



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

December 13, 2019

Mr. Bryan C. Hanson  
Senior VP, Exelon Generation Company, LLC  
President and CNO, Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

**SUBJECT: INFORMATION REQUEST TO SUPPORT UPCOMING PROBLEM  
IDENTIFICATION AND RESOLUTION (PI&R) INSPECTION AT BRAIDWOOD  
STATION, UNITS 1 AND 2**

Dear Mr. Hanson:

This letter is to request information to support our scheduled PI&R inspection beginning February 10, 2020, at Braidwood Station, Units 1 and 2. This inspection will be performed in accordance with the NRC baseline Inspection Procedure 71152.

Experience has shown that these inspections are extremely resource intensive both for the NRC inspectors and the utility staff. In order to minimize the impact that the inspection has on the site and to ensure a productive inspection, we have enclosed a list of documents required for the inspection.

The documents requested are copies of condition reports and lists of information necessary to ensure the inspection team is adequately prepared for the inspection. The information requested prior to the inspection may be provided in either CD-ROM/DVD (preferred) or hard copy format and should be ready for NRC review by January 17, 2020. Mr. Nirodh Shah, the Lead Inspector, will contact your staff to determine the best method of providing the requested information.

If there are any questions about the material requested, or the inspection in general, please contact Mr. Shah at 630-829-9821 or [Nirodh.shah@nrc.gov](mailto:Nirodh.shah@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, its enclosure, and your response (if any) 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,

***/RA Kenneth Riemer Acting for/***

Hironori Peterson, Chief  
Branch 3  
Division of Reactor Projects

Docket Nos. 50-456; 50-457  
License Nos. NPF-72; NPF-77

Enclosure:  
Requested Information to  
Support PI&R Inspection

cc: Distribution via LISTSERV®

Letter to Bryan Hanson from Hironori Peterson dated December 13, 2019.

SUBJECT: INFORMATION REQUEST TO SUPPORT UPCOMING PROBLEM IDENTIFICATION AND RESOLUTION (PI&R) INSPECTION AT BRAIDWOOD STATION, UNITS 1 AND 2

DISTRIBUTION:

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**Requested Information to Support  
Problem Identification and Resolution (PI&R) Inspection  
Inspection Report 05000456–05000457/2020010**

**Please provide the information on a compact disc (one for each of the four team members); external thumb drives can no longer be used on NRC computers. Please identify the folders on the compact disc using the number system, or subject heading, of each numbered request below. Unless otherwise specified, the time frame for requested information is for the period of June 1, 2018, through the time the data request is answered. For requested lists please provide the information, if possible, in a “sortable” Excel spreadsheet format. If lists are provided in a “sortable format” the sort preference in the following items is not required as long as all of the requested information is provided.**

**In addition, inspectors will require computer access to the corrective action program (CAP) database while on site and, if possible, internet service.**

**PROGRAM DOCUMENTS**

1. A current copy of administrative procedure(s) for the corrective action program (CAP), quality assurance (QA) audit program, self-assessment program, corrective action effectiveness review program, trending program, industry experience review program, maintenance rule program and top-level documents for the work control programs, work scheduling programs, and aging management program(s).
2. A current copy of the Employee Concerns Program (ECP)/Ombudsman administrative procedure(s).
3. Description of any substantive changes made to the corrective action program philosophy or operation since the last biennial PI&R Inspection in 2018. Please include with each listed substantive change the effective date of the change. Administrative and non-substantive changes do not need to be listed.

**CAP EFFECTIVENESS—PROBLEM IDENTIFICATION**

4. OPEN Condition Reports (CRs) – A list of all open CRs sorted by significance level. Include CR number, the date initiated, a brief description/title, system affected if any, significance level, and anticipated completion date, if available. This list should be grouped by responsible department and listed in order of initiation date (oldest listed first).
5. CORPORATE CRs – A list of CRs generated by the corporate office that involve or affect plant operation, sorted by significance level. Include the date initiated, a brief description/title, site(s) affected, system affected, significance/priority level, assigned organization, and status (if closed include date closed; if open, include scheduled date to be closed).
6. CR GENERATION – A data table (or similar format) showing the total number of CRs generated per year since 2016 sorted by department (i.e., operations, engineering, security etc.).
7. EXTERNAL CR NUMBERS – A data table showing the number of issues identified externally (NRC, INPO, other etc.) per year as compared to internally since 2016.

Enclosure

8. PLANT TRANSIENTS – A list of plant trips, unplanned down powers (greater than 20 percent), limiting condition for operation entries (not scheduled), and licensee event reports, including dates of these events.
9. CONTROL ROOM DEFICIENCIES – A list of current control room deficiencies and operator work-arounds, sorted by priority, with a brief description/title and corresponding CR and/or work order number.

#### CAP EFFECTIVENESS—PROBLEM PRIORITIZATION AND EVALUATION

10. ROOT CAUSES – A list of completed root cause evaluations with a brief description of the issue. Provide status of any actions developed as part of the evaluations. Include a reference, if not part of the root cause package, to the documents and/or CRs directing and tracking the actions.
11. APPARENT CAUSES – A list of completed apparent cause evaluations with a brief description of the issue. Provide status of any actions developed as part of the evaluations. Include a reference, if not part of the apparent cause package, to the documents and/or CRs directing and tracking the actions.
12. CLOSED CRs – A list of closed CRs sorted by significance level and then initiation date. Include CR number, a brief description/title, the significance level, the date initiated and closed, assigned organization, system affected, and whether there was an associated operability evaluation.
13. OPERABILITY EVALUATIONS – A list of operability evaluations. Include a brief description/title of the issue, date initiated, date closed, or date anticipated to be closed. Include any operability evaluations that are still open that were initiated prior to June 1, 2018.
14. MAINTENANCE RULE – A listing of cause analyses, corrective actions documents, and trend analyses for systems and components considered Maintenance Rule (a)(1). Provide copies of the applicable system health report sections and maintenance rule action plans for those systems starting 1 year earlier from when the system or component entered (a)(1) status. Include dates when system/components entered (a)(1) status and, if applicable, returned to (a)(2) status. For recurring reports, the most recent and middle-of-year and end-of-year reports are sufficient; monthly reports are not required.
15. IN SERVICE TESTING (IST) – A list of test failures (IST or Technical Specifications surveillances) with a brief description of component/system failed. Indicate if the failure was a maintenance preventable failure.
16. TEMPORARY MODIFICATIONS – A list of temporary modifications with a brief description of the modification, installation date, and date closed or anticipated closure date. Include any open temporary modifications that were installed prior to June 1, 2018.

#### CAP EFFECTIVENESS—CORRECTIVE ACTIONS

17. OPEN ACTIONS – A list of open corrective actions, sorted by significance/priority level, with a brief description/title, initiating date and due date. The list should include the number of due date extension and be grouped by the responsible department.
18. EFFECTIVENESS REVIEWS – A list of completed effectiveness reviews with a brief description of the results. Include a cross-reference to the CRs for which the effectiveness

review was conducted and, if applicable, CR numbers documenting any additional follow-up actions.

19. INADEQUATE ACTIONS – A list of CRs initiated for inadequate or ineffective corrective actions. Include the date initiated, a brief description/title, significance/priority level, system affected, assigned organization, and status (if closed, include date closed; if open, include scheduled date to be closed). Include a cross-reference to the CR or evaluation that generated the original corrective action.
20. REWORK – A list of rework items and repeat failures. Include cross-references to applicable Work Orders and CRs.
21. OPEN WORK ORDERS – A list of open work orders/equipment work requests with a brief description. Identify the work order as outage or non-outage, the date of initiation and scheduled or anticipated closure date, if available. If applicable, also provide the classification of the work orders with the recent industry classification scheme. Provide an explanation of the classification scheme and the procedure governing the classification. Work requests/work orders not associated with a degraded equipment condition (e.g., work orders for voluntary plant upgrades) do not have to be included in the list.

#### CAP ASSESSMENT – PROBLEM IDENTIFICATION

22. QA AUDITS – A copy of QA audits of the corrective action program.
23. PI&R ASSESSMENT – A copy of self-assessments and associated condition reports generated in preparation for this PI&R inspection.
24. CAP SELF-ASSESSMENTS – A copy of completed CAP self-assessments and the plan/schedule for future CAP self-assessments.
25. CAP PERFORMANCE INDICATORS – A copy of any performance reports or indicators used to track CAP effectiveness for the past 24 months. The most recent data and end-of-quarter data will suffice; monthly reports are not required.

#### CAP ASSESSMENT – CORRECTIVE ACTIONS

26. TREND REPORTS – Copies of any completed trend reports for CRs. Quarterly trend reports are acceptable; copies of all monthly reports are not required.
27. TREND CRs – A list of CRs initiated for trends of conditions adverse to quality. Include the date initiated, a brief description/title, significance/priority level, and status (if closed include date closed; if open, include scheduled date to be closed).
28. WORK ORDER TRENDS – A copy of any trend reports for work orders. The most recent trend reports and those that existed at the end-of-year and middle-of-year are acceptable; copies of monthly reports are not required. Include a copy of a recent (within 2 months of the data submittal) graph or document showing the status of work week planning of work activities.
29. Copies of all apparent, common and/or root cause evaluations initiated to address identified adverse human performance trends or safety culture adverse trends.

#### USE OF OPERATION EXPERIENCE (OP EX)

30. OP EX CRs: 1) A list of CRs initiated to evaluate NRC generic communications (e.g., bulletins, information notices, generic letters, etc.). 2) A list of CRs initiated to evaluate

industry generic communications (industry operating experience, fleet operating experience, etc). For both lists, include the date the CR was initiated, a brief description/title, and the status (if closed, include date closed; if open, include scheduled date to be closed).

#### SELF-ASSESSMENT AND AUDITS

31. NON CAP QA AUDITS – A list of all other QA audits completed with a brief description of areas where findings were identified.
32. QA AUDIT SCHEDULE – The schedule of future QA audits.
33. NON CAP SELF-ASSESSMENTS – A chronological list of department and site self-assessments completed (include date completed).
34. SELF-ASSESSMENT CAPS – A list of CRs written for findings or concerns identified in self-assessments and audits. Include a short description/title of the finding, its status, and include a cross-reference to the audit or self-assessment number.

#### SAFETY CONSCIOUS WORK ENVIRONMENT

35. SAFETY CONSCIOUS WORK ENVIRONMENT ASSESSMENTS – Copy of the results of safety culture and/or SCWE surveys or self-assessments. Include any organizational effectiveness surveys conducted by internal or external organizations. Include a listing of any action(s) resulting from the survey(s) and the status of the action(s).
36. ECP ISSUES – SCWE issues identified through alternate avenues, such as the employee concerns programs. If issue(s) are considered sensitive, in lieu of describing issue in the data package, provide a paper copy to the lead inspector at the start of the inspection.

#### REGULATORY ISSUES - REVIEWED FOR ALL ASPECTS OF THE CAP PROGRAM

37. NRC FINDING CAPS – A list of CRs for issues (findings, violations, etc.) documented in NRC inspection reports. Include the CR number, brief description/title, date initiated and the status (if closed include date closed; if open, include scheduled date to be closed).
38. LICENSEE IDENTIFIED VIOLATION CAPS – A list of CRs for licensee identified violations that have been documented in NRC inspection reports. Include the CR number, brief description/title, date initiated and the status (if closed, include date closed; if open, include scheduled date to be closed).
39. NRC ISSUES CAPS – A list of CRs associated with NRC-identified issues. Include the CR number, brief description/title, date initiated and the status (if closed, include date closed; if open, include scheduled date to be closed).

5-YEAR REVIEW – Please provide the following that describe, refer to, include or evaluate issues associated with the Unit 1 and 2 Essential 125V DC systems. The time frame should include all issues identified since June 1, 2015.

40. CONDITION REPORTS – A list of CRs, include the CR number, brief description/title, level of evaluation (i.e., root cause, apparent cause, common cause etc.), date initiated, and the status (if closed, include date closed; if open, include scheduled date to be closed).
41. OPERATING EXPERIENCE – A list of evaluations conducted on internal and external industry operating experience.
42. ASSESSMENTS – Copies of assessments or Quality Assurance (NOS) reviews.

43. PROCEDURES – A list of procedures that control evaluation and disposition.

Documents requested to be available on-site during the inspection in either paper or electronic, with search capability, (preferred) format:

- a. Updated Final Safety Analysis Report.
- b. Technical Specifications.
- c. Procedures and procedure index.
- d. Copies of any self-assessments and associated IRs/CRs generated in preparation for this inspection.
- e. A copy of the QA manual.
- f. A list of issues brought to the ECP/ombudsman and the actions taken for resolution.
- g. A list of the codes used in the CAP and Work Orders system(s).
- h. A copy of the most recent monthly performance indicator document and the system health report or the equivalent documents and a copy of the equivalent documents from the end of 2018.
- i. A copy of the latest independent/offsite organization review of safety culture/safety conscious work environment and organizational effectiveness and internal equivalent assessments if not provided as part of the requested data package.
- j. A copy of the maintenance rule scoping document containing licensee-established system and/or component performance goals and criteria for moving an item into maintenance rule (a)(1) status.

Other:

On the first day of the inspection, or early on the second day, please provide the inspection team a briefing of your CAP including an overview of your actions, if any, associated with recent industry efforts to improve the efficiency of the CAP (e.g. cumulative effects initiative). Include your expectations for personnel using the program and how the work order system fits into the overall scheme for addressing identified issues. Also, please demonstrate how to use a computer to access CAP data.

The lead inspector will also request to talk to/interview plant personnel to seek information about the plant's SCWE. The lead inspector will discuss with your staff the protocol and format of the interviews, whether impromptu or scheduled individuals or groups. For this the inspector will need access to organizations charts showing position titles and names.