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

December 21, 2021

Mr. David Rhoades
Senior VP, Exelon Generation Co., LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER PLANT, UNITS 2 AND 3 – NOTIFICATION OF NRC DESIGN BASES ASSURANCE INSPECTION (PROGRAMS) AND INITIAL REQUEST FOR INFORMATION: INSPECTION REPORT 05000237/2022010; 05000249/2022010

Dear Mr. Rhoades:

On March 14, 2022, the U.S. Nuclear Regulatory Commission (NRC) will begin a baseline Design Bases Assurance Inspection (Programs) at Dresden Nuclear Power Station, Unit 2 and Unit 3. This inspection will be performed in accordance with NRC Baseline Inspection Procedure 71111.21N, "Design Bases Assurance Inspection (Programs)," Attachment 2, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements."

This inspection will evaluate the reliability, functional capability, and design basis of risk-important power-operated valves (POVs) as required by 10 CFR 50.55a and applicable 10 CFR Part 50, Appendix A and Appendix B, requirements. In conducting this inspection, the team will select risk-important POVs used to prevent and mitigate the consequences of a design basis accident.

The inspection will include two weeks of onsite inspection. The inspection team will consist of three NRC inspectors. The current inspection schedule is as follows:

- Preparation week: March 7 – March 11, 2022
- Onsite weeks: March 14 – March 18, 2022, and March 28 – April 1, 2022

Experience with previous baseline engineering inspections of similar depth and length has shown this type of inspection is extremely resource intensive, both for the NRC inspectors and the licensee staff. In order to minimize the inspection impact on the site and to ensure a productive inspection for both parties, we have enclosed a request for information needed for the inspection. It is important that all of these documents are up-to-date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection. Insofar as possible, this information should be provided electronically to the lead inspector. The information request has been divided into three groups:

- The first group lists information necessary for our initial inspection scoping activities. This information should be provided to the lead inspector no later than January 31, 2022. By February 4, 2022, the lead inspector will communicate the initial selected samples and additional information needed to support the in-office preparation activities.

- The second group of documents requested is those items needed to support our in-office preparation activities. This set of documents should be provided to the lead inspector no later than March 1, 2022. During the preparation activities, the team may identify additional information needed to support the inspection.

- The last group includes the additional information above as well as plant-specific reference material. This information should be available to the team onsite on March 14, 2022. It is also requested that corrective action documents and answers to questions developed during the inspection be provided to the lead inspector as the documents are generated.

In addition, the enclosure includes information and requests addressing inspection logistics.

The lead inspector for this inspection is Jamie Benjamin. If there are any questions about the inspection or the material requested in the enclosure, contact the lead inspector at 630-829-9747 or via e-mail at Jamie.Benjamin@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.

This letter and its enclosure will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Signed by Benjamin, Jamie
on 12/21/21

Jamie Benjamin
Senior Reactor Inspector
Engineering Branch 2
Division of Reactor Safety

Docket Nos. 05000237, 05000249
License Nos. DPR-19, DPR-25

Enclosure:
Design Bases Assurance Inspection
(Programs) Document Request

cc: Distribution via LISTSERV®

Letter to David Rhoades from Jamie Benjamin dated December 21, 2021.

SUBJECT: DRESDEN NUCLEAR POWER PLANT, UNITS 2 AND 3 – NOTIFICATION OF NRC DESIGN BASES ASSURANCE INSPECTION (PROGRAMS) AND INITIAL REQUEST FOR INFORMATION: INSPECTION REPORT 05000237/2022010; 05000249/2022010

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DESIGN BASES ASSURANCE INSPECTION - POV PROGRAM
REQUEST FOR INFORMATION

I. ADMINISTRATIVE INSPECTION INFORMATION

Inspection Report Number:	05000237/2022010; 05000249/2022010
Onsite Inspection Dates:	March 14, – March 18, 2022 and March 28 – April 1, 2022
Inspection Procedure:	IP 71111.21N, "Design Bases Assurance Inspection (Programs)," Attachment 2, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements"
Lead Inspector:	Jamie Benjamin, Senior Reactor Engineer, RIII/DRS 630-829-9747 Jamie.Benjamin@nrc.gov
Teammate Inspectors:	Benny Jose, Senior Reactor Inspector, RIII/DRS Atif Shaikh, Senior Reactor Inspector, RIII/DRS

II. LOGISTICS

Email the following inspection logistics to the lead inspector by March 7, 2022, or sooner:

1. Inspection room name/number, directions from the main access facility, and phone number;
2. Interview room name/number;
3. Response team contact information (names and phone numbers) and team roles (e.g., management sponsor, lead, inspector counterpart);
4. Any site access/badging actions needed for each inspector;
5. Any dosimetry actions needed for each inspector;
6. Entrance meeting time and location;
7. Confirmation that the team will have access to a licensee computer with a nearby printer;
8. Confirmation that the team will have Wi-Fi access;
9. Cafeteria location and hours;
10. Inspection response team normal working hours; and

11. Any potential resource conflicts during the inspection (e.g., emergency drills and all-staff meetings).

III. INFORMATION REQUEST

Contact the lead inspector as soon as possible if you have any questions regarding this information request. Provide the information electronically in searchable formats, if possible. The files should contain descriptive names, and be indexed and hyperlinked to facilitate ease of use. Information in "lists" should contain enough information to be easily understood by someone who has knowledge of light water reactor technology.

Important Note: For the purpose of this inspection, POVs are valves with power actuators. Examples include motor-operated valves (MOVs), air-operated valves (AOVs), hydraulic-operated valves (HOVs), solenoid-operated valves (SOVs), and pyrotechnic-operated valves (e.g., squib valves).

1. Information Requested for Initial Inspection Scoping Activities

The following information is requested by January 31, 2022, or sooner, to facilitate the initial sample selection.

1.1. List of systems, system numbers/designators, and corresponding system names.

1.2. Probabilistic safety analysis (PSA) "system notebooks" and latest PSA summary document. Also, identify the top ten risk significant functions per the PSA.

1.3. List of POVs from your site-specific PSA sorted by Risk-Achievement Worth (RAW). Include values for Birnbaum Importance, Risk-Reduction Worth, and Fussell-Veseley (as applicable). The list should include (a) component identification number; (b) applicable plant system; (c) ASME Boiler and Pressure Vessel Code (BPV Code) Class; (d) safety-related or nonsafety-related classification; (e) valve type, size, and manufacturer; and (f) actuator type, size, and manufacturer. If the NRC has granted a license amendment to categorize structures, systems, and component in accordance with 10 CFR 50.69, please provide the Risk Informed Safety Category of the component.

1.4. All corrective action documents, evaluations, and NRC correspondence, including any associated NRC requests for additional information (RAIs) and Safety Evaluation Report(s), generated in response to the NRC communications listed below. Also, any NRC inspection reports that were conducted to close out the site's associated responses.

1.4.1. Generic Letter (GL) 89-10;

1.4.2. GL 96-05;

1.4.3. GL 95-07;

1.4.4. Bulletin 85-03;

1.4.5. Regulatory Issue Summary (RIS) 2000-03; and

1.4.6. GL 88-14.

1.5. NRC Safety Evaluation Report(s) associated with the In-Service Testing (IST) Program and relief and alternative requests submitted in accordance with 10 CFR 50.55a for POVs. Identify the edition of the ASME Operation and Maintenance of Nuclear Power Plants (OM Code) that is the Code of record for the current 10-year IST Program interval, as well as any self-imposed standards related to the IST Program elements applicable to POVs.

1.6. IST Program documents, including implementing procedures, IST plan, and the document that identifies the in-scope valves and the associated IST Program requirements for each valve (e.g., IST valve table identifying category, active/passive function).

1.7. Any NRC correspondence regarding the station's POV programs other than the IST Program, including any associated NRC RAIs and any NRC Safety Evaluation Report(s). Identify any self-imposed standards related to these programs.

1.8. Site (and corporate if applicable) procedures associated with implementation of the POV programs required by 10 CFR 50.55a(b)(3)(ii) and/or ASME OM Code Mandatory Appendix III.

1.9. List of any valve removed from a POV program and basis for removal.

1.10. List of corrective action documents related to the POV programs for the last 5 years, including the document identifier and brief description. Provide a separate list for each POV program.

1.11. List of POVs in the Maintenance Rule (a)(1) category for the last 5 years. The list should include a brief description of the surrounding circumstances.

1.12. Current list of operator workarounds.

1.13. List of open operability evaluations related to POVs.

1.14. List of permanent plant modifications to POVs completed in the last 5 years. For the purpose of this inspection, permanent plant modifications include permanent: plant changes, design changes, set point changes, equivalency evaluations, suitability analyses, and commercial grade dedications. The list should contain the modification identifier, title, revision/date, the affected system, completion date, and a brief modification description.

1.15. Any self-assessment and/or audit of POV programs completed in the last 5 years.

1.16. Updated Final Safety Analysis Report, Technical Specifications, Technical Specifications Bases, and Technical Requirements Manual.

1.17. The lead inspector will deliver forms to the licensee point of contact identified in the letter for approximately 30 valves. Fill out the valve characteristics in the form fields. It is possible that not all fields can be completed. For those fields that cannot be filled, leave the fields blank.

1.18. All emergency and abnormal operating procedures.

1.19. Current management and engineering organizational chart.

2. Information Requested to Support Inspection Preparation Activities

The following information is requested by March 1, 2022, or sooner, to facilitate the final inspection preparation.

2.1. Preventive Maintenance (PM) Program document, implementing procedures, and PM templates applicable to POVs.

2.2. Title 10 CFR 50, Appendix J Program document and implementing procedures.

2.3. Corrective Action Program procedures, including the operability/functionality determination procedure.

2.4. Quality Assurance Program document.

2.5. Procedure for addressing issues captured in 10 CFR 21 notifications.

2.6. Joint Owner's Group (JOG) MOV program classification evaluation.

2.7. For each selected POV, including its actuator (the response should be separated by POV such as by creating a folder for each valve that includes the associated documents):

2.7.1. Procurement and design specifications, and Certificate of Conformance.

2.7.2. Vendor documents addressing installation, operation, and maintenance.

2.7.3. Piping and instrumentation drawings (PI&Ds) for the associated system.

2.7.4. Electrical diagrams, including control logic diagrams.

2.7.5. Valve and actuator component drawings.

2.7.6. System description and/or training documents associated with the POV.

2.7.7. Operations procedures that direct operators to control the valve, including alarm response procedures.

2.7.8. Applicable Maintenance Rule scoping document and the Maintenance Rule performance criteria which would cause the system or component to be moved from (a)(2) status to (a)(1) status. Also, documents (e.g., corrective action and work orders) associated with any instance the POV was placed in (a)(1) status during the last 5 years.

2.7.9. List of tests, including technical specification surveillances. The list should identify the test periodicity and test procedure identifier.

2.7.10. Completed tests and surveillances performed during the last 5 years. For those tests and surveillances performed at a periodicity of less than 1 year or greater than 5 years, provide the latest three performed. Include the associated acceptance criteria basis calculations.

2.7.11. Completed preservice testing (PST).

2.7.12. List of applicable PMs. The list should identify the PM periodicity and last completion date, and briefly describe the PM.

2.7.13. Completed PMs performed during the last 5 years, including any post maintenance testing. For those PMs performed at a periodicity of less than 1 year or greater than 5 years, provide the latest three performed.

2.7.14. Corrective maintenance work orders performed on the POV during the last 5 years, including any post maintenance testing.

2.7.15. An all-inclusive list of calculation revisions in effect associated with the POV. The list should include the document identifier, title, and revision number.

2.7.16. Calculations associated with the POV. Data files may be excluded. Calculation examples include (as applicable):

- Minimum available and required voltage at transient and steady state;
- Thermal overload sizing evaluation;
- Critical setpoint calculations (e.g., limit switch settings);
- Required thrust/torque;
- Maximum allowed leakage;
- Maximum differential pressure;
- Ambient room temperature under normal and accident conditions;
- Environmental qualification (EQ) file;
- (For AOVs) Pneumatic supply sizing and setpoint calculations;
- System hydraulic calculations;
- Pressure locking/thermal binding evaluations; and
- Valve weak link/seismic weak link analysis.

2.7.17. History of permanent modifications performed on the POV since installation. Include modification identifier and brief modification description.

2.7.18. List of corrective action documents associated with the POV for the last 5 years. The list should include the document identifier, brief description, and status (e.g., open or completed).

2.7.19. Open and closed operability evaluations originated during the last 5 years.

3. Additional Information to Be Provided Onsite

3.1. During the in-office preparation activities, the team may identify additional information needed to support the inspection. The lead inspector will provide a list of the additional information needed during the week of March 7, 2022.

3.2. Information requested to be provided throughout the inspection:

3.2.1. Any corrective action documents generated as a result of the team's questions during this inspection as the documents are generated.

3.2.2. List of questions and/or document requests submitted by the team and their status (e.g., open, closed) sorted by inspector. Provide to each inspector daily 1.5 hours prior to the daily debrief. It is recommended to provide the team leader with a master list sorted by inspector and each inspector with a list containing only the items originated by that inspector.

3.2.3. If available in hardcopy form, one complete set of P&IDs and simplified drawings (e.g., training schematics). If any of these documents is not available in hardcopy form, contact the lead inspector.