UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

March 4, 2021

EA-21-024

Mr. Joel P. Gebbie
Senior VP and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 (EPID: L-2021-LLD-0000)

Dear Mr. Gebbie:

By letter dated March 2, 2021, Indiana Michigan Power Company (the licensee) requested the U.S. Nuclear Regulatory Commission (NRC) to exercise discretion to not enforce compliance with the actions required by Donald C. Cook, Unit 1 and 2, Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.8.1 – "AC Sources – Operating." The licensee letter is attached to this document because it was not available in ADAMS at the time of issuance of this response.

This letter documented information previously discussed with the NRC in a telephone conference held on February 28, 2021, at 9:00 p.m. Eastern Standard Time (EST). The principal NRC staff members who participated in the telephone conference are listed in the Enclosure. The NRC staff determined that the information contained in your letter requesting the Notice of Enforcement Discretion (NOED) was consistent with your oral request.

The NRC first became aware of the potential for this NOED request on February 26, 2021, at approximately 11:00 a.m. EST through communication with the Senior Resident Inspector at the site. The licensee requested that an NOED be granted pursuant to the NRC's policy regarding exercise of discretion for an operating power reactor, set out in Appendix F of the NRC Enforcement Manual, and the NOED be effective for 48 hours past the LCO expiration (i.e., until 10:08 a.m. EST on Wednesday, March 3, 2021). This letter documents the event and our telephone conversation on February 28, 2021, when we orally granted this NOED request.

On February 26, 2021, at 10:08 a.m. EST, a fault current was observed between high side of reserve auxiliary transformer (RAT) and associated breaker on the train B reserve feed for both units. This caused the circuit breakers to open, removing access to one of the two immediate offsite power sources at both units. The licensee declared Unit 1 and Unit 2 train B reserve feed inoperable and entered Condition A of TS LCO 3.8.1 for both units. Further investigation found a failed bus structure in loop feeder enclosure #1, which fed both units. The licensee determined the cause of the issue was a reduction of the dielectric properties within the train B loop feed bus duct enclosure due to insulator contamination resulting from moisture intrusion and/or condensation within the enclosure. This required repair/replacement of components to

return the required offsite circuit to operable status. The other immediate offsite power source, all four emergency diesel generators, and the backup offsite power source remained fully functional. At the time of the NOED request, the licensee estimated that the maintenance activities necessary to repair the reserve feed circuits would take no more than 48 hours beyond the 72-hour completion time specified in TS LCO 3.8.1 Condition A, Required Action A.3.

During the teleconference held on February 28, 2021, the licensee requested enforcement discretion to avoid an unnecessary shutdown of Donald C. Cook Unit 1 and Unit 2 without a corresponding public health and safety benefit. The proposed enforcement discretion would allow time to repair a failed bus structure due to water intrusion into the housing enclosure and perform necessary post maintenance testing. Without this enforcement discretion, Unit 1 and Unit 2 were required to be in MODE 3 by 4:08 p.m. EST on March 1, 2021 and Mode 5 by 10:08 p.m. EST on March 2, 2021. In addition, during the telephone conference, the licensee stated that a follow-up TS amendment was not necessary to address this emergent issue.

The licensee indicated that the calculated increase in incremental conditional core damage probability (ICCDP), using the zero-maintenance probability model, for the requested 48 hours enforcement discretion period was 9E-8 for Unit 1 and 2E-7 for Unit 2. The licensee also indicated that the increase in incremental conditional large early release probability (ICLERP) was 4E-9 for Unit 1 and 6E-9 for Unit 2. These values were less than the 5E-7 ICCDP and 5E-8 ICLERP guidance thresholds specified in the NRC Enforcement Manual, Appendix F, “Notices of Enforcement Discretion.”

In addition, the licensee proposed to implement compensatory risk management measures during the proposed period of enforcement discretion to reduce the likelihood of risk significant initiating events and protect risk significant equipment and actions. These measures included but were not limited to:

- Protecting risk significant systems and areas;
- Restricting maintenance and surveillance activities;
- Verifying and maintaining availability of credited fire suppression systems;
- Establishing fire watches in risk significant fire areas; and
- Briefing operators on plant recovery procedures for loss of power and loss of heat sink events.

The licensee’s Plant On-Site Review Committee (PORC) approved submission of the NOED request on February 28, 2021, prior to the verbal request for an NOED.

Based on the NRC staff’s evaluation of the licensee’s request, the staff determined that granting this NOED was consistent with the NRC’s Enforcement Policy and staff guidance. The NOED request met the criteria specified in Section 2.5 of Appendix F, “Notices of Enforcement Discretion,” of the NRC’s Enforcement Manual. Granting this NOED avoided an unnecessary shutdown of a reactor without a corresponding benefit to public health and safety or the environment. Therefore, as communicated orally to the licensee at 10:25 p.m. EST on February 28, 2021, the NRC exercised discretion to not enforce compliance with Technical Specification LCO 3.8.1, Condition A, Required Action A.3 for a period of 48 hours, which would have expired at 10:08 a.m. EST on March 3, 2021.

The NRC staff noted that the condition causing the need for this NOED was corrected and both Donald C. Cook units exited from TS LCO 3.8.1 Condition A at 5:22 a.m. EST on March 2, 2021. As a result, this NOED terminated at 5:22 a.m. EST on March 2, 2021, within the period of the enforcement discretion.

As stated in the NRC Enforcement Policy, enforcement action may be taken to the extent that violations were involved for the root cause that led to the noncompliance for which this NOED was necessary.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Julio F. Lara, Director
Division of Reactor Projects

Docket Nos. 05000315 and 05000316
License Nos. DPR-58 and DPR-74

Enclosures:
1. List of Key NRC Personnel
2. Donald C. Cook Nuclear Plant Notice of Enforcement Request

cc: Distribution via LISTSERV®

Letter to Joel Gebbie from Julio Lara dated March 4, 2021.

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 (EPID: L-2021-LLD-0000)

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DATE	3/4/2021	3/4/2021	3/4/2021	3/4/2021

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LIST OF KEY NRC PERSONNEL

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J. Lara, Director, Division of Reactor Projects
J. Heisserer, Deputy Director, Division of Reactor Projects
M. Shuaibi, Director, Division of Reactor Safety
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N. Féliz Adorno, Chief, Reactor Projects Branch 4
R. Skokowski, Chief, Engineering Branch 3
P. Zurawski, Cook Senior Resident Inspector
J. Mancuso, Resident Inspector
J. Hanna, Senior Reactor Analyst
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A. Dahbur, Senior Reactor Inspector, Engineering Branch 3
I. Hafeez, Reactor Inspector, Engineering Branch 3
J. Cameron, RIII Enforcement/Investigation Officer

OFFICE OF NUCLEAR REACTOR REGULATION

C. Erlanger, Director, Division of Operating Reactor Licensing
P. McKenna, Acting Deputy Director, Division of Operating Reactor Licensing
N. Salgado, Chief, Plant Licensing Branch III
B. Titus, Chief, Electrical Engineering Branch
S. Wall, Senior Project Manager, Plant Licensing Branch III
V. Goel, Electrical Engineer, Division of Engineering and External Hazards
M. Hamm, Safety and Plant Systems Engineer, Technical Specifications Branch
K. Bucholtz, Reliability and Risk Analyst, PRA Oversight Branch
E. Miller, Notice of Enforcement Discretion (NOED) Program Manager

INDIANA MICHIGAN POWER
A unit of American Electric Power

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Cook Nuclear Plant
One Cook Place
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March 2, 2021

AEP-NRC-2021-20

Docket No.: 50-315
50-316

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

Donald C. Cook Nuclear Plant Unit 1 and Unit 2
Request for Enforcement Discretion for Technical Specifications 3.8.1, "AC Sources – Operating"

Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, requests enforcement discretion from compliance with Technical Specification (TS) 3.8.1, "AC Sources - Operating." For both Unit 1 and Unit 2, TS 3.8.1 requires two qualified offsite circuits and separate and independent Diesel Generators (DGs) for each train to ensure availability of the required power to shut down the reactor and maintain it in a safe shutdown condition after an anticipated operational transient or a postulated design basis accident (DBA). If one of the offsite circuits is inoperable, TS 3.8.1 condition A requires that circuit be restored to operable status within 72 hours or the plant be in Mode 3 within the next 6 hours and in Mode 5 within 36 hours.

On February 26, 2021, at 1008 hours, a fault current was observed between the high side of the reserve auxiliary transformer (RAT) and associated breaker on the Train B reserve feed for both units. This caused the circuit breakers to open, removing access to one of the two immediate offsite power sources at both units. The Unit 1 and Unit 2 Train B reserve feed was declared inoperable and the Required Action A of Technical Specification 3.8.1 was entered for both units. Further investigation found a failed bus structure in loop feeder enclosure #1 which feeds both Unit 1 and Unit 2. This will require repair/replacement to return the required offsite circuit to Operable status. The other immediate offsite power source, all four EDGs and the backup offsite power source remain fully functional.

I&M requests enforcement discretion for the 72-hour allowed outage time Unit 1 and Unit 2 Required Action A.3 of TS 3.8.1 by an additional 48 hours to allow time to repair the failed bus structure due to water intrusion into the housing enclosure and perform necessary post maintenance testing. Unit 1 and Unit 2 are currently operating at approximately 100% power. Without this enforcement discretion, Unit 1 and Unit 2 are required to be in Mode 3 by 1608 hours on March 1, 2021, and Mode 5 by 2208 hours on March 2, 2021.

The incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) have been quantified for the requested additional time for restoring the qualified offsite AC source. The results of the quantification are within the guidance threshold in Nuclear Regulatory Commission (NRC) Enforcement Manual Appendix F, "Notices of Enforcement Discretion."

The enclosure provides the information requested in NRC Enforcement Manual Appendix F, "Notices of Enforcement Discretion."

This request was verbally transmitted to members of the NRC staff on February 28, 2021, at 21:00 hours with subsequent approval being verbally granted by the NRC on February 28, 2021, at 22:27 hours.

The CNP Unit 1 and Unit 2 Train B reserve feed was repaired and declared operable on February 2, 2021 at 0522 hours.

There are no new or revised commitments in this letter. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Director, at (269) 466-2649.

Sincerely,

Quinton A. Lies

Q. Shane Lies
Site Vice President

DLW/mll

Enclosure:
Request for Enforcement Discretion Regarding Technical Specification 3.8.1, "AC Sources – Operating"

c: R. J. Ancona – MPSC
EGLE – RMD/RPS
J. B. Giessner – NRC Region III
D. L. Hille – AEP Ft. Wayne
NRC Resident Inspector
R. M. Sistevaris – AEP Ft. Wayne
S. P. Wall – NRC, Washington D.C.
A. J. Williamson – AEP Ft. Wayne

bc: D. H. Aubrey
S. A. Dailey
K. J. Ferneau
J. P. Gebbie
R. B. Haemer
K. M. Harper
Q. S. Lies
J. M. Petro
M. K. Scarpello
M. D. Sortwell

Enclosure 1 to AEP-NRC-2021-20

Request for Enforcement Discretion Regarding Technical Specification 3.8.1, "AC Sources – Operating

Request for Enforcement Discretion Regarding Technical Specification 3.8.1,
"AC Sources – Operating"

The questions posed in Nuclear Regulatory Commission (NRC) Enforcement Manual Appendix F, Notices of Enforcement Discretion, Checklist A, are in bold. The information provided by Indiana Michigan Power Company (I&M), licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2 follows each question in plain text.

1. **Why is a formal licensing process not appropriate to address this issue and why the need for a NOED could not reasonably have been avoided? If applicable, this explanation shall address previous instances of the issue and decisions to pursue licensing solutions in the past.**

On February 26, 2021, at 1008 hours, a fault current was observed between the high side of reserve auxiliary transformers (RAT) 101AB / 201AB and their associated breaker. The Unit 1 and Unit 2 Train B reserve feed was declared inoperable and the Required Action A of Technical Specification (TS) 3.8.1 was entered for both units. A failure investigation team was formed and began troubleshooting activities at 1100 hours on February 26, 2021. The initial investigation identified a faulted cable as the most likely source of the identified condition. Following implementation of appropriate clearances, Tan Delta and Withstand testing was performed but failed to identify the fault. The failure investigation team continued troubleshooting activities. On February 28, 2021, at 0300 hours, the continuing investigation revealed that the bus structure that feeds the Train B reserve feed for both units had indications of damage. Due to the extensive troubleshooting that was required, a significant portion of the 72 hour completion time had already elapsed before a cause was identified.

I&M requests enforcement discretion to allow exceeding the 72-hour Completion Time of Unit 1 and Unit 2 Required Action A.3 of TS 3.8.1 by an additional 48 hours to allow time to repair the failed bus structure and perform necessary post maintenance testing. Unit 1 and Unit 2 are currently operating at approximately 100% power. Without this enforcement discretion, Unit 1 and Unit 2 are required to be in Mode 3 by 1608 hours on March 1, 2021. The maintenance activities necessary to repair the reserve feed circuits are estimated to take up to an additional 48 hours beyond the 72 hour completion time. This duration does not provide adequate time to prepare and submit an emergency license amendment request. The requested enforcement discretion for the Completion Time is within the 5 day guideline established by NRC Enforcement Manual Appendix F, "Notices of Enforcement Discretion" and a request for enforcement discretion is appropriate.

I&M has evaluated the criteria specified in NRC Enforcement Manual Appendix F, "Notices of Enforcement Discretion" and determined that the NOED criteria for requesting regular enforcement discretion are met. Entry into TS 3.8.1, "AC Sources - Operating," Condition A, will initiate an undesirable shutdown of both Unit 1 and Unit 2. Additionally, a plant shutdown in accordance with TS 3.8.1 is an unnecessary down-power and shutdown of the reactors without a corresponding health and safety benefit. The offsite AC source bus structure failure is an unplanned condition that has not previously occurred at CNP. This unplanned condition would only require temporary noncompliance with TS 3.8.1 when the repair of the bus structure extends beyond the 72 hour completion time. Enforcement discretion of the shutdown requirement up to an additional 48 hours would allow

continued plant operation for only that additional time needed to repair the bus structure and restore the Unit 1 and Unit 2 Train B Reserve Feed to operable status. Based on the above, the criteria are satisfied.

2. **A description of the TSs or other license conditions that will be violated. This description shall include the time the condition was entered and when the completion time will expire.**

CNP Unit 1 and Unit 2 TS 3.8.1, "AC Sources – Operating," requires two qualified offsite circuits and separate and independent Diesel Generators (DGs) for each train to ensure availability of the required power to shut down the reactor and maintain it in a safe shutdown condition after an anticipated operational transient or a postulated design basis accident (DBA) in Modes 1, 2, 3, and 4. When one offsite circuit is inoperable, Condition A is entered with a Required Action to restore the train to operable status with a Completion Time of 72 hours. If Condition A and its associated Completion Time is not met, then entry into Condition G is required. Condition G requires the action to place the unit (applicable to Unit 1 and Unit 2) in Mode 3 within 6 hours and Mode 5 within 36 hours. I&M is requesting enforcement discretion for 48 hours beyond the 72 hour Completion Time requirement that would allow continued plant operation for only that additional time needed to replace the failed bus structure and restore the inoperable Train B reserve feed to Operable status. Replacement of the failed bus structure will restore operability to both Unit 1 and Unit 2 reserve feed.

On February 26, 2021, at 1008 hours, the Unit 1 and Unit 2 entered their respective TS 3.8.1 Condition A. The TS that will be violated is the Completion Time for TS 3.8.1, Condition A Required Action A.3 which applies when one offsite circuit of AC power is inoperable in Modes 1, 2, 3, and 4. The TS 3.8.1, Condition A Completion Time of 72 hours will expire on March 1, 2021, at 1008.

3. **Provide sufficient information to demonstrate that the cause of the situation is well understood including extent of condition on other related SSCs (e.g., common cause).**

Troubleshooting Process

The 12-87-TABLD-1 relay that tripped the 12AB breaker is the 34.5kV BUS to transformers TR101AB and TR201AB phase 1 lead differential relay. The zone of protection for this relay includes the 12AB breaker, cabling and bus work between the breaker and transformers including the loop feed bus, and the high voltage bushings on the reserve feed transformers. Relay data from the switchyard indicated fault current through the 12AB breaker indicating an actual fault and refuting misoperation of the relay. The fault current was observed by current transformers on either side of the 12AB breaker refuting a fault in the breaker. The reserve feed transformers are not in the zone of protection for the relay, refuting them as a cause for the trip. With that, electrical testing was performed on the cabling and bus work between the 12AB breaker and the reserve feed transformers. All cables Tan Delta and Withstand tested satisfactory. The loop feed bus failed the alternating current (AC) megger test. Visual inspections within the upper structure of the loop feed bus following the failed test identified indications of an electrical fault in the loop feed enclosure. A fault at the loop feed bus would cause the lead differential relay trip that was observed. Finally, lightning arrestors on the transformers and bus work were Doble tested satisfactorily. Based on the results of the

troubleshooting process, I&M was able to determine that the loop feed bus was the source of the fault current and refute that multiple components were involved.

Cause

The investigation of the as-found evidence determined the cause to be a reduction of the dielectric properties within the Train B Loop Feed Bus Duct enclosure due to insulator contamination resulting from moisture intrusion and/or condensation within the enclosure. Specifically the fault was identified on Phase A bus within the enclosure.

Causes such as deliberate sabotage, accidental damage, animal intrusion, and other physical damage were refuted due to the as-found condition of the equipment. Oscillography of the upstream breaker protection was also reviewed and refuted a grid induced or load induced fault such as an over voltage condition.

Common Cause

The enclosure in question serves to supply Unit 1 and Unit 2 Train B Reserve feed. A common cause investigation determined that the Train A reserve feed enclosure is not exposed to the same environmental conditions. The Train B feed enclosure is unprotected from inclement weather and contains louvers which leads to excess moisture intrusion. The Train A loop feed enclosure is in an alternate location mostly enclosed by a concrete missile shield. The physical configuration of the Train A loop feed bus duct enclosure is of different layout, dimensions, and bus configuration than the Train B enclosure. The Train A enclosure is not subject to direct sun, snow, or rain impingement. In addition, there are no other outdoor bus duct enclosures of this style for Tech Spec related equipment.

4. **Provide an evaluation of all safety and security concerns associated with operating outside of the TS or license conditions that demonstrates that the noncompliance will not create undue risk to the public health and safety or involve adverse consequences to the environment. This should include, as appropriate, a description of the condition and operational status of the plant, equipment that is out of service, inoperable, or degraded that may have risk significance, may increase the probability of a plant transient, may complicate the recovery from a transient, or may be used to mitigate the condition. This evaluation shall include potential challenges to offsite and onsite power sources and forecasted weather conditions.**

System Description

The onsite AC electric power distribution system for each unit contains four, 4160V (4.16 kV) non-safety-related buses designated 1A, 1B, 1C, and 1D for Unit 1 and 2A, 2B, 2C, and 2D for Unit 2. These buses are referred to as the "RCP" buses because they power the reactor coolant pumps. Each of the* non-safety-related RCP buses feed a downstream safety-related 4.16 kV bus. These safety-related buses are designated T11A, T11B, T11C, and T11D for Unit 1 and T21A,

T21B, T21C, and T21D for Unit 2. With the main generator on-line, the RCP buses are normally fed from the Unit Auxiliary Transformers (UATs), which receive power from the main generator.

Upon a trip of the main generator, the station auxiliaries are automatically fast transferred to the preferred offsite power source (i.e., to reserve auxiliary transformers (RATs) TR101AB and TR101CD for Unit 1 and TR201AB and TR201CD for Unit 2) to assure continued power to equipment when the main generator is off-line. When powered by the RATs, the essential safety feature (ESF) loads are started using the same timing relays and sequence that are used for the EDG sequencing. The RATs supply the reserve auxiliary power for both units.

The preferred offsite power source can be supplied by any of three sources: Transformer 4, Transformer 5, or Transformer 9. The switchyard can be arranged in a split bus configuration with Train A (TR101CD and TR201CD) and Train B (TR101AB and TR201AB) each supplied from separate sources. In this configuration either Train can be aligned to any of the three sources. The switchyard can also be arranged in a single source configuration with both Trains supplied by any one of the sources. See simplified CNP diagram of electrical AC Power System at the end of this enclosure. This configuration provides diversity of supply for the offsite power source.

In the event of a reactor trip with loss of Reserve Feed, the ESF electrical loads are automatically connected to the DGs in sufficient time to provide for safe reactor shutdown and to mitigate the consequences of a Design Basis Accident (DBA) such as a loss of coolant accident (LOCA). With no Train B Reserve Feed in either unit, a load shed sequence will cause the AB Emergency Diesel Generator (EDG) in both Units to automatically start and sequence on required Train B Safety Related Loads. Reactor Coolant Pumps (RCPs) #1 and #4 in both units will be lost. RCS forced flow circulation will be provided by RCPs #2 & #3, which could lead to asymmetrical flow through the RCS and create additional challenges to Operators controlling the plant.

Plant Condition and Operational Status

Unit 1 and Unit 2 are in MODE 1 (Power Operation), operating at 100% rated thermal power with no other safety-related systems out of service. The plant schedule was reviewed and all risk significant work that could jeopardize plant operation was removed.

Offsite Power Sources

Train A Reserve Feed (redundant qualified offsite power supply) and an alternate qualified offsite circuit supplied from the 69 kV Bus are operable and will be in a guarded condition during the time of enforcement discretion. Guarded condition includes ensuring that access is restricted to only essential work and no elective maintenance will be performed. Shift manager approval is required to access guarded areas. The load dispatcher confirmed that there are no operations on the grid that would present a challenge to the offsite power system to the CNP site during the duration of the enforcement discretion period.

The 69 kV Emergency Power offsite source is operable, however, 69kV Emergency Power does not normally supply AC loads at CNP. 69kV is manually aligned in emergency response procedures when Reserve Feed and the Emergency Diesel Generators are unavailable. Due to a phasing difference, the transfer is a dead bus transfer. This power source can be manually aligned to directly supply 4.16kV emergency buses.

Onsite Power Sources

There are no foreseen challenges to the available onsite power sources. All EDGs are operable and will be guarded. In addition to the EDGs, the station has two fully functional Supplemental Diesel Generators, which can provide one unit one train of ESF equipment in the event an EDG is inoperable.

CNP has a FLEX diesel generator which is located onsite that will be deployed if required. The most recent preventive maintenance activities were performed on the FLEX diesel in July 2020, and February 2021. The maintenance was performed satisfactorily. The staging areas were walked down to ensure access to areas required for FLEX equipment hookup are free from obstructions.

Weather Conditions

The weather forecast from the National Weather Service for the area is as follows:

- Monday (3/01/2021): Mostly sunny, with a high near 34. Breezy, 10% chance of precipitation.
- Monday Night (3/01/2021-3/02/2021): Mostly clear, with a low around 20, 3% chance of precipitation.
- Tuesday (3/02/2021): Sunny, with a high near 40, 3% chance of precipitation.
- Tuesday Night (3/02/2021-3/03/2021): Mostly clear, with a low around 31, 5% chance of precipitation.
- Wednesday (3/03/2021): Sunny, with a high near 40, 5% chance of precipitation.

Based on the forecasted weather, there is a very low probability that severe weather could impact offsite power sources or delay the completion of the maintenance activities. This request for enforcement discretion is not in regard to severe weather or natural phenomena-related emergencies.

Frazil Ice

CNP has implemented routine winterization of the Circulation Water System (de-ice). During de-ice operations, 1 of 3 intakes is used as a Circulating Water return to Lake Michigan. Returning this warm water to the location of the remaining intakes prevents ice formation. Screen house equipment is toured every shift and is operating properly. There is no concern for frazil ice during the period of enforcement discretion.

Covid-19 Pandemic

I&M staff at CNP continue to implement preventative measures to limit the spread of COVID-19. I&M has implemented masking, social distancing, and reduced onsite staff. Due to the measures taken at CNP, the pandemic conditions are not expected to delay or jeopardize the completion of this maintenance activity or lead to any increased risk to the health and safety of the public.

Repairs

The planned resolution is to complete repairs necessary to restore the Train B reserve feed for both Unit 1 and Unit 2 to operable status. This will be accomplished via the existing plant work control processes, which have been successfully implemented in the past. This action will not result in a different, unnecessary transient.

Dual Unit Shutdown without Train B RATs

Approval of the request for enforcement discretion will preclude a complex dual unit shutdown without the RATs. Both Unit 1 and Unit 2 will be subjected to a challenging reactor shutdown due to no power to the Train B RCP buses (due to loss of reserve power), load shed of the Train B safety buses and subsequent repowering of the safety buses to the EDGs. The dual unit shutdown without Train B Reserve Feed would be a significant challenge to licensed operators. Just in Time Training for additional operational support would be required. The reactor protection system could be challenged if an unanticipated transient occurred during the concurrent TS required shutdown of both units. There are no corresponding health and safety benefits gained by requiring a plant shutdown. There is also elevated fire risk to the plant due to both Units having Essential Service Water (ESW) cross-ties closed which is required given the current plant condition. Additionally, based on the expected weather conditions, temperatures are expected to reach below freezing. A dual unit shutdown is further complicated by winterization activities that would be required to prevent the plant components from being adversely impacted by freezing temperatures.

Environmental Considerations

Although the proposed action involves noncompliance with the requirements of an LCO:

- There is no significant change in the types or a significant increase in the amounts of any effluent that may be released offsite, since the proposed actions neither affect the generation of any radioactive effluent nor do they affect any of the permitted release paths; and
- There is no significant increase in individual or cumulative occupational radiation exposure. The actions proposed in this request for enforcement discretion will not significantly affect plant radiation levels, and therefore do not significantly affect dose rates and occupational exposure. As a result, no adverse consequences to the environment will occur.

No Undue Risk to the Public Health and Safety

The requested enforcement discretion will not result in more than a minimal increase in risk, as demonstrated in the risk discussion below. There are no foreseen challenges to the available offsite and onsite power sources. Measures have been implemented to prevent any maintenance activities on systems in the plant that could impact the AC power system. There is no significant increase in radiological risk by applying enforcement discretion to the TS 3.8.1, Condition A Completion Time to accomplish the required repairs. Additionally, there is an inherent safety benefit of restoring the Train

B reserve feed for both Unit 1 and Unit 2 to operable status without shutting down Unit 1 or Unit 2 when compared to shutting down both Unit 1 and Unit 2 without Train B reserve feed available.

In addition to the risk insights, sufficient onsite emergency AC power and offsite power supplies remain available to complete their intended safety function. Appropriate plant redundant and support systems (i.e., including non-TS equipment) will be considered as guarded systems to ensure there is no undue risk of redundant or support equipment inoperability during the proposed enforcement discretion time frame.

Conclusion

Based on the above response, the enforcement discretion for the TS 3.8.1, Condition A Completion Time will not create undue risk to the public health and safety or involve adverse consequences to the environment. This response includes a discussion that no equipment is out of service, inoperable, or degraded that may have risk significance, may increase the probability of a plant transient, may complicate the recovery from a transient, or may be used to mitigate the condition. This response also includes discussion that there are currently no potential challenges due to offsite and onsite power sources and forecasted weather conditions.

5. **Provide a description and timeline of the proposed course of action to resolve the situation (e.g., likely success of repairs) and explain how the resolution will not result in a different or unnecessary transient. This shall include the time period for the requested discretion and demonstrate a high likelihood of completion within the requested period of enforcement discretion. If the proposed course of action necessitates enforcement discretion greater than 5 days, justify why a longer-term solution (e.g., emergency amendment) should not be processed with the duration of a 5 days NOED.**

On February 26, 2021, at 1008, a fault current was observed between the high side of the RATs to the 12AB breaker for approximately 12 cycles. The TR101AB and TR201AB (Unit 1 and Unit 2 RAT respectively) differential relays operated and the transformer TR101AB and TR201AB Phase A lead differential relay (12-87-TABLD-1) was tripped. A Failure Investigation Process (FIP) team was assembled at approximately 1100, and initial investigation measures commenced. The investigative plan was developed and prioritized based on what was considered to be the most likely location of the fault. The equipment was tested based upon that prioritization. The loop enclosure was not considered to be a likely location for the fault and was therefore not prioritized to be investigated/tested early in the equipment testing. This led to a delay in identifying the loop enclosure as the source of the fault. The FIP team continued to investigate failures until the cause was discovered.

FIP team time line for determining the cause:

- Initial walk-downs and investigations – Completed approximately 1300 on 2/26/2021
- Determination of needed testing and identification of resource - Completed approximately 1900 2/26/2021
- Work order planning for testing activities and clearance planning – Completed approximately 2300 2/26/2021

- Electrical clearances in place to support Tan Delta and Withstand Testing – Completed approximately 1000 2/27/2021
- Tan Delta Testing – Completed approximately 1500 on 2/27/2021
- Withstand Testing – Completed approximately 1900 on 2/27/2021
- Megger Testing of the loop feed bus structure – Completed approximately 2300 on 2/27/2021
- Investigation activities of the low resistance results from Megger Testing – Completed approximately 0300 on 2/28/2021
- Lightning Arrester Testing (in parallel will Megger Testing) – Completed approximately 1800 on 2/28/2021
- Initiated development of repair activities – At approximately 0400 on 2/28/2021

The results of the FIP determined that a failure of the loop feed bus structure was the cause of the identified condition. Repairs of this magnitude that have been performed in the past are documented in the CNP work control program. A repair plan was created that shows that approximately 56 hours are required from the start of the repair activities until the component is able to be placed into service.

The following repair plan was developed:

- Personnel and materials 0400 – 1600 (12 hours)
- Remove Bus Bar – In-progress as of 1500 – expected completion 1600
- Engineering Change Planning – 2/28/21 | 1600 – 2000 (4 hours)
- Fabricate new bus bar and layout/drill holes – 2/28/21 | 1600 – 2000 (4 hours)
- Plating/material preparation of bus bar – 2/28/21 | 2000 – 2200 (2 hours)
- Wrap Bars – 2/28/21 | 2200 – 0000 (2 hours)
- Installation/Bolt up – 3/1/21 | 0000 – 0400 (4 hours)
- Wrap insulators/boots – 3/1/21 | 0400 – 1000 (6 hours)
- Testing activities (Hi-Pot/DLRO/Megger) – 3/1/21 | 1000 – 1600 (6 hours)
- Reconnect/Bolt up following testing – 3/1/21 | 1600 – 1900 (3 hours)
- Close up and sign off clearances - 3/1/21 | 1900 – 0000 (5 hours)
- System restoration 3/2/21 | 0000 – 1200 (12 hours)

Additional activities that will be performed when conditions are appropriate throughout the work duration:

- Cleaning of the Structures – 6 hours
- Enclosure set-up with heaters/other equipment– 3 hours
- Replace the insulators – 2 hours

I&M is requesting an additional 48 hours of enforcement discretion beyond the 72 hour completion time to complete the required repairs and testing. The additional time being requested is to account for uncertainties in the schedule and ensure successful repair of the component. Reviews of similar tasks and time estimates from qualified vendors were used to determine the repair plan.

The equipment that is being repaired has already been removed from service and is under a clearance. The normal alignment of the operating plant provides power from the UATs which limits the possibility of a plant transient due to the repairs on reserve feed. This assures that a transient will not be introduced as a results of the repairs. All of the required materials and qualified expertise

are already available on-site which provides a high likelihood of successful completion within the requested extension.

6. **Detail and explain the compensatory actions the plant has taken and will take to reduce risk(s), focusing on both event mitigation and initiating event likelihood. This shall include how each compensatory measure achieves one or more of the following:**

   a. **Reduces the likelihood of initiating events;**
   b. **Reduces the likelihood of the unavailability of redundant trains, during the period of enforcement discretion; and**
   c. **Increases the likelihood of successful operator actions in response to initiating events.**

Compensatory Actions Taken

The following compensatory measures have already been taken to reduce the risk during the period of enforcement discretion:

- The FLEX equipment and installation locations were reviewed for use during a loss of offsite power event. The FLEX Deployment areas were walked down to ensure readiness. The functional and load checks for the FLEX Diesel were reviewed to ensure the diesel would perform if required.

- Operations confirmed that there are no planned operations on the grid that would present a challenge to the remaining offsite power system during the duration of the enforcement discretion period.

- The following equipment and systems are guarded on both Unit 1 and Unit 2 in accordance with station procedures:
  - AB and CD EDGs
  - Supplemental Diesel Generators
  - 69 kV Switchyard
  - Turbine Driven AFW Pump
  - Turbine Driven AFW Pump Steam supply valves
  - Turbine Driven AFW Pump Motor Operated Discharge Valves
  - 4kV Rooms
  - 250 VDC Train A

Compensatory Actions That Will be Taken

The following compensatory measures will be taken to reduce the risk during the period of enforcement discretion:

- The full response team will remain in place throughout the evolution and the remaining maintenance activities will be completed utilizing 24-hour coverage.

- The offsite power supply and switchyard will be guarded. This includes ensuring that switchyard access is restricted to only essential work and no elective maintenance within the switchyard is performed that would challenge offsite power availability. This will reduce the likelihood of a loss of offsite power occurring.

- No intrusive surveillances or maintenance activities will be allowed that could potentially jeopardize plant operations, except for emergent issues. This reduces the likelihood of the unavailability of redundant trains during the period of enforcement discretion. All required weekly surveillances will be performed prior to entering the period of enforcement discretion or deferred until after restoration of reserve feed.

- Fire watches will be established in areas with high fire risk significance.

- Isolate and drain Unit 2 2-FHC-220 to remove it as a flooding source.

- Verify and maintain availability of NFPA-805-credited suppression systems.

- Heaters will be installed in the Train A loop feed bus duct enclosure to limit moisture and condensation. This reduces the likelihood of Train A failure.

During the period of enforcement discretion, I&M will take the following steps to reduce the probability and severity of initiating events:

A. Will not perform any elective maintenance on components that are credited for accident mitigation in the CNP PRA models.
B. Will not perform any unnecessary switchyard work or work on Balance of Plant systems that may increase the probability that there is a Unit trip.
C. Will not perform any hot work in areas identified as significant in the PRA analysis.
D. Operations will align Unit 2 CCW system to the East header (Train A) to avoid unnecessary risk from a West CCW (Train B) alignment.
E. Operators will review the importance of the following systems and equipment:
    a. 250 VDC Train A
    b. Train A Batteries
    c. 4 kV Breakers T11A9, T11A12, T21A12, and T21A9
    d. Train A EDGs
F. The following procedures have increased importance due to the nature of this configuration. Operations will review these procedures which will increase the likelihood that the associated actions are completed successfully:
    a. Procedure 1(2)-OHP-4023-SUP-009 Restoration of 4kV Power from EP.
    b. Procedure 1(2)-OHP-4022-016-004, Loss of Component Cooling Water.
    c. Procedure 1(2)-OHP-4023-E-3, Steam Generator Tube Rupture.
    d. Procedure 1(2)-OHP-4023-ECA-0-0, Loss of all AC Power
    e. Procedure 1(2)-OHP-4023-FR-H-1, Response to Loss of Secondary Heat Sink
    f. In addition to these procedures, the significance of fire to Unit 2 will be reduced by Operations reviewing the following actions
        i. Transferring power to T21A or T21B
        ii. Opening the ESW crosstie

To ensure compensatory actions are correctly implemented for Operations during the period of enforcement discretion:

- Operations will follow written guidance for compensatory measures in 12-OHP-2110-CCA-001, Compensatory Measures and Contingency Actions
- Operations will carry the assigned compensatory measures in the turnover log and review and perform each shift
- The Unit Supervisor for each Unit will ensure compensatory measure is logged in Narrative Logs when performed each shift
- Shift Manager has the overall responsibility for compensatory measure implementation and documentation
- A copy of the Request for Enforcement Discretion will be turned over from shift to shift to ensure compliance of the compensatory plan

7. **Demonstrate that the NOED condition, including compensatory measures will not result in more than a minimal increase in radiological risk, either in quantitative assessment that the risk will be within the normal work control levels (ICCDP less than or equal to 5E-7 and/or ICLERP less than or equal to 5E-8) or in a defensible qualitative manner.**

Both the CNP Full Power Internal Events (FPIE) and the Fire PRA were quantified to assess the impact of the period of enforcement discretion condition has on Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) which are used to determine the Incremental Conditional Core Damage Probability (ICCDP) and the Incremental Conditional Large Early Release Probability (ICLERP).

Train B Reserve Feed has been out of service for 72 hours for unplanned maintenance activities. This evaluation considers the risk impact of keeping Train B Reserve Feed out of service for an additional 48 hours to complete the repair.

Baseline numerical results were obtained by quantifying each model with all test and maintenance activities set to false to correspond with the configuration of the plant during the period of enforcement discretion. There are currently no risk significant pieces of equipment out-of-service, however, the Unit 2 models were run with the Unit 2 Pressurizer Block Valves 2-NMO-151 and 2-NMO-153 closed, which reflects the current plant configuration. These valves can be opened if necessary during an accident scenario, and review of results indicate that this portion of the configuration is not significant to overall risk. In addition to this, credit is taken for Unit 2 being aligned to Train A service water. Review of initial cutsets showed that this configuration is preferable for Unit 2 because of cable differences between the units. This credit is taken only by manually setting alignment variables in the PRA model, and not by changing any basic event data and is only credited in the Unit 2 Fire CDF calculation. This was the only case where cutset review identified this alignment as a significant contributor to the risk assessment.

The configuration case represents the plant with the unavailable Train B Reserve Feed, and zero test and maintenance activities. This modeling was accomplished by setting the failure probability for

1-TR101AB and 2-TR201AB (the B Train reserve feed transformers) to 1.0. Similar to the base case for Unit 2, Pressurizer Block Valves 2-NMO-151 and 2-NMO-153 are modeled as "Closed".

With CDF and LERF quantified, the ICCDP and ICLERP for each model is calculated with Equation 1 and 2.

Equation 1: ICCDP = (ΔCDF) x Duration
Equation 2: ICLERP = (ΔLERF) x Duration

Where ΔCDF and ΔLERF are the difference in CDF and LERF between the baseline model and the NOED configuration and the duration is 48 hours. The results for each model, Unit1 and Unit 2 FPIE and Unit 1 and Unit 2 FPRA are presented below.

Unit 1 FPIE Results

FPIE	Base	Configuration	Delta	Delta CDF/LERF (/hr)
FPIE CDF	2.31E-05	2.81E-05	5.00E-06	5.71E-10
FPIE LERF	1.54E-06	1.81E-06	2.70E-07	3.08E-11

Unit 2 FPIE Results

FPIE	Base	Configuration	Delta	Delta CDF/LERF (/hr)
FPIE CDF	2.31E-05	2.79E-05	4.80E-06	5.48E-10
FPIE LERF	1.56E-06	1.83E-06	2.70E-07	3.08E-11

Unit 1 FPRA Results

FIRE	Base	Configuration	Delta	Delta CDF/LERF (/hr)
Fire CDF	5.15E-05	6.29E-05	1.14E-05	1.30E-09
Fire LERF	3.27E-06	3.77E-06	5.00E-07	5.71E-11

Unit 2 FPRA Results

FIRE	Base	Configuration	Delta	Delta CDF/LERF (/hr)
Fire CDF	6.00E-05	8.99E-5	2.99E-05	3.41E-09
Fire LERF	3.42E-06	4.24E-06	8.20E-07	9.36E-11

The Unit specific Delta CDF and LERF values are summed to obtain the total risk increase for each Unit. NRC Enforcement Manual Appendix F defines threshold values of less than or equal to 5.0E-7 and 5.0E-08 for ICCDP and ICLERP respectively. Multiplying the total Delta CDF and LERF values by the 48 hours requested gives the configuration ICCDP and ICLERP.

	Unit 1		Unit 2	
	CDF	LERF	CDF	LERF
Total Delta	1.87E-09	8.79E-11	3.96E-09	1.24E-10
ICCDP/ICLERP	8.99E-08	4.22E-09	1.90E-07	5.97E-09

The ICCDP and ICLERP values above show that the risk associated with this period of enforcement discretion is below the thresholds provided in NRC Enforcement Manual Appendix F.

In order to bound potential uncertainty associated with risk estimates provided above, several risk mitigation steps are being taken in order to further reduce the safety significance of this configuration.

The first step being taken is isolation and draining of fire protection hose station 2-FHC-220. This is a flood source modeled in the CNP Internal Events PRAs, and its close location to direct current (DC) electrical equipment increases the significance of these floods in this configuration. Isolating and draining this flood source effectively removes it from consideration as a contributor to the risk associated with this configuration. Quantitative credit for removing this flood source reduce the configuration CDF for internal events to 2.6E-05, which gives an ICCDP 1.8E-07 (still accounting for fire).

In addition to the isolation of this hose station, a continuous fire watch is being established in Fire Zone 18, the Unit 2 CD EDG room. The majority of fire risk associated with this configuration is associated with this one fire zone. The risk from this zone is split between fixed source fires, such as the CD EDG and transient fires. A continuous fire watch would be able to identify and mitigate potential transient fires prior to developing to the point where they impact the function of plant equipment. The maximum impact of this compensatory measure can be estimated by setting the frequency of these transient fire scenarios to 0. In addition to the Unit 2 CD EDG room, the Unit 2 AB battery room is also the location of a significant transient fire scenario, and therefore a continuous fire watch is also being established in this fire zone. Taking quantitative credit for these two continuous fire watches would reduce the Unit 2 Fire CDF value to 8.11E-5. This gives an ICCDP of 1.42E-07.

If quantitative credit were taken for these two compensatory actions, it would reduce the estimated ICCDP to 1.32E-7 for the period of the enforcement discretion. These actions are expected to have a similarly beneficial, but lower in magnitude, impact on ICLERP. However, no quantitative credit for these actions is necessary to show that ICCDP and ICLERP, associated with the period of enforcement discretion, is below the thresholds given in the NRC Enforcement Manual Appendix F.

CNP has a peer-reviewed Seismic PRA, but it was not included in the calculation of total ICCDP and ICLERP. This configuration does not pose a unique susceptibility to seismic risk, since any earthquake initiator that is severe enough to fail one train of Reserve Feed is likely to fail the other train as well, due to their similar designs and location. Additionally, offsite power has a low fragility relative to the rest of plant components, and therefore is already failed in the majority of SCDF and SLERF results. For this reason, there is no increased risk impact from seismic due to this configuration. Similar to seismic, the proximity of the two trains of reserve feed to each other means that other external hazards would likely impact both trains. This is particularly true for high winds, which are also generally accompanied by a loss of offsite power.

Dominant Risk Contributors – FPIE

The following lists the 3 CDF initiating events that contributed the most to the increase in risk for Unit 1. The numerical values of Unit 2 differ slightly, however the order and types of initiators is the same.

1. Loss of 250 VDC Unit 1 Train A (28.5%)
2. Spray flood initiator affecting Train A batteries (26.4%)
3. Loss of Bus T11D (5.5%)

The loss of DC initiating event is generally accompanied by breaker fails that result in a station blackout. Because the spray flood also impacts Train A DC, the cutsets are mirrors of each other.

The following lists the 3 LERF initiating events that contributed the most to the increase in risk for Unit 1. The numerical values of Unit 2 differ slightly, however the order and types of initiators is the same.

1. Loss of 250 VDC Train A (48.9%)
2. Steam Generator Tube Rupture (12.6%)
3. Spray flood initiator affecting Train A batteries (11.7%)

Similarly to CDF, the Loss of Train A DC and spray flood initiators have similar damage vectors, so the accidents develop very similar, and similarly lead to a station blackout.

Dominant Risk Contributors – FIRE

The cable routing differences between Unit 1 and Unit 2 greatly influence both the numerical results and the insights for each model. Unit 1 CDF is dominated by fires in Fire Zone 55 combined with a failure of Operations to cooldown the RCS following alignment of the supplemental diesel generators. This Human Error Probability is conservatively set to 1.0 (failed) in the fire PRA, because it is not a significant event in the baseline PRA model. Other contributors include fires in the Unit 1 containment piping annulus (FZ 66, Fire Area AA56), as well as the Unit 1 CD EDG room (FZ 15, Fire Area AA14). While the CD EDG room also shows up as significant in the Unit 2 FPRA, the significance in the Unit 1 model is significantly lower. The significant LERF cutsets for Unit 1 are similar in nature to the CDF cutsets, however the CD EDG room events become the highest contributor. The Fire Zone 55 scenarios that contribute heavily to core damage are generally mitigatable by the distributed ignition system, and so they require an additional failure to proceed to a large, early release. This decreases their contribution to LERF.

Unit 2 results are almost completely dominated by fires in the Unit 2 CD EDG room. In the top contributing sequences these fire events are accompanied by dependent operator failures of operations failing to align an alternate 4kV source, and failure of operations to ensure that the Turbine Driven Auxiliary Feedwater Pump (TDAFP) has a flow path into a steam generator. The top sequences are from fixed ignition sources, namely the CD EDG, as it is the highest frequency ignition source in the fire zone. The transient fire frequency in this room is about an order of magnitude less frequent than the fixed ignition source, but still represents a significant portion of the results for Unit 2 CDF. The significant Unit 2 LERF cutsets mirror the CDF cutsets with the exception of a single top sequence being attributed to a High Energy Arc Fault of 2-T21-D.

Compensatory Risk Management Measures

A qualitative assessment is performed of the model results in order to determine compensatory actions that can help reduce the likelihood of risk significant initiating events, or help protect risk

significant equipment and actions. Because of the differences in cable routing between the two units, compensatory measures will be different between the units. This is noted where applicable.

- Protect 250 VDC Train A
- Operators review the importance of 1(2)-OHP-4023-SUP-009, Restoration of 4kV Power from EP.
- Operators review the importance of Procedure 1(2)-OHP-4022-016-004, Loss of Component Cooling Water

Due to their significance in FPRA results, the following procedures will also be briefed:

- 1(2)-OHP-4023-ECA-0-0, Loss of all AC Power
- 1(2)-OHP-4023-FR-H-1, Response to Loss of Secondary Heatsink

Dominant Risk Contributors - Fire Areas

Unit 1:
Fire Zone 55 – Unit 1 Switchgear Cable Vault
Fire Zone 15 – Unit 1 CD EDG Room
Fire Zone 66 – Unit 1 Containment Piping Annulus

Unit 2:
Fire Zone 18 – Unit 2 CD EDG Room
Fire Zone 50 – Unit 2 HVAC Vestibule
Fire Zone 45 – Unit 2 Eng. Safety System and MCC Room – 609ft (& Underfloor)
Fire Zone 46A – Unit 2 Emergency Power Systems (EPS) Transformer Room
Fire Zone 46B – Unit 2 Control Rod Drive Room
Fire Zone 46D – Unit 2 AB Battery Room

For the areas listed above:

- Verify and maintain availability of NFPA-805-credited suppression systems
- No hot work will be performed in the area
- Accessible fire zones will be verified free of transient combustible material and a regular fire watch will be established
- Due to the significance of Fire Zone 18 and Fire Zone 46D, continuous fire watches will be established – This is Unit 2 only compensatory measure
- Due to the significance of 2-FHC-220, it is being isolated and drained to remove its potential to be a flood source. This is a Unit 2 only compensatory measure

Common Cause Failure Analysis

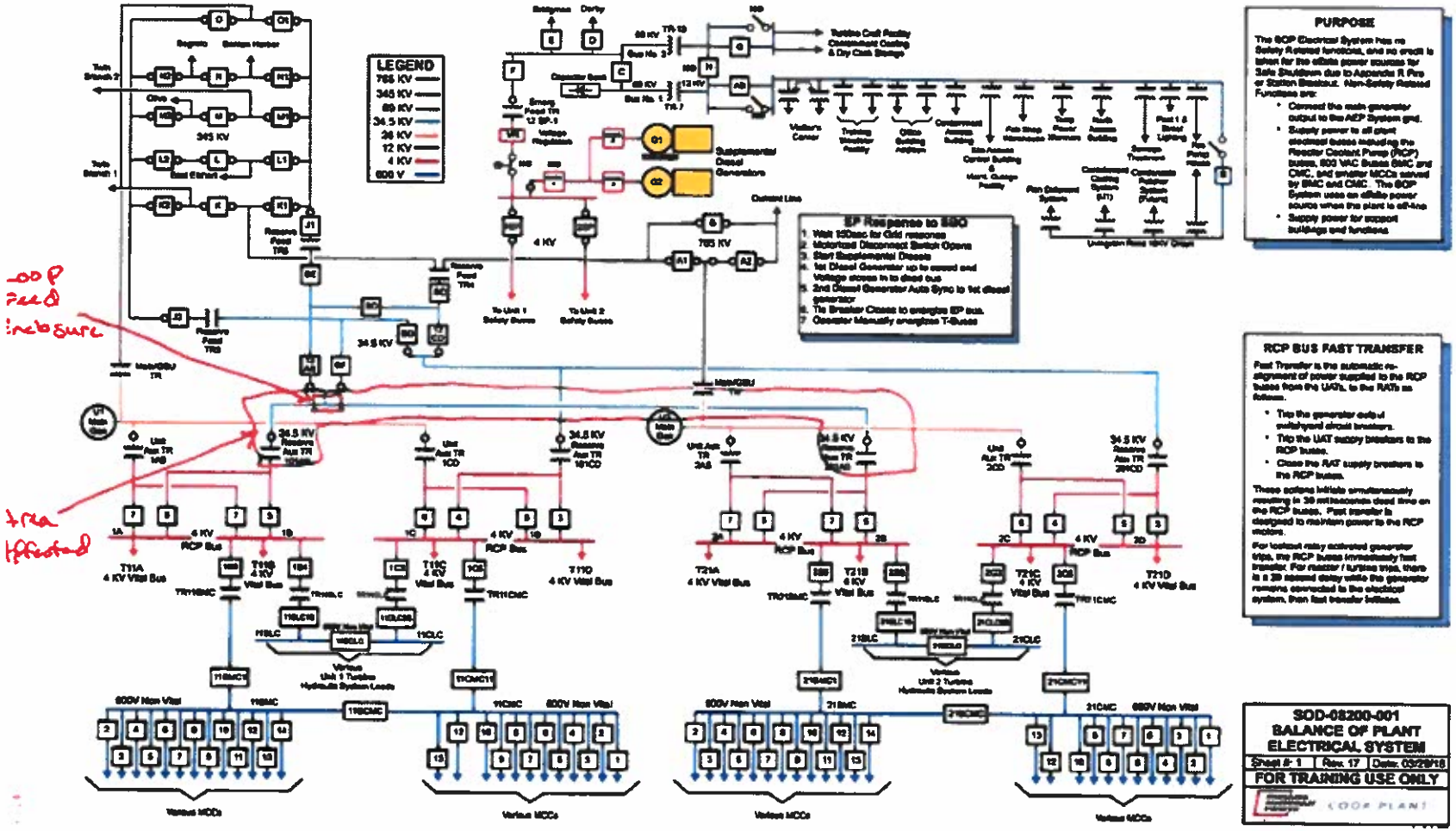
No common cause failure events were adjusted for this assessment, as there is no common cause event linking this event to others in the model in the base PRA. This event resulted in a passive failure of breaker 12AB, which has similar components to breaker BG and 12CD (when aligned) credited in the PRA. The NRC CCF database does not contain common cause Multiple Greek Letter factors for passive failures of breakers, as passive failures due to common cause have not been seen historically, and are therefore considered extremely rare. Additionally, common cause failure events

that result in failures of multiple switchyard components, sufficient that offsite power is lost, would already be accounted for in CNP's Loss of Offsite Power initiating event frequency.

A sensitivity was performed for the most limiting case calculated for this assessment. This is Unit 2 CDF. This sensitivity was performed by changing breaker BG's spurious open probability from its normal 5.07E-6 to 2.75E-2. This value was determined using the Alpha-2 failure probability for spurious breaker operation provided in the NRC results database. This probability is the likelihood that a spurious opening occurs on a breaker that is susceptible to the cause of a similar breaker failure. Calculating this case gives an ICDP of 1.97E-7, which is still below half of the 5E-7 acceptability threshold.

8. **Confirm that the facility organization that normally reviews safety issues has reviewed and approved this request and that a written NOED request will be submitted within 2 days of the NRC staff's decision regarding the NOED.**

This request for enforcement discretion has been reviewed and approved by the CNP Plant Operations Review Committee on February 28, 2021. This letter fulfills the requirement that a written NOED request be submitted by I&M within 2 days of the NRC staff's decision.


LEGEND
765 KV
345 KV
69 KV
34.5 KV
26 KV
12 KV
4 KV
600 V
EP Response to SBO
1. Wait 150sec for Grid response
2. Motorized Disconnect Switch Opens
3. Start Supplemental Diesels
4. 1st Diesel Generator up to speed and Voltage stroke in to dead bus
5. 2nd Diesel Generator Auto Sync to 1st diesel generator
6. Tie Breaker Closes to energize EP bus.
7. Operator Manually energizes T-Buses
PURPOSE
The BOP Electrical System has no Safety Related functions, and no credit is taken for the offsite power sources for Safe Shutdown due to Appendix R Fire or Station Blackout. Non-Safety Related Functions are:
Connect the main generator output to the AEP System grid.
Supply power to all plant electrical buses including the Reactor Coolant Pump (RCP) buses, 600 VAC Buses SWC and CWC, and greater MCCs served by SWC and CWC. The BOP System uses an offsite power source when the plant is off-line
Supply power for support buildings and functions
RCP BUS FAST TRANSFER
Fast Transfer is the automatic re-alignment of power supplied to the RCP buses from the UAT, to the RATs as follows.
Trip the generator output switchyard circuit breakers.
Trip the UAT supply breakers to the RCP buses.
Close the RAT supply breakers to the RCP buses.
These actions initiate simultaneously resulting in 30 milliseconds dead time on the RCP buses. Fast transfer is designed to maintain power to the RCP motors.
For lockout relay actuated generator trips, the RCP buses immediately fast transfer. For master / turbine trips, there is a 2s speed delay while the generator remains connected to the electrical system, then fast transfer initiates.
SOD-08200-001
BALANCE OF PLANT ELECTRICAL SYSTEM
Sheet # 1 | Rev. 17 | Date: 03/29/18
FOR TRAINING USE ONLY
LOOP PLANT