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Indiana Michigan Power  
Cook Nuclear Plant  
One Cook Place  
Bridgman, MI 49106  
IndianaMichiganPower.com

October 31, 2012

AEP-NRC-2012-83  
10 CFR 50.54(f)

Docket No.: 50-315  
50-316

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2  
Communications Assessment Requested by Nuclear Regulatory Commission 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.

References:

1. Letter from E. J. Leeds and M. R. Johnson, U.S. Nuclear Regulatory Commission (NRC), to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, "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, (ML 12056A046).
2. Letter from J. P. Gebbie, Indiana Michigan Power Company (I&M) to NRC Document Control Desk, "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," dated May 11, 2012 AEP-NRC-2012-34.
3. Letter from P. S. Tam, NRC, to L. J. Weber, I&M, "Review of 60-Day Response to Request for Information Regarding Recommendation 9.3 of the near-Term Task Force Related to the Fukushima Dai-ichi Nuclear Power Plant Accident (TAC Nos. ME8683 and ME8684)," dated June 8, 2012, (ML12145A640).
4. Letter from D. L. Skeen, NRC, to S. Perkins-Grew, Nuclear Energy Institute (NEI), "U. S. NRC Review of NEI 12-01, 'Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities,' Revision 0, dated May 2012," dated May 15, 2012, (ML 12131A043).

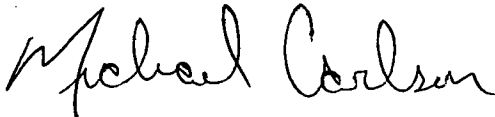
AX45  
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On March 12, 2012, the NRC staff issued Reference 1, a Request for Information pursuant to 10 CFR 50.54(f), to I&M, the licensee for the Donald C. Cook Nuclear Power Plant (CNP) Units 1 and 2. Enclosure 5 of the letter contained specific Requested Actions and Requested Information associated with Recommendation 9.3 for Emergency Preparedness (EP) programs. Specifically, I&M was requested to assess the means to power communications equipment onsite and offsite during a prolonged station blackout (SBO). By Reference 2, I&M provided a response to the Request for Information that proposed an alternative course of action and estimated completion date. I&M indicated that the communications assessment, prepared per the guidance of NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities," and an implementation schedule of the time needed to implement the results of the communications assessment would be provided to the NRC by October 31, 2012. By Reference 3, the NRC agreed to the alternative course of action.

Enclosure 1 to this letter provides an affirmation. Enclosure 2 provides the communications assessment. Enclosure 3 provides the implementation timeline.

This letter contains no new or revised regulatory commitments. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Manager, at (269) 466-2649.

Sincerely,



Michael H. Carlson  
Vice President - Site Support Services

MCS/kmh

Enclosures:

1. Affirmation
2. Communications Assessment
3. Implementation Timeline

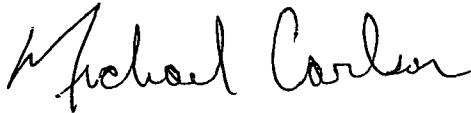
c: C. A. Casto, NRC Region III  
J. T. King, MPSC  
S. M. Krawec, AEP Ft. Wayne, w/o enclosures  
MDEQ – RMD/RPS  
NRC Resident Inspector  
T. J. Wengert, NRC Washington DC

AFFIRMATION

AFFIRMATION

I, Michael H. Carlson, being duly sworn, state that I am Vice President - Site Support Services of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.


Indiana Michigan Power Company



Michael H. Carlson  
Vice President - Site Support Services

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 31<sup>st</sup> DAY OF October, 2012

  
\_\_\_\_\_  
Notary Public

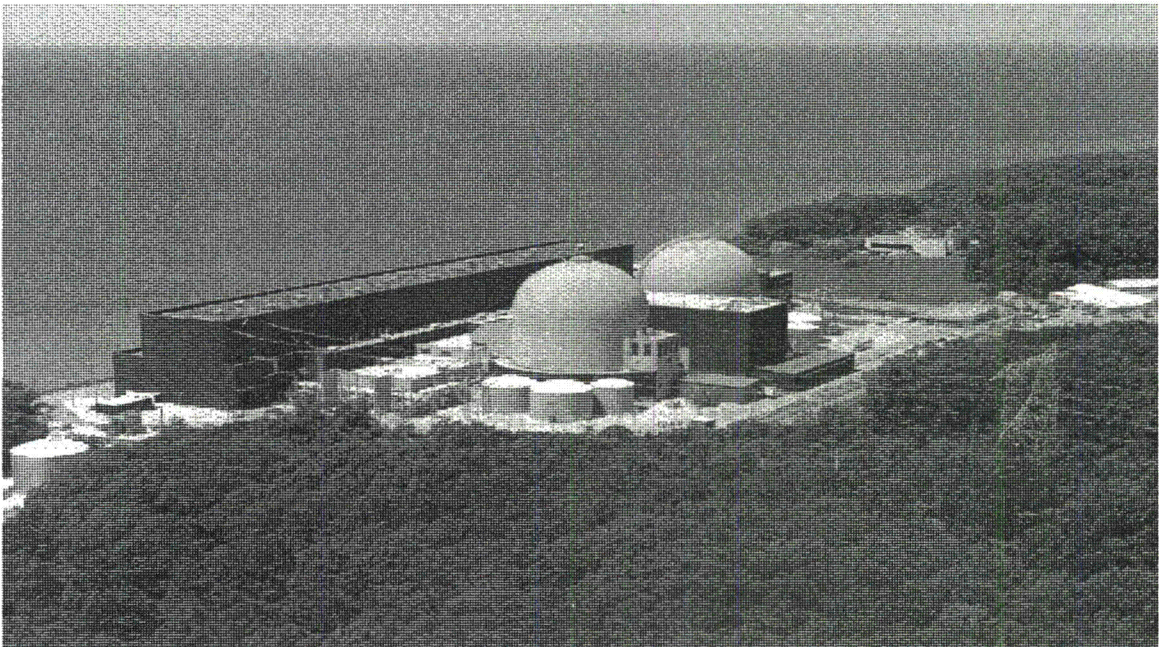
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Enclosure 2 to AEP-NRC-2012-83

Communications Assessment

Enclosure 2 to AEP-NRC-2012-83

# Donald C. Cook Nuclear Plant



## Fukushima Communications Assessment

Bridgman, Michigan

Berrien County

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1. Purpose

This report documents the assessment of the Donald C. Cook Nuclear Plant's (CNP) communication capabilities performed in accordance with Nuclear Energy Institute (NEI) 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities", Revision 0, dated May 2012. This assessment is completed for Unit 1 and Unit 2.

2. Background

Based on the adverse effects of the March 11, 2011, Tohoku earthquake and subsequent tsunami on the Fukushima Dai-Ichi Nuclear Power Plant, the United States Nuclear Regulatory Commission (NRC) issued a request for information (RFI) in accordance with 10 CFR 50.54(f) to Indiana Michigan Power Company (I&M), the licensee for the CNP, entitled "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. In the RFI, the NRC requested that I&M assess their current communications systems and equipment used during an emergency event given a set of standard assumptions. The NRC 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 50, and the guidance in NUREG-0696. I&M was also to consider the means necessary to power the new and existing communications equipment during a multi-unit event, with a loss of all AC power.

I&M's objective is to maintain the capability to perform critical communication during and following an event that results in an extended loss of AC power. NEI 12-01 provides criteria for assessing the availability of communication systems and equipment necessary for implementation of emergency planning standard requirements. Communications capabilities that support implementation of mitigation strategies and repair actions intended to maintain or restore the functions of core cooling, containment, and spent fuel pool cooling are also to be assessed.

3. Methodology

The CNP communications assessment is based on the methodology set forth in NEI 12-01. More specifically, this assessment is based on NEI 12-01 Section 2, Assessment Assumptions, and NEI 12-01 Section 4, Communications During an Extended Loss of AC Power.

In order to perform the methodology in NEI 12-01, the following steps were performed:

1. Discussed the communications assessment methodology with CNP stakeholders to ensure plant objectives are met.



2. Reviewed plant documentation related to CNP's Emergency Plan Procedures.
  3. Reviewed CNP-specific responses to INPO IER 11-4.
  4. Completed facility discussions with plant staff, including Information Systems (IT)/Communications Systems personnel.
  5. Developed an assessment report containing the results of the assessment and recommendations.
  6. Using the information gathered from the above steps, completed Appendix B of this document, which is based on the NEI communications assessment template.
4. Assumptions and Limitations
- 4.1. The assumptions for this report are consistent with those presented in NEI 12-01.
- 4.1.1. A large-scale external event occurs that results in:
- all on-site units affected
  - extended loss of AC power
  - impeded access to the units
- 4.1.2. Initially, all on-site reactors are operating at full power and are successfully shut down.
- 4.1.3. A Hostile Action directed at the affected site does not occur during the period that the site is responding to the event.
- 4.1.4. The event impedes site access as follows:
- A. Post event time: 6 hours – No site access. This duration reflects the time necessary to clear roadway obstructions, use different travel routes, mobilize alternate transportation capabilities (e.g., private resource providers or public sector support), etc.
- B. Post event time: 6 to 24 hours – Limited site access. Individuals may access the site by walking, personal vehicle or via alternate transportation capabilities (e.g., private resource providers or public sector support).
- C. Post event time: 24+ hours – Improved site access. Site access is restored to a near-normal status and/or augmented transportation resources are available to deliver equipment, supplies and large numbers of personnel.

- 4.1.5. Installed sources of AC power, including alternate AC power sources, are not available. These power sources are typically classified as safety-related or governed by augmented quality requirements.
- 4.1.6. Nonessential loads from DC battery buses are stripped in accordance with plant emergency or abnormal operating procedures, or other response guidelines to extend battery life.
- 4.1.7. Installed inverters and battery chargers remain available provided they are protected from external events consistent with the current station design. If the flood protection walk-downs performed in response to Near Term Task Force (NTTF) Recommendation 2.3 identify a lack of sufficient flood protection margin, the communications assessment should be updated to reflect the potentially lost equipment. A regulatory submittal of the updated assessment is not required.
- 4.1.8. On-site diesel fuel oil is available provided that it is stored in a manner protected from external events consistent with the current station design. If the flood protection walk-downs performed in response to NTTF Recommendation 2.3 identify a lack of sufficient flood protection margin, the communications assessment should be updated to reflect the potentially lost fuel oil. A regulatory submittal of the updated assessment is not required.
- 4.1.9. Portable equipment staged for implementation of accident management strategies (e.g., Severe Accident Mitigation Guidance (SAMG) and Extensive Damage Mitigation Guidelines (EDMG) may be used provided it is stored on-site; is reasonably protected from seismic, wind, and flooding events; is maintained through programmatic controls; and has implementing actions specified in existing procedures or guidelines. This includes use of portable AC and DC power sources.
- 4.1.10. On-site communications infrastructure remains available provided that the credited components are reasonably protected from seismic, wind, and flooding events; maintained through programmatic controls; have a power source consistent with the other assumptions in this section; and employed in accordance with implementing actions specified in existing procedures or guidelines.
- 4.1.11. Offsite infrastructure supporting communications systems is inoperable in the area surrounding the site (e.g., cellular telephone or off premise extensions (OPXs), telephone central office buildings, telephone lines, etc.). A licensee has two options for determining the affected area.
  - Apply a default distance value, in all directions, of approximately 25 miles from the plant site, OR
  - Develop a site-specific distance assumption and document the basis.

Communications infrastructure in locations beyond the area defined above is not significantly impacted by the event.

- 4.1.12. Communications equipment located at an offsite response facility, and supplied from a backup power source, is assumed to be functional. The availability of this equipment must be determined in conjunction with Assumption 4.1.11, above. For example, a diesel generator-powered satellite telephone system at an Emergency Operations Center (EOC) located 4 miles from the plant would be available since the system does not rely upon ground-based communications infrastructure within the affected area. A land-line telephone in the same EOC would not be available due to local infrastructure impacts consistent with Assumption 4.1.10.

## 5.0 Assessment Summary

Appendix A provides the assessment in tabular form.

The in-plant radio system is used extensively for a variety of emergency response purposes, including equipment operation, fire brigade, in-plant monitoring, etc. Under normal conditions, the in-plant radio system uses repeaters to ensure radio coverage throughout the plant. In addition, if the repeaters are not available due to loss of AC power, the radios can be operated for point-to-point communications, which may not ensure coverage throughout all areas of the plant. The public address (PA) and the voice powered phone system provide alternatives to the radios.

Communications with the off-site response organizations (OROs) utilize the on-site public branch exchange (PBX) telephone system and the public switched telephone network (PSTN). The Control Room currently has two direct outside lines to the PSTN that automatically bypass the PBX if it is out of service. These lines are not aerial during any portion of their route. However, as previously discussed, the PSTN is assumed to be non-functional for purposes of this assessment. In the event of land-line telephone unavailability, communications can be carried out using the plant 450 MHz radios. Assuming that the on-site repeater is unavailable, radio communications will be limited based upon line of sight and radio power. Additional communications capability is being provided by satellite telephones. Satellite telephones will be distributed to the State of Michigan, Berrien County Sheriff's Department and the Lake Township Fire Department.

Field Teams dispatched from the site use the 450 MHz radio system to communicate with the Emergency Operations Facility (EOF). The radios in the vehicles are powered by the vehicle's electrical system. With the postulated loss of AC power to the on-site repeater, these radios will be limited to point-to-point communications. Although this will limit the range, the teams can still be effective for providing measurements for dose projection tasks within limited distances from the site. As a backup to the radios, cell phones are provided for each vehicle. Again, based on the assumptions used for the assessment, the cell phone infrastructure is considered to be out of service. Satellite

telephones have been purchased and received at the site and will be provided to the Field Team vehicles.

## 6. Recommendations

Recommendations to further evaluate or enhance communications capabilities were developed as a part of the assessment.

- 6.1 Supplement direct telephone lines linking the CNP Emergency Facilities to the Lake Township Fire Department and the Berrien County and State of Michigan Emergency Operations Centers with satellite phones for the postulated loss of the public phone system infrastructure.
- 6.2 Evaluate off-site radio communications including:
  - a) Ability of existing 450 MHz trunked radios to function in "point-to-point" mode.
  - b) Mapping of radio reception in the Emergency Planning Zone (EPZ) and to the EOCs without the repeater in service.
  - c) Reasonable assurance of survivability for the off-site radio repeater and antennae.

The following actions related to communications will be evaluated as a part of CNP's mitigation strategies for beyond-design-basis events (FLEX) strategy:

- 6.3 Determine feasibility for the following future actions associated with FLEX:
  - 1. Provide additional battery backup for the PA system.
  - 2. Provide capability for hooking up alternate power generator for the intra-plant 450 MHz radio system
  - 3. Provide capability for hooking up alternate power generator for the public address system.
  - 4. Harden exterior antennae to the extent necessary to provide reasonable assurance of survivability.
  - 5. Provide survivable offsite 450 MHz radio system (including repeater and antennae) or portable repeater equipment.
- 6.4 Provide alternate power supplies for the following locations (assuming survivability):
  - a) EOF, which also has an existing diesel generator
  - b) Operations Support Center (OSC)
- 6.5 Provide standalone uninterruptible power supply (UPS) units for equipment in the Emergency Operations Facility (EOF) and Technical Support Center (TSC) that

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is needed to manage the emergency (computers, multi-line telephones and portable phones).

6.6 Provide a dedicated source of backup power (portable generator) for charging batteries for handheld radios.

6.7 Update training programs to address emergency communications equipment consistent with implementation of FLEX.

7. References

7.1. Cook Emergency Plan, Revision 30.

7.2. Emergency Plan Implementing Procedure PMP-2080-EPP-100, Emergency Response, Revision 22.

7.3. Emergency Plan Implementing Procedure RMT-2080-EOF-001, Activation and Operation of the EOF, Revision 19.

7.4. Emergency Plan Implementing Procedure RMT-2080-ENC/JIC-001, Activation and Operation of the ENC/JIC, Revision 4.

7.5. Emergency Plan Implementing Procedure RMT-2080-OSC-001, Activation and Operation of the OSC, Revision 12.

7.6. Emergency Plan Implementing Procedure RMT-2080-TSC-001, Activation and Operation of the TSC, Revision 16.

7.7. NEI Template. Communications During an Extended Loss of AC Power Roll-Up Document. Revision 1, August 2012.

7.8. NEI 12-01, Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities, Revision 0, May 2012.

7.9 Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.

Appendix A – Assessment

Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
PA System  Cook Emergency Plan (CEP), Section F-Emergency Communications  Emergency Plan Implementing Procedure (EPIP) PMP-2080-EPP-100, Emergency Response, paragraph 1.3	<ul style="list-style-type: none"> <li>• PBX Telephone System</li> <li>• Commercial Telephone System</li> <li>• ERO Pagers</li> <li>• Company Intranet messages</li> <li>• Company e-mail</li> <li>• Voice Powered Phones</li> <li>• Handheld radios (450 MHz)</li> <li>• Handheld bullhorns</li> </ul>	For all emergency classifications, all personnel within the Protected Area are notified of an emergency by recognizable alarms and/or verbal announcements over the plant PA System. The PA system can be used by individuals in the plant through PA system phones located in various plant areas.

Appendix A – Assessment

Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
Plant PBX Telephone System  CEP F.1.d	<ul style="list-style-type: none"> <li>• Commercial Telephone System</li> <li>• Direct Dialing Lines</li> <li>• Cellular telephones (Not in the Emergency Plan)</li> <li>• Plant System Pagers</li> </ul>	The PBX telephone system provides communication capability between telephones located within the plant by dialing the last four digits of the commercial phone number. The PBX is used to connect the Control Rooms, Technical Support Center (TSC), EOF, Joint Information Center (JIC) and Operations Support Center (OSC). The PBX telephone system also provides for outside communications through interconnections with the commercial telephone lines. There are currently 2 PBX locations. These are located in the Lakeside Office Building and Training Center. Both PBXs are equipped with backup batteries.
Wide Area Fiber Optic System (Not in the Emergency Plan)	<ul style="list-style-type: none"> <li>• Cellular telephones (Not in the Emergency Plan)</li> <li>• Satellite Phones (Not in the Emergency Plan)</li> </ul>	This system provides communications connectivity to extensions at CNP for communication with the CNP Emergency Response Facilities (ERF), Lake Township Fire Department, Berrien County Emergency Operations Center, and the Michigan State Emergency Operations Center.
Commercial Telephone System  CEP F.1.d	<ul style="list-style-type: none"> <li>• Cellular telephones (Not in the Emergency Plan)</li> <li>• Satellite Phones (Not in the Emergency Plan)</li> </ul>	This system provides standard commercial telephone service through the public infrastructure, consisting of central offices and the fiber line and microwave carrier. The commercial telephone system includes connections to PBX, emergency telephone system, dedicated lines to CNP ERFs and the Berrien County 911 Dispatcher. The commercial vendor provides primary and secondary power for their lines at their central office (CO).

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Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
Other telephones  CEP, F.1.d	<ul style="list-style-type: none"> <li>• PBX</li> <li>• Satellite Phones (Not in the Emergency Plan)</li> </ul>	There are two telephone lines in each Control Room that automatically bypass the plant PBX if it fails.
Nuclear Emergency Alarm System  EPIP PMP-2080-EPP-100, Emergency Response, paragraph 1.3	<ul style="list-style-type: none"> <li>• PA Announcements</li> <li>• Pagers</li> <li>• Handheld bullhorns</li> </ul>	For all emergency classifications, all personnel within the Protected Area, buildings in the Owner Controlled Area and the Buchanan Office Building are notified of an emergency by recognizable alarms and/or verbal announcements over the plant PA System. The evacuation alarm is generated by a solid state multi-frequency audio oscillator capable of producing distinctive tones which can be heard over all plant paging zones via the plant paging system.
Ring Down Telephone  EPIP PMP-2080-EPP-100, Emergency Response, Attachment 12 (Berrien County Sheriff Notification).  RMT-2800-EOF-001, Activation and Operation of the EOF, Attachment 16 (County Communications)	<ul style="list-style-type: none"> <li>• Commercial Telephone System</li> <li>• Satellite Phones (Not in the Emergency Plan)</li> </ul>	Point to Point phones connected through the PBX and are "conference lines" that automatically ring when any one of the receivers is picked up. The direct lines are located in both Control Rooms, Central Alarm Station, Secondary Alarm Station, the EOF, and the Berrien County 911 Dispatcher.



Appendix A – Assessment

Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
NRC Communications FTS (ENS & HPN)  CEP, F.1.f	<ul style="list-style-type: none"> <li>• Plant Telephone System</li> <li>• Commercial Telephone System</li> <li>• Cellular telephones (Not in the Emergency Plan)</li> </ul>	<p>Communications with the NRC Operations Center will be performed via the NRC Emergency Notification System (ENS) and Health Physics Network (HPN) circuits on the commercial telephone line. Information is normally communicated from an ERO-approved member prior to establishing an open ENS and/or HPN line.</p> <p>ENS: Dedicated telephone equipment is in place between Control Room and the NRC, with an extension of that line in the TSC and EOF.</p> <p>HPN: There is a separate dedicated telephone between the NRC, the TSC, and EOF for conveying health physics information to the NRC as requested or as an open line. In addition, NRC counterpart lines are located in the Control Room, TSC and EOF.</p>

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Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
Facsimile (Fax) Communications CEP H.1.d, H.2.d and H.3.d EPIP PMP-2080-EPP-100, Emergency Response, Attachments: 11 (MSP Notification) and 12 (Berrien County Sheriff Notification). EPIP RMT-2080-EOF-001, Activation and Operation of the EOF, Attachments: 15 (MSP Notification) and 16 (Berrien County Sheriff Notification).	<ul style="list-style-type: none"> <li>• Commercial Telephone System</li> <li>• Internet/WebEOC (Not in the Emergency Plan)</li> <li>• Satellite Phones (Not in the Emergency Plan)</li> </ul>	Fax communications capability is provided via the PBX telephone system between the Control Rooms, CNP ERFs, State of Michigan, and Berrien County Sheriff's offices.
ERO Pagers (Call Out) EPIP PMP-2080-EPP-100, Emergency Response, paragraph 3.1.9	<ul style="list-style-type: none"> <li>• ERO Pagers</li> <li>• Commercial Telephone System</li> <li>• Cell Phones (Not in the Emergency Plan)</li> </ul>	Paging is done at CNP through a commercial provider. Telephones can also be used as a backup. The paging provider maintains antennas on local communications towers.
Cellular Telephones Not in Emergency Plan	<ul style="list-style-type: none"> <li>• Commercial telephone system</li> </ul>	This system provides standard commercial telephone service through the public infrastructure consisting of central offices, the fiber line, microwave carrier, and commercial cell phone towers and repeaters.

Appendix A – Assessment

Table 1 Emergency Response Communication Systems (Current Capabilities including Satellite Phone Implementation)		
Communications Systems/Equipment (with Emergency Plan cross-reference where applicable)	Alternate methods	System/Equipment Description/Application
Satellite Telephones  Not part of Emergency Plan	<ul style="list-style-type: none"> <li>• Plant PBX Telephone System</li> <li>• Local Commercial Telephone System</li> <li>• Cellular telephones (Not in the Emergency Plan)</li> </ul>	Eighteen satellite phones have been purchased. The phones have not been installed, but have been received and programmed.
Field Monitoring Team Communications  CEP F.1.d	<ul style="list-style-type: none"> <li>• Cellular telephones (Not in the Emergency Plan)</li> </ul>	Teams are dispatched from the OSC. Handheld radios are used for communicating. Satellite phones have been purchased and will be installed in both Field Monitoring Team vehicles.

Appendix A – Assessment

Table 2 Emergency Response Communication Systems – Hazard Analysis (Current Capabilities including Satellite Phone Implementation)					
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary System Component Location	Protected from Seismic as defined in NEI 12-01	Protected from Flooding as defined in NEI 12-01	Protected from Wind as defined in NEI 12-01	Comments
PA system / Emergency Evacuation Alarm System  EPIP PMP-2080- EPP-100, Emergency Response, paragraph 1.3	Various plant locations	Yes	Yes	Yes	Powered from essential power bus.
PBX Telephone System  CEP, F.1.d	Lakeside Office Building and Training Center	No	No	No	No protection enhancements currently planned
Commercial Telephone System  CEP, F.1.d	Interface equipment (Fiber to Central Offices (CO). Lakeside Office Building and Training Center)	No	No	No	Some phone lines are direct in dialing. These phones bypass the PBX and go directly to locations within the plant. Powered by the PSTN CO
Other telephone lines  CEP F.1.d	Lakeside Office Building and Training Center	Yes	Yes	Yes	There are two telephone lines in each Control Room that automatically bypass the plant PBX if it fails.

Appendix A – Assessment

Table 2 Emergency Response Communication Systems – Hazard Analysis (Current Capabilities including Satellite Phone Implementation)					
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary System Component Location	Protected from Seismic as defined in NEI 12-01	Protected from Flooding as defined in NEI 12-01	Protected from Wind as defined in NEI 12-01	Comments
Nuclear Emergency Alarm System  EPIP PMP-2080- EPP-100, Emergency Response, paragraph 1.3	Various plant locations	Yes	Yes	Yes	Powered from essential plant bus.
Ring Down Telephone  EPIP PMP-2080- EPP-100, Emergency Response, Attachment 12 (Berrien County Sheriff Notification).  RT-2080-EOF-001, Activation & Operation of the EOF, Attachment 16 (County Communications)	Both Control Rooms, Central Alarm Station, Secondary Alarm Station, EOF, and 911 dispatch	No	No	No	Point to point phones are connected through the PBX. They are "conference lines" that automatically ring when any one of the receivers are picked up. The direct lines are located in both Control Rooms, Central Alarm Station, Secondary Alarm Station, the EOF, and the Berrien County 911 dispatcher.
NRC Communications (ENS & HPN) Phone Line/Circuit  CEP, F.1.f	Control Rooms TSC EOF	Yes Yes No	Yes Yes No	Yes Yes No	Powered from the CO. Additional NRC Lines are provided (counterpart lines).

Appendix A – Assessment

Table 2 Emergency Response Communication Systems – Hazard Analysis (Current Capabilities including Satellite Phone Implementation)					
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary System Component Location	Protected from Seismic as defined in NEI 12-01	Protected from Flooding as defined in NEI 12-01	Protected from Wind as defined in NEI 12-01	Comments
Facsimile (Fax) Communications –  CEP H.1.d, H.2.d and H.3.d  EPIP PMP-2080- EPP-100, Emergency Response, Attachments: 11 (MSP Notification) and 12 (Berrien County Sheriff Notification)  EPIP RMT-2080- EOF-001, Activation and Operation of the EOF, Attachments: 15 (MSP Notification) and 16 (Berrien County Sheriff Notification).	Control Rooms TSC EOF/OSC, ENC/JIC	Yes Yes No	Yes Yes No	Yes Yes No	Message sent via PBX

Appendix A – Assessment

Table 2 Emergency Response Communication Systems – Hazard Analysis (Current Capabilities including Satellite Phone Implementation)					
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary System Component Location	Protected from Seismic as defined in NEI 12-01	Protected from Flooding as defined in NEI 12-01	Protected from Wind as defined in NEI 12-01	Comments
ERO Pagers (Call Out)	OPX	No	No	No	Paging is done by CNP through a commercial provider. Telephones can also be used as a backup. The paging provider maintains antenna on local communications towers. The commercial towers have been designed for severe weather and are equipped with an 8 hour battery
Cellular Telephones  Not in Emergency Plan	Various	No	No	No	The Microwave tower has been designed for severe weather and is equipped with 8 hour batteries.
Satellite Telephones  Not in Emergency Plan	Control Rooms  CNP ERFs	Yes  No	Yes  No	Yes  No	Battery Powered. Extra batteries and chargers are available.

Appendix A – Assessment

<p align="center"><b>Table 2</b>  <b>Emergency Response Communication Systems – Hazard Analysis</b>  <b>(Current Capabilities including Satellite Phone Implementation)</b></p>					
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary System Component Location	Protected from Seismic as defined in NEI 12-01	Protected from Flooding as defined in NEI 12-01	Protected from Wind as defined in NEI 12-01	Comments
Field Monitoring Team Communications  CEP, F.1.d	EOF/ EP Vehicles	No	No	No	Teams dispatched from OSC. Handheld radios are used for communicating. Field Teams also have cell phones. Satellite phones will be installed in both Field Monitoring Team vehicles.
Diesel Fuel Oil Storage Areas used for fueling portable equipment used for communications  Not in Emergency Plan	Use existing diesel fuel oil storage tanks	To be determined	To be determined	To be determined	Will be evaluated as a part of CNP's mitigation strategies for beyond- design –basis external events (FLEX) strategy



## Appendix A – Assessment

Table 3 Emergency Response Communication Systems – Power Supply Analysis (Current Capabilities including Satellite Phone Implementation)				
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary Power Supply (List the power source)	Alternate Power Supply (List the power source)	Backup power availability (e.g., batteries, portable generators, etc.) Yes/No	Comments
Public Address (PA) System  CEP F.1.e	Critical Control Room Power	Emergency Diesel	Yes –Battery backup	No power supply enhancements currently planned.
Plant PBX Telephone System  CEP F.1.e	Battery	Yes – battery backup	Yes – battery backup	No power supply enhancements currently planned.
Commercial Telephone System  CEP F.1.d	PBX	Yes - Battery backup	Yes - Battery backup	There are two PBX locations. One is located in the Lakeside Office Building and the other is in the Training Center.
Plant Radio Transmitter- Receiver System  CEP F.1.d	OPX	Emergency Diesel	Yes - Battery backup	System uses repeaters, satellite receivers and comparators inside the plant. One additional repeater for offsite communication is located at the OPX and has battery and generator backup
Other telephone lines  CEP F.1.d	CO	CO	Yes	There are two telephone lines in each Control Room that automatically bypass the plant PBX if it fails.
Nuclear Emergency Alarm System  EPIP PMP-2080-EPP- 100, Emergency Response, paragraph 1.3	Critical Control Room power	Emergency diesel	Yes – battery backup	No power supply enhancements currently planned.

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Table 3 Emergency Response Communication Systems – Power Supply Analysis (Current Capabilities including Satellite Phone Implementation)				
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary Power Supply (List the power source)	Alternate Power Supply (List the power source)	Backup power availability (e.g., batteries, portable generators, etc.) Yes/No	Comments
Ring Down Telephone Lines  EPIP PMP-2080-EPP- 100, Emergency Response, Attachment 12 (Berrien County Sheriff Notification).  RT-2080-EOF-001, Activation & Operation of the EOF, Attachment 16 (County Communications)	PBX	CO	Yes	The Ring Down phones are Point to Point phones connected through the PBX and are “conference lines” that automatically ring when any one of the receivers is picked up. The direct lines are located in both Control Rooms, Central Alarm Station, Secondary Alarm Station, the EOF, and the Berrien County 911 Dispatcher.
NRC Communications	CO	Unknown	Unknown	No power supply enhancements currently planned.
Facsimile Communications  CEP H.1.d, H.2.d and H.3.d	PBX	Battery back-up	Battery back-up	Uses PBX & PSTN

Appendix A – Assessment

Table 3 Emergency Response Communication Systems – Power Supply Analysis (Current Capabilities including Satellite Phone Implementation)				
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary Power Supply (List the power source)	Alternate Power Supply (List the power source)	Backup power availability (e.g., batteries, portable generators, etc.) Yes/No	Comments
ERO Pagers (Call Out)  EPIP PMP-2080-EPP-100, Emergency Response, paragraph 3.2.4	OPX	No	Diesel generator and Battery	Paging is done by CNP through a commercial provider. Telephones can also be used as a backup. The paging provider maintains antennas on local communications towers. The commercial towers have been designed for severe weather and are equipped with an 8 hour battery.
Cellular Telephones  Not in Emergency Plan	Cell Phone Battery	AC Outlet	No	Eighteen satellite phones have been purchased and will be located in both Control Rooms, Security (x4: Central Alarm Station, Secondary Alarm Station, and 2 mobile), TSC, Onsite Survey Teams (x2), EOF (x3: State Communicator, Incident Command Post, and Field Team Communicator), Offsite Survey Teams/Vehicles (2), Lake Township Fire Department, and the Berrien County and State of Michigan Emergency Operations Centers.

Appendix A – Assessment

Table 3 Emergency Response Communication Systems – Power Supply Analysis (Current Capabilities including Satellite Phone Implementation)				
System/Equipment (with Emergency Plan cross-reference where applicable)	Primary Power Supply (List the power source)	Alternate Power Supply (List the power source)	Backup power availability (e.g., batteries, portable generators, etc.) Yes/No	Comments
Satellite Telephones  Not in Emergency Plan	Battery powered, recharges at local power outlet	Additional batteries	Yes, portable generators	Eighteen satellite phones have been purchased and will be located in both Control Rooms, Security (x4: Central Alarm Station, Secondary Alarm Station, and 2 mobile), TSC, Onsite Survey Teams (x2), EOF (x3: State Communicator, Incident Command Post, and Field Team Communicator), Offsite Survey Teams/Vehicles (2), Lake Township Fire Department, and the Berrien County and State of Michigan Emergency Operations Centers.
Field Monitoring Team Communications  CEP F.1.d	Battery powered, recharges at local power outlet	Additional batteries	Yes, portable generators	Portable generators are currently located at the Bridgman material Center approximately 5 miles from the plant.

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NEI 12-01 Revision 0 (May 2012)

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.

**4.1.1** Notifications to, and communications with, OROs [per 10 CFR 50, Appendix E.IV.D and E.9.a]

Emergency Response Facility	Minimum Communications Links	Primary Method Described in site E-Plan	Primary Method Available following Assumed Large-Scale Natural Event (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 CEP F.1.d	1 per Control Room	Direct Phone Line	No	PSTN	None	Satellite Phone	5.1
EOF CEP F.1.d	1 for the EOF	Direct Phone Line	No	PSTN	None	Satellite Phone	5.1

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**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.IV.D and E.9.d]

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 CEP F.1.d	1 per Control Room for ENS Communicator	FTS	No	PSTN	None	Satellite Phone	5.2
TSC CEP F.1.d	1 for ENS and HPN Communicator	FTS	No	PSTN	None	Satellite Phone	5.2
EOF CEP F.1.d	1 for ENS and HPN Communicator	FTS	No	PSTN	None	Satellite Phone	5.2

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4.1.3 Communications between licensee emergency response facilities [per 10 CFR 50 Appendix E.9.c. 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, Voice 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 CEP F.1.d	2 per unit	PBX / Commercial Phone Lines and PA system	PA system and handheld radios	PA system and handheld radios	PA system and handheld radios	Satellite Phones	5.3
TSC  Emergency Response Organization Directory Section 7 (Emergency Phone Numbers), Section 8 (Emergency Plan Phone Use Key & Facility Maps) and Section 9 (Communications in the ERO)	1 each for: Site Emergency Coordinator  Radiological Assessment Coordinator  Plant Evaluation Team  TSC Security Director  Board Writer	PBX / Commercial Phone Lines and PA system	PA system and handheld radios	PA system and handheld radios	PA system and handheld radios	Satellite Phones	5.3

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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
OSC  Emergency Response Organization Directory Section 7 (Emergency Phone Numbers), Section 8 (Emergency Plan Phone Use Key & Facility Maps) and Section 9 (Communications in the ERO)	1 each for:  OSC Manager  Radiation Protection Director  Board Writer	PBX / Commercial Phone Lines and PA system	PA system and handheld radios	PA system and handheld radios	PA system and handheld radios	Satellite Phones	5.3
EOF  Emergency Response Organization Directory Section 7 (Emergency Phone Numbers), Section 8 (Emergency Plan Phone Use Key & Facility Maps) and Section 9 (Communications in the ERO)	1 each for:  Emergency Director Operations Advisor Dose Assessment Reactor Physics Analyst Board Writer	PBX / Commercial Phone Lines and handheld radio	Handheld radios	Handheld radios	None	Satellite Phones	5.3



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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
Emergency News Center (ENC) / Joint Information Center (JIC)  EPIP RMT-2080-ENC/JIC-001, Activation and Operation of the ENC/JIC	1 each for: Media Center Manager  Technical Communicator	PBX / Commercial Phone Lines	None	None	None	TBD	N/A

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4.1.4 Communications with field/offsite monitoring teams [per 10 CFR 50 Appendix E.9.c]

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
EOF CEP H.2.d	1 for each field/offsite monitoring team	Handheld Radio	Yes, Limited to radio reception without repeaters	None	None	Satellite Phones	5.5
OSC Primary location from which field/offsite monitoring teams are deployed  EPIP RMT-2080-OSC-001, Activation and Operation of the OSC Attachment 6, Briefing Checklist	1 for each field/offsite monitoring team	Handheld Radio	Yes, Limited to radio reception without repeaters	None – EOF assumes command and control after dispatched.	None	Satellite Phones	5.5

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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.9.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
Primary location where communication with Federal agencies is performed  Emergency Response Organization Directory Section 8 (Emergency Plan Phone Use Key & Facility Maps)	Coordination with Federal agencies	FTS, PSTN	No	PSTN	None	Satellite phones	5.2

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**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  CEP Table B-1 (CNP Staffing for Radiological Emergencies)	Number necessary for the on-shift staff to perform Initial Phase coping actions (reflecting current staff & strategies)	PA, handheld radios and voice Powered telephones	Yes	PA, handheld radios and Voice Powered telephones	Yes - Voice Powered Phones and handheld radios)	Satellite phones	Note 1
OSC and other site-specific locations as necessary (The Fire Brigade and Work It Now (WIN) Team).  CEP F.1.f	1 each for: • On-site radiological monitoring  2 each for: • Firefighting (1 for brigade leader and 1 for OPS representative)  1 each per unit for: • WIN Team	PA and handheld radios	Yes	PA and handheld radios	Yes - Voice Powered Phones and handheld radios)	Satellite phones	5.3

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4.1.6.2 Phase 2 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
OSC and other site-specific locations as necessary.  CEP F.1.f	Site-specific number needed to implement any 2 strategies developed in response to NRC Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events	PA, handheld radios and Voice Powered telephones	Yes	PA and handheld radios	Yes - Voice Powered Phones and handheld radios)	Satellite phones	Note 1

4.2 Plant Paging (Announcement) System

The plant paging system is powered from a battery-backed source and would remain available to provide the initial emergency declaration and direction announcement to plant staff. No further action is required.

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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 LSEE?	Planned or Potential Improvement Identified?	Refer to Following Section for Additional Information
<p>Location where OROs receive notifications of an emergency declaration or a Protective Action Recommendation (as described in the site emergency plan).</p> <p>CEP F.1.a</p> <p>EPIP PMP-2080-EPP-100, Emergency Response, Attachments: 11 (MSP Notification) and 12 (Berrien County Sheriff Notification).</p> <p>EPIP RMT-2080-EOF-001, Activation and Operation of the EOF, Attachments: 15 (MSP Notification) and 16 (Berrien County Sheriff Notification).</p>	<p>At least one. See assumptions and discussion in NEI 12-01.</p>	<p>Commercial phone lines and facsimile</p>	<p>No</p>	<p>PSTN</p>	<p>No</p>	<p>Satellite phones</p>	<p>5.7</p>

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### 4.4 NOTIFICATION OF THE EMERGENCY RESPONSE ORGANIZATION (ERO) Emergency Plan Implementing Procedure PMP-2080-EPP-100, Emergency Response, paragraph 3.2.4

The ERO is notified using pagers. The Control Room initiates the notification process through a commercial provider. Telephones are used as a backup to the pagers. The paging provider maintains antennas on local communications towers. These systems are considered to be unavailable under the assumptions of this analysis. The ERO will self activate in the event of a large scale natural disaster if they cannot be contacted using the notification process.

### 4.5 EQUIPMENT LOCATION REQUIREMENTS

Voice communications equipment has been determined to be survivable.

Spare radios will be stored consistent with these requirements. Exact locations have not been determined but will be determined upon completion of mitigation strategy for beyond-design-basis external events (FLEX) activities. (See Note 1)

### 4.6 PERFORMANCE CHARACTERISTICS (Post event with FLEX)

CNP emergency response facilities, including Security, have use of the 450 MHz handheld radios, PA system and satellite phones.

Field/offsite monitoring teams and the location controlling deployment of the teams (e.g., the EOF). Field teams are dispatched from the OSC and utilize handheld radios as the primary communications mode. They have cell phones and will also have satellite telephones as a backup.

The Shift Communicator, TSC and EOF Communicators, and the ORO contact points will communicate with a combination of radios and satellite phones.

ENS and HPN communications to the NRC staff are not dependent on site resources. The lines connect directly to the local phone company central office by way of buried conductors/pathways. The site will have satellite phones to use as a backup.

On-site teams and the location controlling deployment of the teams (e.g., the OSC): The OSC will have handheld radios for the dispatch and control of response teams. The Control Room is also equipped with a Voice Powered jack (telephone hand-set type) system and radios.

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### 4.7 OTHER ASSESSMENT CONSIDERATIONS

All radios and Satellite phones are provided with chargers and spare batteries. Emergency Preparedness vehicles used by the field monitoring teams are equipped with radios powered from the vehicle electrical system.

Batteries for handheld radios have approximately 10 hours of charge. Chargers are locally powered and plans have been made to have a dedicated source of backup power and can be charged from portable generators provided by FLEX.

### 4.8 PERSONNEL TRAINING

Response personnel should receive periodic training on the location and use of communications systems and equipment: Training programs will be updated to address emergency communications equipment consistent with implementation of CNP's mitigation strategy for beyond-design-basis external events (FLEX).

### 5.0 ADDITIONAL INFORMATION

The following actions will be evaluated as a part of CNP's FLEX strategy:

- a) Provide additional battery backup for the PA system.
- b) Provide capability for hooking up alternate power generator for the intra-plant 450 MHz radio system.
- c) Provide capability for hooking up alternate power generator for the public address system.
- d) Harden exterior antennae to the extent necessary to provide reasonable assurance of survivability.
- e) Provide survivable offsite 450 MHz radio system (including repeater and antennae) or portable repeater equipment.

- 5.1. Direct lines are provided linking the Emergency Facilities to the Berrien County Emergency Operations Center (BCEOC) and is provided with emergency power by way of an installed diesel generator. There are direct lines from: both Control Rooms, Central Alarm Station, Secondary Alarm Station and the EOF to the 911 dispatcher, which is located in the same building as the BCEOC. These are OPX (off premise extensions) powered by the Plant PBX. These phones will be supplemented by satellite phones for the postulated loss of the public phone system infrastructure.
- 5.2. In addition to the ENS and HPN phones, there are two additional phone extensions included in the Control Rooms which are included in the emergency plan. These lines go directly to the local CO via underground transmission and bypass site PBX systems.
- 5.3. The CEP identifies the available methods of communications available to the various entities and facilities. The communications pathways include telephones, two-way radios, dedicated phones, FTS, Voice powered telephones, and the Public Address system.
- 5.4. -The Field teams use 450 MHz radios powered from the emergency vehicles. The range of these radios is limited to line of sight without a repeater but near plant readings would be useful in projecting any potential offsite radiation effects. With the use of a portable repeater or hardening of the existing repeater full capability is returned to the radio system.



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- 5.5 Paging (Public Announcement) System: The plant paging system is powered from an essential power bus. In the event of a loss of offsite power, provisions are made for the bus to automatically “seek” whichever bus is being provided with power from an emergency diesel.
- 5.6 Communications Equipment at ORO Facilities: The Berrien County Emergency Operations Center (BCEOC) is provided with emergency power by way of an installed diesel generator. There are direct lines from both Control Rooms, Central Alarm Station, Secondary Alarm Station and the EOF to the 911 dispatcher, which is located in the same building as the BCEOC. These are OPX (off premise extensions) powered by the Plant PBX. These phones will be supplemented by satellite phones for the postulated loss of the public phone system infrastructure.

Note 1: Final planning for FLEX has not been completed, thus information concerning Mitigating Strategies communications requirements and portable emergency generators have not been finalized.

Enclosure 3 to AEP-NRC-2012-83

Implementation Timeline

Communications Assessment Implementation Timeline		
Completion Date	Action	Comments
February 28, 2013	Supplement direct telephone lines linking the CNP Emergency Facilities to the Lake Township Fire Department and the Berrien County and State of Michigan Emergency Operations Centers with satellite phones for the postulated loss of the public phone system infrastructure.	
October 31, 2013	<p>Evaluate capabilities of off-site radio communications including:</p> <ol style="list-style-type: none"> <li>1. Verifying the ability of existing 450 MHz trunked radios to function in "point-to-point" mode.</li> <li>2. Mapping of radio reception in the EPZ and to the Emergency Operation Centers without the repeater in service.</li> <li>3. Assuring reasonable survivability for the off-site radio repeater and antennae.</li> </ol>	

Communications Assessment Implementation Timeline		
Completion Date	Action	Comments
July 31, 2014	<p>Determine feasibility for the following future actions associated with FLEX:</p> <ol style="list-style-type: none"> <li>1. Provide additional battery backup for the PA system.</li> <li>2. Provide capability for hooking up alternate power generator for the intra-plant 450 MHz radio system.</li> <li>3. Provide capability for hooking up alternate power generator for the public address system.</li> <li>4. Harden exterior antennae to the extent necessary to provide reasonable assurance of survivability.</li> <li>5. Provide survivable offsite 450 MHz radio system (including repeater and antennae) or portable repeater equipment.</li> </ol>	To be evaluated as a part of CNP's FLEX strategy.
September 30, 2014	<p>Provide alternate power supplies for the following locations (assuming survivability) at a minimum:</p> <ol style="list-style-type: none"> <li>1. EOF, which also has an existing diesel generator.</li> <li>2. OSC</li> </ol>	To be evaluated as a part of CNP's FLEX strategy.

Communications Assessment Implementation Timeline		
Completion Date	Action	Comments
September 30, 2014	Provide standalone UPS units for equipment in the EOF and TSC that will be needed to manage the emergency (computers, multi-line telephones and portable phones).	To be evaluated through CNP's FLEX strategy.
September 30, 2014	Provide a dedicated source of backup power (portable generator) for charging batteries for handheld radios.	To be evaluated through CNP's FLEX strategy.
March 31, 2015	Update training programs to address emergency communications equipment consistent with implementation of FLEX.	To be performed as a part of the CNP's FLEX strategy.