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IPEC, P.O. Box 308, Buchanan, NY 10511

CONTROLLED DOCUMENT
TRANSMITTAL FORM - **PROCEDURES**

TO: DISTRIBUTION **DATE: 11/3/20** **TRANSMITTAL: SEE BELOW**
FROM: IPEC DCRM - SHANNON LYONS - 3RD FLOOR ADMIN BLDG

AFFECTED DOCUMENTS: EMERGENCY PLANNING

DOC #	REV #	TITLE	INSTRUCTIONS

THE FOLLOWING RECORDS ARE BEING RESENT PLEASE REMOVE YOUR CURRENT COPY IF ANY AND REPLACE WITH ATTACHED UPDATED REVISION:

TRANSMITTAL No. EP-19-0025
IPEC EP 19-02 *SUPPORTING DOCUMENTATION*
Which includes the following:
EN-LI-100 PAD, EN-EP-305 50.54(Q)(3),
EN-FAP-OM-023 Change Management, EN-LI-113 LBDCR
EP Revision Matrix, IP-SMM-AD-102 paperwork, IP-EP-AD2 EP Checklist

TRANSMITTAL No. EP-19-0032
IP EP-AD13R20 *SUPPORTING DOCUMENTATION*
Which includes the following:
EN-EP-305 50.54(Q)(2), EN-FAP-OM-023 Change Management, EN-LI-113 LBDCR
EAL Tech Bases Revision Matrix, IP-SMM-AD-102 paperwork, IP-EP-AD2 EP Checklist

TRANSMITTAL No. EP-20-0020
IP EP-AD13R21 *SUPPORTING DOCUMENTATION*
Which includes the following:
EN-EP-305 50.54(Q)(2), EN-FAP-OM-023 Change Management, EN-LI-113 LBDCR
IP-EP-AD13R21 Revision Matrix, IP-SMM-AD-102 paperwork, IP-EP-AD2 EP Checklist

TRANSMITTAL No. EP-20-0024
IPEC ON-SHIFT STAFFING ANALYSIS PHASE 1 REV, 20-01
IPEC-EP-STAFF R20-1 *SUPPORTING DOCUMENTATION*
Which includes the following:
EN-LI-100 PAD, EN-EP-305 50.54(Q)(3), EN-FAP-OM-023 Change Management, EN-LI-113 LBDCR, IP-SMM-AD-102 paperwork, IP-EP-AD2 EP Checklist,
IPEC Phase 1 Staffing Assessment 20-01 Revision Matrix

4x45
NRR

TRANSMITTAL No. EP-20-0025
IPEC UNIT 2 AND UNIT 3 PHASE 2 STAFFING STUDY REV 4
PHASE 2 STAFFING STUDY REV 4 *SUPPORTING DOCUMENTATION*
Which includes the following:
EN-EP-305 50.54(Q)(3), IPEC Phase 2 Staffing Assessment REV 4 Revision Matrix

*************PLEASE NOTE EFFECTIVE DATE*************

RECEIPT OF THE ABOVE LISTED DOCUMENT(S) IS HEREBY ACKNOWLEDGED. I CERTIFY THAT ALL SUPERSEDED, VOID, OR INACTIVE COPIES OF THE ABOVE LISTED DOCUMENT(S) IN MY POSSESSION HAVE BEEN REMOVED FROM USE AND ALL UPDATES HAVE BEEN PERFORMED IN ACCORDANCE WITH EFFECTIVE DATE(S) (IF APPLICABLE) AS SHOWN ON THE DOCUMENT(S).

U.S. NUCLEAR REGULATORY COMMISSION
ATTN: DOCUMENT CONTROL DESK
11555 ROCKVILLE PIKE
ROCKVILLE, MD 20852

NAME (PRINT) **SIGNATURE** **DATE** **CC#**

ATTACHMENT 9.1 PROCESS APPLICABILITY DETERMINATION FORM

Sheet 1 of 7

I. OVERVIEW

PAD Rev. #: 0

Facility: Indian Point Energy Center (IPEC)

Proposed Activity / Document: IPEC Emergency Plan Change/Rev 19-02

Description of Proposed Activity: Revision to the IPEC Emergency Plan

II. DOCUMENT REVIEW METHOD

Provide the requested information for each item below.

1. **For documents available electronically:**

   a. **List search engine or documents searched, and keywords used:**
   U2/U3 Technical Specifications, U2/U3 Technical Requirements Manual, U2/U3 UFSARs, NRC Orders, IPEC Orders/Relief Requests/Exemptions, LRS Commitments, and the IPEC Emergency Plan: Keywords: Emergency, Plan, Emergency Plan, Security, Security Plan.

   b. **List relevant sections of controlled electronic documents reviewed:**
   All Licensing Basis Document sections were searched electronically: U2/U3 Technical Specifications, U2/U3 Technical Requirements Manual, U2/U3 UFSARs, NRC Orders, IPEC Orders/Relief Requests/Exemptions, LRS Commitments, and the IPEC Emergency Plan. Review determined no relevant hits and no impact from proposed changes.

2. **Documents reviewed manually (hardcopy):**
   None

3. **For those documents that are not reviewed either electronically or manually, use the specific questions provided in Sections III and IV of Attachment 9.2 of EN-LI-100 as needed. Document, below, the extent to which the Attachment 9.2 questions were used.**

   Reviewed complete Att. 9.2 of EN-LI-100 Revision 26. Emergency Plan (10 CFR 50.54(q)/ (EN-EP-305) section is applicable due to change being controlled by 10 CFR 50.54(q).

III. PROCESS REVIEW

Does the proposed activity affect, invalidate, or render incorrect, OR have the potential to affect, invalidate, or render incorrect, information contained in any of the following processes? Contact Program Owner if needed. Associated regulations and procedures are identified with each process below.

PROCESS (Regulations / Procedures)	YES	NO	REVIEW RESULTS
Chemistry / Effluents	☐	☒	
Radwaste / Process Control Program (PCP) (EN-RW-105 or contact the Radiation Protection Dept)	☐	☒	
Radiation Protection / ALARA (10 CFR 20 / EN-RP-110 or contact the Radiation Protection Dept.)	☐	☒	
Inservice Inspection Program (10 CFR 50.55a / EN-DC-333, -342, -351, -352)	☐	☒	
Inservice Testing Program (10 CFR 50.55a / EN-DC-332)	☐	☒	
Maintenance Rule Program (10 CFR 50.65 / EN-DC-203, -204, -205, -206, -207)	☐	☒	
Containment Leakage Rate Testing (Appendix J) Program (10 CFR 50 Appendix J / EN-DC-334)	☐	☒	
FLEX Program (NRC Order EA-12-049/NRC Order EA-12-051/FLEX Program) (10 CFR 50.59 / EN-OP-201)	☐	☒	

IF any box is checked "Yes," THEN contact the appropriate department to ensure that the proposed change is acceptable and document the results in the REVIEW RESULTS column.

ATTACHMENT 9.1 PROCESS APPLICABILITY DETERMINATION FORM
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IV. LICENSING BASIS DOCUMENT REVIEW

Does the proposed activity affect, invalidate, or render incorrect, OR have the potential to affect, invalidate, or render incorrect, information contained in any of the following Licensing Basis Document(s)? Contact LBD Owner if needed. Associated regulations and procedures are identified with each Licensing Basis Document below.

LICENSING BASIS DOCUMENTS (Regulations / Procedures)	YES	NO	REVIEW RESULTS OR SECTIONS AFFECTED OR LBDCR #
Quality Assurance Program Manual (QAPM) [10 CFR 50.54(a), 10 CFR 50 Appendix B / EN-QV-104]	☐	☒	
Fire Protection Program (FPP) [Includes the Fire Safety Analysis/Fire Hazards Analysis (FSA/FHA)] OL Condition, 10 CFR 50 48 / EN-DC-128)	☐	☒	
Emergency Plan (Includes the On-Shift Staffing Analysis) [10 CFR 50.54(q) / 10 CFR 50.47 / EN-EP-305/ EN-NS-220]	☒	☐	Emergency Plan: 10CFR 50.54q Screen and Evaluation
Environmental Protection Plan (Appendix B of the OL, Environmental Evaluation / EN-EV-115, EN-EV-117, EN-LI-103)	☐	☒	
Security Plan [10 CFR 50.54(p) / EN-NS-210/ EN-NS-220 or contact site Security Dept.]	☒	☐	Contacted the Security Dept. and spoke with the Security Manager
Cyber Security Plan [10 CFR 50.54 (p) /10 CFR 73.54 / EN-IT-103 or EN-IT-103-01]	☐	☒	
Operating License (OL) / Technical Specifications (TS) (10 CFR 50.90 / EN-LI-103)	☐*	☒	
TS Bases (10 CFR 50.59 / EN-LI-100 / EN-LI-101)	☐	☒	
Technical Requirements Manual (TRM) (Including TRM Bases) (10 CFR 50 59 / EN-LI-100 / EN-LI-101)	☐	☒	
Core Operating Limits Report (COLR), and Pressure and Temperature Limits Report (PTLR) (TS Administrative Controls, EN-LI-113, EN-LI-100, EN-LI-101)	☐	☒	
Offsite Dose Calculation Manual (ODCM) (TS Administrative Controls / EN-LI-113, EN-LI-100)	☐	☒	
Updated Final Safety Analysis Report (UFSAR) (10 CFR 50.71(e) / EN-LI-113, EN-LI-100, EN-LI-101)	☐	☒	
Storage Cask Certificate of Compliance (10 CFR 72.244 / EN-LI-113)	☐*	☒	
Cask FSAR (CFSAR) (Including the CTS Bases) (10 CFR 72.70 or 72 248 / EN-LI-113, EN-LI-100,EN-LI-112)	☐	☒	
10 CFR 72.212 Evaluation Report (212 Report) (10 CFR 72.48 / EN-LI-100, EN-LI-112)	☐	☒	
NRC Orders (10 CFR 50.90 / EN-LI-103 or as directed by the Order)	☐*	☒	
NRC Commitments and Obligations (EN-LI-110)	☐*	☒	
Site-Specific CFR Exemption (10 CFR 50.12, 10 CFR 55.11, 10 CFR 55.13, 10 CFR 72.7)	☐*	☒	

*Contact the site Regulatory Assurance Department if needed.

IF any box is checked "Yes," THEN ensure that any required regulatory reviews are performed in accordance with the referenced procedures. Prepare an LBDCR per procedure EN-LI-113, as required, if a LBD is to be changed, and document any affected sections or the LBDCR #. Briefly discuss how the LBD is affected in Section VII.A.

ATTACHMENT 9.1 PROCESS APPLICABILITY DETERMINATION FORM

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V. 10 CFR 50.59 / 10 CFR 72.48 APPLICABILITY

Can the proposed activity be dispositioned by one or more of the following criteria? Check the appropriate box (if any).

☐	An approved, valid 50.59/72.48 Evaluation covering associated aspects of the proposed activity already exists. Reference 50.59/72.48 Evaluation # _____ (if applicable) or attach documentation. Verify the previous 50.59/72.48 Evaluation remains valid.
☐	The NRC has approved the proposed activity or portions thereof in a license amendment or a safety evaluation, or is being reviewed by the NRC in a submittal that addresses the proposed activity. Implementation of change requires NRC approval. Reference the approval document or the amendment in review.: _____
☐	The proposed activity is administratively controlled by the Operating License (OL) or Technical Specifications (TS). Examples of programs and manuals controlled by the OL or TS are: • Fire Protection Program (OL Condition) (EN-DC-128) • Offsite Dose Calculation Manual (TS Administrative Controls) • Surveillance Frequency Control Program (TS Administrative Controls) (EN-DC-355) See NEI 96-07, Appendix E Section 2 for additional guidance on administrative controls. Reference the administrative control(s):_____
☒	The proposed activity is controlled by one or more applicable regulations. Examples of programs controlled by regulations that establish specific criteria are: • Maintenance Rule (50.65) (EN-DC-203) • Quality Assurance Program (10 CFR 50 Appendix B) • Security Plan [50.54(p)] (EN-NS-210) • Cyber Security Plan [73.54] (EN-IT-103) • Emergency Plan [50.54(q)] (EN-EP-305) • Inservice Inspection Program (50.55a) (EN-DC-351, -352) • Inservice Testing Program (50.55a) (EN-DC-332) See NEI 96-07 Section 4.1 for additional guidance on specific regulations. Reference the controlling specific regulation(s): 10 CFR 50.54(q)

IF the entire proposed activity can be dispositioned by one of the criteria in Section V, THEN 50.59 and 72.48 Screenings are not required. Proceed to Section VII and provide basis for conclusion in Section VII.A.

Otherwise, continue to Section VI to perform a 50.59 and/or 72.48 Screening, or perform a 50.59 and/or 72.48 Evaluation in accordance with EN-LI-101 and/or EN-LI-112.

Changes to the IPEC Unit 1 Decommissioning Plan are to be evaluated in accordance with the 50.59 process, as allowed by the NRC in a letter to IPEC dated January 31, 1996. [Merlin Document ID: RA-96-014]

VI. 50.59 / 72.48 SCREENING REVIEW (All proposed activities must be evaluated to determine if 50.59, 72.48 or both apply. Check the applicable boxes)

VI.A 50.59 SCREENING

☐	50.59 applies to the proposed activity, and all of the following 10 CFR 50.59 screening criteria are met; therefore, the proposed activity requires no further 50.59 review. The proposed activity: • Does not adversely affect the design function of an SSC as described in the UFSAR; AND • Does not adversely affect a method of performing or controlling a design function of an SSC as described in the UFSAR; AND • Does not adversely affect a method of evaluation that demonstrates intended design function(s) of an SSC will be accomplished as described in the UFSAR; AND • Does not involve a test or experiment not described in the UFSAR. Document the basis for meeting the screening criteria in Section VI.C, then proceed to Section VII. [10 CFR 50.59(c)(1)]
☐	The proposed activity does not meet the above criteria. Perform a 50.59 Evaluation in accordance with EN-LI-101. Attach a copy of the Evaluation to this form and proceed to Section VII.

VI.B 72.48 SCREENING

☐	72.48 applies to the proposed activity, and all of the following 10 CFR 72.48 screening criteria are met; therefore, the proposed activity requires no further 72.48 review. The proposed activity: • Does not adversely affect the design function of an SSC as described in the CFSAR; AND • Does not adversely affect a method of performing or controlling a design function of an SSC as described in the CFSAR; AND • Does not adversely affect a method of evaluation that demonstrates intended design function(s) of an SSC will be accomplished as described in the CFSAR; AND • Does not involve a test or experiment not described in the CFSAR. Document the basis for meeting the screening criteria in Section VI.C, then proceed to Section VII. [10 CFR 72.48(c)(1)]
☐	The proposed activity does not meet the above criteria. Perform a 72.48 Evaluation in accordance with EN-LI-112. Attach a copy of the Evaluation to this form and proceed to Section VII.

ATTACHMENT 9.1 PROCESS APPLICABILITY DETERMINATION FORM

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VI.C BASIS

Provide a clear, concise basis for determining the proposed activity may be screened out such that a third-party reviewer can reach the same conclusions. Identify the relevant design function, as appropriate. Refer to NEI 96-07 Section 4.2 for guidance. Refer to NEI 12-06 Section 11.4 for guidance regarding FLEX. Provide supporting documentation or references as appropriate.

N/A

VII. REGULATORY REVIEW SUMMARY

VII.A GENERAL REVIEW COMMENTS **(Provide pertinent review details and basis for conclusions if not addressed elsewhere in form.)**

The Indian Point Energy Center Emergency Plan (Plan), Revision 19-02 describes the emergency preparedness program for the Indian Point Energy Center 1, 2, and 3 Generating Stations. The Plan outlines the basis for response actions that would be implemented in an emergency. This revision incorporates changes throughout the document. Specific details regarding each change are included in the 10 CFR 50.54(q) Screen, Evaluation and associated Revision Matrix. The 10 CFR 50.54(q) Evaluation conclusion determined that the proposed changes to the IPEC Emergency Plan continues to meet the planning standards outlined in 10 CFR 50.47 (b). This revision does not represent a reduction in effectiveness to the IPEC Emergency Plan and can be incorporated without prior NRC approval. See completed 10 CFR 50.54(q) Screen and Evaluation.

VII.B CONCLUSIONS

1.	**Is a change to an LBD being initiated?**	☒	**Yes**
	IF "Yes," THEN enter the appropriate change control process and include this form with the change package.	☐	**No**
2.	**Is a 10 CFR 50.59 Evaluation required?**	☐	**Yes**
	IF "Yes," THEN complete a 50.59 Evaluation in accordance with EN-LI-101 and attach a copy to the change activity.	☒	**No**
3.	**Is a 10 CFR 72.48 Evaluation required?**	☐	**Yes**
	IF "Yes," THEN complete a 72.48 Evaluation in accordance with EN-LI-112 and attach a copy to the change activity.	☒	**No**

ATTACHMENT 9.1 PROCESS APPLICABILITY DETERMINATION FORM

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VIII. SIGNATURES [1]

Preparer: A.Iraola/ /Entergy/Emergency Planning/ 8/5/19
Name (print) / Signature / Company / Department / Date

Reviewer: C.Delamater/ /Entergy/Emergency Planning/ 8/5/19
Name (print) / Signature / Company / Department / Date

Process Applicability Exclusion

Site Procedure Champion or Owner: _____
Name (print) / Signature / Company / Department / Date

Upon completion, forward this PAD form to the appropriate organization for record storage. If the PAD form is part of a process that requires transmittal of documentation, including PAD forms, for record storage, then the PAD form need not be forwarded separately.

[1] The printed name, company, department, and date must be included on the form. Signatures may be obtained via electronic processes (e.g., PCRS, ER processes, Asset Suite signature), manual methods (e.g., ink signature), e-mail, or telecommunication. If using an e-mail, attach it to this form.

Procedure/Document Number: IPEC-EP	Revision: 19-02
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Emergency Plan	

Part I. Description of Proposed Change:

The changes being made to the IPEC Emergency Plan are described in the attached revision matrix.

Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

The IPEC Emergency Plan has been reviewed through the Process Applicability Determination (PAD) in accordance with the criteria described in NEI 96-07 and EN-LI-100. This proposed change does not (1) change the facility or procedures as described in the UFSAR or (2) create a test or equipment not described in the UFSAR and is governed under the Emergency Plan 10 CFR 50.54(q) screening process in accordance with EN-EP-305. These proposed changes do not involve structures, systems or components controlled by 10 CFR 50.59 or 72.48 and do not have the potential to impact any of the License Basis Documents (LBDs) on the PAD form, except for the Emergency Plan. All responses to the questions contained in sections III and IV of the PAD form were determined to be "no impact". Since these proposed changes do not contain any requirements that could affect any LBDs other than the Emergency Plan, it is determined to be fully governed under 10 CFR 50.54(q). In addition to those reviewed for the PAD, each of the following documents/relevant sections was reviewed:

a) Reviewed current Plan, all sections Part 1 and Part 2. No additional relevant or affected Plan content was identified.

b) Reviewed the IPEC On-Shift Staffing Analysis (Phase 1) dated 2/7/2019.

c) The original Plans, U2 1970 and U3 1973, were not available for review.

d) Historical 10CFR50.54 (q) documents were reviewed dating back to 2002 for significant changes. No impact identified based on proposed changes.

Procedure/Document Number: IPEC-EP	Revision: 19-02
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Emergency Plan	

Part III. Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC:

10 CFR 50.47(b)(2)—Onsite Emergency Organization

- The process ensures that on–shift emergency response responsibilities are staffed and assigned.

Site Compliance: This change associated with revision 19-02 of the Emergency Plan allows for the clarification on Figure B-1.1: Indian Point Energy Center Station Watch Organization per Unit to depict the Shift Security Supervisor as one individual assigned for the station and not one per unit. This change is consistent with the Indian Point's site Security Contingency Plan and the Indian Point On-Shift Staffing Analysis. The Indian Point Security Department was contacted and confirmed the assignment of the Shift Security Supervisor to be for the station and not one per unit. Overall plant security and site access control are the responsibility of the Shift Security Supervisor and the Security Force.

Previous NRC Commitments – The Regulatory Assurance Commitment Management System and NRC commitment system were reviewed for potential NRC commitment changes as a result of this revision. There were no identified conflicts with this Emergency Plan revision 19-02 and the current listing of NRC commitments associated with the Emergency Plan. All current NRC commitments that relate to Emergency Plan continue to be maintained and fulfilled under this procedure revision.

Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change:

10 CFR 50.47(b) (2)—Onsite Emergency Organization

Functions:

- The process ensures that on–shift emergency response responsibilities are staffed and assigned.

Program Elements: Sections IV.A.2.a–c, IV.A.3, and IV.C of Appendix E to 10 CFR Part 50 provide supporting requirements. Informing criteria appear in Section II.B of NUREG-0654 and in the IPEC Emergency Plan.

ATTACHMENT 9.3 — 10 CFR 50.54(Q)(3) EVALUATION

Procedure/Document Number: IPEC-EP	Revision: 19-02
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Emergency Plan	

Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

Change 3: The current version of the IPEC Emergency Plan, Figure B-1.1 Indian Point Energy Center Station Watch Organization per Unit organization chart depicts the Shift Security Supervisor (SSS) to imply that there is a SSS per unit. However, there is only one SSS for both units which is in accordance with the Security Contingency Plan and the Indian Point On-Shift Staffing Analysis. This change clarifies what has existed and continues to exist for both units An additional note at the bottom of the Figure B-1.1 is made to further clarify the role of the SSS.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A 3, and IV.C and can be incorporated without prior NRC approval because the change does not alter the number of individuals required to be on the watch at any one point. This change only clarifies what has already existed with the SSS. It does not change any of the current responsibilities to individuals on the watch.

Conclusion Regarding Impact:

The proposed changes to the IPEC EPLAN Rev 19-02, continue to meet the planning standards outlined in 10 CFR 50.47(b) (2). This revision does not represent a reduction in effectiveness to the IPEC Emergency Plan and can be incorporated without prior NRC approval.

ATTACHMENT 9.3 — 10 CFR 50.54(q)(3) EVALUATION

Procedure/Document Number: IPEC-EP	**Revision: 19-01**
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Emergency Plan	

Part VI. Evaluation Conclusion

Answer the following questions about the proposed change.

1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	☒YES ☐ NO
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	☒YES ☐ NO
3. Does the proposed change constitute an emergency action level scheme change?	☐YES ☒ NO

If questions 1 or 2 are answered NO, or question 3 answered YES, reject the proposed change, modify the proposed change and perform a new evaluation or obtain prior NRC approval under provisions of 10 CFR 50.90. If questions 1 and 2 are answered YES, and question 3 answered NO, implement applicable change process(es). Refer to step 5.8[8].

Part VII. Signatures

Preparer Name (Print) Antonio Iraola Emergency Planner, Sr.	Preparer Signature	Date: 8/5/19
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Timothy Garvey Nuclear EP Project Manager	Reviewer Signature	Date: 8/5/19
Approver Name (Print) Frank Mitchell Manager, Emergency Preparedness or designee	Approver Signature Rebecca O Martin for FM	Date: 8/7/19

Procedure/Document Number: IPEC-EP	Revision: 19-02

Equipment/Facility/Other: Indian Point Energy Center (IPEC)

Title: Indian Point Energy Center Emergency Plan

Part I. Description of Activity Being Reviewed (This is generally changes to the emergency plan, EALs, EAL bases, etc. – refer to step 3.0[6]):

The activity being reviewed is a revision to IPEC-EP-19-01 "Emergency Plan", to incorporate changes identified in the attached Revision Matrix.

Part II. Activity Previously Reviewed?

Is this activity fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

Justification:

☐ Bounding document attached (optional)

☐ YES	☒ NO
50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.	Continue to next part

Part III. Applicability of Other Regulatory Change Control Processes

Check if any other regulatory change processes control the proposed activity.(Refer to EN-LI-100)

APPLICABILITY CONCLUSION

☒ If there are no other controlling change processes, continue the 50.54(q)(3) Screening.

☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.

☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.

CONTROLLING CHANGE PROCESSES:

10 CFR 50.54(q)

Part IV. Editorial Change

Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?

Justification:

Change 1, 2, 4, 5, 10, 11, 12, and 13 in the attached revision matrix are editorial, but "NO" is checked because the procedure revision contains non-editorial changes per the attached revision matrix.

☐ YES	☒ NO
50.54(q)(3) Evaluation is NOT required. Enter justification and continue to next part or complete Part VI as applicable.	Continue to next part

Procedure/Document Number: IPEC-EP	Revision: 19-02	
Equipment/Facility/Other: Indian Point Energy Center (IPEC)		
Title: Indian Point Energy Center Emergency Plan		
Part V. Emergency Planning Element/Function Screen (Associated 10 CFR 50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?		
1. Responsibility for emergency response is assigned. [1]		☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]		☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]		☒
4. The process for timely augmentation of onshift staff is established and maintained. [2]		☐
5. Arrangements for requesting and using off site assistance have been made. [3]		☐
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]		☐
7. A standard scheme of emergency classification and action levels is in use. [4]		☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]		☐
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]		☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]		☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]		☐
12. Systems are established for prompt communication to emergency response personnel. [6]		☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]		☐
14. Coordinated dissemination of public information during emergencies is established. [7]		☐
15. Adequate facilities are maintained to support emergency response. [8]		☐
16. Adequate equipment is maintained to support emergency response. [8]		☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]		☐
18. A range of public PARs is available for implementation during emergencies. [10]		☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]		☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]		☐

ATTACHMENT 9.2 — 10 CFR 50.54(q)(3) SCREENING

Procedure/Document Number: IPEC-EP	Revision: 19-02	
Equipment/Facility/Other: Indian Point Energy Center (IPEC)		
Title: Indian Point Energy Center Emergency Plan		
21. The resources for controlling radiological exposures for emergency workers are established. [11]		☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]		☐
23. Plans for recovery and reentry are developed. [13]		☐
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]		☐
25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]		☐
26. Identified weaknesses are corrected. [14]		☐
27. Training is provided to emergency responders. [15]		☐
28. Responsibility for emergency plan development and review is established. [16]		☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]		☐

APPLICABILITY CONCLUSION

☐ If no Part V criteria are checked, a 50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

☒ If any Part V criteria are checked, complete Part VI and perform a 50.54(q)(3) Evaluation.

Procedure/Document Number: IPEC-EP	Revision: 19-02
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Emergency Plan	

BASIS FOR CONCLUSION:

Change 6: This change corrects and clarifies reference to the Offsite Dose Calculation Manual (ODCM) in section H.9.b.to reflect the fact that there is one ODCM for the site and to agree with section I of the EPLAN. This was identified under Work Task WT-WTIPC-2018-008, CA134. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

Change 7: This change clarifies that Entergy personnel have always sent these filters out to be analyzed and have not performed the actual analysis. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

Change 8: Corrected that shoe covers are not required for Offsite Monitoring Teams. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 9: Added the wording "ERO, or portions thereof", after Indian Point to be consistent with previous bulleted item, contained in section 2, for clarification. The meaning or intent of description in the emergency plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

Changes 7, 8, and 9 from the revision matrix made to the IPEC Emergency Plan have been reviewed to determine if they affect any of the planning standards or program elements in Part V of this form. It has been concluded that there is no effect on the planning elements and no further evaluation is required for these changes.

Emergency Planning Element 3, in Part V of this form, is affected by change 3 identified on the revision matrix. A 10 CFR 50.54(q) evaluation will be performed to determine if the effectiveness of the IPEC Emergency Plan is reduced and prior NRC approval is required.

ATTACHMENT 9.2 — 10 CFR 50.54(Q)(3) SCREENING

Procedure/Document Number: IPEC-EP	**Revision: 19-02**	
Equipment/Facility/Other: Indian Point Energy Center (IPEC)		
Title: Indian Point Energy Center Emergency Plan		
Part VI. Signatures:		
Preparer Name (Print) Antonio Iraola Sr. Emergency Planner	Preparer Signature	Date: 8/6/19
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Timothy Garvey Nuclear EP Project Manager	Reviewer Signature	Date: 8/6/19
Approver Name (Print) Frank Mitchell Manager, Emergency Planning or designee	Approver Signature Rebecca A Martin for FM	Date: 8/7/19

CHANGE MANAGEMENT NOTICE
IPEC EPLAN Rev. 19-02

WHO is affected?

IPEC Emergency Planning Department Personnel

WHAT is the change?

Please see the attached matrix for a summary of all the changes.

This revision is of "Low Risk/Complexity."

WHY is the change occurring?

These changes were made as part of the EPLAN review that is conducted on an annual basis.
The changes were found to enhance the EPLAN document by correcting the items described in the matrix.

WHEN is the change effective?

Sept. 19, 2019

CONTACTS:

Tony Iraola, Sr. Emergency Planner, x 7704

Frank Mitchell, EP Manager, x 5236

Attachment 1

Change Impact Checklist

This Checklist assists the change lead with identifying the specific impacts on people and processes. The checklist provides details of specific actions required to implement the change. The Change Owner /Lead completes the Change Impact Checklist to identify the needed forms identified in Section IV for the Impact Level of the change. Additionally, the Change Owner/Lead uses additional forms and references identified in section II to analyze the change This form is completed by following Section 7.3 in the procedure. See Section 7.8 for documentation requirements.

IF the change is a personnel change ONLY,
THEN use Attachment 4.

Section I - DEFINE the Change: REFERENCE Section 7.3 Step 1			
Title of Change:	**Emergency Plan Revision 19-02**		
Change Owner:	**F. Mitchell**	**Change Sponsor:**	**F. Mitchell**
Change Lead:	**A. Iraola**	**Project Manager:**	
What is the Change? (*PROVIDE a brief description of what will be different and change scope.)*			
Refer to the attached matrix for a summary of all the changes.			
Who and What groups/departments are impacted by the change? (***IDENTIFY** employees/groups, programs, processes, regulations, equipment, facilities, etc. affected by the change.)*			
Emergency Planning			
Why is the Change necessary? (*PROVIDE a reason for the change, the benefit gained or consequence avoided.)*			
These changes were made as part of the EPLAN review that is conducted on an annual basis. The changes were found to enhance the EPLAN document by correcting the items described on the matrix.			
When is the proposed or desired Date for Change? (***IDENTIFY** timeline or effective date for change.)*			
Sept. 19,. 2019			
Where is the Change being Implemented? (***CHECK** as applicable; **DOUBLE CLICK** box to select)*			
☐ **Fleet-Wide** ☐ **Echelon** ☐ **White Plains** ☐ **ANO** ☐ **GGNS** ☒ **IPEC** ☐ **PAL** ☐ **PIL** ☐ **RBS** ☐ **VY** ☐ **WF3** ☐ **Other** _____			
What SHOULD NOT be affected as a result of this change? (***IDENTIFY** any areas affected employees/groups might likely assume would be affected, but are not included.)*			

Attachment 1

Change Impact Checklist

Yes	No	Unsure	**Section II - Impact Evaluation: REFERENCE** Section 7.3 Step 2	Notes
☐	☒	☐	Impact Nuclear, Radiological, Industrial Safety or Equipment Reliability?	
☒	☐	☐	Impact Licensing: FSAR/Technical Specifications/QA Program/Commitments? *(i.e., ANSI, 50.59, 50.54, etc.)* ***PERFORM*** *evaluation in accordance with EN-LI-100*	
☒	☐	☐	Impact E-Plan, Security Plan, QA Manual? ***PERFORM*** *evaluation in accordance with EN-LI-100*	
☐	☒	☐	Impact to Procedures/Policies? *(e.g., non-editorial changes, change that affects multiple procedures, etc.)*	
☐	☒	☐	Impact scheduled Plant Work Activities or Operating Schedule?	
☐	☒	☐	Impact computer programs/applications software? *If Yes,* ***EVALUATE*** *need for an SQA- Reference EN-IT-104.*	
☐	☒	☐	Impact Accredited Training Job Task or Qualifications of Personnel? *If Yes, an action* ***must*** *be initiated* in accordance with *EN-TQ-201.* ***CONTACT*** *Training management for additional information.*	
☐	☒	☐	Impact ANSI 3.1 Qualification Requirements (**SEE** EN-HR-137) ***PERFORM*** *evaluation in accordance with EN-HR-137*	
☐	☒	☐	Impact organizational responsibility, e.g., require transfer of responsibility from one organization to another? *If Yes,* ***REFERENCE*** *EN-HR-134 during change planning. Note: transferring responsibilities between organizations may impact the QAPM. Evaluate in accordance with applicable Licensing (EN-LI) procedures.*	
☐	☒	☐	Impact resources or physical workload in other departments or organizations? *(e.g., work activities, process time, employee schedules?)*	
☐	☒	☐	Impact contractor resources which are working under Entergy procedures? (e.g., contractors working under Entergy procedures require additional notification beyond normal communication channels)	
☐	☒	☐	Impact of other Areas, Processes or Facilities to support the change? (Internal or External?)	
☐	☒	☐	Potential for new equipment or system not to function properly at implementation? **CONSIDER** use of *Contingency/Prevention Worksheet,* Attachment 6	
☐	☒	☐	Change requires specific skills, experience and subject matter experts for successful plan development and implementation? ***USE*** *Team Skill Matrix,* Attachment 5	
☐	☒	☐	Change involves a temporary or permanent employee change due to: Promotion, Transfer, New Hire, Resignation, Retirement, Staffing Restructuring or Termination Leave of Absence, Medical Leave or Temporary Work Assignment. ***USE*** *Personnel Change Checklist,* Attachment 4	

Attachment 1

Change Impact Checklist

Section III – IDENTIFY the Change Impact Level: (REFERENCE Section 7.3 Step 3)	Low	Medium	High	Major
REFER TO Section 7.3 Step 3 for guidance.	X			

Checked "Yes" to any of the above questions in Section II? ENSURE all "Yes" responses were factored into the impact level evaluation.

Checked "Unsure" to any of the above questions in Section II? REVIEW all notes and evaluate for follow-up actions.

INCLUDE any incomplete follow-up actions in the implementation plan.

SECTION IV – CHANGE MANAGEMENT PROCESS STEPS BY IMPACT TYPE (*FOLLOW THE PROCEDURE GUIDANCE IDENTIFIED BELOW FOR THE IMPACT LEVEL OF THE CHANGE*)

PROCESS	LOW	MEDIUM	HIGH	MAJOR
ASSIGN CHANGE ROLES (SECTION 7.3 STEP 5)	CHANGE OWNER, CHANGE LEAD	SPONSOR, CHANGE OWNER, CHANGE LEAD	SPONSOR, CHANGE OWNER, CHANGE LEAD, PROJECT MANAGER (OPT.)	SPONSOR, CHANGE OWNER, CHANGE LEAD, PROJECT MANAGER
ANALYZE THE CHANGE (SECTION 7.4)	DEVELOP COMMUNICATIONS	Attachment 2 Attachment 4 (OPT)	Attachment 2 (FLEET AND SITE LEVEL) Attachment 4 (OPT) RESOURCE-TO-WORKLOAD RATIO ANALYSIS (3.4[1](G))	
PLAN THE CHANGE (SECTION 7.5)		Attachment 3	Attachment 3 (FLEET AND SITE LEVEL) Attachment 6 Attachment 7 (PLAN ACTIONS FOR EFFECTIVENESS REVIEW)	
IMPLEMENT THE CHANGE (SECTION 7.6)	IMPLEMENT & COMMUNICATE CHANGE	Attachment 3 COMPLETED	Attachment 3 COMPLETED (FLEET AND SITE LEVEL)	
REVIEW THE CHANGE (SECTION 7.7)		Attachment 7 (OPT) Attachment 8 (OPT)	Attachment 7 Attachment 8	
DOCUMENT THE CHANGE (SECTION 7.8)	DEPT STORED	PCRS (OPT)	PCRS (Attachment 1, Attachment 2, Attachment 3, Attachment 6, Attachment 7)	

Concurrence of Phase 1 Review Completion for Major and High Impact Changes: (Section 7.3 Step 6)		
ROLE	**NAME**	**DATE**
CHANGE OWNER/LEAD		
SPONSOR		
GOVERNANCE OWNER		
SITE PROCESS OWNER		

(TYPICAL)

I. LBDCR INITIATION

Tony Iraola	Emergency Planning	7704	1,2,3	Sept. 19, 2019	EPLAN 19-02
INITIATOR'S NAME *(print or type)*	**DEPARTMENT**	**PHONE**	**UNIT**	**DATE**	**LBDCR #**

DESCRIPTION OF THE CHANGE (Attach additional pages if necessary; may also reference PAD Form)
Please see the attached matrix for a summary of all the changes.

	LICENSING DOCUMENT(S) AFFECTED	**AFFECTED SECTION/PAGE(S)** *(Attach marked-up pages)*
☐	**Operating License (OL)**	
☐	**Technical Specifications (TS)**	
☐	**Environmental Protection Plan (EPP)**	
☐	**Anti-Trust Conditions (Appendix of OL)**	
☐	**NRC Orders**	
☐	**Updated Final Safety Analysis Report (UFSAR)**	
☐	**TS Bases**	
☐	**Technical Requirements Manual (TRM) (including TRM Bases)**	
☐	**Quality Assurance Program Manual (QAPM)**	
☐	**Security Plan/Cyber Security Plan (CSP)**	
☒	**Emergency Plan (EP)**	**See attached matrix**
☐	**Offsite Dose Calculation Manual (ODCM)**	
☐	**Spent Fuel Storage Cask Final Safety Analysis Report (CFSAR)**	
☐	**Spent Fuel Storage Cask Certificate of Compliance (CoC)**	
☐	**Spent Fuel Storage Cask CoC Bases**	
☐	**10 CFR 72.212 Evaluation Report (212 Report)**	
☐	**Fire Protection Program (FPP)/Fire Hazards Analysis (FHA)**	
☐	**Core Operating Limits Report (COLR)**	
☐	**Other (Specify)** _____	

METHOD(S) ALLOWING THE CHANGE			
☒	**PAD Review** (Attach a copy)	☐	**10 CFR 50.48 / EN-DC-128 Review** (Attach a copy)
☐	**10 CFR 50.59 Evaluation** (Attach a copy)	☒	**10 CFR 50.54 Review** (Attach a copy)
☐	**10 CFR 72.48 Evaluation** (Attach a copy)	☐	**Environmental Evaluation** (Attach a copy)
☐	**Approved NRC Change** (Attach a copy of NRC Letter or reference NRC letter number)	☐	**Editorial Change** (LBDs controlled under 50.59 or 72.48, only)
☐	**NRC Approval is Required**	☐	**Other Approval** (Attach a copy of supporting documents)
☐	**"UFSAR-only" Change (NEI 98-03)** **Check the appropriate box below:** ☐ **Reformatting** ☐ **Replacing Detailed Drawing** ☐ **Referencing other Documents** **Check the appropriate box below and provide a basis for removing information, if applicable:** ☐ **Removing Excessive Detail** ☐ **Removing Obsolete Information** ☐ **Removing Redundant Information** ☐ **Removing Commitments** **Removal Basis:**		

II. LBDCR IMPLEMENTATION[1]

ACTIONS SUPPORTING IMPLEMENTATION			
LBD SECTION	**REQUIRED ACTIONS**		**ACTION TAKEN OR TRACKING METHOD**
	ACTION	**RESP. DEPT**	
See attached matrix	Issuance of the EPLAN scheduled for Sept. 19, 2019	EP	Entry into Ref. Library on Sept. 19, 2019

III. LBDCR REVIEW AND APPROVAL[1]

REVIEW AND APPROVAL of LBDCR *(see Attachment 9.2)*		
Department	**Approved[2]**	**Date**
UFSAR Section Owner[3]	N/A	
Peer Review	A. Iraola /	8/29/19
LBD Owner	F. Mitchell /	8/29/19

[1] Add additional table rows as needed.

[2] The printed name should be included on the form when using electronic means for signature. Signatures may be obtained via electronic processes (e.g., PCRS, ER processes, Asset Suite signature), manual methods (e.g., ink signature), e-mail, or telecommunication. If using an e-mail, attach it to this form.

[3] UFSAR Section Owners should refer to EN-LI-113-01, "Updated Final Safety Analysis Report Change Process," for review expectations. N/A if change does not update the UFSAR.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
1.	COVER PAGE	Rev 19-01	Rev 19-02	Yes	No- This is an editorial change to the Revision number and effective date. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
2.	**Part 1:** **Pages 3 -9 Including the page labelled Intentionally Left Blank**	Revision 19-01	19-02	Yes	No- This is an editorial change to correct the inconsistent revision numbering in the footers The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
3.	**Section B:** **Figure B-1.1** **Page B-12**	Shift Security Supervisor	Shift Security Supervisor ****** *Adding the ****** at the bottom of the page as follows:* ****** There is one SSS for both units in accordance with the Security Contingency Plan	No	Yes- This corrects the fact that there is only one Shift Security Supervisor in accordance with the Security Contingency Plan.
4.	**Section B:** **Table B-1** **Pages B-19 and B-20**	**On Shift**	**On Shift** **U 2** | **U 3** | **U 1**	Yes	No- Edit the column header on pages B-19 and B-20 to match the first page B-18 of Table B-1. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify If NO.
5.	**Section B:** **Page B-11** **Paragraph c.**	The Hudson Valley Hospital Center	The New York-Presbyterian/Hudson Valley Hospital	Yes	No- This change of name was evaluated under EPLAN revision 15-02 and matches existing and correct wording elsewhere in the EPLAN. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify If NO.
6.	**Section H.** **Page H-8** **Pa. 9.b**	The Indian Point Radiological Environmental Monitoring Program is described in each unit's Offsite Dose Calculation Manual (ODCM).	The Indian Point Radiological Environmental Monitoring Program is described in the Offsite Dose Calculation Manual (ODCM).	No	No- This change corrects and clarifies reference to the Offsite Dose Calculation Manual (ODCM) in section H.9.b.to reflect the fact that there is one ODCM for the site and to agree with section I of the EPLAN. This was identified under Work Task WT-WTIPC-2018-008, CA134. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change..

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
7.	**Section I, page I-6, Item 7, 4th paragraph, last sentence:**	The filters are periodically removed and analyzed by Entergy personnel.	The filters are periodically removed by Entergy personnel and sent to be analyzed.	No	No- This change clarifies that Entergy personnel have always sent these filters out to be analyzed and have not performed the actual analysis. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change..
8.	**Section I,page I-7, Item 8.d.:**	Equipment for personnel protection such as shoe covers and gloves for use in radiation environments.	Equipment for personnel protection such as gloves for use in radiation environments.	No	No- Corrected that shoe covers are not required for Offsite Monitoring Teams. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
9.	**Section M:** **Page M-3, section 2.** **Recovery Organization**	• For events involving major damage to systems required maintaining safe shutdown of the plant and offsite radioactive releases have occurred, (i.e. for SITE AREA EMERGENCY or GENERAL EMERGENCY classifications) the Indian Point and Corporate Emergency Center Manager is put in place.	• For events involving major damage to systems required maintaining safe shutdown of the plant and offsite radioactive releases have occurred, (i.e. for SITE AREA EMERGENCY or GENERAL EMERGENCY classifications) the Indian Point ERO, or portions thereof, and Corporate Emergency Center Manager is put in place.	No	No- Added the wording "ERO, or portions thereof", after Indian Point to be consistent with previous bulleted item, contained in section 2, for clarification. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
10.	**Page M-5, section 2.e**	A senior Indian Point Energy Center management individual or a member of the company's Public Information Group is designated as the Company Spokesperson.	A senior Indian Point Energy Center management individual or a member of the company's Corporate Communications Department is designated as the Company Spokesperson.	Yes	No - Revised Public Information Group to Corporate Communications Department as this is the correct title for this group at Entergy. Consistent with EN-EP-613, Recovery from a Declared Emergency. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
11.	**Section P:** **Page P-4** **Last paragraph**	An assessment (audit) of the emergency preparedness program is performed by the Indian Point Nuclear Oversight (NOS) organization. The assessment will be performed either at intervals not to exceed 12 months or as necessary, based on an assessment by NOS against the emergency preparedness performance indicators, and after changes in personnel, procedures, equipment, or facilities that could adversely affect emergency preparedness, but no longer than 12 months after the change.	An assessment (audit) of the emergency preparedness program is performed by the Indian Point Nuclear Independent Oversight (NIOS) organization. The assessment will be performed either at intervals not to exceed 12 months or as necessary, based on an assessment by NIOS against the emergency preparedness performance indicators, and after changes in personnel, procedures, equipment, or facilities that could adversely affect emergency preparedness, but no longer than 12 months after the change.	Yes	No- Corrected the name of the Nuclear Independent Oversight (NIOS) from the incorrect name Nuclear Oversight (NOS) that has been in the EPLAN. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
12.	**Appendix 3: Procedure Cross – Reference to Sections of the Plan** **NOTE:** **This addresses NIOS CR IP2-2019-02201**	IP-EP-250 EOF Activation and Response IP-EP-251 EN-EP-609 **(NOTE: This is shown in Rev 17-02)**	EN-EP-609 EOF Activation and Response **(NOTE: This is shown in Revs 18-01 and 19-01)**	Yes	No- During the EPLAN revision 18-01, the deletion of IP-EP-251 (AEOF) from the EOF Activation and Response subject category was not addressed during the revision from EPLAN 17-02 to 18-01. This deletion was/is made as this procedure IP-EP-251 is correctly shown under the Alternate EOF Activation and Response subject category and was incorrectly shown under the EOF Activation and Response subject category. This addresses NIOS CR IP2-2019-02201. The deletion of IP-EP-250 was correctly addressed during the 18-01 update. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

IPEC Emergency Plan Revision 19-02 (Revision 24 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19-01)	New Version (19-02)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
13.	**Figure B-1.2b Page B-14**	Note..... An organization chart graphic line is missing that connects the Emergency Plant Manager to the TSC Manager. In addition, an organization chart graphic line is missing that connects the Engineering Coordinator to the line connecting the TSC Manager.	Note.... These missing lines have been reinstalled.	Yes	No- EPLAN Revision 15-02 clearly shows the correct organization lines connecting these positions. It appears that the lines were inadvertently removed during subsequent EPLAN revisions by mistake. The Engineering Coordinator connecting line was removed during EPLAN Revision 16-01 and the TSC Manager connecting line was removed during the EPLAN revision 17-01. The EPLAN Revision 15-02 remains valid and correct. This change is being made to correct these editorial errors. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

ATTACHMENT 10.2 IPEC PROCEDURE REVIEW AND APPROVAL

(Page 1 of 1)

Procedure Title: IPEC Emergency Plan

Procedure No: IPEC-EP Existing Rev: 19-01 New Rev: 19-02 DRN/EC No: DRN-19-00788

Procedure Activity (MARK Applicable)	☐ Converted To IPEC, Replaces:	Temporary Procedure Change (MARK Applicable)
☐ NEW PROCEDURE ☐ GENERAL REVISION ☒ PARTIAL REVISION ☐ EDITORIAL REVISION ☐ VOID PROCEDURE ☐ SUPERSEDED	Unit 1 Procedure No: _____ Unit 2 Procedure No: _____ Unit 3 Procedure No: _____	☐ EDITORIAL Temporary Procedure Change ☐ ADVANCE Temporary Procedure Change ☐ CONDITIONAL Temporary Procedure Change Terminating Condition: _____
☐ RAPID REVISION	Document in Microsoft Word: ☐ Yes ☐ No	☐ VOID DRN/TPC No(s): _____

Revision Summary ☒ N/A - See Revision Summary Matrix.

Implementation Requirements

Implementation Plan? ☐ Yes ☒ No Formal Training? ☐ Yes ☒ No Special Handling? ☐ Yes ☒ No

RPO Dept: Emergency Planning Writer **(Print Name/ Ext/ Sign)**: A. Iraola / x7704 8/28/19

Review and Approval (Per Attachment 10.1, IPEC Review And Approval Requirements)

1. ☒ Technical Reviewer: Dara Gray / 8-28-19 **(Print Name/ Signature/ Date)**
2. ☐ Cross-Disciplinary Reviewers:
   Dept: _____ Reviewer: _____ **(Print Name/ Signature/ Date)**
   Dept: _____ Reviewer: _____ **(Print Name/ Signature/ Date)**
3. ☒ **RPO- Responsibilities/Checklist**: F. Mitchell 8/29/19 **(Print Name/ Signature/ Date)**
   - ☒ PAD required and is complete (PAD Approver and Reviewer qualifications have been verified)
   - ☐ Previous exclusion from further LI-100 Review is still valid
   - ☐ PAD not required due to type of change as defined in 4.6
4. ☐ Non-Intent Determination Complete: _____ **(Print Name/ Signature/ Date)**

   NO change of purpose or scope
   NO reduction in the level of nuclear safety
   NO voiding or canceling of a procedure, unless requirements are incorporated into another procedure or the need for the procedure was eliminated via an alternate process.
   NO change to less restrictive acceptance criteria
   NO change to steps previously identified as commitment steps
   NO deviation from the Quality Assurance Program Manual
   NO change that may result in deviations from Technical Specifications, FSAR, plant design requirements or previously made commitments.
5. ☐ On-Shift Shift Manager/CRS: _____ **(Print Name/ Signature/ Date)**
6. ☐ User Validation: User: _____
7. ☐ **Special Handling Requirements Understood:** _____

Attachment 9.1

Emergency Planning Document Change Checklist Form

(All sections must be completed, N/A or place a check on the line where applicable)

Section 1

Doc/Procedure Type:	Administrative ☐ Implementing ☐ EPLAN ☒ N/A ☐
Doc/Procedure No:	IPEC-EP
Doc/Procedure Title:	IPEC Emergency Plan
New revision number:	19-02
Corrective Action:	Yes ☒ No ☐ N/A ☒ CR#: IP2-2019-2201
Effective date:	Sept. 19, 2019

Section 2

Change Description

1. Ensure the following are completed, or are not applicable and are so marked:
   a. 50.54q ☒ N/A ☐
   b. EN-FAP-OM-023 ☒ N/A ☐
   c. IP-SMM- AD-102 ☒ N/A ☐
   d. OSRC ☒ N/A ☐
   e. NRC Transmittal (within 30 days) ☒ N/A ☐
2. List any other documents affected by this change: N/A
3. Transmittals are completed: ☐ N/A ☐ Date: 9/4/2019
4. Ensure the proper revision is active in eB Ref. Lib.: ☐ N/A ☐
5. Approved doc/procedure delivered to Doc. Control for distribution: ☒ N/A ☐ Date: 9/4/2019
6. Position Binders updated: ☒ N/A ☐ Date: ____
7. Copy of EPDCC placed in EP file: ☐ N/A ☐ Date: 8/29/2019
8. Supporting documentation is submitted as a general record in eB Ref. Lib.: ☒ N/A ☐ Date: 9/4/2019
9. Word files are moved from working drafts folder to current revision folder in the EP drive. ☐ N/A ☒ Date: 9/4/2019

Procedure/Document Number: IP-EP-AD-13	Revision:20
Equipment/Facility/Other: Indian Point Energy Center	
Title: IPEC Emergency Action Level Technical Bases	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that have the potential to affect the emergency plan or have the potential to affect the implementation of the emergency plan):

See attached revision matrix.

Part II. Emergency Plan Sections Reviewed (List all emergency plan sections that were reviewed for this activity by number and title. IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE OR EAL OR EAL BASIS CHANGE, ENTER THE SCREENING PROCESS. NO 10 CFR 50.54(q)(2) DOCUMENTATION IS REQUIRED.

Section A – Assignments of Responsibility
Section B - Station Emergency Response
Section C - Emergency Response and Support
Section D - Emergency Classification System
Section E - Notification Methods
Section F - Emergency Communication
Section I - Accident Assessment
Appendix 1
Appendix 3

Part III. Ability to Maintain the Emergency Plan (Answer the following questions related to impact on the ability to maintain the emergency plan):

1. Do any elements of the activity change information contained in the emergency plan (procedure section 3.0[6])?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

2. Do any elements of the activity change an emergency classification Initiating Condition, Emergency Action Level (EAL), associated EAL note or associated EAL basis information or their underlying calculations or assumptions?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

3. Do any elements of the activity change the process or capability for alerting and notifying the public as described in the FEMA-approved Alert and Notification System design report?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

4. Do any elements of the activity change the Evacuation Time Estimate results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

5. Do any elements of the activity change the Onshift Staffing Analysis results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

Procedure/Document Number: IP-EP-AD-13	Revision:20
Equipment/Facility/Other: Indian Point Energy Center	
Title: IPEC Emergency Action Level Technical Bases	

Part IV. Maintaining the Emergency Plan Conclusion The questions in Part II do not represent the sum total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in Part IV document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion that describes how the conditions as described in the emergency plan are maintained with this activity.
2. Check the box below when the 10 CFR 50.54(q)(2) review completes all actions for all elements of the activity – no 10 CFR 50.54(q)(3) screening or evaluation is required for any element. Otherwise, leave the checkbox blank.

☒ I have completed a review of this activity in accordance with 10 CFR 50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity under 10 CFR 50.54(q)(3).

A review of this activity in accordance with 10 CFR 50.54(q)(2) has been completed and determined that the effectiveness of the emergency plan is maintained. This revision on the Technical Bases procedure adds the definition of a release. The changes made to IP-EP-120 do not require a change to the Emergency Action Level scheme, On shift staffing study, or the IPEC Emergency Plan. No further actions are required to screen or evaluate this activity under 10 CFR 50.54(q)(3).

Part V. Signatures:

Preparer Name (Print) Craig Delamater	Preparer Signature	Date: 10/1/19
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Timothy F. Garvey Nuclear EP Project Manager	Reviewer Signature for T. Garvey	Date: 10/3/19
Reviewer Name (Print) Frank J. Mitchell Manager, Emergency Planning or designee	Reviewer Signature	Date: 10-3-19

IP-EP-AD-13, IPEC Emergency Action Level Technical Bases (Revision 20 in eB) Revision Matrix

Change No.	Page/Section	Previous Version (19)	New Version (20)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
1.	Cover Page	Rev 19	Rev 20	Yes	No- This is an editorial change to the Revision number and effective date. The meaning or intent of description in the emergency plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
2.	**Page 19**	There was no definition of a release.	A release of radioactive materials due to the classified event (per NYS Radiological Emergency Data Form, Part 1). In accordance with the Part 1 form, "Release" is classified as one of the four (4) following descriptions: A.NO Release B.Release BELOW Federal Limits C.Release ABOVE Federal Limits D.Unmonitored Release Requiring Evaluation	No	No- The definition of a release being added to the procedure does not effect any of the planning standards. The meaning or intent of description in the emergency plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

ATTACHMENT 10.2 IPEC PROCEDURE REVIEW AND APPROVAL

(Page 1 of 1)

Procedure Title: IPEC Emergency Action Level Technical Bases

Procedure No. IP-EP-AD-13 Existing Rev: 19 New Rev: 20 DRN/EC No: DRN-19-00968

Procedure Activity (MARK Applicable)	☐ Converted To IPEC, Replaces:	**Temporary Procedure Change (MARK Applicable)**
☐ NEW PROCEDURE ☐ GENERAL REVISION ☒ PARTIAL REVISION ☐ EDITORIAL REVISION ☐ VOID PROCEDURE ☐ SUPERSEDED	Unit 1 Procedure No. Unit 2 Procedure No: Unit 3 Procedure No:	☐ EDITORIAL Temporary Procedure Change ☐ ADVANCE Temporary Procedure Change ☐ CONDITIONAL Temporary Procedure Change Terminating Condition:
☐ RAPID REVISION	Document in Microsoft Word: ☐ Yes ☐ No	☐ VOID DRN/TPC No(s):

Revision Summary ☐ N/A – see Revision Summary Matrix.

Implementation Requirements

Implementation Plan? ☐ Yes ☒ No Formal Training? ☐ Yes ☒No Special Handling? ☐ Yes ☒No

RPO Dept: Emergency Planning Writer: **(Print Name/Ext/Sign):** Craig Delamater/2619/

Review and Approval (Per Attachment 10.1, IPEC Review And Approval Requirements)

1. ☒ Technical Reviewer: Michael York/ 10/2/19
   (Print Name/ Signature/ Date)
2. ☐ Cross-Disciplinary Reviewers:
   - Dept: _____ Reviewer: _____
     Print Name/ Signature/ Date)
   - Dept: _____ Reviewer: _____
     Print Name/ Signature/ Date)
3. ☒ RPO- Responsibilities/Checklist: Frank J Mitchell / 10-2-19
   (Print Name/ Signature/ Date)
   - ☐ PAD required and is complete (PAD Approver and Reviewer qualifications have been verified)
   - ☒ Previous exclusion from further LI-100 Review is still valid
   - ☐ PAD not required due to type of change as defined in 4.6
4. ☐ Non-Intent Determination Complete: _____
   (Print Name/ Signature/ Date)

   NO change of purpose or scope
   NO reduction in the level of nuclear safety
   NO voiding or canceling of a procedure, unless requirements are incorporated into another procedure or the need for the procedure was eliminated
   NO change to less restrictive acceptance criteria
   NO change to steps previously identified as commitment steps
   NO deviation from the Quality Assurance Program Manual
   NO change that may result in deviations from Technical Specifications, FSAR, plant design requirements,
5. ☐ On-Shift Shift Manager/CRS: _____
   (Print Name/ Signature/ Date)
6. ☐ User Validation: User: _____ _____
7. ☐ Special Handling Requirements Understood: _____
   (Print Name/ Signature/ Date)

Attachment 9.1

Emergency Planning Document Change Checklist Form

(All sections must be completed, N/A or place a check on the line where applicable)

Section 1

Doc/Procedure Type:	Administrative ☐ Implementing ☒ EPLAN ☐ N/A ☐
Doc/Procedure No:	IP-EP-AD-13
Doc/Procedure Title:	IPEC Emergency Action Level Technical Bases
New revision number:	20
Corrective Action:	Yes ☒ No ☐ N/A CR#IP2-2019-3544
Effective date:	10/8/19

Section 2

Change Description

1. Ensure the following are completed, or are not applicable and are so marked:
   a. 50.54q ☒ N/A ☐
   b. EN-FAP-OM-023 ☒ N/A ☐
   c. IP-SMM- AD-102 ☒ N/A ☐
   d. OSRC ☐ N/A ☒
   e. NRC Transmittal (within 30 days) ☐ N/A ☒
2. List any other documents affected by this change: _____
3. Transmittals are completed: ☐ N/A ☒ Date: 10/3/2019
4. Ensure the proper revision is active in eB Ref. Lib.: ☒ N/A ☐
5. Approved doc/procedure delivered to Doc. Control for distribution: ☐ N/A ☒ Date: 10/3/2019
6. Position Binders updated: ☐ N/A ☒ Date: 10/8/2019
7. Copy of EPDCC placed in EP file: ☐ N/A ☐ Date: _____
8. Supporting documentation is submitted as a general record in eB Ref. Lib.: ☐ N/A ☒ Date: 10/3/2019
9. Word files are moved from working drafts folder to current revision folder in the EP drive: ☐ N/A ☒ Date: 10/8/2019

10CFR50.54(Q)(2) Review

Procedure/Document Number: IP-EP-AD13	Revision: 21
Equipment/Facility/Other: Indian Point Energy Center	
Title: Emergency Action Level Technical Bases	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that have the potential to affect the emergency plan or have the potential to affect the implementation of the emergency plan):

Procedure was revised, to reflect the requirement in the Post Unit 2 Shutdown Eplan (PSEP), as submitted to the NRC per LAR, license #NL-19-001. See attached matrix for changes made. Procedure will be effective on June 1, 2020,

Part II. Emergency Plan Sections Reviewed (List all emergency plan sections that were reviewed for this activity by number and title. IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE, EAL CHANGE OR EAL BASIS CHANGE, ENTER THE SCREENING PROCESS. NO 10CFR50.54(q)(2) DOCUMENTATION IS REQUIRED.

Part 1 Introduction:

Section A: Purpose

Part 2 Planning Standards and Criteria:

Section A: Assignment of Responsibility

Section B: Station Emergency Response Organization

Section D: Emergency Classification System

Part III. Ability to Maintain the Emergency Plan (Answer the following questions related to impact on the ability to maintain the emergency plan):

1. Do any elements of the activity change information contained in the emergency plan (Section 3.0 Step 6)?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

2. Do any elements of the activity change an emergency classification Initiating Condition, Emergency Action Level (EAL), associated EAL note or associated EAL basis information or their underlying calculations or assumptions?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

3. Do any elements of the activity change the process or capability for alerting and notifying the public as described in the FEMA-approved Alert and Notification System design report?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

4 Do any elements of the activity change the Evacuation Time Estimate results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

5. Do any elements of the activity change the Onshift Staffing Analysis results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

10CFR50.54(Q)(2) Review

Procedure/Document Number: IP-EP-AD13	Revision: 21
Equipment/Facility/Other: Indian Point Energy Center	
Title: Emergency Action Level Technical Bases	

Part IV. Maintaining the Emergency Plan Conclusion The questions in Part III do not represent the sum total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in Part V document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion that describes how the conditions as described in the emergency plan are maintained with this activity.
2. Check the box below when the 10CFR50.54(q)(2) review completes all actions for all elements of the activity – no 10CFR50.54(q)(3) screening or evaluation is required for any element. Otherwise, leave the checkbox blank.

☒ I have completed a review of this activity in accordance with 10CFR50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity under 10CFR50.54(q)(3).

Per Post Shutdown Emergency Plan (PSEP), Unit 3 CCR will be the active/running plant and Unit 2 will be at shut down. Unit 3 CCR will be the lead plant for making initial declarations that affect both Units and also some EALs are no longer applicable to Unit 2 because thresholds cannot be met with the plan in a defueled condition. The changes made to this procedure (see attached matrix) reflects this requirement of the PSEP, as submitted to the NRC (license # NL-19-001) and some minor editorial adjustments. The NRC has approved the PSEP per RA-20-040.

A review of this activity in accordance with 10 CFR 50.54(q)(2) has been completed and determined that the effectiveness of the PSEP is maintained. This revision aligns the procedure with the protocols of the post Unit 2 shutdown. None of the changes affect the ability to perform classifications, notifications, or PARs, it does not affect activation or staffing of the ERO, and all planning standard requirements are maintained. The changes made do not require a change to the Emergency Action Level scheme, On-shift Staffing study or the PSEP.

No further actions are required to screen or evaluate this activity under 10 CFR 50.54(q)(3).

Part V. Signatures:

Preparer Name (Print) Rebecca A. Martin	Preparer Signature Rebecca A Martin	Date: 5/14/2020
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Timothy Garvey Nuclear EP Project Manager	Reviewer Signature Rebecca A Martin for T. Garvey Approved Per Telecom	Date: 5/14/2020
Approver Name (Print) Frank Mitchell Emergency Planning Manager or designee	Approver Signature F Mitchell	Date: 5/13/2020

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REVISION MATRIX

Change No.	Page/Section	Previous Version	New Version	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
1.	Page 4 Section 1.0	EP-IP-120	IP-EP-120	Y	N - Fixed document #
2.	Page 8 2nd Bullet	None	• For Unit 2, not all EALs are applicable post shut down. Validate applicable EALs via EAL Wall Chart.	N	N – Per Decommissioning EPlan, Unit 2 will have limited EALs. This Note was added to remind Unit 2 staff of expectations. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
3.	Page 13 Section 2.9	Indian Point Unit 2 has been designated the lead plant.	None	N	N – Unit 2 is no longer the lead plant post shutdown This change reflects that requirement In the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
4.	Page 16 Section 3.2	3.2.1 EP-IP-120 Emergency Classification	3.2.1 IP-EP-120 Emergency Classification	Y	N - Fixed document #.
5.	Page 32, 35	None	Post Unit 2 Shutdown: For Unit 2 only: R-49 UE thresholds are not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

6.	Page 39	None	Post Unit 2 Shutdown: For Unit 2 only: R-49 ALERT thresholds are not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
7.	Page 42	None	Post Unit 2 Shutdown: For Unit 2 only: R-49 ALERT thresholds are not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
8.	Page 59	None	Post Unit 2 Shutdown: For Unit 2 only: R-2/R-7, R-25/R-26 are not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
9.	Page 63	None	Post Unit 2 Shutdown: For Unit 2 only: R-2/R-7, R-25/R-26, R-42 are not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
10.	Page 72,	None	Post Unit 2 Shutdown: For Unit 2 only: CU1.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

11	Page 76	None	Post Unit 2 Shutdown: For Unit 2 only: CU2.1 is not applicable	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
12.	Page 79	None	Post Unit 2 Shutdown: For Unit 2 only: CU2.2 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
13.	Page 83	None	Post Unit 2 Shutdown: For Unit 2 only: CU2.3 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
14.	Page 87	None	Post Unit 2 Shutdown: For Unit 2 only: CA2.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
15.	Page 90	None	Post Unit 2 Shutdown: For Unit 2 only: CS2.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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REVISION MATRIX

16.	Page 93	None	Post Unit 2 Shutdown: For Unit 2 only: CS2.2 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
17.	Page 98	None	Post Unit 2 Shutdown: For Unit 2 only: CS2.3 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
18.	Page 105	None	Post Unit 2 Shutdown: For Unit 2 only: CG2.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
19.	Page 113	None	Post Unit 2 Shutdown: For Unit 2 only: CG2.2 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
20.	Page 118	None	Post Unit 2 Shutdown: For Unit 2 only: CU3.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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REVISION MATRIX

21.	Page 121	None	Post Unit 2 Shutdown: For Unit 2 only: CU3.2 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
22.	Page 126	None	Post Unit 2 Shutdown: For Unit 2 only: CA3.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
23.	Page 130	None	Post Unit 2 Shutdown: For Unit 2 only: CU5.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
24.	Page 132	None	Post Unit 2 Shutdown: For Unit 2 only: CU6.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
25.	Page 139	None	Post Unit 2 Shutdown: For Unit 2 only: HU1.3 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

IP-EP-AD13 Revision 21
REVISION MATRIX

26.	Page 151	None	Post Unit 2 Shutdown: For Unit 2 only: HA1.4 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
27.	Page 168	None	Post Unit 2 Shutdown: For Unit 2 only. HA3.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
28.	Page 179	None	Post Unit 2 Shutdown: For Unit 2 only: HA5.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
29.	Page 181	None	Post Unit 2 Shutdown: For Unit 2 only: HS5.1 is not applicable.	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
30.	Page 190 & Page 239	None	NOTE: Post Unit 2 Shutdown, Hot Conditions are not applicable to Unit 2	N	N - Per Decommissioning EPlan, Unit 2 will have limited EALs. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

ATTACHMENT 10.2 IPEC PROCEDURE REVIEW AND APPROVAL

(Page 1 of 1)

Procedure Title: Emergency Action Level Technical Bases

Procedure No: IP-EP-AD13 Existing Rev: 20 New Rev: 21 DRN/EC No: DRN-20-00311

Procedure Activity (MARK Applicable)	☐ Converted To IPEC, Replaces:	**Temporary Procedure Change (MARK Applicable)**
☐ NEW PROCEDURE ☐ GENERAL REVISION ☒ PARTIAL REVISION ☐ EDITORIAL REVISION ☐ VOID PROCEDURE ☐ SUPERSEDED	Unit 1 Procedure No: Unit 2 Procedure No: Unit 3 Procedure No:	☐ EDITORIAL Temporary Procedure Change ☐ ADVANCE Temporary Procedure Change ☐ CONDITIONAL Temporary Procedure Change Terminating Condition:
☐ RAPID REVISION	Document In Microsoft Word: ☐ Yes ☐ No	☐ VOID DRN/TPC No(s):

Revision Summary ☐ N/A - See Revision Summary Matrix

Implementation Requirements

Implementation Plan? ☐ Yes ☒ No Formal Training? ☒ Yes ☐ No Special Handling? ☐ Yes ☒ No

RPO Dept: Emergency Planning Writer **(Print Name/ Ext/ Sign)**: Rebecca A. Martin/x7106/ Rebecca A Martin

Review and Approval (Per Attachment 10.1, IPEC Review And Approval Requirements)

1. ☒ Technical Reviewer: Kevin Robinson / 5-14-2020
   (Print Name/ Signature/ Date)
2. ☐ Cross-Disciplinary Reviewers:
   Dept: _____ Reviewer: _____
   (Print Name/ Signature/ Date)
   Dept: _____ Reviewer: _____
   (Print Name/ Signature/ Date)
3. ☒ **RPO- Responsibilities/Checklist**: F. Mitchell 5/15/2020
   (Print Name/ Signature/ Date)
   - ☒ PAD required and is complete (PAD Approver and Reviewer qualifications have been verified)
   - ☐ Previous exclusion from further LI-100 Review is still valid
   - ☐ PAD not required due to type of change as defined in 4.6
4. ☐ Non-Intent Determination Complete: _____
   (Print Name/ Signature/ Date)

   NO change of purpose or scope
   NO reduction in the level of nuclear safety
   NO voiding or canceling of a procedure, unless requirements are incorporated into another procedure or the need for the procedure was eliminated via an alternate process.
   NO change to less restrictive acceptance criteria
   NO change to steps previously identified as commitment steps
   NO deviation from the Quality Assurance Program Manual
   NO change that may result in deviations from Technical Specifications, FSAR, plant design requirements or previously made commitments.
5. ☐ On-Shift Shift Manager/CRS: _____
   (Print Name/ Signature/ Date)
6. ☐ User Validation: User: _____
7. ☐ Special Handling Requirements Understood: _____

Attachment 9.1

Emergency Planning Document Change Checklist Form

(All sections must be completed, N/A or place a check on the line where applicable)

Section 1

Doc/Procedure Type:	Administrative ☒ Implementing ☐ EPLAN ☐ N/A ☐
Doc/Procedure No:	IP-EP-AD13
Doc/Procedure Title:	Emergency Action Level Technical Bases
New revision number:	21
Corrective Action:	Yes ☒ No ☐ N/A ☐ CR#: OL-OLI-2018-00090 CA 18
Effective date:	June 1, 2020

Section 2

Change Description

1 Ensure the following are completed, or are not applicable and are so marked:

a. 50.54q ☒ N/A ☐
b. EN-FAP-OM-023 ☒ N/A ☐
c. IP-SMM- AD-102 ☒ N/A ☐
d. OSRC ☒ N/A ☐
e. NRC Transmittal (within 30 days) ☐ N/A ☒

2. List any other documents affected by this change: N/A
3. Transmittals are completed: ☐ N/A ☐ Date: 5/19/2020
4. Ensure the proper revision is active in eB Ref. Lib.. ☒ N/A ☐
5. Approved doc/procedure delivered to Doc. Control for distribution: ☐ N/A ☒ Date: 5/20/2020
6. Position Binders updated: ☐ N/A ☒ Date: 6/1/2020
7. Copy of EPDCC placed in EP file: ☐ N/A ☒ Date: _____
8. Supporting documentation is submitted as a general record in eB Ref. Lib.: ☐ N/A ☒ Date: 5/20/2020
9. Word files are moved from working drafts folder to current revision folder in the EP drive: ☐ N/A ☒ Date: 6/1/2020

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INDIAN POINT ENERGY CENTER

ON-SHIFT STAFFING ANALYSIS (PHASE 1)

Rev 20-01

June 1, 2020

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I. INTRODUCTION

This revision (Revision 20-01) documents the fact that Unit 2 is permanently defueled. Revision 1 to the Indian Point Energy Center (IPEC) On-Shift Staffing Analysis Report added to the IPEC Emergency Plan on December 17, 2012, as updated via the December 2015 Revision to the Report submitted to the US NRC (Letter NL-15-154), Revision 1 incorporated the analysis of the responsibilities of the on-shift staff supporting IPEC Unit 1 and documented the evaluation of the Shift Manager's task of Emergency Response Organization (ERO) notification. Revision (Revision 19-01) documents the fact that both the Fire Brigade Leader and the Communicator can come from either unit and need not only come from Unit 3, as previously listed in the unit staffing numbers.

This revision continues to satisfy the requirement of 10 CFR 50 Appendix E Section IV.A.9 for Units 1, 2 and 3, which states that nuclear power licensees shall perform "*a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.*" The revision does reduce the necessary minimum staffing since Unit 2 is permanently defueled and no longer requires the additional staffing to ensure successful plant operation and safe shutdown.

A structured approach using the guidance found in NEI 10-05 was utilized to perform the analysis in Revision 20-01, which is incorporated in this document. As a result, the total minimum staffing requirements were reduced by nine Operations personnel. The analysis examined the capability of the revised minimum staff listed in Table B-1 of the IPEC Emergency Plan (E-Plan) to perform the actions for the key functional areas of events described in NSIR/DPR-ISG-01, *Interim Staff Guidance – Emergency Planning for Nuclear Power Plants*, until augmenting ERO staff arrives in accordance with the E-Plan.

II. ANALYSIS SUMMARY

The OSA team determined that an on-shift staff of seventeen (17) for IPEC units 1, 2 and 3 is required to respond to the accidents reviewed for emergency planning, with five additional positions required for FLEX totaling twenty-two (22) positions. It is noted, however, that Unit 1, is defueled and only those areas that either store or process radioactive materials (the Fuel Handling Building and waste storage/process areas in the Chemical Systems Building and the Integrated Liquid Radwaste Systems Building) are considered in evaluating the radiological hazards for the IPEC Emergency Plan. As detailed in the Unit 1 Safety Analysis Report and

Decommissioning Plan and the IP2 Defueled Safety Analysis Report, there are limited operating systems remaining in Unit 1. The limited operating systems combined with the reduced radioactive source term, would result in a limited potential impact to a radiological release resulting from an event at Unit 1. Additionally, there are no Emergency Action Levels specific to IPEC Unit 1 that would challenge the on-shift staffing above and beyond those considered in this analysis for Unit 3. For any event that may challenge Unit 1, Unit 2, and 3, staff are available to provide support as needed. As such, the IPEC on-shift staff actions in response to the accidents evaluated for this staffing analysis are bounded by the operating or recently defueled units (Unit 2 and 3) and a separate evaluation of the NEI 10-05 required accidents for Unit 1 is not included in the analysis.

Additionally, the single plant operator assigned to Unit 1 has minimal responsibilities specific to Unit 1. These responsibilities consist of conducting a limited scope building tour once per shift and the periodic monitoring of Liquid Waste Processing operation occurring approximately 2 to 3 times/week. These tasks are not time critical and do not impact the Unit 1 staff member's ability to perform assigned Emergency Plan functions and/or tasks. Additionally, the limited Unit 1 tasks are not time critical and can be accomplished by the augmented ERO if required.

The most limiting accident scenario reviewed for the operating unit (Unit 3) was a main control room fire and alternate shutdown. The on-shift staff consists of individuals necessary to support each of the emergency plan functional areas or tasks:

- Emergency Direction and Control
- Plant Operations and Safe Shutdown (SSD)
- Fire Fighting (FB)
- Accident Assessment
- Radiation Protection and Chemistry
- Notification/Communication
- Technical Support
- Access Control and Accountability

NEI 10-05 states it is acceptable for certain function to be assigned to personnel already assigned other functions/tasks. These include Repair and Corrective Action, Rescue Operations and First Aid.

The Fire Brigade Leader and Communicator positions are not unit-specific qualifications and as such, they can be supplied from either unit as the situation warrants. This revision to the Phase 1 Study provides the documented clarification of this ability to utilize staff from either unit and maintain minimum staffing, as noted in the table below.

A. Emergency Plan Minimum Staffing

Per 10 CFR 50.54 (q)(1)(iii), Emergency planning function means a capability or resource necessary to prepare for and respond to a radiological emergency, as set forth in the elements of section IV of Appendix E and, for nuclear power reactor licensees, the planning standards of § 50.47(b).

The following table indicates the result of the NEI 10-05 staffing analysis of on-shift personnel to perform the required emergency planning functions and the licensing basis requirement for each on-shift position. These positions are included in Table 1 of each accident.

Position U2	E-Plan Requirement	E-Plan Functional Area U2 staff	E-Plan Functional Area U3 staff	On-Shift Staffing Analysis Results U2	On-Shift Staffing Analysis Results U3
Shift Manager (SM)	E-Plan Table B-1	Emergency Direction and Control	SSD/Emergency Direction and Control	1	1
Control Room Supervisor (CRS)	E-Plan Table B-1		SSD	0	1
Shift Technical Advisor/FSS (STA)	E-Plan Table B-1	Technical Support	Technical Support	0	1
Reactor Operators (RO)	E-Plan Table B-1		1 SSD U3 1 SSD U3	0	2
Nuclear Plant Operator (NPO)	E-Plan Table B-1		SSD (3) FB (1)	0	4
Nuclear Plant Operator (U1)			N/A	1	[redacted]
SRO	E-Plan Table B-1	FBL for both units		[redacted]	1*
Nuclear Plant Operator	E-Plan Table B-1	Communicator / Notifications for both units		[redacted]	1**
Chemistry	E-Plan Table B-1	Chemistry	Chemistry	1	1
Radiation Protection (RP)	E-Plan Table B-1	Radiation Protection	Radiation Protection	1	1
Security	Security Contingency Plan / E-Plan Table B-1	Access Control and Accountability		Per Security Contingency Plan	
TOTAL				**4**	**13**

*The Fire Brigade Leader is shown under the Unit 3 staffing numbers but can come from either unit.

**The Communicator is shown under the Unit 3 staffing numbers but can come from either unit

B. Other Commitments to Shift Staffing

The following table indicates the minimum staffing requirements to support FLEX and Fire Brigade Strategies. This table represents the total on-shift staffing.

Position	Functional Area U2 staff	Functional Area U3 staff	On-Shift Staffing Analysis Results U2	On-Shift Staffing Analysis Results U3
Shift Manager (SM)	Emergency Direction and Control / Assessment of Operational Aspects	Emergency Direction and Control / Safe Shutdown / Assessment of Operational Aspects	1	1
Control Room Supervisor (CRS)	Plant Operations / Assessment of Operational Aspects	Plant Operations / Safe Shutdown / Assessment of Operational Aspects	1	1
Shift Technical Advisor/FSS (STA)	N/A	Plant System Engineering / Technical Support	0	1
Reactor Operators (RO)	Plant Operations / Assessment of Operational Aspects	Plant Operations / Safe Shutdown / Assessment of Operational Aspects	1	2
Nuclear Plant Operator (NPO)	Plant Operations / Fire Brigade	Plant Operations / Fire Brigade	3	4
Nuclear Plant Operator (U1)	Plant Operations	N/A	1	[redacted]
SRO	FBL for both units		[redacted]	1*
Nuclear Plant Operator	Communicator / Notifications for both units		[redacted]	1**
Chemistry	Chemistry / Offsite Dose Assessment	Chemistry / Offsite Dose Assessment	1	1
Radiation Protection (RP)	Radiological Assessment / In-plant Protective Actions	Radiological Assessment / In-plant Protective Actions	1	1
Security	Access Control and Accountability		Per Security Contingency Plan	
			9	**13**

*The Fire Brigade Leader is shown under the Unit 3 staffing numbers but can come from either unit.

**The Communicator is shown under the Unit 3 staffing numbers but can come from either unit

C. Staffing Exceptions and Time Motion Studies (TMS)

1. The primary responsibility for the two on-shift Chemistry Technicians is chemistry/radiochemistry sampling; however, no chemistry job tasks were noted as being required within the first 90 minutes of any of the analyzed events. The two Chemistry Technicians on-shift are qualified to work either unit. The task of dose assessment, currently assigned to the Shift Manager, will be reassigned to Chemistry as a result of this staffing analysis. One Chemistry Tech is assigned to perform the chemistry tasks and the second is assigned the responsibility for dose assessment. It is acceptable for one on-shift Chemistry Technician to perform dose assessment because no specific time critical chemistry tasks were identified requiring the use of both Chemistry Technicians. No further analysis or TMS is required.

2. The Shift Manager is assigned the responsibility to make some notifications such as the Duty Plant Manager, Operations Manager, and Resident Inspector. These notifications, by phone, are considered communications that are approximately one minute in length and are acceptable tasks for the Shift Manager. No further analysis or TMS is required.

3. Station staff is required to maintain continuous communications with the notification source during an aircraft threat in accordance with 10CFR50.54(hh) and Reg. Guide 1.214. There are no specific qualifications required to perform this task and the function is not required to be assigned in advance. The analysis of this event identified there are sufficient personnel on-shift to perform this task during the event. Specifically, reactor operators, nuclear plant operators, radiation protection technicians, or chemistry technicians were all available to fill this function. No further analysis or TMS is required.

4. The task of activating ERDS (Emergency Response Data System) is not required for this analysis because the system operates 24 hours/day. A specific task to initiate ERDS is therefore not required and was not analyzed.

5. The STA was previously assigned the task of notifying the off-shift ERO of the emergency. A TMS was conducted to determine if this task could be reassigned to the Shift Manager and to verify the Shift Manager could perform the concurrent tasks of maintaining emergency direction and control while notifying the ERO of the event using Everbridge. The TMS demonstrated the Shift Manager was able to maintain Emergency Direction and Control during the approximate two minutes it took to notify the ERO using Everbridge. This evaluation may be used to allow the Shift Manager to perform the task of ERO notification. Since the TMS (Appendix C) was performed IPEC has upgraded to Internet 10.0 and step 1.1.1.1 of the time study was streamlined so the SM now just types eron.entergy.com and hits enter. These enhancements would decrease the times associated with this process. Continuing to utilize the current TMA would be more conservative. The current TMA does not have to be redemonstrated.

D. Emergency Plan Tasks Not Analyzed

1. Repair and Corrective Action - Per the guidance of NUREG-0654, Table B-1, repair and corrective action tasks may be performed by dedicated shift personnel or qualified shift personnel assigned other functions/tasks. Repair and corrective action is defined as:

   - An action that can be performed promptly to restore a non-functional component to functional status (e.g., resetting a breaker), or to place a component in a desired configuration (e.g., open a valve), and which does not require work planning or implementation of lockout/tagout controls to complete.

   In accordance with NEI 10-05 section 2.5, the analysis included a review of repair and corrective action tasks. For the purpose of this analysis, the tasks were considered to fall into two broad categories:

   - Unplanned/unexpected actions that address equipment failures. These actions are contingent in nature and cannot be specified in advance.
   - Planned/expected actions performed in support of operating procedure implementation, including severe accident management guidelines.

   At IPEC, Nuclear Plant Operators are trained to perform the actions associated with this functional area. Repair and Corrective Action is an acceptable collateral duty per the guidance of NEI 10-05 and was not analyzed

2. Rescue Operations and First Aid: In accordance with NEI 10-05 section 2.6, the analysis also included a review of rescue operations and first aid response. Per the guidance of NUREG-0654, Table B-1, rescue operations and first aid may be performed by shift personnel assigned other functions. IPEC Fire brigade members are trained to perform rescue operations and are assigned the task should the need arise. Rescue operations were not required in any of the accident scenarios reviewed. Additionally, the Nuclear Plant Operators on shift are trained to Red Cross First Aid standards and meet the basic requirements to render first aid and CPR. Rescue operations and first aid response are acceptable collateral duties per the guidance of NEI 10-05 and were not analyzed.

III. ANALYSIS PROCESS

The original analysis was conducted by a joint team of Emergency Preparedness (EP) personnel and Operations, Operations Training, Radiation Protection, Chemistry, and Emergency Preparedness (EP) departments. The team members for this analysis are identified in Section XIII of this report.

The emergency response to each event was determined by conducting a tabletop of the event using the emergency plan and procedures and the applicable department procedures such as Operations emergency and abnormal operating procedures.

Each scenario was reviewed by the cross disciplinary team to determine what plant actions and emergency plan implementation actions were required based on plant procedures prior to staff augmentation. These actions were then compared to the minimum staffing for Emergency Plan implementation as described in the Emergency Plan Table B-1 and Figure B-1.1, ensuring that no actions were assigned to staff members that conflicted with either their dedicated emergency plan role or their dedicated operational role as appropriate. In cases where multiple tasks were assigned to an individual in their role, the team evaluated timing of the tasks to ensure that they could be performed by the individual in series within any specified time requirements.

The results of the analysis for each of the scenarios are included in Sections VII, VIII and IX, APPENDIX B – ON-SHIFT STAFFING ANALYSIS. Note that NSIR DPR-ISG-01 states that only DBA accidents "which would result in an emergency declaration" should be evaluated in the staffing assessment. Each of IPEC's DBAs were evaluated and classified according to IP3 FSAR Chapter 14 description or the IP2 DSAR Chapter 6 description. If the accident description alone did not result in a classification, the projected accident Exclusion Area Boundary (EAB) dose found in the FSAR or DSAR was utilized to determine if an EAL threshold would be exceeded within the first 60 minutes using the Abnormal Rad Level EAL thresholds. In cases where several projected dose rates were provided or release data was not detailed significantly to determine an EAL, the assessment used the radiological consequences associated with the realistic case in accordance with NEI 10-05.

IV. ACCIDENT SCENARIOS

A. Accident Selection

1. The OSA scenarios were chosen using the guidance of NEI 10-05 and NSIR/DPR-ISG-01, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants." The evaluation considered the station Design Basis Accidents (DBA) described in the FSAR or DSAR along with additional scenarios specified by the guidance documents. The scenarios considered for U2 and U3 were:
   - Design Basis Threat (DBT)
   - DBA Control Element Ejection Accident
   - DBA Steam Line Rupture
   - DBA Loss of Coolant Accident
   - DBA Steam Generator Tube Rupture
   - DBA Fuel Handling Accident
   - DBA Accidental Release of Waste - Liquid
   - DBA Accidental Release of Waste - Gases
   - DBA Aircraft Probable Threat
   - Control Room (CR) fire requiring CR evacuation and Alternate Shutdown (Appendix R Fire)
   - Station Blackout, (SBO)
   - LOCA/General Emergency with release and PAR
   - LOCA with entry into Severe Accident Management
   - Appendix R Fire (Fire that results in reactor trip)
   - DBA Fuel-Handling Accident in Fuel Storage Building

- DBA High Integrity Container Drop Event

B. Accident Scenarios included in the Analysis

1. Design Basis Threat (DBT) as described in NEI 10-05 (Unit 2 and Unit 3)

   - Land and/or waterborne Hostile Action directed against the Protected Area by a Hostile Force. This event assumes the threat is neutralized immediately when inside the protected area fence, no significant damage to equipment or systems that require corrective actions before the ERO is staffed, no radiological release, and no fire that requires firefighting response before the ERO is staffed. EAL is based on the event.

2. Steam Line Rupture as described in FSAR 14.2.5 (Unit 3)

   - A main steam line break with loss of offsite power. Release into the turbine building until Main steam stop valves isolate. EAL is based on the event.

3. Loss of Coolant Accident as described in FSAR 14.3 (Unit 3)

   - Break (Double Ended Guillotine Cold Leg (DEGCL) break) between the reactor coolant pump and the reactor vessel. Core degradation with release to the containment and to the environment at the containment design leakage rate. EAL is based on the event.

4. Steam Generator Tube Rupture as described in FSAR 14.2.4 (Unit 3)

   - Double ended rupture of a single U-tube that results in exceeding charging pump capacity. No fuel failure is postulated. The EAL is based on the event

5. Fuel Handling Accident as described in FSAR 14.2.1 (Unit 3)

   - The accident involves a dropped fuel bundle on top of the core. Initial EAL is based on the event.

6. Aircraft Probable Threat as described in 10 CFR 50.54 hh(1) (Unit 2 and Unit 3)

   - Notification is received from the NRC that a probable aircraft threat exists (<30 minutes). EAL is based on the event

7. CR Fire Requiring CR evacuation and Alternate Shutdown (Unit 3)

   - A fire occurs in the main control room requiring the evacuation and the procedure implemented to shutdown from the alternate shutdown panels. EAL is based on the event.

8. Station Blackout (Unit 3)

   - A loss of all offsite AC power occurs and the failure of the emergency diesel generators to start. EAL is based on the event.

9. General Emergency with release and PAR (Unit 3)

- Assumed SAE condition when dose projection indicates an upgrade to GE and a PAR based on release is needed.

10. Fuel-Handling Accident in FSB described in DSAR 6.2.1 (Unit 2)

- Damaged fuel assembly during movement under water in the spent fuel pool.

C. Accident Scenarios Not Included in the Analysis

1. Control Rod Ejection (CRE) as described in FSAR 14.2.1

- Mechanical failure of a control rod mechanism pressure housing resulting in the ejection of a rod cluster control assembly and drive shaft. The CRE accident is bound by the LOCA. No further analysis is required.

2. Accidental Release of Waste - Liquid as described in FSAR 14.2.2 / DSAR 6.4

- The largest vessels are the three liquid holdup tanks (CVCS), each sized to hold two-thirds of the reactor coolant liquid volume. The tanks are used to process the normal recycle or waste fluids produced. The contents of one tank will be passed through the liquid processing train while another tank is being filled. Hence, the loss of water from the spent resin storage tank presents no hazard offsite or onsite because means are available both to detect the situation occurring and to keep the resin temperature under control until the resin can be removed to burial facilities. No EAL condition met.

3. Accidental Release of Waste – Gases as described in 14.2.3 / DSAR 6.3

- The tanks operate at low pressure, approximately 2 psig, a gas phase leak would result in an expulsion of approximately 12-percent of the contained gases and then the pressure would be in equilibrium with atmosphere. The curie content of the tanks is controlled administratively to maintain an operating limit. It is conservatively assumed that all of the contained noble gas activity and one percent of the iodine activity are released. The tank pits are vented to the ventilation system so that any gaseous leakage would be discharged to the atmosphere by this route. No EAL condition met.

4. Implement Severe Accident Management Guidelines (SAMG)

- A review of the SAMGs associated with the initial site-specific Candidate High Level Actions concluded that no actions would require on-shift personnel other than licensed and non-licensed operators. No analysis required.

5. Appendix R Fire

- The team concluded the Control Room fire to be the most limiting for resources and therefore a staffing analysis for an additional fire scenario is not required. The emergency plan and fire brigade responsibilities are the same for both events. No analysis required.

6. High Integrity Container (HIC) Drop Event

   - One HIC falls on top of another and both catch on fire. Administrative controls ensure the HIC's source term remains below the allowable dose-equivalent activity. This bounds the HIC drop event by the Fuel-Handling Accident. No analysis required.

V. GENERAL ASSUMPTIONS AND LIMITATIONS

A. Notes and Assumptions Applicable to All IPEC OSA

1. The RP and Chemistry tasks reviewed were those directed by the Shift Manager to support actions in Abnormal Operating Procedures (AOP), Off Normal Procedures (OP), Emergency Operating Procedures (OP), and Emergency Plan Implementing Procedures (EP). Any additional tasks directed by the Technical Support Center (TSC), Operations Support Center (OSC), or Emergency Operations Facility (EOF) procedures were not reviewed.

2. IPEC has 60 minute emergency responders when augmented while the ERO is offsite. This analysis was conducted assuming a 90 minute response of the augmented ERO. No specific emergency response tasks requiring the augmented ERO were identified prior to the 90 minutes following the emergency declaration.

3. The OSA team determined there are no time critical RP and Chemistry tasks and that task performance is directed and prioritized by the Shift Manager. The time RP or Chemistry is directed to perform a task and the amount of time taken to complete tasks are estimated. No Chemistry samples are required by Tech Specs within the 90 minute period after a declaration. Since the Shift Manager directs when the tasks are performed, there are no overlapping RP or chemistry tasks.

4. All crews have one individual filling the SM role therefore the analysis did not consider using a dual-role individual.

5. For the purposes of this analysis, both the Fire Brigade Leader and the Communicator were assumed to come from Unit 3 but both those positions can be supplied by either unit. Firefighting is the responsibility of the Fire Brigade as defined in the Indian Point Station Fire Protection Program Plan. The Fire Brigade consists of members who are trained in firefighting techniques and are on duty 24 hours a day. A local department may be called in if necessary.

B. NEI 10-05 Rev 0 Assumptions

1. Response time used for this analysis was the maximum acceptable number of minutes elapsed between emergency declaration and the augmented ERO position holder at a location necessary to relieve an on-shift position of the emergency response task. (60 min.)

2. On-shift personnel complement was limited to the minimum required number and composition as described in the site FLEX plan. If the plan commitments allow for different minimum staffing levels (e.g., a variance between a normal dayshift and a backshift), the staffing with the smallest total number of personnel was used for the analysis.

3. Although the temporary absence of a position may be allowed by Tech Specs, the analysis was performed assuming that all required on-shift positions are filled.

4. Event occurred during off-normal work hours where ERO was offsite and all required minimum on-shift positions were filled.

5. On-shift personnel reported to their assigned response locations within timeframes sufficient to allow for performance of assigned actions.

6. On-shift staff had necessary Radiation Worker qualification to obtain normal dosimetry and enter the radiological control area (RCA) (but not locked high or very high radiation areas) without the aid of a RP technician.

7. Personnel assigned plant operations and SSD met the requirements and guidance (analyzed through other programs such as operator training) and were not evaluated as part of this assessment unless a role/function/task from another major response area was assigned as a collateral duty.

8. In-plant (manual) safety related operator actions to manipulate components and equipment from locations outside the control room to achieve and maintain safe shutdown was done by a member of the on-shift staff as defined in the unit's Tech Specs.

9. Fire brigade (FB) staff performance is analyzed through other station programs (e.g., fire drills) and was not evaluated as part of this assessment unless a role/function/task from another major response area was assigned as a collateral duty.

10. Individuals holding the position of RP technician or Chemistry technician are qualified to perform the range of tasks expected of their position.

11. Security was not evaluated unless a role or function from another major response area was assigned as a collateral duty.

12. Communications, briefings, and peer checks are acceptable collateral duties.

13. All on-shift staff positions were evaluated, even if they had no known collateral duties, to ensure they can perform the tasks assigned to them. [Ref NSIR/DPR-ISG-01]

14. The Staffing Analysis specified the resources available to perform "Repair and Corrective Actions" and "Rescue Operations and First Aid" but these may be assigned as collateral duty to a designated on-shift responder.

15. For assessment purposes, NRC notifications were treated as a continuous action per 10CFR50.72(c)(3) and 73.71(b)(1). This means once the initial NRC communications are established, the NRC will request an open line be maintained with the NRC Operations Center.

16. DBA (postulated accident, Condition IV event, or limiting fault) is considered as "Unanticipated occurrences that are postulated for accident analysis purposes but not expected to occur during the life of the plant. A postulated accident could result in sufficient damage to preclude resumption of plant operation. As a result, a greater number and variety of actions would need to be implemented by plant personnel."

17. Unless otherwise specified in NSIR/DPR-ISG-01, Interim Staff Guidance – Emergency Planning for Nuclear Power Plants, or by the USAR initial conditions of a DBA analysis, it was assumed that the unit was in Mode 1, Power.

18. DBT assumed a hostile force breached the protected area fence but was neutralized with no adverse consequences to plant safety. Damage inflicted on plant systems, structures and components was not sufficient to prevent safe shutdown or cause a radiological release. There was no fire significant enough to warrant firefighting efforts prior to arrival of offsite resources and/or the augmented ERO.

19. The Staffing Analysis used DBA analysis assumptions, inputs, timing of events, plant protective response, and specified manual operator actions and their timing, as documented in the USAR.

20. In cases where a DBA analysis included a radiological release, and the starting point of the release was not clearly defined, the staffing analysis assumed that the release began 15-minutes after the initiating event.

21. Severe Accident Management Guideline (SAMG) - It is sufficient to simply assume that the accident progressed to conditions requiring a severe accident response; it did not include determining specific failures and the accident sequence.

22. SAMG - The actions analyzed included those that implement the initial site-specific actions assuming the core is not ex-vessel (i.e., no reactor vessel failure), and there is no actual or imminent challenge to containment integrity.

VI. APPENDIX A - ANALYZED EVENTS AND ACCIDENTS

A. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 2

Event #	Event Type	Summary Description of Event	No Mode	Reference Document(s)	Event ECL	Analysis Required?
6	DBA	Fuel-Handling Accident in Fuel Storage Building	Permanently Defueled	DSAR 6.2	Alert	YES
8	DBA	Accidental Release - Waste Gas	Permanently Defueled	DSAR 6.3	None	NO[1]
7	DBA	Accidental Release- Recycle of Waste Liquid	Permanently Defueled	DSAR 6.4	None	NO[1]
15	DBA	High Integrity Container Drop Event	Permanently Defueled	DSAR 6.5	Unusual Event	NO[1]

[1] The dose consequences are less than a fuel-handling accident in the fuel storage building in accordance with the IP2 Defueled Safety Analysis Report and therefore are bound by analysis #1.

B. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 3 (APPENDIX A)

Event #	Event Type	Summary Description of Event	Plant Mode[1]	Reference Document(s)	Event ECL	Analysis Required?
1	DBT	Land and/or waterborne HOSTILE ACTION directed against the Protected Area by a HOSTILE FORCE.	1	NEI 10-05 ISG IV.C	Site Area Emergency	YES
2	DBA	Control Rod Ejection	1	FSAR 14.2.6	Alert	NO[2]
3	DBA	Steam Line Rupture	1	FSAR 14.2.5	Unusual Event	YES
4	DBA	Loss of Coolant Accident (LOCA)	1	FSAR 14.3	Site Area Emergency	YES
5	DBA	Steam Generator Tube Rupture	1	FSAR 14.2.4	Alert	YES
6	DBA	Fuel Handling Accident	1	FSAR 14.2.1	Alert	YES
7	DBA	Accidental Release of Waste - Liquid	1	FSAR 14.2.2	None	NO

Event #	Event Type	Summary Description of Event	Plant Mode[1]	Reference Document(s)	Event ECL	Analysis Required?
8	DBA	Accidental Release of Waste - Gases	1	FSAR 14.2.3	None	NO
9	Assumed for Analysis Purpose	Aircraft Probable Threat.	1	10CFR50.54hh(1) RG 1.214	Alert	YES
10	Assumed for Analysis Purpose	Control Room Evacuation and Alternate Shutdown (fire in main control room)	1	10CFR50 Appendix R ISG IV,C	Alert	YES
11	Assumed for Analysis Purpose	Station Blackout	1	ISG IV.C	Site Area Emergency	YES
12	Assumed for Analysis Purpose	LOCA – General Emergency with radiological release and PAR	1	ISG IV.C	GE	YES
13	Assumed for Analysis Purpose	LOCA with entry into severe accident procedures.	1	ISG IV.C	GE	NO[3]
14	Assumed for Analysis Purpose	Appendix R Fire with Reactor Trip	1	ISG IV.C	Alert	NO[4]

[1] Plant mode per USAR or assumed for analysis purpose

[2]The CRE accident is bound by the LOCA accident. No further analysis required.

[3]IPEC does not meet the NEI 10-05 intent for the analysis of implementing SAMG. NEI 10-05 Section 2.11 states that the analysis of the ability to implement SAMG focuses on the reasonably expected initial mitigation action that would be performed by on-shift personnel other than licensed and non-licensed operators. The actions assessed by NEI 10-05 are those which implement the initial site-specific Candidate High Level Action assuming the core is not ex-vessel (i.e., no reactor vessel failure), and there is no actual or imminent challenge to containment integrity. SAMG is implemented by the TSC. All success paths' actions are performed by on-shift licensed and non-licensed operators.

[4] Appendix R Fire is bound by the Control Room Fire and Remote Shutdown.

VII. APPENDIX B – U2 ON-SHIFT STAFFING ANALYSIS

A. Design Basis Accident Analysis #6 – Fuel-Handling Accident in FSB

1. Accident Summary

   - Fuel-Handling Accident (FHA) occurs in the Fuel Storage Building (FSB) during movement of a fuel assembly.
   - The fuel assembly is moved under water and the accident is assumed to occur when one fuel assembly is damaged.
   - The fission product activity present in the fuel gap of all of the fuel pins in the damaged fuel assembly is released to the spent fuel pool while the FSB exhaust fan is not operating.

2. Accident Specific Assumptions Made

   - The accident is assumed to occur when one fuel assembly is damaged. The fission product activity present in the fuel gap of all of the fuel pins in the damaged fuel assembly is released to the spent fuel pool while the FSB exhaust fan is not operating.

3. Procedures for Accident Response

   - 2-AOP-FH-1, Fuel Damage or Loss of SFP/Refueling Cavity Level
   - IP-EP-115, Forms
   - IP-EP-120, Classification
   - IP-EP-210, Central Control Room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	60	U2 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	60	T4/L7	No	No
8	U2 RP	E-Plan Table B-1	60	T4/L1	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
11	U3 CRS	E-Plan Table B-1	N/A	N/A	No	No
12	U3 STA	E-Plan Table B-1	N/A	N/A	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	N/A	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	N/A	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	N/A	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	N/A	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	N/A	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	T5/L12	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L2	No	No
21	U1 NPO	E-Plan Table B-1	N/A	U2 T2/L4	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 2 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	N/A	N/A
3	Reactor Operator #1	N/A	N/A
4	Auxiliary Operator #1	Nuclear Plant Operator U1	Non-Licensed Operator Training Program
5	Other needed for Safe Shutdown	N/A	N/A
6	Other needed for Safe Shutdown	N/A	N/A
7	Other needed for Safe Shutdown	N/A	N/A
8	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING
Analysis # 6 – Fuel-Handling Accident In Fuel Storage Building (U2)

Line #	Performed by	Task Analysis Controlling Method
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

No firefighting activities included in this accident.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: U2 RP (survey FSB)				X	X	X	X	X	X	X								
2	On-site Survey: U3 RP (site boundary')								X	X	X	X	X						
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): N/A)																		
7	Chemistry Function task #1 (describe) N/A																		
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U2 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U2 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U2 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U3 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U2 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U2 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	U3 Chemistry Technician	Emergency Planning Training Program
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U3 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

VIII. APPENDIX B - UNIT 3 ON-SHIFT STAFFING ANALYSIS

A. Design Basis Accident Analysis #3 – Steam Line Rupture

1. Accident Summary

   - Steam pipe rupture in a faulted main steam line downstream of MSIVs with loss of offsite power.
   - Release until MSIVs close. Puff release to turbine building and to environment.

2. Accident Specific Assumptions Made

   - EAL based on Shift Manager's discretion

3. Procedures for Accident Response

   - 3-E-0, Reactor Trip or Safety Injection
   - 3-E-2, Faulted Steam Generator Isolation
   - 3-E-1, Loss of Reactor or Secondary Coolant
   - 3-ES-1.1 SI Termination
   - IP-EP-115, Forms
   - IP-EP-120, Classification
   - IP-EP-210, Central Control Room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 3 – Steam Line Rupture (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
8	U2 RP	E-Plan Table B-1	N/A	T4/L1	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	T4/L7	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L2	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN
One Unit – One Control Room
Analysis # 3 – Steam Line Rupture (U3)

Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxillary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis # 3 – Steam Line Rupture (U3)		
Line #	Performed by	Task Analysis Controlling Method
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

No firefighting activitles included in this accident.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis # 3 – Steam Line Rupture (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: U2 RP (survey TB)				X	X	X	X	X	X	X								
2	On-site Survey: U3 RP (site boundary)								X	X	X	X	X						
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5)*																		
6	Other site specific RP (describe): N/A)																		
7	Chemistry Function task #1 (describe) U3 Chemistry (sample all SG's)					X	X	X	X	X	X	X	X	X	X				
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 3 – Steam Line Rupture (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	N/A	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

B. Design Basis Accident Analysis #4 – Loss of Coolant Accident (LOCA)

1. Accident Summary

   - Break (Double Ended Guillotine Cold Leg (DEGCL) break) between the reactor coolant pump and the reactor vessel occurred. Safety Injection initiated.
   - It is assumed core cooling features fail to prevent the core from experiencing significant degradation (i.e. melting) A portion of the activity that is released to the containment is assumed to be released to the environment due to the containment leaking at its design rate.

2. Accident Specific Assumptions Made

   - Worse 2 hr. EAB dose occurs at 0.6 hour to 2.6 hour. Assume GE condition not met until after the emergency response facilities are activated.
   - Assumed reactor coolant activity was >300 µCi/cc I-131 equivalent based on FSAR LOCA accident analysis.

3. Procedures for Accident Response

   - 3-E-0, Reactor Trip or Safety Injection
   - IP-EP-120, Classification
   - IP-EP-115, Forms
   - IP-EP-210, Central Control Room
   - 3-E-1, Loss of Reactor or Secondary Coolant
   - 3-ES-1.3, Transfer to Cold Leg Recirculation
   - IP-EP-310, Dose Assessment
   - 0-CY-1645 Chemistry Response to Plant Causalities

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 4 – LOCA (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	T5/L12	No	No
8	U2 RP	E-Plan Table B-1	N/A	T4/L1	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	T4/L7	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L4 T4/L6	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 4 – LOCA (U3) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other.	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis # 4 – LOCA (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

Firefighting activities not included in the analysis.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis # 4 – LOCA (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: U2 RP survey all SG lines							X	X	X	X	X							
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: U3 RP							X	X	X	X	X							
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): U3 RP goes to CR setup habitability/contamination instruments N/A)			X	X	X	X												
7	Chemistry Function task #1 U3 Chemistry Sample all SG									X	X	X	X	X	X	X	X		
8	Chemistry Function task #2 (describe) N/A																		

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 4 LOCA (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	U2 Chemistry Technician	Emergency Planning Training Program
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

C. Design Basis Accident Analysis #5 – Steam Generator Tube Rupture (SGTR)

1. Accident Summary

   - Primary to secondary leakage 150 gal/day in all SGs. All noble gases carried over to the secondary side through SG tube leakage are assumed to be immediately released to the atmosphere.
   - Operators recognize the tube leak and isolate the affected steam generator.

2. Accident Specific Assumptions Made

   - EAL is based on event.

3. Procedures for Accident Response

   - 3-E-0, Reactor Trip or Safety Injection
   - 3-E-1, Loss of Reactor or Secondary Coolant
   - 3-E-3, Steam Generator Tube Rupture
   - IP-EP-120, Classification
   - EP-EP-115, Forms
   - IP-EP-210, Central Control Room
   - IP-EP-310, Dose Assessment
   - 0-CY-1645 Chemistry Response to Plant Causalities

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 5 – SGTR (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	T5/L12	No	No
8	U2 RP	E-Plan Table B-1	N/A	T4/L1	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	T4/L7	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L4	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 5 - SGTR (U3) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #5 – SGTR (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis #5 – SGTR (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: U2 RP				X	X	X	X	X										
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: U3 RP					X	X	X	X	X	X								
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): N/A)																		
7	Chemistry Function task #1 U3 Chem sample SGs					X	X	X	X	X	X	X							
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 5 - SGTR (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	U2 Chemistry Technician	Emergency Planning Training Program
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

D. Design Basis Accident Analysis #6 – Fuel Handling Accident

1. Accident Summary

   - Dropped fuel assembly over the core in the containment building. The activity is discharged to the atmosphere at the ground level. No credit is taken for filtration or isolation of the leak.

2. Accident Specific Assumptions Made

   - Additional SROs, ROs, NPOs, and RP techs are assumed to be on shift as part of the refueling/outage staff to assist the Shift Manager.
   - EAL is based on the event.

3. Procedures for Accident Response

   - IP-EP-120, Classification
   - IP-EP-115, Forms
   - IP-EP-210, Central Control Room
   - 3-AOP-FH-1, Fuel Damage or Loss of SFP/Refuel Cavity Level

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 6 – FHA (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	T5/L12	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	T4/L7	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L6	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN
One Unit – One Control Room
Analysis # 6 - FHA (U3)

Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #6 – FHA (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

Firefighting activities are not included in the analysis.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis #6 – FHA (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific U3 RP: contamination monitoring			X	X	X	X	X	X										
7	Chemistry Function task #1 U3Chem. Monitor plant vents for rising levels			X	X	X	X	X	X	X	X								
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 6 - FHA (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	U2 Chemistry Technician	Emergency Planning Training Program
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

E. Design Basis Accident Analysis #10 – Control Room Evacuation and Alternate Shutdown

1. Accident Summary

   - Fire in the control room and decision is made by the Shift Manager to evacuate and shutdown from the Alternate Shutdown Panel.

2. Accident Specific Assumptions Made

   - Assume reactor tripped, turbine tripped, feed pumps tripped, reactor coolant pumps tripped and other actions of steps 4.1-4.12 are completed prior to evacuation.
   - U3 SM maintains oversight of the response and U2 SM assumes the Emergency Director function.

3. Procedures for Accident Response

   - 3-AOP-SSD-1, Control Room Inaccessibility Safe Shutdown Control
   - IP-EP-120, Classifications
   - IP-EP-115, Forms
   - IP-EP-210, Central Control room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis #10 – Control Room Evacuation and Alternate Shutdown (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L1 T5/L3 T5/L5 T5/L6 T5/L8 T5/L10 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	T3/L5	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L4	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	T3/L1	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis #10 – Control Room Evacuation and Alternate Shutdown (U3) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #10 – Control Room Evacuation and Alternate Shutdown (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	SRO FBL	Fire Protection Training Program
2	FB #2	Fire Protection Training Program
3	FB #3	Fire Protection Training Program
4	FB #4	Fire Protection Training Program
5	FB #5	Fire Protection Training Program

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis #10 – Control Room Evacuation and Alternate Shutdown (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: U3 RP FB Support			X	X	X	X	X	X	X	X	X	X						
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): N/A																		
7	Chemistry Function task #1 (describe) N/A																		
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis #10 – Control Room Evacuation and Alternate Shutdown (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U2 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U2 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U2 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U2 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U2 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	N/A	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

F. Design Basis Accident Analysis #11 – Station Blackout (SBO)

1. Accident Summary

   - A loss of all AC power occurred on U3.

2. Accident Specific Assumptions Made

   - Assume the emergency diesel generators are not started for the first 60 minutes and that that the Appendix R SBO diesel is started and energizes equipment per procedure.

3. Procedures for Accident Response

   - 3-ECA-0.0, Loss of All AC Power
   - 3-E-0, Reactor Trip or Safety Injection
   - 0-SOP-ESP-002, Emergency Contingency Plan
   - IP-EP-120, Classification
   - IP-EP-115, Forms
   - IP-EP-210, Central Control Room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis #11 – Station Blackout (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
20	U3 RP	E-Plan Table B-1	N/A	N/A	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis #11 – Station Blackout (SBO) (U3) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #11 – Station Blackout (SBO) (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

Firefighting activities not included in the analysis.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis #11 – Station Blackout (SBO) (U3)

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP N/A																		
7	Chemistry Function task #1 (describe) N/A																		
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis #11 – Station Blackout (SBO) (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	N/A	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

G. Design Basis Accident Analysis #12 – LOCA/General Emergency with Release and PAR

1. Accident Summary (Assumed for Staffing Analysis Purpose)

   - The unit is in a Site Area Emergency AS1 when the Shift Manager is given a dose projection update and site boundary survey data that supports >1 Rem TEDE dose at the site boundary.

2. Accident Specific Assumptions Made

   - All actions for SAE are complete.
   - No transients other than LOCA are considered.
   - The ERO would be activated at an Alert or SAE. For Staffing Analysis purpose, the T=0 clock is used for the emergency plan actions to evaluate the capability to implement the GE classification, PAR and notification functions before the ERO arrives.

3. Procedures for Accident Response

   - IP-EP-120, Classification
   - IP-EP-410, PARs
   - IP_EP-310, Dose Assessment
   - IP-EP-115, Forms
   - IP-EP—210, Central Control Room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis #12 – LOCA/General Emergency with Release and PAR (U3)						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	T5/L12	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L2 T5/L3 T5/L4 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
20	U3 RP	E-Plan Table B-1	N/A	T4/L2	No	No
21	U1 NPO	E-Plan Table B-1	N/A	N/A	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis #12 – LOCA/General Emergency with Release and PAR (U3) Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Tralning Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #12 – LOCA/General Emergency with Release and PAR (U3)		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

No firefighting activities included in the analysis.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY Analysis #12 – LOCA/General Emergency with Release and PAR (U3)																		
LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: U3 RP (site boundary)				X	X	X	X	X										
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): N/A)																		
7	Chemistry Function task #1 (describe)																		
8	Chemistry Function task #2 (describe) N/A																		

*Times are estimated.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis #12 – LOCA/General Emergency with Release and PAR (U3)			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	U3 Shift Manager	Emergency Planning Training Program / EP Drills
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	U3 Shift Manager	Emergency Planning Training Program / EP Drills
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	U2 Chemistry Technician	Emergency Planning Training Program
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

IX. APPENDIX B – COMMON CONTROL ROOM ON-SHIFT STAFFING ANALYSIS

A. Accident Analysis #1 – Design Basis Threat (DBT)

1. Accident Summary

   - Land and/or waterborne HOSTILE ACTION directed against the Protected Area by a HOSTILE FORCE. Assume adversary characteristics defined by the Design Basis Threat.
   - Security Code Red condition

2. Accident Specific Assumptions Made

   - This event assumes the threat is neutralized immediately when inside the protected area fence, no significant damage to equipment or systems that require corrective actions before the ERO is staffed, no radiological release, and no fire that requires firefighting response before the ERO is staffed.
   - Assume at power in Mode 1
   - Assume Security notifies the Shift Manager of condition Security Code RED.
   - Assume all non-security staff is located inside the protected area at their normal work station when the event occurs.
   - Assume all systems function and the core remains covered. No fuel damage and no release.

3. Procedures for Accident Response

   - 0-AOP-SEC-1, Response to Security Compromise
   - IP-EP-120, Classification
   - 3-E-0, Reactor Trip or Safety Injection
   - IP-EP-115, Forms
   - IP-EP-210, Central Control Room

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS
Analysis # 1 DBT Security Threat

Line #	On-shift Position	Basis Document	Augmentation Elapsed Time (min)*	Role in Table # / Line #	Unanalyzed Task?	TMS Required?
1	U2 SM	E-Plan Table B-1	N/A	U2 T2/L1 T5/L6 T5/L7 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
20	U3 RP	E-Plan Table B-1	N/A	N/A	No	No
21	U1 NPO	E-Plan Table B-1	N/A	U2 T2/L6	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 2 PLANT OPERATIONS & SAFE SHUTDOWN
One Unit – One Control Room
Analysis # 1 DBT Security Threat
Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs If Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	N/A	N/A
3	Reactor Operator #1	N/A	N/A
4	Auxiliary Operator #1	N/A	N/A
5	Auxiliary Operator #2	N/A	N/A
6	Auxiliary Operator #3	Nuclear Plant Operator U1	Non-Licensed Operator Training Program
7	Other needed for Safe Shutdown	N/A	N/A
8	Other needed for Safe Shutdown	N/A	N/A

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN
One Unit – One Control Room
Analysis # 1 DBT Security Threat
Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs If Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis # 1 DBT Security Threat		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

Note: This accident does not include the need for firefighting, first aid or search & rescue.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis # 1 DBT Security Threat

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: N/A																		
6	Other site specific RP (describe): N/A																		
7	Chemistry Function task #1 (describe) N/A																		
8	Chemistry Function task #2 (describe) N/A																		

Note: No chemistry or RP job function tasks for the conditions described in the DBT assumptions. RP and Chemistry take cover as directed.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 1 DBT Security Threat			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	U2 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	N/A	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

B. Accident Analysis #9 – Aircraft Probable Threat

1. Accident Summary

   - The analysis includes all emergency response actions taken prior to an aircraft impact in accordance with RG 1.214 for an aircraft threat that is greater than 5 minutes, but less than 30 minutes from the site, and considers the dispersal of the site fire brigade away from target areas for firefighting.
   - The analysis does not include a scenario or response actions taken during or after a crash.

2. Accident Specific Assumptions Made

   - The Shift Manager receives the call from the NRC of probable aircraft threat.
   - All non-security on-shift personnel are inside the protected area fence at their normal workstation.

3. Procedures for Accident Response

   - 0-AOP-SEC-2, Aircraft Threat
   - IP-EP-120, Classification
   - IP-EP-115, Forms
   - IP-EP-210, Central Control Room (for both units)

4. Tables

IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 9 – Aircraft Probable Threat						
Line #	**On-shift Position**	**Basis Document**	**Augmentation Elapsed Time (min)***	**Role in Table # / Line #**	**Unanalyzed Task?**	**TMS Required?**
1	U2 SM	E-Plan Table B-1	N/A	U2 T2/L1 T5/L6 T5/L14	No	No
2	U2 CRS	E-Plan Table B-1	N/A	N/A	No	No
3	U2 RO #1	E-Plan Table B-1	N/A	N/A	No	No
4	U2 AO #1	E-Plan Table B-1	N/A	N/A	No	No
5	U2 AO #2	E-Plan Table B-1	N/A	N/A	No	No
6	U2 AO #3	E-Plan Table B-1	N/A	N/A	No	No
7	U2 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
8	U2 RP	E-Plan Table B-1	N/A	N/A	No	No
9	Communicator	E-Plan Table B-1	60	T5/L9 T5/L13	No	No
10	U3 Shift Manager	E-Plan Table B-1	60	U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	E-Plan Table B-1	N/A	U3 T2/L2	No	No
12	U3 STA	E-Plan Table B-1	N/A	U3 T2/L3	No	No
13	U3 RO #1	E-Plan Table B-1	N/A	U3 T2/L4	No	No
14	U3 RO #2	E-Plan Table B-1	N/A	U3 T2/L5	No	No
15	U3 NPO#1	E-Plan Table B-1	N/A	U3 T2/L6	No	No
16	U3 NPO#2	E-Plan Table B-1	N/A	U3 T2/L7	No	No
17	U3 NPO#3	E-Plan Table B-1	N/A	U3 T2/L8	No	No
18	U3 NPO#4	E-Plan Table B-1	N/A	N/A	No	No
19	U3 Chemistry	E-Plan Table B-1	N/A	N/A	No	No
20	U3 RP	E-Plan Table B-1	N/A	N/A	No	No
21	U1 NPO	E-Plan Table B-1	N/A	U2 T2/L6	No	No
22	SRO FBL	E-Plan Table B-1	N/A	N/A	No	No
23	Security	Security Contingency Plan / E-Plan Table B-1	60	T5/L15	No	No

IPEC TABLE 2 – UNIT 2 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 9 Aircraft Probable Threat Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	N/A	N/A
3	Reactor Operator #1	N/A	N/A
4	Auxiliary Operator #1	N/A	N/A
5	Auxiliary Operator #2	N/A	N/A
6	Auxiliary Operator #3	Nuclear Plant Operator U1	Non-Licensed Operator Training Program
7	Other needed for Safe Shutdown	N/A	N/A
8	Other needed for Safe Shutdown	N/A	N/A

IPEC TABLE 2 – UNIT 3 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 9 Aircraft Probable Threat Minimum Operations Crew Necessary to Implement AOPs and EOPs or SAMGs if Applicable			
Line #	**Generic Title/Role**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Shift Manager	Shift Manager	Licensed Operator Training Program
2	Unit Supervisor	Control Room Supervisor	Licensed Operator Training Program
3	Shift Technical Advisor	Shift Technical Advisor	Licensed Operator Training Program
4	Reactor Operator #1	Reactor Operator #1	Licensed Operator Training Program
5	Reactor Operator #2	Reactor Operator #2	Licensed Operator Training Program
6	Auxiliary Operator #1	Nuclear Plant Operator #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	Nuclear Plant Operator #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	Nuclear Plant Operator #3	Non-Licensed Operator Training Program
9	Other needed for Safe Shutdown	N/A	N/A
10	Other needed for Safe Shutdown	N/A	N/A

Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs or SAMGs if Applicable

Line #	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
15	Other	N/A	N/A

Fire Brigade

IPEC TABLE 3 – FIREFIGHTING Analysis #9 – Aircraft Probable Threat		
Line #	Performed by	Task Analysis Controlling Method
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

FB stages in the In-Processing Building, no firefighting activities during the 30 minutes included in the analysis.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Analysis #9 – Aircraft Probable Threat

LINE	Position Performing Function / Task	Performance Time Period After Emergency Declaration (minutes)*																
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey: N/A																		
2	On-site Survey: N/A																		
3	Personnel Monitoring: N/A																		
4	Job Coverage: N/A																		
5	Offsite Rad Assessment: *(Included in Table 5*																		
6	Other site specific RP (describe): N/A)																		
7	Chemistry Function task #1 (describe) N/A																		
8	Chemistry Function task #2 (describe) N/A																		

Note: No chemistry or RP job function tasks for the conditions described in the Aircraft Threat assumptions.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Analysis # 9 Aircraft Probable Threat			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 Shift Manager	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	N/A	N/A
3	Approve content of State/local notifications	U3 Shift Manager	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 Shift Manager	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	U2 Shift Manager	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 Shift Manager	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 Shift Manager	Licensed Operator Training Program
11	Activate ERDS	N/A (runs 24/7)	N/A
12	Offsite radiological assessment	N/A	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	U2 Shift Manager	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

X. APPENDIX C – TIME MOTION STUDIES SUPPORTING THE STAFFING ANALYSIS

A. ERO Notification (Everbridge activation)

TIME MOTION STUDY OF OVERLAPPING TASKS

TASK 1: ACTIVATE THE ERO USING EVERBRIDGE

JOB: SHIFT MANAGER

TASK 2: EMERGENCY DIRECTION AND CONTROL

JOB: SHIFT MANAGER

PURPOSE:

Perform a Time Motion Study to evaluate whether assigning the performance of ERO notification using Everbridge to the Shift Manager or STA can be justified as an acceptable overlap to the Shift Manager's primary emergency plan function of direction and control.

NOTE

The Time Motion Study may be completed during simulator training/evaluation or during EP drills

LOCATION:

Simulator (to use the "TRAINING" event code to avoid inadvertent ERO activation for an EMERGENCY event.) Codes are site specific.

REQUIRED TOOLS/EQUIPMENT:

A. Individual performing the procedure actions must be logged on to the computer being used.

B. PC with Internet 7.0 and internet access.

C. Instructions/codes for activating Everbridge in the TRAINING mode. [Staged Instruction sheet for activating Everbridge may be used in lieu of EN-EP-310, *Emergency Response Organization Notification System)]*

Function / Responsibility (Task) Analysis Template

Event: All Site: IPEC Position: Shift Manager Line #: 1

Function	Responsibility (Task)	Action Step	Duration
1.Notification	1.1 Initiate notification to the ERO via the ERON Program	1.1.1 Retrieve the Everbridge instruction that contains the **[TRAINING]** Access code and Pass code.	22 sec.
		1 (On the PC) Open ERO Notification System by clicking: **Start →Nuclear Corporate Apps (ESM) → Nuclear Emergency Response (ESM) → ERON**	17 sec.
		2 Enter Access code (**XXXXX**) and Pass code (**XXXXX**) and click the SUBMIT button	11 sec.
		3 Select the appropriate classification by clicking on it. **(Select ALERT)**	8 sec.
		4 Answer "Yes" or "No" to Security EAL question, "Was the event declared on a Security EAL?" [**Click on "YES"**]	8 sec.
		5 Select proper response action by clicking on it. **[Select "Security Event"}**	10 sec.
		6	

		Review the message that was generated in the User Message box at the bottom of the screen. Ensure the message contains the information to communicate to the ERO. Additional information can be added to the message by clicking in the User Message box and typing.	12 sec.
		7 Once satisfied with the message content, click send notification button. **[Click "Send Notification"]**	7 sec.
		8 Answer "YES" to send verification question, "Are you CERTAIN you want to send this message?" **[Click "YES"]**	5 sec.
		9 If message was successfully sent, you will see a dialog box **[Click "Return"]**	5 sec.
		END OF INITIATE NOTIFICATION TO ERO TASK	
2.Emergency Direction and Control	2.1 Maintain emergency direction and control of the event response.	1 Oversight of the emergency response.	NA
		2 Initiate any emergency actions.	NA
		Comments: The task of ERO notification/activation via ERON for the Non-ED Unit Shift Manager does not negate or interfere with the SM's ability to continue oversight of control room activities or to initiate additional emergency actions.	

END OF EMERGENCY DIRECTION AND CONTROL TASK	

Task Performer: __Donald Dewey_____ Position: ____Shift Manager/AOM_____ Date:_____4/9/13_____

Name Job Title

Evaluator: _____Anthony Ambrose_____ Position: ___Sr. Emergency Planner_____ Date:_____4/9/13_____

Name Job Title

Evaluator:_____Brian McCarthy_____ Position:_____Shift Manager/AOM_____ Date:_____4/9/13_____

XI. OVERLAP OF TASKS ACTIVITIES OR OTHER CONFLICTS IDENTIFIED

A. Overlap Requiring Compensatory Measures.

NONE

XII. REFERENCES

- NEI 10-05, Rev 0, *Assessment of On-Shift Emergency Response Organization Staffing and Capabilities*
- NSIR DPR-ISG-01, *Interim Staff Guidance – Emergency Planning for Nuclear Power Plants*
- NUREG-0654, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.*
- IPEC Emergency Plan
- Indian Point No. 1 Safety Analysis Report
- Decommissioning Plan for Indian Point Unit 1, October 1980
- IP2 Defueled Safety Analysis Report

XIII. STAFFING ANALYIS TEAM

- Paul Bowe, Operations
- Gary Norton, Training - Operations
- Chris Bohren, Operations
- Kevin Robinson, Emergency Planning

Sheet 1 of 7

I. OVERVIEW

PAD Rev. #: 0

Facility: Indian Point Energy Center (IPEC)

Proposed Activity / Document: On-Shift Staffing Analysis Report **Change/Rev. #: 20-01**

Description of Proposed Activity: Revision to On-Shift Staffing Analysis Report

II. DOCUMENT REVIEW METHOD

Provide the requested information for each item below.

1. **For documents available electronically:**

   a. **List search engine or documents searched, and keywords used:**
   U2/U3 Technical Specifications, U2/U3 UFSARs, NRC Orders, LRS Commitments, and the IPEC Emergency Plan: Keywords: Emergency, Plan, Emergency Plan, Staff, and Staffing.

   b. **List relevant sections of controlled electronic documents reviewed:**
   All Licensing Basis Document sections were searched electronically: U2/U3 Technical Specifications, U2/U3 UFSARs, NRC Orders, LRS Commitments, and the IPEC Emergency Plan. Review determined no relevant hits and no impact from proposed changes

2. **Documents reviewed manually (hardcopy):**

   None

3. **For those documents that are not reviewed either electronically or manually, use the specific questions provided in Sections III and IV of Attachment 9.2 of EN-LI-100 as needed. Document, below, the extent to which the Attachment 9.2 questions were used.**

   Reviewed complete Att. 9.2 of EN-LI-100 Revision 28. Emergency Plan (10 CFR 50.54(q) / (EN-EP-305) section is applicable due to change being controlled by 10 CFR 50.54 (q).

Sheet 2 of 7

III. PROCESS REVIEW

Does the proposed activity affect, invalidate, or render incorrect, OR have the potential to affect, invalidate, or render incorrect, information contained in any of the following processes? Contact Program Owner if needed. Associated regulations and procedures are identified with each process below.

PROCESS (Regulations / Procedures)	YES	NO	REVIEW RESULTS
Chemistry / Effluents	☐	☒	
Radwaste / Process Control Program (PCP) (EN-RW-105 or contact the Radiation Protection Dept.)	☐	☒	
Radiation Protection / ALARA (10 CFR 20 / EN-RP-110 or contact the Radiation Protection Dept.)	☐	☒	
Inservice Inspection Program (10 CFR 50.55a / EN-DC-333, -342, -351, -352)	☐	☒	
Inservice Testing Program (10 CFR 50.55a / EN-DC-332)	☐	☒	
Maintenance Rule Program (10 CFR 50.65 / EN-DC-203, -204, -205, -206, -207)	☐	☒	
Containment Leakage Rate Testing (Appendix J) Program (10 CFR 50 Appendix J / EN-DC-334)	☐	☒	
FLEX Program (NRC Order EA-12-49/NRC Order EA-12-051/FLEX Program) (10 CFR 50.59 / EN-OP-201)	☐	☒	

IF any box is checked "Yes," THEN contact the appropriate department to ensure that the proposed change is acceptable and document the results in the REVIEW RESULTS column.

Sheet 3 of 7

IV. LICENSING BASIS DOCUMENT REVIEW

Does the proposed activity affect, invalidate, or render incorrect, OR have the potential to affect, invalidate, or render incorrect, information contained in any of the following Licensing Basis Document(s)? Contact LBD Owner if needed. Associated regulations and procedures are identified with each Licensing Basis Document below.

LICENSING BASIS DOCUMENTS (Regulations / Procedures)	YES	NO	REVIEW RESULTS OR SECTIONS AFFECTED OR LBDCR #
Quality Assurance Program Manual (QAPM) [10 CFR 50.54(a), 10 CFR 50 Appendix B / EN-QV-104]	☐	☒	
Fire Protection Program (FPP) [Includes the Fire Safety Analysis/Fire Hazards Analysis (FSA/FHA)] OL Condition, 10 CFR 50.48 / EN-DC-128)	☐	☒	
Emergency Plan (Includes the On-Shift Staffing Analysis) [10 CFR 50.54(q) / 10 CFR 50.47 / EN-EP-305/EN-NS-220]	☒	☐	IPEC On-Shift Staffing Analysis Screen and Evaluation
Environmental Protection Plan (Appendix B of the OL, Environmental Evaluation / EN-EV-115, EN-EV-117, EN-LI-103)	☐	☒	
Security Plan [10 CFR 50.54(p) / EN-NS-210 / EN-NS-220 or contact site Security Dept.]	☐	☒	
Cyber Security Plan [10 CFR 50.54 (p) / EN-NS-210]	☐	☒	
Operating License (OL) / Technical Specifications (TS) (10 CFR 50.90 / EN-LI-103)	☐*	☒	
TS Bases (10 CFR 50.59 / EN-LI-100 / EN-LI-101)	☐	☒	
Technical Requirements Manual (TRM) (Including TRM Bases) (10 CFR 50.59 / EN-LI-100 / EN-LI-101)	☐	☒	
Core Operating Limits Report (COLR), and Pressure and Temperature Limits Report (PTLR) (TS Administrative Controls, EN-LI-113, EN-LI-100, EN-LI-101)	☐	☒	
Offsite Dose Calculation Manual (ODCM) (TS Administrative Controls / EN-LI-113, EN-LI-100)	☐	☒	
Updated Final Safety Analysis Report (UFSAR) (10 CFR 50.71(e) / EN-LI-113, EN-LI-100, EN-LI-101)	☐	☒	
Storage Cask Certificate of Compliance (10 CFR 72.244 / EN-LI-113)	☐*	☒	
Cask FSAR (CFSAR) (Including the CTS Bases) (10 CFR 72.70 or 72.248 / EN-LI-113, EN-LI-100,EN-LI-112)	☐	☒	
10 CFR 72.212 Evaluation Report (212 Report) (10 CFR 72.48 / EN-LI-100, EN-LI-112)	☐	☒	
NRC Orders (10 CFR 50.90 / EN-LI-103 or as directed by the Order)	☐*	☒	
NRC Commitments and Obligations (EN-LI-110)	☐*	☒	
Site-Specific CFR Exemption (10 CFR 50.12, 10 CFR 55.11, 10 CFR 55.13, 10 CFR 72.7)	☐*	☒	

*Contact the site Regulatory Assurance Department if needed.

IF any box is checked "Yes," THEN ensure that any required regulatory reviews are performed in accordance with the referenced procedures. Prepare an LBDCR per procedure EN-LI-113, as required, if a LBD is to be changed, and document any affected sections or the LBDCR #. Briefly discuss how the LBD is affected in Section VII.A.

V. 10 CFR 50.59 / 10 CFR 72.48 APPLICABILITY

Can the proposed activity be dispositioned by one or more of the following criteria? Check the appropriate box (if any).

☐	An approved, valid 50.59/72.48 Evaluation covering associated aspects of the proposed activity already exists. Reference 50.59/72.48 Evaluation # _____ (if applicable) or attach documentation. Verify the previous 50.59/72.48 Evaluation remains valid.
☐	The NRC has approved the proposed activity or portions thereof in a license amendment or a safety evaluation, or is being reviewed by the NRC in a submittal that addresses the proposed activity. Implementation of change requires NRC approval. Reference the approval document or the amendment in review.: _____
☐	The proposed activity is administratively controlled by the Operating License (OL) or Technical Specifications (TS). Examples of programs and manuals controlled by the OL or TS are: • Fire Protection Program (OL Condition) (EN-DC-128) • Offsite Dose Calculation Manual (TS Administrative Controls) • Surveillance Frequency Control Program (TS Administrative Controls) (EN-DC-355) See NEI 96-07, Appendix E Section 2 for additional guidance on administrative controls. Reference the administrative control(s):_____
☒	The proposed activity is controlled by one or more applicable regulations. Examples of programs controlled by regulations that establish specific criteria are: • Maintenance Rule (50.65) (EN-DC-203) • Quality Assurance Program (10 CFR 50 Appendix B) • Security Plan [50.54(p)] (EN-NS-210) • Cyber Security Plan [50.54(p)] (EN-NS-210) • Emergency Plan [50.54(q)] (EN-EP-305) • Inservice Inspection Program (50.55a) (EN-DC-351, -352) • Inservice Testing Program (50.55a) (EN-DC-332) See NEI 96-07 Section 4.1 for additional guidance on specific regulations. Reference the controlling specific regulation(s): Emergency Plan [50.54Q] (EN-EP-305)

IF the entire proposed activity can be dispositioned by one of the criteria in Section V, THEN 50.59 and 72.48 Screenings are not required. Proceed to Section VII and provide basis for conclusion in Section VII.A.

Otherwise, continue to Section VI to perform a 50.59 and/or 72.48 Screening, or perform a 50.59 and/or 72.48 Evaluation in accordance with EN-LI-101 and/or EN-LI-112.

Changes to the IPEC Unit 1 Decommissioning Plan are to be evaluated in accordance with the 50.59 process, as allowed by the NRC in a letter to IPEC dated January 31, 1996. [Document ID: RA-96-014]

VI. 50.59 / 72.48 SCREENING REVIEW (All proposed activities must be evaluated to determine if 50.59, 72.48 or both apply. Check the applicable boxes)

VI.A 50.59 SCREENING

☐	50.59 applies to the proposed activity, and all of the following 10 CFR 50.59 screening criteria are met; therefore, the proposed activity requires no further 50.59 review. The proposed activity: • Does not adversely affect the design function of an SSC as described in the UFSAR; AND • Does not adversely affect a method of performing or controlling a design function of an SSC as described in the UFSAR; AND • Does not adversely affect a method of evaluation that demonstrates intended design function(s) of an SSC will be accomplished as described in the UFSAR; AND • Does not involve a test or experiment not described in the UFSAR. Document the basis for meeting the screening criteria in Section VI.C, then proceed to Section VII. [10 CFR 50.59(c)(1)]
☐	The proposed activity does not meet the above criteria. Perform a 50.59 Evaluation in accordance with EN-LI-101. Attach a copy of the Evaluation to this form and proceed to Section VII.

VI.B 72.48 SCREENING

☐	72.48 applies to the proposed activity, and all of the following 10 CFR 72.48 screening criteria are met; therefore, the proposed activity requires no further 72.48 review. The proposed activity: • Does not adversely affect the design function of an SSC as described in the CFSAR; AND • Does not adversely affect a method of performing or controlling a design function of an SSC as described in the CFSAR; AND • Does not adversely affect a method of evaluation that demonstrates intended design function(s) of an SSC will be accomplished as described in the CFSAR; AND • Does not involve a test or experiment not described in the CFSAR. Document the basis for meeting the screening criteria in Section VI.C, then proceed to Section VII. [10 CFR 72.48(c)(1)]
☐	The proposed activity does not meet the above criteria. Perform a 72.48 Evaluation in accordance with EN-LI-112. Attach a copy of the Evaluation to this form and proceed to Section VII.

VI.C BASIS

Provide a clear, concise basis for determining the proposed activity may be screened out such that a third-party reviewer can reach the same conclusions. Identify the relevant design function, as appropriate. Refer to NEI 96-07 Section 4.2 for guidance. Refer to NEI 12-06 Section 11.4 for guidance regarding FLEX. Provide supporting documentation or references as appropriate.

N/A

VII. REGULATORY REVIEW SUMMARY

VII.A GENERAL REVIEW COMMENTS (Provide pertinent review details and basis for conclusions if not addressed elsewhere in form.)

The Indian Point Energy Center Emergency Plan describes the emergency preparedness program for the Indian Point Energy Center 1, 2, and 3 Generating Stations, and the IPEC On-Site Staffing Assessment is part of the Plan, per EN-EP-305. The Plan outlines the basis for response actions that would be implemented in an emergency. This revision to On-Site Staffing Assessment (OSSA) Revision 20-01 incorporates changes as noted in the Revision Matrix. In all cases, no change has resulted in a reduction in effectiveness of the Plan. Specific details regarding each change are included in the 10 CFR 50.54(q) Screen, Evaluation and associated Revision Matrix. The 10 CFR 50.54(q) Evaluation conclusion determined that the proposed changes to the On-Site Staffing Assessment continues to meet the planning standards outlined in 10 CFR 50.47 (b). The Staffing Assessment Revision 20-01 does not represent a reduction in effectiveness to the IPEC Emergency Plan and can be incorporated without prior NRC approval. See completed 10 CFR 50.54(q) Screen and Evaluation.

VII.B CONCLUSIONS

1.	**Is a change to an LBD being initiated?**	☒	**Yes**
	IF "Yes," THEN enter the appropriate change control process and include this form with the change package.	☐	**No**
2.	**Is a 10 CFR 50.59 Evaluation required?**	☐	**Yes**
	IF "Yes," THEN complete a 50.59 Evaluation in accordance with EN-LI-101 and attach a copy to the change activity.	☒	**No**
3.	**Is a 10 CFR 72.48 Evaluation required?**	☐	**Yes**
	IF "Yes," THEN complete a 72.48 Evaluation in accordance with EN-LI-112 and attach a copy to the change activity.	☒	**No**

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VIII. SIGNATURES [1]

Preparer: Craig Delamater/ /Entergy/Emergency Planning/5/26/2020
Name (print) / Signature / Company / Department / Date

Reviewer: A. Iraola/ /Entergy/Emergency Planning/ 5/27/2020
Name (print) / Signature / Company / Department / Date

Process Applicability Exclusion

Site Procedure Champion or Owner: _____
Name (print) / Signature / Company / Department / Date

Upon completion, forward this PAD form to the appropriate organization for record storage. If the PAD form is part of a process that requires transmittal of documentation, including PAD forms, for record storage, then the PAD form need not be forwarded separately.

[1] The printed name should be included on the form when using electronic means for signature or if the handwritten signature is illegible. Signatures may be obtained via electronic authentication, manual methods (e.g., ink signature), e-mail, or telecommunication. Signing documents with indication to look at another system for signatures is not acceptable such as "See EC" or "See Asset Suite." Electronic signatures from other systems are only allowed if they are included with the documentation being submitted for capture in eB (e.g., if using an e-mail, attach it to this form; if using Asset Suite, attach a screenshot of the electronic signature(s); if using PCRS, attach a copy of the completed corrective action).

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	Revision: 20-01
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Part I. Description of Activity Being Reviewed (This is generally changes to the emergency plan, EALs, EAL bases, etc. – refer to Section 3.0 Step 6):

The activity being reviewed is a revision to the IPEC Units 2 and 3 19-01 Phase 1, Staffing Assessment, (OSSA) to incorporate changes identified in the attached revision matrix. The Staffing Assessment has been updated to reflect the changes in the Defuel Safety Analysis Report (DSAR) and the associated Design Bases Accidents (DBA).

Part II. Activity Previously Reviewed?

Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

Justification: N/A

☐ Bounding document attached (optional)

☐ YES	☒ NO
50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.	Continue to next part

Part III. Applicability of Other Regulatory Change Control Processes

Check if any other regulatory change processes control the proposed activity. (Refer to EN-LI-100 and 10 CFR 50.54(Q)).

APPLICABILITY CONCLUSION

☒ If there are no other controlling change processes, continue the 10CFR50.54(q)(3) Screening.
☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 10CFR50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.
☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 10CFR50 54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.

CONTROLLING CHANGE PROCESSES

10 CFR 50.54(q)

Part IV. Editorial Change

Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?

Justification: This staffing study revision contains various editorial changes, but "NO" is checked because the procedure revision contains non-editorial changes per the attached revision matrix. See the editorial changes on the attached document on lines 1-Cover page, 2- Table of contents, 25-Changed the name of equipment, 28-Adjusted the numbering, 32-Added the FSB abbreviation, 35-Aligned the formatting and bulleting, 36-Added Fuel Storage Building and Unit 2, 43- Added Fuel Storage Building and Unit 2, 46- Added Fuel Storage Building and Unit 2, 47- Added Fuel Storage Building and Unit 2, 49-Added the word "On" to the title of the section, 63- Added the word "On" to the title of the section.

☐ YES	☒ NO
50.54(q)(3) Evaluation is NOT required. Enter justification and continue to next part or complete Part VI as applicable.	Continue to next part

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	Revision: 20-01
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Part V. Emergency Planning Element/Function Screen (Associated 10CFR50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?	
1. Responsibility for emergency response is assigned. [1]	☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]	☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]	☒
4. The process for timely augmentation of onshift staff is established and maintained. [2]	☐
5. Arrangements for requesting and using off site assistance have been made. [3]	☐
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]	☐
7. A standard scheme of emergency classification and action levels is in use. [4]	☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]	☐
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]	☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]	☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]	☐
12. Systems are established for prompt communication to emergency response personnel. [6]	☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]	☐
14. Coordinated dissemination of public information during emergencies is established. [7]	☐
15. Adequate facilities are maintained to support emergency response. [8]	☐
16. Adequate equipment is maintained to support emergency response. [8]	☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]	☐
18. A range of public PARs is available for implementation during emergencies. [10]	☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]	☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]	☐
21. The resources for controlling radiological exposures for emergency workers are established. [11]	☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]	☐
23. Plans for recovery and reentry are developed. [13]	☐

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	**Revision: 20-01**
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]	☐
25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]	☐
26. Identified weaknesses are corrected. [14]	☐
27. Training is provided to emergency responders. [15]	☐
28. Responsibility for emergency plan development and review is established. [16]	☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]	☐

APPLICABILITY CONCLUSION

☐ If no Part V criteria are checked, a 10CFR50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

■ If any Part V criteria are checked, complete Part VI and perform a 10CFR50.54(q)(3) Evaluation.

BASIS FOR CONCLUSION

The following changes are non-editorial, but they screen out because the change does not change the meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan:

Change 3: This change to the Introduction documents the new revision and the purpose of the revision which is to reflect that Unit 2 is permanently defueled. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 6: This change adds reference to the Unit 2 Defueled Safety Analysis Report (DSAR) due to Unit 2 being permanently defueled. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 7: This change indicates that both units (Unit 2 and 3) are either operating or no longer operating and that Unit 2 is recently defueled. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 8: This change is to update the applicability of accident scenarios to Unit 2 as it is permanently defueled. Specifically, in accordance with the DSAR, a fire in the Unit 2 Control Room resulting in remote shutdown is no longer applicable. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 10: This change clarifies team members assigned for the current analysis.
This change does not update the analysis or conclusion of the staffing study. The meaning or intent of description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 11: This change clarifies that Chapter 14 of the FSAR applies to Unit 3 and that Chapter 6 of the IP2 DSAR now addresses Unit 2 DBAs. This change reflects the new licensing basis document for a permanently defueled Unit 2. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	Revision: 20-01
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Change 12: This added the DSAR reference due to Unit 2 being permanently defueled and DBA now found in the DSAR for Unit 2. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 13: This change identifies two Design Basis Accidents (DBA's) that were added to the study per the DSAR. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 14: This change has been made to indicate which accident scenarios apply to each unit. Not all scenarios are applicable to the defueled Unit 2 per the DSAR. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 15: This change adds the DSAR reference as that is what is applicable to the defueled Unit 2. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 16: This change added to the Accident Scenarios Analysis #6 for the High Integrity Container Drop Event. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 18: This change adjusts Appendix A showing the Analyzed events and Accidents table for Unit 2 on a separate table from Unit 3. Unit 2 table contains only four events as it is permanently defueled per DSAR. The Unit 3 table contains all 14 original events. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 19: This change adds a note providing information from the DSAR to clarify which analysis is bounding. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 20: This change adds the Unit 2 Defueled analysis report to the reference section, Unit 2 is permanently defueled. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 21: This change is being made to reflect the new staffing analysis team. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 24: The change removes Unit 2 wording from the on-shift staffing analysis because it is permanently defueled. No change to staffing levels or responsibilities are made by this by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	Revision: 20-01
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Change 26: This change corresponds to Change 22 and it provides for an introductory statement that defines what the table depicts regarding the FLEX and Fire Brigade Strategies. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 27: This change clarifies the web browser used for ERO notification system and that there is no effect on the Shift Manager performing notifications to the ERO. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 29: This change clarifies but does not change the function of the Fire Brigade. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 30: This changed the wording from Emergency Plan to the FLEX plan as the wrong plan was previously stated when describing a complement of on-shift personnel. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 31: This change removed the accidents for Unit 2 that are associated with an operating unit. The tables have been removed as a result of the analysis. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change

Change 33: This change added accident scenarios for a defueled unit inside the Fuel Storage Building. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 34: This change describes the conditions that may occur during a fuel accident. There will no longer be refueling outages, or additional staffing as Unit 2 is permanently defueled. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 51: These changes were made to identify the operating unit in the associated procedures. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 53: These changes were made to identify the operating unit in the associated procedures. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 60: These changes were made to identify the operating unit in the associated procedures. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 64: This change removed the note that has Unit 2 take the lead in a Design Basis Event. Unit 2 is defueled and will no long take the lead. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

10CFR50.54(Q)(3) Screening

Procedure/Document Number: IPEC Phase 1 Staffing Study	Revision: 20-01
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Change 65: This change was made to identify the operating unit in the associated procedures. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

Change 71: This change removes the note that states that Unit 2 takes the lead on EP actions. Unit 2 will no longer take the lead as it is now defueled. No change to staffing levels or responsibilities are made by this change. The meaning or intent of a description in the emergency plan, facilities or equipment described in the emergency plan or a process described in the emergency plan are not affected by this change. No further evaluation is required for this change.

The above changes from the revision matrix made to the On-Shift Staffing Analysis have been reviewed to determine if they affect any of the planning standards or program elements in Part V of this form. It has been concluded that there is no effect on the planning elements and no further evaluation is required for these changes.

Part V. Emergency Planning Element 3, in Part V of this form, is affected by changes 4,5,9,17,22,23,37,38,39,40,41,42,44,45,48,50,52,54,55,56,57,58,59,61,62,66,67,68,69,70,72,73,74,75,76 identified on the revision matrix. A 10CFR 50.54(q) evaluation will be performed to determine if the effectiveness of the IPEC Emergency Plan is reduced and prior NRC approval is required.

Part VI. Signatures:

Preparer Name (Print) Craig Delamater	Preparer Signature	Date: 5/26/2020
(Optional) Reviewer Name (Print) Antonio Iraola	Reviewer Signature	Date: 5/27/2020
Reviewer Name (Print) Timothy Garvey Nuclear EP Project Manager	Reviewer Signature Mark for T. Garvey per telecon	Date: 5/26/2020
Approver Name (Print) Frank Mitchell Emergency Planning Manager or designee	Approver Signature	Date: 5/27/2020

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Part I. Description of Proposed Change:

The activity being reviewed is a revision to the IPEC Units 2 and 3 19-01 Phase 1, Staffing Assessment, (OSSA) to incorporate changes identified in the attached revision matrix. The Staffing Assessment has been updated to reflect the changes in the Defuel Safety Analysis Report (DSAR) and the associated Design Basis Accidents. The following items from the revision matrix did not screen out:4,5,9,17,22,23,37,38,39,40,41,42,44,45,48,50,52,54,55,56,57,58,59,61,62,66,67,68,69,70,72,73,74,75,76 and will be evaluated in this document under Part V of this document.

Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

The Indian Point On-Shift Staffing Analysis Report (Phase 1) (OSSA) has been reviewed through the Process Applicability Determination (PAD) in accordance with the criteria described in NEI 96-07 and EN LI-100. This proposed change does not (I) change the facility or procedures as described in the UFSAR/DSAR or (2) create a test or equipment not described in the UFSAR/DSAR and is governed under the Emergency Plan 10 CFR 50.54(q) screening process in accordance with EN-EP-305. These proposed changes do not involve structures, systems or components controlled by 10 CFR 50.59 or 72.48 and do not have the potential to impact any of the License Basis Documents (LBDs) on the PAD form, except for the Emergency Plan. All responses to the questions contained in sections III and IV of the PAD form were determined to be "no impact". Since these proposed changes do not contain any requirements that could affect any LBDs other than the Emergency Plan, it is determined to be fully governed under 10 CFR 50.54(q). In addition to those reviewed for the PAD, each of the following documents/relevant sections was reviewed:

a) The original Plans. U2 1970 and 1.33 1973, were not available for review.
b) Historical 10CFR50.54 (q) documents were manually reviewed dating back to 2005 for significant changes. No impact identified based on proposed changes.

Part III. Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC:

10 CFR 50.47(b)(2)—Onsite Emergency Organization

The process ensures that on-shift emergency response responsibilities are staffed and assigned.

Site Compliance: The changes associated with revision 20-01 of OSSA changes the minimum staffing for the Emergency Plan due to Unit 2 being permanently defueled and the associated Defuel Safety Analysis Report (DSAR). Changing the minimum staffing required a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan. Staffing has been reduced by four positions. These position reductions were analyzed and have no adverse effect on maintain the effectiveness of the Emergency Plan.

Previous NRC Commitments – During the Process Applicability Determination (PAD) review, the Licensing Research System and the NRC Orders were reviewed for potential NRC Commitment changes as a result of this revision. There were no identified conflicts with the On-Shift Staffing Analysis revision. The amendments revise the on-shift staffing and emergency response organization in the site emergency plan for the post-shutdown and permanently defueled condition, which has been approved by the NRC on April 15, 2020 via NRC document RA-20-040. The Safety Evaluation included with the April 15, 2020 PSEP License Amendment makes statements that the staffing levels that were proposed in the PSEP LAR were evaluated against 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the requirements would continue to be met.

A review of U2/U3 Technical Specifications, U2/U3 UFSAR, U2 DSAR, NRC Orders, and the Indian Point Emergency Plan were all conducted.

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Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change:

10 CFR 50.47(b)(2)—Onsite Emergency Organization

The process ensures that on-shift emergency response responsibilities are staffed and assigned.

Program Elements: Sections IV.A.2.a—c, IV.A.3, and IV.C of Appendix E to 10 CFR Part 50 provide supporting requirements. Informing criteria appear in Section II.B of NUREG-0654 and in the IPEC Emergency Plan.

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Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

Change 4: This change reduces the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 5: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 9: This change removed four positions from the on-shift minimum staffing due to Unit 2 being permanently defueled in accordance with the associated DSAR. These reductions were analyzed in the On-Shift Staffing Analysis performed using NEI10-05 guidance. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 17: This change removes the Shift Technical Advisor (STA) from Unit 2 because the unit is being defueled and no longer requires the STA. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, without the STA, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

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Change 22: This change adds a new table that shows the total on-shift staff required, including those needed to implement FLEX strategies. These staffing totals are in accordance with the updated Phase 2 staffing assessment which was separately reviewed in accordance with 10CFR 50.54(q) and found not to reduce effectiveness of the emergency plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 23: This change identifies that staffing has been reduced from 13 to four positions. This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 37: This change removes the Shift Technical Advisor (STA) from Unit 2 because the unit is being defueled and no longer requires the STA. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, without the STA, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 38: This change removes the Unit 2 RO from the Table B-1.This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 39: Removed two (2)AO's from the Table B-1.This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

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can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 40: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 41: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 42: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 44: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 45: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

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can be Incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 48: This change adjusts performance times for personnel responding to an accident on Unit 2 based on the unit being defueled. There is no response above the previous 60-minute response times. The analysis demonstrates that at this reduced staffing level on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 50: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 52: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 54: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 55: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

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can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 56: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 57: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 58: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 59: This change adjusts the role of on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 61: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

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can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 62: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 66: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 67: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 68: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 69: This change adjusts the on-shift minimum staffing and training for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

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can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 70: This change adjusts the on-shift minimum staffing and roles/responsibilities for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 72: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 73: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 74: This change adjusts the on-shift minimum staffing for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 75: This change adjusts the on-shift minimum staffing and training for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and

10CFR50.54(Q)(3) Evaluation

Procedure/Document Number: IPEC Phase 1 Staffing Analysis	Revision: 20-01
Equipment/Facility/Other: Indian Point (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Change 76: This change adjusts the on-shift minimum staffing and roles/responsibilities for Emergency Planning due to Unit 2 being permanently defueled in accordance with the associated DSAR. This revision of the staffing study used the guidance in NEI 10-05. The analysis demonstrates that at this reduced staffing level, on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the Emergency Plan.

The change does not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a–c, IV.A.3, and IV.C and can be incorporated without prior NRC approval because on-shift personnel are not assigned responsibilities that would prevent timely performance of assigned emergency plan functions.

Conclusion Regarding Impact:

These changes do not represent a reduction in the effectiveness of the emergency plan, continues to meet planning standard 10 CFR 50.47(b)(2) and 10CFR50 Appendix E Sections IV.A.2.a-c, IV.A.2, and IV.C and can be incorporated without prior NRC approval because the effectiveness of the emergency plan is not reduced. These changes can be incorporated without prior NRC approval.

Part VI. Evaluation Conclusion

Answer the following questions about the proposed change.

1. Does the proposed change comply with 10CFR50.47(b) and 10CFR50 Appendix E?	☒YES ☐ NO
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	☒YES ☐ NO
3. Does the proposed change constitute an emergency action level scheme change?	☐YES ☒ NO

If questions 1 or 2 are answered NO, or question 3 answered YES, reject the proposed change, modify the proposed change and perform a new evaluation or obtain prior NRC approval under provisions of 10CFR50.90. If questions 1 and 2 are answered YES, and question 3 answered NO, implement applicable change process(es). Refer to Section 6.7 Step 8.

Part VII. Signatures

Preparer Name (Print) Craig Delamater	Preparer Signature	Date: 5/26/2020
(Optional) Reviewer Name (Print) Antonio Iraola	Reviewer Signature	Date: 5/27/2020
Reviewer Name (Print) Timothy Garvey Nuclear EP Project Manager	Reviewer Signature for T. Garvey per telecon	Date: 5/26/2020
Approver Name (Print) Frank Mitchell	Approver Signature	Date: 5/27/2020

10CFR50.54(Q)(3) Evaluation

Procedure/Document Number: IPEC Phase 1 Staffing Analysis	**Revision: 20-01**
Equipment/Facility/Other: Indian Point (IPEC)	
Title: Indian Point On-Shift Staffing Analysis (Phase 1)	

Emergency Planning Manager or designee	

LBDCR Form (typical)

(TYPICAL)

I. LBDCR INITIATION

A. Iraola	Emergency Planning	7704	1,2,3	June 1, 2020	20-01
INITIATOR'S NAME *(print or type)*	**DEPARTMENT**	**PHONE**	**UNIT**	**DATE**	**LBDCR #**

DESCRIPTION OF THE CHANGE (Attach additional pages if necessary; may also reference PAD Form)
The revised IPEC On-Shift Staffing Analysis Report was revised to account for the permanent defuel of Unit 2. Refer to the attached matrix of changes.

	LICENSING DOCUMENT(S) AFFECTED	**AFFECTED SECTION/PAGE(S)** *(Attach marked-up pages)*
☐	**Operating License (OL)**	
☐	**Technical Specifications (TS)**	
☐	**Environmental Protection Plan (EPP)**	
☐	**Anti-Trust Conditions (Appendix of OL)**	
☐	**NRC Orders**	
☐	**Updated Final Safety Analysis Report (UFSAR)**	
☐	**TS Bases**	
☐	**Technical Requirements Manual (TRM) (including TRM Bases)**	
☐	**Quality Assurance Program Manual (QAPM)**	
☐	**Security Plan/Cyber Security Plan (CSP)**	
☒	**Emergency Plan (EP)**	
☐	**Offsite Dose Calculation Manual (ODCM)**	
☐	**Spent Fuel Storage Cask Final Safety Analysis Report (CFSAR)**	
☐	**Spent Fuel Storage Cask Certificate of Compliance (CoC)**	
☐	**Spent Fuel Storage Cask CoC Bases**	
☐	**10 CFR 72.212 Evaluation Report (212 Report)**	
☐	**Fire Protection Program (FPP)/Fire Hazards Analysis (FHA)**	
☐	**Core Operating Limits Report (COLR)**	
☐	**Other (Specify)** _____	

LBDCR Form (typical)

METHOD(S) ALLOWING THE CHANGE			
☒	**PAD Review** (Attach a copy)	☐	**10 CFR 50.48 / EN-DC-128 Review** (Attach a copy)
☐	**10 CFR 50.59 Evaluation** (Attach a copy)	☐	**10 CFR 50.54 Review** (Attach a copy)
☐	**10 CFR 72.48 Evaluation** (Attach a copy)	☐	**Environmental Evaluation** (Attach a copy)
☐	**Approved NRC Change** (Attach a copy of NRC Letter or reference NRC letter number)	☐	**Editorial Change** (LBDs controlled under 50.59 or 72.48, only)
☐	**NRC Approval is Required**	☐	**Other Approval** (Attach a copy of supporting documents)
☐	**"UFSAR-only" Change (NEI 98-03)** Check the appropriate box below: ☐ Reformatting ☐ Replacing Detailed Drawing ☐ Referencing other Documents Check the appropriate box below and provide a basis for removing information, if applicable: ☐ Removing Excessive Detail ☐ Removing Obsolete Information ☐ Removing Redundant Information ☐ Removing Commitments Removal Basis:		

II. LBDCR IMPLEMENTATION[1]

ACTIONS SUPPORTING IMPLEMENTATION			
LBD SECTION	**REQUIRED ACTIONS**		**ACTION TAKEN OR TRACKING METHOD**
	ACTION	**RESP. DEPT**	
See attached matrix	Issuance of the revised IPEC On-Shift Staffing Analysis Report, Revision 20-01 scheduled for June 1, 2020	EP	Entry into EB on June 1, 2020

LBDCR Form (typical)

III. LBDCR REVIEW AND APPROVAL[1]

REVIEW AND APPROVAL of LBDCR *(see Attachment 2.)*		
Department	**Approved[2]**	**Date**
UFSAR Section Owner[3]		
Peer Review	A. Iraola/	5/11/20
LBD Owner	F. Mitchell/	5/11/2020

[1] Add additional table rows as needed.

[2] The printed name should be included on the form when using electronic means for signature or if the handwritten signature is illegible. Signatures may be obtained via electronic authentication, manual methods (e.g., ink signature), e-mail, or telecommunication. Signing documents with indication to look at another system for signatures is not acceptable such as "See EC" or "See Asset Suite." Electronic signatures from other systems are only allowed if they are included with the documentation being submitted for capture in eB (e.g., if using an e-mail, attach it to this form; if using Asset Suite, attach a screenshot of the electronic signature(s); if using PCRS, attach a copy of the completed corrective action).

[3] UFSAR Section Owners should refer to EN-LI-113-01, "Updated Final Safety Analysis Report Change Process," for review expectations. N/A if change does **NOT** update the UFSAR.

Attachment 1

Change Impact Checklist

This Checklist assists the change lead with identifying the specific impacts on people and processes. The checklist provides details of specific actions required to implement the change. The Change Owner /Lead completes the Change Impact Checklist to identify the needed forms identified in Section IV for the Impact Level of the change. Additionally, the Change Owner/Lead uses additional forms and references identified in section II to analyze the change. This form is completed by following Section 7.3 in the procedure. See Section 7.8 for documentation requirements.

IF the change is a personnel change ONLY,
THEN use Attachment 4.

Section I - DEFINE the Change: REFERENCE Section 7.3 Step 1			
Title of Change:	**On-Shift Staffing Analysis 20-01**		
Change Owner:	**F. Mitchell**	**Change Sponsor:**	**F. Mitchell**
Change Lead:	**Craig Delamater**	**Project Manager:**	

What is the Change? (*PROVIDE a brief description of what will be different and change scope.)*

Refer to the attached matrix for a summary of all the changes.

Who and What groups/departments are impacted by the change? (*IDENTIFY employees/groups, programs, processes, regulations, equipment, facilities, etc. affected by the change.)*

Emergency Response Organization and Operations

Why is the Change necessary? (*PROVIDE a reason for the change, the benefit gained or consequence avoided.)*

The Staffing Assessment has been updated to reflect the changes in the Defuel Safety Analysis Report and the associated Design Bases Accidents. These changes are being made as a result of Unit 2 being defueled and permanently shutdown.

When is the proposed or desired Date for Change? (*IDENTIFY timeline or effective date for change.)*

June 1, 2020

Where is the Change being Implemented? (*CHECK as applicable; DOUBLE CLICK box to select)*

☐ Fleet-Wide ☐ Echelon ☐ White Plains ☐ ANO ☐ GGNS ☒ IPEC ☐ PAL
☐ PIL ☐ RBS ☐ VY ☐ WF3 ☐ Other _____

What SHOULD NOT be affected as a result of this change? (*IDENTIFY any areas affected employees/groups might likely assume would be affected, but are not included.)*

Attachment 1

Change Impact Checklist

Yes	No	Unsure	**Section II - Impact Evaluation: REFERENCE** Section 7.3 Step 2	Notes
☐	☒	☐	Impact Nuclear, Radiological, Industrial Safety or Equipment Reliability?	
☒	☐	☐	Impact Licensing: FSAR/Technical Specifications/QA Program/Commitments? *(i.e., ANSI, 50.59, 50.54, etc.)* ***PERFORM*** *evaluation in accordance with EN-LI-100*	
☒	☐	☐	Impact E-Plan, Security Plan, QA Manual? ***PERFORM*** *evaluation in accordance with EN-LI-100*	
☐	☒	☐	Impact to Procedures/Policies? *(e.g., non-editorial changes, change that affects multiple procedures, etc.)*	
☐	☒	☐	Impact scheduled Plant Work Activities or Operating Schedule?	
☐	☒	☐	Impact computer programs/applications software? *If Yes,* ***EVALUATE*** *need for an SQA- Reference EN-IT-104.*	
☐	☒	☐	Impact Accredited Training Job Task or Qualifications of Personnel? *If Yes, an action* ***must*** *be initiated* in accordance with *EN-TQ-201.* ***CONTACT*** *Training management for additional information.*	
☐	☒	☐	Impact ANSI 3.1 Qualification Requirements (**SEE** EN-HR-137) ***PERFORM*** *evaluation in accordance with EN-HR-137*	
☐	☒	☐	Impact organizational responsibility, e.g., require transfer of responsibility from one organization to another? *If Yes,* ***REFERENCE*** *EN-HR-134 during change planning. Note: transferring responsibilities between organizations may impact the QAPM. Evaluate in accordance with applicable Licensing (EN-LI) procedures.*	
☐	☒	☐	Impact resources or physical workload in other departments or organizations? *(e.g., work activities, process time, employee schedules?)*	
☐	☒	☐	Impact contractor resources which are working under Entergy procedures? (e.g., contractors working under Entergy procedures require additional notification beyond normal communication channels)	
☐	☒	☐	Impact of other Areas, Processes or Facilities to support the change? (Internal or External?)	
☐	☒	☐	Potential for new equipment or system not to function properly at implementation? **CONSIDER** use of *Contingency/Prevention Worksheet,* Attachment 6	
☐	☒	☐	Change requires specific skills, experience and subject matter experts for successful plan development and implementation? ***USE*** *Team Skill Matrix,* Attachment 5	
☐	☒	☐	Change involves a temporary or permanent employee change due to: Promotion, Transfer, New Hire, Resignation, Retirement, Staffing Restructuring or Termination	

Attachment 1

Change Impact Checklist

Yes	No	Unsure	**Section II - Impact Evaluation: REFERENCE** Section 7.3 Step 2	Notes
			Leave of Absence, Medical Leave or Temporary Work Assignment. ***USE*** *Personnel Change Checklist,* Attachment 4	

Section III – IDENTIFY the Change Impact Level: (REFERENCE Section 7.3 Step 3)	Low	Medium	High	Major
REFER TO Section 7.3 Step 3 for guidance.	X			

Checked "Yes" to any of the above questions in Section II? ENSURE all "Yes" responses were factored into the impact level evaluation.

Checked "Unsure" to any of the above questions in Section II? REVIEW all notes and evaluate for follow-up actions.

INCLUDE any incomplete follow-up actions in the implementation plan.

SECTION IV – CHANGE MANAGEMENT PROCESS STEPS BY IMPACT TYPE (*FOLLOW THE PROCEDURE GUIDANCE IDENTIFIED BELOW FOR THE IMPACT LEVEL OF THE CHANGE*)

PROCESS	LOW	MEDIUM	HIGH	MAJOR
ASSIGN CHANGE ROLES (SECTION 7.3 STEP 5)	CHANGE OWNER, CHANGE LEAD	SPONSOR, CHANGE OWNER, CHANGE LEAD	SPONSOR, CHANGE OWNER, CHANGE LEAD, PROJECT MANAGER (OPT.)	SPONSOR, CHANGE OWNER, CHANGE LEAD, PROJECT MANAGER
ANALYZE THE CHANGE (SECTION 7.4)	DEVELOP COMMUNICATIONS	Attachment 2 Attachment 4 (OPT)	Attachment 2 (FLEET AND SITE LEVEL) Attachment 4 (OPT) RESOURCE-TO-WORKLOAD RATIO ANALYSIS (3.4[1](G))	
PLAN THE CHANGE (SECTION 7.5)		Attachment 3	Attachment 3 (FLEET AND SITE LEVEL) Attachment 6 Attachment 7 (PLAN ACTIONS FOR EFFECTIVENESS REVIEW)	
IMPLEMENT THE CHANGE (SECTION 7.6)	IMPLEMENT & COMMUNICATE CHANGE	Attachment 3 COMPLETED	Attachment 3 COMPLETED (FLEET AND SITE LEVEL)	
REVIEW THE CHANGE (SECTION 7.7)		Attachment 7 (OPT) Attachment 8 (OPT)	Attachment 7 Attachment 8	
DOCUMENT THE CHANGE (SECTION 7.8)	DEPT STORED	PCRS (OPT)	PCRS (Attachment 1, Attachment 2, Attachment 3, Attachment 6, Attachment 7)	

Concurrence of Phase 1 Review Completion for Major and High Impact Changes: (Section 7.3 Step 6)		
ROLE	**NAME**	**DATE**
CHANGE OWNER/LEAD		
SPONSOR		
GOVERNANCE OWNER		
SITE PROCESS OWNER		

Attachment 9.1

Emergency Planning Document Change Checklist Form

(All sections must be completed, N/A or place a check on the line where applicable)

Section 1

Doc/Procedure Type:	Administrative ☐ Implementing ☐ EPLAN ☒ N/A ☐
Doc/Procedure No:	IPEC-EP-Staff
Doc/Procedure Title:	IPEC Phase 1 Staffing Analysis
New revision number:	20-01
Corrective Action:	Yes ☐ No ☒ N/A ☒ CR#:
Effective date:	June 1, 2020

Section 2

Change Description

1. Ensure the following are completed, or are not applicable and are so marked:
   a. 50.54q ☒ N/A ☐
   b. EN-FAP-OM-023 ☒ N/A ☐
   c. IP-SMM- AD-102 ☒ N/A ☐
   d. OSRC ☒ N/A ☐
   e. NRC Transmittal (within 30 days) ☒ N/A ☐
2. List any other documents affected by this change: N/A
3. Transmittals are completed: ☐ N/A ☒ Date: 5/28/2020
4. Ensure the proper revision is active in eB Ref. Lib.: ☒ N/A ☐
5. Approved doc/procedure delivered to Doc. Control for distribution: ☐ N/A ☒ Date: 5/28/2020
6. Position Binders updated: ☒ N/A ☐ Date: _____
7. Copy of EPDCC placed in EP file: ☐ N/A ☒ Date: 5/28/2020
8. Supporting documentation is submitted as a general record in eB Ref. Lib.: ☐ N/A ☒ Date: 5/28/2020
9. Word files are moved from working drafts folder to current revision folder in the EP drive: ☐ N/A ☒ Date: 6/1/2020

ATTACHMENT 10.2 IPEC PROCEDURE REVIEW AND APPROVAL

(Page 1 of 1)

Procedure Title: IPEC On-Shift Staffing Analysis Report

Procedure No: IPEC-EP-STAFF Existing Rev: 19-01 New Rev: 20-01 DRN/EC No: N/A

Procedure Activity (MARK Applicable)	☐ Converted To IPEC, Replaces:	Temporary Procedure Change (MARK Applicable)
☐ NEW PROCEDURE ☐ GENERAL REVISION ☒ PARTIAL REVISION ☐ EDITORIAL REVISION ☐ VOID PROCEDURE ☐ SUPERSEDED	Unit 1 Procedure No: _____ Unit 2 Procedure No: _____ Unit 3 Procedure No: _____	☐ EDITORIAL Temporary Procedure Change ☐ ADVANCE Temporary Procedure Change ☐ CONDITIONAL Temporary Procedure Change Terminating Condition: _____
☐ RAPID REVISION	Document in Microsoft Word: ☐ Yes ☐ No	☐ VOID DRN/TPC No(s): _____

Revision Summary ☐ N/A - See Revision Summary Matrix.

Implementation Requirements

Implementation Plan? ☐ Yes ☒ No Formal Training? ☐ Yes ☒ No Special Handling? ☐ Yes ☒ No

RPO Dept: Emergency Planning Writer **(Print Name/ Ext/ Sign)**: Craig Delamater/2619/

Review and Approval (Per Attachment 10.1, IPEC Review And Approval Requirements)

1. ☒ Technical Reviewer: A. Iraola/ 5/27/2020
   (Print Name/ Signature/ Date)
2. ☐ Cross-Disciplinary Reviewers:
   Dept: _____ Reviewer: _____
   (Print Name/ Signature/ Date)
   Dept: _____ Reviewer: _____
   (Print Name/ Signature/ Date)
3. ☒ **RPO- Responsibilities/Checklist**: F. Mitchell 5/5 FM 5/11/2020 5/27/2020
   (Print Name/ Signature/ Date)
   - ☒ PAD required and is complete (PAD Approver and Reviewer qualifications have been verified)
   - ☐ Previous exclusion from further LI-100 Review is still valid
   - ☐ PAD not required due to type of change as defined in 4.6
4. ☐ Non-Intent Determination Complete: _____
   (Print Name/ Signature/ Date)

   NO change of purpose or scope
   NO reduction in the level of nuclear safety
   NO voiding or canceling of a procedure, unless requirements are incorporated into another procedure or the need for the procedure was eliminated via an alternate process.
   NO change to less restrictive acceptance criteria
   NO change to steps previously identified as commitment steps
   NO deviation from the Quality Assurance Program Manual
   NO change that may result in deviations from Technical Specifications, FSAR, plant design requirements or previously made commitments.
5. ☐ On-Shift Shift Manager/CRS: _____
   (Print Name/ Signature/ Date)
6. ☐ User Validation: User: _____
7. ☐ Special Handling Requirements Understood: _____

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
1.	COVER PAGE	Rev 19-01 February 7, 2019 Prepared by: Dara Gray Casey Karsten	Rev 20-01 June 1, 2020 Prepared by: Gary Norton Approval : Frank Mitchell	Yes	No – This is a change to the revision number, date and signatures.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
2.	**Page 2 Table of Contents VII**	VII. APPENDIX B-U2 ON-SHIFT STAFFING ANALYSIS....17 A. Design Basis Accident Analysis #3-Steam line Rupture...17 B. Design Basis Accident Analysis #4-Loss of Coolant Accident (LOCA)...22 C. Design Basis Accident Analysis #5-Steam Generator Tube Rupture (SGTR)...28 D. Design Basis Accident Analysis #6 Fuel Handling Accident...34 E, Design Basis Accident Analysis #10 Control Room Evacuation and Alternate Shutdown...40 F. Design Basis Accident Analysis #11 Station Blackout (SBO)...46 G. Design Basis Accident Analysis #12 LOCA/General Emergency with Release and PAR...51	VII. APPENDIX B-U2 ON-SHIFT STAFFING ANALYSIS....17 A. Design Basis Accident Analysis #6-Fuel Handling Accident in FSB...18	Yes	No - This is an editorial change to the Table of Contents.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

3.	**Page 4** **Section I** **INTRODUCTION** **Paragraph 1**	This document is a revision to the Indian Point Energy Center (IPEC) On-Shift Staffing Analysis Report added to the IPEC Emergency Plan on December 17, 2012, as updated via the December 2015 Revision to the Report (Revision 1) submitted to the US NRC (Letter NL-15-154), Revision 1 incorporated the analysis of the responsibilities of the on-shift staff supporting IPEC Unit 1 and documented the evaluation of the Shift Manager's task of Emergency Response Organization (ERO) notification. This revision (Revision 19-01) documents the fact that both the Fire Brigade Leader and the Communicator can come from either unit and need not only come from Unit 3, as previously listed in the unit staffing numbers.	This revision (Revision 20-01) documents the fact that Unit 2 is permanently defueled. Revision 1 to the Indian Point Energy Center (IPEC) On-Shift Staffing Analysis Report added to the IPEC Emergency Plan on December 17, 2012, as updated via the December 2015 Revision to the Report submitted to the US NRC (Letter NL-15-154), Revision 1 incorporated the analysis of the responsibilities of the on-shift staff supporting IPEC Unit 1 and documented the evaluation of the Shift Manager's task of Emergency Response Organization (ERO) notification. Revision (Revision 19-01) documents the fact that both the Fire Brigade Leader and the Communicator can come from either unit and need not only come from Unit 3, as previously listed in the unit staffing numbers.	No	No – This documents the new revision and unit 2 being permanently defueled.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
4.	**Page 4 Section I** INTRODUCTION **Paragraph 2**	It does not identify the need for nor incorporate any changes to the necessary minimum staffing and merely provides a clarification on the units from which personnel supporting emergency planning functions can be supplied.	The revision does reduce the necessary minimum staffing since Unit 2 is permanently defueled and no longer requires the additional staffing to ensure successful plant operation and safe shutdown	No	Yes – This changes the minimum staffing for emergency planning due to unit 2 being permanently defueled. Changing the minimum staffing due to unit 2 being permanently defueled required a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan. A structured approach using the guidance found in NEI 10-05 was utilized to perform the analysis which is incorporated in this staffing study.
5.	**Page 4 Section II** ANALYSIS SUMMARY Paragraph 1	The OSA team determined that a total on-shift staff of twenty-six (26) for IPEC units 1, 2 and 3 is required to respond to the accidents reviewed.	The OSA team determined that an on-shift staff of seventeen (17) for IPEC units 1, 2 and 3 is required to respond to the accidents reviewed for emergency planning, with five additional positions required for FLEX totaling twenty-two (22) positions.	No	Yes – Changing the minimum staffing due to unit 2 being permanently defueled required a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan. A structured approach using the guidance found in NEI 10-05 was utilized to perform the analysis which is incorporated in this staffing study.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
6.	**Page 4-5 Section II** ANALYSIS SUMMARY Paragraph 1	As detailed in the Unit 1 Safety Analysis Report and Decommissioning Plan, there are limited operating systems remaining in Unit 1.	As detailed in the Unit 1 Safety Analysis Report and Decommissioning Plan and the IP2 Defueled Safety Analysis Report, there are limited operating systems remaining in Unit 1.	No	No – This change adds the IP2 Defueled Safety Analysis Report due to unit 2 being permanently defueled.
7.	**Page 5 Section II** ANALYSIS SUMMARY Paragraph 1	As such, the IPEC on-shift staff actions in response to the accidents evaluated for this staffing analysis are bounded by the operating units (Units 2 and 3) and a separate evaluation of the NEI 10-05 required accidents for Unit 1 is not included in the analysis.	As such, the IPEC on-shift staff actions in response to the accidents evaluated for this staffing analysis are bounded by the operating or recently defueled units (Unit 2 and 3) and a separate evaluation of the NEI 10-05 required accidents for Unit 1 is not included in the analysis.	No	No – This changed units 2 and 3 to operating or recently defueled. Unit 2 is permanently defueled and unit 3 will remain an operating unit.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
8.	**Page 5 Section II** ANALYSIS SUMMARY Paragraph 3	The most limiting accident scenario reviewed for the operating units (Units 2 and 3) was a main control room fire and alternate shutdown.	The most limiting accident scenario reviewed for the operating unit (Unit 3) was a main control room fire and alternate shutdown.	No	No – The change is to remove unit 2 from some accident scenarios as it will be permanently defueled therefore a fire in the unit 2 main control room is not the most limiting accident scenario.
9.	**Page 6 A. Emergency Plan Minimum Staffing Table**	Row 4 - Shift Technical Advisor/FSS (STA) U 2 (1) U 3 (1) Row 5 – Reactor Operators (RO) U 2 (2) U 3 (2) Row 6 – Nuclear Plant Operator (NPO) U 2 (5) U 3 (4)	Row 4 - Shift Technical Advisor/FSS (STA) U 2 (0) U 3 (1) Row 5 – Reactor Operators (RO) U 2 (0) U 3 (2) Row 6 – Nuclear Plant Operator (NPO) U 2 (0) U 3 (4)	No	Yes – Staffing has been reduced from 13 to four positions. These position reductions were analyzed in this ON-SHIFT STAFFING ANALYSIS.
10.	**Page 9 Section III Analysis Process paragraph 1**	This analysis was conducted by a joint team of corporate Emergency Preparedness (EP) personnel and station personnel from the Operations, Operations Training, Radiation Protection, Chemistry, and Emergency Preparedness (EP) departments. The team members are identified in Section XIII of this report.	The original analysis was conducted by a joint team of Emergency Preparedness (EP) personnel and Operations, Operations Training, Radiation Protection, Chemistry, and Emergency Preparedness (EP) departments. The team members for this analysis are identified in Section XIII of this updated version.	No	No - The change clarifies team members assigned for the current analysis. This change does not update the analysis or conclusion of the staffing study.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
11.	**Page 10 Section III Analysis Process paragraph 3**	Each of IPEC's DBAs were evaluated and classified according to its FSAR Chapter 14 description. If the accident description alone did not result in a classification, the projected accident Exclusion Area Boundary (EAB) dose found in the FSAR was utilized to determine if an EAL threshold would be exceeded within the first 60 minutes using the Abnormal Rad Level EAL thresholds.	Each of IPEC's DBAs were evaluated and classified according to IP3 FSAR Chapter 14 description or the IP2 DSAR Chapter 6 description. If the accident description alone did not result in a classification, the projected accident Exclusion Area Boundary (EAB) dose found in the FSAR or DSAR was utilized to determine if an EAL threshold would be exceeded within the first 60 minutes using the Abnormal Rad Level EAL thresholds	No	No– This change removed unit 2 from the FSAR Chapter 14 and added it to IP2 DSAR. Unit 2 is permanently defueled so reference documents have changed.
12.	**Page 10 Section IV Accident Scenario's Paragraph 1**	The evaluation considered the station Design Basis Accidents (DBA) described in the FSAR along with additional scenarios specified by the guidance documents.	The evaluation considered the station Design Basis Accidents (DBA) described in the FSAR or DSAR along with additional scenarios specified by the guidance documents.	No	No – Added DSAR reference due to unit 2 being permanently defueled and DBA now found in the DSAR for unit 2.

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13.	**Page 10/11 Section IV Accident Scenario's A. bullets**	N/A	• DBA Fuel-Handling Accident in Fuel Storage Building • DBA High Integrity Container Drop Event	No	No– No evaluation is needed for staffing for 2 DBA's that were added.

14.	**Page 11 Section IV B.** Accident Scenarios included in the Analysis	1. Design Basis Threat (DBT) as described in NEI 10-05 • Land and/or waterborne Hostile Action directed against the Protected Area by a Hostile Force. This event assumes the threat is neutralized immediately when inside the protected area fence, no significant damage to equipment or systems that require corrective actions before the ERO is staffed, no radiological release, and no fire that requires firefighting response before the ERO is staffed. EAL is based on the event. 2. Steam Line Rupture as described in FSAR 14.2.5 • A main steam line break with loss of offsite power. Release into the turbine building until Main steam stop valves isolates. EAL is based on the event. 3. Loss of Coolant Accident as described in FSAR 14.3 • Break (Double Ended Guillotine Cold Leg (DEGGL) break) between the reactor coolant pump and the reactor vessel. Core degradation with release to the containment and to the	1. Design Basis Threat (DBT) as described in NEI 10-05 (Unit 2 and Unit 3) • Land and/or waterborne Hostile Action directed against the Protected Area by a Hostile Force. This event assumes the threat is neutralized immediately when inside the protected area fence, no significant damage to equipment or systems that require corrective actions before the ERO is staffed, no radiological release, and no fire that requires firefighting response before the ERO is staffed. EAL is based on the event. 2. Steam Line Rupture as described in FSAR 14.2.5 (Unit 3) • A main steam line break with loss of offsite power. Release into the turbine building until Main steam stop valves isolates. EAL is based on the event. 3. Loss of Coolant Accident as described in FSAR 14.3 (Unit 3)	No	No – Changes have been made to indicate which accident scenarios apply to each unit. Not all scenarios are applicable to the defueled unit 2 per the DSAR. Bullet under #6 removed >5 minutes as it is not part of the EAL. This does not change the DBT as analyzed. Added Accident Scenario 10 Fuel Handling Accident as described in DSAR 6.2.1 (unit 2) Added the affected unit to each bullet.

		environment at the containment design leakage rate. EAL is based on the event. 4. Steam Generator Tube Rupture as described in FSAR 14.2.4 • Double ended rupture of a single U-tube that results in exceeding charging pump capacity. No fuel failure is postulated. The EAL is based on the event 5. Fuel Handling Accident as described in FSAR 14.2.1 • The accident involves a dropped fuel bundle on top of the core. Initial EAL is based on the event. 6. Aircraft Probable Threat as described in 10 CFR 50.54 hh(1) • Notification is received from the NRC that a probable aircraft threat exists (>5 minutes, <30 minutes). EAL is based on the event 7. CR Fire Requiring CR evacuation and Alternate Shutdown	• Break (Double Ended Guillotine Cold Leg (DEGGL) break) between the reactor coolant pump and the reactor vessel. Core degradation with release to the containment and to the environment at the containment design leakage rate. EAL is based on the event. 4. Steam Generator Tube Rupture as described in FSAR 14.2.4 (Unit 3) • Double ended rupture of a single U-tube that results in exceeding charging pump capacity. No fuel failure is postulated. The EAL is based on the event 5. Fuel Handling Accident as described in FSAR 14.2.1 (Unit 3) • The accident involves a dropped fuel bundle on top of the core. Initial EAL is based on the event. 6. Aircraft Probable Threat as described in 10 CFR 50.54 hh(1) (Unit 2 and Unit 3) • Notification is received from the NRC that a probable aircraft		

		• A fire occurs in the main control room requiring the evacuation and the procedure implemented to shutdown from the alternate shutdown panels. EAL is based on the event. 8. Station Blackout • A loss of all offsite AC power occurs and the failure of the emergency diesel generators to start. EAL is based on the event. 9. General Emergency with release and PAR • Assumed SAE condition when dose projection indicates an upgrade to GE and a PAR based on release is needed.	threat exists (<30 minutes). EAL is based on the event 7. CR Fire Requiring CR evacuation and Alternate Shutdown (Unit 3) • A fire occurs in the main control room requiring the evacuation and the procedure implemented to shutdown from the alternate shutdown panels. EAL is based on the event. 8. Station Blackout (Unit 3) • A loss of all offsite AC power occurs and the failure of the emergency diesel generators to start. EAL is based on the event. 9. General Emergency with release and PAR (Unit 3) • Assumed SAE condition when dose projection indicates an upgrade to GE and a PAR based release is needed. 10. Fuel-Handling Accident in FSB described in DSAR 6.2.1 (Unit 2) • Damaged fuel assembly during movement under water in the spent fuel pool.		

15.	**Page 12 Section IV C.** Accident Scenarios Not Included in the Analysis Numbers 2 and 3	2. Accidental Release of Waste - Liquid as described in FSAR 14.2.2 • ***The largest vessels are the three liquid holdup tanks (CVCS), each sized to hold two-thirds of the reactor coolant liquid volume. The tanks are used to process the normal recycle or waste fluids produced. The contents of one tank will be passed through the liquid processing train while another tank is being filled. Hence, the loss of water from the spent resin storage tank presents no hazard offsite or onsite because means are available both to detect the situation occurring and to keep the resin temperature under control until the resin can be removed to burial facilities. No EAL condition met.*** 2. Accidental Release of Waste – Gases as described in 14.2.3 • The tanks operate at low pressure, approximately 2 psig, a gas phase leak would result in an expulsion of approximately 12-percent of the contained	2. Accidental Release of Waste - Liquid as described in FSAR 14.2.2 / DSAR 6.4 • The largest vessels are the three liquid holdup tanks (CVCS), each sized to hold two-thirds of the reactor coolant liquid volume. The tanks are used to process the normal recycle or waste fluids produced. The contents of one tank will be passed through the liquid processing train while another tank is being filled. Hence, the loss of water from the spent resin storage tank presents no hazard offsite or onsite because means are available both to detect the situation occurring and to keep the resin temperature under control until the resin can be removed to burial facilities. No EAL condition met. 3. Accidental Release of Waste – Gases as described in 14.2.3 / DSAR 6.3 • The tanks operate at low pressure, approximately 2 psig, a gas phase leak would result in an expulsion of approximately 12-percent of the contained gases and then the	No	No – Added DSAR reference as that is what is applicable to the defueled Unit 2. Changed numbering from 1, 2, 2, 3, 4 to 1, 2, 3, 4, 5 and corrected the sequence.

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		gases and then the pressure would be in equilibrium with atmosphere. The curie content of the tanks is controlled administratively to maintain an operating limit. It is conservatively assumed that all of the contained noble gas activity and one percent of the iodine activity are released. The tank pits are vented to the ventilation system so that any gaseous leakage would be discharged to the atmosphere by this route. No EAL condition met.	pressure would be in equilibrium with atmosphere. The curie content of the tanks is controlled administratively to maintain an operating limit. It is conservatively assumed that all of the contained noble gas activity and one percent of the iodine activity are released. The tank pits are vented to the ventilation system so that any gaseous leakage would be discharged to the atmosphere by this route. No EAL condition met.		

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16.	**Page 13 Section IV** C. Accident Scenarios Not Included in the Analysis #6 Page 12 in (20-01)	N/A	6. High Integrity Container (HIC) Drop Event • One HIC falls on top of another and both catch on fire. Administrative controls ensure the HIC's source term remains below the allowable dose-equivalent activity. This bounds the HIC drop event by the Fuel-Handling Accident. No analysis required.	No	No - added to Accident Scenarios and not Included in the Analysis #6.
17.	**Page 13 Section V. GENERAL ASSUMPTIONS AND LIMITATIONS A. 4**	4. All crews have one individual filling the SM and one individual filling the STA roles therefore the analysis did not consider using a dual-role individual.	4 All crews have one individual filling the SM role therefore the analysis did not consider using a dual-role individual.	No	Yes – The STA is a post that is being removed from Unit 2. "All crews have one individual filling the SM role therefore the analysis did not consider using a dual-role individual." STA was removed

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18.	**Page 16/17 Section VI APPENDIX A Analyzed events and accidents**	Appendix A is applicable to both Unit 2 and Unit 3. Accidents and FSAR section numbers are the same.	A. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 2 B. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 3 (APPENDIX A)	No	No- There are now 2 tables A. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 2 and B. ANALYZED EVENTS AND ACCIDENTS FOR UNIT 3 (APPENDIX A) Unit 2 has added event 15 High Integrity Container Drop Appendix A – Analyzed Events and Accidents table is now 2 different tables with a table for unit 2 and a table for unit 3. The Unit 2 table contains only 4 events as it is permanently defueled. The unit 3 table contains all 14 original events. Event 15 was added to unit 2 (High Integrity Container Drop Event) with no analysis required.
19.	**Page 16 Section VI APPENDIX A Analyzed events and accidents**	N/A	[1] The dose consequences are less than a fuel-handling accident in the fuel storage building in accordance with the IP2 Defueled Safety Analysis Report and therefore are bound by analysis #1.	No	No – a note is added to Event #7, #8, and #15. The note references the DSAR for Analysis Required column to explain the no value.

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20.	**Page 113 for 19-01 Page 78 for 20-01 Section XII REFERENCES**	N/A	• IP2 Defueled Safety Analysis Report	No	No – IP2 Defueled Safety Analysis Report was added to the reference section, Unit 2 is permanently defueled.
21.	**Page 113 for 19-01 Page 78 for 20-01 Section XIII STAFFING ANALYSIS TEAM**	• Fred Guynn, Entergy ECH Sr. Project Manager, EP • Myra Jones, Contractor CMCG • Charles Hock, IPEC Operations Shift Manager • Brian Sullivan, Training Superintendent • Brent Magurno, Chemistry Specialist • Steve Sandike, Chemistry Specialist • Scott Stevens, Radiation Protection Supervisor • Mary Ann Wilson, Emergency Preparedness Manager	• Paul Bowe, Operations • Gary Norton, Training - Operations • Chris Bohren, Operations • Kevin Robinson, Emergency Planning	No	No – The change is to reflect the new staffing analysis team.

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22	**Page 7** **B.** Other Commitments to Shift Staffing	1. No additional shift staffing commitments were identified.	The following table indicates the minimum staffing requirements to support FLEX and Fire Brigade Strategies. This table represents the total on-shift staffing. *Added new table.*	No	Yes – The addition of the new table clarifies the difference in staffing for E-Plan in the first table shown on page 6 and Flex table added on this page 7.
23	**Page 4** **Introduction** **3rd Paragraph**	...in Revision 1 which is incorporated in this document. That analysis was based on the assumption that both the Fire Brigade Leader and the Communicator came from Unit 3. Changing the assumption so that both can be supplied by either unit does not impact the conclusions reached by the analysis. It does not change the minimum staffing needs or the ability of the staff to perform necessary emergency function.	...in Revision 20-01, which is incorporated in this document. As a result, the total minimum staffing requirements was reduced by nine Operations personnel.	No	Yes- Staffing has been reduced from 13 to four positions. These position reductions were analyzed in this ON-SHIFT STAFFING ANALYSIS.

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24	**Page 5 First paragraph, third sentence.**	Additionally, there are no Emergency Action Levels specific to IPEC Unit 1 that would challenge the on-shift staffing above and beyond those considered in this analysis for Units 2 and 3.	Additionally, there are no Emergency Action Levels specific to IPEC Unit 1 that would challenge the on-shift staffing above and beyond those considered in this analysis for Unit 3	No	No-This change removes Unit 2 since it is permanently defueled.
25	**Page 5 second paragraph, second sentence.**	These responsibilities consist of conducting a limited scope building tour once per shift and the periodic monitoring of evaporator operation occurring approximately 2 to 3 times/week.	These responsibilities consist of conducting a limited scope building tour once per shift and the periodic monitoring of Liquid Waste Processing operation occurring approximately 2 to 3 times/week.	Yes	No-Corrected /changed the name of the evaporator operation to the Liquid Waste Processing.
26	**Page 7 Section B**	1. No additional shift staffing commitments were idfentified	The following table indicates the minimum staffing requirements to support FLEX and Fire Brigade Strategies. This table represents the total on-shift staffing.	No	No-This new statement provides an explanation of the table added under Change 22.

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27	Page 8 C.5	N/A	Since the TMS (Appendix C) was performed IPEC has upgraded to Internet 10.0 and step 1.1.1.1 of the time study was streamlined so the SM now just types eron.entergy.com and hits enter. These enhancements would decrease the times associated with this process. Continuing to utilize the current TMA would be more conservative. The current TMA does not have to be redemonstrated.	No	No- This additional wording clarifies the web browser used for ERO notification system and that there is no effect on the Shift Manager performing notifications to the ERO.
28	Page 12/13 Section C	1. 2. 2. 3. 4.	1. 2. 3. 4. 5. 6.	Yes	No- Corrected the numbering bullets for C. Accident Scenarios Not Included in the Analysis. Note item 6 was added via change 16.
29	Page 13 Section V.A.5	N/A	Firefighting is the responsibility of the Fire Brigade as defined in the Indian Point Station Fire Protection Program Plan. The Fire Brigade consists of members who are trained in firefighting techniques and are on duty 24 hours a day. A local department may be called in if necessary.	No	No-This provides a description of the Fire Brigade.

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30	**Page 14 Number 2**	On-shift personnel complement was limited to the minimum required number and composition as described in the site Emergency plan	On-shift personnel complement was limited to the minimum required number and composition as described in the site FLEX plan	No	No-Changed the wording from Emergency Plan to the FLEX plan as the wrong plan was previously stated when describing a complement of on-shift personnel.
31	**Pages 17-33 Section VII Unit 2 Design Basis Accident Analysis #'s 3,4,5**	Design Basis Accident Analysis #3 – Steam Line Rupture- Associated tables and summaries. Pages 17-21 Design Basis Accident Analysis #4 – Loss of Coolant Accident (LOCA)- Associated tables and summaries. Pages 22-27 Design Basis Accident Analysis #5 – Steam Generator Tube Rupture (SGTR)- Associated tables and summaries. Pages 28-33.	N/A	No	No-Removed the accidents for Unit 2 that are associated with an operating unit. The tables have been removed as a result of the analysis.
32	**Page 18**	D. Design Basis Accident Analysis #6 – Fuel-Handling Accident	A. Design Basis Accident Analysis #6 – Fuel-Handling Accident in FSB	Yes	No- Added the abbreviation FSB to show the location of the accident and changed the bullet item from D. to A..

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33	**Page 18 A.1 Accident Summary**	Dropped fuel assembly over the core in the containment building. The activity isdischarged to the atmosphere at the ground level. No credit is taken for filtration or isolation of the leak.	•Fuel-Handling Accident (FHA) occurs in the Fuel Storage Building (FSB) during movement of a fuel assembly. •The fuel assembly is moved under water and the accident is assumed to occur when one fuel assembly is damaged. •The fission product activity present in the fuel gap of all of the fuel pins in the damaged fuel assembly is released to the spent fuel pool while the FSB exhaust fan is not operating.	No	No-Added accident scenarios for a defueled unit inside the FSB.
34	**Page 18 A.2 Accident Specific Assumptions Made**	Additional SROs, ROs, NPOs, and RP techs are assumed to be on shift as part of the refueling/outage staff to assist the Shift Manager. EAL is based on the event.	The accident is assumed to occur when one fuel assembly is damaged. The fission product activity present in the fuel gap of all of the fuel pins in the damaged fuel assembly is released to the spent fuel pool while the FSB exhaust fan is not operating.	No	No- This change describes the conditions that may occur during a fuel accident. There will no longer be refueling outages, or additional staffing as Unit 2 is permanently defueled.

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35	Page 18 Section A.3	• IP-EP-120, Classification • IP-EP-115, Forms • IP-EP-210, Central Control Room 2-AOP-FH-1, Fuel Damage or Loss of SFP/Refuel Cavity Level	• 2-AOP-FH-1, Fuel Damage or Loss of SFP/Refueling Cavity Level • IP-EP-115, Forms • IP-EP-120, Classification • IP-EP-210, Central Control Room	Yes	No- This was an editorial change to align the formatting and to reorder the procedures.
36	Page 19	IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 6 – FHA (U2)	IPEC TABLE 1 – ON-SHIFT POSITIONS Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)	Yes	No-Replaced FHA (U2) with Fuel-Handling Accident in Fuel Storage Building (U2) to better describe and enhance the heading of the Table 1.
37	Page 19 Row 3 in 19-01	U2 STA E-Plan Table B-1 60 U2 T2/L3 No No	N/A	No	Yes-Removed Unit 2 STA from the table.
38	Page 19 Row 5 in 19-01	5 U2 RO #2 E-Plan Table B-1 N/A U2 T2/L5 No No	N/A	No	Yes-Removed the Unit 2 RO from the table.

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39	Page 19 Row 6, 7 in 19-01	6 U2 AO #1 E-Plan Table B-1 N/A U2 T2/L7 No No 7 U2 AO #2 E-Plan Table B-1 N/A U2 N/A No No	N/A	No	Yes- Removed two (2)AO's from the table. Note: Due to deletions in items 37,38 and 39, resequenced all the rows in Table 1 from rows 1-27 to rows 1-23. Also resequenced the U2 AOs from U2 AO #1-5 to U2 AOs #1-3 in 20-01.
40	Page 19 Row 4 in 19-01	4- U2 RO #1 E-Plan Table B-1 N/A U2 T2/L4 No No	3-U2 RO #1 E-Plan Table B-1 N/A N/A No No	No	Yes-Changed Role in Table # and Line #.
41	Page 19 Row 8	12- U2 RP E-Plan Table B-1 60 T4/L6 No No	U2 RP E-Plan Table B-1 60 T4/L1 No No	No	Yes- Changed Role in Table # and Line #.
42	Page 19 Row 20/21	24- U3 RP E-Plan Table B-1 N/A N/A No No 25-U1 NPO E-Plan Table B-1 N/A U2 T2/L8 No No	U3 RP E-Plan Table B-1 N/A T4/L2 No No U1 NPO E-Plan Table B-1 N/A U2 T2/L4 No No	No	Yes- Changed Role in Table # and Line #.

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43	Page 20	IPEC TABLE 2 – UNIT 2 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 6 - FHA	IPEC TABLE 2 – UNIT 2 PLANT OPERATIONS & SAFE SHUTDOWN One Unit – One Control Room Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2).	Yes	No-Replaced FHA with the words Fuel-Handling Accident in Fuel Storage Building (U2) in the title of Table 2.
44	Page 20	3 Shift Technical Advisor Shift Technical Advisor Licensed Operator Tralning Program 5 Reactor Operator #2 Reactor Operator #2 Licensed Operator Training 7 Auxiliary Operator #2 Nuclear Plant Operator #2 Non-Licensed Operator Training Program 8 Auxiliary Operator #3 Nuclear Plant Operator U1 Non-Licensed Operator Training Program	N/A	No	Yes-Removed personnel that are no longer needed due to the defuel of Unit 2.

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45	Page 20 Rows 2 and 3 in 20-01	2 Unit Supervisor Control Room Supervisor Licensed Operator Training Program 4 Reactor Operator #1 Reactor Operator #1 Licensed Operator Training Program	2 Unit Supervisor N/A N/A 3 Reactor Operator #1 N/A N/A	No	Yes-Removed personnel due to the permanent defuel of Unit 2 as no longer applicable.
46	Page 21	IPEC TABLE 3 – FIREFIGHTING Analysis #6 – FHA (U2)	IPEC TABLE 3 – FIREFIGHTING Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)	Yes	No- Replaced FHA with the words Fuel-Handling Accident in Fuel Storage Building (U2) in the title of Table 3.
47	Page 21	IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY Analysis #6 – FHA (U2)	IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY Analysis # 6 – Fuel-Handling Accident in Fuel Storage Building (U2)	Yes	No- Replaced FHA with the words Fuel-Handling Accident in Fuel Storage Building (U2) in the title of Table 4.

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48	**Page 21 Line 1 and 2**	6-Other Site Specific U2 RP: contamination monitoring Performance Time Period After Emergency Declaration (minutes)* 10-15,15-20,20-25,25-30,30-35,35-40 7-Chemistry Function task #1 U2 Chem. Monitor Plant vents for rising levels Performance Time Period After Emergency Declaration (minutes)* 10-15,15-20,20-25,25-30,30-35,35-40,40-45,45-50	6-Other Site Specific U2 RP: N/A Performance time period: N/A 7- Chemistry Function task #1 U2 Chem: N/A Performance time period: N/A 1-In Plant Survey: U2 RP Performance Time Period After Emergency Declaration (minutes)* 15-20,20-25,25-30,30-35,35-40,40-45, 45-50 2-On-site Survey: U3 RP (Site boundary) Performance Time Period After Emergency Declaration (minutes)* 35-40,40-45, 45-50, 50-55, 55-60	No	Yes- This adjusts performance times for personnel responding to an accident on Unit 2 based on being defueled. There is no response above the previous 60-minute response times.
49	**Page 23 VIII Appendix B**	UNIT 3 SHIFT STAFFING ANALYSIS	UNIT 3 ON-SHIFT STAFFING ANALYSIS	Yes	No-Added the word ON to the title of the section.

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50	Page 24 Rows 3,5,9,10 in 19-01	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.
51	Page 28 B.3	2-E-0, Reactor Trip or Safety Injection 2-E-1, Loss of Reactor or Secondary Coolant 2-ES-1.3, Transfer to Cold Leg Recirculation	3-E-0, Reactor Trip or Safety Injection 3-E-1, Loss of Reactor or Secondary Coolant 3-ES-1.3, Transfer to Cold Leg Recirculation	No	No-These procedure changes were made to identify the operating unit.

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52	**Page 29** **Rows 3,5,9,10 In 19-01**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.
53	**Page 33** **Row C.3**	2-E-0, Reactor Trip or Safety Injection 2-E-1, Loss of Reactor or Secondary Coolant 2-E-3, Steam Generator Tube Rupture	3-E-0, Reactor Trip or Safety Injection 3-E-1, Loss of Reactor or Secondary Coolant 3-E-3, Steam Generator Tube Rupture	No	No-These procedure changes were made to identify the operating unit.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
54	**Page 34** **Rows 3,5,9,10 in 19-01**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.
55	**Page 40** **Rows 3,5,9,10 in 19-01**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
56	**Page 46** **Rows 3,5,9,10 in 19-01**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.
57	**Page 46** **Rows 6, 7,8,22,24 in 19-01**	6 U2 AO #1 E-Plan Table B-1 N/A N/A No No 7 U2 AO #2 E-Plan Table B-1 N/A N/A No No 8 U2 AO #3 E-Plan Table B-1 N/A T3/L3 No No 22 U3 NPO#4 E-Plan Table B-1 N/A T3/L2 No No 24 U3 RP E-Plan Table B-1 N/A N/A No No	4-U2 AO #1 E-Plan Table B-1 N/A N/A No No 5-U2 AO #2 E-Plan Table B-1 N/A N/A No No 6-U2 AO #3 E-Plan Table B-1 N/A N/A No No 18-U3 NPO#4 E-Plan Table B-1 N/A T3/L5 No No 20- U3 RP E-Plan Table B-1 N/A T4/L4 No No	No	Yes- Changed Role in Table # and Line #.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
58	**Page 48 Rows 2,3,4,5 In 19-01**	2 U2 NPO#3 Fire Protection Training Program 3 U2 NPO#4 Fire Protection Training Program 4 U2 NPO#5 Fire Protection Training Program 5 U3 NPO#4 Fire Protection Training Program	2 FB #2 Fire Protection Training Program 3 FB #3 Fire Protection Training Program 4 FB #4 Fire Protection Training Program 5 FB #5 Fire Protection Training Program	No	Yes-These changes show NPO personnel being removed and replaced with Fire Brigade personnel in accordance with the Fire Protection Training Program.
59	**Page 49** **Row 4 in 19-01**	Job Coverage: U2 RP FB Support	Job Coverage: U3 RP FB Support	No	Yes-This change shows personnel being moved to Unit 3 as a result of Unit 2 being defueled.
60	**Page 51** **Section F.3**	2-ECA-0.0, Loss of All AC Power 2-E-0, Reactor Trip or Safety Injection	3-ECA-0.0, Loss of All AC Power 3-E-0, Reactor Trip or Safety Injection	No	No-These procedure changes were made to identify the operating unit.
61	**Page 52 Rows 3,5,9,10**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
62	Page 57 Rows 3,5 In 19-01	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.
63	Page 61 IX.	APPENDIX B – COMMON CONTROL ROOM SHIFT STAFFING ANALYSIS	APPENDIX B – COMMON CONTROL ROOM ON-SHIFT STAFFING ANALYSIS	Yes	No-This change added the word ON to the title.
64	Page 61- NOTE table	NOTEThreat based event is single procedure and bothunits affected. Unit 2 takes lead on EP actions.	N/A	No	No-This removed the note that has Unit 2 take the lead in a Design Basis Event. Unit 2 is defueled and will no long take the lead.
65	Page 61 A.3	2/3-E-0, Reactor Trip or Safety Injection	3-E-0, Reactor Trip or Safety Injection	No	No-This procedure change was made to identify the operating unit.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
66	**Page 62 Rows 3,5,9,10**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA. Note: Resequenced all the rows in Table 1 from rows 1-27 to rows 1-23.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
67	Page 62 Row 1,2,3,4,5,10, 21	1-U2 SM E-Plan Table B-1 N/A U2 T2/L1T5/L1T5/L3T5/L5T5/L8T5/L10 No No 2-U2 CRS E-Plan Table B-1 N/A U2 T2/L2 No No 4-U2 RO #1 E-Plan Table B-1 N/A U2 T2/L4 No No 6-U2 AO #1 E-Plan Table B-1 N/A U2 T2/L6 No No 7-U2 AO #2 E-Plan Table B-1 N/A U2 T2/L7 No No 14 U3 Shift Manager E-Plan Table B-1, 60 U3 T2/L1 T5/L6 T5/L14 No No 25 U1 NPO E-Plan Table B-1 N/A U2 T2/L8 No No	1 U2 SME-Plan Table B-1 N/A U2 T2/L1T5/L6T5/L7T5/L14No No 2 U2 CRS-Plan Table B-1 N/A N/A No No 3 U2 RO #1 E-Plan Table B-1 N/A N/A No No 4 U2 AO #1 E-Plan Table B-1 N/A N/A No No 5 U2 AO #2 E-Plan Table B-1 N/A N/A No No 10 U3 Shift Manager E-Plan Table B-1 60 U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10 No No 21 U1 NPO E-Plan Table B-1 N/A U2 T2/L6 No No	No	Yes- Changed Role in Table # and Line #.
68	Page 63	3 Shift Technical AdvisorShift Technical Advisor Licensed Operator TrainingProgram 5 Reactor Operator #2 Reactor Operator #2 Licensed Operator Training Program	N/A	No	Yes-These changes show personnel being removed from positions for a DBA.

69	Page 63	1 Shift Manager Shift Manager Licensed Operator Training Program 2 Unit Supervisor Control Room Supervisor Licensed Operator Training Program 3 Shift Technical Advisor Shift Technical Advisor Licensed Operator Training Program 4 Reactor Operator #1 Reactor Operator #1 Licensed Operator Training Program 5 Reactor Operator #2 Reactor Operator #2 Licensed Operator Training Program 6 Auxiliary Operator #1 Nuclear Plant Operator #1 Non-Licensed Operator Training Program 7 Auxiliary Operator #2 Nuclear Plant Operator #2 Non-Licensed Operator Training Program 8 Auxiliary Operator #3 Nuclear Plant Operator U1 Non-Licensed Operator Training Program 9 Other needed for Safe Shutdown N/A N/A 10 Other needed for Safe Shutdown N/A N/A	1 Shift Manager Shift Manager Licensed Operator Training Program 2 Unit Supervisor N/A N/A 3 Reactor Operator #1 N/A N/A 4 Auxiliary Operator #1 N/A N/A 5 Auxiliary Operator #2 N/A N/A 6 Auxiliary Operator #3 Nuclear Plant Operator U1 Non-Licensed Operator Training Program 7 Other needed for Safe Shutdown N/A N/A 8 Other needed for Safe Shutdown N/A N/A	No	Yes- These changes show personnel being removed from positions for a DBA. Removed the Licensed Operator Training Program for and noted as N/A: Unit Supervisor Reactor Operator #1 Auxiliary Operator #1 Auxiliary Operator #2

70	Page 66	1 Declare the emergency classification level (ECL) U2 ShiftManager Emergency Planning Training Program / EP Drills 2 Approve Offsite Protective Action Recommendations N/A N/A 3 Approve content of State/local notifications U2 Shift Manager Emergency Planning Training Program 4 Approve extension to allowable dose N/A N/A 5 Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.) U2 Shift Manager Licensed Operator Training Program/ Emergency Planning Training Program 6 ERO notification U3 Shift Manager Emergency Planning Training Program 7 Abbreviated NRC notification for DBT event U2 STA Licensed Operator Training Program/ Emergency Planning Training Program 8 Complete State/local notification form U2 Shift Manager Emergency Planning Training Program	1 Declare the emergency classification level (ECL) U3 Shift Manager Emergency Planning Training Program / EP Drills 2 Approve Offsite Protective Action Recommendations N/A N/A 3 Approve content of State/local notifications U3 Shift Manager Emergency Planning Training Program 4 Approve extension to allowable dose N/A N/A 5 Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.) U3 Shift ManagerLicensed Operator Training Program / Emergency Planning Training Program 6 ERO notification U2 Shift Manager Emergency Planning Training Program 7 Abbreviated NRC notification for DBT event U2 Shift Manager Licensed Operator Training Program / Emergency Planning Training Program 8 Complete State/local notification form U3 Shift Manager Emergency Planning Training Program	No	Yes- The roles for the personnel have changed due to the defuel of Unit 2

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify If NO.
		9 Perform State/local notifications Communicator Emergency Planning Training Program 10 Complete NRC event notification form U2 Shift Manager Licensed Operator Training Program 11 Activate ERDS N/A (runs 24/7) N/A 12 Offsite radiological assessment N/A N/A 13 Perform NRC notifications Communicator Emergency Planning Training Program 14 Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.) U3 Shift Manager Licensed Operator Training Program 15 Personnel Accountability Security Security Training Program / EP Drills	9 Perform State/local notificationsCommunicator Emergency Planning Training Program 10 Complete NRC event notification form U3 Shift Manager Licensed Operator Training Program 11 Activate ERDS N/A (runs 24/7) N/A 12 Offsite radiological assessment N/A N/A 13 Perform NRC notifications Communicator Emergency Planning Training Program 14 Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.) U2 Shift Manager Licensed Operator Training Program 15 Personnel Accountability Security Security Training Program / EP Drills		
71	**Page 67 NOTE Section**	NOTE Threat based event is single procedure and both units affected. Unit 2 takes lead on EP actions	N/A	No	No-This removes the note that states that Unit 2 takes the lead on EP actions. Unit 2 will no longer take the lead as it is now defueled.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
72	**Page 68** **Rows 3,5,9,10 in 19-01**	3 U2 STA E-Plan Table B-1 N/A N/A No No 5 U2 RO #2 E-Plan Table B-1 N/A N/A No No 9 U2 AO #4 E-Plan Table B-1 N/A N/A No No 10 U2 AO #5 E-Plan Table B-1 N/A N/A No No	N/A	No	Yes-These changes show personnel being removed from positions for a DBA.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
73	Page 68 Rows 1, 2,4,6,7,14,25	1 U2 SM E-Plan Table B-1 N/A U2 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10 No No 2 U2 CRS E-Plan Table B-1 N/A U2 T2/L2 No No 4 U2 RO #1 E-Plan Table B-1 N/A U2 T2/L4 No No 6 U2 AO #1 E-Plan Table B-1 N/A U2 T2/L6 No No 7 U2 AO #2 E-Plan Table B-1 N/A U2 T2/L7 No No 14 U3 Shift Manager E-Plan Table B-1 60 U3 T2/L1 T5/L6 T5/L14 No No 25 U1 NPO E-Plan Table B-1 N/A U2 T2/L8 No No	1 U2 SM E-Plan Table B-1 N/A U2 T2/L1 T5/L6 T5/L14 No No 2 U2 CRS E-Plan Table B-1 N/A N/A No No 3 U2 RO #1 E-Plan Table B-1 N/A N/A No No 4 U2 AO #1 E-Plan Table B-1 N/A N/A No No 5 U2 AO #2 E-Plan Table B-1 N/A N/A No No 10 U3 Shift Manager E-Plan Table B-1 60 U3 T2/L1 T5/L1 T5/L3 T5/L5 T5/L8 T5/L10 No No 21 U1 NPO E-Plan Table B-1 N/A U2 T2/L6 No No	No	Yes- Changed Role in Table # and Line #.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
74	**Page 69** **Rows 3 and 5 in 19-01**	3 Shift Technical AdvisorShift Technical Advisor Licensed Operator Training Program 5 Reactor Operator #2 Reactor Operator #2 Licensed Operator Training Program	N/A	No	Yes-These changes show personnel being removed from positions for a DBA.

75	Page 69	1 Shift Manager Shift Manager Licensed Operator Training Program 2 Unit Supervisor Control Room Supervisor Licensed Operator Training Program 3 Shift Technical Advisor Shift Technical Advisor Licensed Operator Training Program 4 Reactor Operator #1 Reactor Operator #1 Licensed Operator Training Program 5 Reactor Operator #2 Reactor Operator #2 Licensed Operator Training Program 6 Auxillary Operator #1 Nuclear Plant Operator #1 Non-Licensed Operator Training Program 7 Auxiliary Operator #2 Nuclear Plant Operator #2 Non-Licensed Operator Training Program 8 Auxiliary Operator #3 Nuclear Plant Operator U1 Non-Licensed Operator Training Program 9 Other needed for Safe Shutdown N/A N/A 10 Other needed for Safe Shutdown N/A N/A	1 Shift Manager Shift Manager Licensed Operator Training Program 2 Unit Supervisor N/A N/A 3 Reactor Operator #1 N/A N/A 4 Auxiliary Operator #1 N/A N/A 5 Auxiliary Operator #2 N/A N/A 6 Auxiliary Operator #3 Nuclear Plant Operator U1 Non-Licensed Operator Training Program 7 Other needed for Safe Shutdown N/A N/A 8 Other needed for Safe Shutdown N/A N/A	No	Yes- Yes- These changes show personnel being removed from positions for a DBA. Removed the Licensed Operator Training Program for and noted as N/A: Unit Supervisor Reactor Operator #1 Auxiliary Operator #1 Auxiliary Operator #2

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

76	Page 72	1 Declare the emergency classification level (ECL) U2 Shift Manager Emergency Planning Training Program / EP Drills 2 Approve Offsite Protective Action Recommendations N/A N/A 3 Approve content of State/local notifications U2 Shift Manager Emergency Planning Training Program 4 Approve extension to allowable dose N/A N/A 5 Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.) U2 Shift Manager Licensed Operator Training Program / Emergency Planning Training Program 6 ERO notification U3 Shift Manager Emergency Planning Training Program 7 Abbreviated NRC notification for DBT event N/A N/A 8 Complete State/local notification form U2 Shift Manager Emergency Planning Training Program	1 Declare the emergency classification level (ECL) U3 Shift Manager Emergency Planning Training Program / EP Drills 2 Approve Offsite Protective Action Recommendations N/A N/A 3 Approve content of State/local notifications U3 Shift Manager Emergency Planning Training Program 4 Approve extension to allowable dose N/A N/A 5 Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.) U3 Shift Manager Licensed Operator Training Program / Emergency Planning Training Program 6 ERO notification U2 Shift Manager Emergency Planning Training Program 7 Abbreviated NRC notification for DBT event N/A N/A 8 Complete State/local notification form U3 Shift Manager Emergency Planning Training Program	No	Yes- Changed unit designations from Unit 2 to Unit 3 based on Unit 2 defuel.

Entergy IPEC Phase 1 Staffing Assessment (Rev 20-01) REVISION MATRIX 1

Change No.	Page/Section in 20-01	Previous Version (Revision 19-01)	New Version (Revision 20-01)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
		9 Perform State/local notifications Communicator Emergency Planning Training Program 10 Complete NRC event notification form U2 Shift Manager Licensed Operator Training Program 11 Activate ERDS N/A (runs 24/7) N/A 12 Offsite radiological assessment N/A N/A 13 Perform NRC notifications Communicator Emergency Planning Training Program 14 Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.) U3 Shift Manager Licensed Operator Training Program 15 Personnel Accountability Security Security Training Program / EP Drills	9 Perform State/local notifications Communicator Emergency Planning Training Program 10 Complete NRC event notification form U3 Shift Manager Licensed Operator Training Program 11 Activate ERDS N/A (runs 24/7) N/A 12 Offsite radiological assessment N/A N/A 13 Perform NRC notifications Communicator Emergency Planning Training Program 14 Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.) U2 Shift Manager Licensed Operator Training Program 15 Personnel Accountability Security Security Training Program / EP Drills		

10CFR50.54(Q)(3) Screening

Procedure/Document Number: Phase 2 Staffing Study	Revision: 4
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Units 2 and 3 NEI 12-01 Phase 2 Staffing Assessment	

Part I. Description of Activity Being Reviewed (This is generally changes to the emergency plan, EALs, EAL bases, etc. – refer to Section 3.0 Step 6):

The activity being reviewed is a revision to the IPEC Units 2& 3 Phase 2 Staffing Assessment. See attached matrix for the changes made to the document.

Part II. Activity Previously Reviewed?

Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

☐ YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.

☒ NO Continue to next part

Justification:

N/A

☐ Bounding document attached (optional)

Part III. Applicability of Other Regulatory Change Control Processes

N/A

APPLICABILITY CONCLUSION

☒ If there are no other controlling change processes, continue the 10CFR50.54(q)(3) Screening.
☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 10CFR50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.
☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 10CFR50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI

CONTROLLING CHANGE PROCESSES

10CFR50.54(q)

Part IV. Editorial Change

Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?

☐ YES 50 54(q)(3) Evaluation is NOT required. Enter justification and continue to next part or complete Part VI as applicable.

☒ NO Continue to next part

Justification:

"No" is checked because this activity contains changes that are not editorial

10CFR50.54(Q)(3) Screening

Procedure/Document Number: Phase 2 Staffing Study	Revision: 4
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Units 2 and 3 NEI 12-01 Phase 2 Staffing Assessment	

Part V. Emergency Planning Element/Function Screen (Associated 10CFR50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?	
1. Responsibility for emergency response is assigned. [1]	☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]	☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]	☐
4. The process for timely augmentation of onshift staff is established and maintained. [2]	☐
5. Arrangements for requesting and using off site assistance have been made. [3]	☐
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]	☐
7. A standard scheme of emergency classification and action levels is in use. [4]	☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]	☐
9 Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]	☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]	☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]	☐
12. Systems are established for prompt communication to emergency response personnel. [6]	☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]	☐
14. Coordinated dissemination of public information during emergencies is established. [7]	☐
15. Adequate facilities are maintained to support emergency response. [8]	☐
16. Adequate equipment is maintained to support emergency response. [8]	☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]	☐
18. A range of public PARs is available for implementation during emergencies. [10]	☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]	☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]	☐
21. The resources for controlling radiological exposures for emergency workers are established. [11]	☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]	☐
23. Plans for recovery and reentry are developed. [13]	☐
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]	☐

10CFR50.54(Q)(3) Screening

Procedure/Document Number: Phase 2 Staffing Study	Revision: 4
Equipment/Facility/Other: Indian Point Energy Center (IPEC)	
Title: Indian Point Energy Center Units 2 and 3 NEI 12-01 Phase 2 Staffing Assessment	

25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]	☐
26. Identified weaknesses are corrected. [14]	☐
27. Training is provided to emergency responders. [15]	☐
28. Responsibility for emergency plan development and review is established. [16]	☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]	☐

APPLICABILITY CONCLUSION

☒ If no Part V criteria are checked, a 10CFR50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

☐ If any Part V criteria are checked, complete Part VI and perform a 10CFR50.54(q)(3) Evaluation.

BASIS FOR CONCLUSION

The Phase 2 Staffing assessment was completed to assess the Post Shutdown staffing levels and determine the appropriate staff to fill all necessary positions for responding to a multi-unit event during a beyond design basis natural event. The assessment concluded that the on-shift staffing, with assistance from augmented staff is capable of implementing the FLEX strategies necessary and that the Emergency response function would not be degraded or lost.

Actual changes made to the Phase 2 staffing assessment are listed in the attached matrix. Executive summary was updated to indicate that U3 is the only plant operating at fully power, U2 is a defueled plant, there was an initial team which conducted a tabletop for the original assessment and there was a new team put together to conduct another tabletop to ensure any changes made to revision 4 continued to meet the requirements Post U2 shutdown.

Other changes included, removing FLEX procedures, removing some OPS staff positions and updating the tasks assignments to the staff that is required for FLEX. There were no changes to Emergency Planning procedures or Table B-1 staffing. The tasks in the assessment were for FLEX requirements only, not Emergency Planning tasks and they remain as required. The U3 CCR has taken over as the lead plant because the U3 CCR will be the active running plant and U2 will be shut down. This change reflects that requirement in the Post Shut down EPlan (PSEP) which was approved by the NRC on 4/15/2020, RA-20-040. So no responsibilities for the Emergency Response Organization have been changed.

The proposed changes to the IPEC U2 & U3 Phase 2 Staffing Assessment, continues to meet the planning standards outlined in 10 CFR 50.47(b). This revision does not require a change to the Emergency Plan or represent a reduction in effectiveness to the IPEC Emergency Plan and can be incorporated without prior NRC approval.

No further evaluation is required for these changes.

Part VI. Signatures:

Preparer Name (Print) Rebecca A. Martin – Sr. EP Project Manager	Preparer Signature Rebecca A Martin	Date: 5/7/2020
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Timothy Garvey - Nuclear EP Project Manager	Reviewer Signature Rebecca A Martin for TG via email	Date: 5/8/2020
Approver Name (Print) Frank Mitchell - Emergency Planning Manager or designee	Approver Signature Frank Mitchell	Date: 5/11/2020

Martin, Rebecca A

Subject: FW: Updated Q3 screen - hopefully last time

From: Garvey,Timothy F <TGarvey@entergy.com>
Sent: Friday, May 08, 2020 3:06 PM
To: Martin, Rebecca A <RMartin@entergy.com>
Subject: RE: Updated Q3 screen - hopefully last time

This is good. I have no comments. Please sign for me.

Tim

(Happy Mothers Day!!)

From: Martin, Rebecca A <RMartin@entergy.com>
Sent: Friday, May 08, 2020 1:48 PM
To: Garvey,Timothy F <TGarvey@entergy.com>
Subject: Updated Q3 screen - hopefully last time
Importance: High

See attached.

Rebecca Martin
Sr. EP Project Manager
450 Broadway
Buchanan, NY 10511
Tel: 914-254-7106
Cell: 845-224-6447

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
1.	Page 2, Section 1.0	..this revised report (Rev. 3) presents..	(Rev. 3) presented...	N	No – in the executive summary this change updated wording to represent the past Rev 3 report. The meaning or intent of description in the Post Shutdown Emergency Plan(PSEP), facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
2.	Page 2 Section 1.0	impact on all units (all units are operating at full power at the time of the event)	impact on all units (U3 is operating at full power at the time of the event U2 is defueled)	No	No – in the Executive Summary this change was made to indicate that U3 is the only plant operating at full power and U2 is a defueled plant. The meaning or intent of description in the Post Shutdown Emergency Plan(PSEP), facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
3.	Page 2 Section 1.0	To conduct the on-shift portion of the assessment, a team of subject matter experts	To conduct the on-shift portion of the assessment, initially a team of subject matter experts	No	No – the word "initially" was added to the executive summary of the Phase 2 Staffing Study to signify that a team was put together for the on-shift portion of the original assessment. The meaning or intent of description in the PSEP, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
4.	Page 2 Section 1.0	None	In April 2020 another tabletop was performed involving the site FLEX Marshall, the Defueling Project, Operations and Engineering to determine that the modifications to this document continued to meet the requirements post U2 defueling.	No	No – this change was added to the Executive Summary to document that another team was put together to conduct a tabletop to ensure the FLEX strategies requirements will still be met with U2 defueled. FLEX is not a part of the IPEC PSEP and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
5.	Page 3	The validated and verified Phase 2 Staffing Assessment concluded that the current minimum on-shift staffing as defined in the IPEC Emergency Plan is sufficient to support the implementation of the mitigating strategies (FLEX strategies) on Units 2 and 3, as well as the required Emergency Plan action	The validated and verified Phase 2 Staffing Assessment concluded that the current minimum on-shift staffing including the required fire brigade is sufficient to support the implementation of the mitigating strategies (FLEX strategies) on Units 2 and 3, as well as the required Emergency Plan action,	No	No – this was updated to state minimum staffing for FLEX includes the On-shift Eplan Minimum staffing and the Fire Brigade. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
6.	Page 5 Section 4.0	EMERGENCY PLAN MINIMUM ON-SHIFT STAFFING	FLEX PLAN MINIMUM ON-SHIFT STAFFING	No	No – the title of the section was changed due to the section discussing the minimimum staffing needed for FLEX, not the Emergency Plan. Emergency planning minimum staffing requirements are still being met and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

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Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
7.	Page 5 Section 4.0	Shift Technical Advisor (STA) | 1 | 1	Shift Technical Advisor (STA) | 1	No	No – this change updated the number of On-shift staffing for the Unit 2 STA. The removal of the U2 STA reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040)
8.	Page 5 Section 4.0	Reactor Operator (RO) | 2 | 2	Reactor Operator (RO) | 1 | 2	No	No – this change updated the number of On-shift staffing for the Unit 2 ROs. The removal of the U2 RO reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040)
9.	Page 5 Section 4.0	Nuclear Plant Operator (NPO) | 5 | 4	Nuclear Plant Operator (NPO) | 4 | 4	No	No – this change updated the number of On-shift staffing for the Unit 2 NPOs. The removal of the U2 NPO reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040)
10.	Page 6 Section 4.0	Nuclear Plant Operator U1 | 1 | 0	None	No	No – this change updated the number of On-shift staffing for the Unit 2 NPOs. The removal of the U2 NPO reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040)
11.	Page 6 Section 5.1	U2 SM assumed the Emergency Director (ED) function	U3 SM assumed the Emergency Director (ED) function	No	No – Per PSEP, Unit 3 CCR will be the active/running plant and Unit 2 will be at shut down. Unit 3 CCR will be lead plant for making initial declarations that affect both Units. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
12.	Page 6 Section 5.1	The (2) CRSs, (4) ROs, (1) FBL SRO, and (10) NPOs were available to perform plant operations to establish and maintain core cooling, spent fuel pool level, and containment integrity as directed by each unit CRS using ECAs, and FSGs.	The (2) CRSs, (3) ROs, (1) FBL SRO, and (8) NPOs were available to perform plant operations to establish and maintain core cooling (U3), spent fuel pool level (U2 & U3), and containment integrity as directed by each unit CRS using ECAs, and FSGs.	No	No – this change updated the number of On-shift staffing for the Unit 2. The updated numbers reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040). Also added (U3) to core cooling, since U2 is defueled and core cooling will only be needed for U3 and added (U2 & U3) to spent fuel pool level since both plants will be subjected to spent fuel levels, this is also in accordance with DSAR . the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change
13.	Page 6 Section 5.1	SM/RD	SM/ED	Yes	- Corrected typo.
14.	Page 6 Section 5.1	The U3 SM was available to assist the ED with	The U2 SM was available to assist the ED with	No	No – This change showed U2 SM as being available to support U3 SM/ED when the tabletop, to ensure the FLEX strategies requirements will still be met with U2 defueled, was conducted. The originally tabletop has U3 SM supporting U2. Intent was not changed to support the new tabletop conducted, but reflected that U3 will be lead plant as per the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
15.	Page 7	IPEC Unit 2 procedures were not available at the time of the original assessment however; the strategies are similar on both units so all transition strategies identified in the Implementation Plan for both units were considered. Once developed, the Unit 2 procedures were reviewed and found to be consistent with the assumptions used to develop the original assessment report and timeline. Unit 2 and Unit 3 procedures were used to perform the verification and validation.	None	No	No – this section was removed from the methodology section since it was written from the original tabletop. FLEX procedures are now effective and in use and this note is not needed for revision 4. This is for FLEX procedures and do not refer to Emergency Planning procedures. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change
16.	Page 13 Attachment 1	Initially, both units are operating at full power and are successfully shut down.	Initially, U3 operating at full power and is successfully shut down, U2 is defueled.	No	No – this change was made in the Tabletop Data Accident Summary. It designates that U3 is the only operating plant and U2 is defueled. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).
17.	Page 13 Attachment 1	U2 FLEX Support Guidelines 2-FSG-001, Long Term RCS Inventory Control 2-FSG-002, Alternate AFW/EFW Suction Source 2-FSG-003, Alternate Low Pressure Feedwater	U2 FLEX Support Guidelines	No	No – FLEX procedures removed from Unit 2 list that are no longer needed. The meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

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Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
18.	Page 15 Table 1	*See Page 10 & 11 of this matrix which was Table 1 on-shift positions for Rev 3*	*See Page 12 of this matrix which was Table 1 on-shift positions for Rev 4*	No	No – Four positions were removed from the required On-shift staffing, a Unit 2 STA, a Unit 2 RO and 2 NPOs. Per the PSEP additional positions were removed so less positions were removed for FLEX staffing assessmet as compared to the PSEP required On-shift staffing. Staffing requirements of the PSEP were not affected or changed and they continued to be met. The change made to this matrix removed the 4 On-shift positions and updated the roles for each staffing position listed. Task #s were updated to reflect who would be responsible for that designated task. It was validated per the tabletop that all Emergency Plan tasks required have been met using the reduced staff. The IPEC Emergency Plan (PSEP) and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.

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Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
19.	Page 17 & 18 Table 2 and Table 2a	*See Page 13 of this matrix which was Table 2 & Table 2a Plant Operations Safe Shutdown for Rev 3*	*See Page 14 of this matrix which is Table 2 & Table 2a Plant Operations Safe Shutdown for Rev 4*	No	No – Four positions were removed from the required On-shift staffing, a Unit 2 STA, a Unit 2 RO and 2 NPOs. Per the PSEP additional positions were removed so less positions were removed for FLEX staffing assessmet as compared to the PSEP required On-shift staffing. Staffing requirements of the PSEP were not affected or changed and they continued to be met. The change made to this matrix removed the 4 On-shift positions and updated their On-Shift Position. A note 3 was added stating Safe Shutdown no longer required on Unit 2. The IPEC Emergency Plan (PSEP) and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change
20.	Page 20 Table 5	*See Page 15 of this matrix which was Table 5 Emergeny Plan Implementations for Rev 3*	*See Page 16 of this matrix which is Table 5 Emergency Plan Implementations for Rev 4*	No	No – Only change made here was to update U2 SM with U3 SM. Per Decommissioning Emergency Plan, Unit 3 CCR will be the active/running plant and Unit 2 will be at shut down. Unit 3 CCR will be lead plant for making initial declarations that affect both Units. This change reflects that requirement in the Post Unit 2 shut down Eplan, which is under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
21.	Page 21 Attachment 2	*See Pages 17 to 26 of this matrix which was Attachment 2 IPEC Flex Implementation Timelines for Rev 3 (only the highlighted sections were changed in Rev 4 all others remained the same.)*	*See Pages 27 to 35 of this matrix which was Attachment 2 IPEC Flex Implementation Timelines for Rev 4*	No	No – Four positions were removed from the required On-shift staffing, a Unit 2 STA, a Unit 2 RO and 2 NPOs. Per the PSEP additional positions were removed so less positions were removed for FLEX staffing assessmet as compared to the PSEP required On-shift staffing. Staffing requirements of the PSEP were not affected or changed and they continued to be met. The change made to this matrix removed the 4 On-shift positions and updated the roles along with the timeline for each staffing position and their tasks. It was validated per the tabletop that all Emergency Plan tasks required have been met using the reduced staff. The IPEC Emergency Plan (PSEP) and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change
22.	Page 30; Total Number required for Unit 2 and Unit 3 column	U2 – 5 NPO	U2 – 4 NPO	No	No – this change updated the number of On-shift staffing for the Unit 2. The updated numbers reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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Revision Matrix

Change No.	Page/Section	Previous Version (Revision 3)	New Version (Revision 4)	Editorial Change	Effect on 10 CFR 50.47(b) Planning Standards or NUREG-0654 program elements? Justify if NO.
23.	Page 30 Under strategy column	U2 – FSG-003 - Implement Alternate Low Pressure Feedwater – 2 Operators required. U2 – FSG-006 – Implement CST Makeup – 3 Operators required.	None	No	No – Removed two Simultaneous Implementation of 2 Tranistion Phase Coping Strategies which no longer will be need for U2 as a defueled plant. This is a part of FLEX, not Eplan requirements and the meaning or intent of description in the Emergency Plan, facilities or equipment described in the Emergency Plan or a process described in the Emergency Plan are not affected by this change. No further evaluation is required for this change.
24.	Page 30 Under Available Staff Column	48 – ROs 55 - NPOs	40 - ROs 48 - NPOs	No	No – this change updated the number of On-shift staffing for the Unit 2. The updated numbers reflects U2 On-shift Staffing changes made in the Post Unit 2 shut down Eplan (PSEP), under an LAR. (license # NL-19-001) which was approved by the NRC on 4/15/2020 (RA-20-040).

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Revision Matrix

IPEC TABLE 1 – ON-SHIFT POSITIONS Multi-Unit ELAP/LUHS

Line #	On-shift Position	Role in Table # / Line #	Unanalyzed Task?	Collateral Tasks? (See Attachment 2 for Task sequence & timeline)
1	U2 SM	T2/L1 T5/L1 T5/L2 T5/L3 T5/L5 T5/L8 T5/L10	No	No
2	U2 CRS	T2/L2	No	No
3	U2STA	T2/L3	No	No
4	U2 RO #1	T2/L4	No	No
5	U2 RO #2	T2/L5		
6	U2 NPO #1	T2/L6	No	No
7	U2 NPO #2	T2/L7	No	No
8	U2 NPO #3	T2/L8	No	No
9	U2 NPO #4	T2/L9	No	No
10	U2 NPO #5	T2/L10		
11	U2 Chemistry	T2a/L24	No	No
12	U2 RP	T4/L1 T4/L2 T2a/L22	No	No (Refer to ATT 2)
13	U3 SM	T2/L11 T2/L14	No	No
14	U3 CRS	T2/L12	No	No
15	U3 STA	T2/L13	No	No
16	U3 RO #1	T2/L14	No	No
17	U3 RO #2	T2/L15	No	No
18	U3 NPO #1	T2/L16	No	No
19	U3 NPO #2	T2/L17	No	No
20	U3 NPO #3	T2/L18	No	No
21	U3 NPO#4	T2/L19	No	No
22	U3 Chemistry	T2a/L25	No	No
23	U3 RP	T4/L4 T2a/L23	No	No (Refer to ATT 2)

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24	U1 NPO	T2/L20	No	No
25	Communicator	T5/L6 T5/L9 T5/L13	No	No
26	SRO FBL	T2/L21	No	No
27	Security	T5/L15	No	No

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Revision Matrix

IPEC TABLE 1 – ON-SHIFT POSITIONS Multi-Unit ELAP/LUHS

Line #	On-shift Position	Role in Table # / Line #	Unanalyzed Task?	Collateral Tasks? (See Attachment 2 for Task sequence & timeline)
1	U2 SM	T2/L1 T5/L14	No	No
2	U2 CRS	T2/L2	No	No
3	U2 RO #1	T2/L3	No	No
4	U2 NPO #1	T2/L4	No	No
5	U2 NPO #2	T2/L5	No	No
6	U2 NPO #3	T2/L6	No	No
7	U2 NPO #4	T2/L7	No	No
8	U2 Chemistry	T2a/L21	No	No
9	U2 RP	T4/L1 T4/L2 T2a/L19	No	No (Refer to ATT 2)
10	U3 SM	T2/L8 T5/L1 T5/L2 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	T2/L9	No	No
12	U3 STA	T2/L10	No	No
13	U3 RO #1	T2/L11	No	No
14	U3 RO #2	T2/L12	No	No
15	U3 NPO #1	T2/L13	No	No
16	U3 NPO #2	T2/L14	No	No
17	U3 NPO #3	T2/L155	No	No
18	U3 NPO#4	T2/L16	No	No
19	U3 Chemistry	T2a/L22	No	No
20	U3 RP	T4/L4 T2a/L20	No	No (Refer to ATT 2)
21	Communicator	T5/L6 T5/L9 T5/L13	No	No
22	SRO FBL	T2/L18	No	No
23	Security	T5/L15	No	No

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IPEC TABLE 2 - PLANT OPERATIONS & SAFE SHUTDOWN Two Unit – Two Control Room Multi-Unit ELAP/LUHS Operations Crew Available to Implement AOPs, EOPs, SAMGs, or FSGs as Applicable			
Line #	**Generic Title/Role**	**On-Shift Position (Note 1)**	**Task Analysis Controlling Method (Note 2)**
1	Shift Manager	U2 SM	Licensed Operator Training Program
2	Unit Supervisor	U2 CRS	Licensed Operator Training Program
3	Shift Technical Advisor	U2STA	Licensed Operator Training Program
4	Reactor Operator #1	U2 RO #1	Licensed Operator Training Program
5	Reactor Operator #2	U2 RO #2	Licensed Operator Training Program
6	Auxiliary Operator #1	U2 NPO #1	Non-Licensed Operator Training Program
7	Auxiliary Operator #2	U2 NPO #2	Non-Licensed Operator Training Program
8	Auxiliary Operator #3	U2 NPO #3	Non-Licensed Operator Training Program
9	Auxiliary Operator #4	U2 NPO #4	Non-Licensed Operator Training Program
10	Auxiliary Operator #5	U2 NPO #5	Non-Licensed Operator Training Program
11	Shift Manager	U3 SM	Licensed Operator Training Program
12	Unit Supervisor	U3 CRS	Licensed Operator Training Program
13	Shift Technical Advisor	U3 STA	Licensed Operator Training Program
14	Reactor Operator #1	U3 RO #1	Licensed Operator Training Program
15	Reactor Operator #2	U3 RO #2	Licensed Operator Training Program
16	Auxiliary Operator #1	U3 NPO #1	Non-Licensed Operator Training Program
17	Auxiliary Operator #2	U3 NPO #2	Non-Licensed Operator Training Program
18	Auxiliary Operator #3	U3 NPO #3	Non-Licensed Operator Training Program
19	Auxiliary Operator #4	U3 NPO#4	Non-Licensed Operator Training Program
20	Auxiliary Operator	U1 NPO	Non-Licensed Operator Training Program
21	SRO Fire Brigade Leader	SRO FBL	Licensed Operator Training Program

*The Communicator NPO does not perform AOP, EOP, or FSG tasks

Note 1: During a BDBEE that results in an ELAP/LUHS, all positions except the SM, STA, and Communicator, are expected to be utilized if available to implement or assist in the implementation of FLEX strategies using Flex Support Guidelines (FSG) under the direction of the Control Room Supervisor and oversight by the Shift Manager

Note 2: The controlling method put in place when FLEX is implemented will follow the guidance recommended by the industry. Each position receives the INPO initiated NANTEL Generic Basic FLEX Initial Course. Shift Managers and Control Room Supervisors will also receive the NANTEL Generic Advanced FLEX Training Course. A training plan developed using the systematic approach to training (SAT) process is in place for additional FLEX training.

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Revision Matrix

IPEC TABLE 2 - PLANT OPERATIONS & SAFE SHUTDOWN Two Unit – Two Control Room Multi-Unit ELAP/LUHS Operations Crew Available to Implement AOPs, EOPs, SAMGs, or FSGs as Applicable			
Line #	**Generic Title/Role**	**On-Shift Position (Note 1)**	**Task Analysis Controlling Method (Note 2)**
1	Shift Manager(Note 3)	U2 SM	Licensed Operator Training Program
2	Unit Supervisor(Note 3)	U2 CRS	Licensed Operator Training Program
3	Reactor Operator #1(Note 3)	U2 RO #1	Licensed Operator Training Program
4	Auxiliary Operator #1(Note 3)	U2 NPO #1	Non-Licensed Operator Training Program
5	Auxiliary Operator #2(Note 3)	U2 NPO #2	Non-Licensed Operator Training Program
6	Auxiliary Operator #3(Note 3)	U2 NPO #3	Non-Licensed Operator Training Program
7	Auxiliary Operator #4(Note 3)	U2 NPO #4	Non-Licensed Operator Training Program
8	Shift Manager	U3 SM	Licensed Operator Training Program
9	Unit Supervisor	U3 CRS	Licensed Operator Training Program
10	Shift Technical Advisor	U3 STA	Licensed Operator Training Program
11	Reactor Operator #1	U3 RO #1	Licensed Operator Training Program
12	Reactor Operator #2	U3 RO #2	Licensed Operator Training Program
13	Auxiliary Operator #1	U3 NPO #1	Non-Licensed Operator Training Program
14	Auxiliary Operator #2	U3 NPO #2	Non-Licensed Operator Training Program
15	Auxiliary Operator #3	U3 NPO #3	Non-Licensed Operator Training Program
16	Auxiliary Operator #4	U3 NPO#4	Non-Licensed Operator Training Program
17	Auxiliary Operator	U1 NPO	Non-Licensed Operator Training Program
18	SRO Fire Brigade Leader	SRO FBL	Licensed Operator Training Program

The Communicator NPO does not perform AOP, EOP, or FSG tasks

Note 1: During a BDBEE that results in an ELAP/LUHS, all positions, except the SM, STA, and Communicator, are expected to be utilized if available to implement or assist in the implementation of FLEX strategies using Flex Support Guidelines (FSG) under the direction of the Control Room Supervisor and oversight by the Shift Manager

Note 2: The controlling method put in place when FLEX is implemented will follow the guidance recommended by the industry Each position receives the INPO initiated NANTEL Generic Basic FLEX Initial Course Shift Managers and Control Room Supervisors will also receive the NANTEL Generic Advanced FLEX Training Course A training plan developed using the systematic approach to training (SAT) process is in place for additional FLEX training

Note3: Safe Shutdown no longer required on Unit 2

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Revision Matrix

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Multi-Unit ELAP/LUHS			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U2 SM	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	U2 SM	Emergency Planning Training Program / EP Drills
3	Approve content of State/local notifications	U2 SM	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U2 SM	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	Communicator	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT	N/A	N/A
8	Complete State/local notification form	U2 SM	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U2 SM	Licensed Operator Training Program
11	Activate ERDS	(Note 1)	N/A
12	Offsite radiological assessment	(Note 2)	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	(Note 3)	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

Note 1 ERDS at both units normally operates 24/7 and therefore does not require specific actions to activate the system. It is recognized, however, that the BDBEE is assumed to result in the loss of normal communication paths for ERDS If ERDS capability is lost, critical information would be communicated directly to the NRC over other communication paths, such as satellite phones

Note 2. U2 (U3) Chemistry reports to the U2 (U3) Control Room to assist the SM/ED as directed and be available for offsite radiological assessment if needed A release is not anticipated since core cooling, spent fuel pool cooling and containment integrity are maintained during the 24 hour period If no release is expected, the SM is expected to direct Chemistry to assist with FLEX strategy implementation

Note 3: The SM will not make these communications. The Duty Plant Manager reports to the site or the staging area and is responsible for other site specific event notifications.

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Revision Matrix

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Multi-Unit ELAP/LUHS			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 SM	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	U3 SM	Emergency Planning Training Program / EP Drills
3	Approve content of State/local notifications	U3 SM	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g , to assemble, evacuate, etc.)	U3 SM	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	Communicator	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT	N/A	N/A
8	Complete State/local notification form	U3 SM	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 SM	Licensed Operator Training Program
11	Activate ERDS	(Note 1)	N/A
12	Offsite radiological assessment	(Note 2)	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	(Note 3)	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

Note 1 ERDS at both units normally operates 24/7 and therefore does not require specific actions to activate the system It is recognized, however that the BDBEE is assumed to result in the loss of normal communication paths for ERDS If ERDS capability is lost, critical information would be communicated directly to the NRC over other communication paths, such as satellite phones

Note 2. U2 (U3) Chemistry reports to the U2 (U3) Control Room to assist the SM/ED as directed and be available for offsite radiological assessment if needed. A release is not anticipated since core cooling, spent fuel pool cooling and containment integrity are maintained during the 24 hour period If no release is expected, the SM is expected to direct Chemistry to assist with FLEX strategy implementation

Note 3 The SM will not make these communications. The Duty Plant Manager reports to the site or the staging area and is responsible for other site specific event notifications.

Entergy IPEC Phase 2 Staffing Assessment (Rev 4) Revision Matrix

ATTACHMENT 2 IPEC FLEX IMPLEMENTATION TIMELINES

Timeline

It is assumed on-shift staff will be relieved after +6 hours as personnel are able to access the site. The relief staff will continue the tasks for the job position as shown. The intent of this table is to identify the job position, tasks, and estimated timeline to complete the Emergency Plan, initial phase and transition phase tasks and to demonstrate that no collateral duties have an adverse impact on implementing the Emergency Plan or FLEX strategies.

JOB POSITION	TIME	TASK	Collateral Duty?
U3 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr. (4) T = 1.0 – 1.5 hrs. (5) T = 1.5 – 2.0 hrs. (6) T = 0 – until EOF is operational	(1) Assess event and coordinate with U2 SM (ED) to declare SAE (2) Coordinate with U2 SM (ED) to ensure NMF reflects correct emergency declaration (3) Declare ELAP (4) Coordinate with U2 SM (ED) to declare GE / Develop PAR / Direct notifications (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely) / Coordinate with U2 SM (ED) of status of U3 and the need for FLEX equipment implementation (5) Coordinate actions of FSG-100 for U2 and U3 as directed by the ED (6) Perform SM oversight and assist U2 ED	No
U3 Control Room Supervisor	(1) T = 0 – 1.0 hr. (2) T = 1 hr. -duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOP (2) Direct and coordinate EOP/ELAP actions	No
U3 Shift Technical Advisor	(1) T = 0 – until mode 4 entered (2) T = 1.0 – 1.5 hrs.	(1) Technical Support / Plant monitoring and assessment (2) Initial plant assessment for FLEX per FSG-5 Att. 1	No

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JOB POSITION	TIME	TASK	Collateral Duty?
U3 SRO (Fire Brigade Leader)	(1) T = 0 – 1.0 hr. (2) T = 1.0 – 4.0 hrs. (3) T = 4.0 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 – 16 hrs. (11) T = 16 – 18 hrs. (12) T = 18 - duration	(1) No Assignment (2) Transit to the FLEX Storage Bldg. and perform debris removal (3) Transfer U3 FLEX DG to staging area (4) Transfer Mechanical Trailer #2 with discharge hoses to staging areas (5) Transfer Mechanical Trailer #1 with suction hoses to staging areas (6) Transfer U3 RCS and U3 SG makeup pumps to staging area (7) Transfer refuel tank trailer to staging area (8) Transfer light trailers #2 and #4 to staging areas as needed (9) Align hoses and FLEX CST makeup pump for U3 CST makeup (10) No assignment (11) Deploy N2 bottles for ADV operation (12) No assignment	No
U3 RO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 3.0 hrs (3) T = 10 - 18 hrs. (4) T = 13 – 15 hrs (5) T = 20 - 22 hrs. (6) T = 1.0 – duration	(1) Immediate plant actions / Coordinate RCS cooldown with NPO#3 (2) Perform RCS cooldown to 415 degrees (3) Head vent valve operations as needed for letdown (4) Isolate SI Accumulators (5) Perform RCS cooldown to 340 degrees (6) Plant monitoring	No
U3 RO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 4.0 hrs. (5) T = 4.0 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs (9) T = 8.0 - 10 hrs. (10) T = 10 - duration	(1) Immediate plant actions / open CR panel doors / open PCV-1188 (2) Perform SBO Load shed (3) Monitor channel – train indications / initiate DC Deep load shed (CR only) (4) Coordinate damage assessment (5) No assignments (6) Layout discharge hoses from Mechanical Trailer #2 (7) Layout suction hoses from Mechanical Trailer #1 (8) Connect RCS suction and discharge hoses, vent system and start pump (9) Connect SFP suction and discharge hoses, vent system and start pump (10) No assignment	No

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JOB POSITION	TIME	TASK	Collateral Duty?
U3 NPO #1	(1) T = 0 – 0.5 hrs (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6.0 hrs. (8) T = 6.0 – 6.5 hrs. (9) T = 6.5 - duration (10) T = 8.0 – 10 hrs.	(1) Attempt to start EDG, evaluate bus work for damage, travel to Appendix R DG (2) Attempt to start Appendix R DG, perform SBO load shed in field (3) Perform Deep Load Shed / Verify DC bus voltage (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service (7) No assignment (break for fatigue) (8) Verify master FSB vent fans control switch in STOP and charcoal filter bypass panel assemblies are closed (9) Periodic monitoring of FLEX DG (10) Setup portable light trailers (as needed)	No
U3 NPO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 2.5 hrs. (5) T = 2.5 – 3.5 hrs (6) T = 3.5 – 4.5 hrs (7) T = 4.5 – 6.0 hrs. (8) T = 6.0 – 7.0 hrs. (9) T = 7.0 – 8.0 hrs. (10) T = 8.0 – 10 hrs. (11) T = 10 – duration	(1) Isolate RCP Seal Injection (2) No assignment (3) Monitor SFP level and temperature (4) Perform flush of BAST line (5) Establish FSB natural circulation (6) No assignment (7) Deploy discharge hoses from Mechanical Trailer #2 (8) Deploy suction hoses from Mechanical trailer #1 (9) Connect RCS suction and discharge hoses, connect to pump and start pump (10) Connect SFP suction and discharge hoses, vent system and start pump (11) Monitor FLEX RCS pump and makeup / available for SFP makeup (if needed)	No
U3 NPO #3	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 8.0 – 10.0 hrs. (5) T = 1.5 - duration	(1) Check MSIV bypass valves closed / Install N2 backup jumper and blocking device to PCV-1188 (2) Travel to Aux Boiler feed pump room / monitor N2 / lineup N2 to atmospheric dumps (3) Support Aux Feed Bldg. / monitor N2 pressure for ADV's / manual control of AFW (4) Layout and hookup hoses for FLEX SG makeup / available for manual control of AFW (as needed) (5) Support Aux Feed Bldg. (as needed)	No

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JOB POSITION	TIME	TASK	Collateral Duty?
U3 NPO #4	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs (7) T = 5.5 – 8.0 hrs. (8) T = 8.0 – 10 hrs. (9) T = 10 – 12 hrs (10) T = 12 – 13 hrs. (11) T = 13 – 15 hrs. (12) T = 15 – 16 hrs. (13) T = 16 - 18 hrs. (14) T = 18 - duration	(1) Break condenser vacuum / Close CST to Hotwell isolation valve (2) Vent generator H2 / secure seal oil pump (3) No assignment (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service (7) Not assigned (break for fatigue and available to provide relief of others if needed) (8) Layout and hook-up hoses for FLEX SG makeup pump (9) Align hoses and FLEX CST makeup pump for U3 CST makeup (10) No assignment (11) Isolate Safety Injection Accumulators (12) No assignment (13) Deploy N2 bottles for ADV operation (14) No assignment	No
U3 NPO #5	(1) T = 0 – duration	(1) Report to CR / Offsite Communicator / Make offsite and NRC notifications as directed by the ED / make ERO notification (by satellite phone if needed)	No
U3 RP	(1) T = 0 – 2.5 hrs. (2) T = 2.5 - 3.5 hrs. (3) T = 3.5 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 - 8.0 hrs (7) T = 8.0 – 10 hrs (8) T = 10 – duration	(1) Report to CR / no specific task assignment / RP support as needed (2) Assist Ops - Establish FSB natural circulation (3) RP support as needed (4) Assist staging of discharge hoses from Mechanical Trailer #2 (5) Assist staging of suction hoses from Mechanical Trailer #1 (6) Assist Ops connect RCS suction and discharge hoses, connect to pump and start pump (7) Assist Ops connect SFP suction and discharge hoses and start pump (8) RP support as needed	No
U3 Chemistry Technician	(1) T = 0 – 8.0 hrs. (2) T = 8.0 – 10 hrs. (3) T = 10 – 12 hrs. (4) T = 12 - duration	(1) Reports to the Control Room / available for dose assessment (as needed) / available for FLEX support (as needed) (2) Support Operations layout and hookup hoses for FLEX SG makeup pump (3) Commence refuel strategy by connecting hoses and filling fuel trailer (4) Refuel FLEX equipment	No

Entergy IPEC Phase 2 Staffing Assessment (Rev 4) Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty
U2 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr (4) T = 1.0 – 1.5 hrs. (5) T = 0 – duration	(1) Assess event and declare SAE (2) Approve NMF & Direct communicator make notifications / Direct SAE evacuation & accountability (3) Declare ELAP / Coordinate with U2 SM on U2 status and need for FLEX equipment implementation (4) Declare GE / Develop PAR / Direct notification (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely / Call SAFER / Direct Security to enable FLEX equipment access (5) Perform oversight and ED responsibilities	No
U2 Control Room Supervisor	(1) T = 0 – 1.0 hrs. (2) T = 1.0 hr. – duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOPs (2) Direct and coordinate EOP / ELAP actions	No
U2 Shift Technical Advisor	(1) T = 0 – duration (2) T = 0.5- 1.0 hrs. (3) T = 1.0 - 1.5 hrs.	(1) Technical Support / Plant monitoring and assessment (2) Contact Con-ED to determine power availability. (3) Initial plant assessment for FLEX per FSG-5 Att. 1	
U2 RO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 3.0 hrs. (3) T = 1.0 – duration (4) T = 10 – 18 hrs. (5) T = 13 – 15 hrs. (6) T = 20 - 22 hrs.	(1) Immediate plant actions (2) Perform RCS Cooldown to 415 degrees / plant monitoring (3) Plant monitoring (4) Head vent valve operation as needed for letdown (5) Isolate SI accumulators (6) Perform RCS cooldown to 340 degrees	No
U2 RO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs (4) T = 1.5 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10) T = 10 – duration	(1) Open PCV-1188 on loss of CST / Open CR panel doors per 2-ECA0.0 / Coordinate attempt to restore power (2) Perform SBO DC load shed (3) Monitor channel and train indications per FSG-004 / Perform deep load shed per FSG-004 (CR only) (4) Coordinate and conduct initial damage assessment (5) No assignment (6) Deploy discharge hoses from Mechanical Trailer #2 (SFP & RCS) (7) Deploy suction hoses from Mechanical Trailer #1 (8) Connect RCS suction and discharge hoses, vent discharge line and start pump. Available for RCS makeup by T+8 hrs. (9) Deploy and hookup hoses and pump for SFP makeup. Available for SFP makeup	

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JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #1	(1) T = 0 – 1.0 hrs (2) T = 1.0 – 1.5 hrs (3) T = 1.5 – 2.0 hrs (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5hrs (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6.5 hrs (8) T = 6.5 – 8.0 hrs (9) T = 8.0 – 10 hrs (10)T = 10 - duration	(1) Investigate DG failure /Attempt to start Appendix R DG/ perform DC load shed per 2-AOP-DC-1and 2-AOP-IB-1 (2) Perform DC deep load shed (3) Not assigned (4) Perform breaker alignment in preparation for FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, place battery chargers in service (7) Periodic monitoring of FLEX DG (8) Not assigned (break for fatigue) (9) Periodic monitoring of FLEX DG / setup of portable lights (10)Periodic monitoring of FLEX DG	No

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JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 3.0 hrs. (5) T = 3.0 – 8.0 hrs. (6) T = 8.0 – 10 hrs. (7) T = 20 – 22 hrs. (8) T = 10 - duration	(1) Open AFW roll-up doors (2) Line up N2 to ADV to allow control from CR / install manual blocking device on PCV-1188 (if CST lost) / Coordinate with U2RO1 for support of RCS cooldown (3) Available for local manual control of aux feed regulator valves as needed / Support Aux Feedwater Bldg. tasks / Coordinate with U2RO1 for support of RCS cooldown (4) Support Aux Feedwater Bldg. tasks as needed / Coordinate with U2RO#1 for support of RCS cooldown (5) Support Aux Feedwater Bldg. tasks as needed (6) Layout hoses and hookup Alternate low pressure Feedwater makeup / available for local control of Aux Feedwater if needed (7) Coordinate with U2RO#1 for support of RCS cooldown (8) Support Aux Feedwater Bldg. tasks as needed	No

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JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #3	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 1.5 hrs. (3) T = 1.5 – 2.5 hrs. (4) T = 2.5 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 – 11 hrs. (11)T = 11 – duration	(1) Isolate RCP seals per 2-ECA-0.0 (2) Monitor SFP level and temperature (3) Perform BAST line flush (4) Perform FSG-011 actions to establish FSB natural circulation ventilation (5) No assignment (6) Deploy discharge hoses from trailer #2 (SFP & RCS) (7) Deploy suction hoses from trailer #1 (8) Connect RCS suction and discharge hoses, vent discharge line and start RCS makeup pump. Available for RCS makeup by T+8. (9) Deploy hoses and pump for SFP makeup. Available for SFP makeup by T+10 hrs. (10)Available for SFP and RCS makeup as needed / Close or verify closed breakers HCV-3101 and HCV-3100 for Reactor Head Vent operations (11) Available for SFP and RCS makeup as needed.	No
U2 NPO #4	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6. 5 hrs. (8) T = 6.5 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 – 12 hrs. (11)T = 12 – duration	(1) Isolate Hotwell per 2-ECA-0.0 / verify FW reg. valves, bypass valves, and blowdown isolation valve closed. (2) Vent Generator H2 and secure seal oil (3) No assignment (4) Perform breaker alignment in preparation for FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start DG and energize 480V bus, place battery chargers in service (7) Setup fans and power cords for battery room ventilation (8) No assignment (9) Layout hoses and hookup Alternate low pressure Feedwater makeup (10)Set-up hoses and FLEX CST makeup pump for U2 CST makeup (11)Available for CST makeup when needed	No

U2 NPO #5	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 4.0 hrs. (3) T = 4.0 – 4.5 hrs. (4) T = 4.5 – 7.0 hrs. (5) T = 7.0 – 8.0 hrs. (6) T = 8.0 – 9.0 hrs. (7) T = 9.0 – 10 hrs. (8) T = 10 – 12 hrs. (9) T = 12 - 13 hrs. (10) T = 13 – 15hrs. (11)T = 15 – 24 hrs.	(1) Equipment monitoring (2) Transit to FLEX storage bldg. and perform initial debris removal (3) Transfer U2 FLEX DG to staging area (4) Transfer U2 suction and discharge hoses to staging areas (5) Transfer U2 FLEX RCS makeup pump and U2 FLEX SG MU pump to staging areas (6) Assist U1 NPO transfer and energize light tower #1, establish battery room ventilation and move N2 bottles for extended ADV operation (7) Transfer light trailers #3& #5 to staging areas (8) Set up hoses and FLEX CST makeup pump for CST makeup (9) No assignment (10) Isolate Safety Injection Accumulators (11)No assignment	
U1 NPO	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 – 4.0 hrs. (4) T = 4.0 – 4.5 hrs. (5) T = 4.5 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 - 12 hrs. (10) T = 12 – 13 hrs. (11) T = 13 – 14 hrs. (12) T = 14 – 16 hrs. (13) T – 16 – 18 hrs. (14) T = 18 – 24 hrs.	(1) No assignment (2) Transit to FLEX storage bldg. and support initial debris removal (3) Transfer U2FLEX electrical cables to staging areas (4) Transfer U2 FLEX DG to staging area (5) Transfer U2 suction and discharge hoses to staging areas (6) Transfer U2 FLEX SFP and U2 FLEX CST makeup pumps to staging areas (7) Transfer light tower trailer #1 (power supply for battery room vent fans) and N2 bottles for extended ADV operation to staging area. Energize light tower and establish battery room ventilation (8) Transfer light trailers #6 & #8 to staging areas (9) Set up hoses and FLEX CST makeup pump for CST makeup (10) Transfer light trailer #7 (11) Transfer U2 diesel driven air compressor and hoses. (12) No assignment (13) Connect N2 bottles for extended ADV operation (14) No assignment	

Entergy IPEC Phase 2 Staffing Assessment (Rev 4) Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty?
U2 RP	(1) T = 0 - 2.5 hrs. (2) T = 2.5 – 3.5 hrs. (3) T = 3.5 – 4.5 hrs (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs (7) T = 8.0 – 10 hrs. (8) T = 10 - 12 hrs. (9) T = 12 - duration	(1) Report to the U2 CR / Perform RP support actions as directed by the SM or ED since no release or fuel damage. (2) RP support to establish FSB natural circulation ventilation (3) RP support as needed (4) RP support to deploy discharge hoses from trailer #2 (SFP) (5) RP support to deploy suction hoses from trailer #1 (6) RP support as needed (7) RP support to align hoses and pump for SFP makeup (8) Commence FLEX equipment refueling strategy by filling 500 gallon fuel trailer (9) Implement FLEX equipment refueling strategy	No
U2 Chemistry Technician	(1) T = 0 - 1.0 hrs (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 - 4.5 hrs (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 - 7.0 hrs. (6) T = 7.0 – 8.0 hrs (7) T = 8.0 – 9.0 hrs (8) T = 9.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 - duration	(1) Report to CR. Provides support as directed by SM (2) Travel to FLEX Bldg. and support debris removal (3) Transfer U3 FLEX DG cable trailer and U3 FLEX DG to staging area (4) Transfer and stage discharge hoses from Mechanical Trailer #2 (5) Transfer and stage suction hoses from Mechanical Trailer #1 (6) Transfer U3 SFP and U3 CST makeup pumps to staging areas (7) Transfer refueling trailer to staging areas (8) Transfer light trailers #2 & #4 to staging areas (9) Support alignment of hoses and FLEX CST makeup pump for U3 CST makeup (10) Support as directed by the ED	No
Security	(1) T = 0 – 0.5 hrs (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 - 2.0 hrs (4) T = 2.0 - 3.0 hrs. (5) T = 3.0 – 3.5 hrs. (6) T = 3.5 - duration	(1) Access control / accountability / Open CR access doors / ABFP room doors and roll-up door for U2 & U3 (2) Access control / On-site personnel accountability (3) Open security gates manually to allow delivery of FLEX equipment (4) Security functions as needed (5) Security functions as needed / support opening FSB rolling door and doors 306 & 319 for FSB natural circulation (6) Security functions as needed	No
Augmented Staff	Assumes augmented staff is available after 6 hours and will assist as directed. Augmented staff will setup and establish communications per FSG-101.		N/A

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

ATTACHMENT 2 IPEC FLEX IMPLEMENTATION TIMELINES

Timeline

It is assumed on-shift staff will be relieved after +6 hours as personnel are able to access the site. The relief staff will continue the tasks for the job position as shown. The intent of this table is to identify the job position, tasks, and estimated timeline to complete the Emergency Plan, initial phase and transition phase tasks and to demonstrate that no collateral duties have an adverse impact on implementing the Emergency Plan or FLEX strategies.

JOB POSITION	TIME	TASK	Collateral Duty
U3 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr. (4) T = 1.0 – 1.5 hrs (5) T = 1.5 – 2.0 hrs. (6) T = 0 – until EOF is operational	(1) Assess event and declare SAE (2) Approve NMF & Direct communicator make notifications / Direct SAE evacuation & accountability (3) Declare ELAP / Coordinate with U2 SM on U2 status and need for FLEX equipment implementation (4) Declare GE / Develop PAR / Direct notification (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely / Call SAFER / Direct Security to enable FLEX equipment access (5) Perform oversight and ED responsibilities	No
U3 Control Room Supervisor	(1) T = 0 – 1.0 hr. (2) T = 1 hr. -duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOP (2) Direct and coordinate EOP/ELAP actions	No
U3 Shift Technical Advisor	(1) T = 0 – until mode 4 entered (2) T = 1.0 – 1.5 hrs.	(1) Technical Support / Plant monitoring and assessment (2) Initial plant assessment for FLEX per FSG-5 Att. 1	No

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Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty?
U3 SRO (Fire Brigade Leader)	(1) T = 0 – 1.0 hr.	(1) No Assignment	No
	(2) T = 1.0 – 4.0 hrs.	(2) Transit to the FLEX Storage Bldg. and perform debris removal	
	(3) T = 4.0 – 4.5 hrs.	(3) Transfer U3 FLEX DG to staging area	
	(4) T = 4.5 – 6.0 hrs.	(4) Transfer Mechanical Trailer #2 with discharge hoses to staging areas	
	(5) T = 6.0 – 7.0 hrs	(5) Transfer Mechanical Trailer #1 with suction hoses to staging areas (6)	
	(6) T = 7.0 – 8.0 hrs.	Transfer U3 RCS and U3 SG makeup pumps to staging area	
	(7) T = 8.0 – 9.0 hrs	(7) Transfer refuel tank trailer to staging area	
	(8) T = 9.0 – 10 hrs.	(8) Transfer light trailers #2 and #4 to staging areas as needed	
	(9) T = 10 - 12 hrs.	(9) Align hoses and FLEX CST makeup pump for U3 CST makeup	
	(10) T = 12 – 16 hrs.	(10) No assignment	
	(11) T = 16 – 18 hrs.	(11) Deploy N2 bottles for ADV operation	
	(12) T = 18 - duration	(12) No assignment	
U3 RO #1	(1) T = 0 – 0.5 hrs.	(1) Immediate plant actions / Coordinate RCS cooldown with NPO#3	No
	(2) T = 0.5 – 3.0 hrs.	(2) Perform RCS cooldown to 415 degrees	
	(3) T = 10 – 18 hrs	(3) Head vent valve operations as needed for letdown	
	(4) T = 13 – 15 hrs.	(4) Isolate SI Accumulators	
	(5) T = 20 - 22 hrs	(5) Perform RCS cooldown to 340 degrees	
	(6) T = 1.0 – duration	(6) Plant monitoring	
U3 RO #2	(1) T = 0 – 0.5 hrs.	(1) Immediate plant actions / open CR panel doors / open PCV-1188	No
	(2) T = 0.5 – 1.0 hrs.	(2) Perform SBO Load shed	
	(3) T = 1.0 – 2.0 hrs.	(3) Monitor channel – train indications / initiate DC Deep load shed (CR only)	
	(4) T = 2.0 – 4.0 hrs.	(4) Coordinate damage assessment	
	(5) T = 4.0 – 4.5 hrs.	(5) No assignments	
	(6) T = 4.5 – 6.0 hrs.	(6) Layout discharge hoses from Mechanical Trailer #2	
	(7) T = 6.0 – 7.0 hrs.	(7) Layout suction hoses from Mechanical Trailer #1	
	(8) T = 7.0 – 8.0 hrs	(8) Connect RCS suction and discharge hoses, vent system and start pump (9)	
	(9) T = 8.0 – 10 hrs	Connect SFP, suction and discharge hoses, vent system and start pump (10)	
	(10) T = 10 - duration	No assignment	

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty
U3 NPO #1	(1) T = 0 – 0.5 hrs (2) T = 0.5 - 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6.0 hrs. (8) T = 6.0 – 6.5 hrs. (9) T = 6.5 - duration (10) T = 8.0 – 10 hrs.	(1) Attempt to start EDG, evaluate bus work for damage, travel to Appendix R DG (2) Attempt to start Appendix R DG, perform SBO load shed in field (3) Perform Deep Load Shed / Verify DC bus voltage (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service. (7) No assignment (break for fatigue) (8) Verify master FSB vent fans control switch in STOP and charcoal filter bypass panel assemblies are closed (9) Periodic monitoring of FLEX DG (10) Setup portable light trailers (as needed)	No
U3 NPO #2	(1) T = 0 – 0.5 hrs (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 2.5 hrs. (5) T = 2.5 – 3.5 hrs. (6) T = 3.5 – 4.5 hrs. (7) T = 4.5 – 6.0 hrs. (8) T = 6.0 – 7.0 hrs. (9) T = 7.0 – 8.0 hrs. (10) T = 8.0 – 10 hrs. (11) T = 10 – duration	(1) Isolate RCP Seal Injection (2) No assignment (3) Monitor SFP level and temperature (4) Perform flush of BAST line (5) Establish FSB natural circulation (6) No assignment (7) Deploy discharge hoses from Mechanical Trailer #2 (8) Deploy suction hoses from Mechanical trailer #1 (9) Connect RCS suction and discharge hoses, connect to pump and start pump (10) Connect SFP suction and discharge hoses, vent system and start pump (11) Monitor FLEX RCS pump and makeup / available for SFP makeup (if needed)	No
U3 NPO #3	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 8.0 – 10.0 hrs. (5) T = 1.5 - duration	(1) Check MSIV bypass valves closed / Install N2 backup jumper and blocking device to PCV-1188 (2) Travel to Aux Boiler feed pump room / monitor N2 / lineup N2 to atmospheric dumps (3) Support Aux Feed Bldg. / monitor N2 pressure for ADV's / manual control of AFW (4) Layout and hookup hoses for FLEX SG makeup / available for manual control of AFW (as needed) (5) Support Aux Feed Bldg. (as needed)	No

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
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JOB POSITION	TIME	TASK	Collateral Duty?
U3 NPO #4	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs (3) T = 1.0 – 2.0 hrs (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs (7) T = 5.5 – 8.0 hrs (8) T = 8.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 – 13 hrs. (11) T = 13 – 15 hrs. (12) T = 15 – 16 hrs. (13) T = 16 - 18 hrs. (14) T = 18 - duration	(1) Break condenser vacuum / Close CST to Hotwell isolation valve (2) Vent generator H2 / secure seal oil pump (3) No assignment (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service (7) Not assigned (break for fatigue and available to provide relief of others if needed) (8) Layout and hook-up hoses for FLEX SG makeup pump (9) Align hoses and FLEX CST makeup pump for U3 CST makeup (10) No assignment (11) Isolate Safety Injection Accumulators (12) No assignment (13) Deploy N2 bottles for ADV operation (14) No assignment	No
U3 NPO #5	(1) T = 0 – duration	(1) Report to CR / Offsite Communicator / Make offsite and NRC notifications as directed by the ED / make ERO notification (by satellite phone if needed)	No
U3 RP	(1) T = 0 – 2.5 hrs (2) T = 2.5 - 3.5 hrs (3) T = 3.5 – 4.5 hrs. (4) T = 4.5 - 6.0 hrs (5) T = 6.0 - 7.0 hrs (6) T = 7.0 - 8.0 hrs. (7) T = 8.0 – 10 hrs. (8) T = 10 – duration	(1) Report to CR / no specific task assignment / RP support as needed (2) Assist Ops - Establish FSB natural circulation (3) RP support as needed (4) Assist staging of discharge hoses from Mechanical Trailer #2 (5) Assist staging of suction hoses from Mechanical Trailer #1 (6) Assist Ops connect RCS suction and discharge hoses, connect to pump and start pump (7) Assist Ops connect SFP suction and discharge hoses and start pump (8) RP support as needed	No
U3 Chemistry Technician	(1) T = 0 – 8.0 hrs. (2) T = 8.0 – 10 hrs (3) T = 10 – 12 hrs (4) T = 12 - duration	(1) Reports to the Control Room / available for dose assessment (as needed) / available for FLEX support (as needed) (2) Support Operations layout and hookup hoses for FLEX SG makeup pump (3) Commence refuel strategy by connecting hoses and filling fuel trailer (4) Refuel FLEX equipment	No

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Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty
U2 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr. (4) T = 1.0 – 1.5 hrs. (5) T = 0 – duration	(1) Assess event and coordinate with U3 SM (ED) to declare SAE (2) Coordinate with U3 SM (ED) to ensure NMF reflects correct emergency declaration (3) Declare ELAP (4) Coordinate with U3 SM (ED) to declare GE / Develop PAR / Direct notifications (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely) / Coordinate with U3 SM (ED) of status of U2 and the need for FLEX equipment implementation (5) Coordinate actions of FSG-100 for U2 and U3 as directed by the ED (6) Perform	No
U2 Control Room Supervisor	(1) T = 0 – 1.0 hrs (2) T = 1.0 hr. – duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOPs (2) Direct and coordinate EOP / ELAP actions (3) Initial plant assessment for FLEX per FSG-5 Att. 1 (4) Coordinate and conduct initial damage assessment	No
U2 RO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 3.5 hrs. (5) T = 3.5 - 4.5 hrs (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 - duration	(1) Open CR panel doors per 2-ECA0.0 / Coordinate attempt to restore power (2) Perform SBO DC load shed (3) Coordinate with U3 to dispatch operators and chemistry to perform debris removal (4) Perform breaker alignment in preparation for FLEX DG per FSG-5 (5) Stage electrical cables from electrical trailer (6) No assignment (7) No assignment (8) No assignment (9) Deploy and hookup hoses and pump for SFP makeup. Available for SFP makeup by T+10 hrs. (10) No assignment	No

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #1	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 1.5 hrs. (3) T = 1.5 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs (5) T = 3.5 – 4.5hrs. (6) T = 4.5 – 5.5 hrs (7) T = 5.5 – 6.5 hrs. (8) T = 6.5 – 8.0 hrs (9) T = 8.0 – 10 hrs (10)T = 10 - duration	(1) Investigate DG failure /Attempt to start Appendix R DG/ perform DC load shed per 2-AOP-DC-1and 2-AOP-IB-1 (2) Perform DC deep load shed (3) Not assigned (4) Perform breaker alignment in preparation for FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, place battery chargers in service (7) Periodic monitoring of FLEX DG (8) Not assigned (break for fatigue) (9) Periodic monitoring of FLEX DG / setup of portable lights (10)Periodic monitoring of FLEX DG	No

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Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty
U2 NPO #2	(1) T = 0 – 1.0 hrs.(2) T = 1.0 – 1.5 hrs. (3) T = 1.5 – 2.5 hrs. (4) T = 2.5 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 – 11 hrs. (11)T = 11 – duration	(1) No assignment (2) Monitor SFP level and temperature (3) Monitor SFP level and temperature (4) Perform FSG-011 actions to establish FSB natural circulation ventilation (5) Transit to U2 FLEX DG staging area and unload and run FLEX DG cables when equipment is staged (6) Deploy discharge hoses from trailer #2 (SFP & RCS) (7) Deploy suction hoses from trailer #1 (8) No assignment (9) Deploy hoses and pump for SFP makeup. Available for SFP makeup by T+10 hrs. (10) Available for SFP (11) Available for SFP makeup as needed.	No

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Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #3	(1) T = 0 – 1.0 hrs. (2) T = 1.0 - 4.0 hrs. (3) T = 4.0 – 4.5 hrs. (4) T = 4.5 – 7.0 hrs (5) T = 7.0 – 8.0 hrs. (6) T = 8.0 – 9.0 hrs (7) T = 9.0 – 10 hrs (8) T = 10 - 12 hrs. (9) T = 12 - 13 hrs (10) T = 13 – 15hrs (11)T = 15 – 24 hrs	(1) No assignment (2) Transit to FLEX storage bldg. and perform initial debris removal (3) Transfer U2 FLEX DG to staging area (4) Transfer U2 suction and discharge hoses to staging areas (5) No assignment (6) Assist U1 NPO transfer and energize light tower #1 (7) Transfer light trailers #3& #5 to staging areas (8) No assignment (9) No assignment (10) No assignment (11)No assignment	No
U2 NPO #4	(1) T = 0 - 1.0 hrs. (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 - 4.0 hrs. (4) T = 4.0 – 4.5 hrs. (5) T = 4.5 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 - 12 hrs. (10)T = 12 – 13 hrs. (11)T = 13 – 14 hrs. (12)T = 14 – 16 hrs. (13)T - 16 – 18 hrs (14)T = 18 – 24 hrs	(1) Replace radio repeater antenna if damaged (2) Transit to FLEX storage bldg. and support initial debris removal (3) Transfer U2FLEX electrical cables to staging areas (4) Transfer U2 FLEX DG to staging area (5) Transfer U2 suction and discharge hoses to staging areas (6) Transfer U2 FLEX SFP and U2 FLEX CST makeup pumps to staging areas (7) Transfer light tower trailer #1 (power supply for battery room vent fans) Energize light tower and establish battery room ventilation (8) Transfer light trailers #6 & #8 to staging areas (9) No assignment (10) Transfer light trailer #7 (11) Transfer U2 diesel driven air compressor and hoses (12) No assignment (13) No assignment (14) No assignment	No

Entergy IPEC Phase 2 Staffing Assessment (Rev 4)
Revision Matrix

JOB POSITION	TIME	TASK	Collateral Duty?
U2 RP	(1) T = 0 – 2.5 hrs. (2) T = 2.5 – 3.5 hrs. (3) T = 3.5 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 10 hrs (8) T = 10 - 12 hrs (9) T = 12 - duration	(1) Report to the U2 CR / Perform RP support actions as directed by the SM or ED since no release or fuel damage. (2) RP support to establish FSB natural circulation ventilation (3) RP support as needed (4) RP support to deploy discharge hoses from trailer #2 (SFP) (5) RP support to deploy suction hoses from trailer #1 (6) RP support as needed (7) RP support to align hoses and pump for SFP makeup (8) Commence FLEX equipment refueling strategy by filling 500 gallon fuel trailer (9) Implement FLEX equipment refueling strategy	No
U2 Chemistry Technician	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 - 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 - 7.0 hrs. (6) T = 7.0 – 8.0 hrs (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 - duration	(1) Report to CR. Provides support as directed by SM (2) Travel to FLEX Bldg. and support debris removal (3) Transfer U3 FLEX DG cable trailer and U3 FLEX DG to staging area (4) Transfer and stage discharge hoses from Mechanical Trailer #2 (5) Transfer and stage suction hoses from Mechanical Trailer #1 (6) Transfer U3 SFP and U3 CST makeup pumps to staging areas (7) Transfer refueling trailer to staging areas (8) Transfer light trailers #2 & #4 to staging areas (9) Support alignment of hoses and FLEX CST makeup pump for U3 CST makeup (10) Support as directed by the ED	No
Security	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 - 2.0 hrs (4) T = 2.0 – 3.0 hrs (5) T = 3.0 - 3.5 hrs. (6) T = 3.5 - duration	(1) Access control / accountability / Open CR access doors / ABFP room doors and roll-up door for U2 & U3 (2) Access control / On-site personnel accountability (3) Open security gates manually to allow delivery of FLEX equipment (4) Security functions as needed (5) Security functions as needed / support opening FSB rolling door and doors 306 & 319 for FSB natural circulation (6) Security functions as needed	No
Augmented Staff	Assumes augmented staff is available after 6 hours and will assist as directed. Augmented staff will setup and establish communications per FSG-101.		N/A

Indian Point Energy Center

Unit 2 and Unit 3

Phase 2 Staffing Study

(Rev 4)

Prepared _____ 5/20/2020

David Powell, IPEC Operations, FLEX Marshall — Date

Reviewed Tim Garvey approved via email see attached _____ 5/20/2020

Tim Garvey, ENO, Emergency Preparedness — Date

Senior Project Manager

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1.0 EXECUTIVE SUMMARY

Beyond Design Basis External Events (BDBEE) are events initiated by natural phenomena that either exceed the protections provided by design basis features or involve natural phenomena within the design basis in combination with beyond design-basis failures leading to an extended loss of ac power (ELAP) and/or loss of access to the ultimate heat sink (LUHS).

Using the methodology of (Nuclear Energy Institute) NEI 12-01, Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities, Rev. 3 presented the results of an assessment of the capability of the Indian Point Energy Center (IPEC) on-shift staff and augmented Emergency Response Organization (ERO) to respond to a BDBEE. Changes made in Rev. 3 were limited to adjustments to task assignments as detailed in the FLEX Implementation Timeline (Att. 2). The task assignment change eliminated the need to replace a damaged radio antenna at the onset of a BDBEE. Further evaluations identified sufficient redundant radio channels, each with separate antennas, are available and can be easily transferred between Units 2 and 3 to ensure radio communications remain available for both units if an antenna is damaged by the event. Revision 3 did not change the overall conclusions of the assessment as detailed in the original report.

The assumptions for the NEI 12-01 Phase 2 scenario postulate that the BDBEE involves a large-scale external event that results in:

- an extended loss of AC power
- an extended loss of access to ultimate heat sink
- impact on all units (U3 is operating at full power at the time of the event U2 is defueled)
- impeded access to the units by off-site responders as follows:
  (1) 0 to 6 Hours Post Event – No site access.
  (2) 6 to 24 Hours Post Event – 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).
  (3) 24 Hours Post Event – 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.

To conduct the on-shift portion of the assessment, initially a team of subject matter experts from Operations, Operations Training, Radiation Protection, Chemistry, Security, Emergency Planning and FLEX Project Team personnel performed a tabletop in July 2014. The participants reviewed the assumptions and applied procedural guidance, including applicable draft and approved FLEX Support Guidelines (FSGs) for coping with a BDBEE using minimum on-shift staffing. Particular attention was given to the sequence and timing of each procedural step, its duration, and the on-shift individual performing the step to account for both the task and the estimated time to prepare for and perform the task. A validation and verification of the time and resources needed to reasonably assure required tasks, manual actions and decisions for FLEX strategies are feasible and may be executed within the time constraints identified in the Overall Integrated Plan (OIP) / Final Integrated Plan (FIP) was also conducted. In April 2020 another tabletop was performed (Rev.4) involving the site FLEX Marshall, the Defueling Project, Operations and Engineering to determine that the modifications to this document continued to meet the requirements post U2 defueling.

The validated and verified Phase 2 Staffing Assessment concluded that the current minimum on-shift staffing including the required fire brigade is sufficient to support the implementation of the mitigating strategies (FLEX strategies) on Units 2 and 3, as well as the required Emergency Plan action, with no unacceptable collateral tasks assigned to the on-shift personnel during the first 6 hours. The assessment also concluded that the on-shift staffing, with assistance from augmented staff, is capable of implementing the FLEX strategies necessary after the 6 hour period within the constraints. It was concluded that the Emergency response function would not be degraded or lost.

This assessment also concluded that sufficient personnel resources exist in the current IPEC augmented ERO to fill positions for the expanded emergency response functions. Thus, the ERO resources and capabilities necessary to implement Transition Phase coping strategies performed after the end of the "no site access" 6-hour time exist in the current program.

2.0 INTRODUCTION

The Nuclear Regulatory Commission (NRC) issued a Letter to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, dated March 12, 2012, *Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident.* Information requests related to Emergency Planning were contained in Enclosure 5 of the §50.54(f) letter. Enclosure 5 contained two requested actions; one involving performance of a staffing assessment and the other a communications assessment. The communications assessment is independent of the staffing assessment and not included as part of this report. The Phase 2 staffing assessment addresses Requested Information Items 1, 2, and 6 of NTTF Recommendation 9.3. The actions for the staffing assessment are summarized as follows:

> *It is requested that addressees assess their current staffing levels and determine the appropriate staff to fill all necessary positions for responding to a multi-unit event during a beyond design basis natural event and determine if any enhancements are appropriate given the considerations of Near-Term Task Force (NTTF) Recommendation 9.3.*

A two-phased approach was established by the industry to respond to the information requests contained in the §50.54(f) letter associated with staffing. Additionally, NEI developed a technical report (NEI 12-01, *Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities*) that includes the recommended criteria for use in performing the staffing assessment for a BDBEE. The criteria provides for documenting the organizational capabilities that will facilitate simultaneous performance of extended coping capabilities following a BDBEE.

Note – Use of the term ELAP throughout this report also assumes a loss of access to the ultimate heat sink as part of the event. The use of the terms Phases 1, 2, and 3 refers to Initial Phase, Transition Phase and Final Phase respectively as referenced in the Mitigating Strategies Order and NRC JLD-ISG-2012-1.

3.0 SCOPE OF THE ELAP ERO STAFFING ASSESSMENT

All sites with one or more operating units are required to perform a Phase 2 staffing assessment no later than 4 months prior to beginning of the second refueling outage (as used within the context of NRC Order EA-12-049). The Phase 2 assessment considers the staffing necessary to implement actions that address functions related to Fukushima NTTF Recommendation 4.2. Licensees of multi-unit sites have two options for providing the Phase 2 staffing assessment:

- Provide one Phase 2 staffing assessment applicable to all on-site units. This assessment should be provided 4 months prior to the first occurrence of a second refueling outage at the site (i.e., the first "second refueling outage"). This option may be used by sites that will employ essentially identical mitigation strategies for all on-site units.

- Provide two or more Phase 2 staffing assessments as applicable to the different on-site units. Each assessment should be provided 4 months prior to the occurrence of the second refueling outage of the unit to which the assessment is applicable. This option may be used by all sites that will employ different mitigation strategies for on-site units.

IPEC Unit 2 and Unit 3 staffing assessments were performed per the guidance of the first option to conduct one assessment applicable to both units with a submittal date no later than November 3, 2014 based on the Unit 3 FLEX implementation. The intent of this assessment was to perform the following:

1 Evaluate the ability of the on-shift staff to implement Initial Phase coping actions and, consistent with the site access assumption, evaluate Transition Phase actions that must be performed prior to the end of the "no site access" time period.
   - Initial Phase – Implementation of strategies that generally rely upon installed plant equipment.
   - Transition Phase – Implementation of strategies that involve the use of on-site portable equipment and consumables to extend the coping period, and prevent a loss of functions needed for core cooling, containment integrity, and spent fuel pool cooling. Setup for these strategies may be performed prior to the end of the Initial Phase as determined by procedure.

2 Evaluate the ability of the on-shift staff to implement the Station Blackout (SBO) coping strategies in place before ELAP is declared.

3 Evaluate the EOPs and FSGs for responding to an ELAP affecting both units. (Note: Draft FSGs and draft emergency operating procedures revised for FLEX implementation were used.)

4 Evaluate whether the ability of the on-shift staff to perform any required emergency response functions would be degraded or lost prior to the arrival of the augmented ERO.

5 Consistent with the site access assumption, evaluate the ability of the on-shift staff and augmented staff to implement Transition Phase coping strategies performed after the end of the "no site access" time period.

The staffing level determined as a result of the Phase 2 assessment was verified and validated to reasonably assure required tasks, manual actions and decisions for FLEX strategies are feasible and may be executed within the constraints identified in the Overall Integrated Plan (OIP) or order EA 12-049. The validation was performed and is documented in the report titled "Entergy Indian Point Station FLEX Validation" dated 12/02/2015 and follow-up evaluations titled "IPEC Unit 2 Strategy Changes and Impact to FLEX Validation" dated 03/15/2016 (CIN 2016-00030) and "IPEC Unit 3 Strategy Changes and Impact to FLEX Validation" dated 04/06/2016 (CIN 2016-00070).

4.0 FLEX PLAN MINIMUM ON-SHIFT STAFFING

The IPEC Emergency Plan establishes the licensing basis for the on-shift staffing complement as determined by the staffing assessment performed as part of the overall Emergency Planning rulemaking published in November of 2011. Only personnel required to be on-shift are credited in the Phase 2 Staffing Assessment for the initial 6 hours of the event. The following table indicates the on-shift personnel necessary to perform Initial Phase plant operations and the required emergency planning functions.

Position	NUREG-0654 Functional Area/Tasks U2 staff	NUREG-0654 Functional Area/Tasks U3 staff	On-Shift Staffing U2	On-Shift Staffing U3
Shift Manager (SM)	Emergency Direction and Control/ Safe Shutdown / Assessment of Operational Aspects	Emergency Direction and Control/Safe Shutdown / Assessment of Operational Aspects	1	1
Control Room Supervisor (CRS)	Plant Operations/Safe Shutdown / Assessment of Operational Aspects	Plant Operations/Safe Shutdown / Assessment of Operational Aspects	1	1
Shift Technical Advisor (STA)	Plant System Engineering / Technical Support	Plant System Engineering / Technical Support		1
Reactor Operators (RO)	Plant Operations/Safe Shutdown / Assessment of Operational Aspects	Plant Operations/Safe Shutdown / Assessment of Operational Aspects	1	2
Nuclear Plant Operator (NPO)	Plant Operations/Safe Shutdown/Fire Brigade	Plant Operations/Fire Brigade	4	4
Nuclear Plant Operator (NPO)	Communicator / Notifications			1
Chemistry	Chemistry/Offsite Dose Assessment	Chemistry/Offsite Dose Assessment	1	1
Radiation Protection (RP)	Radiological Assessment / In-plant Protective Actions	Radiological Assessment / In-plant Protective Actions	1	1

SRO	Fire Brigade Leader for both units (available for plant operations/safe shutdown in non-fire events on unit licensed on and other as directed by the Emergency Director)		1
Security	Access Control and Accountability	Per Security Contingency Plan	

Emergency plan tasks of repair and corrective action, first aid and rescue operations are provided by personnel assigned other functions as allowed by NUREG-0654 Table B-1 and NEI 10-05. The SM provides emergency direction and control of plant operations and assessment of operational aspects.

5.0 PHASE 2 STAFFING ASSESSMENT FOR BDBEE/ELAP

5.1 On-shift Staff Responsibilities

On-shift staff responsibilities and actions assumed in the tabletop are as follows:

- U3 SM assumed the Emergency Director (ED) function
- On-shift Communicator was available to perform off-site notifications
- The (2) CRSs, (3)ROs, (1) FBL SRO, and (8) NPOs were available to perform plant operations to establish and maintain core cooling (U3), spent fuel pool level (U2 & U3), and containment integrity (U3) as directed by each unit CRS using ECAs, and FSGs.
- Two RP Technicians and two Chemistry Technicians were available to perform their emergency plan functions and other tasks as directed by the Shift Manager in either unit.

  (1) One of the two Chemistry Technicians was responsible for the task of dose assessment should a release occur. Both are qualified and either may be called to the control room to perform the function should a release occur. Otherwise, they were available to perform tasks to implement FLEX as directed by SM/ED.
  (2) One of the two RP techs was available to perform job support, in-plant surveys, and onsite surveys as directed by the SM/ED. Either RP tech could be called upon for the task when needed; otherwise they were available to perform tasks to implement FLEX as directed by the Shift Manager.

- The U2 SM was available to assist the ED with other communications such as contacting the Corporate Duty Manager, or Corporate Emergency Center (CEC) and coordinating request for resources.
- Existing coping strategies do not anticipate the use of Security Officers other than to perform duties related to their assigned security roles. Tasks assigned for FLEX response are consistent with their normal duties such as monitoring and controlling sites access, providing site access for FLEX equipment staging, and providing

compensating measures for vital area doors that may need to remain open to facilitate room environmental conditions or staging and operation of FLEX equipment.

- It was assumed that the Emergency Director and Communicator functions and responsibilities remained in the Control Room throughout the duration of this assessment. It is recognized, however, that the augmented ERO would be expected to arrive on-site or at their designated off-site facilities and assume these functions from the Control Room as soon as possible.

5.2 Methodology

- The Phase 2 staffing assessment for response functions related to NTTF Recommendation 4.2 was based on the actions delineated in the procedures and guidelines developed in response to the Order to ensure accurate results.
- A tabletop was used to determine what plant actions and emergency plan implementation actions were required based on procedures during an ELAP. In cases where multiple tasks were assigned to an individual, the team evaluated the timing of the tasks to ensure that they could be performed by the individual in series within any specified time constraints. A team of Emergency Planning, Operations, Operations Training, Security, Chemistry, and FLEX Project Team personnel completed the assessment of the on-shift staff's response to a BDBEE and ELAP.
- The guidance of NEI 10-05 was used to determine if the number and composition of the on-shift staff is sufficient to implement the Emergency Plan, Initial Phase actions and, with assistance from augmented staff, implement Phase 2 mitigation strategies and repair or corrective actions intended to maintain or restore the functions of core cooling, containment integrity, and spent fuel pool makeup for both units.
- The guidance of NEI 10-05 was used but the tables were modified to include tasks to implement the FLEX strategies.
- Due to the lead time before Phase 3, it was assumed that offsite equipment would arrive on site and appropriate staff would be available to receive, stage, and operate the equipment. Therefore, the staffing assessment did not consider Phase 3 FLEX strategies.

5.3 NEI 12-01 General Assumptions and Limitations

- A large-scale external event occurs that results in:
  - all onsite units affected
  - extended loss of AC power with simultaneous LUHS
  - impeded access to all units
- Initially, all on-site reactors are operating at full power and are successfully shut down.
- A Hostile Action directed at the affected site does not occur during the period that the site is responding to the event.
- The event impedes site access as follows:

- Post event time: 0 to 6 hours - No site access. This duration reflects the time necessary to clear road way obstructions, use different travel routes, mobilize alternate transportation capabilities, etc.
- Post event time: 6 to 24 hours - Limited site access. Individuals may access the site by walking, personal vehicle or via alternate transportation capabilities.
- 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.

5.4 Other Assumptions for Staffing Assessment

- The result of the beyond-design-basis event may place the plant in a condition where it cannot comply with certain Technical Specifications and/or with its Security Plan, and as such, may warrant invoking 10 CFR 50.54(x) and/or 10 CFR 73.55(p).
- For purposes of assessing augmented staffing, it is assumed that the on-shift staff successfully performs all Initial Phase and any necessary Transition Phase coping actions during the 0-6 hour period. It is assumed an adequate number of augmented ERO members arrive on site between 6 hours and 24 hours to assist the on-shift staff to successfully implement the appropriate FLEX strategies and FSGs.

  Initial Phase *– Implementation of strategies that generally rely upon installed plant equipment.*
  Transition Phase *– Implementation of strategies that involve the use of portable equipment and consumables to extend the coping period, and maintain or restore the functions of core cooling, containment integrity, and spent fuel pool cooling.*

- On-shift personnel are limited to the minimum complement allowed by the site emergency plan (i.e., the minimum required number for each required position). This would typically be the on-shift complement present during a backshift, weekend, or holiday.
- Off-site emergency response facilities and staging areas are available, including those located within the 25 mile telecommunications blackout range.

5.5 NEI 12-06 Staffing Assumptions

- The FLEX strategies documented in the event sequence analysis assume:
  - No independent, concurrent events
  - All personnel onsite are available to support site response
  - All reactors on-site initially operating at power, unless site has procedural direction to shut down due to the impending event.

5.6 NEI 10-05 Applicable Assumptions to support Methodology

- On-Shift personnel can report to their assigned response locations within timeframes sufficient to allow for performance of assigned actions.
- The on-shift staff possesses the necessary Radiation Worker qualifications to obtain normal dosimetry and to enter Radiologically Controlled Areas (but not high, locked high or very high radiation areas unless allowed by procedure or Emergency Plan) without the aid of a Radiation Protection Technician.

- Performance of site and protected area access control function is regularly analyzed through other station programs and will not be evaluated here, unless a role or function from another major response area is assigned as a collateral duty.
- The task of making a simple and brief communication has minimal impact on the ability to perform other assigned functions/tasks, and is therefore an acceptable collateral duty for all positions. Examples include making a plant page announcement or placing a call for assistance to an offsite resource such as local law enforcement. This assumption does not apply to emergency notification to an Offsite Response Organization (ORO) or the NRC.
- The task of performing a peer check has minimal impact on the ability to perform other assigned functions/tasks, and is therefore an acceptable collateral duty for all positions. Examples include performing a peer check on a recommended emergency classification or notification form for transmittal to offsite authorities.
- The analyzed event occurs during off-normal work hours at a time when augmented ERO responders are not at the site (e.g., during a backshift, weekend or holiday).

5.7 Severe Accident Management Guideline (SAMG)

- It was concluded in the Phase 2 Staffing Assessment that the on-shift staff and augmented ERO would not be called upon to perform SAMG activities for the event analyzed for this report. The IPEC FLEX strategy is assumed to be successful to the extent that SAMG entry will not be necessary.

5.8 Assessment of the INITIAL PHASE Coping Strategies and Capability

- The Phase 2 staffing assessment for the Initial Phase actions during the first 6-hours concluded that there were no task overlaps for the activities assigned to the on-shift staff and the ability of the on-shift staff to perform any required emergency response functions were not degraded or lost. Refer to Attachment 1, Phase 2 Staffing Assessment NEI 10-05 Tabletop Data and Attachment 2, IPEC FLEX Implementation Timelines.

5.9 Assessment of TRANSITION PHASE Coping Strategies and Capability

- <u>On-shift Staff</u> Transition Phase Coping Actions (Hours 0 – 6)

  The Transition Phase requires providing sufficient, portable, on-site equipment and consumables to maintain or restore functions until they can be accomplished with resources brought from off site. Actions include:
  1) Initial Assessment and FLEX Equipment Staging (FSG-005)
  2) DC Load Shed (FSG-004)
  3) Debris removal (0-FSG-201)
  4) Deploy FLEX Phase 2 Generator, connect cables and start DG (FSG-005)
  5) Deploy and stage additional FLEX equipment (0-FSG-201)
  6) Alternate AFW/EFW Suction Source (FSG-002)

- Augmented ERO and On-shift Staff Transition Phase Coping Actions

  The following tasks are assumed to be performed by the on-shift and augmented staff after the 6 hour no access period using limited augmented ERO members as shown in Attachment 2.

  1) Long Term RCS Inventory Control (FSG-001)
  2) Makeup to the Spent Fuel Pool (FSG-011)
  3) Alternate Low Pressure Feedwater (FSG-003)
  4) Alternate CST Makeup (FSG-006)
  5) Refuel FLEX equipment (FSG-005)

6.0 AUGMENTED ERO

6.1 ERO Response

- The methods to notify and augment the ERO was identified in *Entergy's 90-Day Response to the March12, 2012 Information Request, Action Plan for Completing Emergency Communication and Staffing Assessments* ((NL-12-075) and in Entergy Letter dated April 30, 2013, *Entergy's Response to the March 12, 2012, Information Request, Enclosure 5, Recommendation 9.3, Emergency Preparedness - Staffing, Requested Information items 1, 2, and 6 (Phase 1 Staffing Assessment).* (NL-13-70) The Phase 1 Staffing Assessment addressed site access for the augmented ERO.

6.2 Expanded Emergency Response

- The expanded emergency response was identified in the Phase 1 Staffing Assessment submitted in Entergy Letter dated April 30, 2013, *Entergy's Response to the March 12, 2012, Information Request, Enclosure 5, Recommendation 9.3, Emergency Preparedness - Staffing, Requested Information items 1, 2, and 6.*
- The Phase 2 Staffing Assessment revised the expanded emergency response table by including the recommended expanded response described in NEI 12-01 Table 3.2. The revised portion of the expanded response is shown in Attachment 3. The expanded response table and implementation guidance is provided in a FLEX Support Guideline.

7.0 PHASE 2 STAFFING ASSESSMENT CONCLUSION

7.1 Staffing Level

This validated and verified assessment concluded that the current minimum on-shift staffing as defined in the IPEC Emergency Plan, is sufficient to support the implementation of the ELAP strategies on Units 2 and 3, as well as the required Emergency Plan actions, with no unacceptable collateral duties. The staffing assessment did not identify the need for additional on-shift staff.

The NPOs performed tasks in series when necessary and were able to timely perform all assigned functions. The NPOs performed actions to ensure core cooling, containment integrity, and spent fuel pool makeup could be implemented as designed. The performance of coping strategies does not impact the ability of the on-shift staff to perform any required

emergency response function. Emergency response functions would not be degraded or lost prior to the arrival of the augmented ERO.

The existing on-shift staff and augmented ERO is sufficient to implement existing BDBEE and ELAP strategies on both units simultaneously while continuing to perform required Emergency Planning tasks without unacceptable collateral duties. No change to the on-shift staffing level or augmented ERO is required. The emergency plan will not be changed as a result of the shift staffing assessment. No interim actions have been taken or are planned as a result of the assessment.

7.2 Task Analysis Results

Refer to Attachment 1, Phase 2 Staffing Assessment Tabletop Data, and Attachment 2, IPEC FLEX Implementation Timelines, for the analysis of on-shift staffing tasks.

- The task analysis did not identify any unassigned tasks.
- The task analysis did not identify any task overlaps that were performed by the on-shift staff.
- The time to perform the tasks was best estimate of the assessment team based on operating experience and for those tasks identified as being "time sensitive", were validated as being bounded by the time allotted for performing the tasks as noted in Att. 2.

7.3 Time Motion Study (TMS) Results

Collateral tasks were not identified, therefore a time motion study was not required. Refer to Attachment 2, IPEC FLEX Implementation Timelines, for the on-shift staffing task timing and sequence analysis results.

7.4 Augmented and Expanded ERO Assessment Results

The existing ERO is sufficient to fill augmented ERO positions and those positions needed to support expanded response positions assigned as necessary if responding to a BDBEE on both units. IPEC has four ERO teams that have been trained to respond to the site.

8.0 REFERENCES

8.1 NEI 12-01, Rev 0, *Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities*

8.2 NEI 10-05, Rev 0, *Assessment of On-Shift Emergency Response Organization Staffing and Capabilities*

8.3 NSIR DPR-ISG-01, *Interim Staff Guidance – Emergency Planning for Nuclear Power Plants*

8.4 NRC Letter to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, dated March 12, 2012, *Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident.*

8.5 NRC Order Number EA-12-049, dated March 12, 2012, Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

8.6 Entergy letter (NL-12-054) to the NRC dated May 11, 2012, *Entergy's 60-Day Response to the March 12, 2012, Information Request, Action Plan for Completing Emergency Communication and Staffing Assessments (ML12144A157)*

8.7 Entergy Letter (NL-12-075) dated June 8, 2012, *Entergy's 90-Day Response to the March 12, 2012, Information Request, Action Plan for Completing Emergency Communication and Staffing Assessments (ML12164A566)*

8.8 Entergy Letter (NL-13-070) dated April 30, 2013, *Entergy's Response to the March 12, 2012, Information Request, Enclosure 5, Recommendation 9.3, Emergency Preparedness - Staffing, Requested Information items 1, 2, and 6 (Phase 1 Staffing Assessment)*

8.9 NRC Interim Staff Guidance JLD-ISG-2012-01, Rev. 0, dated August 29, 2012, Compliance with Order EA-12-049, Order Modifying Strategies for Beyond-Design-Basis External Events

8.10 NEI 12-06 Rev. 0, August 2012, *Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*

8.11 IP-RPT-13-00059 Rev 02, *IP3 FLEX Strategy Development*

8.12 Indian Point Energy Center Emergency Plan

8.13 Entergy Indian Point Station FLEX Validation dated 12/02/2015

8.14 Entergy Validation evaluation "IPEC Unit 2 Strategy Changes and Impact to FLEX Validation" dated 03/15/2016 (CIN 2016-00030).

8.15 Entergy Validation evaluation "IPEC Unit 3 Strategy Changes and Impact to FLEX Validation" dated 04/06/2016 (CIN 2016-00070).

9.0. ATTACHMENTS

ATTACHMENT 1	PHASE 2 STAFFING ASSESSMENT NEI 10-05 TABLETOP DATA
ATTACHMENT 2	IPEC FLEX IMPLEMENTATION TIMELINES
ATTACHMENT 3	EXPANDED EMERGENCY RESPONSE TABLE

Attachment 1 Phase 2 Staffing Assessment NEI 10-05 Tabletop Data

Note
NEI-10-05 Tables are modified to include Emergency Plan and FLEX implementation tasks.

1. Accident Summary:

   - A large-scale external event occurs that results in:
     - All on-site units affected
     - ELAP/LUHS
     - Impeded access to the units
   - Initially, U3 operating at full power and is successfully shut down, U2 is defueled.
   - The event results in a Site Area Emergency based on EAL SS1.1. The event is upgraded to a General Emergency SG1.1 once it has been determined that power cannot be restored before the station blackout coping time will be exceeded.
   - The most limiting hazard for on-shift staffing was used for the assessment. On-shift personnel respond as shown in Attachment 2.

2. Accident Assumptions:

   - The start and load manual actions for SBO Diesel Generators are unsuccessful.
   - Attachment 2 assumptions include:
     - SM/CRS are expected to use available staff to provide periodic relief (if needed) for individuals working in extreme environmental conditions (e.g., high heat areas).
     - Estimated task times include expected pre-job and safety briefings
     - Augmented Chemistry support is available to relieve Chemistry of Dose Assessment at T > 6 hours
   - Assumptions are identified in Section 5.0 of this document.

3. Procedures Reviewed for Accident Response Include:

   - Common Control Room
     IP-EP-115, Emergency Plan Forms
     IP-EP-120, Emergency Classification
     IP-EP-210, Central Control Room
     IP-EP-410, Protective Action Recommendation
   - U2 Procedures
     2-ECA-0.0, Loss of All AC Power
     2-AOP-SFP.1, Loss of Spent Fuel Pit Cooling
   - U3 Procedures
     3-ECA-0.0 Loss of All AC Power
     3-AOP-SFP.1, Loss of Spent Fuel Pool Cooling
   - U2 FLEX Support Guidelines

2-FSG-004, ELAP DC Bus Load Shed /Management
2-FSG-005, Initial Assessment and FLEX Equipment Staging
2-FSG-006, Alternate CST Makeup
2-FSG-011, Alternate SFP Makeup and Cooling

- U3 FLEX Support Guidelines
  3-FSG-001, Long Term RCS Inventory Control
  3-FSG-002 Alternate AFW/EFW Suction Source
  3-FSG-003, Alternate Low Pressure Feedwater
  3-FSG-004, ELAP DC Bus Load Shed /Management
  3-FSG-005, Initial Assessment and FLEX Equipment Staging
  3-FSG-006, Alternate CST Makeup
  2-FSG-011, Alternate SFP Makeup and Cooling
- Common FLEX Support Guidelines
  0-FSG-100, BDBEE / ELAP Emergency Response
  0-FSG-101, BDBEE / Emergency Communications
  0-FSG-201, Staging FLEX Equipment
  0-FSG-202, Refueling FLEX Equipment

NOTE: NEI 10-05 Tables 1-5 shown here are modified to include Emergency Plan and FLEX implementation tasks

IPEC TABLE 1 – ON-SHIFT POSITIONS Multi-Unit ELAP/LUHS				
Line #	**On-shift Position**	**Role in Table # / Line #**	**Unanalyzed Task?**	**Collateral Tasks? (See Attachment 2 for Task sequence & timeline)**
1	U2 SM	T2/L1 T5/L14	No	No
2	U2 CRS	T2/L2	No	No
3	U2 RO #1	T2/L3	No	No
4	U2 NPO #1	T2/L4	No	No
5	U2 NPO #2	T2/L5	No	No
6	U2 NPO #3	T2/L6	No	No
7	U2 NPO #4	T2/L7	No	No
8	U2 Chemistry	T2a/L21	No	No
9	U2 RP	T4/L1 T4/L2 T2a/L19	No	No (Refer to ATT 2)
10	U3 SM	T2/L8 T5/L1 T5/L2 T5/L3 T5/L5 T5/L8 T5/L10	No	No
11	U3 CRS	T2/L9	No	No
12	U3 STA	T2/L10	No	No
13	U3 RO #1	T2/L11	No	No
14	U3 RO #2	T2/L12	No	No
15	U3 NPO #1	T2/L13	No	No
16	U3 NPO #2	T2/L14	No	No
17	U3 NPO #3	T2/L15	No	No
18	U3 NPO#4	T2/L16	No	No

19	U3 Chemistry	T2a/L22	No	No
20	U3 RP	T4/L4 T2a/L20	No	No (Refer to ATT 2)
21	Communicator	T5/L6 T5/L9 T5/L13	No	No
22	SRO FBL	T2/L18	No	No
23	Security	T5/L15	No	No

IPEC TABLE 2 - PLANT OPERATIONS & SAFE SHUTDOWN Two Unit – Two Control Room Multi-Unit ELAP/LUHS Operations Crew Available to Implement AOPs, EOPs, SAMGs, or FSGs as Applicable			
Line #	**Generic Title/Role**	**On-Shift Position (Note 1)**	**Task Analysis Controlling Method (Note 2)**
1	Shift Manager(Note 3)	U2 SM	Licensed Operator Training Program
2	Unit Supervisor(Note 3)	U2 CRS	Licensed Operator Training Program
3	Reactor Operator #1(Note 3)	U2 RO #1	Licensed Operator Training Program
4	Auxiliary Operator #1(Note 3)	U2 NPO #1	Non-Licensed Operator Training Program
5	Auxiliary Operator #2(Note 3)	U2 NPO #2	Non-Licensed Operator Training Program
6	Auxiliary Operator #3(Note 3)	U2 NPO #3	Non-Licensed Operator Training Program
7	Auxiliary Operator #4(Note 3)	U2 NPO #4	Non-Licensed Operator Training Program
8	Shift Manager	U3 SM	Licensed Operator Training Program
9	Unit Supervisor	U3 CRS	Licensed Operator Training Program
10	Shift Technical Advisor	U3 STA	Licensed Operator Training Program
11	Reactor Operator #1	U3 RO #1	Licensed Operator Training Program
12	Reactor Operator #2	U3 RO #2	Licensed Operator Training Program
13	Auxiliary Operator #1	U3 NPO #1	Non-Licensed Operator Training Program
14	Auxiliary Operator #2	U3 NPO #2	Non-Licensed Operator Training Program
15	Auxiliary Operator #3	U3 NPO #3	Non-Licensed Operator Training Program
16	Auxiliary Operator #4	U3 NPO#4	Non-Licensed Operator Training Program
17	Auxiliary Operator	U1 NPO	Non-Licensed Operator Training Program
18	SRO Fire Brigade Leader	SRO FBL	Licensed Operator Training Program

*The Communicator NPO does not perform AOP, EOP, or FSG tasks.

Note 1: During a BDBEE that results in an ELAP/LUHS, all positions, except the SM, STA, and Communicator, are expected to be utilized if available to implement or assist in the implementation of FLEX strategies using Flex Support Guidelines (FSG) under the direction of the Control Room Supervisor and oversight by the Shift Manager.

Note 2: The controlling method put in place when FLEX is implemented will follow the guidance recommended by the industry. Each position receives the INPO initiated NANTEL Generic Basic FLEX Initial Course. Shift Managers and Control Room Supervisors will also receive the NANTEL Generic Advanced FLEX Training Course. A training plan developed using the systematic approach to training (SAT) process is in place for additional FLEX training.

Note3: Safe Shutdown no longer required on Unit 2.

IPEC Table 2a Other On-shift staff available to perform FLEX implementation tasks (not safe shutdown)			
Line #	**Generic Title/Role**	**On-Shift Position (Note 1)**	**Task Analysis Controlling Method (Note 2)**
19	U2 RP	U2 RP	N/A
20	U3 RP	U3 RP	N/A
21	U2 Chemistry	U2 Chemistry	N/A
22	U3 Chemistry	U3 Chemistry	N/A

Note 1: During a BDBEE that results in an ELAP/LUHS, these positions may to be utilized, if available, to assist in the implementation of FLEX strategies using FSGs under the instructions of Operations.

Note 2: The controlling method put in place when FLEX is implemented will follow the guidance recommended by the industry. Each position will receive the INPO initiated NANTEL Generic Basic FLEX Initial Course.

IPEC TABLE 3 – FIREFIGHTING Multi-Unit ELAP/LUHS		
Line #	**Performed by**	**Task Analysis Controlling Method**
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A

Fire Brigade (No firefighting activities included in this accident.).
Staff filling fire brigade positions is shown in the minimum staffing table in Section 4.0.

IPEC TABLE 4 – RADIATION PROTECTION AND CHEMISTRY
Multi-Unit ELAP/LUHS

LINE	Position Performing Function / Task	Performance Time Period After Event (hours)*																
		0-.5	.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	6.0-7.0	7.0-8.0	8.0-9.0	9.0-10.0	10.0-11.0	11.0-12.0	12.0-13.0	13.0-14.0	14.0-15.0	15.0-16.0	16.0-24.0
1	In-Plant Survey: RP	As directed by SM*																	
2	On-site Survey: RP	As directed by SM*																	
3	Personnel Monitoring:																		
4	Job Coverage: RP	As directed by SM*																	
5	Offsite Rad Assessment: *(Included in Table 5)*																		
6	Other site specific RP (describe):																		
7	Chemistry Function task #1 (describe)																		
8	Chemistry Function task #2 (describe)																		

*The team determined there are no time sensitive RP or Chemistry tasks and that task performance is directed and prioritized by the Shift Manager. The time RP or Chemistry is directed to perform a task and the amount of time taken to complete tasks are estimated. No Chemistry samples are taken due to the loss of power to the equipment necessary to analyze samples. No fuel damage or release is anticipated since core cooling. containment integrity, and spent fuel pool makeup are maintained. RP and Chemistry are available to assist with staging and setup of FLEX equipment when not performing dose assessment, surveys. or job support. Both Chemistry Technicians are qualified to perform dose assessment. RP Technicians may perform RP tasks at either unit.

IPEC TABLE 5 – EMERGENCY PLAN IMPLEMENTATION Multi-Unit ELAP/LUHS			
Line#	**Function / Task**	**On-Shift Position**	**Task Analysis Controlling Method**
1	Declare the emergency classification level (ECL)	U3 SM	Emergency Planning Training Program / EP Drills
2	Approve Offsite Protective Action Recommendations	U3 SM	Emergency Planning Training Program / EP Drills
3	Approve content of State/local notifications	U3 SM	Emergency Planning Training Program
4	Approve extension to allowable dose	N/A	N/A
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	U3 SM	Licensed Operator Training Program / Emergency Planning Training Program
6	ERO notification	Communicator	Emergency Planning Training Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	U3 SM	Emergency Planning Training Program
9	Perform State/local notifications	Communicator	Emergency Planning Training Program
10	Complete NRC event notification form	U3 SM	Licensed Operator Training Program
11	Activate ERDS	(Note 1)	N/A
12	Offsite radiological assessment	(Note 2)	N/A
13	Perform NRC notifications	Communicator	Emergency Planning Training Program
14	Perform other site-specific event notifications (e.g., Duty Plant Manager, INPO, ANI, etc.)	Communicator	Licensed Operator Training Program
15	Personnel Accountability	Security	Security Training Program / EP Drills

Note 1: ERDS at both units normally operates 24/7 and therefore does not require specific actions to activate the system. It is recognized, however, that the BDBEE is assumed to result in the loss of normal communication paths for ERDS If ERDS capability is lost, critical information would be communicated directly to the NRC over other communication paths, such as satellite phones.

Note 2. U2 (U3) Chemistry reports to the U2 (U3) Control Room to assist the SM/ED as directed and be available for offsite radiological assessment if needed. A release is not anticipated since core cooling, spent fuel pool cooling and containment integrity are maintained during the 24 hour period. If no release is expected, the SM is expected to direct Chemistry to assist with FLEX strategy implementation.

ATTACHMENT 2 IPEC FLEX IMPLEMENTATION TIMELINES

Timeline

It is assumed on-shift staff will be relieved after +6 hours as personnel are able to access the site. The relief staff will continue the tasks for the job position as shown. The intent of this table is to identify the job position, tasks, and estimated timeline to complete the Emergency Plan, initial phase and transition phase tasks and to demonstrate that no collateral duties have an adverse impact on implementing the Emergency Plan or FLEX strategies.

JOB POSITION	TIME	TASK	Collateral Duty?
U3 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr. (4) T = 1.0 – 1.5 hrs. (5) T = 1.5 – 2.0 hrs.	(1) Assess event and declare SAE (2) Approve NMF & Direct communicator make notifications / Direct SAE evacuation & accountability (3) Declare ELAP / Coordinate with U2 SM on U2 status and need for FLEX Equipment implementation (4) Declare GE / Develop PAR / Direct notification (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely / Call SAFER / Direct Security to enable FLEX equipment access (5) Perform oversight and ED responsibilities	No
U3 Control Room Supervisor	(1) T = 0 – 1.0 hr. (2) T = 1 hr. -duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOP (2) Direct and coordinate EOP/ELAP actions	No
U3 Shift Technical Advisor	(1) T = 0 – until mode 4 entered (2) T = 1.0 – 1.5 hrs.	(1) Technical Support / Plant monitoring and assessment (2) Initial plant assessment for FLEX per FSG-5 Att. 1	No

JOB POSITION	TIME	TASK	Collateral Duty?
U3 SRO (Fire Brigade Leader)	(1) T = 0 – 1.0 hr. (2) T = 1.0 – 4.0 hrs. (3) T = 4.0 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 – 16 hrs. (11) T = 16 – 18 hrs. (12) T = 18 - duration	(1) No Assignment (2) Transit to the FLEX Storage Bldg. and perform debris removal (3) Transfer U3 FLEX DG to staging area (4) Transfer Mechanical Trailer #2 with discharge hoses to staging areas (5) Transfer Mechanical Trailer #1 with suction hoses to staging areas (6) Transfer U3 RCS and U3 SG makeup pumps to staging area (7) Transfer refuel tank trailer to staging area (8) Transfer light trailers #2 and #4 to staging areas as needed (9) Align hoses and FLEX CST makeup pump for U3 CST makeup (10) No assignment (11) Deploy N2 bottles for ADV operation (12) No assignment	No
U3 RO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 3.0 hrs. (3) T = 10 – 18 hrs. (4) T = 13 – 15 hrs. (5) T = 20 - 22 hrs. (6) T = 1.0 – duration	(1) Immediate plant actions / Coordinate RCS cooldown with NPO#3 (2) Perform RCS cooldown to 415 degrees (3) Head vent valve operations as needed for letdown (4) Isolate SI Accumulators (5) Perform RCS cooldown to 340 degrees (6) Plant monitoring	No
U3 RO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1. 0 – 2.0 hrs. (4) T = 2.0 – 4.0 hrs. (5) T = 4.0 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10) T = 10 - duration	(1) Immediate plant actions / open CR panel doors / open PCV-1188 (2) Perform SBO Load shed (3) Monitor channel – train indications / initiate DC Deep load shed (CR only) (4) Coordinate damage assessment (5) No assignments (6) Layout discharge hoses from Mechanical Trailer #2 (7) Layout suction hoses from Mechanical Trailer #1 (8) Connect RCS suction and discharge hoses, vent system and start pump (9) Connect SFP suction and discharge hoses, vent system and start pump (10) No assignment	No

JOB POSITION	TIME	TASK	Collateral Duty?
U3 NPO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6.0 hrs. (8) T = 6.0 – 6.5 hrs. (9) T = 6.5 - duration (10) T = 8.0 – 10 hrs.	(1) Attempt to start EDG, evaluate bus work for damage, travel to Appendix R DG (2) Attempt to start Appendix R DG, perform SBO load shed in field (3) Perform Deep Load Shed / Verify DC bus voltage (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service (7) No assignment (break for fatigue) (8) Verify master FSB vent fans control switch in STOP and charcoal filter bypass panel assemblies are closed (9) Periodic monitoring of FLEX DG (10) Setup portable light trailers (as needed)	No
U3 NPO #2	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 2.5 hrs. (5) T = 2.5 – 3.5 hrs. (6) T = 3.5 – 4.5 hrs. (7) T = 4.5 – 6.0 hrs. (8) T = 6.0 – 7.0 hrs. (9) T = 7.0 – 8.0 hrs. (10) T = 8.0 – 10 hrs. (11) T = 10 – duration	(1) Isolate RCP Seal Injection (2) No assignment (3) Monitor SFP level and temperature (4) Perform flush of BAST line (5) Establish FSB natural circulation (6) No assignment (7) Deploy discharge hoses from Mechanical Trailer #2 (8) Deploy suction hoses from Mechanical trailer #1 (9) Connect RCS suction and discharge hoses, connect to pump and start pump (10) Connect SFP suction and discharge hoses, vent system and start pump (11) Monitor FLEX RCS pump and makeup / available for SFP makeup (if needed)	No
U3 NPO #3	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 8.0 – 10.0 hrs. (5) T = 1.5 - duration	(1) Check MSIV bypass valves closed / Install N2 backup jumper and blocking device to PCV-1188 (2) Travel to Aux Boiler feed pump room / monitor N2 / lineup N2 to atmospheric dumps (3) Support Aux Feed Bldg. / monitor N2 pressure for ADV's / manual control of AFW (4) Layout and hookup hoses for FLEX SG makeup / available for manual control of AFW (as needed) (5) Support Aux Feed Bldg. (as needed)	No

JOB POSITION	TIME	TASK	Collateral Duty?
U3 NPO #4	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 8.0 hrs. (8) T = 8.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 – 13 hrs. (11) T = 13 – 15 hrs. (12) T = 15 – 16 hrs. (13) T = 16 - 18 hrs. (14) T = 18 - duration	(1) Break condenser vacuum / Close CST to Hotwell isolation valve (2) Vent generator H2 / secure seal oil pump (3) No assignment (4) Perform breaker alignment in prep for energizing busses by FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, reenergize normal control room lighting, place battery chargers in service (7) Not assigned (break for fatigue and available to provide relief of others if needed) (8) Layout and hook-up hoses for FLEX SG makeup pump (9) Align hoses and FLEX CST makeup pump for U3 CST makeup (10) No assignment (11) Isolate Safety Injection Accumulators (12) No assignment (13) Deploy N2 bottles for ADV operation (14) No assignment	No
U3 NPO #5	(1) T = 0 – duration	(1) Report to CR / Offsite Communicator / Make offsite and NRC notifications as directed by the ED / make ERO notification (by satellite phone if needed)	No
U3 RP	(1) T = 0 – 2.5 hrs. (2) T = 2.5 - 3.5 hrs. (3) T = 3.5 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 10 hrs. (8) T = 10 – duration	(1) Report to CR / no specific task assignment / RP support as needed (2) Assist Ops - Establish FSB natural circulation (3) RP support as needed (4) Assist staging of discharge hoses from Mechanical Trailer #2 (5) Assist staging of suction hoses from Mechanical Trailer #1 (6) Assist Ops connect RCS suction and discharge hoses, connect to pump and start pump (7) Assist Ops connect SFP suction and discharge hoses and start pump (8) RP support as needed	No
U3 Chemistry Technician	(1) T = 0 – 8.0 hrs. (2) T = 8.0 – 10 hrs. (3) T = 10 – 12 hrs. (4) T = 12 - duration	(1) Reports to the Control Room / available for dose assessment (as needed) / available for FLEX support (as needed) (2) Support Operations layout and hookup hoses for FLEX SG makeup pump (3) Commence refuel strategy by connecting hoses and filling fuel trailer (4) Refuel FLEX equipment	No

JOB POSITION	TIME	TASK	Collateral Duty?
U2 Shift Manager	(1) T = 0 – 15 min (2) T = 15- 30 min (3) T = 1.0 hr. (4) T = 1.0 – 1.5 hrs. (5) T = 0 – duration	(1) Assess event and coordinate with U3 SM (ED) to declare SAE (2) Coordinate with U3 SM (ED) to ensure NMF reflects correct emergency declaration (3) Declare ELAP (4) Coordinate with U3 SM (ED) to declare GE / Develop PAR / Direct notifications (GE expected to be declared when ED determines restoration of at least one safeguards bus within 4 hours is not likely) / Coordinate with U3 SM (ED) of status of U2 and the need for FLEX equipment implementation (5) Coordinate actions of FSG-100 for U2 and U3 as directed by the ED	No
U2 Control Room Supervisor	(1) T = 0 – 1.0 hrs. (2) T = 1.0 hr. – duration (3) T = 1.0 hr. – 1.5 hr. (4) T = 1.0 hr. - duration	(1) Direct immediate plant actions per SBO AOP, Loss of SFP cooling, and EOPs (2) Direct and coordinate EOP / ELAP actions (3) Initial plant assessment for FLEX per FSG-5 Att. 1 (4) Coordinate and conduct initial damage assessment	No
U2 RO #1	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 1.5 hrs. (4) T = 1.5 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 – duration	(1) Open CR panel doors per 2-ECA0.0 / Coordinate attempt to restore power (2) Perform SBO DC load shed (3) Coordinate with U3 to dispatch operators and chemistry to perform debris removal (4) Perform breaker alignment in preparation for FLEX DG per FSG-5 (5) Stage electrical cables from electrical trailer (6) No assignment (7) No assignment (8) No assignment (9) Deploy and hookup hoses and pump for SFP makeup. Available for SFP makeup by T+10 hrs. (10) No assignment	No

JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #1	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 1.5 hrs. (3) T = 1.5 – 2.0 hrs. (4) T = 2.0 – 3.5 hrs. (5) T = 3.5 – 4.5hrs. (6) T = 4.5 – 5.5 hrs. (7) T = 5.5 – 6.5 hrs. (8) T = 6.5 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 - duration	(1) Investigate DG failure /Attempt to start Appendix R DG/ perform DC load shed per 2-AOP-DC-1and 2-AOP-lB-1 (2) Perform DC deep load shed (3) Not assigned (4) Perform breaker alignment in preparation for FLEX DG (5) Stage electrical cables from electrical trailer (6) Connect electrical cables to FLEX DG, start FLEX DG, energize 480V buses, place battery chargers in service (7) Periodic monitoring of FLEX DG (8) Not assigned (break for fatigue) (9) Periodic monitoring of FLEX DG / setup of portable lights (10)Periodic monitoring of FLEX DG	No

JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #2	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 1.5 hrs. (3) T = 1.5 – 2.5 hrs. (4) T = 2.5 – 3.5 hrs. (5) T = 3.5 – 4.5 hrs. (6) T = 4.5 – 6.0 hrs. (7) T = 6.0 – 7.0 hrs. (8) T = 7.0 – 8.0 hrs. (9) T = 8.0 – 10 hrs. (10)T = 10 – 11 hrs. (11)T = 11 – duration	(1) No assignment (2) Monitor SFP level and temperature (3) Monitor SFP level and temperature (4) Perform FSG-011 actions to establish FSB natural circulation ventilation (5) Transit to U2 FLEX DG staging area and unload and run FLEX DG cables when equipment is staged (6) Deploy discharge hoses from trailer #2 (SFP & RCS) (7) Deploy suction hoses from trailer #1 (8) No assignment (9) Deploy hoses and pump for SFP makeup. Available for SFP makeup by T+10 hrs. (10) Available for SFP (11) Available for SFP makeup as needed.	No

JOB POSITION	TIME	TASK	Collateral Duty?
U2 NPO #3	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 4.0 hrs. (3) T = 4.0 – 4.5 hrs. (4) T = 4.5 – 7.0 hrs. (5) T = 7.0 – 8.0 hrs. (6) T = 8.0 – 9.0 hrs. (7) T = 9.0 – 10 hrs. (8) T = 10 – 12 hrs. (9) T = 12 - 13 hrs. (10) T = 13 – 15hrs. (11)T = 15 – 24 hrs.	(1) No assignment (2) Transit to FLEX storage bldg. and perform initial debris removal (3) Transfer U2 FLEX DG to staging area (4) Transfer U2 suction and discharge hoses to staging areas (5) No assignment (6) T ransfer and energize light tower #1 (7) Transfer light trailers #3& #5 to staging areas (8) No assignment (9) No assignment (10) No assignment– (11)No assignment	No
U2 NPO #4	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 – 4.0 hrs. (4) T = 4.0 – 4.5 hrs. (5) T = 4.5 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 - 12 hrs. (10) T = 12 – 13 hrs. (11) T = 13 – 14 hrs. (12) T = 14 – 16 hrs. (13) T – 16 – 18 hrs. (14) T = 18 – 24 hrs.	(1) Replace radio repeater antenna if damaged (2) Transit to FLEX storage bldg. and support initial debris removal (3) Transfer U2FLEX electrical cables to staging areas (4) Transfer U2 FLEX DG to staging area (5) Transfer U2 suction and discharge hoses to staging areas (6) Transfer U2 FLEX SFP and U2 FLEX CST makeup pumps to staging areas (7) Transfer light tower trailer #1 (power supply for battery room vent fans) Energize light tower and establish battery room ventilation (8) Transfer light trailers #6 & #8 to staging areas (9) No assignment (10) Transfer light trailer #7 (11) Transfer U2 diesel driven air compressor and hoses (12) No assignment (13) No assignment (14) No assignment	No

JOB POSITION	TIME	TASK	Collateral Duty?
U2 RP	(1) T = 0 – 2.5 hrs. (2) T = 2.5 – 3.5 hrs. (3) T = 3.5 – 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 – 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 10 hrs. (8) T = 10 - 12 hrs. (9) T = 12 - duration	(1) Report to the U2 CR / Perform RP support actions as directed by the SM or ED since no release or fuel damage. (2) RP support to establish FSB natural circulation ventilation (3) RP support as needed (4) RP support to deploy discharge hoses from trailer #2 (SFP) (5) RP support to deploy suction hoses from trailer #1 (6) RP support as needed (7) RP support to align hoses and pump for SFP makeup (8) Commence FLEX equipment refueling strategy by filling 500 gallon fuel trailer (9) Implement FLEX equipment refueling strategy	No
U2 Chemistry Technician	(1) T = 0 – 1.0 hrs. (2) T = 1.0 – 3.5 hrs. (3) T = 3.5 - 4.5 hrs. (4) T = 4.5 – 6.0 hrs. (5) T = 6.0 - 7.0 hrs. (6) T = 7.0 – 8.0 hrs. (7) T = 8.0 – 9.0 hrs. (8) T = 9.0 – 10 hrs. (9) T = 10 – 12 hrs. (10) T = 12 - duration	(1) Report to CR. Provides support as directed by SM (2) Travel to FLEX Bldg. and support debris removal (3) Transfer U3 FLEX DG cable trailer and U3 FLEX DG to staging area (4) Transfer and stage discharge hoses from Mechanical Trailer #2 (5) Transfer and stage suction hoses from Mechanical Trailer #1 (6) Transfer U3 SFP and U3 CST makeup pumps to staging areas (7) Transfer refueling trailer to staging areas (8) Transfer light trailers #2 & #4 to staging areas (9) Support alignment of hoses and FLEX CST makeup pump for U3 CST makeup (10) Support as directed by the ED	No
Security	(1) T = 0 – 0.5 hrs. (2) T = 0.5 – 1.0 hrs. (3) T = 1.0 – 2.0 hrs. (4) T = 2.0 – 3.0 hrs. (5) T = 3.0 – 3.5 hrs. (6) T = 3.5 - duration	(1) Access control / accountability / Open CR access doors / ABFP room doors and roll-up door for U2 & U3 (2) Access control / On-site personnel accountability (3) Open security gates manually to allow delivery of FLEX equipment (4) Security functions as needed (5) Security functions as needed / support opening FSB rolling door and doors 306 & 319 for FSB natural circulation (6) Security functions as needed	No
Augmented Staff	Assumes augmented staff is available after 6 hours and will assist as directed. Augmented staff will setup and establish communications per FSG-101.		N/A

ATTACHMENT 3 Expanded Emergency Response Table

NOTE

ERO positions are filled in accordance with the applicable facility emergency implementing procedure. Selected ERO positions are shown in the Table to show comparable responsibilities for NEI 12-01 Table 3.2 recommended expanded emergency response individuals. Expertise from both units is desired, but not required, for those positions.

Expanded Response Function from NEI 12-01, Table 3.2	Location	Key Roles and Staffing Considerations	TOTAL Number required U2 and U3	ERO Available to Implement Coping Strategies for 2 units
Evaluation of Transition Phase Coping Strategy	TSC	• One team for each unit to evaluate selection of Transition Coping strategies; team performs evaluations not done by the Control Room • Team composition (i.e., number and represented disciplines) as described in governing site programs, procedures and guidelines. • Team may include personnel responsible for performing other functions for the same assigned unit.	No additional team members	Unit Operations Coordinator Unit Engineering Coordinator TSC Engineering Team
Implementation of Transition Phase Coping Strategies	OSC	• Number and composition of personnel capable of simultaneous implementation of any 2 Transition Phase coping strategies at each unit. • Should not include personnel assigned to other function (e.g., emergency repair and corrective actions); however, may include members of the on-shift staff and personnel responsible for implementation of SAM strategies.	U2 – 4 NPO U3 – 5 NPO	4 ERO OSC Teams

IPEC Simultaneous Implementation of 2 Transition Phase Coping Strategies

		Strategy	Required Staff to Implement	Available Staff
U3	FSG-003	Implement Alternate Low Pressure Feedwater	2 Operators	40 ROs* 48 NPOs*
U3	FSG-006	Implement CST Makeup	3 Operators	

*Unit specific qualification is not required for running and connecting hoses/cables and operating FLEX equipment. Qualified on-shift staff is available to manipulate or operate installed plant valves or equipment.

Bohren, Christopher

From: Garvey,Timothy F
Sent: Friday, May 15, 2020 1:41 PM
To: Bohren, Christopher; Myers, Valerie E
Subject: FW: IPEC Phase 2 Staffing Assessment Report Rev. 4 (U2 Defuel)

Chris –

I have completed my review of the staffing assessment report. Please sign for me.

Thanks,

Tim

From: Garvey,Timothy F
Sent: Tuesday, April 28, 2020 7:13 AM
To: Powell, David A <DPowel2@entergy.com>
Subject: RE: IPEC Phase 2 Staffing Assessment Report Rev. 4 (U2 Defuel)

No.

I do think a 50.54 q review needs to performed on it.

From: Powell, David A <DPowel2@entergy.com>
Sent: Tuesday, April 28, 2020 7:11 AM
To: Garvey,Timothy F <TGarvey@entergy.com>
Subject: RE: IPEC Phase 2 Staffing Assessment Report Rev. 4 (U2 Defuel)

Tim,
Any other issues with this?

Dave

INDIAN POINT ENERGY CENTER
Work (914) 254-5995
Cell (845) 705-8372

From: Powell, David A
Sent: Friday, April 24, 2020 1:17 PM
To: Garvey,Timothy F <TGarvey@entergy.com>
Cc: Bohren, Christopher (cbohren@entergy.com) <cbohren@entergy.com>; Bowe, Paul (pbowe@entergy.com) <pbowe@entergy.com>
Subject: IPEC Phase 2 Staffing Assessment Report Rev. 4 (U2 Defuel)

Tim,

Revised the number of RO's and NPO's on site on page 30.

The deep load shed is correct in the staffing study.