

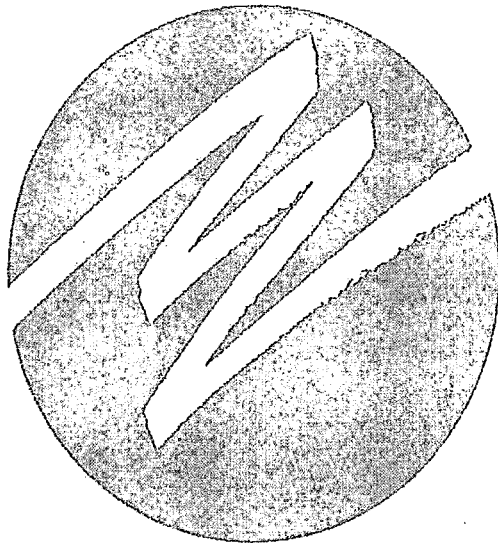
Treat Document Enclosure as Sensitive Information until Exercise Completion

Enclosure to L-2016-222

**Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
2017 Emergency Plan Exercise Scenario**

Treat Document Enclosure as Sensitive Information until Exercise Completion

Florida Power & Light Company



FPL®

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

CONFIDENTIAL UNTIL FEBRUARY 23, 2017

1.0 INTRODUCTION

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

1.0 INTRODUCTION

This Scenario Section contains the following information:

Section 1.1 FORWARD - A brief introduction to the basis for the drill and the layout of the scenario data.

Section 1.2 SCHEDULE OF EVENTS - Date, time, location, purpose and participants for the following meetings and critiques for drill performance and evaluation.

- 1.2.1 Player Briefing
- 1.2.2 Controller Briefing
- 1.2.3 Drill
- 1.2.4 Facility Critiques
- 1.2.5 FP&L Controller/Evaluator Critique
- 1.2.6 FPL Lead Controller / Evaluator Critique

Section 1.3 PARTICIPATING AGENCIES - A listing of the agencies from the following areas that will be participating in the performance of the drill.

- 1.3.1 Utility
- 1.3.2 State
- 1.3.3 County
- 1.3.4 NRC

1.1 FOREWORD

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

1.1 FORWARD

In the interest of assuring that the health and safety of the general public is protected in the event of a radiological accident at Turkey Point Nuclear Plant (PTN), and to meet the requirements of 10 CFR 50, Appendix E, the Florida Power and Light Company (FPL) plans and conducts periodic emergency preparedness exercises. This scenario has been written to conduct an evaluated exercise on February 22, 2017.

The exercise scenario will be performed during normal working hours (7:30 A.M. to 4:00 P.M. EST) the participation will include communications network activity in response to emergency conditions at Turkey Point Nuclear Plant. Site participation will involve the activation of Emergency Response Facilities, mobilization of resources and full communications network activity in response to an escalating emergency condition at Turkey Point Nuclear Plant.

In accordance with NEI 99-01 Rev. 5, "An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within the emergency preparedness plans and organizations." This exercise will include the elements of Radiation Protection, Communications, Emergency Response Teams, and Radiological Monitoring. It will require the activation of the Florida Power and Light Emergency Response Organization and Facilities.

Exercise participants ("responders") will have no prior knowledge of the exercise scenario. The intent of this exercise is to ensure that those individuals' assigned responsibilities in a radiological emergency are adequately trained and prepared to perform in accordance with emergency preparedness plans and procedures.

The exercise will be controlled, observed, evaluated and critiqued by a FPL Controller Organization for the Turkey Point Plant portion of the exercise. NRC DEP PI Points will be taken for this drill.

1.1 FORWARD (Continued)

This scenario manual has been prepared to provide the Controller Organization the information and data necessary to conduct the exercise in an efficient and coordinated manner. It contains the following scenario sections:

- Section 2.0** **SCOPE, OBJECTIVES, AND GUIDELINES:** describes the drill scope and objectives and sets forth the guidelines for conducting the drill to meet those objectives. In addition, the Guidelines establish the rules for conduct of the drill.
- Section 3.0** **SCENARIO:** describes the postulated sequence of plant events that should require the various onsite and off-site Emergency Response Organizations to respond.
- Section 4.0** **MESSAGES:** includes information in the form of message sheets, which are utilized to control scenario activities. Messages will be used to initiate activities and ensure proper progression of the scenario. In addition, this section provides a scenario and messages for conducting the mini-scenarios associated with various in-plant response teams.
- Section 5.0** **PLANT PARAMETERS:** includes information concerning the status of plant parameters and equipment.
- Section 6.0** **METEOROLOGICAL PARAMETERS:** contains postulated meteorological information to be used for the scenario.
- Section 7.0** **RADIOLOGICAL DATA:** contains time-related information concerning simulated radiological conditions at postulated onsite and off-site monitoring locations. Also included in this section is information concerning primary coolant activity, radiological release data, area radiation monitor readings, process radiation monitor readings and plume data for the teams tracking and monitoring the simulated release of radioactivity.
- Section 8.0** **MISCELLANEOUS DATA:** contains evaluation materials for the FPL Controllers and a listing of acronyms and abbreviations.

Copies of this manual will be provided to the drill controllers, evaluators and observers prior to the drill.

NOTE: *The scenario sequence of events, timing and data are to be maintained confidential and not available to the participants prior to the drill. Following the drill, copies of this manual should be available to key drill participants for their information and review.*

1.2 SCHEDULE OF EVENTS

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
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1.21 Controller Briefing

Date: 02/16/17
Time: 1:00pm - 3:00pm - OSC 2nd floor NMB
Location: PTN Operation Support Center (OSC)
Purpose: Drill control and evaluation overview.
Participants: Controller and Evaluators

1.22 Player Briefing

Date: 02/21/17
Time: 8:00am – 11:00am
Location: TSC, OSC, and EOF (per facility ERO assignment)
Purpose: Player rules, prior drill critique reviews.
Participants: TSC, OSC and EOF players, controllers, evaluators

1.23 Drill

Date: 02/22/17
Time: Normal Working Hours (7:00 AM to 4:00 PM)
Location: Turkey Point Plant and General Office
Purpose: Review and evaluate exercise performance.
Participants: All exercise participants and controllers

1.24 Facility Critiques

Date: 02/22/17
Time: After Exercise Termination
Location: Onsite and Offsite Emergency Response Facilities
Purpose: Review and evaluate exercise performance.
Participants: Responders, Controllers, Evaluators.

1.2.5 Florida Power and Light Company Lead Controller/Evaluator Critique

Date: 02/22/17
Time: following facility critiques
Location: PTN Operations Support Center/Teleconference with EOF
Purpose: Review and evaluate exercise play, formal exercise critique, collect and prepare final exercise critique comments.
Participants: All FPL Facility Leads and Lead Controllers and Evaluators

1.3 PARTICIPATING AGENCIES

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
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1.3.1 Utility

Florida Power & Light Company (FPL) Turkey Point Nuclear Plant (PTN)

1.3.2 Federal

Nuclear Regulatory Commission (NRC)
Federal Emergency Management Agency (FEMA)

1.3.3 State

State of Florida (SWO) to receive notifications)
State of Florida EOC
Florida Health – Bureau of Radiation Control (BRC)

1.3.4 County

Miami-Dade County EOC
Monroe County EOC

2.0 SCOPE, OBJECTIVES AND GUIDELINES

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
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2.0 SCOPE, OBJECTIVES AND GUIDELINES

This Scenario Section contains the following information:

- Section 2.1** **SCOPE** - Describes the overall content and intended activities of the drill.
- Section 2.2** **OBJECTIVES** - Describes the objectives that will be evaluated for determination of satisfactory performance during the course of the drill.
- Section 2.3** **OBJECTIVES** - Describes the objectives that will be evaluated for determination of satisfactory performance during the course of the drill.
- Section 2.4** **GUIDELINES** - Describes the rules for Participants, Controllers, Evaluators and Observers that will be applied to the conduct of the drill.

2.1 SCOPE

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
GRADED EXERCISE
FEBRUARY 22, 2017**

2.1 SCOPE

NOTE: This exercise will be used for NRC Drill and Exercise points.

To assure that the health and safety of the general public is protected in the event of an accident at Turkey Point Nuclear Plant, Florida Power & Light Company (FPL) conducts biennial emergency preparedness exercises and quarterly drills. This is the 2017 Graded Exercise at the Turkey Point Nuclear Plant. This exercise involves mobilization, or simulated mobilization of FPL, State of Florida (EOC), and resources to respond to a simulated accident scenario. A Controller organization will control, observe, evaluate and critique the exercise to assess the emergency response capabilities of the utility and government agencies. A FPL Controller Organization will control, observe, evaluate, and critique the PTN portion of the exercise. Juno Beach FPL ERO personnel may be pre-positioned. All onsite Emergency Response Facilities will be activated in accordance with simulated conditions and appropriate emergency response procedures for the exercise. Exercise participants ("responders") will not have any prior knowledge of the simulated accident events, operational sequence, radiological effluents, or weather conditions.

The drill incorporates the following sub-drills:

Medical Emergency - A worker will suffer injuries resulting from the turbine failure requiring medical treatment and will be transported to and treated at site medical,

Fire Brigade Response – The Fire Brigade will respond to an oil fire at the Unit 3 Main Transformer.

Personnel Decontamination – A Radiation Protection Technician will become contaminated during a survey of the Auxiliary Building, and will be decontaminated on site.

Search For Source of Release – Re-entry Team will attempt to locate the source of the radioactive release in the Unit 3 Pipe and Valve Room.

Radiological Monitoring - both onsite and offsite teams will be dispatched during the exercise to obtain required air samples and measurements associated with a simulated offsite release of radioactivity, and communicate these results to the appropriate Emergency Response Facility. (Field monitoring team's protective clothing and respiratory protection will be simulated.)

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2.1 SCOPE (continued)

Radiation Protection - involves the response to, and analysis of, simulated elevated airborne activity or liquid samples; radiation exposure control; emergency dosimetry, and the use of protective equipment onsite.

Communications - actual use of emergency response communications links and equipment to demonstrate their integrity.

The preceding sub-drills are incorporated into the exercise scenario and will be demonstrated concurrently in the course of the exercise. The overall intent of the exercise is to demonstrate that the FPL ERO is adequately trained to perform in accordance with the Emergency Plan and its implementing procedures.

2.2 EXERCISE OBJECTIVES

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

2.2 OBJECTIVES

The Turkey Point Nuclear Plant (PTN) emergency preparedness exercise objectives are based upon Nuclear Regulatory Commission requirements provided in 10CFR50 Appendix E, *Emergency Planning and Preparedness for Production and Utilization Facilities*; and NRC Inspection Manual. Additional guidance provided in NUREG-0654, FEMA-REP-1, Revision 1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, was utilized in developing the objectives below

Exemptions

1. Site Evacuation and relocation of non-essential personnel will not be demonstrated.
2. Real time activation of the EOF by Juno responders, or State and County participants will not be demonstrated.
3. Onsite personnel accountability will not be demonstrated. Security will demonstrate accountability process through the use of simulated personnel rosters.

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
1	Assignment of Responsibility	1	Command and Control	Demonstrate the ability to provide overall command and control of the emergency response by initiating, coordinating and implementing timely and effective decisions during the event. Additionally, demonstrate the management of the ERFs by providing command and control within each facility.	CR TSC OSC EOF JIC
		2	Operational Agreements	Demonstrate the coordination of the implementation of emergency measures and the exchange of information between the utility and Federal, State and local agencies and other support organizations having an emergency response role within the EPZ.	EOF
		3	Continuous Operations	Demonstrate the capability to establish and maintain continuous (24 hour) operations for a protracted period.	TSC OSC EOF JIC
2	Onsite Emergency Organization	1	Shift Response	Demonstrate the ability of the normal staff complement to perform the functions of the on-shift ERO.	CR
		2	On-Shift Emergency Direction	Demonstrate the Shift Manager's ability to immediately and unilaterally initiate any emergency response action, including providing protective action recommendations to authorities responsible for implementing offsite emergency measures.	CR
		3	Line of Succession	Demonstrate the ability to transfer overall command and control of the emergency response.	CR TSC OSC EOF
		4	Non-Delegable Responsibilities	Demonstrate the performance of authority of the non-delegable responsibilities.	CR TSC EOF
		5	Minimum Staffing Requirements	Demonstrate the ability to augment the on-shift response capabilities within a short period of time.	TSC OSC EOF
		6	Full Staffing Requirements	Demonstrate the ability of management, administrative and technical support personnel to augment the plant staff in the areas of logistics support, technical support, government interface, and public information.	TSC OSC EOF JIC

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
		7	ERO Support Organizations	Demonstrate the ability of specified contractor and/or private support organizations to provide technical assistance or augmentation of the ERO.	TSC EOF
		8	Emergency Services Support Organizations	Demonstrate the ability to utilize onsite first aid / fire brigade personnel and to coordinate with required offsite emergency services (police, fire, ambulance, medical, and hospital).	CR
3	Emergency Response Support and Resources	1	Federal Support	Demonstrate the ability to effectively integrate assistance resources from federal agencies to augment the plant's emergency response capabilities.	TSC EOF
		2	Community Representatives	Demonstrate the ability to provide a liaison at each participating offsite governmental emergency operations center (EOC).	EOF
		3	Radiological Support Services	The scenario must include conditions, which support measurable activity present in the sample.	N/A
4 (RSPS)	Emergency Classification System	1	Classification	Demonstrate the ability to recognize the initiating conditions for the EALs and to properly classify emergencies.	CR TSC EOF
5 (RSPS for all objectives except #2)	Notification Methods and Procedures	1	Offsite Notifications	Demonstrate the ability to notify the offsite Emergency Response Organizations consistent with the classification scheme including the verification of messages in a timely manner.	CR TSC EOF
		2	ERO Notification	Demonstrate the ability to alert, notify and mobilize ERO personnel.	CR
		3	Initial Notification Message Content	Demonstrate the ability to provide the required content for the initial notification messages timely and accurately.	CR TSC EOF
		4	Follow-Up Notification Message Content	Demonstrate the ability to provide the required content for the follow-up information messages timely and accurately.	CR TSC EOF
		5	Public Notification	Demonstrate to ability to develop and issue public information and the ability to provide supporting information to offsite agencies for the development of public messages regarding specific protective actions.	EOF JIC

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
6	Emergency Communications	1	Communications Systems	Demonstrate the ability to operate the communications systems used by the ERO.	CR TSC OSC EOF Field Monitoring Team
		2	Back-Up Communications Systems	Demonstrate the ability to operate the back-up communications systems used by the Emergency Response Organization.	N/A
		3	Medical Support Communications	Demonstrate the ability to perform communications with both fixed and mobile medical support unit.	CR First Aid Team Fire Brigade Site Medical Facility
7	Public Education and Information	1	Primary Media Accommodations	Demonstrate the ability to provide points of contact and physical locations for use by the news media at the Joint Information Center.	JIC
		2	Media Briefings	Demonstrate the ability of the Corporate Spokespersons to brief the media in a clear, accurate and timely manner.	JIC
		3	Exchange of Public Information	Demonstrate timely exchange of public information among designated agency spokespersons.	JIC
		4	Rumor Control	Demonstrate the ability to establish and operate rumor control in a coordinated fashion.	JIC
8	Emergency Facilities and Equipment	1	TSC Support of Emergency Operations	Demonstrate the adequacy of the TSC to support emergency response activities.	TSC
		2	EOF Support of Emergency Operations	Demonstrate the adequacy of the EOF to support emergency response activities.	EOF
		3	OSC Support of Emergency Operations	Demonstrate the adequacy of the OSC to support emergency response activities.	OSC
		4	Timely Facility Activation	Demonstrate the ability to activate the emergency response facilities in a timely manner.	TSC OSC EOF JIC

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
		5	Alternate Sources for Analysis Information	Demonstrate the ability to acquire data from, or have access to, offsite monitoring and analysis equipment.	N/A
		6	Meteorological Data	Demonstrate the ability to obtain current and forecasted meteorological information from primary as well as back-up and alternate sources.	CR TSC EOF
9 (RSPS)	Accident Assessment	1	Accident Recognition and Assessment	Demonstrate the ability to provide initial values and continuing assessment throughout the course of an accident as well as the parameter values which correspond to the initiating conditions for EALs and PARs.	CR TSC EOF
		2	Release and Dose Assessment	Demonstrate the capability to determine the magnitude of radioactive releases or perform dose assessments based on plant parameters, effluent monitors, field data and meteorological conditions.	TSC EOF
		3	Alternative Dose Assessment	Demonstrate the ability to determine the release rate and projected dose when effluent monitors are off-scale or inoperable.	EOF
		4	Environmental Monitoring	Demonstrate the ability to monitor radiological releases to the environment in the field.	TSC OSC EOF Field Monitoring Team
		5	Core Damage Assessment	Demonstrate the ability to determine the extent of core failure based on station-specific assessment strategies and sampling.	EOF TSC
		6	Severe Accident Management (non RSPS)	Demonstrate the ability to identify and implement appropriate SAM strategies.	CR TSC
10 (RSPS for PARs, PS for all else)	Protective Response	1	Warning Onsite Personnel	Demonstrate the means, within the required time, to alert individuals at the site who do not have emergency assignments (such as visitors, contractor and construction personnel.	CR TSC

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
		2	Relocation of Non-Essential Personnel	Demonstrate the ability to evacuate and relocate on-site personnel to a relocation center at a Site Area Emergency or higher classification.	TSC OSC Other
		3	Site Evacuee Monitoring	Demonstrate the capability for radiological monitoring and decontamination of personnel evacuated from the Protected Area.	TSC OSC Other
		4	Assembly and Accountability	Demonstrate the ability to perform accountability for all individuals in the Protected Area within 30 minutes.	TSC OSC
		5	Protective Clothing	Demonstrate the availability and use of respiratory protection and protective clothing for onsite emergency response personnel.	OSC
		6	KI	Demonstrate the availability and use of potassium iodide (KI) for on-site emergency response personnel.	TSC OSC EOF Field Monitoring Team
		7	PARs	Demonstrate the ability to recommend protective actions to appropriate offsite authorities.	CR TSC EOF
11	Radiological Exposure Controls	1	Emergency Worker Exposure Controls	Demonstrate the methods used to implement emergency exposure guidelines and the ability to authorize emergency workers to receive doses in excess of 10 CFR 20.	TSC OSC EOF
		2	Exposure Monitoring	Demonstrate the ability to control and track emergency worker radiation exposure.	OSC
		3	Personnel Contamination/Decontamination Controls	Demonstrate the use of action levels for determining the need for decontamination, and perform decontamination and provide for waste disposal.	OSC Other
		4	Area Contamination Controls	Demonstrate contamination control practices.	OSC

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
		5	Habitability Controls	Demonstrate the capability to minimize ERO internal contamination through ERF habitability controls and controlling the intake of drinking water and food supplies.	CR TSC OSC
		6	Decontamination of Site Evacuees	Demonstrate the ability to decontaminate evacuees from the site including the capacity to provide additional clothing.	OSC Other
12	Medical and Public Health Support	1	Hospital Response	Demonstrate the radiological capabilities of local and backup hospitals.	N/A
		2	First Aid	Demonstrate the ability to provide first aid treatment onsite.	CR First Aid Team Fire Brigade
		3	Contaminated Injured Transportation	Demonstrate the capability to transport a contaminated injured person off-site.	N/A
13	Recovery and Re-entry Planning	1	Event Termination	Demonstrate the capability to terminate the emergency and enter into recovery including informing the State of the opportunity to relax protective actions.	N/A
		2	Recovery Organization	Demonstrate the ability to identify and establish a recovery organization.	N/A
		3	Recovery Notifications	Demonstrate the methods used to inform members of the response organizations of entry into recovery, including any organizational structural changes that will be implemented.	N/A
14	Conduct Drills and Exercises	1	Exercise / Drill Preparation	Demonstrate the capability to prepare a scenario drill or exercise package to allow for training and testing of stations Emergency Response Plan.	Site Objective
		2	Exercise / Drill Evaluation	Demonstrate the capability to conduct drill / exercise and evaluate performance.	Site Objective

PLANNING STANDARD [10CFR 50.47(b)(#)]		OBJECTIVE		DESCRIPTION	FACILITY
NEI 06-04 App.-A	Hostile Action Based Event	1	Hostile Action Based Event	Demonstrate the ability to implement the emergency plan during a hostile action-based event.	N/A
	Augmentation Drill / Telephone Test Only	1	Augmentation Drill / Telephone Test Only	Demonstrate the ability to augment the emergency response organization to support facility activation. (After normal work hours or weekends).	N/A

2.4 GUIDELINES

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

2.4 GUIDELINES

The following exercise guidelines have been established in order to define the "extent of play" of exercise responders at the Turkey Point Plant and to meet the drill objectives.

A. General Information

Since exercise responders will not be informed of the exercise start time or the initiating events, all personnel should follow their normal routines prior to the exercise. Selected personnel aside from the Control Room/Simulator crew may be required to respond prior to activation of facilities

The exercise will include postulated conditions necessitating initiation of the Emergency Plan and may require escalation to a Site Area Emergency or General Emergency.

Three groups of personnel will be in attendance at the exercise and will function as described below:

1. ***Responders*** are members, supervisors, operators, chemistry/RP personnel, maintenance personnel, etc., who have been assigned a "Responder" role during the emergency exercise. These people serve to take necessary actions to mitigate, terminate, correct, and/or recover from the simulated emergency.
2. ***Controllers*** are those designated FPL personnel who serve an active role in the exercise by providing data to responders. The *Controllers* may also serve to prompt or initiate certain actions in order to assure continuity of the events described in the exercise scenario. *Controllers* are the only personnel who will provide information to the *Responders*; the *Responders* will ignore other inputs of information from personnel not designated as *Controllers*. *Controllers* will also serve as *Evaluators*.
3. ***Evaluators/Observers*** are personnel designated by FPL to provide documentation and assessment of the exercise. As *Evaluators* they serve a passive function and will only note actions taken by *Responders*. These personnel have received specific instructions on what areas to consider in their evaluation of the exercise. *Evaluators* may ask questions of responders to clarify actions taken or procedural concerns. They should not interfere with the flow of events, and should interface with a *Controller* before questioning a *Responder*.

2.4 GUIDELINES (Continued)

Identification of personnel:

Controller ID tags – pink

Observer ID tags – orange

Responder ID tags - white

Evaluator ID tags - blue

Personnel will be assigned as *Controllers* at all functional areas to monitor and control the exercise. In addition, they will accompany radiological monitoring teams, plant radiation protection personnel and maintenance repair/rescue teams.

In order for the drill to run smoothly, the following topics must be understood.

Message Forms (including operating data) will be the mechanisms used to initiate, orchestrate, modify and complete the events comprising the overall scenario. The controller will use the message forms to initiate scenario events and trigger responses from the involved personnel.

Each controller will have the time-related plant and radiological parameters of the exercise scenario. This information will be issued upon request to the appropriate drill participants.

The controllers will not provide information to the exercise participants regarding scenario development or resolution of problem areas encountered. The drill participants are expected to obtain information through their organizations and exercise their judgment in determining response actions and resolving problems.

The Turkey Point Training Control Room Simulator will be utilized to permit the Control Room Crew to respond to the emergency situation. During the drill period, the Simulator Telephone System and Plant Page System will be connected to the actual plant systems to allow for as realistic drill play as possible.

Plant/Monitoring Data will be provided through simulated DCS. This data will be directly from the simulator providing the responders with real time data.

Some drill responders may insist that certain parts of the scenario are unrealistic. The controllers have the authority, with the approval from the Lead Controller, to clarify any questions regarding scenario content. In some cases, it may be necessary to exercise "controller's prerogative" of countermanding participant actions to preserve the continuity and objectives of the exercise. The responder must accept the controller's word as final and proceed. Inappropriate actions can either delay or speed up the entire exercise and impact other groups.

2.4 GUIDELINES (Continued)

Note that the scenario events are hypothetical. Any portions of the scenario depicting plant system operational transients are simulated events. NO control room actions, or reactions involving operation of plant systems, or affecting generating capability shall be initiated. All drill scenario messages shall be understood as simulated events only.

Postulated accident conditions may result in a simulated radiological release that could necessitate the consideration of protective actions for the general public.

All listed onsite and offsite emergency response facilities will be staffed and will perform their prescribed functions as appropriate to the development of the drill scenario.

Participation by FPL onsite and offsite personnel directly involved in responding to an emergency should be carried out to the extent necessary to meet the scope and objectives including the deployment of radiological monitoring teams, emergency response teams, and other emergency workers.

All actions are to be played out, as much as possible, in accordance with emergency plan and procedures as if it were a real emergency. Other plant communications may be used to reduce the communications traffic of the drill channels. Any use of plant channels must be specified in the scenario package or authorized by the Lead Controller.

Radios - For exercise play both Controllers and Responders will use plant radios. "NUC OPS DRILL" is the designated channel for exercise responders. "PLANT MANAGEMENT" is the designated channel for Field Monitoring Teams. "DRILL MANAGEMENT" is the designated channel for exercise controllers. EP DRILL is to be used by OSC Operations controllers for field activities. Actual plant channels SHALL NOT be used for exercise play.

Actual and Simulated Events during the emergency exercise, certain events and activities may be simulated rather than utilizing the actual employment of resources. As little simulation as practical will be performed.

Simulation - involve identification and utilization of requirements and procedures short of actual development.

Actual - the movement of resources and/or physical implementation for this drill.

Provisions for Actual Emergency exist. Drill participants, controller/evaluators, and observers should not take any actions which would preclude maintaining emergency readiness of the organization and community. If an actual emergency occurs during the exercise requiring a group to terminate its participation in the exercise, they should notify the Lead Controller. All messages concerning actual emergency events should be preceded with "*This is an Actual Emergency Message.*"

2.4 GUIDELINES (Continued)

Communications between all drill participants shall occur in accordance with the procedures of applicable emergency response plans. All communications, including initial telephone conversations, radio transmittals, and loudspeaker announcements should begin and end with *"This is a Drill, This is a Drill."*

Compliance with all Laws: Intentional violation of laws is not permitted during an exercise. Drill responders, controllers/evaluators, and visitors should comply with all Federal, State and Local legal restrictions. Specifically, all local traffic laws such as speed limits should be observed.

Avoid Property Endangerment. Exercise responders, controllers/evaluators, and visitors should avoid endangering property (public or private), members of the general public or the environment.

Minimize Public Inconvenience. It is not the intent to inconvenience the public during the conduct of an exercise. Also, all communications, particularly in the public relations area, should be prefaced with *"This is a Drill."*

Closeout of Drill will be initiated at the appropriate point in the drill scenario. The Lead Controller will initiate termination of the drill. The Lead Controller will notify offsite points of contact to advise them that the exercise be being terminated.

Debriefing and Critique will occur for all drills/exercises. All Controllers and Responders shall meet and conduct a critique in each facility immediately following drill termination. Controllers will then meet at a later time (to be announced) in a designated area to compile Controller notes and discuss critique items.

Radiological Controls: All normal radiological controls will be observed during the drill. No one is permitted to deviate from normal procedures, guidelines and controls whether they are a responder, controller, or evaluator. If emergency dosimetry is issued as part of the drill, responders shall continue to obtain normal dosimetry from the Radiological Controlled Area (RCA) Control Point prior to entering the RCA. The main RCA Control Point shall be utilized for access and egress.

B. Controller Information

Controllers are personnel selected to deliver Drill Messages to designated responders at specific times and places during the drill. They will inject or deliver additional messages, as may be required, to initiate appropriate responder actions to keep the exercise moving according to the scenario and to ensure the demonstration of all drill objectives. Controllers will be briefed on the instructions contained in this Exercise Package.

2.4 GUIDELINES (Continued)

Controllers are assigned to observe the drill and judge the effectiveness of selected organizations, personnel, functions, and activities in response to the simulated emergency situation. Selection of Controllers is based on their expertise and qualifications to evaluate an assigned activity or area. They will record their observations using an evaluation form and provide recommendations on corrective actions to the Lead Drill Controller prior to the scheduled critique. They will evaluate exercise performance on the basis of standards or requirements contained in the Turkey Point Radiological Emergency Plan, and the associated Implementing Procedures. They will take steps, whenever possible, to collect data on the time-and-motion aspects of the activities observed for post-exercise use in designating and implementing system improvements. A Lead Controller is assigned to each emergency response facility. The Lead facility Controller is responsible for all Controllers, Evaluator and Observer activities for that facility and, as appropriate, its associated teams. Controllers for teams or sub-areas of a facility report to the Lead Controller of that facility/functional area.

Each Controller should be familiar with the following:

- The basic objectives of the exercise.
- The assumptions and precautions being taken.
- The exercise scenario, including the initiating events and the expected course of action to be taken.
- The various locations that will be involved and the specific items to be observed at those locations.
- The evaluation checklists provided herein.

Precautions and Limitations

This section provides guidance for all drill Controllers and Evaluators for the conduct of this drill. Prior to initiation of the drill, a briefing will be held to review the entire exercise process with all the exercise Controllers.

1. If at any time during the course of the conduct of this exercise, an actual emergency situation arises, all activities and communications related to the drill will be suspended. It will be the responsibility of any exercise Controller that becomes aware of an actual emergency to suspend drill response in his/her immediate area and to inform the Lead Exercise Controller of the situation. Upon notification of an actual emergency, the Lead Drill Controller may notify all other Controllers to suspend all exercise activities. The Lead Drill Controller will make a determination at that point whether to continue, place a temporary hold on, or terminate the drill.

2.4 GUIDELINES (Continued)

2. If at any time during the course of this exercise, a Controller witnesses a drill participant undertake any action which would, in the opinion of the Controller, place either an individual or component in an unsafe condition, the Controller is responsible for intervening in the individual's actions and terminating the unsafe activity immediately. Upon termination of the activity, the Controller is responsible for contacting the Lead Drill Controller and informing him of the situation. The Lead Drill Controller will make a determination at that point whether to continue, place a temporary hold on, or terminate the drill.
3. Manipulation of any plant operating system, valves, breakers, or controls in response to this exercise is only to be simulated. There is to be no alteration of any plant operating equipment, systems, or circuits during the response to this drill.
4. No discharging of fire extinguishers or initiation of any fire suppression systems will be required for the drill. A pressurized hose could be used as a dike to contain the chemical spill.
5. All repair activities associated with the scenario will be simulated, with extreme caution emphasized around operating equipment. Some mock equipment may be pre-positioned in the plant to permit actual repair activities to take place.
6. All telephone communication, radio transmissions, and public address announcements related to the exercise must begin and end with the statement; *"This is a drill."* Should a Controller witness a drill participant not observing this practice, it is the Controller's responsibility to remind the individual of the need to follow this procedure.
7. Any motor vehicle response to this drill, whether it is ambulance, firefighting equipment, police/security vehicles or emergency radiation teams, should observe all normal motor vehicle operating laws including posted speed limits, stop lights/signs, one way streets, etc.
8. Should any onsite security actions be required in response to this scenario, drill participants are to cooperate as directed by the Security Force, and security representatives are to be prudent and tolerant in their actions.
9. Responders are to inject as much realism into the exercise as is consistent with its safe performance however, caution must be used to prevent over-reaction.
10. Care must be taken to prevent any non-participating individuals who may observe scenario activities from believing that an actual emergency exists. Any Controller 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 actions and their intent.

2.4 GUIDELINES (Continued)

11. If you are entering normal nuclear station radiation areas, observe all rules and procedures; no one is exempt from normal station radiological practices and procedures.

NOTE: *Do not enter High Radiation Areas or contaminated areas in the plant; Follow ALARA Principles.*

12. All Industrial Safety Rules and Procedures are to be adhered to at all times.

C. Responder Information

The success of the Drill is largely dependent on responder performance. Appropriate reaction to simulated emergency conditions and demonstrated competence in the Emergency Plan and Implementing Procedures are the key criteria by which the responders are evaluated. It is imperative, therefore, that a Controller witnesses all responder actions and activities. Those actions that are to be simulated must be brought to the attention of the Controller to ensure that credit is awarded. Observation of response actions taken is mandatory for credit to be given for demonstration of an objective. Responders are requested to observe the following guidelines:

1. Maintain a professional attitude throughout the Drill; this is especially true late in the Drill or when activity is limited.
2. Be courteous and professional at all times.
3. Identify yourself by name and function/position to the Controller.
4. Comply with all instructions provided by the appropriate Controller.
5. Elements of Drill play will be introduced through use of controlled Exercise messages and information generated by Responders as a result of the particular emergency activity performed. Therefore, be responsible for initiating actions in accordance with instructions and your responsibilities.
6. Communications should be concise and formal; always include *"This is a drill."*
7. Do not use radio communications in site areas where such use may cause Plant Transients and Engineering Safety Feature Actuation from radio frequency interference.
8. Use and demonstrate knowledge of the Emergency Plans and Implementing Procedures.
9. Use all resources and equipment available as you would in an actual emergency.
10. Keep a list of items which you believe will improve the plan and/or procedures; provide this to your Controller at the end of the Drill.

2.4 GUIDELINES (Continued)

11. Controllers serve an active role in the exercise by providing messages or instructions to the participants. They may also serve to initiate certain actions to assure continuity of the events described in the drill scenario. They also serve as Evaluators.
12. Evaluators will be noting all actions, both good and bad. They will be the main source of input to the FPL critique.
13. Play out all actions as much as possible in accordance with the Emergency Plan and Implementing Procedures as if it were a real emergency.
14. Identify your actions to the Controller. State whether you are going to play them out or simulate them. It is recommended that you play out your actions as much as possible to convincingly demonstrate the proper emergency response.
15. Speak out loud, identifying your key actions and decisions to the Controllers and Evaluators. This may seem artificial, but it will assist in the evaluation process and is to your benefit.
16. Any messages transmitted over communication lines or radios shall be preceded and followed by the statement *"This is a Drill"*.
17. You should play as if radiation levels are actually present, in accordance with the information you have received. Unless otherwise specified, this will require normal radiological control measures, including the wearing of protective clothing.
18. Non-participants are exempt from acting on radiation levels specified for the emergency exercise. However, normal radiological control practices shall be followed throughout the course of the exercise.
19. Only selected parameters and readings will be provided. This selected information will be sufficient to make decisions in accordance with FPL plans and procedures.
20. DO NOT BECOME OVERLY CONCERNED WITH THE MECHANICS OF THE REACTOR OR THE CAUSE OF THE ACCIDENT. THIS DRILL IS DESIGNED TO TEST FPL PLANS AND PROCEDURES AND IS NOT CONCERNED WITH ESTABLISHING THE PROBABILITY, FEASIBILITY OR DETAILED MECHANICS OF THE SIMULATED ACCIDENT.
21. There will be one or more Controllers at each important location. Controllers will provide information and clarification on which actions are to be simulated or are outside the scope of this exercise in order to keep the exercise progressing in accordance with the scenario. Controllers will also observe all aspects of the exercise to prepare an in-house evaluation of plans, procedures and training.

2.4 GUIDELINES (Continued)

22. Do not take actions that would result in actual alterations of valve and switch positions in response to scenario simulations. Any event or operations outside the scenario that results in an actual or potential danger to plant operation or safety will take precedence over exercise activity.
23. Any motor vehicle response to this exercise, whether it be ambulance, fire fighting equipment, police security vehicles or Emergency Radiation Teams, will observe all normal motor vehicle operating laws, including posted speed limits, stop lights/signs, one-way streets, etc.
24. Should any onsite security actions be required in response to this exercise, Drill Participants are to cooperate as directed by the Security Force; Security representatives are to be prudent and tolerant in their actions.
25. While Drill Participants are to inject as much realism into the Exercise as possible, the safety of the plant and personnel shall not be jeopardized.

3.0 SCENARIO

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

3.0 SCENARIO

This section contains the following information:

- Section 3.1** **NARRATIVE SUMMARY** – This describes in detail activities and events which occur during the scenario along with appropriate and anticipated corrective actions.
- Section 3.2** **SCENARIO TIMELINE** - Provides a relationship between scenario events and anticipated times of occurrence.

3.1 NARRATIVE SUMMARY

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

3.1 NARRATIVE SUMMARY

BRIEF NARRATIVE

Initial Conditions:

- Unit 3 is operating at 100% power, Beginning of Life (BOL), Spent Fuel Pool Temperature is 94°F, 30 days since the last refueling outage.
- Unit 4 is operating at 100% power, Middle of Life (MOL), Spent Fuel Pool Temperature is 93°F, 245 days since the last refueling outage.
- Protected Train (for the drill) is: B.
- Radiochemical analysis indicates elevated Unit 3 RCS activity <300 uCi/gm, and within Technical Specification limits.

Station Area Ops (SAO) is scheduled to perform preventive maintenance on GCB 8W92 (Flagami Line) in the switchyard on day shift.

A sulfuric acid delivery to the Water Treatment Plant is scheduled for 1200.

It is a weekday morning. The current temperature is 78°F, with winds from the south southeast (150°) at 10 miles per hour. Atmospheric Stability Class is E. Skies are clear and no rain is forecast.

The Control Room will note Elevated tailpipe temperature readings indicate a leaking Unit 3 Pressurizer safety valve (RV-3-551C) shortly after taking the shift and investigate due to improper overhaul during the refueling outage.

The Control Room crew will be alerted to increasing Main Turbine vibrations via annunciator E 1/1(TURB ROTOR VIBRATION/ECCENTRICITY) alarming quickly followed by a loss of Main Condenser vacuum and subsequent Turbine and Reactor trip. The Control Room will receive reports from the field indicating that a Turbine failure (blades having penetrated the casing) has occurred on Unit 3 resulting in visible damage to the 3A and 3C Moisture Separator Re-heaters (MSRs), Main Transformer, Condensate Storage Tank, and the Turbine Building. (Note: the failure of the turbine blading was the result of cracking that was not detected by the inspection conducted during the refueling outage.) This is T-0 for **ALERT – HA1 / Natural or Destructive Phenomena Affecting VITAL AREAS**. Operating Mode Applicability: All

Threshold Value: 4. Turbine failure-generated projectiles resulting in VISIBLE DAMAGE to or penetration of ANY of the Table H1 plant structures containing safety systems or components OR Control Room indication of degraded performance of those safety systems.

The operating crew will enter 3-EOP-E-0 (Reactor Trip or Safety Injection), then transition to 3-EOP-ES-0.1 (Reactor Trip Response) and stabilize the unit. The Shift Manager will enter 0-EPIP-20101 (Duties of Emergency Coordinator).

When the Alert is declared the Emergency Response Organization (ERO) will be activated to proceed to their respective Emergency Response Facilities (ERFs).

The Control Room will receive a report from the field that a worker has suffered steam burns as a result of the Turbine failure, and medical assistance is needed. The operating crew will alert Site Medical personnel, and direct them to respond to the scene of the injured worker. The worker's injuries will not be life threatening, and transport off site will not be required.

Reactor Coolant System (RCS) activity will begin to increase following the Reactor Trip due to thermal shock to the leaking fuel assemblies such that it climbs above 300 uCi/gm as indicated by ≥ 2.5 R/hr on R-3-20, Letdown Radiation Monitor and $> 5.4 \text{ E}+3$ R/hr on RAD-3-6311A/B, Containment High Range Radiation Monitors (CHRRMS) 55 minutes after the Reactor Trip. The operating crew will enter 3-ONOP-041.4, Excessive Reactor Coolant System Activity.

Five minutes later, a loss of Reactor coolant greater than maximum charging with letdown isolated occurs due to Pressurizer safety valve RV-3-551C opening as a result of the pressure transient caused by the Reactor Trip, and not re-seating resulting in a Safety Injection (SI). This is T-0 for **SITE AREA EMERGENCY – FS1 / Loss or Potential Loss of ANY two Barriers**. Operating Mode Applicability: Modes 1, 2, 3, and 4

Threshold Value:

CHRRM reading greater than $5.4 \text{ E}+3$ R/hr

AND

RCS leak rate indicated by greater than maximum charging with Letdown isolated.

The operating crew will re-enter 3-EOP-E-0 (Reactor Trip or Safety Injection), then transition to 3-EOP-E-1 (Loss of Reactor or Secondary Coolant).

The Emergency Coordinator (EC) will enter 0-EPIP-20101 (Duties of Emergency Coordinator) and 0-EPIP-20110 (Criteria For, and Conduct of Owner Controlled Area Evacuation).

The Control Room will receive a report from the field that oil leaking from the Unit 3 Main Transformer has caught fire. The Transformer Deluge System does not actuate. The operating crew will alert the Fire Brigade to respond to the scene of the fire. The Fire Brigade will be successful in extinguishing the fire within 20 minutes of arrival on scene.

Unit 3 Containment wide range pressure decreases rapidly. Shortly thereafter Area Radiation Monitors (ARMS) in the vicinity of the Unit 3 Pipe & Valve Room (e.g., RD-1416 and RD-1413) as well as the Plant Vent Radiation Monitors (R-14 and RAD-6304) readings indicate increasing activity. This is T-0 for **GENERAL EMERGENCY – FG1 / Loss of ANY two Barriers AND Loss or Potential Loss of the Third Barrier**. Operating Mode Applicability: Modes 1, 2, 3, and 4

Threshold Value:

CHRRM reading greater than $5.4\text{E}+3$ R/hr

AND

RCS leak rate indicated by greater than maximum charging with Letdown isolated.

AND

A containment pressure rise followed by a rapid unexplained drop in containment pressure.

The Emergency Coordinator (EC) will re-enter 0-EPIP-20101 (Duties of Emergency Coordinator). The Recovery Manager (RM) will enter 0-EPIP-20134 (Offsite Notifications and Protective Action Recommendations).

Due to the General Emergency, Protective Action Recommendations (PARs) based on plant conditions and/or offsite dose projections, will be recommended to the risk-counties and state. T-0 for PARs will be the same as the T-0 for the General Emergency. Sectors affected are Q, R, and A.

The Plant Condition Based PARs should be:

Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors
0 - 2	All	None	None
2 - 5	Q R A	None	All Remaining
5 - 10	None	None	All

The Dose Based PARs should be:

Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors
0 - 2	All	None	None
2 - 5	Q R A	None	All Remaining
5 - 10	None	None	All

Dose rates at the door of the Unit 3 Pipe and Valve room are 1R/hr. Dose rates will allow entry into the room using emergency dose extension guidance (0-EPIP-20111) however, due to the nature of the penetration failure; it will not be possible to terminate the release prior to the end of the drill.

The Operations Support Center (OSC) receives a report from the field that a Radiation Protection Technician (RPT) has become contaminated while performing a survey in the Auxiliary Building near the Unit 3 Pipe & Valve Room. The individual will be successfully decontaminated by RP in accordance with applicable plant procedures.

The Plant Vent SPING Radiation Monitor (RAD-6304) reading increases to 2.00 E0 uCi/cc. Conditions exist for T-0 for a PAR upgrade based upon dose projections once the EOF Radiation Protection Manager signs the Protective Action Recommendations (PAR) Worksheet (Attachment 1 of 0-EPIP-1102).

The Recovery Manager (RM) will re-enter 0-EPIP-20134 (Offsite Notifications and Protective Action Recommendations).

The Upgraded Dose Based PARs should be:



Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors
0 - 2	All	None	None
2 - 5	Q R A	None	All Remaining
5 - 10	Q R A	None	All Remaining




The exercise is terminated once the objectives in each facility have been met.



**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**



3.2 SCENARIO TIMELINE



Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action
Pre-Drill Setup				<p>Initial conditions:</p> <ul style="list-style-type: none"> Unit 3 is operating at 100% power, Beginning of Life (BOL), Spent Fuel Pool Temperature is 94°F, 30 days since the last refueling outage. Unit 4 is operating at 100% power, Middle of Life (MOL), Spent Fuel Pool Temperature is 93°F, 245 days since the last refueling outage. Protected Train (for the drill) is: B. Radiochemical analysis indicates elevated Unit 3 RCS activity <300 uCi/gm, and within Technical Specification limits. <p>Planned evolutions:</p> <ul style="list-style-type: none"> Station Area Ops is scheduled to perform preventive maintenance on GCB 8W92 (Flagami Line) in the switchyard on day shift. A sulfuric acid delivery to the Water Treatment Plant is scheduled for 1200. <p>It is a weekday morning. The current temperature is 78°F, with winds from the south southeast (150°) at 10 miles per hour. Atmospheric Stability Class is E. Skies are clear and no rain is forecast.</p>	Simulator will be set up as required.
0	0800			Shift Turnover	The operating crew takes the watch.
+ 5 minutes	0805			Tailpipe temperature readings begin to increase indicating a leaking Unit 3 Pressurizer safety valve (RV-3-551C).	The operating crew will investigate upon discovery.



Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action
+10 minutes	0810		1 	The Control Room crew will be alerted to increasing Main Turbine vibrations via annunciator E 1/1(TURB ROTOR VIBRATION/ECCENTRICITY) alarming quickly followed by a loss of Main Condenser vacuum and subsequent Turbine and Reactor trip.	Trigger Event 1 The operating crew will enter 3-EOP-E-0 (Reactor Trip or Safety Injection), then transition to 3-EOP-ES-0.1 (Reactor Trip Response) and stabilize the unit.
+15 minutes	0815	 Record Times T-0 (ALERT): _____ ALERT Classification Time: _____ ALERT Notification Time: _____ Time State / Counties Notified of Classification: _____ Time of ERO Activation: _____		<p>The Control Room is notified that a Turbine failure (blades having penetrated the casing) has occurred on Unit 3 resulting in visible damage to the 3A and 3C Moisture Separator Re-heaters (MSRs), Unit 3 Main Transformer, Unit 3 Condensate Storage Tank (CST), and the Turbine Building. [Message 16]</p> <p>This is T-0 for ALERT – HA1 / Natural or Destructive Phenomena Affecting VITAL AREAS.</p> <p><u>Threshold Value</u></p> <p>4. Turbine failure-generated projectiles resulting in VISIBLE DAMAGE to or penetration of ANY of the Table H1 plant structures containing safety systems or components OR Control Room indication of degraded performance of those safety systems.</p>	<p>The Shift Manager (SM) will enter 0-EPIP-20101 (Duties of Emergency Coordinator).</p> <p>The Alert must be declared within 15 minutes of T-0 (ALERT) with notification < 15 min thereafter</p> <p>An Alert should be declared: HA1</p> <ul style="list-style-type: none"> • Alert Notification is made to the State and Counties, via the Hot Ring Down phone within 15 minutes of the declaration. • Alert Notification is made to the NRC within 60 minutes. • Plant announcements should be made for entry into the Alert. • ERO will be activated to proceed to their respective Emergency Response Facilities.

Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action
+55 minutes	0855			The Control Room is notified that a worker has suffered steam burns as a result of the Turbine failure, and medical assistance is needed. [Message 18]	The operating crew will alert Site Medical personnel, and direct them to respond to the scene of the injured worker. The worker will be treated at the Site Medical Facility. The worker's injuries will not be life threatening, and transport off site will not be required.
+60 minutes	0900	Record Times  TSC Operational Time: _____		TSC is Operational	TSC becomes Operational. Announcements are made in the Control Room, Operations Support Center, and the Technical Support Center of who the new Emergency Coordinator is and his/her location. ERFs are briefed on the condition of the nuclear units. Priority Status is being made for the units.
+60 minutes	0900	Record Times  OSC Operational Time: _____		OSC is Operational	OSC becomes Operational.
+70 minutes	0910		2 	Reactor Coolant System (RCS) activity will begin to increase following the Reactor Trip such that it climbs above 300 uCi/gm as indicated by ≥ 2.5 R/hr on R-3-20, Letdown Radiation Monitor and > 5.4 E+3 R/hr on RAD-3-6311A/B, Containment High Range Radiation Monitors (CHRRMS) 60 minutes after the Reactor Trip.	Trigger Event 2 The operating crew will enter 3-ONOP-041.4, Excessive Reactor Coolant System Activity.

Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action
+75	0915	 Record Times T-0 (SAE): <hr/> SAE Classification Time: <hr/> SAE Notification Time: <hr/> Time State / Counties Notified of Classification: <hr/> Start Time of the Owner Controlled Area Evacuation: <hr/>	3 	<p>A loss of Reactor coolant greater than maximum charging with letdown isolated occurs due to Pressurizer safety valve RV-3-551C opening and not re-seating resulting in a Safety Injection (SI).</p> <p>This is T-0 for: SITE AREA EMERGENCY / FS1 / Loss or Potential Loss of ANY two Barriers.</p> <p><u>Threshold Value:</u></p> <p>CHRRM reading greater than 5.4 E+3 R/hr</p> <p><u>AND</u></p> <p>RCS leak rate indicated by greater than maximum charging with Letdown isolated.</p>	<p>Trigger Event 3</p> <p>The operating crew will re-enter 3-EOP-E-0 (Reactor Trip or Safety Injection), then transition to 3-EOP-E-1 (Loss of Reactor or Secondary Coolant).</p> <p>The Emergency Coordinator (EC) will enter 0-EPIP-20101 (Duties of Emergency Coordinator) and the EC will enter 0-EPIP-20110 (Criteria For, and Conduct of Owner Controlled Area Evacuation).</p> <p>The SAE must be declared within 15 minutes of T-0 (SAE) with notification < 15 min thereafter</p> <p>A Site Area Emergency should be declared: FS1</p> <ul style="list-style-type: none"> • Site Area Emergency Notification is made to the State and Counties, via the Hot Ring Down phone within 15 minutes of the declaration. • Site Area Emergency Notification is made to the NRC within 60 minutes. • Plant announcements should be made for entry into the Site Area Emergency and Owner Controlled Area Evacuation. • Security Shift Supervisor performs an evacuation of the Owner Controlled Area, including non-essential personnel from the Protected Area and implements 0-EPIP-20110, Criteria for and Conduct of an Owner Controlled Area Evacuation, and Security Procedure, PTN-SY-001, Emergency Evacuation and Accountability. • Watch Engineers of Units 1, 2, and 5 are notified of the Site Evacuation and are instructed to initiate a roster of personnel left in the fossil units for shutdown of the fossil units.

Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action
+90 minutes	0930	Record Times  EOF Operational Time: <hr/>		EOF is Operational	EOF becomes Operational. Announcements are made in the Operations Support Center and the Technical Support Center of who the Recovery Manager is. Active coordination between the EOF, OSC, and TSC is occurring.
+120 minutes	1000	 Record Times End Time of the Owner Controlled Area Evacuation completed: <hr/>		Security completes simulated Owner Controlled Area evacuation.	Security completes simulated Owner Controlled Area evacuation within 30 minutes.
+120 minutes	1000			The Control Room is notified that oil leaking from the Unit 3 Main Transformer has caught fire. [Message 24] Note: The Transformer Deluge System does NOT actuate.	Control Room personnel will announce the fire, activate the fire alarm, and dispatch the Fire Brigade to the fire scene. The fire will be extinguished within 30 minutes.

Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action																																
+160 minutes	1040	<div> Record Times GE Classification Time: _____ GE Notification Time: _____ Time State / Counties Notified of Classification: _____ Time State / Counties Notified of PARs: _____</div>	<div>4 </div>	<p>Unit 3 Containment wide range pressure decreases rapidly. Shortly thereafter Area Radiation Monitors (ARMS) in the vicinity of the Unit 3 Pipe & Valve Room (e.g., RD-1416 and RD-1413) as well as the Plant Vent Radiation Monitors (R-14 and RAD-6304) readings indicate increasing activity.</p> <p>This is T-0 for: GENERAL EMERGENCY / FG1 / Loss of ANY two Barriers <u>AND</u> Loss or Potential Loss of the Third Barrier.</p> <p><u>Threshold Value:</u></p> <p>CHRRM reading greater than 5.4 E+3 R/hr</p> <p><u>AND</u></p> <p>RCS leak rate indicated by greater than maximum charging with Letdown isolated.</p> <p><u>AND</u></p> <p>A containment pressure rise followed by a rapid unexplained drop in containment pressure.</p>	<p>Trigger Event 4</p> <p>The Emergency Coordinator (EC) will re-enter 0-EPIP-20101 (Duties of Emergency Coordinator). The Recovery Manager (RM) will enter 0-EPIP-20134 (Offsite Notifications and Protective Action Recommendations).</p> <p>Due to the General Emergency, Protective Action Recommendations (PARs) based on plant conditions and/or offsite dose projections, will be recommended to the risk-counties and state. T-0 for PARs will be the same as the T-0 for the General Emergency. Sectors affected are Q, R, and A.</p> <p>The Plant Condition Based PARs should be:</p> <table><tr><th>Miles</th><th>Evacuation Sectors</th><th>Shelter Sectors</th><th>Monitor & Prepare Sectors</th></tr><tr><td>0 -2</td><td>All</td><td>None</td><td>None</td></tr><tr><td>2 – 5</td><td>Q-R-A</td><td>None</td><td>All Remaining</td></tr><tr><td>5 - 10</td><td>None</td><td>None</td><td>All</td></tr></table> <p>The Dose Based PARs should be: *</p> <table><tr><th>Miles</th><th>Evacuation Sectors</th><th>Shelter Sectors</th><th>Monitor & Prepare Sectors</th></tr><tr><td>0 -2</td><td>All</td><td>None</td><td>None</td></tr><tr><td>2 – 5</td><td>Q-R-A</td><td>None</td><td>All Remaining</td></tr><tr><td>5 - 10</td><td>None</td><td>None</td><td>All</td></tr></table>	Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors	0 -2	All	None	None	2 – 5	Q-R-A	None	All Remaining	5 - 10	None	None	All	Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors	0 -2	All	None	None	2 – 5	Q-R-A	None	All Remaining	5 - 10	None	None	All
Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors																																		
0 -2	All	None	None																																		
2 – 5	Q-R-A	None	All Remaining																																		
5 - 10	None	None	All																																		
Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors																																		
0 -2	All	None	None																																		
2 – 5	Q-R-A	None	All Remaining																																		
5 - 10	None	None	All																																		
+205 minutes	1125			<p>The Operations Support Center (OSC) receives a report that a Radiation Protection Technician (RPT) has become contaminated while performing a survey in the Auxiliary Building near the Unit 3 Pipe & Valve Room. [Message 28]</p>	<p>The individual will be successfully decontaminated by RP in accordance with applicable plant procedures.</p>																																

Timeline	Scenario Time	Actual Time	Event #	Event Description	Anticipated Response Action																
+220 minutes	1140	<div> Record Times T-0 (PARs): Time State / Counties Notified of PARs:</div>	<div>5 </div>	<p>The Plant Vent SPING Radiation Monitor (RAD-6304) reading increases to 2.00 E0 uCi/cc.</p> <p>Conditions exist for T-0 for a PAR upgrade based upon dose projections once the EOF Radiation Protection Manager signs the Protective Action Recommendations (PAR) Worksheet (Attachment 1 of 0-EPIP-1102).</p>	<p>Trigger Event 5</p> <p>The Recovery Manager (RM) will re-enter 0-EPIP-20134 (Offsite Notifications and Protective Action Recommendations).</p> <p>The upgraded PAR notification must be made within 15 minutes of the Recovery Manager signing the Protective Action Recommendations (PAR) Worksheet (Attachment 1 of 0-EPIP-1102).</p> <p>Due to the increased Plant Vent SPING monitor (RAD-6304) reading, upgraded Protective Action Recommendations (PARs) based on offsite dose projections, will be recommended to the risk-counties and state. T-0 for PARs will be when offsite dose projections indicated that PAGs will be exceeded at 5 miles. Sectors affected are Q, R, and A.</p> <p>The Upgraded Dose Based PARs should be:</p> <table><tr><th>Miles</th><th>Evacuation Sectors</th><th>Shelter Sectors</th><th>Monitor & Prepare Sectors</th></tr><tr><td>0 -2</td><td>All</td><td>None</td><td>None</td></tr><tr><td>2 - 5</td><td>Q R A</td><td>None</td><td>All Remaining</td></tr><tr><td>5 - 10</td><td>Q R A</td><td>None</td><td>All Remaining</td></tr></table>	Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors	0 -2	All	None	None	2 - 5	Q R A	None	All Remaining	5 - 10	Q R A	None	All Remaining
Miles	Evacuation Sectors	Shelter Sectors	Monitor & Prepare Sectors																		
0 -2	All	None	None																		
2 - 5	Q R A	None	All Remaining																		
5 - 10	Q R A	None	All Remaining																		
+270 minutes	1230 (Approximately)			<p>Ensure all objectives have been accomplished by contacting the Lead Controller at each facility.</p> <p>When the above has been verified then terminate drill. [Message 32]</p>	<p>Ensure all objectives completed.</p> <p>Ensure all paperwork and copies of logbook entries are collected.</p> <p>Ensure all State and NRC Notification forms are collected.</p>																

¹ S-Time = Scenario time, which begins at zero.

² Clock = Actual time, all times approximate.

4.0 DRILL MESSAGES

**FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

4.1 MESSAGE INDEX

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28. Notification of Contaminated RP Technician in the Auxiliary Building
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31. Contingency PAR Upgrade Based on Dose Projections
32. Drill Termination

Message - 1

THIS IS A DRILL!

THIS IS A DRILL!

THIS IS A DRILL!

To: Drill Responders

From: Lead Exercise Controller

Time: 0630

Controller Notes:

The Lead Controller should notify Plant Management at the Morning Meetings drill initial conditions will be emailed. The plant initial conditions for the Emergency Preparedness HAB Drill as follows. This information is for your review and familiarization before responding to the Drill.

MESSAGE:

Initial Conditions

- Unit 3 is operating at 100% power, Beginning of Life (BOL), Spent Fuel Pool Temperature is 95°F, 30 days since the last refueling outage.
- Unit 4 is operating at 100% power, Middle of Life (MOL), Spent Fuel Pool Temperature is 90°F, 245 days since the last refueling outage.
- Protected Train (for the drill) is: B.
- Radiochemical analysis indicates elevated Unit 3 RCS activity <300 uCi/gm, and within Technical Specification limits.

Planned Evolutions:

Station Area Ops (SAO) is scheduled to perform preventive maintenance on GCB 8W92 (Flagami Line) in the switchyard on day shift.

A sulfuric acid delivery to the Water Treatment Plant (WTP) is scheduled for 1200.

Meteorological Conditions

It is a weekday morning. The current temperature is 78°F, with winds from the south southeast (150°) at 10 miles per hour. Atmospheric Stability Class is E. Skies are clear and no rain is forecast.

Radiological and Radiochemical Conditions

Radiological conditions are normal. Radiochemistry conditions are as stated above.

Message - 2

THIS IS A DRILL !

THIS IS A DRILL !

THIS IS A DRILL!

To: ENS Communicators and Shift Communicator

From: Local Controller

Time: Start of Drill or upon player arrival

Message:

Turkey Point Nuclear Plant will be conducting an emergency preparedness drill until approximately 1:00 PM today or earlier as determined by the Master Exercise Controller.

The NRCOC will participate for the entire drill. Make all calls to the NRCOC per actual procedure guidance.

The State Watch Office will participate for the entire drill. Make all calls to the State Watch Office per actual procedure guidance.

DO NOT PRE-STAGE ANY NOTIFICATION PAPERWORK!

Message - 3

THIS IS A DRILL ! THIS IS A DRILL !

THIS IS A DRILL !

To: Nuclear Watch Engineer

From: Simulator Controller

Time: Start of exercise

Controller Notes:

Fire Brigade members must be assigned as part of normal shift routine.

Expected Responder Actions:

- Fire Brigade members assigned.

Message:

Designate the Fire Brigade Leader and plant operators as Fire Brigade members.

Message – 4

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: RP Shift Supervisor and Chemistry Supervisor

From: Master RAD Controller

Time: At beginning of RP/CHEM Shift Meeting

Controller Notes:

- Have the supervisors notify the Simulator crew of the shift assignments.
- Locate responders prior to exercise and maintain contact.
- Ensure drill message is given to the drill players and not actual on shift RP or Chemistry Tech.

Expected Responder Actions:

- RP / Chemistry members designated for drill.
- RP and Chemistry Supervisors notified prior to start of drill to designate 3 RP and 1 Chemistry responders and their location.

Message:

Designate 3 RP and 1 Chemistry responders for early response if required before facility activation. Designate the location for the RP and Chemistry responders.

Message - 5

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: All responders

From: Local Controllers

Time: As needed

Controller Notes:

Informing responders, as needed, of special instructions to contact the Simulator-Control Room.

DO NOT LET "DRILL CALLS" BE MADE TO ANY "REAL" CONTROL ROOM PHONE NUMBER.

The Simulator will be using the new CISCO Computer phone communication system for this drill. REMEMBER TO USE **"THIS IS A DRILL....THIS IS A DRILL"**

Message:

- To call from the Plant to the Simulator : **DIAL *555XXXX (ex. *5554906)**
- To call from outside the plant (ex. Juno, EOF, etc.) to the Simulator : **DIAL 305-246-6993 , when you hear the auto-operator, then DIAL *555XXXX (ex. *5554906)**
- To call from the Simulator to the Plant : **DIAL *XXXX (ex. *6271)**
- To call from the Simulator to outside the Plant: **DIAL Area Code-XXX-XXXX (ex. 305-552-1234)**
- To call from Simulator to another Simulator phone : **DIAL *555XXXX (ex. *5554907)**
- **SIMULATED SAS/CAS SECURITY BRIDGE LINE TO ICP: 561-694-5038**
- **SIMULATOR/CONTROL ROOM OPERATIONS BRIDGE LINE TO ICP: 305-552-3000 (Code 2466857) (Host Pin 12345). IF you are the first person on the bridge enter 2#, THEN Code and Host PIN.**
- To call Simulated SECURITY CAS/SAS ROOM **DIAL *4086**

WARNING: CELLULAR PHONES MAY NOT LINK TO THE SIMULATOR EXTENSIONS.

Message - 6

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Security

From: Security Controllers

Time: As Needed

Controller Notes:

DO NOT LET "DRILL CALLS" BE MADE TO ANY "REAL" CONTROL ROOM PHONE NUMBER.

REMEMBER TO USE **"THIS IS A DRILL....THIS IS A DRILL"**

Expected Responder Actions:

Use number as directed.

Message:

- **DIAL *5554372 to call Control Room Security HRD Phone using extension 4086.**
- **DIAL 561-694-5038 for SIMULATED SAS/CAS SECURITY BRIDGE LINE TO ICP using extension 4088.**

Message - 7

THIS IS A DRILL ! THIS IS A DRILL THIS IS A DRILL !

To: Drill Shift Manager & Shift Communicator in Simulator
From: Simulator Controller
Time: Start of Drill

Controller Notes:

Read the message sheet to the Drill SHIFT MANAGER and Shift Communicator

Show the drill SHIFT MANAGER and the Shift Communicator the location of the facsimile machine.

Expected Responder Actions: Shift Manager and Shift Communicator are aware of Page / Beeper / Alarm / Phone / Fax use for drill period.

Message:

The Simulator Page System is connected to the Plant Page for the exercise period. Any required announcements may be made from the Simulator.

ALL ANNOUNCEMENTS SHALL BE PRECEDED AND ENDED WITH: "THIS IS A DRILL"

0- ADM-115 NOTIFICATIONS SHALL BE PRECEDED AND ENDED WITH: "THIS IS A DRILL"

The Bell telephone system will simulate Emergency Notification System (ENS). The Hot Ring Down (HRD) telephones are operable for making event notifications from the simulator.

All plant alarms and the page boost may be initiated from the simulator during the exercise period. To have someone contact you, in the simulator, instruct them to dial *555XXXX. Unit 4 extensions are NOT available.

FACSIMILE is available in the Simulator Computer Room 305-246-6765 and is a direct Plant extension.

Message - 8

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager, Control Room Simulator and EOF Communicators

From: Control Room Simulator and EOF Controllers

Time: As facilities staff up

Controller Notes:

ENSURE ALL NOTIFICATIONS ARE PRECEDED AND ENDED WITH: **"THIS IS A DRILL"**

Expected Responder Actions:

The players should contact the NRCOC via the numbers listed on the telephones (1-301-816-5100), and then make the required notifications. Continue with follow-up notifications.

Message:

The FTS-2001 Emergency Notification System (ENS) is operable. The NRCOC will be participating in this exercise. Continuous communication may be maintained if agreed to with the NRCOC at the time of initial notification.

ALL NOTIFICATIONS **SHALL** BE PRECEDED AND ENDED WITH: **"THIS IS A DRILL"**.

Notify your controller when NRCOC notifications are required. Remember "no safeguards" info since it is not a secure line.

Message - 9

THIS IS A DRILL! THIS IS A DRILL ! THIS IS A DRILL!

To: Control Room Communicator, EOF Communicators, and NDDO

From: Control Room and EOF Controllers

Time: Start of Exercise

Controller Notes:

EOF will be activated on a simulated real time basis from a pre-staging area in the General Office (GO). Any Juno Beach personnel should be contacted in the simulated Juno office until EOF activation.

Expected Responder Actions:

Demonstrate contact of the NDDO.

Message:

Contact the NDDO.

NDDO :

Cellular: 786-214-1203

Message - 10

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL

To: OSC / Maintenance Journeyman Players, OSC RP Technician Players, OSC Offsite Field Team Members (if called for), Simulator and Field/Fire Brigade Operators

From: OSC / Maintenance Lead, RP, Chemistry, Operations, and Field Team Controllers

Time: During radio communication between Players and Controllers

Controller Notes:

The Lead TSC and OSC Controllers should ensure that the responders who interface with the offsite teams have radios with the "Plant Management" Talk Group. The mobile radios in the RP Field Team Kits have this channel already programmed.

Remind all responders this message is printed on the reverse side of the responder badges.

Expected Responder Actions:

None

Message: For the purpose of the exercise, the following radio talk groups will be used:

- "Nuc Ops Drill" Talk Group will be utilized for Onsite Team Players' radio communication.
- "Plant Management" Talk Group will be utilized for Offsite Field Team Players' radio communication.
- "Drill Management" Talk Group will be utilized ONLY for Controllers' radio communication.

Message - 11

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL!

To: EOF DCS Operator / EOF ENS Communicator

From: EOF Controller

Time: Upon EOF Staffing

Controller Notes:

Perform and Simulate actions in accordance with procedures.

Message:

*Connection of the Emergency Response Data System (ERDS) to the NRC can be performed up to the point of selecting NRC ERDS LINK. **The rest is SIMULATED ONLY.** This will allow the DCS / Operator to be familiar with the new steps to activate the ERDS Link.*

Message - 12

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL

To: EOF Communicators

From: EOF Controller

Time: Upon EOF Staffing

Controller Notes:

Ensure the facilities have this line available for the drill. If there are problems, contact the Master Operations Controller to ensure the machine is operational.

Expected Responder Actions:

Use facsimile equipment as required.

Message:

FACSIMILE is available in the Simulator Computer Room at *6765 on site and 305-246-6765 from off-site.

Message - 13

THIS IS A DRILL !

THIS IS A DRILL !

THIS IS A DRILL

To: ECO and NDDO

From: Roaming EP Controller

Time: Start of Drill

Message:

To call back into the Control Room – Simulator, call 305-246-6108 which will directly ring into the Control Room – Simulator.

If this extension is busy or is not answered, you may call on any site extension and request to be transferred to the Control Room – Simulator by dialing *5556492 or *5556493.

Message – 14

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: OSC Reentry Coordinator

From: OSC Lead Controller

Time: Prior to dispatch of the first field monitoring or reentry team requiring protective gear.

Controller Notes:

The OSC Lead Controller shall require one player to dress out.

Expected Responder Actions:

Relay message to first field monitoring or reentry team to be dispatched requiring protective gear.

Message:

Field responders dispatched require one team member to don the appropriate respirator equipment.

Message – 15

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Fire Team Leader

From: Fire Protection Controller

Time: When Fire Brigade is dispatched.

Controller Notes:

Fire Protection Controller shall require all players to respond in bunker gear.

Expected Responder Actions:

Relay information to Fire Team Leader upon arrival at scene.

Message:

Fire Brigade response requires two team members to don SCBAs and go on air.

Message – 16

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager Player

From: Simulator Booth Controller

Time: 0815

Controller Notes:

Call the Simulator Shift Manager's phone from the Booth and deliver the message below reporting the catastrophic failure of the Unit 3 Turbine and resultant damage.

Expected Responder Actions:

The Shift Manager (SM) will enter 0-EPIP-20101 (Duties of Emergency Coordinator).

Message:

This is the Unit 3 Turbine Operator. The northernmost Unit 3 LP Turbine has thrown several blades through the casing. There are multiple holes in the LP Turbine casing, the upper portion of the Unit 3 CST, as well as the 3A and 3C MSRs. The surrounding turbine deck area has been damaged in multiple locations by debris from the Turbine. The Unit 3 Main Transformer also has several holes near the top that are leaking oil. I do not see any fire, and I do not know if there are any injured personnel at this time.

THIS IS A DRILL

Contingency Message – 17

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager Player

From: Shift Manager Controller

Time: 0830

CONTROLLER NOTE:

GAIN APPROVAL FROM LEAD EXERCISE CONTROLLER TO DELIVER THIS MESSAGE.

Expected Responder Actions:

The SM should declare an **ALERT**, and carry out Emergency Plan responsibilities.

Message:

If not already done so, declare an **ALERT** at this time in accordance with 0-EPIP-20101, "Duties of the Emergency Coordinator."

IC/Classification: ALERT

HA1 - Natural or Destructive Phenomena Affecting VITAL AREAS.

Operating Mode Applicability: ALL

Threshold Value:

4. Turbine failure-generated projectiles resulting in **VISIBLE DAMAGE** to or penetration of **ANY** of the Table H1 plant structures containing safety systems or components **OR** Control Room indication of degraded performance of those safety systems.

THIS IS A DRILL

Message – 18

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager Player

From: Simulator Booth Controller

Time: 0855

Controller Notes:

While surveying the Unit 3 Turbine deck for additional damage, the Unit 3 Turbine Operator discovers an injured worker lying between the Unit 3 LP Turbine and the 3A MSR, and makes a report to the Control Room requesting medical assistance.

Expected Responder Actions:

The Control Room personnel will request Site Medical personnel to respond to the location of the injured mechanic.

Message:

This is the Unit 3 Turbine Operator. I have just found a worker lying on the Turbine deck between the Unit 3 LP Turbine and the 3A MSR. He is unconscious and appears to have been scalded by steam on his chest area. Send medical assistance.

THIS IS A DRILL

Message – 19

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Site Medical First Responder

From: Safety Controller

Time: Upon arrival at the location of the injured worker

Controller Notes:

Site Medical personnel will respond to the location of the injured worker.

Expected Responder Actions:

Site Medical personnel will perform an examination of the injured worker to determine the extent of injury. Upon completion of the initial examination, Site Medical personnel will render any immediate aid as necessary and then transport the injured worker to the Site Medical Facility for further treatment.

Message:

As the examination of the injured worker is performed, and upon request by the Players, the following information should be provided by the Controller:

- The victim is unconscious.
- The victim's chest and upper right arm are presenting first degree steam burns covering approximately 50% of the area with a small area (approximately 5%) of the arm also presenting second degree steam burns.
- The victim will exhibit the following vital signs:

Pulse	100/min
Respiration	20/min and labored
Blood Pressure	140/80
Pupils	Equal and Non-Reactive
Skin	Reddened in the burned areas, otherwise pale, moist, and cool to the touch

THIS IS A DRILL

Message – 20

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Site Medical Player

From: Safety Controller

Time: Following evaluation of the injured worker at the Site Medical Facility

Controller Notes:

Site Medical personnel should contact the TSC/EC and provide a status report on the injured worker after evaluating his condition.

No offsite communication with fire/rescue or the hospital will take place, and no actual transportation of the victim offsite will occur.

Expected Responder Actions:

Site Medical personnel will contact the TSC/EC and provide a status report on the injured worker, and whether transport to the hospital is required.

Message:

This is the Site Medical Facility. We have completed our evaluation of the injured worker. He has been treated for minor first and second degree steam burns, and his condition is stable. His injuries are not life threatening,

THIS IS A DRILL

Contingency Message – 21

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Emergency Coordinator Player

From: TSC EP Controller

Time: 0930

Controller Notes:

GAIN APPROVAL FROM LEAD EXERCISE CONTROLLER TO DELIVER THIS MESSAGE.

Expected Responder Actions:

The EC should declare a **SITE AREA EMERGENCY**, and carry out Emergency Plan responsibilities.

Message:

If not already done so, declare an **SITE AREA EMERGENCY** at this time in accordance with 0-EPIP-20101, "Duties of the Emergency Coordinator."

IC/Classification: SITE AREA EMERGENCY

FS1 - Loss or Potential Loss of ANY two Barriers

Operating Mode Applicability: 1, 2, 3, 4

Threshold Value:

CHRRM reading greater than 5.4 E+3 R/hr

AND

RCS leak rate indicated by greater than maximum charging with Letdown isolated.

THIS IS A DRILL

Contingency Message – 22

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: The TSC Emergency Coordinator

From: TSC EP Controller

Time: 0915

Controller Notes:

OBTAIN APPROVAL FROM LEAD EXERCISE CONTROLLER TO DELIVER THIS MESSAGE.

Expected Responder Actions:

The EC should direct the TSC Security Supervisor to perform an evacuation of the Owner Controlled Area in accordance with 0-EPIP-20110, "Criteria for and Conduct of an Owner Controlled Area Evacuation," and PTN-SY-001, "Emergency Evacuation and Accountability."

Message:

If not already done so, direct the TSC Security Supervisor to perform an evacuation of the Owner Controlled Area in accordance with 0-EPIP-20110, "Criteria for and Conduct of an Owner Controlled Area Evacuation," and PTN-SY-001, "Emergency Evacuation and Accountability."

THIS IS A DRILL

Message – 23

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager Player and TSC Security Supervisor Player

From: Simulator Controller and TSC Security Controller

Time: Upon decision to perform a Site Evacuation (approximately 0915)

Controller Notes:

Site Evacuation will be simulated and any and all announcements regarding it should be preceded with "THIS IS A DRILL". This message should be relayed to the Security Supervisor in the TSC at the time of the simulated evacuation requirement.

The Controller for this event must note the time that the Site Area Emergency is declared. Thirty minutes following the declaration of the Site Area Emergency, accountability should be complete.

Expected Responder Actions:

- Site Evacuation announcement is made as required and time noted.
- All individuals are accounted for and the time accountability is completed noted.
- Control Room is requested to sound the Site Evacuation Alarm with appropriate announcements.

Message:

Ensure the following information is announced pertaining to the Owner Controlled Area Evacuation Announcement:

"ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. THIS IS ONLY A DRILL. A SITE EVACUATION IS **NOT** REQUIRED. I REPEAT, THIS IS ONLY A DRILL. A SITE EVACUATION IS **NOT** REQUIRED"

THIS IS A DRILL

Message - 24

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Shift Manager Player

From: Simulator Booth Controller

Time: 1000

Controller Notes:

Call the Simulator Fire Phone (Ex. 4444) from the Booth and deliver the message below reporting the fire at the Unit 3 Main Transformer.

Expected Responder Actions:

Control Room personnel will announce the fire, activate the fire alarm, and dispatch the Fire Brigade to the fire scene in accordance with Section 5.3 of 0-EPIP-20101 (Duties of Emergency Coordinator).

Message:

This is Security. One of our officers reports that oil leaking from the Unit 3 Main Transformer has caught fire. The deluge system does not appear to be working. Send the Fire Brigade.

THIS IS A DRILL

Message - 25

THIS IS A DRILL !

THIS IS A DRILL !

THIS IS A DRILL !

To: Fire Brigade Leader

From: Fire Brigade Controller

Time: Upon arrival at the fire scene

Controller Notes:

When the Fire Brigade arrives at the Unit 3 Main Transformer, they will observe that the deluge system has not actuated, and a small amount of oil that has leaked from the Transformer is burning in catch basin below the Transformer.

Note: Hoses and other equipment may be deployed, and hoses may be charged at the discretion of the Fire Brigade Controller.

Expected Responder Actions:

Maintain air gap between player and plant equipment at all times!!

The Fire Brigade Leader will direct the Fire Brigade's response to the fire in accordance with applicable fire plans and procedures.

Message:

The deluge system has not actuated, and a small amount of oil that has leaked from the Unit 3 Main Transformer is burning in catch basin below the Transformer.

THIS IS A DRILL

Message - 26

THIS IS A DRILL !

THIS IS A DRILL !

THIS IS A DRILL !

To: Fire Brigade Leader

From: Fire Brigade Controller

Time: 1030 (Approximately)

Controller Notes:

The Fire Brigade will be successful in extinguishing the fire at the Unit 3 Main Transformer, and will contact the Control Room to notify the EC.

Expected Responder Actions:

Upon receipt of the message, the Fire Brigade Leader will notify the Control Room that the fire has been extinguished at the Unit 3 Main Transformer. The Control Room should relay the report to the EC in the TSC.

Message:

The fire has been extinguished at the Unit 3 Main Transformer.

THIS IS A DRILL

Contingency Message – 27

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Emergency Coordinator Player

From: TSC EP Controller

Time: 1055

CONTROLLER NOTE:

GAIN APPROVAL FROM LEAD EXERCISE CONTROLLER TO DELIVER THIS MESSAGE.

Expected Responder Actions:

The EC should declare a **GENERAL EMERGENCY**, and carry out Emergency Plan responsibilities.

Message:

If not already done so, declare a **GENERAL EMERGENCY** at this time in accordance with 0-EPIP-20101, "Duties of the Emergency Coordinator."

IC/Classification: GENERAL EMERGENCY

FG1 - Loss of ANY two barriers AND Loss or Potential Loss of the Third Barrier.

Operating Mode Applicability: 1, 2, 3, 4

Threshold Value:

CHRRM reading greater than 5.4 E+3 R/hr

AND

RCS leak rate indicated by greater than maximum charging with Letdown isolated.

AND

A containment pressure rise followed by a rapid unexplained drop in containment pressure.

THIS IS A DRILL

Message – 28

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: RP Technician Player

From: RP Re-Entry Team Controller

Time: 1125 (Approximately)

Controller Notes:

An RP Technician who performed surveys in the Auxiliary Building near the Unit 3 Pipe & Valve Room will be found to have become contaminated (Cesium and Rubidium) from airborne activity due to the leaking penetration in the Unit 3 Pipe & Valve Room. The RP Technician will report the contamination to the OSC RP Supervisor.

Expected Responder Actions:

While monitoring him/herself when exiting the Auxiliary Building and upon being notified by the RP Re-Entry Team Controller, the RP Technician will contact the OSC RP Supervisor to report the contamination.

Message:

The portal monitor that you are using has alarmed for your head area indicating that you are contaminated.

THIS IS A DRILL

Message – 29

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: RP Technician Player

From: RP Re-Entry Team Controller

Time: Following monitoring at the RCA Control Point

Controller Notes:

An RP Technician who performed surveys in the Auxiliary Building near the Unit 3 Pipe & Valve Room will find that his/her hair has become contaminated (Cesium and Rubidium) from airborne activity due to the leaking penetration in the Unit 3 Pipe & Valve Room. Attempts to decontaminate the technician in accordance with applicable plant procedures will be made.

Expected Responder Actions:

While performing further monitoring of him/herself with a frisker at the RCA Control Point and upon being notified by the RP Re-Entry Team Controller, the RP Technician will determine that his/her hair has become contaminated. Attempts to decontaminate the technician in accordance with applicable plant procedures will be made.

Message:

The frisker reads 500cpm when checking your hair.

THIS IS A DRILL

Message - 30

THIS IS A DRILL !

THIS IS A DRILL !

THIS IS A DRILL !

To: RP Technician Player

From: RP Re-Entry Team Controller

Time: 1155 (Approximately) – following simulated decontamination efforts

Controller Notes:

The RP Technician will be successfully decontaminated, and will contact the OSC to inform the OSC RP Supervisor.

Expected Responder Actions:

Upon receipt of the message, the RP Technician will notify the OSC RP Supervisor that decontamination efforts were successful.

Message:

You hair has been successfully decontaminated.

THIS IS A DRILL

Contingency Message – 31

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Recovery Manager Player

From: EOF EP Controller

Time: 1155 (Approximately)

CONTROLLER NOTE:

GAIN APPROVAL FROM LEAD EXERCISE CONTROLLER TO DELIVER THIS MESSAGE.

Expected Responder Actions:

The RM should recommend a **PAR UPGRADE** based on dose projections, and ensure that the state and counties are notified.

Message:

If not already done so, recommend a **PAR UPGRADE** at this time, and notify the state and counties in accordance with 0-EPIP-20134, "Offsite Notifications and Protective Action Recommendations."

THIS IS A DRILL

Message – 32

THIS IS A DRILL ! THIS IS A DRILL ! THIS IS A DRILL !

To: Controller Network

From: Master Controller

Time: 1230 (Approximately) - after check with Lead Controller's on readiness to terminate.

Controller Notes:

Gather notes and ALL paperwork generated during drill and attend appropriate critiques.

Ensure Termination Message is given to PTN ERO responders and Offsite agencies responding.

Lead Controllers ensure objectives are evaluated as sat or unsat during facility critique.

Expected Player Actions:

Contact all responders, set time for facility critique.

Return all facilities to a ready status.

Message:

"Attention Controller Network, the drill is terminated."

THIS IS A DRILL

5.0 PLANT PARAMETERS

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

SECTION 5.0 – PLANT PARAMETERS

DATA PRESENTATION:

Plant Parameters are provided by the Turkey Point dynamic Simulator and are not included in the printed scenario package.

6.0 METEOROLOGICAL PARAMETERS

**FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
FEBRUARY 22, 2017**

U.S. WEATHER SERVICE FORECAST DATA

For JANUARY 13, 2015:

TURKEY POINT MET TOWER DATA

PARAMETER	UNIT	VALUES
*10M TWR WIND DIR	DEG	150°
*10M TWR WIND SPD	MPH	10
60M TWR TEMP A	DEG F	78°
60M TWR TEMP B	DEG F	76°
*60M TWR A DELTA T	DEG F	+1.0
60M TWR/10M DIR	DEG	148°
60M TWR/60M DIR	DEG	150°
60M TWR/10M SPD	MPH	9
60M TWR/60M SPD	MPH	10
*10M TWR/10M S/T	σθ	3.0

0700 Forecast from the National Weather Service Station at Miami International Airport for the Biscayne Bay and vicinity:

- The immediate area is experiencing seasonal temperatures, light winds, and clear skies.
- Present conditions include a temperature of 78 degrees F with an anticipated high in the low to mid 80's. Winds are moderate from the South Southeast at 10 miles per hour. The weather has been seasonably normal and the forecast is for clear skies.

7.0 RADIOLOGICAL DATA

			PRMS	PRMS	PRMS	PRMS	PRMS	PRMS	PRMS	PRMS
			Plant Vent Sping	Plant Vent Sping	Plant Vent Sping	PRMS	PRMS	PRMS	PRMS	Plant Vent SPING area gamma MR/Hr
Clock time	Minutes	Seconds	RAD6304 LR Gas (uci/cc)	RAD6304 MR Gas (uci/cc)	RAD6304 HR Gas (uci/cc)	R-11 (uci/cc)	R-12 (uci/cc)	R-14 (CPM)	R-20 (RCS Letdown - MR/Hr)	Plant Vent SPING area gamma MR/Hr
			CMB_019 2	CMB_019 3	CMB_019 4	CMB_018 2	CMB_018 3	CMB_0184	CMB_019 0	CMB_150 6
8:00	0	0	1.00E-08	1.00E-04	0.30	0.00	0.00	292.33	26.55	1.00
8:05	5	300	1.00E-08	1.00E-04	0.30	0.00	0.00	289.37	26.58	1.00
8:10	10	600	1.00E-08	1.00E-04	0.30	0.00	0.00	290.55	26.59	1.00
8:15	15	900	1.00E-08	1.00E-04	0.30	0.00	0.00	289.97	26.59	1.00
8:20	20	1200	1.00E-08	1.00E-04	0.30	0.00	0.00	292.51	26.59	1.00
8:25	25	1500	1.00E-08	1.00E-04	0.30	0.00	0.00	287.29	26.58	1.00
8:30	30	1800	1.00E-08	1.00E-04	0.30	0.00	0.00	287.87	26.58	1.00
8:35	35	2100	1.00E-08	1.00E-04	0.30	0.00	0.00	292.19	26.58	1.00
8:40	40	2400	1.00E-08	1.00E-04	0.30	0.00	0.00	290.36	26.58	1.00
8:45	45	2700	1.00E-08	1.00E-04	0.30	0.00	0.00	292.34	26.57	1.00
8:50	50	3000	1.00E-08	1.00E-04	0.30	0.00	0.00	291.68	26.57	1.00
8:55	55	3300	1.00E-08	1.00E-04	0.30	0.00	0.00	288.10	26.56	1.00
9:00	60	3600	1.00E-08	1.00E-04	0.30	0.00	0.00	292.37	26.91	1.00
9:05	65	3900	1.00E-08	1.00E-04	0.30	0.00	0.00	291.77	31.76	1.00
9:10	70	4200	1.00E-08	1.00E-04	0.30	0.00	0.00	288.11	51.63	1.00
9:15	75	4500	1.00E-08	1.00E-04	0.30	0.00	0.00	291.53	136.40	1.00
9:20	80	4800	1.00E-08	1.00E-04	0.30	0.00	0.00	289.25	291.98	1.00
9:25	85	5100	1.00E-08	1.00E-04	0.30	0.00	0.00	292.15	517.41	1.00
9:30	90	5400	1.00E-08	1.00E-04	0.30	0.00	0.00	291.12	811.11	1.00
9:35	95	5700	1.00E-08	1.00E-04	0.30	0.00	0.00	490.76	1173.04	1.00
9:40	100	6000	1.00E-08	1.00E-04	0.30	0.00	0.00	289.99	1770.73	1.00
9:45	105	6300	1.00E-08	1.00E-04	0.30	0.00	0.00	287.48	2189.97	1.00
9:50	110	6600	1.00E-08	1.00E-04	0.30	0.00	0.00	292.43	2587.10	1.00
9:55	115	6900	1.00E-08	1.00E-04	0.30	0.00	0.00	291.27	2974.48	1.00
10:00	120	7200	1.00E-08	1.00E-04	0.30	0.00	0.00	290.62	3352.29	1.00
10:05	125	7500	1.00E-08	1.00E-04	0.30	0.00	0.00	291.76	3715.27	1.00
10:10	130	7800	1.00E-08	1.00E-04	0.30	0.00	0.00	289.63	3776.03	1.00
10:15	135	8100	1.00E-08	1.00E-04	0.30	0.00	0.00	291.87	3757.76	1.00
10:20	140	8400	1.00E-08	1.00E-04	0.30	0.00	0.00	290.08	3739.61	1.00
10:25	145	8700	1.00E-08	1.00E-04	0.30	0.00	0.00	291.32	3721.51	1.00
10:30	150	9000	1.00E-08	1.00E-04	0.30	0.00	0.00	287.84	3703.51	1.00
10:35	155	9300	1.00E-08	1.00E-04	0.30	0.00	0.00	289.30	3685.62	1.00
10:40	160	9600	1.00E-08	1.00E-04	0.30	0.00	0.00	290.42	3667.79	1.00
10:45	165	9900	1.00E-08	1.00E-04	0.30	0.00	0.00	288.36	3650.07	1.00
10:50	170	10200	1.00E-08	1.00E-04	0.30	0.00	0.00	291.23	3632.41	1.00
10:55	175	10500	1.00E-08	1.00E-04	0.30	0.00	0.00	289.00	3614.86	1.00
11:00	180	10800	1.00E-08	1.00E-04	0.30	0.00	0.00	292.10	3597.47	1.00
11:05	185	11100	0.06	1.451817	1.45	0.00	0.00	132801.86	3580.17	1.69
11:10	190	11400	0.06	3.2	3.20	0.00	0.00	360350.63	3562.86	2.99

7.1.1 PROCESS RADIATION MONITOR DATA

			ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS	ARMS
Clock time	Minutes	Seconds	CHRRMS (R/Hr)	R-1 (ARM Personnel Hatch - MR/Hr)	R-2 (ARM 58' Cmtt - MR/Hr)	RD 1401 (Unit 3 cmtt mezzanine - MR/Hr)	RD 1402 (SG 3A blowall - MR/Hr)	RD 1403 (Unit 3 Flux Mapper - MR/Hr)	RD 1407 (Unit 3 SFP - MR/Hr)	RD 1409 (Aux Bldg 4' elevation - MR/Hr)	RD 1410 (Aux Bldg Boric Acid Batching Room - MR/Hr)	RD 1412 (Unit 3 cask wash area - MR/Hr)	RD 1413 (Unit 3 sample room - MR/Hr)	RD 1415 (North end aux building hallway - MR/Hr)	RD 1417 (east end of aux building hallway - MR/Hr)	RD 1418 (west end of aux building hallway - MR/Hr)	RD 1419 (Unit 3 SFP exhaust - MR/Hr)	RD 1420 (control room - MR/Hr)
		time	C2B_0198	CMB_0210	CMB_0211	CMR1401	CMR1402	CMR1403	CMR1407	CMR1409	CMR1410	CMR1412	CMR1413	CMR1415	CMR1417	CMR1418	CMR1419	CMR1420
8:00	0	0	1	3.58	107.39	3.59	106.54	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:05	5	300	1	3.62	107.12	3.59	106.53	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:10	10	600	1	3.56	108.06	3.59	106.53	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:15	15	900	1	3.57	105.00	3.59	106.53	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:20	20	1200	1	3.56	105.89	3.59	106.52	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:25	25	1500	1	3.61	106.02	3.59	106.52	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:30	30	1800	1	3.63	106.47	3.59	106.51	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:35	35	2100	1	3.58	107.80	3.59	106.52	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:40	40	2400	1	3.58	106.44	3.59	106.51	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:45	45	2700	1	3.57	108.06	3.59	106.51	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:50	50	3000	1	3.57	107.96	3.59	106.51	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
8:55	55	3300	1	3.58	105.44	3.59	106.50	0.18	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
9:00	60	3600	1	3.67	107.67	3.64	106.53	0.23	0.10	0.12	0.10	0.10	0.10	0.11	0.10	0.10	0.98	0.10
9:05	65	3900	1	3.85	106.00	3.80	107.33	0.38	0.10	0.12	0.11	0.10	0.10	0.14	0.11	0.10	0.98	0.10
9:10	70	4200	1	3.07	6.69	3.06	6.75	1.33	0.10	0.12	0.14	0.10	0.10	0.25	0.13	0.10	0.98	0.10
9:15	75	4500	1	5.29	8.43	5.26	8.53	3.54	0.10	0.12	0.26	0.10	0.10	0.73	0.23	0.10	0.98	0.10
9:20	80	4800	1	8.63	11.48	8.61	11.65	6.89	0.10	0.12	0.49	0.10	0.10	1.60	0.40	0.10	0.98	0.10
9:25	85	5100	1	12.86	15.81	13.09	15.97	11.37	0.10	0.12	0.82	0.10	0.10	2.86	0.65	0.10	0.98	0.10
9:30	90	5400	1	18.86	21.07	18.69	21.44	16.96	0.10	0.12	1.24	0.10	0.10	4.49	0.98	0.10	0.98	0.10
9:35	95	5700	1	25.03	28.30	25.37	28.01	23.63	0.10	0.12	1.77	0.10	0.10	6.51	1.38	0.10	0.98	0.10
9:40	100	6000	1	32.19	34.91	32.19	34.75	30.45	0.10	0.12	2.63	0.10	0.10	9.84	2.05	0.10	0.98	0.10
9:45	105	6300	1	38.38	40.76	38.82	41.30	37.05	0.10	0.12	3.24	0.10	0.10	12.16	2.51	0.10	0.98	0.10
9:50	110	6600	1	45.77	47.09	45.29	47.71	43.51	0.10	0.12	3.81	0.10	0.10	14.36	2.95	0.10	0.98	0.10
9:55	115	6900	1	51.69	54.69	51.60	53.98	49.80	0.10	0.12	4.37	0.10	0.10	16.52	3.38	0.10	0.98	0.10
10:00	120	7200	1	58.53	59.84	57.76	60.09	55.94	0.10	0.12	4.91	0.10	0.10	18.61	3.80	0.10	0.98	0.10
10:05	125	7500	1	63.77	65.24	63.67	65.97	61.82	0.10	0.12	5.44	0.10	0.10	20.63	4.21	0.10	0.98	0.10
10:10	130	7800	651	6.33E+06	8.72E+06	6.38E+06	8.90E+06	1.62E+07	0.10	0.12	5.52	0.10	0.10	20.94	4.27	0.10	0.98	0.10
10:15	135	8100	1651	1.00E+07	1.00E+07	1.49E+07	2.00E+07	1.80E+07	0.10	0.12	5.49	0.10	0.10	20.85	4.25	0.10	0.98	0.10
10:20	140	8400	2651	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.47	0.10	0.10	20.75	4.23	0.10	0.98	0.10
10:25	145	8700	3651	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.44	0.10	0.10	20.65	4.21	0.10	0.98	0.10
10:30	150	9000	4651	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.41	0.10	0.10	20.55	4.19	0.10	0.98	0.10
10:35	155	9300	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.39	0.10	0.10	20.45	4.17	0.10	0.98	0.10
10:40	160	9600	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.36	0.10	0.10	20.35	4.15	0.10	0.98	0.10
10:45	165	9900	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.34	0.10	0.10	20.25	4.13	0.10	0.98	0.10
10:50	170	10200	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.31	0.10	0.10	20.15	4.11	0.10	0.98	0.10
10:55	175	10500	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.29	0.10	0.10	20.05	4.09	0.10	0.98	0.10
11:00	180	10800	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	0.10	0.12	5.26	0.10	0.10	19.96	4.07	0.10	0.98	0.10
11:05	185	11100	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	1000.00	2000.00	5.23	200.00	500.00	1000.00	346.67	109.78	350.00	0.10
11:10	190	11400	5600	1.00E+07	1.00E+07	1.70E+07	2.00E+07	1.80E+07	1000.00	2000.00	5.21	200.00	500.00	1000.00	1000.00	950.00	350.00	0.10

7.1.2 AREA RADIATION MONITOR DATA

7.2 ONSITE RADIOLOGICAL DATA

7.2.5

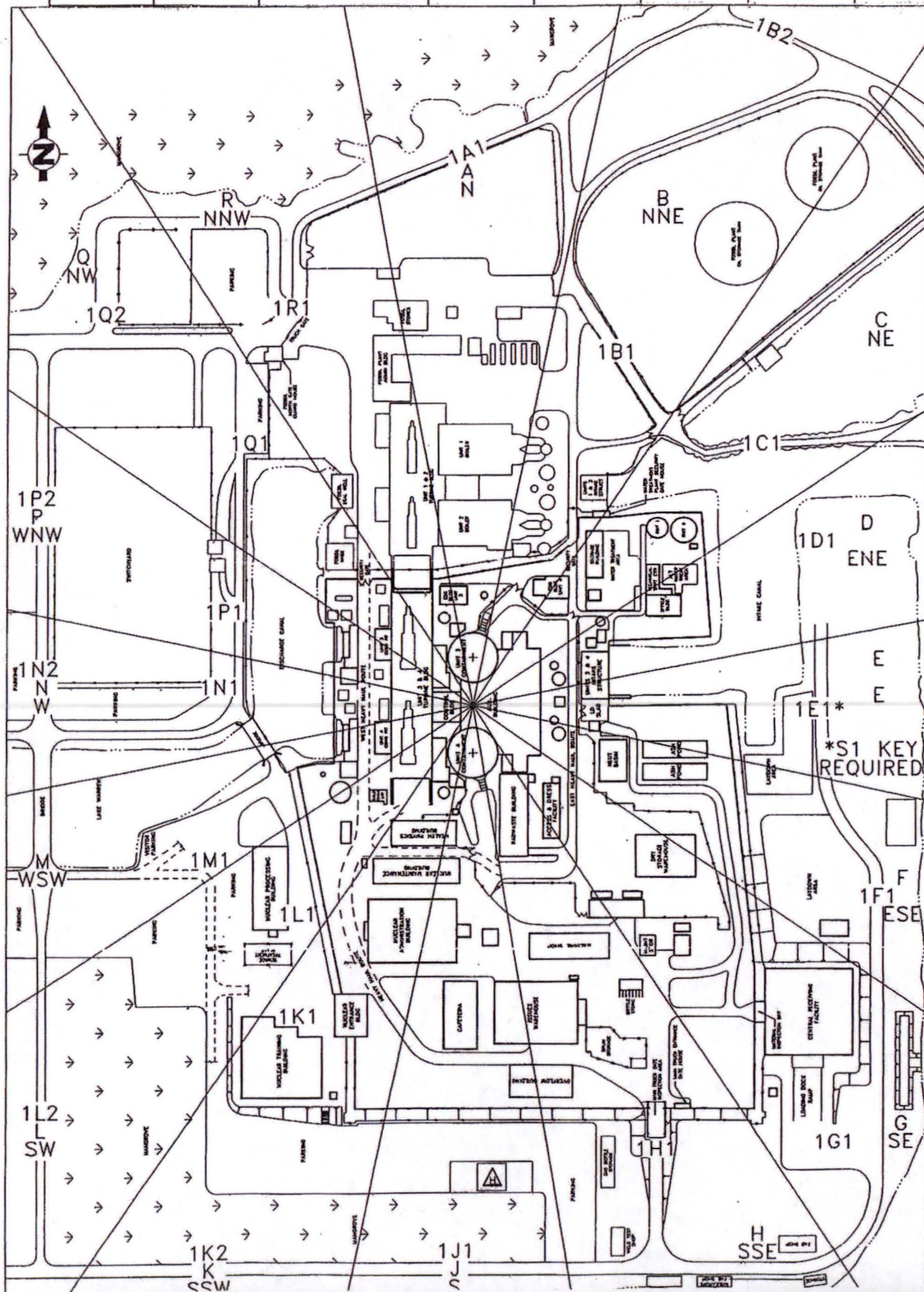
SOURCE TERM INFORMATION

ID	Group Number	Isotope	Halflife (hours)	apply PRF	Core Inventory (Ci)	Iso Correction Factor	Available Fraction	Calculated Release Rate
1	1	Kr-85	9.40E+04	FALSE	7.35E+05	1.00E+00	2.79E-03	3.24E+00
2	1	Kr-85m	4.48E+00	FALSE	1.63E+07	1.00E+00	5.21E-02	6.04E+01
3	1	Kr-87	1.27E+00	FALSE	3.25E+07	1.00E+00	6.71E-02	7.79E+01
4	1	Kr-88	2.84E+00	FALSE	4.49E+07	1.00E+00	1.30E-01	1.51E+02
5	1	Xe-131m	2.86E+02	FALSE	9.65E+05	1.00E+00	3.65E-03	4.24E+00
6	1	Xe-133	1.26E+02	FALSE	1.44E+08	1.00E+00	5.42E-01	6.28E+02
7	1	Xe-133m	5.25E+01	FALSE	4.55E+06	1.00E+00	1.70E-02	1.97E+01
8	1	Xe-135	9.09E+00	FALSE	3.75E+07	1.00E+00	1.31E-01	1.52E+02
9	1	Xe-138	2.36E-01	FALSE	1.21E+08	1.00E+00	1.72E-02	2.00E+01
10	2	I-131	1.93E+02	TRUE	7.06E+07	0.00E+00	5.34E-03	6.19E+00
11	2	I-132	2.30E+00	TRUE	1.03E+08	0.00E+00	5.56E-03	6.45E+00
12	2	I-133	2.08E+01	TRUE	1.43E+08	0.00E+00	1.05E-02	1.22E+01
13	2	I-134	8.77E-01	TRUE	1.58E+08	0.00E+00	4.96E-03	5.75E+00
14	2	I-135	6.61E+00	TRUE	1.37E+08	0.00E+00	9.25E-03	1.07E+01
15	3	Cs-134	1.81E+04	TRUE	1.24E+07	0.00E+00	9.42E-04	1.09E+00
16	3	Cs-136	3.14E+02	TRUE	3.94E+06	0.00E+00	2.98E-04	3.46E-01
17	3	Cs-137	2.63E+05	TRUE	8.59E+06	0.00E+00	6.53E-04	7.57E-01
18	4	Sb-127	9.22E+01	TRUE	6.32E+06	0.00E+00	0.00E+00	0.00E+00
19	4	Sb-129	4.40E+00	TRUE	2.29E+07	0.00E+00	0.00E+00	0.00E+00
20	4	Te-129m	8.06E+02	TRUE	4.44E+06	0.00E+00	0.00E+00	0.00E+00
21	4	Te-131m	3.00E+01	TRUE	1.43E+07	0.00E+00	0.00E+00	0.00E+00
22	4	Te-132	7.82E+01	TRUE	1.01E+08	0.00E+00	0.00E+00	0.00E+00
23	5	Ba-140	3.06E+02	TRUE	1.26E+08	0.00E+00	0.00E+00	0.00E+00
24	5	Sr-89	1.21E+03	TRUE	6.37E+07	0.00E+00	0.00E+00	0.00E+00
25	5	Sr-90	2.55E+05	TRUE	6.32E+06	0.00E+00	0.00E+00	0.00E+00
26	5	Sr-91	9.50E+00	TRUE	7.96E+07	0.00E+00	0.00E+00	0.00E+00
27	6	Mo-99	6.59E+01	TRUE	1.30E+08	0.00E+00	0.00E+00	0.00E+00
28	6	Ru-103	9.43E+02	TRUE	1.15E+08	0.00E+00	0.00E+00	0.00E+00
29	6	Ru-106	8.84E+03	TRUE	4.10E+07	0.00E+00	0.00E+00	0.00E+00
30	7	La-140	4.03E+01	TRUE	1.30E+08	0.00E+00	0.00E+00	0.00E+00
31	7	Y-91	1.40E+03	TRUE	8.38E+07	0.00E+00	0.00E+00	0.00E+00
32	8	Ce-144	6.82E+03	TRUE	9.36E+07	0.00E+00	0.00E+00	0.00E+00
33	8	Np-239	5.65E+01	TRUE	1.50E+09	0.00E+00	0.00E+00	0.00E+00
1000		Total(NG)		FALSE	4.02E+08		9.63E-01	1.12E+03
1001		Total(I2)		FALSE	6.11E+08		3.56E-02	4.13E+01
1002		Total(Part)		FALSE	2.55E+09		1.89E-03	2.20E+00
1003		Totals		FALSE	3.56E+09		1.00E+00	1.16E+03

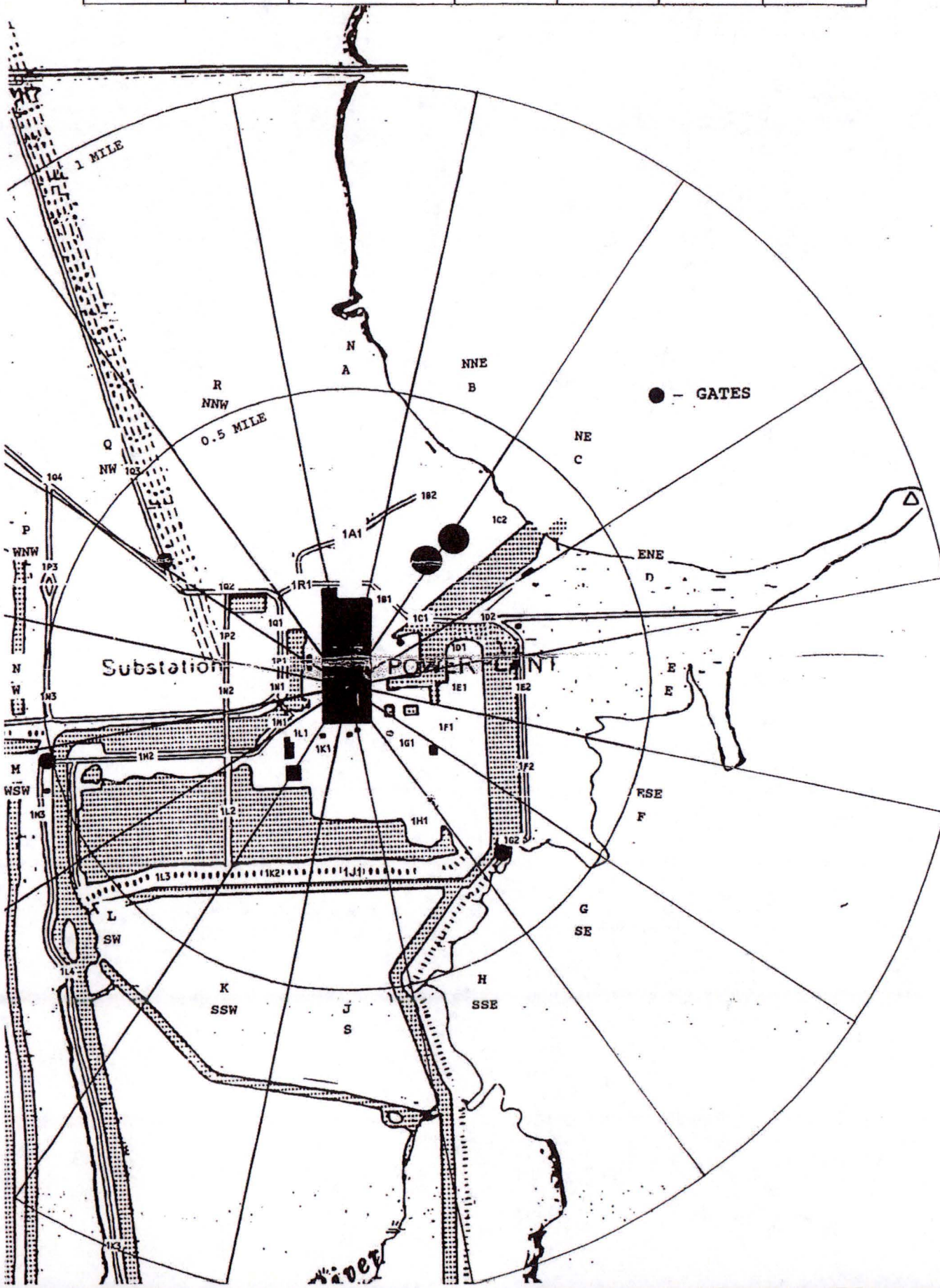
7.3 RADIOLOGICAL MAPS

7.3.1 - ONSITE MAPS

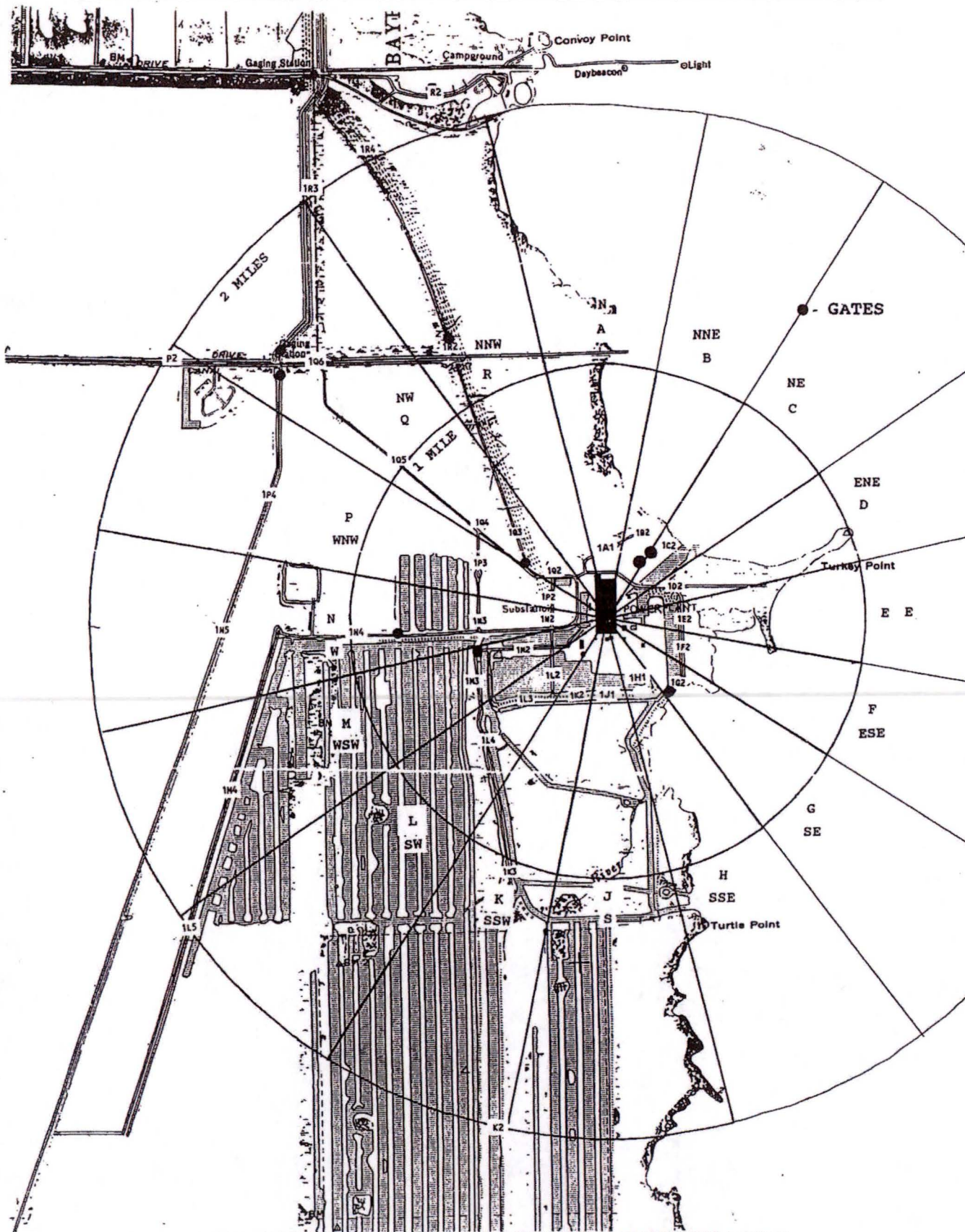
TEAM	TIME	SURVEY LOCATION	EXTERNAL DOSE RATE (R/hr)		IODINE CONC. (uCi/cc)	THYROID DOSE RATE (rem/hr)
			OW	CW		



TEAM	TIME	SURVEY LOCATION	EXTERNAL DOSE RATE (R/hr)		IODINE CONC. (uCi/cc)	THYROID DOSE RATE (rem/hr)
			OW	CW		

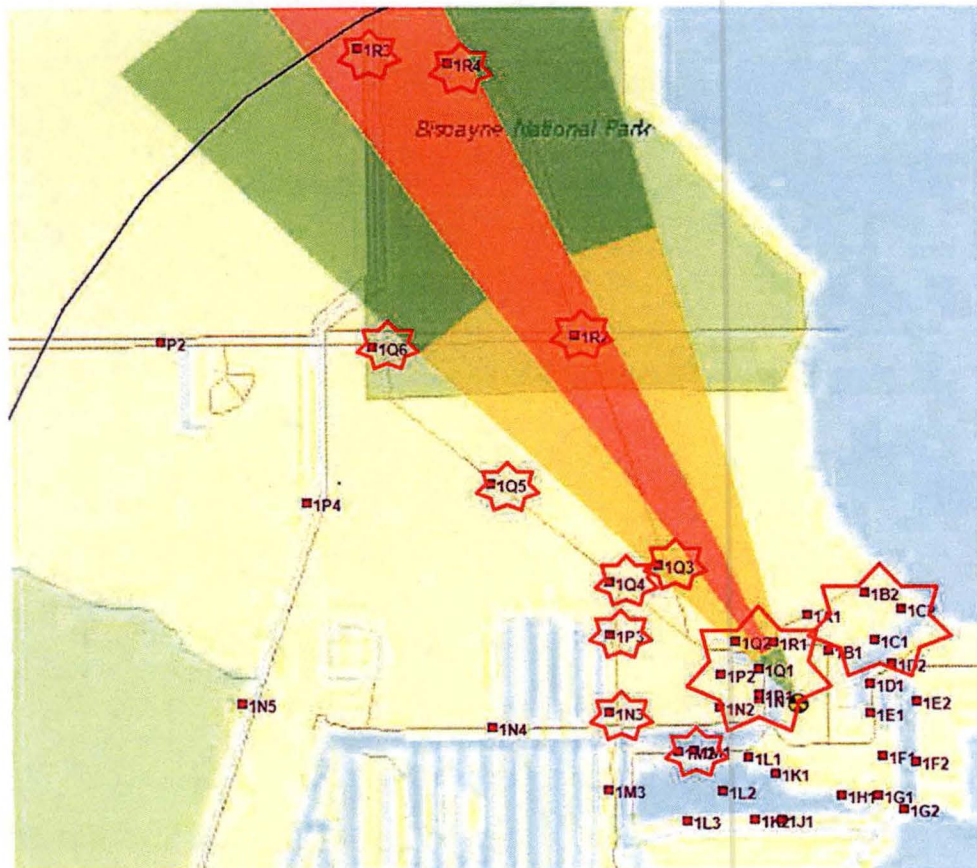


TEAM	TIME	SURVEY LOCATION	EXTERNAL DOSE RATE (R/hr)		IODINE CONC. (uCi/cc)	THYROID DOSE RATE (rem/hr)
			OW	CW		



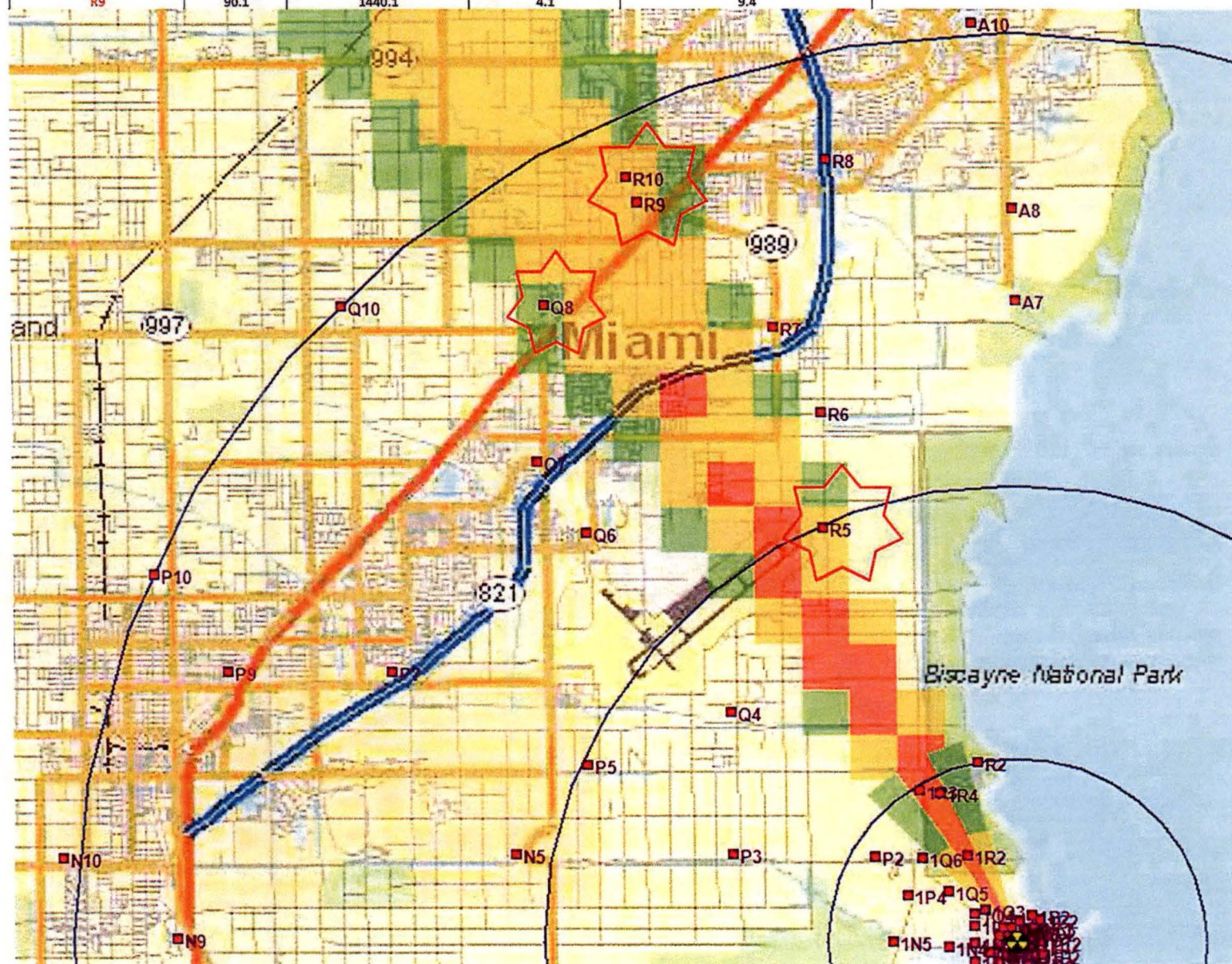
7.3.2 - PLUME AFFECTED AREA MAP

2 Mile Map With Monitoring Location Data



Monitoring Location	TEDE Total	CDE thyroid Total	Dose Rate (mr/hr)	Distance From Plant
1B1	5.3	0	3.8	0.15
1B2	1.7	0	1.2	0.32
1C1	3	0	2.1	0.24
1C2	0.8	0	0.6	0.34
1M2	0.8	0	0.6	0.31
1N1	26.4	0	18.8	0.09
1N2	5.3	0	3.8	0.18
1N3	0.2	0	0.2	0.44
1P1	26.4	0	18.8	0.1
1P2	12.2	0	8.8	0.19
1P3	1	0	0.7	0.47
1Q1	69	0	49.2	0.13
1Q2	123.4	797.6	54	0.21
1Q3	137.9	1744	24.1	0.47
1Q4	7.5	0	5.3	0.54
1Q5	0.9	0	0.7	0.9
1Q6	0.2	0	0.1	1.34
1R1	123.4	797	54	0.16
1R2	2635.2	41760	98.4	1.06
1R3	1204.1	18960	50.4	1.94
1R4	1204.1	18960	50.4	1.8

Monitoring Location	TEDE Total	CDE thyroid Total	Dose Rate (mr/hr)	Distance From Plant
R5	52	833.9	2.2	4.96
Q8	24.9	397.5	1.1	8.59
R10	33.7	539.9	1.7	9.34
R9	90.1	1440.1	4.1	9.4



09:00 Field Monitoring Data

Centerline

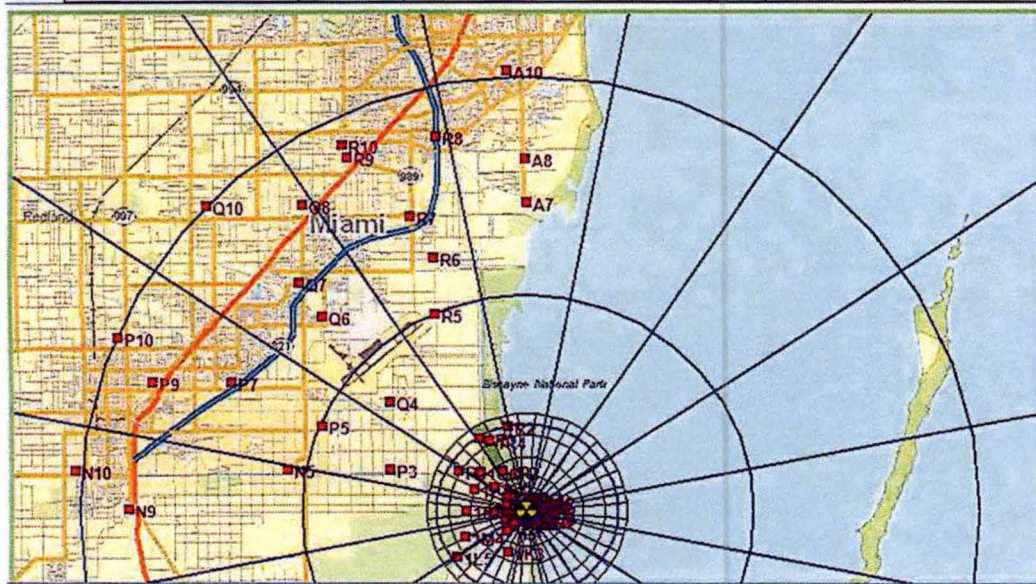
Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Half Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Tenth Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND



10:00 Field Monitoring Data

Centerline

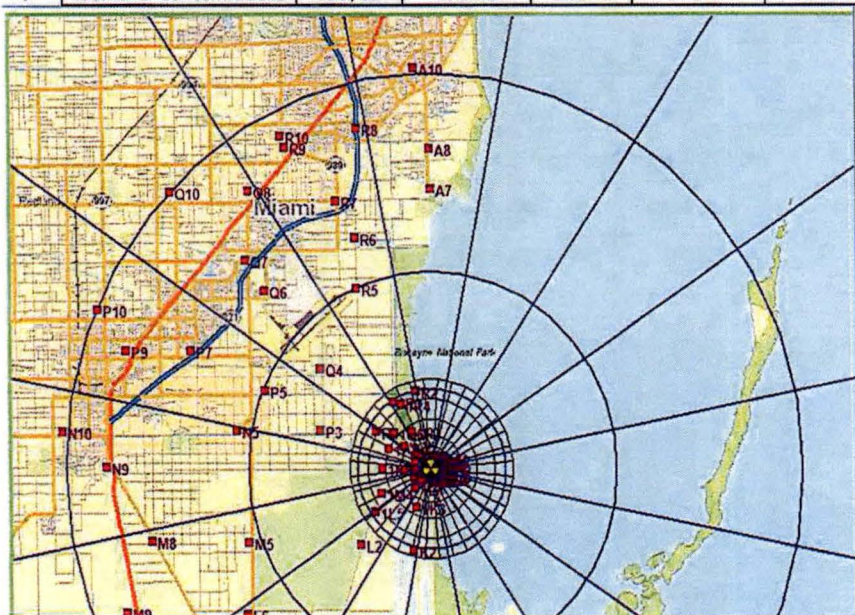
Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Half Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Tenth Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND



Centerline

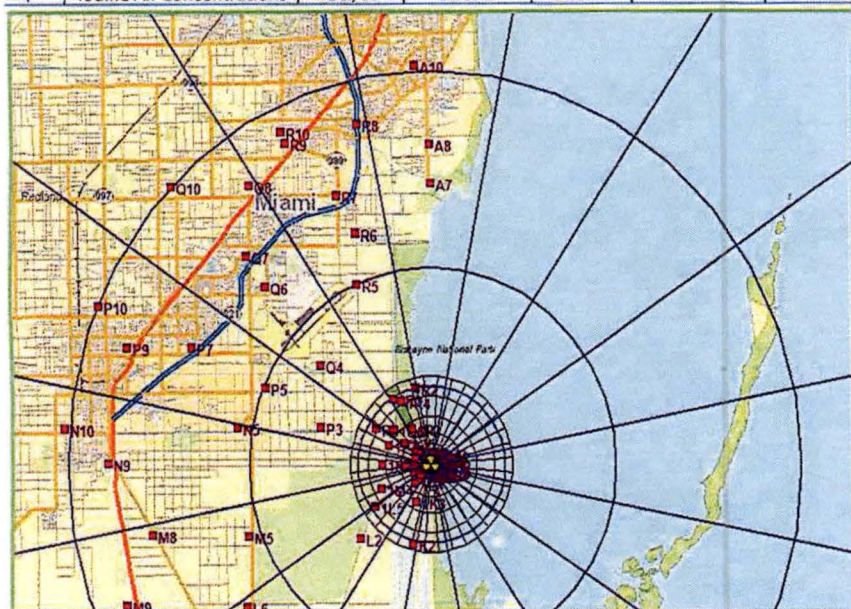
Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Half Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND

Tenth Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Head	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Waist	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Open Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Closed Window at Ground	mr/hr	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND
Iodine Air Concentrations	Uci/cc	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND	BKGND



Centerline

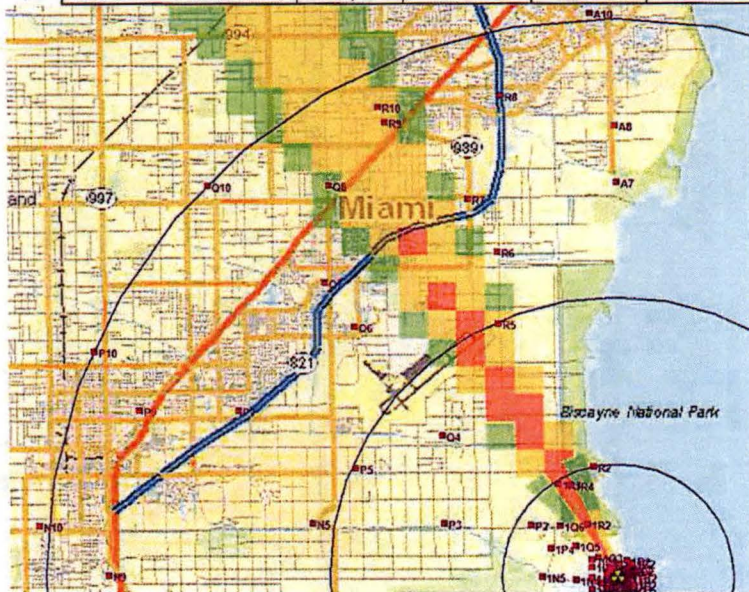
Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	9.84	103.39	77.08	40.22	42.06	27.22	21.92	13.60	12.00	10.70	9.12
Closed Window at Head	mr/hr	9.84	67.60	50.40	26.30	27.50	17.80	15.00	13.60	12.00	10.70	9.12
Open Window at Waist	mr/hr	6.888	103.39	77.08	40.22	42.06	27.22	21.92	10	8.4	7.49	6.384
Closed Window at Waist	mr/hr	6.888	67.60	50.40	26.30	27.50	17.80	15.00	9.12	8.4	7.49	6.384
Open Window at Ground	mr/hr	2.952	103.39	77.08	40.22	42.06	27.22	21.92	4.08	3.6	3.21	2.736
Closed Window at Ground	mr/hr	2.952	67.60	50.40	26.30	27.50	17.80	15.00	4.08	3.6	3.21	2.736
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07

Half Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	4.92	51.69	38.54	20.11	21.03	13.61	10.96	6.80	6.00	5.35	4.56
Closed Window at Head	mr/hr	4.92	33.80	25.20	13.15	13.75	8.90	7.50	6.80	6.00	5.35	4.56
Open Window at Waist	mr/hr	3.44	51.69	38.54	20.11	21.03	13.61	10.96	5.00	4.20	3.75	3.19
Closed Window at Waist	mr/hr	3.44	33.80	25.20	13.15	13.75	8.90	7.50	4.56	4.20	3.75	3.19
Open Window at Ground	mr/hr	1.48	51.69	38.54	20.11	21.03	13.61	10.96	2.04	1.80	1.61	1.37
Closed Window at Ground	mr/hr	1.48	33.80	25.20	13.15	13.75	8.90	7.50	2.04	1.80	1.61	1.37
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07

Tenth Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	1.18	12.41	9.25	4.83	5.05	3.27	2.63	1.63	1.44	1.28	1.09
Closed Window at Head	mr/hr	1.18	8.11	6.05	3.16	3.30	2.14	1.80	1.63	1.44	1.28	1.09
Open Window at Waist	mr/hr	0.83	12.41	9.25	4.83	5.05	3.27	2.63	1.20	1.01	0.90	0.77
Closed Window at Waist	mr/hr	0.83	8.11	6.05	3.16	3.30	2.14	1.80	1.09	1.01	0.90	0.77
Open Window at Ground	mr/hr	0.35	12.41	9.25	4.83	5.05	3.27	2.63	0.49	0.43	0.39	0.33
Closed Window at Ground	mr/hr	0.35	8.11	6.05	3.16	3.30	2.14	1.80	0.49	0.43	0.39	0.33
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07



Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	9.84	103.39	77.08	40.22	42.06	27.22	21.92	13.60	12.00	10.70	9.12
Closed Window at Head	mr/hr	9.84	67.60	50.40	26.30	27.50	17.80	15.00	13.60	12.00	10.70	9.12
Open Window at Waist	mr/hr	6.888	103.39	77.08	40.22	42.06	27.22	21.92	10	8.4	7.49	6.384
Closed Window at Waist	mr/hr	6.888	67.60	50.40	26.30	27.50	17.80	15.00	9.12	8.4	7.49	6.384
Open Window at Ground	mr/hr	2.952	103.39	77.08	40.22	42.06	27.22	21.92	4.08	3.6	3.21	2.736
Closed Window at Ground	mr/hr	2.952	67.60	50.40	26.30	27.50	17.80	15.00	4.08	3.6	3.21	2.736
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07

Half Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	4.92	51.69	38.54	20.11	21.03	13.61	10.96	6.80	6.00	5.35	4.56
Closed Window at Head	mr/hr	4.92	33.80	25.20	13.15	13.75	8.90	7.50	6.80	6.00	5.35	4.56
Open Window at Waist	mr/hr	3.44	51.69	38.54	20.11	21.03	13.61	10.96	5.00	4.20	3.75	3.19
Closed Window at Waist	mr/hr	3.44	33.80	25.20	13.15	13.75	8.90	7.50	4.56	4.20	3.75	3.19
Open Window at Ground	mr/hr	1.48	51.69	38.54	20.11	21.03	13.61	10.96	2.04	1.80	1.61	1.37
Closed Window at Ground	mr/hr	1.48	33.80	25.20	13.15	13.75	8.90	7.50	2.04	1.80	1.61	1.37
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07

Tenth Centerline

Miles from the plant		0.5	1	2	3	4	5	6	7	8	9	10
Open Window at Head	mr/hr	1.18	12.41	9.25	4.83	5.05	3.27	2.63	1.63	1.44	1.28	1.09
Closed Window at Head	mr/hr	1.18	8.11	6.05	3.16	3.30	2.14	1.80	1.63	1.44	1.28	1.09
Open Window at Waist	mr/hr	0.83	12.41	9.25	4.83	5.05	3.27	2.63	1.20	1.01	0.90	0.77
Closed Window at Waist	mr/hr	0.83	8.11	6.05	3.16	3.30	2.14	1.80	1.09	1.01	0.90	0.77
Open Window at Ground	mr/hr	0.35	12.41	9.25	4.83	5.05	3.27	2.63	0.49	0.43	0.39	0.33
Closed Window at Ground	mr/hr	0.35	8.11	6.05	3.16	3.30	2.14	1.80	0.49	0.43	0.39	0.33
Iodine Air Concentrations	Uci/cc	1.21E-05	7.67E-06	5.52E-06	3.14E-06	2.53E-06	1.84E-06	1.51E-06	1.39E-06	1.00E-06	9.00E-06	8.92E-07

