



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION IV  
1600 E. LAMAR BLVD.  
ARLINGTON, TX 76011-4511

January 23, 2018

Mr. John Dent, Jr.  
Vice President-Nuclear and CNO  
Nebraska Public Power District  
Cooper Nuclear Station  
72676 648A Avenue  
P.O. Box 98  
Brownville, NE 68321

**SUBJECT: COOPER NUCLEAR STATION – NOTIFICATION OF NRC INSPECTION OF THE IMPLEMENTATION OF MITIGATION STRATEGIES AND SPENT FUEL POOL INSTRUMENTATION ORDERS AND EMERGENCY PREPAREDNESS COMMUNICATION/ STAFFING/MULTI-UNIT DOSE ASSESSMENT PLANS (05000298/2018010) AND REQUEST FOR INFORMATION**

Dear Mr. Dent:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) staff will conduct a mitigation strategies for beyond-design-basis external events, spent fuel pool instrumentation, and emergency preparedness enhancements inspection at the Cooper Nuclear Station, from March 12-16, 2018. The inspection will consist of two reactor inspectors from the NRC's Region IV office, one reactor inspector from the NRC's Region III office, plus one of the assigned Resident Inspectors at the Cooper Nuclear Station for one week. The inspection will be conducted in accordance with the NRC's Temporary Instruction 2515/191, "Inspection of the Implementation of Mitigating Strategies and Spent Fuel Pool Instrumentation Orders, and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans."

Experience has shown that this inspection is resource intensive both for the NRC inspectors and licensee staff. In order to minimize the impact to your onsite resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection activity. Please note that the documents are requested to be provided by February 23, 2018. During the onsite inspection, inspectors will verify that plans for complying with NRC Orders EA-12-049 and EA-12-051 are in place and are being implemented. Inspectors will also verify the establishment of staffing and communications plans provided in response to the March 12, 2012, request for information letter, and multi-unit dose assessment information provided per COMSECY-13-0010, Schedule and Plans for Tier 2 Order on Emergency Preparedness for Japan Lessons Learned, dated March 27, 2013. These plans and information were provided in the site specific submittals, which were subsequently reviewed by the NRC staff for understanding and documented in the NRC's plant safety evaluations (SEs) and safety assessments. Therefore, appropriate personnel knowledgeable of the station's FLEX strategies, spent fuel pool instrumentation, and emergency preparedness enhancements should be available to support the inspectors at the site during the inspection.

We have discussed the schedule for this inspection activity with your staff and understand that our regulatory contact for this inspection will be Brenda Kirkpatrick of your licensing organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Michael H. Stafford, by telephone at 402-825-3371 or by e-mail at [Michael.Stafford@nrc.gov](mailto:Michael.Stafford@nrc.gov).

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150 0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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/*

Jason W. Kozal, Branch Chief  
Project Branch C  
Division of Reactor Projects

Dockets: 50-298  
Licenses: DPR-46

Enclosure:  
FLEX Strategies, Spent Fuel Pool  
Instrumentation, & EP Enhancements  
Inspection Request for Information

**Request for Information  
FLEX Strategies, Spent Fuel Pool Instrumentation, & EP Enhancements Inspection  
Cooper Nuclear Station**

Inspection Report: 05000298/2018010

Inspection Dates: March 12 - 16, 2018

Inspection Procedure: Temporary Instruction 2515/191, "Inspection of the Implementation of Mitigating Strategies and Spent Fuel Pool Instrumentation Orders, and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans"

Inspectors: Michael H. Stafford, Team Lead, CNS Resident Inspector  
Ryan D. Alexander, Sr. Project Engineer, Region IV  
John M. Mateychick, Sr. Reactor Inspector, Region IV  
Stuart N. Sheldon, Project Engineer, Region III

**Information Requested for the In-Office Preparation Week**

The following information should be sent to the Region IV office in hard copy or electronic format (use of the Certrec IMS information portal is preferred), to the attention of Ryan Alexander, by February 23, 2018. Additionally, a copy of any material sent to the Region IV office should also be delivered to the resident inspector's office at Cooper Nuclear Station. The inspectors will select specific items from the information requested below and then request from your staff additional documents needed during the onsite inspection week. Also, we request that you categorize the documents in your response with the numbered list below. Please provide requested documentation electronically if possible. If requested documents are large and only hard copy formats are available, please inform the lead inspector, and provide subject documentation during the first day of the onsite inspection. If you have any questions regarding this information request, please call the lead inspector as soon as possible.

TI 2515/191 - Appendix A

- A. Provide current revision of the FLEX Final Integrated Plan (i.e., current FLEX Program Document), including any revisions since January 2017 submission to the NRC.
- B. Provide the FLEX Strategy Basis Document.
- C. Provide each operating, off-normal, abnormal, and/or emergency procedures where entry into one or more FLEX Support Guideline(s) are initiated.
- D. Provide a list and copies of every FLEX Support Guideline (FSG) or equivalent procedure which you developed or revised to implement your mitigating strategies.
- E. Provide a list of key pieces of equipment that directly perform a FLEX mitigation strategy for core cooling, containment, and/or spent fuel pool cooling.
- F. Provide a listing/summaries of plant modifications completed related to the FLEX program.
- G. Provide a listing of calculations, evaluations, and 50.59 reviews related to the FLEX program and modifications.

H. Applicable site specific hazards for the Cooper Nuclear Station:

- 1) Provide documents which show the locations and configuration of structure(s) which store FLEX equipment.
- 2) Seismic
  - (a) Provide the travel route(s) for FLEX equipment from storage location(s) to their location(s) of use, AND evaluation(s) which demonstrate that for the potential for soil liquefaction is not of a concern for these travel route(s).
  - (b) Seismic concerns for water source(s)
    - (1) If the FLEX water sources are seismically robust, then provide the assessment that shows that they are.
    - (2) If the FLEX water sources are not seismically robust, then provide:
      - (a) an assessment of alternate water sources, and
      - (b) the procedure(s) which describe when and how to access those sources.
- 3) External Flooding
  - (a) Provide description of where FLEX equipment is stored relative to protection from flood waters in accordance with site flood analysis.
    - (1) If any FLEX equipment is stored below flood level, then (i) on an event timeline, show when that equipment will be needed; and (ii) provide the procedure(s) used to retrieve and deploy that equipment.
  - (b) Provide your plans/procedures to support successful FLEX equipment deployment for flooding/ponding from localized intense precipitation (which persist over a long time period).
  - (c) If credited in the strategy, provide plans/procedures for storage and deployment of temporary flood barriers, including timeline of deployment strategy.
- 4) Severe storms with high winds
  - (a) Provide evaluation/evidence as to how FLEX equipment is stored relative to protection from severe storms with high winds (including tornadic):
    - (1) In a structure that meets the plant's design basis for high wind hazards (e.g., existing safety-related structure); OR
    - (2) In a structure that meets the design requirements as described in ASCE 7-10, "Minimum Design Loads for Buildings and Other Structures," given the limiting tornado wind speeds from Regulatory Guide 1.76, and/or design-basis hurricane wind speeds.
  - (b) Provide pathways via which you plan to move FLEX equipment from onsite storage areas to final deployment locations.
    - (1) Show how you designated and evaluated those pathways for post-storm accessibility for staging and connecting FLEX equipment.
- 5) Snow, Ice, and Extreme Cold

For each key piece of equipment described in Item E (above) that directly performs or implements a FLEX mitigation strategy:

- (a) Provide procedures/documents demonstrating how the FLEX equipment is maintained at a temperature within a range to ensure that it will function when called upon.
  - (b) Provide procedures/documents demonstrating how the FLEX equipment can be moved from the storage location to its deployment location during extreme snowfall and ice storms.
- 6) Extreme high temperatures
- For each key piece of equipment described in Item E (above) that directly performs or implements a FLEX mitigation strategy:
- (a) Provide procedures/documents which describes the high-temperature limit of the range within which the equipment will function.
  - (b) Provide procedures/documents which describe how the equipment is maintained below that limit in its storage location.
- I. Provide the station-specific FLEX strategies time validation study(ies).
- J. Provide the relevant station procedure(s)/guideline(s) which describe the testing and maintenance program for FLEX equipment. As applicable, provide a listing of the model work orders established to conduct period testing and maintenance activities for FLEX equipment.
- NOTE – A sample of records for completed maintenance/testing activities will be requested for review during the onsite inspection week.
- K. Provide documents/procedures which describe the programmatic controls in place to ensure that if equipment and applicable connections are unavailable (e.g., due to maintenance, non-functionality), then compensatory measures are implemented in accordance with guidance outlined NEI 12-06.
- L. Provide the station-specific National SAFER Center “Playbook”
- M. Relative to personnel training on FLEX strategies, provide:
- 1) FLEX training bases document(s)
  - 2) Lesson plans/training documents for site emergency response leaders responsible for the implementation of FLEX strategies.
- NOTE – Records for staff completing this training may be requested for review during the onsite inspection week.
- 3) Lesson plans/training documents for site personnel responsible for the execution of mitigating strategies for BDBEEs (i.e., operators, craft personnel, security, radiation protection, etc.).
- NOTE – Records for staff completing this training may be requested for review during the onsite inspection week.
- N. A current copy of administrative procedure(s) for the CAP, modification program, operations procedure writing and implementation, and top-level documents for the work control and work scheduling programs. (If FLEX related procedures such as FSGs or the FIP are maintained under a different process, please include copies of those procedures.)
- O. A current copy of the U/FSAR, Technical Specifications, and Technical Specification Bases documents.
- P. Listing of corrective action program document summaries generated related to FLEX equipment, strategies, procedures, and/or training.

NOTE – Complete corrective action program documents for a selection of those included in the summary will be requested for review during the onsite inspection week.

- Q. A copy of any audits/self-assessments related to your preparation for this inspection, as well as any related to the implementation or maintenance of the FLEX program.

TI 2515/191 - Appendix B

- R. Provide the procedures implemented for maintenance, testing, calibration, and use of the primary and backup Spent Fuel Pool (SFP) instrumentation channels.
- S. Provide lesson plans/training documents which describe the training program that address the use, maintenance, calibration, surveillance, and the use of alternate power to the primary and backup SFP instrument channels.

TI 2515/191 - Appendix C

T. Communications:

- 1) Provide documents which show that the communications system(s), technologies, equipment and power supplies would be available from the beginning of the event and operate during an ELAP.
- 2) Provide the procedures and/or guidance used to implement the communication capabilities.
- 3) Provide documents which show that you have added any new communications equipment, portable power supplies and/or systems have been added to ongoing testing and preventative maintenance programs.

U. Staffing:

- 1) Provide documents which show that onsite and augmented staff will be available to implement the strategies in response to a large scale natural event that results an ELAP and impedes access to the site, and that functions/tasks have been appropriately staffed.
- 2) Provide documents which show that the site access methods (e.g., roadways, navigable bodies of water and dockage, airlift, etc.) expected to be available following the event and available to the Emergency Response Organization (ERO) [as described in the Phase 1 and 2 staffing assessments and NRC safety assessment].
- 3) Provide documents which show the testing, training, and drills/exercises performed by the station to demonstrate the ERO's ability to utilize the communications systems and/or equipment.

- V. Provide documents and procedures which show that your dose assessment process/program is capable of analyzing concurrent radiological releases from all on-site significant sources, including releases from spent fuel pools (i.e., multi-unit/multi-source dose assessment capability).

Lead Inspector Contact Information:

Michael H. Stafford, Resident Inspector  
402-825-3371  
Michael.Stafford@nrc.gov

Mailing Address:  
U.S. NRC, Region IV  
Attn: Ryan Alexander, DRP  
1600 East Lamar Blvd.  
Arlington, TX 76011-4511

COOPER NUCLEAR STATION – NOTIFICATION OF NRC INSPECTION OF THE  
IMPLEMENTATION OF MITIGATION STRATEGIES AND SPENT FUEL POOL  
INSTRUMENTATION ORDERS AND EMERGENCY PREPAREDNESS COMMUNICATION/  
STAFFING/MULTI-UNIT DOSE ASSESSMENT PLANS (05000298/2018010) AND REQUEST  
FOR INFORMATION DATED JANUARY 23, 2018

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**ADAMS ACCESSION NUMBER: ML18023A110**

<input checked="" type="checkbox"/> SUNSI Review By: MHS/rdr	ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Sensitive <input checked="" type="checkbox"/> Non-Sensitive	<input type="checkbox"/> Non-Publicly Available <input checked="" type="checkbox"/> Publicly Available	Keyword NRC-002
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DATE	01/23/2018	01/23/18		

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