UNITED STATES
NUCLEAR REGULATORY COMMISSION
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February 5, 2019

MEMORANDUM TO: Nathan T. Sanfillipo, Acting Deputy Director
Division of Reactor Safety
Region III

FROM: Gregory Suber, Deputy Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2 – NRR POSITION ON NON-CITED VIOLATION 05000315/2014005-03; 05000316/2014005-03; RADIOLOGICAL IMPACT OF THE REMOVAL OF THE AUXILIARY SHIELD BLOCKS ON THE CONTAINMENT ACCIDENT SHIELD POST LARGE-BREAK LOSS-OF-COOLANT ACCIDENT

On June 23, 2017, the Division of Operating Reactor Licensing (DORL) sent a memorandum (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17080A119), to the Division of Reactor Safety in Region III to document a teleconference that was held on March 17, 2017, and to provide clarification of the requirements for protecting occupational workers from radiation exposure during a design basis accident (DBA). A Differing Professional Opinion (DPO) panel later determined the June 23, 2017, memorandum contained several inaccurate or misleading statements. The purpose of this memorandum is to withdraw and replace the June 23, 2017, document.

On March 17, 2017, a teleconference was held between the U.S. Nuclear Regulatory Commission (NRC or Commission) Office of Nuclear Reactor Regulation (NRR) and Region III, regarding the corrective actions performed by Indiana Michigan Power Company (I&M, the licensee), in response to a non-cited violation (NCV) of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Appendix B, Criterion 3, "Design Control." The NCV was issued in an inspection report dated February 10, 2015 (ADAMS Accession No. ML15042A380). The violation was identified by NRC inspectors while reviewing the licensee activities associated with the permanent removal of auxiliary missile blocks (AMBs) from the Donald C. Cook Nuclear Plant (CNP), Unit Nos. 1 and 2, containment accident shields. The removal of the AMBs was performed under 10 CFR 50.59, and the regional inspectors determined that the licensee correctly followed the NRC-approved 10 CFR 50.59 process. In response to the NCV, the licensee took several corrective actions, which included modifications to personnel evacuation procedures and adding postings to the access points. However, the licensee does not consider restoration of the AMBs, or installation of equivalent shielding, to be required for regulatory compliance.

In order to evaluate the adequacy of the licensee's corrective actions, the NRC staff in Region III requested that NRR provide clarification of the requirements for protecting occupational workers from radiation exposure during a DBA. During the March 17, 2017, teleconference, the NRC staff in Region III and NRR agreed that the request could be summarized as follows:

> Clarify the occupational dose requirements for personnel evacuating from non-vital areas during a DBA at CNP.

The June 23, 2017, memorandum, which documented the March 17, 2017, teleconference, stated, in part, that:

> There is no requirement for the licensee to demonstrate radiation doses are ALARA [as low as reasonably achievable] during the extremely unlikely event of a reactor accident. Therefore, 10 CFR 20.1101 is not applicable in this case.

The memorandum incorrectly stated that:

> The licensee is not required to limit the dose to occupational workers in non-vital areas during design basis accidents.

However, the memorandum correctly concluded:

> There is no regulation related to radiation exposure that would require restoration of the AMBs or installation of equivalent shielding at CNP.

On October 24, 2017, two NRC staff members submitted DPO-2017-008 in accordance with NRC Management Directive 10.159, "The NRC Differing Professional Opinion Program," regarding the June 23, 2017, memorandum. The publicly available DPO case file, including the DPO submittal, panel report, and decision, are available at ADAMS Accession No. ML18152B664. The DPO submitters raised concerns that the June 23, 2017, memorandum stated that the licensee is not required to limit the dose to occupational workers in non-vital areas during DBAs. On April 6, 2018, the DPO panel issued a report which stated that several statements within the memorandum were inaccurate or misleading. However, the DPO panel found that the overall conclusion regarding the shield blocks at CNP was correct. As a follow-up action to the DPO panel report and recommendations, the June 23, 2017, memorandum is hereby withdrawn and replaced by this memorandum.

The following technical discussion addresses the original issues raised in the March 17, 2017, teleconference between Region III and NRR, as well as additional questions as directed in the May 8, 2018, DPO decision.

The Commission's position concerning the applicability of 10 CFR Part 20 during emergencies is provided in the *Federal Register*, dated May 21, 1991 (56 FR 23365). This *Federal Register* notice addressed the addition of a sentence to 10 CFR 20.1001(b) stating that nothing in 10 CFR Part 20, "shall be construed as limiting actions that may be necessary to protect health and safety." The notice published in 56 FR 23365 states, in part:

> It is the Commission's intent that the regulations be observed to the extent practicable during emergencies, but that conformance with the regulations should not hinder any actions that are necessary to protect public health and safety such

> as lifesaving or maintaining confinement of radioactive materials. In this regard, the Commission notes that the Federal guidance on occupational radiation protection states that those dose standards only apply to normal operating conditions. The Commission believes that the dose limits for normal operation should remain the primary guidelines in emergencies.
>
> The purpose of the addition to this section is to assure licensees that their first priority should be to carry out those actions that are necessary to protect workers and the public from radiation exposure, to perform lifesaving activities, to prevent or limit the spread of radioactive contamination or the release of radioactive materials to the environment, and to preserve adequate margin of safety. In evaluating any ensuing violations and their severity, the Commission will consider on a case-by-case basis any extenuating circumstances.

Additionally, in NUREG/CR-6204, "Questions and Answers Based on Revised 10 CFR Part 20," dated May, 1994 (ADAMS Accession No. ML12166A179), Question No. 97, the NRC staff clarified the terms "emergency" and "accident," and took the position that the term emergency encompasses the term accident.

Therefore, with regard to the request from the March 17, 2017, teleconference to "Clarify the occupational dose requirements for personnel evacuating from non-vital areas during a DBA at CNP," it is the NRC staff's position—based on the Commission's statement—that the regulations in 10 CFR Part 20 apply during a reactor accident. For example, the requirements to monitor, document, and limit occupational dose; to use procedures and engineering controls based upon sound radiation protection principles to achieve doses that are ALARA; and the provisions that allow planned special exposures to occur, are all applicable during a reactor accident. This expectation exists without regard to location within a plant (i.e., whether a certain area is designated as vital or non-vital). However, compliance with 10 CFR Part 20 should not hinder actions necessary to protect public health and safety. Furthermore, violations of 10 CFR, Part 20, which occur during an accident would be dispositioned on a case-by-case basis with consideration of any extenuating circumstances.

The May 8, 2018, memorandum in response to the DPO directed NRC staff to address the following two additional questions:

1. Establish and institutionalize an applicable agency position regarding licensee worker dose during accident conditions that includes plant workers in non-vital areas, and also which addresses licensee modification of shielding included in the design bases.

2. Provide additional guidance on whether administrative controls can replace or supplement the physical protection of shield blocks.

The following discussion addresses the above question No. 1. The distinction between vital and non-vital areas of a plant for radiological purposes was emphasized following lessons learned from the accident at Three Mile Island, Unit 2 (TMI). In response to the accident, the NRC requested power reactor licensees to conduct a design basis review of radiation shielding as described in Item II.B.2 of NUREG-0737, "Clarification of TMI Action Plan Requirements" (ADAMS Accession No. ML051400209). A vital area was described in NUREG-0737 as any area which will, or may, require occupancy to permit an operator to aid in the mitigation or recovery from an accident. NUREG-0737 also set design dose rate criteria similar to that found in Appendix A to 10 CFR, Part 50, "General Design Criteria for Nuclear Power Plants" (GDC),

"Criterion 19—Control Room," for vital area access. Specifically, "dose to personnel should not be in excess of 5 rem [roentgen equivalent man] whole body, or its equivalent to any part of the body for the duration of the accident."

The NRC established that licensees adequately satisfied the intent of NUREG-0737, Item II.B.2, through plant-specific correspondence. Currently, the NRC enforces the concept of the vital area by controlling plant changes that could affect actions in the vital area pursuant to the regulations in 10 CFR 50.59(c)(2)(iii). Through Regulatory Guide (RG) 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments" (ADAMS Accession No. ML003759710), and the endorsed guidance included in Nuclear Energy Institute (NEI) 96-07, Revision 1, "Guidelines for 10 CFR 50.59 Implementation" (ADAMS Accession No. ML003771157), the NRC published a position on what constitutes an activity that results "in more than a minimal increase in the consequences of an accident," as provided in 10 CFR 50.59(c)(2)(iii). Section 4.3.3 of NEI 96-07 states that consequences in the context of 10 CFR 50.59 means radiological dose, and that an increase in consequences is interpreted as an increase in dose to the public and control room operators. Similarly, for contemplated changes that affect the dose associated with required actions outside the control room (i.e., actions in vital areas), the increase in consequences is considered more than minimal if the resultant dose exceeds the applicable provisions of GDC 19. Licensees desiring to make a change that would result in more than a minimal increase in the consequences of an accident must obtain a license amendment pursuant to 10 CFR 50.90 prior to making the change.

Regulation 10 CFR, Part 20, establishes requirements for radiological protection. As stated above, the requirements of 10 CFR, Part 20, apply during normal and accident conditions and in all areas of the plant (i.e., vital and non-vital areas). During normal operations, licensees satisfy the NRC's requirement to use procedures and engineering controls to achieve radiological doses that are ALARA pursuant to 10 CFR 20.1101(b), through adequate implementation of plant-specific programs. Licensees use a combination of work controls, shielding, training, radiological source control, and other mechanisms to control occupational doses during licensed activities. The NRC enforces operational ALARA programs at power reactor licensees through its risk-informed, performance-based, inspection program, primarily, by evaluating the outcomes of licensee efforts as compared to plans developed using plant-specific programs.

During a reactor accident, a licensee is still required to meet 10 CFR, Part 20, including the requirement to maintain occupational and public doses ALARA. However, the NRC does not require licensees to demonstrate how they will use procedures or engineering controls to maintain occupational doses ALARA during an accident; nor does the NRC require licensees to evaluate or control postulated post-accident dose levels to non-vital areas of the plant. This approach provides adequate protection because licensees are still required to control doses as described in the Commission's position cited above. Licensees should perform any actions necessary to protect public health and safety in an emergency, regardless of the requirements of 10 CFR, Part 20, with the knowledge that the NRC will include consideration of extenuating circumstances in dispositioning violations of 10 CFR, Part 20.

The following discussion addresses the above question No. 2. For the specific case of CNP, the AMBs were not part of the engineering controls associated with the control room or a vital area, nor did the AMBs provide radiation shielding for members of the public. Thus, their removal did not require a license amendment request (LAR) pursuant to 10 CFR 50.90. The licensee must meet the requirements of 10 CFR, Part 20, in the impacted area (i.e., the area where the radiological conditions were potentially impacted by the removal of the AMBs). For example, the licensee would have to survey the impacted area and post and control access to

the area as necessitated by the radiological conditions. If, after performing surveys as described in 10 CFR 20.1501, the licensee properly determined that no radiological controls were required by the regulations in 10 CFR Part 20, then any administrative controls implemented by the licensee should be considered voluntary and are solely governed by self-imposed, plant-specific procedures.

In August 2018, NRR staff provided the submitters of DPO 2017-008 a draft of this memorandum for review before publication. The DPO submitters provided a list of comments on the draft memo. Those comments, as well as NRR staff's disposition of those comments, are provided in Enclosure 1 of this document.

Enclosure:
NRR Staff Dispositions of DPO
Submitter Comments

NRR Staff Dispositions of DPO Submitter Comments
Revised Shield Block Memorandum

In August 2018, NRR staff provided the submitters of DPO 2017-008 a draft rewrite of the June 23, 2017 memorandum regarding CNP AMBs. The DPO submitters provided a list of comments on the draft memo. Below is a one-page overview of those comments, and NRR staff's dispositions. More detailed explanations are provided in the attached pages.

	Comment	Disposition
1	The draft memorandum is not consistent with GDC Criterion 61. Licensees are required to ensure radiological safety in all areas of the plants under all conditions, including postulated accident conditions, consistent with ALARA principles.	The application of the GDC are as reflected in the plant-specific licensing bases. Changes to plant-specific licensing bases are under the purview of 10 CFR 50.59, with guidance provided in RG 1.187, which endorses NEI 96-07 with conditions. In accordance with RG 1.187, NEI 96-07 interprets an "increase in consequences" to mean an increase in dose to the public or the control room, or an increase in dose beyond the GDC 19 criteria in a vital area.
2	10 CFR 20.1501 requires licensees to implement an effective radiation survey and monitoring program. RG 8.2[1] states that licensees should ensure the survey and monitoring program is designed to adequately characterize the radiological conditions and hazards. The licensee is required to analyze radiological hazards in all areas of the plant under all conditions to include accident conditions.	10 CFR 20.1501 requires the licensee to conduct surveys that "Are reasonable under the circumstances to evaluate." Accident conditions are considered "reasonable under the circumstances," for areas designated as vital areas. As stated in the memo, licensees are not required to evaluate or control for postulated post-accident dose levels to non-vital areas of the plant.
3	The draft memorandum does not address the interval as the accident develops and worsens. The memorandum states that post-accident, the licensee must meet the requirements of 10 CFR Part 20 by conducting surveys and controlling access as necessitated by radiological conditions. However, the worker standing in the non-vital area when an accident is initiated is in danger due to the lack of shielding.	A worker in a non-vital area will be initially protected by the plant's emergency evacuation procedures. If returning to a non-vital area post-accident, the worker will be protected by 10 CFR Part 20 requirements. Non-vital areas do not contain equipment that must be operated to mitigate the consequences of or enable recovery from an accident. Additionally, since the area of concern is a non-vital area, it would not be appropriate to use the DBA source term in a shielding analysis for the removal of the AMBs.
4	The draft memorandum is not consistent with statements of consideration associated with 10 CFR Part 20, which says "that the principal role of the survey is preventive. Adequate survey procedures provide measurable protection for the health and safety of the worker and the public because they provide the information necessary for the establishment of adequate protective measures."	Same disposition as provided for Comment #2: 10 CFR 20.1501 requires the licensee to conduct surveys that "Are reasonable under the circumstances to evaluate."
5	The letter in its draft fails to address the actions directed by NRR Office Director Brian Holian. In particular, the letter allows modification to the accident shield without evaluating the impact on workers in non-vital areas.	The actions directed by Brian Holian were to withdraw the original memorandum and rewrite the memo, involving appropriate stakeholders. The DPO panel concluded that though the original memorandum contained "several misleading statements," the panel agreed with the overall conclusion that restoration of the AMBs or equivalent shielding at CNP is not required.
6	Part of the DPO decision included a commitment to establish and institutionalize guidance on worker dose in non-vital areas, including modification to shielding. The draft memorandum states that the NRC does not require a licensee to evaluate the impact of shielding removal on dose in non-vital areas. If so, an action to provide durable guidance regarding worker protection and shield design would not be needed.	The DPO Panel's recommendation #3 was that NRR "Establish and institutionalize an applicable agency position." However, this was not included in the Director's Decision, which stated, "The revised memo should satisfy Recommendations 2 and 3 of the Panel report." The revised memorandum does not establish any new NRC positions, only clarifies previously held positions. Therefore, additional guidance beyond the revised memorandum is not needed.

[1]Regulatory Guide 8.2, "Administrative Practices in Radiation Surveys and Monitoring," Revision 1, May 2011 (ADAMS Accession No. ML110460093)

Enclosure

Nuclear Reactor Regulation (NRR) Staff Dispositions of Differing Professional Opinion (DPO) Submitter Comments Revised Shield Block Memorandum

In August 2018, NRR staff provided the submitters of DPO 2017-008 a draft rewrite of the June 23, 2017, memorandum regarding Donald C. Cook Nuclear Plant (CNP), Unit Nos. 1 and 2 auxiliary missile blocks (AMBs). The DPO submitters provided a list of comments on the draft memo. Below is a list of those comments, along with detailed explanations of NRR staff's disposition of each comment.

1.0 Comment

The draft memorandum is not consistent with the regulations in Title 10 of the *Code of Federal Regulations* (CFR), Part 50.

General Design Criteria (GDC), Criterion 61, states:

> The fuel storage and handling, radioactive waste, and other systems which may contain radioactivity shall be designed to assure adequate safety under normal and postulated accident conditions. These systems shall be designed [...] with suitable shielding for radiation protection.

If a change is made to shielding that would increase dose in any location, the licensee must request a license amendment. Licensees are required to ensure radiological safety in all areas of the plants under all conditions, including postulated accident conditions, consistent with as low as reasonably achievable (ALARA) principles. Therefore, alterations to shielding need to consider dose impact on plant workers as well as actions that can be taken to limit dose under postulated accidents and transients. Therefore, it seems reasonable that the licensee must evaluate the potential hazards and prescribe appropriate controls before authorizing work in areas previously protected by the shield blocks.

1.1 Disposition

As a general rule, the application of the GDC are as reflected in the plant-specific licensing bases. Once the operating license is issued to a licensee, the plant-specific licensing basis is assumed to satisfy all applicable GDCs. Consequently, the NRC verified that the applicable CNP principle design criteria as reflected in the plant's licensing basis satisfied Criterion 61 when the plant was initially licensed. Subsequent to licensing, changes to the plant-specific licensing basis are under the purview of 10 CFR 50.59, for voluntary changes, or 10 CFR 50.109, for NRC-mandated changes. 10 CFR 50.59 and the rule's accompanying guidance in Regulatory Guide (RG) 1.187 provide the process for the licensee to determine what mechanism (i.e., licensee controlled or NRC license amendment) will be used to make voluntary changes to the plant-specific licensing basis. The licensee is allowed to make changes to the plant without a license amendment provided the change satisfies the provisions of 10 CFR 50.59. In this particular case, the licensee made changes to shielding that was ostensibly installed to meet GDC 61 criteria during initial licensing.

The revised memorandum discusses the applicable requirements of 10 CFR 50.59(c)(2)(iii) as well as the accompanying guidance for the rule in RG 1.187. In accordance with RG 1.187, NEI 96-07 interprets an "increase in consequences" to mean an increase in dose to the public or the control room. Additionally, per RG 1.187, changes that result in doses exceeding the

GDC 19 dose criteria in vital areas of the plant require prior NRC approval. The licensee does not need to request a license amendment if the change will increase dose to areas of the plant not specifically called out in RG 1.187. In these cases, the survey, posting, and access control requirements of 10 CFR Part 20 provide adequate protection of workers. The original non-cited violation (NCV) asserted that the licensee had properly followed 10 CFR 50.59. Therefore, the plant-specific licensing basis was changed via an NRC-approved method.

2.0 Comment

The draft memorandum is not consistent with 10 CFR 20.1501. It is also inconsistent with RG 8.2.

Regulation 10 CFR 20.1501 requires licensees to implement an effective radiation survey and monitoring program to demonstrate compliance with NRC regulations. RG 8.2 states that licensees should ensure that the survey and monitoring program is designed to adequately characterize the radiological conditions and hazards. Thus, the licensee is required to analyze radiological hazards in all areas of the plant under all conditions, to include accident conditions.

2.1 Disposition

Regulation 10 CFR 20.1501 requires the licensee to conduct surveys that "Are reasonable under the circumstances to evaluate." The NRC has determined that it is reasonable to require licensees to evaluate radiological conditions that result from postulated accidents in selected areas of the plant (i.e., the control room and vital areas). Additionally, the NRC has determined that it is reasonable to require licensees to evaluate radiological consequences to the public associated with postulated accidents. However, the NRC has not determined that licensees are required to evaluate radiological conditions and hazards resulting from postulated accidents in non-vital areas of the plant. In these cases, accident conditions are not considered "reasonable under the circumstances," as they are extremely unlikely. As stated in the memo, licensees are not required to evaluate or control for postulated post-accident dose levels to non-vital areas of the plant.

3.0 Comment

The draft memorandum does not address the interval as the accident develops and worsens.

The memorandum does not address the time between the pre-accident and post-accident. The memorandum states that post-accident, the licensee must meet the requirements of 10 CFR, Part 20, by conducting surveys and controlling access as necessitated by radiological conditions. However, the worker standing in the non-vital area when an accident is initiated is in danger due to the lack of shielding.

3.1 Disposition

At the initiation of an accident, non-essential workers will be evacuated per the licensee's emergency response procedures. Therefore, a worker in a non-vital area will be initially protected by the plant's emergency evacuation procedures. If returning to a non-vital area post-accident, the worker will be protected by 10 CFR, Part 20, requirements.

Additionally, it has been long-standing NRC practice to accept shielding analyses from licensees that assume 0.25 to 1 percent fuel defect for pressurized-water reactors during

licensing reviews. In fact, prior to the accident at Three Mile Island 2 (TMI-2), the 0.25 percent-based source term (or a similar value) was used for shielding analyses in all areas of the reactor plant during reactor licensing (e.g., during verification of the licensee's principle design criteria satisfying the GDC 61 shielding criteria). As a result of the accident at TMI-2, the NRC learned that the radiation doses in certain areas of the plant should be reassessed based on dose outcomes from accident response and recovery. Therefore, the NRC requested that licensees re-evaluate shielding for their vital areas using a source term that was very similar to the DBA, TID 14844, source term, as described in NUREG-0737, Item II.B.2. During their reevaluations, licensees were expected to make plant modifications so that doses — calculated using the more significant source term — in vital areas would remain within doses similar to the GDC 19 dose criteria.

The NUREG-0737 changes were made permanent in plant licensing bases through updated final safety analysis report (UFSAR) changes that were coordinated via individual plant correspondence with the NRC. Changes to the UFSAR are controlled by 10 CFR 50.59. Specifically, 10 CFR 50.59 guidance states that plant changes that impact doses to the public or control room, or that result in an increase to vital area doses above the GDC 19 criteria, require prior NRC approval via a license amendment. Non-vital areas do not contain equipment that must be operated to mitigate the consequences of, or enable recovery from, an accident. Therefore, the NRC did not request that licensees reevaluate the shielding in those areas, and the original plant-specific licensing bases that were based on a source term of 0.25 percent fuel defects (or similar) remained acceptable.

In summary, it would not be appropriate to apply DBA source terms as the basis in determining if the removal of the AMBs at CNP was acceptable from a radiological shielding standpoint. If, hypothetically, a licensee submitted a LAR for this action, the NRC would use what is now called the plant design basis source term to determine acceptability of the modification, since the impacted area was determined to be a non-vital area. As described in NUREG 0800, Standard Review Plan, Chapter 11 (ADAMS Accession No. ML15029A022), the plant design basis source term is based on 0.25 to 1 percent fuel defects. Furthermore, to appropriately risk-inform this hypothetical licensing action, this source term would be informed by the new Alternative Source Term release timeframes, and the magnitude of the source term would be reduced to the amount of leakage from the reactor coolant system to the containment, to determine the level of containment shine to which workers would be exposed if standing outside the unshielded access hatch. This analysis would result in significantly smaller dose rates than have hitherto been described in association with this topic.

4.0 Comment

The draft memorandum is not consistent with statements of consideration (SOC) associated with 10 CFR, Part 20.

The SOC for 10 CFR Part 20 (46 FR 53647) states, in part:

> The principal role of the survey is preventive. Adequate survey procedures provide measurable protection for the health and safety of the worker and the public because they provide the information necessary for the establishment of adequate protective measures. The usefulness of this "early warning system" may be seriously reduced if licensees are not held responsible for failure to conduct any survey or for failure to conduct an adequate survey when violations of other 10 CFR, Part 20, requirements have not occurred.

Ignoring of accident or AOOs can lead to inadequate protective measures thus exposing workers to the harmful effects of radiation.

4.1 Disposition

Regulation 10 CFR 20.1501 requires the licensee to conduct surveys that "Are reasonable under the circumstances to evaluate." Accident conditions are not considered reasonable to evaluate, as they are extremely unlikely.

For detailed explanation, see disposition of comment #2.

5.0 Comment

The memorandum fails to address the actions directed by NRR Office Director Brian Holian.

In particular, the memorandum allows modification to the accident shield without evaluating the impact on workers in non-vital areas. During a telephone call, NRR staff stated that there is no requirement to evaluate the impact of accident shield modifications on plant workers (aside from control room operators and those that need to access vital areas). In particular, NRR staff stated the probability of an accident is so low that its impact on workers need not be considered. This position runs counter to the current design of containments that provide accident shielding designed in a manner that indicates its purpose is worker protection during and post-accident. The NRR response should be consistent with existing NRC requirements and guidance as well as existing plant designs.

5.1 Disposition

The actions directed by Brian Holian in the Director's Decision dated May 8, 2018, were to:

- Withdraw the original memo
- Rewrite the memorandum and involve appropriate stakeholders, including the Office of the General Counsel (OGC).

The DPO Panel agreed with the conclusion of the original memorandum dated June 23, 2017, that "there is no regulation related to radiation exposure that would require restoration of the AMBs or installation of equivalent shielding at CNP." Because the original memorandum contained several misleading or inaccurate statements, this document has been issued as a replacement. Appropriate stakeholders have been involved in the drafting and review of this document, including OGC.

For a detailed explanation of why the change to shielding was allowed per 10 CFR 50.59, see disposition of comment # 1.

6.0 Comment

The memorandum fails to address the actions recommended by the DPO panel.

The DPO response validated that 10 CFR, Part 20, applies during accidents. Therefore, surveys need to embody the hazards associated with an accident. The DPO panel report included a recommendation to establish and institutionalize guidance on worker dose in non-

vital areas, including modification to shielding. The draft memorandum states that the NRC does not require a licensee to evaluate the impact of shielding removal on dose in non-vital areas. If so, an action to provide durable guidance regarding worker protection and shield design would not be needed.

6.1 Disposition

The DPO Panel's recommendation No. 3 was that NRR "Establish and institutionalize an applicable agency position regarding licensee worker dose during accident conditions." However, this was not part of the Director's Decision. The Directors Decision states, "The revised memo should satisfy Recommendations 2 and 3 of the Panel report."

The revised memorandum does not establish any new positions. Rather, the memorandum only clarifies the NRC staff's previously held position, that a licensee is not required to evaluate the impact of shielding removal on dose in non-vital areas. Therefore, additional guidance beyond the revised memorandum is not necessary.

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