FPL

OCT 25 2012

U. S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Washington, D.C. 20555-0001

Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to NRC 10 CFR 50.54(f) Request for Information Regarding Near-Term Task Force Recommendation 9.3, Emergency Preparedness

References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," Accession No. ML12073A348, March 12, 2012.
2. NRC Letter, D.L. Skeen (NRC) to S. Perkins-Grew (NEI), U.S. Nuclear Regulatory Commission Review of NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities, Revision 0, dated May 2012," Accession No. ML12131A043, May 15, 2012.
3. FPL Letter, M. Kiley (FPL) to NRC (L-2012-208), "60-Day Response to NRC Letter, 'Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident,' dated March 12, 2012," Accession No. ML12144A158, May 10, 2012.

On March 12, 2012, the U. S. Nuclear Regulatory Commission (NRC) issued a letter (Reference 1) to Florida Power and Light Company (FPL) requesting information pursuant to Title 10 of the Code of Federal Regulations 50.54(f). Enclosure 5 of the letter contains specific Requested Actions and Requested Information associated with Recommendation 9.3 for Emergency Preparedness (EP) programs. The requested information consists of the following three items:

1. An assessment of the current communications systems and equipment used during an emergency event to identify any enhancements that may be needed to ensure communications are maintained during a large scale natural event. The assessment should:
   - Identify any planned or potential improvements to existing onsite communications systems and their required normal and/or backup power supplies,
   - Identify any planned or potential improvements to existing offsite communications systems and their required normal and/or backup power supplies,
   - Provide a description of any new communications system(s) or technologies that will be deployed based upon the assumed conditions described above, and
   - Provide a description of how the new and/or improved systems and power supplies will be able to provide for communications during a loss of all ac power;
2. A description of any interim actions that have been taken or are planned to be taken to enhance existing communications systems power supplies until the communications assessment and resulting actions are complete; and

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3. An implementation schedule of the time needed to conduct and implement the results of the assessment.

Reference 2 documents the NRC's review and acceptance of NEI 12-01, Revision 0 for providing an acceptable method for licensees to employ when responding to the 10 CFR 50.54(f) letters regarding Recommendation 9.3.

Table 1.1 of NEI 12-01 provides a summary of licensee actions and due dates pertaining to the subject NRC information request. Consistent with Action # 3 of the table, FPL provided its response to Item 2 of the information request via the FPL letter L-2012-208 (Reference 3). Consistent with Action # 5 of the table, this letter serves to respond to Items 1 and 3 of the information request and thereby completes FPL's response to the communications portion of Recommendation 9.3.

The enclosed report, Turkey Point Nuclear Plant Communications Assessment During an Extended Loss of AC Power, was prepared in accordance with the guidance of NEI 12-01, Revision 0. The report documents the requested communications assessment. The planned communications improvements resulting from the assessment, along with an implementation schedule, are identified in the table below as new commitments. No changes are made to any existing commitments.

REGULATORY COMMITMENT	DUE DATE/EVENT
Complete modifications to implement necessary improvements involving non-power block structures and/or emergency response facilities. a) Design, fabrication, and staging of stop logs to protect the NAB telephone PBX and SpectraLink rooms from flooding as well as the development of applicable procedural guidance. b) Modify the existing external power connector for the PBX room as necessary to insure the required electrical panels can be energized by a portable generator. c) Install stationary cellular telephones in both the EOF and TSC hard wired similar to that which is currently installed in the Control Room. d) Install base stations for satellite telephones in the EOF and OSC to allow open line communications between ERFs.	October 31, 2013
Complete modifications to implement necessary improvements involving power block structures and/or on-site emergency response facilities. a) Obtain and install an appropriately sized battery backup for the SpectraLink Onsite Wireless Telephone System controller located in the Cable Spreading Room such that it will remain powered for a minimum of 24 hours following a sustained loss of all AC at the plant site. b) Relocate the currently installed external power connector for the TSC to an external wall at an elevation above the flood plain to facilitate the use of an appropriately sized external/portable generator and provide instructions for use. c) Install base stations for satellite telephones in the Control Room and TSC to allow open line communications between (ERFs). d) Stage portable generators in Class I or robust structures at selected site locations (e.g., Cable Spreading Room, Central Alarm Station, A/B 4KV Switchgear Rooms) with instructions for use for charging radio and satellite phone batteries and/or powering the PBX room and TSC.	October 31, 2013
Implement actions and modifications related to the proposed improvements including the indicated staging of equipment contained in the enclosed communications assessment Section 5.0 "Planned Improvements".	August 31, 2014

If you have any questions or require additional information, please contact Mr. Robert J. Tomonto, Licensing Manager, at (305) 246-7327.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 25, 2012.

Very truly yours,

Eric McCartney for M. Kiley

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

Enclosure

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant

Enclosure

Turkey Point Nuclear Plant
Communications Assessment
During An Extended Loss of AC Power

This coversheet plus 30 pages.

TURKEY POINT NUCLEAR PLANT

COMMUNICATIONS ASSESSMENT

DURING AN EXTENDED LOSS OF AC POWER

Turkey Point Nuclear Plant response to NRC Request for Information Pursuant to Title 10 of the code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Team Task Force Review of insights from the Fukushima Dai-ichi Accident, dated March 12, 2012. The NRC requested among other things, information related to Emergency Communications.

Dates of Assessment:
July 16, 2012 through September 20, 2012

Executive Summary

This assessment report reviews the communications capabilities associated with the Turkey Point Nuclear Plant with respect to the site's capability to support emergency response to events involving a loss of off site power during wide spread natural events impacting the communications infrastructure in the surrounding community. The assessment was prepared in response to an NRC request for information dated March 12, 2012. The criteria used for performing the assessment was defined in industry guidance contained in NEI 12-01 "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities."

Hazards considered most credible to the region are high winds and storm surge due to hurricanes as well as high winds, sudden pressure spikes and missiles generated by tornadoes. Accordingly, the strategies place a priority on protecting equipment from those events. It is noted that the plant and its associated Emergency Response Facilities (ERFs) were effectively tested by Hurricane Andrew in 1992. Except for damage from a felled water tower (that no longer exists), power block facilities sustained relatively minor damage from wind and missiles; and vital systems remained functional. Therefore, several structures that withstood this event and are considered robust are utilized in the communications strategies.

The earthquake and large tsunami that struck the Fukushima Daiichi nuclear plant caused an extended loss of all AC power that resulted in emergency core cooling systems being unable to prevent fuel damage at three of the six units. South Florida is a seismically inactive area such that seismically-induced failures, for all practical purposes, are considered low probability events. The possibility of a tsunami impacting the Atlantic or Gulf Coasts of Florida is considered to be remote. This is because most tsunamis are associated with major earthquakes. The Atlantic Ocean basin is not ringed by large faults as is the Pacific, which is associated both with earthquakes and tsunamis. Although the Caribbean region has a history of earthquakes and tsunamis, they do not appear to have impacted Florida's coastlines. In the unlikely occurrence of a tsunami, the barrier islands and shallow waters off Florida's coasts would substantially reduce a tsunami's energy. Nevertheless, the strategies consider these events and a complement of equipment is or will be located in structures that provide protection from these events as well.

The conclusion of this assessment is that Turkey Point's communications capabilities are robust and diverse. The communications systems include multiple technologies, redundant power supplies, and the capability to operate with substantial impairment to communications equipment in the surrounding community. Opportunities to further enhance communications were identified and are shown in Attachments A, B, and C. They include the following improvements:

- designate and store adequate backup radios, satellite phones, and batteries, that are reasonably protected from flooding, seismic, and wind hazards;
- acquire portable generators to charge primary and backup radio and satellite phone batteries, and store them such they are reasonably protected from flooding seismic, and wind hazards; and provide instructions for use;
- design, fabrication, and staging of stop logs to protect the Nuclear Administration Building PBX (Commercial) Telephone and SpectraLink Onsite Wireless Telephone System rooms from flooding as well as the development of applicable procedural guidance;
- acquire additional radios, satellite phones, and batteries and stage them at the Turkey Point ERFs as deemed necessary; and
- relocate the currently installed external power connector for the Technical Support Center to an external wall above the flood plain to facilitate the use of an appropriately sized external/portable generator and provide instructions for use.

Topic: 10 CFR 50.54(f) Request For Information – Near Term Task Force (NTTF) Recommendation 9.3 - Communications

NRC Requested Information

NRC Requested Actions

It is requested that addressees assess their current communications systems and equipment used during an emergency event. It is also requested that consideration be given to any enhancements that may be appropriate for the emergency plan with respect to communications requirements of 10 CFR 50.47, Appendix E to 10 CFR Part 50, and the guidance in NUREG-0696. Also addressees are requested to consider the means necessary to power the new and existing communications equipment during a prolonged station blackout (SBO).

NRC Request Assumptions

The NRC requests that the following assumptions be made in preparing responses to this request for information: the potential onsite and offsite damage is a result of a large scale natural event resulting in a loss of all alternating current (ac) power.

In addition, assume that the large scale natural event (LSNE) causes extensive damage to normal and emergency communications systems both onsite and in the area surrounding the site. It has been recognized that following a large scale natural event that ac power may not be available to cell and other communications infrastructures.

NRC Requested Information

1. Addressees are requested to provide an assessment of the current communications systems and equipment used during an emergency event to identify any enhancements that may be needed to ensure communications are maintained during a large scale natural event meeting the conditions described above.

4 COMMUNICATIONS DURING AN EXTENDED LOSS OF AC POWER

4.1 REQUIRED EMERGENCY COMMUNICATIONS CAPABILITIES

Consistent with emergency planning standard requirements, communications systems and equipment associated with the following emergency response functions should be available during an extended loss of AC power. Availability should be determined after a review of existing capabilities and consistent with the assumptions listed in NEI 12-01 Rev. 0 Section 2. In particular, it is important that the primary and backup (if applicable) power source for each communications system or piece of equipment be identified.

End-point equipment identified for a communications link listed below should be used solely for the purpose indicated. For example, a satellite telephone assigned to the Control Room should not be credited for performing both Offsite Response Organization (ORO) and NRC notifications.

When performing this assessment, consideration should be given to the desirability of providing some communications capabilities in alternate facilities at offsite locations instead of their normal locations in on-site facilities.

NOTE A:

In tables below, when referring to "Additional Information" in column 8, ensure the following is addressed:

1. Provide a description of any new communications system(s) or technologies that will be deployed based upon the assumed conditions described above, and
2. Provide a description of how the new and/or improved systems and power supplies will be able to provide for communications during a loss of all AC power.

4.1.1 Notifications to and communications with OROs [*per 10 CFR 50 Appendix E*]

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Control Room (Common For Both Units)	1 for Shift Communicator	State/County Hot Ring Down (HRD) Telephone	NO	PBX (Commercial) Phone	NO	YES(2)	(1)See Attachment B
				Cell Phone	NO	NO	(2)See Attachment A
				EMNET Stationary Satellite Phone System	NO	NO	
				Satellite Phone	YES	YES(1)	
				VHF Radio	NO	NO	
Technical Support Center12 (TSC)	1 for Key TSC Communicator	State/County Hot Ring Down (HRD) Telephone	NO	PBX (Commercial) Phone	NO	YES(2)	(1)See Attachment B
				EMNET Stationary Satellite Phone System	NO	NO	(2)See Attachment A
				Satellite Phone	YES	YES(1)	
				VHF Radio	NO	NO	
Emergency Operations Facility (EOF)	1 for Key EOF Communicator	State/County Hot Ring Down (HRD) Telephone	YES(2)	PBX (Commercial) Phone	YES(2)	NO	(1)See Attachment B
				EMNET Stationary Satellite Phone System	YES(2)	NO	(2)See Attachment G Note: 1
				Satellite Phone	YES	YES(1)	
				VHF Radio	YES(2)	NO	

4.1.2 Notifications to, and communications with, the Nuclear Regulatory Commission (NRC) Headquarters Incident Response Center and the appropriate NRC Regional Office Operations Center [*per 10 CFR 50 Appendix E*]

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Control Room (Common For Both Units)	1 for ENS Communicator	ENS (FTS)	NO	PBX (Commercial) Phone Cell Phone Satellite Phone	NO NO YES	YES(2) NO YES(1)	(1)See Attachment B (2)See Attachment A
Technical Support Center (TSC)	1 for ENS Communicator	ENS (FTS)	NO	PBX (Commercial) Phone Satellite Phone	NO YES	YES(2) YES(1)	(1)See Attachment B (2)See Attachment A
Emergency Operations Facility (EOF)	1 for ENS Communicator	ENS (FTS)	YES(2)	PBX (Commercial) Phone Satellite Phone	YES(2) YES	NO YES(1)	(1)See Attachment B (2) See Attachment G Note: 1
EOF Location where HPN communications are performed	1 for HPN Communicator	HPN (FTS)	YES(2)	PBX (Commercial) Phone Satellite Phone	YES(2) YES	NO YES(1)	(1)See Attachment B (2) See Attachment G Note: 1
TSC Location where HPN communications are performed	1 for HPN Communicator	HPN (FTS)	NO	PBX (Commercial) Phone Satellite Phone	NO YES	YES(2) YES(1)	(1)See Attachment B (2)See Attachment A

4.1.3 Communications between licensee emergency response facilities [*per 10 CFR 50 Appendix E. Additional links that support performance of critical response functions are also specified.*] The minimum communications links to support this function are listed below by facility. For example, if the normally used telephone system cannot be restored to service, these links could rely upon some combination of radio, sound-powered and satellite-based communications systems.

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Control Room (Common For Both Units)	1 per unit	PBX (Commercial) Phone	NO	900 MHz Radio Cell Phone Public Address System (Gai-tronics) Satellite Phones	YES(1) NO NO YES	YES(1) NO NO YES(2)	(1)See Attachment C (2)See Attachment B
Technical Support Center (TSC)	1 each for: • Senior/Lead TSC Manager • Operations Coordination • Maintenance Coordination • Engineering Coordination • Radiological Support Additional links for multi-unit sites: • 1 for each position providing Unit Response Coord.	PBX (Commercial) Phone	NO	900 MHz Radio Public Address System (Gai-tronics) Satellite Phones	YES(1) NO YES	YES(1) NO YES(2)	(1)See Attachment C (2)See Attachment B

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Operational Support Center (OSC)	1 each for: • Senior/Lead OSC Manager • Radiological Support Additional response coordination links for multi-unit sites: • 1 for each position providing Unit In-Plant Team Coordination.	PBX (Commercial) Phone	NO	900 MHz Radio Cell Phone Public Address System (Gai-tronics) Satellite Phones	YES(1) NO NO YES	YES(1) NO NO YES(2)	(1)See Attachment C (2)See Attachment B
Emergency Operations Facility (EOF)	1 each for: • Senior/Lead Manager • Key Protective Measures • Operations or Technical Support (as needed to support performance of dose projections, formulation of PARs and plant status updates to ORO authorities).	PBX (Commercial) Phone	YES(1)	Satellite Phones	YES(2)	YES(2)	(1) See Attachment G Note: 1 (2)See Attachment B
Joint Information Center (JIC)	1 for Senior Manager	PBX (Commercial) Phone	YES(1)	Satellite Phone Face-to-Face communications	YES(2) YES(1)	YES(2) NO	(1) See Attachment G Note: 1 (2)See Attachment B

4.1.4 Communications with field/offsite monitoring teams [*per 10 CFR 50 Appendix E*]

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Primary location where field/offsite monitoring team coordination is performed	Field/offsite monitoring team coordination	900 MHz Radio	YES(1)	None	NO	YES(2)	(1)See Attachment C (2)See Attachment B
Primary location from which field/ offsite monitoring teams are deployed	1 for each field/offsite monitoring team	900 MHz Radio	YES(1)	None	NO	YES(2)	(1)See Attachment C (2)See Attachment B

4.1.5 Communications with other Federal agencies as described in the site emergency plan (e.g., the US Coast Guard) [*per 10 CFR 50 Appendix E*]

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Primary location where communication with Federal agencies is performed	Coordination with Federal agencies	PBX (Commercial) Phone	YES(2)	Satellite phone VHF Radio	YES YES(2)	YES(1) NO	(1)See Attachment B (2) See Attachment G Note: 1

4.1.6 Coordination and direction of on-site and in-plant response teams. This includes teams necessary to affect emergency repairs, firefighting, search and rescue, radiological monitoring, and implementation of Transition Phase coping and severe accident management strategies. To accommodate the timeline associated with NRC Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (as discussed in Section 1), this element should be assessed in 2 phases.

4.1.6.1 Phase 1 Assessment

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
On-shift staff	Number necessary for the on-shift staff to perform Initial Phase coping actions (reflecting current staff & strategies)	900 MHz Radio	YES(1)	Gai-tronics	NO	YES (2)	(1)See Attachment C (2)See Attachment A Re: SpectraLink Onsite Wireless Telephone System
Operational Support Center (OSC) and other site-specific locations as necessary	1 each for: • On-site radiological monitoring 2 each for: • Firefighting (1 for brigade leader and 1 for the brigade) 2 each per unit for: • In-plant rad. monitoring • Search and Rescue ◦ Emergency repairs	900 MHz Radio	YES(1)	Gai-tronics	NO	YES (2)	(1)See Attachment C (2)See Attachment A Re: SpectraLink Onsite Wireless Telephone System

4.2 Plant Paging (Announcement) System

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Control Room (Common For Both Units)	See assumptions and discussion in NEI 12-01.	Gai-tronics	NO	Face-to-Face communications 900 MHz radios	YES YES(1)	NO NO	(1) See Attachment C
TSC	See assumptions and discussion in NEI 12-01	Gai-tronics	NO	Face-to-face communications 900 MHz radios	YES YES(1)	NO NO	(1)See Attachment C

4.3 Communications Equipment at ORO Facilities

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Location where OROs receive notifications of an emergency declaration or a Protective Action Recommendation (as described in the site emergency plan) (From the EOF)	At least one. See assumptions and discussion in NEI 12-01.	State/County Hot Ring Down (HRD) Telephone	YES(1)	PBX (Commercial) Phone EMNET Stationary Satellite Phone System	YES(1) YES(1)	NO NO	(1) See Attachment G Note: 1

4.4 Notification of the Emergency Response Organization (ERO)

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed LSNE?	Backup Method(s) Described in site E-Plan	Backup Method(s) Available following Assumed LSNE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
Location where ERO notifications of an emergency (as described in the site emergency plan)	At least one. See assumptions and discussion in NEI 12-01.	Combination of Cellular Phone, Pager, and PBX (Commercial) Telephone Gai-tronics	NO(1) NO	Predetermined response based on wide area loss of power (memo to employees)	YES	NO	(1)See Attachment E

Considerations for performing the communications assessment and identifying enhancements:

4.5 EQUIPMENT LOCATION REQUIREMENTS

- To be considered functional, a piece of on-site communications equipment should be stored in a location, and maintained in a manner, that maximizes survivability following a beyond design basis event. Some of the facilities may be lost because they are not protected from all of the design basis events (e.g., flooding, seismic, and wind); however, those located in Class I or robust structures meeting the requirements of NEI 12-06 will be available.
- The Interim Staff Guidance for FLEX equipment was issued, by the NRC on 8/29/12. All equipment storage locations will be assessed, and where needed, enhancements identified earlier in this assessment report will be made to verify:
  - location or manner of storage reasonably precludes wetting from flooding,
  - location or manner of storage reasonably precludes damage from a seismic event and
  - equipment is stored, or otherwise available, in locations that can be readily accessed when needed. To the degree practical, potential constraints to equipment access or movement when selecting a storage location will be considered.
- When assessing storage locations, criteria presented in regulatory and industry guidance applicable to equipment associated with the NRC Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External events (e.g., FLEX equipment) has or will be considered. This guidance applies to equipment at the point of use (e.g., radios, satellite telephones, etc.) as well as any supporting infrastructure. Such infrastructure may include portable power sources, radio system repeaters, or satellite telephone antennas.

4.6 PERFORMANCE CHARACTERISTICS

- This assessment has confirmed that once the communications enhancements have been implemented, the systems and equipment identified for usage will support communications among and between:
  - the station's Emergency Response Facilities,
  - radiological field monitoring teams and the location controlling their deployment (e.g., EOF or TSC),
  - the Control Room, TSC, and EOF communicators; and ORO contact points,
  - ENS and HPN communicators, and the NRC staff, and
  - on-site and in-plant teams and the location controlling their deployment (e.g., OSC).
- This assessment has verified that expected reliance upon "multi-use" equipment is minimized.

4.7 OTHER ASSESSMENT CONSIDERATIONS

- Portable backup AC power source(s) for communications systems and components have been assessed, and in accordance with final rulemaking:
  - Backup AC power sources credited as operable will meet the assumptions and requirements discussed in section 4.5 above.
  - Sufficient power source fuel will be available on-site to support the expected run time.
- Assess battery-operated equipment:
  - Enhancements have been identified to verify that there are a sufficient number of on-site and charged batteries to support operation of required equipment. This number was determined with consideration given to the following items:
    - a sufficient number of charged batteries available at the start of an event to support performance of the required emergency response functions listed in Section 4.1, Required Emergency Communications Capabilities,
    - the vendor's stated minimum reliable operability period for a fully charged battery was used,
    - availability of onsite battery charging capability, and
    - delivery of replacement batteries (assumed to occur any time after T + 24 hours).
- This assessment has verified that the only manual action that may need to be taken by emergency responders to facilitate the use of any communication link would be if the portable generators were used to provide power. If their use becomes necessary, then additional enhancements (such as staffing, training, procedure development, etc.) will be identified.

4.8 QUALITY AND MAINTENANCE-RELATED REQUIREMENTS

- Site procedures will be changed/added to account for new equipment.

4.9 NATIONAL COMMUNICATIONS SYSTEM (NCS) SERVICES

- GETS cards are available through the Manager of Wireless Services in Juno Beach. GET cards will be made available to some of our ERFs.
- WPS are telephone specific and require a monthly fee.

4.10 COMMUNICATIONS PROVIDER EMERGENCY SERVICES

- The local cellular carrier has mobile devices capable to extend cellular service to affected areas.

4.11 PERSONNEL TRAINING

- Need training for EP and other personnel on the new communications devices and portable power supplies (interim devices and final configuration).

5.0 PLANNED IMPROVEMENTS

5.1 Planned improvements to existing on-site communications systems and their required normal and/or backup power supplies;

- Design, fabrication, and staging of stop logs to protect the NAB telephone PBX and SpectraLink rooms from flooding as well as the development of applicable procedural guidance.
- Install a stationary cellular telephone in the TSC hard wired similar to that which is currently installed in the Control Room.
- Obtain and stage a Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS) card in the Control Room and TSC.
- Stage three satellite telephones with chargers, extra batteries, and instructions in the Control Room which is in a Class I structure. Also stage a portable generator in a robust structure (e.g., Cable Spreading Room which is in a Class I structure) with instructions for use for charging phone and radio batteries.
- Stage four satellite telephones with chargers, extra batteries, and instructions for use in the TSC; as well as a portable generator in a robust structure (e.g., Unit 3 A/B 4KV switchgear rooms which are Class I structures) with instructions for use for charging phone and radio batteries.
- Stage three satellite telephones with chargers, extra batteries, and instructions for use in the OSC; as well as a portable generator in a robust structure (e.g., Central Alarm Station Building) with instructions for use for charging phone and radio batteries.
- Install base stations for satellite telephones in the Control Room, OSC, and TSC to allow open line communications between emergency response facilities (ERFs).
- Obtain and install an appropriately sized battery backup for the SpectraLink Onsite Wireless Telephone System controller located in the Cable Spreading Room such that it will remain powered for a minimum of 24 hours following a sustained loss of all AC at the plant site.
- Relocate the currently installed external power connector for the TSC to an external wall at an elevation above the flood plain to facilitate the use of an appropriately sized external/portable generator and provide instructions for use.
- Modify the existing external power connector for the PBX room as necessary to insure the required electrical panels can be energized by a portable generator.

5.2 Planned improvements to off-site communications systems and their required normal and/or backup power supplies;

- Stage five satellite telephones with chargers, extra batteries, and instructions in the EOF (located more than 25 miles from the station and therefore not subject to damage from the postulated event).
- Install a base station for satellite telephones in the EOF to allow open line communications between emergency response facilities (ERFs).
- Install a stationary cellular telephone in the EOF hard wired similar to that which is currently installed in the Control Room.
- Obtain and stage a GETS and WPS card in the EOF.

5.3 Provide a description of any new communications system(s) or technologies that will be deployed based upon the assumed conditions;

- No new communications systems will be deployed.

5.4 Provide a description of how the new and/or improved systems and power supplies will be able to provide for communications during a loss of all AC power;

- Obtain and install an appropriately sized battery backup for the SpectraLink Onsite Wireless Telephone System controller located in the Cable Spreading Room such that it will remain powered for a minimum of 24 hours following a sustained loss of all AC at the plant site.
- Relocate the currently installed external power connector for the TSC to an external wall at an elevation above the flood plain to facilitate the use of an appropriately sized external/portable generator and provide instructions for use.
- Modify the existing external power connector for the PBX room as necessary to insure the required electrical panels can be energized by a portable generator.
- Stage portable generators in Class I or robust structures at selected site locations (e.g., Cable Spreading Room, Central Alarm Station, A/B 4KV Switchgear Rooms) with instructions for use for charging radio and satellite phone batteries and/or powering the PBX room and TSC.

Note 1: enhancements/improvements will be documented and tracked within the Corrective Action Program.

Note 2: the portable generators referred to above will be purchased and incorporated into the site's extended blackout mitigation strategy.

6.0 PTN Emergency Response Communication Systems (Current Capabilities)

Communications Systems/Equipment	Alternate methods	System/Equipment Description
Plant Private Branch Exchange (PBX) Commercial Telephone System.	• 900 MHz Radios • Satellite Phones • Cellular Telephone • Gai-tronics • VHF Radio	See Attachment A for a detailed description.
HPN (FTS)	• Plant PBX Commercial Telephone System • Cellular Telephone • Satellite phones	See Attachment A for a detailed description.
Cellular Telephone	• 900 MHz Radios • Plant PBX Commercial Telephone System • Gai-tronics • Satellite Phones	See Attachment A for a detailed description.
Satellite Phones	• 900 MHz Radios • Plant PBX Commercial Telephone System • Cellular Telephone • Gai-tronics • VHF Radio	See Attachment B for a detailed description.
ENS (FTS)	• Plant PBX Commercial Telephone System • Cellular Telephone • Satellite Phones	See Attachment A for a detailed description.
State/County Hot Ring Down Phones	• Plant PBX Commercial Telephone System • EMNET Stationary Satellite Phone System • Cellular Telephone • Satellite Phones	See Attachment A for a detailed description.
EMNET Stationary Satellite Phone System	• State/County Hot Ring Down Phones • Plant PBX Commercial Telephone System • Cellular Telephone • Satellite Phones	See Attachment A for a detailed description.
Plant Public Address System (Gai-tronics)	• 900 MHz Radios • Plant PBX Commercial Telephone System • Cellular Telephone	See Attachment D for a detailed description.

6.0 PTN Emergency Response Communication Systems (Current Capabilities - continued)

SpectraLink Onsite Wireless Telephone System	• Plant PBX Commercial Telephone System • 900 MHz Radios • Gai-tronics	See Attachment A for a detailed description.
Radios	• Plant PBX Commercial Telephone System • Gai-tronics • Satellite Phones • SpectraLink Onsite Wireless Telephone System	See Attachment C for a detailed description.
ERO Notification System (Pagers)	• Plant PBX Commercial Telephone System • Cellular telephones • Email • Predetermined response based on wide area loss of power (memo to employees)	See Attachment E for a detailed description

Attachment A

Turkey Point (PTN) Phone System Description

Assumptions are that there is a loss of all power within a 25 miles radius. These systems will be enhanced as noted to gain additional margin; however, some facilities may be lost because some elements are not protected from all of the design basis events (e.g., flooding, seismic, and wind).

PBX (Commercial) Phone System
Numerous commercial telephone lines are connected to the plant through the PBX switch in the PTN Nuclear Administrative Building (NAB) for normal dial telephone service both within and external to the plant/company. Several extensions of this system are located throughout the Protected Area to facilitate in-plant communication. There is one main PBX system at Turkey Point, located in the NAB with a backup battery life of 4 hours as well as an installed backup via the Security System diesel generator available for use in the event of a loss of offsite power. However given the assumptions in NEI 12-01, the ability to have continued communication between the TSC, OSC, and Control Room depends on how quickly a portable emergency generator can be put into service. The PBX room has an external power connection for a small 480v diesel fueled generator in the event of a loss of AC power. The NAB is elevated above sea level similar to the Nuclear Plant but is not specifically protected from flooding. The NAB withstood the winds produced by hurricane Andrew in 1992 (category 5 storm), however it is not designed to withstand the winds from a tornado. Additionally, the NAB is does not meet the seismic requirements for either a Class I or robust structure.

Stationary Cellular System
A separate telephone set in the office of the Shift Manager in the Control Room, which is a Class I structure, has been dedicated as a backup telephone system. This set is interfaced with a permanently installed cellular telephone unit in the Telephone Frame Room in the NAB, and has a permanently installed backup battery and AC power feed from the Security System diesel backed load center. An antenna for the telephone is located on the NAB roof. See notations in the PBX system description regarding flooding, seismic, and wind considerations for the NAB.

Lease Line Phone System
A direct line (dedicated four wire voice circuit independent of the public switching network) is installed to the System Operations Power Coordinator's Office at the FPL Le Jeune and Flagler Office at 42nd Avenue and Flagler Street. The direct line is also connected to several other Florida plants and substations and is constantly monitored at the Control Rooms of the Florida plants (including PTN) and at the switchboard in the System Operations Power Coordinator's Office. This line's main function during both normal and emergency conditions is for transmitting and receiving instructions and information to and from the System Operations Power Coordinator's Office. Portions of this equipment located in offsite commercial structures are not specifically protected from all of the design basis events (e.g., flooding, seismic, and wind).

EMNET Stationary Satellite Phone System

A satellite dish, satellite modem, VoIP router, and EMNET computer are located at the EOF. The line travels from the EOF Computer/Telephone Room via fiber optic lines to the NAB Computer/Telephone Room over the FPL transmission and distribution system. A line travels from the NAB Computer/Telephone Room to the Control Room, TSC, site Emergency Preparedness (EP) office, and OSC. The NAB Computer/Telephone Room has an external power connection for a small 480v diesel fueled generator in the event of a loss of AC power. The EOF is greater than 25 miles from the plant site, and consistent with the assumptions listed in NEI 12-01 Rev. 0 Section 2.4, would still have AC power. The EOF is located in West Miami at 92nd Avenue and Flagler Street in the General Office (GO) Building. The GO Building is equipped with its own permanently installed diesel generator as a source of emergency power. See notations in the PBX system description regarding flooding, seismic, and wind considerations for the NAB.

State/County Hot Ring Down (HRD) Phone System

The State/County HRD telephones are located in the Control Room, TSC, and EOF which gives those facilities the capability to contact the Florida State Warning Point and County Emergency Operations Centers. The State of Florida Hot Ring Down circuit is routed via a dedicated four wire system that travels on the fiber optic line from the Homestead commercial telephone service office. The State Hot Ring Down system operates independent of the public switching network. Portions of this equipment located in the TSC and offsite commercial structures are not specifically protected from all of the design basis events (e.g., flooding, seismic, and wind).

NRC ENS and HPN Phone Systems (FTS)

These telephones are connected to the Federal Telephone System (FTS-2001). The NRC ENS telephones are located in the Control Room, TSC, and EOF which gives those facilities the capability to contact NRC Headquarters in Rockville, MD. The NRC HPN telephones are located in the TSC and EOF and can be used to call regional NRC offices, the NRC Headquarters, or other sites within the region. The FTS-2001 telecommunications circuits are routed via telephone lines from the Homestead commercial telephone service office. Portions of this equipment located in the TSC and offsite commercial structures are not specifically protected from all of the design basis events (e.g., flooding, seismic, and wind).

SpectraLink Communications System

The SpectraLink communications system is a local (onsite) wireless telephone system that operates over a frequency range of 902-928 MHz, and is capable of being interfaced with most commercially available telephone switches. The system Master Control Unit is located in the Turkey Point NAB in a room adjacent to the site PBX room; with a battery backup life of approximately 24 hours. An additional control unit is located in the Cable Spreading Room on the second floor of the Turkey Point Control Building, a Class I structure, with a battery backup life of 35 minutes to provide communications between refueling stations during fuel moving activities. Base station style antennas are located in the Control Building, NAB, Nuclear Maintenance Building (NMB), and throughout the power block to allow transmission and reception between the control units and SpectraLink wireless telephones within the power block and the immediate surrounding area. Normal power is supplied to the system from non-vital Motor Control Center (MCC) D breaker 0812 via lighting transformer 33. SpectraLink phones are currently used by site Operations, Maintenance, and Projects personnel for communications during various plant activities; particularly in areas that are sensitive to RF interference such as produced by walkie-talkies. Additionally, personnel engaged in an activity can utilize an activity specific bridge via the SpectraLink system so as to avoid interference with other site communications. Portions of this equipment located in the NAB and NMB are not specifically protected from all of the design basis events (e.g., flooding, seismic, and wind).

Telephone System Enhancements:

Design, fabrication, and staging of stop logs to protect the NAB telephone PBX and SpectraLink rooms from flooding as well as the development of applicable procedural guidance.

Obtain and install an appropriately sized battery backup for the SpectraLink Onsite Wireless Telephone System controller located in the Cable Spreading Room such that it will remain powered for a minimum of 24 hours following a sustained loss of all AC at the plant site.

Relocate the currently installed external power connector for the TSC to an external wall at an elevation above the flood plain to facilitate the use of an appropriately sized external/portable generator and provide instructions for use.

Install stationary cellular telephones in both the EOF and TSC hard wired similar to that which is currently installed in the Control Room.

Obtain and stage a GETS and WPS card in the Control Room, TSC, and EOF.

Modify the existing external power connector for the PBX room as necessary to insure the required electrical panels can be energized by a portable generator.

Attachment B

PTN Handheld Satellite Phone System Description

The handheld satellite phone system allows standard service where available, but also auto senses and establishes a satellite link for phone connection as needed. The system must be used in an open area and works just like a standard cell phone. Startup and link time is approximately 2 minutes. Handheld satellite phones are located in the PTN Control Room, Security Entrance Building, and EP Office. The batteries for the handheld satellite phones will need to be recharged or replaced in order to last more than 24 hours. Some of the facilities may be lost because they are not protected from all of the design basis events; however, those located in Class I or robust structures will be available.

Satellite Phone Enhancements

Stage three satellite telephones with chargers, extra batteries, and instructions in the Control Room which is in a Class I structure. Also stage a portable generator in a robust structure (e.g., Cable Spreading Room which is in a Class I structure) with instructions for use for charging phone and radio batteries.

Stage four satellite telephones with chargers, extra batteries, and instructions for use in the TSC; as well as a portable generator in a robust structure (e.g., Unit 4 Emergency Diesel Generator Building which is a Class I structure) with instructions for use for charging phone and radio batteries.

Stage three satellite telephones with chargers, extra batteries, and instructions for use in the OSC; as well as a portable generator in a robust structure with instructions for use for charging phone and radio batteries.

Stage five satellite telephones with chargers, extra batteries, and instructions in the EOF (located more than 25 miles from the station and therefore not subject to damage from the postulated event).

Install base stations for satellite telephones in the Control Room, EOF, OSC, and TSC to allow open line communications between emergency response facilities (ERFs).

Attachment C

PTN Radio System Description

Note that some of the facilities may be lost because some of the elements are not protected from all of the design basis events (e.g., flooding, seismic, and wind).

VHF Radio System
The VHF Radio System is provided for off-site communication with FPL facilities and Government Agencies. The transceivers for these systems are installed in the PTN Control Building, (Class I structure) elevator vestibule on the 30 foot elevation. Antennas are mounted on the missile barrier between the Computer Room chiller units on the Control Room roof. Control units are installed in the Shift Manager's office in the Control Room which, allow channel selection and local volume control of the system via the plant telephone lines. The radio units have individual, local, batteries that would allow use for up to 8 hours following a loss of AC power. The VHF radio is a 150 MHz unit that may be used for longer range communications to the PTN EOF as well as the Florida Department of Health - Bureau of Radiation Control (DOH – BRC) and the US Coast Guard (USCG).

900 MHz Radio System
The 900 MHz radio system consists of numerous portable radio transceiver sets that are available to supplement the fixed communications equipment in the plant. Twenty-four dedicated emergency response radios with batteries are stored in the OSC. These small, lightweight, battery-operated sets may be easily carried by personnel to any location on the plant site and provide communications capabilities among all plant departments, and provide access to the telephone system. Additionally, this system may be used by on-site personnel to communicate with off-site personnel, including radiological field monitoring teams. The batteries for individual radios typically last for 8-12 hours. There are sufficient charged batteries on site to last all responders more than 24 hours. The radio tower is located approximately one mile west of the plant, and was built after Hurricane Andrew in 1992 to withstand hurricane force winds (185 mph) and flooding from a Category 5 storm surge. However, the structure is not specifically protected from all of the design basis events (e.g., seismic, and tornado). The system is on an uninterruptible power supply (UPS) system. This system consists of plant equipment in the form of a propane fueled generator as well as standby batteries. If the system experiences power losses, the system will revert to battery backup. While on battery backup power, the system will continue normal operation however, it will go into a battery revert mode which will cause the repeaters to switch to half output power. Thus, in times of power outages the range of the system may be decreased due to the half output power mode. When the power is restored, the system will return to normal output power. The battery is expected to last 3 hours, and the 1000 gallon propane tank supplying the generator will last for more than ten days. The generator is located above ground level. A bi-directional amplifier for the 900 MHz radio system is installed at the EOF to allow transmission and reception of signals from PTN assuming associated repeaters remain in service following an event.

Radio System Enhancements:

Stage portable generators in Class I or robust structures throughout the plant site (e.g., Cable Spreading Room, Unit 4 Emergency Diesel Generator Building, A/B 4KV Switchgear Rooms) with instructions for use for charging radio batteries. Note: this is not required for the 900 MHz radio system to be functional during the first 24 hours following a LSNE.

Attachment D

PTN Paging System (Gai-tronics) Description

Note that some of the facilities may be lost because some of the elements are not protected from all of the design basis events (e.g., flooding, seismic, and wind).

Plant Public Address System
The plant paging system is used at PTN to notify plant personnel of initial emergency declaration and provide additional warnings and instructions. The plant page system is a solid-state public address system which uses noise-cancelling dynamic microphone handsets located throughout the plant site. The system includes one paging channel and one party line channel. The two channels are independent such that paging can be accomplished without disturbing communications on the party line channel. Power to the paging system is supplied from a variety of sources. The original page system, located throughout the power block area, receives power from breaker 30824 in vital Motor Control Center (MCC) 3D. Alternate power is available from the Turkey Point Fossil Units (PTF) via a general service station MCC and PTF Lighting Panel (LP) 11. A switch is located in the PTN Control Room behind Unit 3 Vertical Panel B for swapping power as required. During the 1991 Dual Unit Outage the plant page system was expanded to cover the Unit 4 Emergency Diesel Generator Building and the southern plant areas. These areas of the system were provided independent power supplies to minimize loading on the original page system (MCC 4K via 4DP87, Load Center 4J via DP437 and DP99, and Power Panel SBT). Page Volume Boost push buttons are located on the console in the Shift Manager office in the Control Room and on the Unit 3 and 4 Reactor Operator desks. By depressing and holding the Page Volume Boost pushbutton the page system speakers, which are equipped with Volume Level Control (VLC), broadcast at maximum volume and blue strobe lights activate in high ambient noise areas. The Page Volume Boost may be used to make emergency announcements from the Control Room. For the assumed conditions defined for this evaluation it is anticipated that plant personnel on site would readily recognize the loss of all AC power and respond appropriately to their designated emergency response facility regardless of the status of the plant page system. In addition, site procedures define alternate methods to provide notification of plant personnel using handheld radios, or land utilization and security personnel (face-to-face communication) in the event the plant page system is inoperable for any reason. This provides reasonable assurance plant staff can be notified within approximately 30 minutes.

Dedicated Alternate Shutdown Communications System
This system is completely independent of the normally used Plant Public Address System. It is provided to enable the operators to coordinate operations and monitor status of the plant during Control Room Evacuation conditions. Both units' Alternate Shutdown Communications Systems are permanently cross-connected to facilitate communications throughout the plant. To meet regulatory requirements, the Alternate Shutdown Communications System is protected from any fires in the Control Room, Cable Spreading Room, or North-South Auxiliary Building Breezeway. Most of the communications stations are unit-specific however the following common areas have a wall station for each unit:

- 3B 4160 Volt Switchgear Room (Alternate Shutdown Panel)
- 4B 4160 Volt Switchgear Room (Alternate Shutdown Panel)
- Auxiliary Feedwater Pump Cage

- Auxiliary Building Hallway
- TSC
- 3B Emergency Diesel Generator Room
- Control Room

The Control Room stations are normally isolated from the other stations for fire protection via key lock switches located in the Computer Room (switch normally in Isolate position). The key lock switch, when positioned to Normal, provides for Control Room communications necessary for an orderly transfer of plant control back to the Control Room.

Operation of this system is identical to the normal plant page system. In addition to a handset, each communications station is provided with a headset and extension cord stored in a locked communications headset box. Power is provided from power panels (3/4P39) located in their respective unit's B 4160 Volt Switchgear Room. All wall stations are uniquely identified as Alternate Shutdown Communications Stations.

Paging System Enhancements:

None identified at this time.

Attachment E

PTN ERO Notification System Description

Note that some of the facilities may be lost because some of the elements are not protected from all of the design basis events (e.g., flooding, seismic, and wind).

The normal method of activating the Emergency Response Organization (ERO) for staff augmentation is by a remotely located electronic call-out system/service that utilizes hard line phones, cell phones (voice and text), email, and pagers to alert staff. This system can be activated from any phone (commercial, cell, or satellite) using access codes. The system itself is housed and maintained by a vendor at two geographically separate, redundant sites outside the state of Florida. Therefore, the call-out system itself would be unaffected by a large-scale event in the PTN area. Local cell phone towers/antennae in the community are needed to transmit signals from the system to cell phones or pagers. A significant number of cell phone towers exist within transmission distance of the areas where the PTN ERO personnel reside. Many of these installations include alternate power sources independent of the grid. A review of cell tower locations in the PTN area shows that, even with a large-area loss of cell towers in the vicinity (25 miles is the default evaluation distance recommended by NEI 12-01) of PTN, there are a significant number of towers that would remain just outside this zone that could provide coverage of much of the affected area. While any one of these communication paths used by the call-out system may be lost or degraded during a large-scale event, there is a high likelihood that some portion of the system would function to provide notification to a significant number of PTN staff. PTN ERO personnel reside in diverse locations in surrounding communities thus increasing the potential that a significant number of additional staff would be successfully notified, even with substantial impairment of local communications infrastructure.

PTN has implemented guidance to the site ERO regarding situations where normal notification methods may be unavailable. This was done in response to loss of electrical grid situations such as those described in SOER 99-01. This guidance would also serve to enable augmentation of site staff during other events in which communications capability was degraded or lost. The instructions provided to PTN augmentation staff are as follows:

"If you are on duty and become aware of a grid disturbance, take the following actions:

- Monitor local radio communications for impact on the Grid structure.
- Should the situation appear to be a major disturbance to the Grid structure, ensure your home and family are safe, then report to your emergency response facility."

ERO Notification System Enhancements:

None identified at this time.

Attachment F

Offsite Response Organization (ORO) Communications Facilities

ORO facilities that normally receive notifications of emergency declarations or protective action recommendations are listed in the PTN Emergency Plan. Miami Dade and Monroe County Emergency Operations Centers as well as the Florida State Warning Point are located beyond 25 miles from the site and, as such, would be expected to have communications capability. Discussions with each of these ORO facility operators indicate that they have satellite communications capability and backup power options that ensure they maintain communications capabilities during an extended loss of grid event or LSNE.

Attachment G

PTN Emergency Response Facilities (ERFs)

Control Room
The Control Room contains the necessary communications equipment for notifying on-site personnel and OROs in the event of an accident. This includes the State HRD Telephone System, Emergency Satellite Backup Communications System (EMNET), ENS hotline to the NRC Operations Center, Commercial Telephones, Installed Cellular Telephone, Portable Satellite Telephone, Company VHF Radio System, Plant Public Address System, Radio Paging System, and Portable Radio Handsets (walkie-talkies). While individual systems could be impacted by a large scale natural event, the diversity of alternatives ensures high reliability of communication links. The Control Room is housed in a Class I structure capable of withstanding all design basis events including flooding, seismic, and wind.

Technical Support Center
The TSC has equipment equivalent to the Control Room for on-site and off-site communications as well as the Health Physics Network (HPN) dedicated line to the NRC Operations Center. The TSC also contains three Emergency Response Data Acquisition Display System (ERDADS) terminals which provide critical information for accident identification, pictorial displays of various plant systems, and associated trending information. The TSC is powered by two diverse offsite power sources but does not have an emergency diesel generator. However, the TSC is equipped with an installed external power connector currently located inside the adjacent HVAC equipment room to facilitate the use of an appropriately sized external/portable generator. While individual systems could be impacted by a large scale natural event, the diversity of alternatives ensures high reliability of communication links.

Operations Support Center
The OSC communications requirements for emergency response do not include off-site communications. Any off-site communications would normally go through the TSC. On-site communication with the TSC and multiple communications with field teams in plant are required. Open line telephone communications are maintained between the OSC and the TSC. Portable radio handsets are used for communication between the OSC and field teams. The OSC is normally powered from an offsite power source and does not receive power from an emergency diesel generator. However, the building housing the OSC is equipped with an installed external power connector to facilitate the use of an appropriately sized external/portable diesel fueled generator. While individual systems could be impacted by a large scale natural event the diversity of alternatives ensures high reliability of communication links.

Emergency Operations Facility
The EOF is located off-site on the second floor of the General Office (GO) Building in West Miami approximately twenty-six miles from PTN. Communications requirements for emergency response include communication with the site, OROs including state and local agencies, NRC, and field monitoring teams. The EOF has equipment similar to the Control Room and TSC for communications between the ERFs and with OROs. The EOF also contains one ERDADS terminal which provides critical information for accident identification, pictorial displays of various plant systems, and associated trending information. The power supplies for the existing communications systems include the normal supply from diverse feeds on the local electrical grid as well as a backup diesel generator available for use in the event of a loss of AC power. The location of the EOF on the second floor of the GO Building provides adequate protection from flood hazards. Additionally, the GO building was constructed to withstand Category 3 hurricane winds, and suffered no significant damage during Hurricane Andrew in 1992. The General Office serves as a major telecommunications and

network hub for the FPL Intelligent Tandem Network (ITN) and provides multiple and diverse exit points for external communications outside of the impacted areas. While individual systems could be impacted by a large scale natural event, the diversity of alternatives ensures high reliability of communication links. The potential effects on the EOF of large scale natural events occurring in the vicinity of the PTN plant site are mitigated by the EOF's distance from the site and the diverse communications capability in the GO Building.

Emergency News Center (JIC)
The ENC is located off-site on the second floor of the GO Building across the hallway from the EOF in West Miami approximately twenty-six miles from PTN. The ENC is equipped with commercial telephones, and receives primary and backup power from the same sources as the EOF. The location of the ENC on the second floor of the GO Building provides adequate protection from flood hazards. Additionally, the GO building was constructed to withstand Category 3 hurricane winds, and suffered no significant damage during Hurricane Andrew in 1992. The ENC provides a location for the timely and accurate dissemination of information to the news media and general public regarding a site emergency. The potential effects on the ENC of large scale natural events occurring in the vicinity of the PTN plant site are mitigated by the ENC's distance from the site.

NOTE 1:

The locations of the PTN EOF, PTN ENC (JIC), Miami-Dade County Emergency Operations Center (EOC), and Monroe County EOC are outside the assumed 25 mile affected zone around the plant site. Additionally, the EOF and ENC (JIC) are co-located at the GO Building.