



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

February 22, 2021

Mr. David P. Rhoades  
Senior Vice President  
Exelon Generation Company, LLC  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 –  
INFORMATION REQUEST FOR A TRIENNIAL BASELINE DESIGN BASES  
ASSURANCE INSPECTION (TEAM); INSPECTION REPORT  
05000317/2021010 AND 05000318/2021010

Dear Mr. Rhoades:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region I staff will conduct a Design Bases Assurance Inspection (DBAI) at Calvert Cliffs, Units 1 and 2. Paul Cataldo, a Senior Reactor Inspector from the NRC's Region I Office, will lead the inspection team. The inspection will be conducted in accordance with Inspection Procedure 71111.21M, "Design Bases Assurance Inspection (Team)," dated December 8, 2016 (ADAMS Accession No. ML16340B000).

The inspection will evaluate the capability of risk-significant/low-margin components to function as designed to support proper system operation. The inspection will also include a review of selected modifications, operating experience, and as applicable, operator actions.

During a telephone conversation on February 16, 2021, with Mr. Kenneth Greene, Calvert Cliffs Regulatory Assurance, we confirmed arrangements for the receipt of scoping documents for information gathering and remote review, and the two-week onsite inspection(\*\*), as follows:

- Information gathering and remote review: Weeks of March 22 through April 26, 2021
- Onsite weeks\*\*: Weeks of June 7 and June 21, 2021

\*\* Due to the current Covid PHE, some activities may be conducted remotely.

The purpose of the information-gathering and remote review is to identify risk-significant components, modifications, operator actions, and operating experience items. Information and documentation needed to support the inspection will also be identified. Frank Arner, a Region I Senior Risk Analyst, will support Paul Cataldo during the information-gathering visit and remote review, to evaluate probabilistic risk assessment data and identify components to be examined during the inspection.

Experience with previous baseline design/modification inspections of similar depth and length has shown this type of inspection is 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 two groups:

- The first group lists information necessary for our initial inspection scoping activities. After discussion with Mr. Greene, in recognition of the outage-related activities in March 2021, a majority of this information that should be easily and readily available for uploading to Sharefile, should be provided to the lead inspector by the week of March 22, 2021. Additionally, the remainder of the documents not uploaded due to outage conflicts should be available to the lead inspector by April 12, 2021. By the week of April 26, 2021, the lead inspector will communicate the initial selected set of components and modifications.
- The second group of documents requested is those items needed to support our in-office preparation activities. This set of documents, specific to the selected components and modifications, should be provided to the lead inspector no later than May 28, 2021. During the in-office preparation activities, the team may identify additional information needed to support the inspection, and those items will be communicated directly to Mr. Greene.

If there are any questions about the inspection or the material requested in the enclosure, please contact the lead inspector at 603-395-5536 or via e-mail at [pcc1@nrc.gov](mailto:pcc1@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 Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

X /RA/

---

Signed by: Melvin K. Gray  
Mel Gray, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos. 05000317 and 05000318  
License Nos. DPR-53 and DPR-69

Enclosure:  
Document Request for Design Bases  
Assurance Inspection

cc: Distribution via ListServ

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 –  
 INFORMATION REQUEST FOR A TRIENNIAL BASELINE DESIGN BASES  
 ASSURANCE INSPECTION (TEAM); INSPECTION REPORT  
 05000317/2021010 AND 05000318/2021010 DATED FEBRUARY 22, 2021

**DISTRIBUTION:**

DLew, RA (R1ORAMAIL Resource)  
 RLorson, DRA (R1ORAMAIL Resource)  
 DCollins, DRP (R1DRPMAIL Resource)  
 BPham, DRP (R1DRPMAIL Resource)  
 PKrohn, DRS (R1DRSMAIL Resource)  
 MFerdas, DRS (R1DRSMAIL Resource)  
 MYoung, DRP  
 LCline, DRP  
 KChambliss, DRP  
 DBeacon, DRP, SRI  
 SObadina, DRP, RI  
 CFragman, DRP, AA  
 MHaire, RI OEDO  
 RidsNrrPMCalvertCliffs Resource  
 RidsNrrDorlLpl1 Resource  
 ROPReports Resource

DOCUMENT NAME: G:\DRS\Engineering Branch 1\-- Cataldo\CC DBAI June 2021\DBAI Request for Information Letter Calvert Cliffs.docx  
 ADAMS ACCESSION NUMBER: ML21053A314

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRS	RI/DRS	RI/DRS		
NAME	PCataldo	FArner	MGray		
DATE	2/17/21	2/17/21	2/22/21		

OFFICIAL RECORD COPY

## DOCUMENT REQUEST FOR DESIGN BASES ASSURANCE INSPECTION

**Inspection Report:** 05000317/2021010 and 05000318/2021010

**Onsite Inspection Dates:** June 7 through June 11, 2021; and  
June 21 through June 25, 2021

**Inspection Procedure:** Inspection Procedure 71111.21M, Design Bases Assurance  
Inspection (Team)

**Lead Inspector:** Paul Cataldo, Senior Reactor Inspector  
603-395-5536  
[PCC1@nrc.gov](mailto:PCC1@nrc.gov)

### I. Information Requested for Selection of Components and Modifications

The following information is requested by March 22, 2021 (and April 12, 2021 for remaining documents not provided due to outage-related conflicts) to facilitate inspection preparation. Feel free to contact the lead inspector as soon as possible if you have any questions regarding this information request. Please provide the information electronically (Certrec/Sharefile) in "pdf" files, Excel, or other searchable formats. Also, we understand the prevailing use of Sharefile for inspection-related information for the Exelon fleet, therefore, the files should contain descriptive names, and indexed and hyperlinked to facilitate ease of use by the inspectors. Information in "lists" should contain enough information to be easily understood by someone who has knowledge of light water reactor technology.

1. The site probabilistic risk analysis (PRA) "System Notebook" and latest PRA Summary Document.
2. Risk ranking of top 250 basic events sorted by Risk Achievement Worth ( $\geq 1.3$ ). Include values for Risk Reduction Worth, Birnbaum Importance, and Fussell-Vesely (as applicable). Please provide in an excel spreadsheet or other sortable format, and to include an understandable definition of the coded, basic events.
3. Risk-ranking of top 100 components from site-specific PRA sorted by Large Early Release Frequency.
4. If you have an External Events or Fire PRA Model, provide the information requested in Items 1 and 2 for external events and fire. Provide narrative description of each coded event, including fire and flood zone descriptions.
5. List of time-critical and/or risk significant operator actions.
6. List of emergency and abnormal operating procedures.
7. If available, any pre-existing evaluation or list of components and associated calculations with low design margins (e.g., pumps closest to the design limit for flow or

Enclosure

## DOCUMENT REQUEST FOR DESIGN BASES ASSURANCE INSPECTION

pressure, diesel generator close to design required output, heat exchangers close to rated design heat removal).

8. If applicable, copy of any self-assessments and/or Quality Assurance assessments of low margin structures, systems and components (SSCs) completed since July 1, 2018.
9. List of available design margins in both the open and closed direction for valves in the motor-operated valve and air-operated valve programs (related to GL 96-05, looking for resultant output – matrix of risk vs margin for MOVs and AOVs, as applicable); the fleet or Calvert Cliffs-specific MOV Program procedure.
10. The age and capacity of the safety-related DC batteries.
11. The In-Service Testing (IST) Program Basis document identifying the in-scope valves and pumps, and the associated IST Program requirements for each component (e.g., IST valve table identifying category, active/passive function).
12. Access to IST trend data for the following pumps for both units: AFW pumps, HPSI pumps, LPSI/RHS pumps, and SW pumps. [Note: needed for each discrete component (e.g. for each RHR pump)]
13. Listing of MR (a)(1) systems, date entered into (a)(1) status, and brief description of why (a)(1); if not included as part of Item 15 below, please include the latest System Health report for those systems in (a)(1) status.
14. List of MRFFs evaluations completed since July 1, 2018 (include those determined not to be a MRFF).
15. A copy of the most recent System Health and/or trending reports for the following systems (as applicable): SR 4KV, SR 480 Vac, HPSI, LPSI/RHS, SW, SR 125 Vdc, and EDGs.
16. A copy of the most recent Program Health and/or trending reports for the following programs, as applicable: GL 89-10 (MOVs), GL 89-13, IST, AOVs, breakers, relays.
17. List of open operability evaluations, and the associated implementing procedure for degraded and non-conforming conditions/operability evaluations; List of formal operability evaluations performed for the last 4 years.
18. List of current “operator work arounds/burdens.”
19. List of “permanent plant modifications” to SSCs that are field work complete since July 1, 2018. 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 number of each document, title (sufficient to understand the purpose of the modification), revision/date, and the affected system. Please provide the design change procedure that governs the implementation of the listed and applicable methods.
20. List of calculation changes (including new calculations) that have been issued for use since July 1, 2018.

## **DOCUMENT REQUEST FOR DESIGN BASES ASSURANCE INSPECTION**

21. Corrective Action Program procedure.
22. Procedures addressing the following: modifications, design changes, set point changes, equivalency evaluations or suitability analyses, commercial grade dedications, and post-modification testing.
23. List of corrective action documents (open and closed) that address permanent plant modifications issues, concerns, or processes, for the past four years; MOV-related deficiencies, and any plant-level events that generated root or causal evaluations, and/or associated Licensee Event Reports in the last four years.
24. Any internal/external self-assessments and associated corrective action documents generated in preparation for this inspection.
25. Updated Final Safety Analysis Report, Technical Specifications, Technical Specifications Bases, and Technical Requirements Manual.
26. Electrical simple one-line drawings for 4KV, 480V, & 345KV (scalable for electronic viewing preferred).
27. Copy of Exelon's internal responses to any applicable NRC Information Notices, Generic Letters, or Regulatory Issue Summaries for the past four years.
28. A list of NRC Part 21 Reports, determined to be applicable to Calvert Cliffs, for the past 4 years.
29. DBDs (if applicable & available): SR 4KV, SR 480 Vac, HPSI, LPSI/RHS, SW, SR 125 Vdc, and EDGs.

### **II. Information Requested to Be Available by May 28, 2021**

This information should be separated for each selected component and modification, especially if provided electronically (e.g., a folder for each component and modification named after the component or modification that includes the information requested below). Items 1 through 11 are associated with the selected components and Item 12 is for the selected modifications.

1. List of corrective action documents associated with each selected component for the past four years.
2. Maintenance history (e.g., corrective, preventive, and elective) associated with each selected component for the last five years. Identify frequency of preventive maintenance activities.
3. Aging Management Program documents and/or License Renewal committed inspection results applicable to each selected component.
4. List of calculations associated with each selected component, excluding data files. Pipe stress calculations are excluded from this request.
5. System Health Report (last completed) and Design Basis Document associated with each selected component, as applicable.

## **DOCUMENT REQUEST FOR DESIGN BASES ASSURANCE INSPECTION**

6. Access to or copy of vendor manual(s) for each selected component.
7. List of open temporary modifications associated with each selected component, if applicable.
8. Trend data/graphs on the selected components' performance for the past three years (e.g., pump performance including IST, other vibration monitoring, oil sample results).
9. List of normal operating and alarm response procedures associated with each selected component.
10. Last completed tests and surveillances for each selected component performed for the past three years. For those tests and surveillances performed at a periodicity of greater than three years, provide the latest test performed.
11. Schedule of surveillance testing of selected components that occur during the onsite and offsite inspection weeks.
12. For each selected modification, copies of associated documents such as modification package, engineering changes, 50.59 screening or evaluation, relevant calculations, post-modification test packages, associated corrective action documents, design drawings, and new/revised preventive maintenance requirements.