Progress Energy

Serial: NPD-NRC-2011-049 10CFR52.79
June 10, 2011

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

LEVY NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
SUPPLEMENT 1 TO RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 100 RELATED TO EMERGENCY PLANNING

References:
1. Letter from Denise McGovern (NRC) to John Elnitsky (PEF), dated February 16, 2011, "Request for Additional Information Letter No. 100 Related to the SRP Section 13.3 for the Levy County Nuclear Plant, Units 1 and 2 Combined License Application"

2. Letter from John Elnitsky (PEF) to U. S. Nuclear Regulatory Commission (NRC), dated March 15, 2011, "Response to Request for Additional Information Letter No. 100 Related to Emergency Planning," Serial: NPD-NRC-2011-021

Ladies and Gentlemen:

Progress Energy Florida, Inc. (PEF) hereby submits a supplemental response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in Reference 1.

A revised response to two of the NRC questions (13.03-45 and 13.03-53) is addressed in the enclosure. The enclosure also identifies changes that will be made in a future revision of the Levy Nuclear Plant Units 1 and 2 application.

If you have any further questions, or need additional information, please contact Bob Kitchen at (919) 546-6992, or me at (727) 820-4481.

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

Executed on June 10, 2011.

Sincerely,

John Elnitsky
Vice President
New Generation Programs & Projects

Enclosure/Attachment

D094
AK45
NRO

Progress Energy Florida, Inc.
P.O. Box 14042
St. Petersburg, FL 33733

cc : U.S. NRC Region II, Regional Administrator
Mr. Brian C. Anderson, U.S. NRC Project Manager
Mr. David Misenhimer, U.S. NRC Project Manager

Levy Nuclear Plant Units 1 and 2
Response to NRC Request for Additional Information Letter No. 100 Related to SRP Section 13.3 for the Combined License Application, dated February 16, 2011

NRC RAI #	Progress Energy RAI #	Progress Energy Response
13.03-45	L-0936	Revised response enclosed – see following pages
13.03-46	L-0883	March 15, 2011; NPD-NRC-2011-021
13.03-47	L-0884	March 15, 2011; NPD-NRC-2011-021
13.03-48	L-0885	March 15, 2011; NPD-NRC-2011-021
13.03-49	L-0888	March 15, 2011; NPD-NRC-2011-021
13.03-50	L-0889	March 15, 2011; NPD-NRC-2011-021
13.03-51	L-0890	March 15, 2011; NPD-NRC-2011-021
13.03-52	L-0891	March 15, 2011; NPD-NRC-2011-021
13.03-53	L-0942	Revised response enclosed – see following pages
13.03-54	L-0893	March 15, 2011; NPD-NRC-2011-021
13.03-55	L-0894	March 15, 2011; NPD-NRC-2011-021
13.03-56	L-0895	March 15, 2011; NPD-NRC-2011-021
13.03-57	L-0896	March 15, 2011; NPD-NRC-2011-021
13.03-58	L-0897	March 15, 2011; NPD-NRC-2011-021
NA	L-0913	March 15, 2011; NPD-NRC-2011-021

NRC Letter No.: LNP-RAI-LTR-100

NRC Letter Date: February 16, 2011

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 13.03-45

Text of NRC RAI:

Subject: On-shift and Augmentation Emergency Response Staff

Basis: Supplemental to RAI 13.03-18(D)(1) and (6) and 13.03-29(1), NUREG-0654/FEMA-REP-1, Revision 1, Evaluation Criterion B.5, O.4.c, Appendix E, Section IV.A.4, and Appendix E, Section IV.F.1(b)(iii)

SRP Acceptance Criteria: Requirements A and B; Acceptance Criteria 1 and 2

1. In response to RAI 13.03-18(D)(6) regarding the basis for ERO staffing levels and consideration for Instrument and Controls (I&C) Maintenance, and Information Technology (IT) personnel, the applicant stated, in part, that its basis for the staffing composition identified in Table B-1 of the LNP Emergency Plan is Table B-1 of NUREG-0654/FEMA-REP-1, Revision 1. In addition, the applicant stated that Table B-1 includes positions needed for most types of emergencies and is not an all inclusive list of emergency response organization members that will respond to an event. **Discuss whether Digital I&C Maintenance personnel were considered as part of its staffing basis for Table B-1, and whether Table B-1 meets the site-specific needs of LNP to effectively respond, on shift and for an extended period of time, to a declared emergency event, for a new generation passive design reactor, the AP1000.**

2. In response to RAI 13.03-18(D)(1) regarding augmented staffing times, the applicant stated that notification of the ERO typically occurs within the first 15 minutes of an event. Once notified, ERO members are expected to respond to their respective ERFs within 30 or 60 minutes and be ready to assume responsibility for their ERO function within approximately 15 minutes. Therefore, the ranges of 30-45 minutes and 60-75 minutes shown on Table B-1 include the initial ERO notification time (not to exceed 15 minutes) and turnover time to assume the ERO role and responsibility for their respective Table B-1 function. The staff find's the applicant's response to RAI 13.03(D)(1) acceptable, however, the applicant's responses to RAIs 13.03-21(B) and RAI 13.03-44(2) appear to conflict with the above discussion increasing the augmentation times an additional 15 minutes, totaling 90 minutes. **Discuss why the LNP Emergency Plan and responses to RAI 13.03-21B and 13.03-44(2) appear inconsistent with the discussion provided in RAI 13.03-18(D)(1), or revise the LNP Emergency Plan to incorporate the response to RAI 13.03-18(D)(1) (excluding the Crystal River operating experience), and ensure that Section H.4., "Activation and Staffing of Emergency Response Facilities," of the LNP Emergency Plan and the EP-ITAAC in LNP Table 3.8-1 align with this information.**

3. In response to RAI 13.03-29(1) regarding Radiological Control Team members identified to perform on-shift Protective Actions (In-Plant) in LNP Table B-1 of the Emergency

Plan, the staff finds the applicant's response to RAI 13.03-29(1) acceptable, with exception. The proposed revision to Table B-1 in the LNP Emergency Plan is not consistent with the applicant's response to this RAI, which incorrectly reflects a minimum shift staffing size (1 versus 3) of Radiological Control Team members on-shift, for Units 1 and 2, specific to the major task of On-shift Protective Actions (In-Plant). In addition, the applicant added footnote (f) to the position indicating that task may be performed by shift personnel assigned other functions. **Discuss why Table B-1 does not reflect the additional Radiological Control Team members described in response to RAI 13.03-29(1), or revise Table B-1 to include this information. Regarding footnote (f), discuss who will assume this function in the event of an emergency, including any collateral duties or competing priorities. Revise the emergency plan accordingly.**

4. Section 4.1, "On-site Dose Assessment," of the LNP Emergency Plan states that the Radiation Monitoring Team has sole responsibility for plume monitoring until such time as the State monitoring teams arrive and assume this responsibility for areas beyond the site boundary. LNP Table B-1 identifies Environmental Monitoring Team Personnel as performing the major task of off-site surveys from the EOF. **Discuss in the LNP Emergency Plan whether the Radiation Monitoring Team personnel described in Section 4.1 are the same as the Environmental Monitoring Team personnel identified in LNP Table B-1. If not, describe in the LNP Emergency Plan the team makeup, general responsibilities, and training provided for the Environmental Monitoring Team.**

PGN RAI ID #: L-~~08820~~0936

PGN Response to NRC RAI:

1. The Levy Emergency Plan Table B-1, Minimum Staffing Requirements for Emergencies staffing is based on NUREG-0654 Table B-1, Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies. Section 18.6-1 revision 17 of the AP1000 Design Control Document (DCD) states that staffing levels will be addressed for various plant personnel including instrumentation and control (I&C) technicians. Section 18.6-1 is not specific to emergency conditions and applies to normal conditions as well. The intent is not to require each of the staffing positions to be onsite at all times.

   Table B-1 for LNP delineates positions needed to perform emergency functions and in turn be onsite to respond to emergency conditions. Electrical or I&C personnel are listed on LNP Table B-1 to perform repair and corrective action tasks associated with an emergency. Digital components can be affected during an emergency and as such some Electrical/I&C personnel will be trained in repair and corrective action tasks associated with digital components. The Minimum Shift Electrical/I&C Maintenance emergency position and at least one of the additional Electrical/I&C Maintenance emergency positions that augment the shift staffing upon declaration of an Alert or higher are trained in digital component repair and corrective action tasks. ~~One individual capable of performing the function must be on shift at all times and three additional electrical/I&C personnel will augment the shift staffing upon declaration of an Alert or higher.~~ The requirement for these Electrical/I&C Maintenance emergency positions to be trained in repair and corrective action tasks associated with digital components will be annotated in Table B-1 of the LNP Emergency Plan in a future LNP COLA revision.

The number of electrical/I&C personnel in LNP Table B-1 mirrors the numbers specified in Table B-1 of NUREG-0654 and has been deemed adequate by the NRC and industry to respond to design basis accidents. It is reasonable to conclude the numbers are also sufficient for LNP minimum staffing requirements during an emergency. No additional personnel specializing in digital I&C maintenance are required in Table B-1 at this time.

2. RAI 13.03-45 acknowledges the acceptance of RAI 13.03(D)(1) as an acceptable response regarding augmented staffing times associated with LNP Emergency Plan Table B-1. RAI 13.03-45 also expresses concern that the response to RAI 13.03-21B and 13.03-44(2) appear inconsistent with RAI 13.03(D)(1). It is not the intent for RAI 13.03-21(B) and 13.03-44(2) to be inconsistent with RAI 13.03(D)(1). After benchmarking other AP1000 COLA Part 5, Emergency Plan, submittals and the Crystal River Unit 3 operating Emergency Plan augmented staff capability for additions tables, the use of a range versus concrete time is believed to be a primary contributor to the uncertainty related to the previous RAI responses. The LNP Emergency Plan will replace the 30-45 and 60-75 minute ranges listed in Table B-1 with 30 and 60 minute times, respectively. Section H.4, Activation and Staffing of Emergency Response Facilities, will be revised in a future LNP COLA revision to correspond to the Table B-1 changes.

   The change from ranges on Table B-1 to a finite number of minutes is to improve clarity and does not alter any specific actions for the LNP Emergency Response Organization. A 15 minute briefing and turnover time will continue to be used in facility activation times as discussed in Section H.4.

   In addition, the EP-ITAAC in LNP Table 3.8-1 will be revised to align with the changes to Table B-1 and Section H.4. (Refer to the response to RAI 13.03-58 below for specific changes to EP-ITAAC in LNP Table 3.8-1.)

3. Table B-1 will be adjusted in a future revision to the LNP COLA Part 5 Emergency Plan to show 3 Radiological Control Team Personnel as a minimum shift size for Units 1 & 2 for in-plant protective actions. The revision from 1 to 3 Radiological Control Team Personnel will be consistent with the response provided for RAI 13.03-29(1). The "total" minimum shift size for Units 1 & 2 will also be increased by 2 to 24 to account for the Radiological Control Team Personnel increase.

   The Levy Emergency Plan Table B-1 includes a footnote for the Radiological Control Team Personnel performing in-plant protective actions. The footnote states the function may be provided by shift personnel assigned other functions. The LNP footnote is consistent with the same footnote for personnel performing in-plant protective actions per NUREG- 0654, Table B-1, Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies.

   During emergency situations the LNP Radiological Control Team Personnel performing in-plant protective actions do not have collateral duties. Personnel on-shift required to perform in-plant protective actions during an emergency at LNP will be trained and qualified to perform the major radiation protection task per Table B-1. Collateral emergency response duties will not exist regardless of the title of the individual performing the Table B-1 major task.

In conclusion, Radiological Control Team Personnel assigned to perform in-plant protective actions per LNP Emergency Plan Table B-1 are not assigned collateral duties or competing priorities during an emergency.

4. Section I.4.1, On-Site Dose Assessment refers to a "Radiation Monitoring Team" for both in-plant evaluations and the determination of radioactive levels at the site boundary and beyond. The radiation monitoring team evaluating onsite conditions is not the same as the team evaluating site boundary and beyond conditions.

   The reference to "Radiation Monitoring Team" for in-plant evaluations and surveys will be changed to "Radiological Control Team" to be consistent with emergency positions described in Table B-1, Minimum Staffing Requirements for Emergencies.

   The reference to "Radiation Monitoring Team" for site boundary and beyond evaluations will be changed to "Radiological Monitoring Team" to be consistent with emergency positions described in Table B-1, Minimum Staffing Requirements for Emergencies. (See RAI 13.03-47 response below regarding a Table B-1 nomenclature change from "Environmental Monitoring Team Personnel" to "Radiological Monitoring Team Personnel".)

   Section I.4.1 does not introduce any new monitoring teams in addition to teams specified in Table B-1. However, Section B.5.1, On-site Emergency Response Organization will be revised in a future revision to the LNP COLA to add a subsection for Radiological Monitoring Teams. The teams report to the Radiation Control Coordinator. Teams assemble at the site and are subsequently dispatched in vehicles to the surrounding area. They are responsible for offsite plume tracking, monitoring and other sampling activities.

   Section O.4, Emergency Response Training and Qualification will also be revised in a future LNP COLA to add subsection O.4.l to specify training requirements for the Radiological Monitoring Team. Training will cover the following topics:
   - Equipment and equipment checks
   - Plume tracking and map reading
   - Field measurement of airborne radioactivity
   - Radiation levels and contamination in the EPZ
   - Environmental sample collection
   - Record keeping
   - Communications, and
   - Procedures

Section K.6.a, Contamination Control Measures, also refers to a "Radiation Monitoring Team" and will be revised in a future LNP COLA to replace "Radiation Monitoring Team" with "Radiological Control Team". The nomenclature change will align Section K.6.a with the remainder of the LNP Emergency Plan.

Associated LNP COL Application Revisions:

The following changes will be made in a future revision of the LNP COLA Part 5, Emergency Plan:

1. Revise Table B-1, Minimum Staffing Requirements for Emergencies, Capability for Additions Columns (sheets 1 and 2) from (See Attachment RAI 13.03-45 Table B-1):

Capability for Additions
30-45 min and 60-75 min

To Read:

Capability for Additions
(from time of notification)
30 min and 60 min

2. Revise Section H.4, Activation and Staffing of Emergency Response Facilities from:

NUREG-0654 Criterion II.B.5 states that the "licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency." It further defines that short period as 30 and 60 minutes. The time frames for rapid augmentation of a nuclear power plant staff in the event of an emergency are not rigid inviolate requirements but rather goals. It is Progress Energy's intent to expend its best efforts to meet the augmentation criteria goals regarding staffing emergency response facilities with sufficiently skilled individuals capable of handling an emergency. Progress Energy realizes that these time frames might be exceeded due to diversity of normal residential patterns for the plant's staff, possible adverse weather conditions, and road congestion.

Progress Energy has put into place plans and procedures to ensure timely activation of the emergency response facilities. The Nuclear Shift Manager, acting as Emergency Coordinator (EC), will initiate a call-out in accordance with emergency plan implementing procedures. The Emergency Response Organization (ERO) augmentation process identifies individuals who are capable of fulfilling the specific response functions that are listed in Table B-1, Minimum Staffing Requirements for Emergencies. This table was developed based on the functions listed in NUREG-0654, Table B-1. Depending on the emergency, personnel with required expertise will be contacted on a priority basis, as shown in Table B-1. Additional personnel will be available to provide communications; onsite and offsite radiological assessment; repair and corrective actions; and technical support within a short period of time. Although the response time will vary due to such factors as weather and traffic conditions, 30-45 minutes should provide enough time to make the appropriate staff available to augment the plant's onshift organization. The ERO will continue to be augmented such that within 60-75 minutes after notification, additional personnel will be added to provide the necessary support.

Progress Energy staffs and activates the designated emergency response facilities as follows:

a. Notification of Unusual Event – Emergency response facility staffing not normally needed, but may be undertaken at the discretion of the EC.
b. Alert – Staffing of the TSC and OSC is required (EOF and ENC staffing is discretionary).
c. Site Area Emergency and General Emergency – Staffing of the TSC, OSC, EOF, and ENC is required.

Although the response time will vary due to factors such as weather and traffic conditions, a goal of 60 minutes has been established for minimum staffing in the TSC, OSC, and EOF.

It is the goal of the organization to be capable of declaring the applicable emergency response facility operational within 15 minutes of achieving minimum staffing. During the facility activation process, the facility managers will determine that minimum staffing has been met, as described in the emergency plan implementing procedures, and verify the readiness to declare the facility operational with facility ERO members.

The facility can be declared operational when the following conditions are met:

- Minimum staffing has been achieved.
- Personnel have been briefed on the situation and a proper turnover has been conducted.
- The facility is functionally capable of performing the appropriate emergency response activity.

The 60-minute response time and 15-minute activation times are not applicable to the ENC. ENC personnel must first coordinate the decision to activate the ENC with the appropriate offsite authorities responding to the facility.

Depending on the emergency classification declared at the site, State and local emergency response personnel will also staff and activate their emergency response facilities.

To Read:

NUREG-0654 Criterion II.B.5 states that the "licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency." It further defines that short period as 30 and 60 minutes. ~~The time frames for rapid augmentation of a nuclear power plant staff in the event of an emergency are not rigid inviolate requirements but rather goals. It is Progress Energy's intent to expend its best efforts to meet the augmentation criteria goals regarding staffing emergency response facilities with sufficiently skilled individuals capable of handling an emergency. Both the NRC and LNP realize that due to diversity of normal residential patterns for the plant's staff, possible adverse weather conditions and road congestion, these time frames might be exceeded.~~

Progress Energy has put into place plans and procedures to ensure timely activation of the emergency response facilities. The Nuclear Shift Manager, acting as Emergency Coordinator (EC), will initiate a call-out in accordance with emergency plan implementing procedures. The Emergency Response Organization (ERO) augmentation process identifies individuals who are capable of fulfilling the specific response functions that are listed in Table B-1, Minimum Staffing Requirements for Emergencies. This table was developed based on the functions listed in NUREG-0654, Table B-1. The "Capability for Additions" times shown in Table B-1, Minimum Staffing Requirements for Emergencies, are from time of notification.

Depending on the emergency, personnel with required expertise will be contacted on a priority basis, as shown in Table B-1. Additional personnel will be available to provide communications; onsite and offsite radiological assessment; repair and corrective actions; and technical support within a short period of time.

~~Although the response time will vary due to factors such as weather and traffic conditions, a~~ A goal of 60 minutes for minimum staffing, following the notification of an Alert has been established for the ERO personnel responding to the station emergency facilities. A goal of

60 minutes for minimum staffing, following the notification of a Site Area Emergency or higher emergency classification, has been established for the ERO personnel responding to the station emergency facilities and EOF. Additionally, plans have been developed to ensure timely functional activation and staffing of the ENC when the classification of a Site Area Emergency or higher emergency classification is declared.

It is the goal of the organization to be capable of declaring the applicable emergency response facility operational within 15 minutes of achieving minimum staffing. The facility can be declared operational when the following conditions are met:

- Minimum staffing has been achieved.
- Personnel have been briefed on the situation and a proper turnover has been conducted.
- The facility is functionally capable of performing the appropriate emergency response activity.

The 60-minute response time and 15-minute activation times are not applicable to the ENC. ENC personnel must first coordinate the decision to activate the ENC with the appropriate offsite authorities responding to the facility.

~~The senior manager in charge may elect to activate his/her facility without meeting minimum staffing if it has been determined that sufficient personnel are available to fully respond to the specific event (this would not constitute a successful minimum staff response). Using professional judgment, the facility manager may appoint alternate personnel to fill vacant positions on an interim basis to respond to the emergency. Every effort to match the appropriate skill with position should be taken.~~

Depending on the emergency classification declared at the site, State and local emergency response personnel will also staff and activate their emergency response facilities.

3. Revise Table B-1, Minimum Staffing Requirements for Emergencies, Functional Area 6, In-plant Protective Actions row, Minimum Shift Size (Units 1 & 2) column from (See Attachment RAI 13.03-45 Table B-1):

   1

   To Read:

   3[f]

4. Revise Table B-1, Minimum Staffing Requirements for Emergencies, LNP TOTAL (Less Security) row, Minimum Shift Size (Units 1 & 2) column from (See Attachment RAI 13.03-45 Table B-1):

   22

   To Read:

   24

5. Add the following paragraph to the end of Section B.5.1.p, On-Site Emergency Response Organization, Radiological Control Teams:

Radiological Control Team Personnel are typically composed of Radiation Control staff. Regardless if the Radiological Control Team Personnel assigned to in-plant protective actions per Table B-1 is composed of Radiation Control staff or other on-shift members each member will be trained in in-plant protective actions. Radiological Control Team Personnel will not have collateral emergency response duties that compete or conflict with in-plant protective actions or any other assigned emergency response function per Table B-1.

6. Revise the first line of the third paragraph of Section I.4.1, On-Site Dose Assessment from:

   In-plant evaluations and radiological surveys are performed by the Radiation Monitoring Team.

   To Read:

   In-plant evaluations and radiological surveys are performed by the Radiological Control Team.

7. Revise the fourth paragraph of Section I.4.1, On-Site Dose Assessment from:

   It is important to determine radioactive levels at the site boundary, and beyond, as soon as possible following an accidental release. These activities are performed by the Radiation Monitoring Team in accordance with implementing procedures. TLDs have been strategically placed within the Exclusion Area Boundary. However, conditions at the time of occurrence of any emergency will dictate specific areas where intense radiological monitoring efforts will be required. Upon activation and preparation of the Radiation Monitoring Team, the Radiation Controls Coordinator and EC will determine area(s) to be monitored. The Radiation Monitoring Team has sole responsibility for plume monitoring until such time as the state monitoring teams arrive and assume this responsibility for areas beyond the site boundary. As required, a general beta-gamma survey, gross particulate air sampling, gross iodine sampling, TLD collection and replacement, if applicable, and smear surveys will be conducted. The need for additional or continuing surveys is established by the EC. Results of surveys are appropriately recorded and reported to the TSCs via portable transceiver. The TSCs transmit the results to the EOF for coordination of analysis, as appropriate, with state survey results.

   To Read:

   It is important to determine radioactive levels at the site boundary, and beyond, as soon as possible following an accidental release. These activities are performed by the Radiological Monitoring Team in accordance with implementing procedures. TLDs have been strategically placed within the Exclusion Area Boundary. However, conditions at the time of occurrence of any emergency will dictate specific areas where intense radiological monitoring efforts will be required. Upon activation and preparation of the Radiological Monitoring Team, the Radiation Controls Coordinator and EC will determine area(s) to be monitored. The Radiological Monitoring Team has sole responsibility for plume monitoring until such time as the state monitoring teams arrive and assume this responsibility for areas beyond the site boundary. As required, a general beta-gamma survey, gross particulate air sampling, gross iodine sampling, TLD collection and

replacement, if applicable, and smear surveys will be conducted. The need for additional or continuing surveys is established by the EC. Results of surveys are appropriately recorded and reported to the TSCs via portable transceiver. The TSCs transmit the results to the EOF for coordination of analysis, as appropriate, with state survey results.

8. Insert the following in Section B.5.1.q, On-site Emergency Response Organization and renumber remaining subsections:

   Radiological Monitoring Teams: Radiological Monitoring Teams report to the Radiation Control Coordinator. Teams assemble at the site and are subsequently dispatched in vehicles to the surrounding area. They are responsible for offsite plume tracking, monitoring and other sampling activities.

9. Add the following new Section O.4.l, Emergency Response Training and Qualification, Radiological Monitoring Team:

   Radiological Monitoring Team: Equipment and equipment checks, plume tracking and map reading, field measurement of airborne radioactivity, radiation levels and contamination in the EPZ, environmental sample collection, record keeping, communications and procedures.

10. Revise the last sentence of the first paragraph of Section K.6.a, Contamination Control Measures from:

    The measures are initiated by the EC through the use of the Radiation Monitoring Team as described in the implementing procedures.

    To Read:

    The measures are initiated by the EC through the use of the Radiological Control Team as described in the implementing procedures.

11. Revise the first sentence of the second paragraph of Section K.6.a, Contamination Control Measures from:

    In the event of a radiological emergency in which access to certain areas of the plant is required and hazardous radiation levels might be encountered, the Radiation Monitoring Team is dispatched and, among other duties, identifies the need to establish Radiation Controlled Areas (RCAs) and appropriate access and work precautions.

    To Read:

    In the event of a radiological emergency in which access to certain areas of the plant is required and hazardous radiation levels might be encountered, the Radiological Control Team is dispatched and, among other duties, identifies the need to establish Radiation Controlled Areas (RCAs) and appropriate access and work precautions.

12. Revise Table B-1, Minimum Staffing Requirements for Emergencies, Electrical/I&C Maintenance emergency position (sheet 2) from (See Attachment RAI 13.03-45 Table B-1):

Electrical/I&C Maintenance

To Read:

Electrical/I&C Maintenance[(i)]

13. Add the following note to Table B-1, Minimum Staffing Requirements sheet 2 (See Attachment RAI 13.03-45 Table B-1):

    i) The Minimum Shift and at least one of the additional Electrical/I&C Maintenance emergency positions are trained in digital component repair and corrective action tasks.

Attachments/Enclosures:

1. RAI 13.03-45 Table B-1

NRC Letter No.: LNP-RAI-LTR-100

NRC Letter Date: February 16, 2011

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 13.03-53

Text of NRC RAI:

Subject: Exercises and Drills

Basis: NUREG-0654/FEMA-REP-1, Revision 1, Evaluation Criterion N.1.a, N.1.b, N.3.a-f, Appendix E, Section IV.F.2, Appendix E, Section IV.F.2.f

SRP Acceptance Criteria: Requirements A and B; Acceptance Criteria 1, 2, and 30

1. Section N, "Exercises and Drills," of the LNP Emergency Plan states that Progress Energy implements a program of periodic exercises to evaluate major portions of emergency response capabilities and to develop and maintain key emergency response skills.

    a. **Describe in the LNP Emergency Plan whether EP exercises will simulate an emergency that results in offsite radiological releases which would require response by offsite authorities, and are conducted as set forth in NRC and FEMA rules, or provide justification as to why this information is not required.**

    b. **Describe in the LNP Emergency Plan whether the following provisions for the conduct of EP exercises have been made: 1) exercises will test the adequacy of timing and content of implementing procedures and methods; 2) exercises will test emergency equipment, communication networks, and the public notification system; and 3) exercises will ensure the members of the ERO are familiar with their duties, or provide justification for why this information is not required.**

2. Section N.1.a, "Exercise Scope and Frequency," and N.1.b, "Exercise Scenario and Participation," provide discussion regarding the frequency of exercise play, participation by the State of Florida, and scope of scenarios such that all major elements of the LNP Emergency Plan are tested. Major elements to be tested include: management and coordination of emergency response, accident assessment, protective action decision making, and plant system repair and corrective action. **Describe in the LNP Emergency Plan whether the following provisions for the conduct of EP exercises have been made: 1) an EP exercises shall start between 6:00 p.m. and 4:00 a.m. once every six years; 2) exercises will be conducted during different seasons of the year to vary weather conditions; and 3) some exercise will be unannounced, or provide justification for why this information is not required.**

3. **Describe in the LNP Emergency Plan whether remedial exercises will be conducted for unsatisfactory performance during a biennial exercise that results in the loss of NRC and FEMA reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.**

4. Section N.3, "Conduct of Drills and Exercises," of the LNP Emergency Plan describes who is responsible for the overall development and direction of an exercise, and criteria included in an exercise plan. **Clarify in the LNP Emergency Plan whether the discussion provided in Section N.3 is also applicable for drills.**

PGN RAI ID #: L-~~0892~~0942

PGN Response to NRC RAI:

The LNP COLA Part 5 will be revised in a future revision to include the information discussed in responses 1 – 4 below.

1.a. EP exercises conducted in support of the LNP COLA Part 5, Emergency Plan Section N.1 Exercises, will simulate an emergency that results in offsite radiological releases which would require response by offsite authorities. The exercises are conducted in accordance with NRC and FEMA rules.

1.b. Section N.1 Exercises, of the LNP Emergency Plan requires the conduct of EP exercises to meet the following provisions:
- Test the adequacy of timing and content of implementing procedures and methods,
- Test emergency equipment, communication networks, and the public notification system, and
- Ensure members of the ERO are familiar with their duties.

2. Section N.1.a, Exercise Scope and Frequency contains provisions for EP exercises to:
   1. Start between 6:00 p.m. and 4:00 a.m. once every six years, and
   2. Be conducted during different seasons of the year to vary weather conditions.

   Section N.1.a also contains the provision for some EP exercises to be unannounced.

3. Remedial exercises will be conducted for unsatisfactory performance during a biennial exercise that results in the loss of NRC and FEMA reasonable assurance that adequate protective measure can and will be taken in the event of a radiological emergency. Section N.4, Exercise and Drill Evaluation contains the provision for the remediation.

4. Section N.3 is applicable to exercises and drills. The section describes exercise content that shall be included in the exercise plan as described in Section N.3 a-e. The plan content listed in N.3 a-e should also be used for large scale integrated drills that involve activation and participation by both onsite and offsite agencies. Section N.3 will be revised in a future LNP COLA Part 5 revision to clarify the use of the N.3 a-e plan content for drills.

Associated LNP COL Application Revisions:

The following changes will be made in a future revision of the LNP COLA Part 5, Emergency Plan:

1. Revise Section N.1, Exercises, from:

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations.

To Read:

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. An exercise will simulate an emergency that results in offsite radiological releases which would require response by offsite authorities. Exercises are conducted as set forth in NRC and FEMA rules. In addition exercises shall be designed to:

- Test the adequacy of timing and content of implementing procedures and methods,
- Test emergency equipment, communication networks, and the public notification system, and
- Ensure members of the ERO are familiar with their duties

2. Revise Section N.1.a, Exercise Scope and Frequency from:

An emergency response exercise shall be conducted every two (2) years. The scenario should be varied such that all major elements of the Plan are tested within a 6-year period. During the interval between biennial Exercises, at least one (1) drill should be conducted involving principal areas of on-site emergency response capabilities. These areas include management and coordination of emergency response, accident assessment, protective action decision-making, and Plant system repair and corrective action. State and local agencies will be invited to participate in the "off-year" drills. Plan elements may be tested during "off-year" drills. Provisions for drills and exercises using terrorist based events are also part of the Drill and Exercise Program.

To Read:

An emergency response exercise shall be conducted every two (2) years. One exercise shall start between 6:00 p.m. and 4:00 a.m. once every six years. Exercises shall also be conducted during different seasons of the year to vary weather conditions. Some exercises should be unannounced.

The scenario should be varied such that all major elements of the Plan are tested within a 6-year period. During the interval between biennial Exercises, at least one (1) drill should be conducted involving principal areas of on-site emergency response capabilities. These areas include management and coordination of emergency response, accident assessment, protective action decision-making, and Plant system repair and corrective action. State and local agencies will be invited to participate in the "off-year" drills. Plan elements may be tested during "off-year" drills. Provisions for drills and exercises using terrorist based events are also part of the Drill and Exercise Program.

3. Add the following paragraph to the end of Section N.4, Exercise and Drill Evaluation

Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency. The extent of State and local participation in remedial exercises must be

sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercise.

4. Revise ~~the last sentence of~~ the first paragraph of Section N.3, Conduct of Drills and Exercises, from:

Emergency Preparedness is responsible for the overall development and direction of the exercise. Designated personnel develop the exercise scenario, exercise messages, and simulated data for the Site and off-site areas. The Exercise Director develops an exercise plan for each exercise. This plan includes the following:

To Read:

Emergency Preparedness is responsible for the overall development and direction of exercises and drills. Designated personnel develop exercise and drill scenarios, messages, and simulated data for the Site and off-site areas. The Exercise Director develops an exercise plan for each exercise. This exercise plan includes the following:

5. Add the following to the end of Section N.3, Conduct of Drills and Exercises:

Large-scale integrated drills that involve participation and facility activation by both onsite and offsite agencies should also include a plan that contains content listed in N.3 a-e above.

Attachments/Enclosures:

None.

Attachment to NRC RAI Number 13.03-45 (PGN RAI ID# L-~~0882~~0936)

RAI 13.03-45 Table B-1

Minimum Staffing Requirements for Emergencies

[2 pages following this cover page]

ATTACHMENT RAI 13.03-45 Table B-1

Levy Nuclear Plant Units 1 and 2
COL Application
Part 5, Emergency Plan

Table B-1 (Sheet 1 of 2)
Minimum Staffing Requirements for Emergencies

Functional Area	Location	Major Tasks	Emergency Positions	Minimum Shift Size (Unit 1)	Minimum Shift Size (Units 1 & 2)	Capability for Additions (from time of notification)	
						30 min	60 min
1. Plant Operations and Assessment of Operational Aspects	Control Room	Control Room Staff	Nuclear Shift Manager (NSM)[a] USCO Control Operators Non-Licensed Operators	1 1 2 2[b]	1 2 4 4[b]	-- -- -- --	-- -- -- --
2. Emergency Direction and Control	Control Room EOF TSC	--	EC – CR (NSM[c]) EOF Director[d] EC – TSC[d]	1 -- --	1 -- --	-- -- --	-- 1 1
3. Notification and Communication	CR/TSC/EOF	Emergency Communicator	Plant Personnel	1	2	1	2
4. Radiological Assessment	EOF	Off-site Dose Assessment	Dose Projection Team Leader	--	--	1	--
	EOF	Off-site Surveys	~~Environmental~~ Radiological Monitoring Team Personnel	--	--	2	2
	OSC	On-site Surveys	Radiological Control Team Personnel	--	--	1	1
	OSC	In-plant Surveys	Radiological Control Team Personnel	1	2	1	1
	OSC	Chemistry	Chemistry Team Personnel	1	2	--	1

(Continued on next page)

NOTES:

a) After activation of the EOF and TSC.

b) One of the two non-licensed operators may be assigned to the Fire Brigade.

c) On shift responsibility prior to activation of the EOF and TSC.

d) Overall direction of facility response is assumed by the EOF Director when all facilities are activated. The direction of minute-to-minute facility operations remains with the EC – TSC.

ATTACHMENT RAI 13.03-45 Table B-1

Levy Nuclear Plant Units 1 and 2
COL Application
Part 5, Emergency Plan

Table B-1 (Sheet 2 of 2)
Minimum Staffing Requirements for Emergencies

Functional Area	Location	Major Tasks	Emergency Positions	Minimum Shift Size (Unit 1)	Minimum Shift Size (Units 1 & 2)	Capability for Additions (from time of notification)	
						30 min	60 min
5. Plant Engineering, Repair and Corrective Actions	CR	Technical Support	Shift Technical Advisor[e]	1	1	--	--
	TSC		Core Performance Engineering	--	--	1	--
	TSC		Mechanical Engineering	--	--	--	1
	TSC		Electrical Engineering	--	--	--	1
	OSC	Repair and Corrective Actions	Mechanical Maintenance	1	1	--	2
	OSC		Electrical/I&C Maintenance[i]	1	1	2	1
6. In-plant Protective Actions	OSC	Radiation Protection	Radiological Control Team Personnel	2[f]	3[f]	2	2
7. Fire Fighting	CR/OSC	--	--	5[g]		Local Support	
8. First Aid and Rescue Operations	CR/OSC	--	Plant Personnel	2[f]		--	--
9. Site Access Control	Various Security Posts	Security and Accountability	Security Team Personnel	(h)	(h)	(h)	(h)
LNP TOTAL (Less Security):				**15**	**24**	**11**	**16**

NOTES:

e) One Shift Technical Advisor (STA) is assigned per shift during plant operation. A shift manager or another SRO on shift, who meets the qualifications for the combined Senior Reactor Operator/Shift Technical Advisor (SRO/STA) position, as specified for option 1 of Generic Letter 86-04, the commission's policy statement on engineering expertise on shift, may also serve as the STA. If this option is used for a shift, then the separate STA position may be eliminated for that shift. (Reference LNP FSAR 13.1.2.1.3.8 and FSAR Table 13.1-202)

f) May be provided by shift personnel assigned other functions.

g) Fire Brigade per FSAR.

h) Per Security Plan.

i) The Minimum Shift and at least one of the additional Electrical/I&C Maintenance emergency positions are trained in digital component repair and corrective action tasks.