possible??!!

3. TO THE TELEPHONE CENTER - 221-3700

This is WPNE TV in Green Bay. What are the details surrounding the accident at Point Beach? We're going with a special update at 11 am.

4. TO THE TELEPHONE CENTER - 221-3700

I am a WE customer. How is the accident going to affect my electric bill?

5. TO THE TELEPHONE GROUP - 221-3700

I want to talk to Chairman Abdoo. We trusted you people. Now look what happened. And now you're using the site as a nuclear waste dump? This is awful. What is the company doing about this?

6. TO THE GENERAL WE NUMBER - 221-3700

I am a WE customer. Do you have any details on the accident?

7. TO THE TELEPHONE CENTER - 221-3700

This is Jane McDormand at WPNE TV. We're starting to get a lot of calls from concerned and frightened viewers. Do you plan to start evacuation procedures? How bad is this situation?

8. TO THE GENERAL WE NUMBER - 221-3700

This is M&I Bank calling. We heard on the radio that something happened at your plant in Two Rivers today. Should we freeze activity on your accounts?

9. TO THE TELEPHONE CENTER - 221-3700

This is the Chicago Tribune calling. What is the current status of the situation?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1030 - 1115

1. TO THE TELEPHONE CENTER - 221-3700

This is UPI in Milwaukee. What is the latest information on your situation at Point Beach? Have employees at the plant been evacuated? What about residents around the plant? When will you have more information?

2. TO THE GENERAL WE NUMBER - 221-3700

Hello, my name is Jack Thomas, and I live in Tisch Mills. Is this a drill or the real thing? What's up?

3. TO THE GENERAL WE NUMBER - 221-3700

Will the Point Beach accident affect my supply of electricity? I own a pizzeria in Mishicot.

4. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

I live in Washington DC but my mother lives in Green Bay. Is she in any danger?

5. TO THE TELEPHONE CENTER 221-3700

I understand there's an emergency at your nuclear plant. My father is on life-support equipment. Will anything happen to our power? How can I be sure. He lives in Francis Creek.

6. TO THE TELEPHONE CENTER - 221-3700

This is Jack Rodgers of WQTC Radio in Two Rivers. We're getting lots of call about the plant. We don't want people calling us. What number should we tell our listeners to call to get information about the plant?

7. TO THE GENERAL WE NUMBER - 221-3700

I'm a Wisconsin Electric stockholder, and I'm concerned about my investment. Should I sell my stock now?

8. TO THE TELEPHONE CENTER - 221-3700

This is WQTC Radio. Can you tell us where the nearest fallout shelters are so we can tell our listeners?

9. TO THE TELEPHONE CENTER - 221-3700

I am a WE customer. How serious is this situation? What type of people are you hiring up there?

10. TO THE TELEPHONE CENTER - 221-3700

Is this the big one? How does it compare to Three Mile Island or Chernobyl? I live in Milwaukee. Will I be affected by the radiation?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1115 - 1200

1. TO GENERAL WE NUMBER - 221-3700

I live in Two Rivers. What's happening at the plant? What type of actions are underway to get this situation under control?

2. TO THE TELEPHONE CENTER - 221-3700

This is Doug Schultz at the Milwaukee Journal. Can you update me on Point Beach? I need information for my story in the next edition.

3. TO THE TELEPHONE CENTER - 221-3700

Hi, I live in Waukesha. What happened at the nuclear plant today? What caused the accident?

4. TO THE TELEPHONE CENTER - 221-3700

This is WCUB Radio in Two Rivers. I've seen your first news release. What other details can you give me?

5. TO THE TELEPHONE CENTER - 221-3700

What will this accident do to the price of my stock? Should I sell it?

6. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

This is WCUB Radio. Are your people out testing the radiation levels to see how bad it is? When we will know the severity of this situation?

7. TO THE TELEPHONE CENTER - 221-3700

This is the Chicago Sun Times. We heard that there is major damage in northeast Wisconsin. Does that mean Door County has been affected?

8. TO THE TELEPHONE CENTER - 221-3700

This is Jim Mullen from CNN. We're flying in a film crew to get footage of the plant site and surrounding areas. How close can we get? Can we land our helicopter? Where?

9. TO THE TELEPHONE CENTER - 221-3700

I'm a fisherman. Are the fish in Lake Michigan contaminated?

10. TO THE TELEPHONE CENTER - 221-3700

This is WLTU Radio. I recall a scare of a hydrogen explosion at Three Mile Island. Could this happen at Point Beach?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1200 - 1245

1. TO THE TELEPHONE GROUP - 221-3700

I heard something about a brochure we're supposed to have. What brochure is that? Where can I get one?

2. TO THE GENERAL WE NUMBER - 221-3700

This is Mary Harris. I'm new to the Two Rivers area. I heard about the nuclear accident. How do I know what to do? I'm home alone with my infant son, and I'm really upset.

3. TO POINT BEACH NUCLEAR PLANT - 755-2321

This is WOMT Radio in Manitowoc. What is the latest news we can give our listeners?

4. TO POINT BEACH NUCLEAR PLANT - 755-2321

This is WOMT Radio in Manitowoc again. Can we talk to someone in charge of the situation there?

5. TO THE TELEPHONE GROUP - 221-3700

This is Jackie Hartmann, regional manager in the Rock River Region. How should my staff handle questions that we're receiving from our customers?

6. TO THE TELEPHONE CENTER - 221-3700

How do I protect myself from the radiation? I live within five miles of the plant and know that I'll be exposed if I go outside. How do I evacuate?

7. TO THE TELEPHONE CENTER - 221-3700

This is WFRV TV in Green Bay. We'd like to do an in-depth story at five. Can you give me some background on the company? When can I expect a call back?

8. TO THE GENERAL WE NUMBER - 221-3700

Hi, this is Mary Hill. I was just talking to an employee at your nuclear plant and was cut off. Has there been an accident?

9. TO THE TELEPHONE CENTER - 221-3700

I'm calling from New York; this is NBC. We have a helicopter headed that way. Who can give us permission for the pilot to make a pass over the site? Are we in any danger of radiation exposure?

10. TO THE TELEPHONE CENTER - 221-3700

This is Doug James from ABC Washington. I want details. Everything thus far has been sketchy. I don't particularly want the news release information but something more detailed.

11. TO THE TELEPHONE CENTER - 221-3700

This is WBAY TV. Is it true that you released radioactive gas at the nuclear plant? How much was released?

12. TO THE TELEPHONE CENTER - 221-3700

This is WLTU Radio. We heard there were several employees injured when the radiation was released in the plant? Is this true?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1245 - 1330

1. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

Was anyone killed in the accident this morning? Many of my neighbors work there.

2. TO THE TELEPHONE CENTER - 221-3700

This is WAUN Radio. When is your next media briefing? Will it be televised?

3. TO THE TELEPHONE CENTER - 221-3700

What details can you give me about the accident? Don't hold anything back. I need to know. I live in Two Rivers.

4. TO THE GENERAL WE NUMBER - 221-3700

This is Joan Simon. My cows were outside this morning. Does this mean they've been exposed to radiation? I live in Valders.

5. TO THE TELEPHONE CENTER - 221-3700

This is WLUK TV in Green Bay. We've heard that the NRC is in Two Rivers. Are they going to take control of the plant?

6. TO THE TELEPHONE CENTER - 221-3700

This is WAUN Radio in Kewaunee. Has the governor declared the plant a "state of emergency." If so, will the residents be able to be reimbursed with funds for the inconvenience the accident has caused them?

7. TO THE TELEPHONE CENTER - 221-3700

This is WPNE TV. I can't get anyone from your information group on the phone! What is the latest information?

8. TO THE TELEPHONE CENTER - 221-3700

This is WPNE TV. Exactly, what is a plume? How dangerous is it?

9. TO THE GENERAL WE NUMBER - 221-3700

I've heard all sorts of reports to the number of casualties? What's correct? I live in Tisch Mills and know many people who work at the plant.

10. TO THE GENERAL WE NUMBER - 221-3700

This is the office of Senator Russ Feingold from Washington. I heard we have a "little problem" at Point Beach. Can you give me an update? Are things improving or getting worse? What can my office do to help?

11. TO THE TELEPHONE CENTER - 221-3700

This is the Wall Street Journal. We heard that your stock may be frozen. What can you tell us? Also, I'd like a brief financial history on the company. Can you fax this to me?

12. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

I live in Francis Creek. What is a plume and where is it headed?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1330 - 1415

1. TO THE GENERAL WE NUMBER - 221-3700

This is Larry Epstein. I work at the plant, but today was my day off. My neighbors are concerned about their spouses. Have all employees been accounted for?

2. TO THE TELEPHONE CENTER - 221-3700

My wife will be released from the Manitowoc Hospital today with our newborn daughter. Should I go get them now? Is it better that they not go outside?

3. TO THE TELEPHONE CENTER - 221-3700

This is the Manitowoc Herald Times. Will the residents in Two Rivers be evacuated?

4. TO THE TELEPHONE CENTER - 221-3700

This is The Boston Globe. I'm calling to verify information I received about the problem at the nuclear plant. Is it true that the plant is shut down and people have been injured as a result of the accident?

5. TO THE TELEPHONE GROUP - 221-3700

This is Scott Neitzel from the PSCW. We are getting calls on financial impacts of the Point Beach plant. What should we be telling the media who call?

6. TO THE GENERAL WE NUMBER - 221-3700

The reporter on television said that radiation is deadly. How many people at the plant have died so far?

7. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

This is Bob Klein (simulator contract worker). Are we supposed to come into work? I'm on second shift. Is the accident bad?

8. TO THE TELEPHONE GROUP - 221-3700

This is State Representative Dale Bolle calling from Madison. How bad is the accident? I'm getting calls from my constituents. I want to be kept informed and they want to be kept informed.

9. TO THE TELEPHONE CENTER - 221-3700

This is the Wall Street Journal. Can you give me a brief overview of the type of insurance you have? What is your insurance company's name and number? I'd like to ask them some questions.

10. TO THE GENERAL WE NUMBER - 221-3700

If I've been exposed to radiation, how can I tell? I live in Two Rivers.

11. TO THE TELEPHONE CENTER - 221-3700

This is WLUK TV. What is the general feeling of the employees there? Will heads roll?

12. TO THE TELEPHONE CENTER - 221-3700

This is WBAY TV. Has the radiation leak been contained yet?

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH "THIS IS A DRILL."

1415 - 1500

1. TO POINT BEACH NUCLEAR PLANT - 755-2321

This is WOMT Radio in Manitowoc. What is the latest news we can give our listeners?

2. TO GENERAL WE NUMBER - 221-3700

I live in Green Bay. What's happening at the plant? What type of actions are underway to get this situation under control?

3. TO THE TELEPHONE CENTER - 221-3700

I am a WE customer. How is the accident going to affect my electric bill?

4. TO GENERAL WE NUMBER - 221-3700

I am a journalism student at Marquette. Can I discuss your response and the media response to this accident. I want to use this accident as part of my Master's Thesis.

5. TO THE TELEPHONE CENTER - 221-3700

This is WETA Radio, National Public Radio, in Washington DC. You are live. Please tell our listeners:

- What happened?
- Has anyone been injured?
- Has any radiation been released?
- What is the status of the plant?
- How many people have been evacuated?
- What do you think the future of nuclear power will be?

6. TO THE TELEPHONE CENTER - 221-3700

How do I protect myself from the radiation? I live in Kaukauna and I know that I'll be exposed if I go outside. How do I evacuate?

7. TO POINT BEACH NUCLEAR PLANT - 755-2321

This is UPI in Milwaukee again. What is the latest information on your situation at Point Beach? Have all employees at the plant been evacuated? What about residents around the plant? When will you have more information?

8. TO THE POINT BEACH NUCLEAR PLANT - 755-2321

I am with the Madison Times. What is the status of the dry cask storage project? What will you do?

9. TO THE TELEPHONE CENTER - 221-3700

This is the Chicago Tribune calling again. What is the current status of the situation?

9.2 WE Media Monitor Scripts

**POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE
MEDIA MONITOR SCRIPT**

Segment #1

Time: 9:00 a.m.

THIS IS A DRILL

"This is Adam Goldman for WTPL Radio in Two Rivers.

We've just learned that an emergency was declared at Point Beach Nuclear Power Plant this morning after a tornado damaged the plant. As listeners know, this area has been hit by severe weather and there were some tornado sightings in Manitowoc County. Apparently one hit the Point Beach Nuclear Plant.

As of this hour, the tornado knocked out power to the plant. Both nuclear reactors were shut down, but one reactor has been seriously damaged.

The plant is located in Two Creeks, about 10 miles north of Two Rivers.

This is all the information I have so far. I will be reporting as more details are known.

For WTPL, this is Adam Goldman."

**POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE
MEDIA MONITOR SCRIPT**

Segment #2

Time: 10:00 p.m.

THIS IS A DRILL

"This is Matthew Ellison for WMKE-TV. I'm reporting live from an emergency press center in Milwaukee. We've just come from a briefing where Wisconsin Electric spokespersons made a statement and answered questions regarding the events that have happened this morning.

They report that a "Site Emergency" was declared at the Two Rivers plant earlier this morning. This is a serious situation.

A tornado destroyed power lines and equipment that the reactors need to keep running. Both reactors are shut down, but the nuclear fuel still need to be cooled for months afterward. With no power, there is no nuclear fuel cooling. The utility reports that the tornado and other equipment problems have left the plant with only one backup power generator plus batteries. These are apparently not enough.

No injuries are reported and un-needed staff have evacuated the site. Federal officials are on their way to the stricken plant.

For WMKE, this is Matthew Ellison."

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE
MEDIA MONITOR SCRIPT

Segment #3

Time: 11:00 p.m.

THIS IS A DRILL

"This is Fran Jordan for WPNE-TV. I am here with Richard Wilkins of the Milwaukee-based Citizens Against Nuclear Power. He has definite opinions on the cause of the emergency at the Point Beach Nuclear Plant."

Richard Wilkins: "This disaster is a direct result of Wisconsin Electric's lackadaisical attitude towards this dangerous technology. The cause of this is due to their uneducated operators beating sensitive nuclear equipment with heavy sledge hammers. Wisconsin Electric was fined several million dollars for this, and now we are paying for this with our children's lives."

Fran Jordan: "We have not been able to reach company officials for comment on this allegation. We will continue to keep you informed."

For WPNE-TV, I am Fran Jordan."

**POINT BEACH NUCLEAR PLANT
1996 EVALUATED DRILL
MEDIA MONITOR SCRIPT**

Segment #4

Time: 12:30 p.m. or following the media briefing discussing a radiation release

THIS IS A DRILL

"This is Adam Goldman, WTPL radio, reporting on the ongoing emergency at Point Beach Nuclear Power Plant.

I'm here at a Joint Public Information Center in Green Bay, and we've learned from company officials that a release of radiation to the environment IS OCCURRING RIGHT NOW! Wisconsin Electric spokespersons are saying that they do not exactly know the reason for the leak, although there was talk of something called a "pressure spike".

A "General Emergency" was declared at that time, and employees at the plant were evacuated. A "General Emergency" is declared when a problem is identified at the plant that could result in a meltdown or a release of radiation outside the plant!

We have no reports as to the extent of the plant's damage or number of injuries. We will continue to keep you informed.

This is Adam Goldman, WTPL."

POINT BEACH NUCLEAR PLANT
1996 EVALUATED EXERCISE
MEDIA MONITOR SCRIPT

Segment #5

Time: 1:30 p.m.

THIS IS A DRILL

You have heard several reports that have stated that the Wisconsin Public Service Corporation is the owner or operator of the Point Beach Nuclear Plant.

**POINT BEACH NUCLEAR PLANT
1996 EVALUATED DRILL
MEDIA MONITOR SCRIPT**

Segment #6

Time: 2:00 p.m.

THIS IS A DRILL

"This is Debra Perko for WBAY-TV.

The situation is improving at the Point Beach Nuclear Power Plant. Electric power has been restored to the reactors and the release of radiation to the environment is slowing down. Officials are now discussing what effects are to be seen in the areas around the plant. Long term actions are under discussion.

It remains to be seen who is at fault, how long the effects of this catastrophe will last, and even who will pay for repairs, the lost electricity and the affect on the farms and citizens in this area. For Wisconsin, the real disaster may only be beginning.

For WBAY, this is Debra Perko reporting."

10.0 SIMULATED EXTERNAL RESPONSES

This section provides guidance to the external Control Cell that will simulate certain non-participating emergency responders. There is virtually full State and county participation in the Exercise, but certain federal and industry agencies are not participating; thus those interactions with the PBNP Emergency Response Organization need to be simulated as noted herein.

A list of telephone numbers for these and other external notifications will be given to participants at the Pre-Exercise Briefings.

10.1 AMBULANCE AND HOSPITAL

There are no injuries postulated in this Exercise. However, should it be necessary, the Control Cell will act as the Mishicot Ambulance Service and the Two Rivers Hospital. The Controller simulating the ambulance/hospital should ask questions on the nature and the extent of injury. Controller should ascertain the victim's name, age, job and residence. As requested, tell JPIC staff that the victim's status is stable, but the name is being withheld pending notification of the family. Free play this information as required.

10.2 VENDORS/OFFSITE TECHNICAL SUPPORT

All such notifications will be made to the Control Cell. Any request for offsite support should be greeted with concern, and the organization contacted will provide whatever assistance PBNP wants. Do not commit to providing resources that could be at PBNP before 1500. Controllers are encouraged to ask questions on the situation, but do not offer help unless asked.

If Ameritech is called for actual equipment problems, direct participants to follow normal equipment repair procedures.

10.3 INDUSTRY ORGANIZATIONS

At the ALERT classification or above, PBNP will notify, among others, the following:

- a. Institute of Nuclear Power Operations (INPO)
- b. American Nuclear Insurers (ANI)

Communicators will use the Event Notice Form. Controllers, acting as these organizations, should be given initial, follow-up and close-out notifications. Controllers are encouraged to ask questions on the situation, but do not offer help unless asked.

Other industry organizations (such as NEI, EEI, EPRI) may be contacted. If so, Controller will respond as appropriate (i.e. listen to update, offer resources, ask questions, etc.). Controllers are encouraged to ask questions on the situation, but do not offer help unless asked.

10.4 WISCONSIN ELECTRIC POWER COMPANY DEPARTMENTS

Generally, internal PBNP notifications will be made through normal channels within/among PBNP, the Nuclear Power Business Unit, and the External Affairs Department. The following internal communications [and controller guidance] apply.

System Control - The [Simulator] Control Room operators should contact System Control when significant power changes are planned or occur. System control will be "played" by one of the simulator drivers.

Appleton Service Center - The Appleton Service Center (ASC) may be contacted to assist in the repair/bypass of the 1X03 transformer. The ASC will be simulated by a designated OSC Controller. See Mini-scenarios #2 and 4 for further information.

Other Wisconsin Electric Departments - External Affairs response requires that others within the company be notified of PBNP events. All such notifications will be made to the actual departments. CAUTION: Controllers and Participants must verify that notified departments understand that the notification is part of an Exercise and not real.

10.5 FEDERAL AGENCIES

PBNP response will require that various federal agencies be notified. Special Control Cell telephones will be set up for the NRC Emergency Notification System (ENS) and Health Physics Network (HPN) positions. All other federal notifications will be made to the Control Cell. Controllers are encouraged to ask questions on the situation, but do not offer help unless asked.

10.6 MEDIA, CITIZENS, CUSTOMERS, SPECIAL NOTIFICATIONS

External Affairs may notify several non-WE people and agencies. All such notifications will be made to the Control Cell. Controllers are encouraged to ask questions on the situation, but do not offer help unless asked.

10.7 MESSAGES

Note that in Section 5, several messages are to be phoned in by the Control Cell at designated times. Control Cell Controllers must be familiar with the call and expected response.

APPENDIX 1

Shift Turnover Documents

This Appendix contains the information which will be part of the on-coming shift crew's turnover at 0645 of Accident Day 1.

The Exercise shift turnover documents to be provided are as follows:

- Unit 1 Shift Turnover Checklist
- Unit 2 Shift Turnover Checklist
- Unit 1 Control Room Shift Log
- Unit 2 Control Room Shift Log
- Safeguards Shift Log