



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

May 2, 2018

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

**SUBJECT: INFORMATION REQUEST TO SUPPORT UPCOMING PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION AT BRAIDWOOD NUCLEAR
POWER STATION, UNITS 1 AND 2**

Dear Mr. Hanson:

This letter is to request information to support our scheduled Problem Identification and Resolution (PI&R) inspection beginning July 16, 2018, at Braidwood Nuclear Power Station, Units 1 and 2. This inspection will be performed in accordance with the U.S. Nuclear Regulatory Commission (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 action requests/condition reports (AR/CRs) 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 electronic format by either a CD, DVD, or a website and should be provided for NRC review by June 28, 2018. Mr. John Rutkowski, of our office, 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. Rutkowski at 630-829-9730 or john.rutkowski@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,

/RA/

Eric Duncan, 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 C. Hanson from Eric Duncan date May 2, 2018

SUBJECT: INFORMATION REQUEST TO SUPPORT UPCOMING PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION AT BRAIDWOOD NUCLEAR
POWER STATION, UNITS 1 AND 2

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**REQUESTED INFORMATION TO SUPPORT
PROBLEM IDENTIFICATION AND RESOLUTION (PI&R) INSPECTION
INSPECTION REPORT 05000456–05000457/2018010**

Please provide the information, if not provided via an accessible website, on a disc (one for the team lead, one for the Resident Inspector Office, and one for each of the two other scheduled inspectors), if possible. Unless otherwise specified, the time frame for requested information is for the period of July 1, 2016, 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 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). Include a copy of the current top-level QA program/QA topical report document.
2. A current copy of the Employee Concerns Program/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 July 2016. Please include with each listed substantive change the effective date of the change. Administrative and non-substantive changes do not need to be listed.

ASSESSMENTS

4. A copy of Quality Assurance (QA) audits of the CAP and self-assessment process and, if done, audits of the QA program.
5. A list of all other QA audits completed with a brief description of areas audited. Indicate where findings requiring corrective action were identified.
6. A copy of completed assessments of the CAP program, the QA program, and the self-assessment program.
7. A copy of your schedule for future assessments, out to no more than two years. Include the plan/schedule for future self-assessments of the CAP, QA program, and assessment process.
8. A list of all other self-assessments completed with a brief description. Indicate which assessments resulted in AR/CRs for adverse findings. Please include, if appropriate, the AR/CR number for the assessments.

Enclosure

CORRECTIVE ACTION DOCUMENTS

9. A copy of completed root cause evaluations completed with a brief description of the issue and open date and date of latest status. Provide status (i.e. open, closed, deferred, etc.), if not part of the root cause package, of any actions developed as part of the evaluations and a reference to the documents and/or ARs/CRs directing and tracking the actions.
10. A list of completed apparent/common cause evaluations completed with a brief description of the issue and open date and date of latest status. Provide status of any actions developed (i.e. open, closed, deferred, etc.), if not part of the apparent/common cause package, and a reference, to the documents and/or AR/CRs directing and tracking the actions. Please identify if the cause evaluations were common or, as appropriate, apparent full/detailed/in-depth or limited-scope evaluations.
11. A list of all open AR/CRs sorted by significance level and then initiation date. Include each report's identification number, the date initiated, a brief description/title of the issue, system affected if any, significance level, priority level, assigned organization, and anticipated completion date, if available. Indicate if the CR was associated with a refueling outage activity. Include in the list any AR/CRs still open and that were initiated prior to July 1, 2016.
12. A list of AR/CRs closed since May 1, 2018, sorted by significance level and then initiation date. Include each document's identification number, a brief description/title, the significance level, the priority level, the date initiated and closed, assigned organization, cause codes assigned, and whether there was an associated operability evaluation. Indicate if the CR was associated with a refueling outage activity.
13. A list of AR/CRs generated by the corporate office that involve or affect Braidwood's operation, sorted by significance level. Include the date initiated, a brief description/title of the issue, other site(s) affected, system affected, significance level, status, assigned organization, and closure date or anticipated completion date, if available.
14. A list of completed effectiveness reviews of AR/CR-developed remedial and corrective actions. Include a descriptive title for the review(s). Include a cross-reference to the AR/CR or AR/CRs for which the effectiveness review was conducted and, if applicable, AR/CR numbers documenting any additional follow-up actions.
15. A list of AR/CRs initiated for identified inadequate or ineffective corrective or remedial actions. Include the date initiated, a brief description, status (i.e. open, closed, deferred, etc.), significance level of the issue, system affected, assigned organization, priority level to correct, completion/closure date or, if applicable, anticipated completion date, if available. Include a cross-reference to the AR/CR, AR/CRs, or evaluation that generated the original corrective action.
16. A copy of any performance reports or indicators used to track the corrective action program effectiveness since 2016. The most recent data and 2016 and 2017 end-of-year data will suffice; monthly or quarterly reports are not required.

TRENDS

17. A list of initiated ARs/CRs that identify trends of conditions adverse to quality. Include the date initiated, a brief description, significance level, priority level for each item, and date closed or anticipated closure date.
18. Copies of any completed trend reports that are associated with overall CAP performance and/or effectiveness. If done on a periodic basis, provide the most recent report and end of year 2016 and 2017 reports.

OPERATING EXPERIENCE

19. A copy of the most recent operating experience program effectiveness review and/or assessment and/or QA audit.
20. A list of operating experience documents reviewed (after initial preliminary screening) and any associated AR/CRs. Please provide identification of the originating organization, the initiating organization's document/reference number, your identification number if different than the originators, a brief description/title of the issue, and status of the review and any developed follow-up actions. Indicate the initiation date and the closure date or the anticipated closure date if available.

SYSTEMS AND COMPONENTS

21. A list of the top ten risk significant systems and top ten risk significant components.
22. A list of operability determinations/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 and that were initiated prior to July 1, 2016.
23. A listing of systems and components considered Maintenance Rule (a)(1) at any time since July 1, 2016. Provide copies of the applicable maintenance rule action plans for those systems and the status of those action plans. Include dates when system/components entered (a)(1) status and, if applicable, returned to (a)(2) status.
24. 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. Include any failures of test equipment calibrations that necessitated a review of past surveillances and/or tests. Include in the listing the AR/CR number(s) applicable to the failures.
25. 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 July 1, 2016. Temporary modifications specific to a refueling outage and presently closed are not needed in the listing.
26. A list of rework items and repeat failures. Include cross-references to applicable Work Orders and AR/CRs.
27. A list of plant trips, unplanned downpowers (greater than 20 percent), unplanned LCO entries (not scheduled), and any associated LERs, including dates of these events.
28. 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. 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 or regularly scheduled surveillances and preventive maintenance) do not have to be included in the list.

29. A copy of any trend reports for work orders including status of preventive maintenance scheduling and deferrals. Provide the most recent trend reports and those that existed at the end-of-year 2016 and 2017; copies of monthly reports are not required. Include a copy of a recent (within two months of the data submittal) graph or document showing the status of work week planning of work activities.
30. A list of open procedure change requests showing initiation date, title of change or procedure title (whichever is more relevant), status, responsible department, procedure number, priority assigned, and your identification number. Please provide an explanation of your priority system for procedures and from that priority, if applicable, when the request might be completed.
31. A list of procedure change requests that were completed, canceled, or otherwise dispositioned since May 1, 2018. Please indicate the action taken on those requests. Please include title, tracking number, and the date initiated and the date closed or otherwise dispositioned.

SCWE

32. Copy of the results of safety culture and/or safety conscious work environment (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).
33. SCWE issues identified through alternate avenues, such as the employee concerns programs. If issue(s) are considered sensitive, in lieu of describing the issue in the data package, provide a paper copy to the lead inspector at the start of the inspection.

REGULATORY ISSUES

34. Copies of all apparent, common and/or root cause evaluations or other evaluations initiated to address identified adverse human performance trends or safety culture adverse trends.
35. Copies of ARs/CRs, investigations (CAPE/ACE or RCE or other), and corrective actions taken for issues identified in NRC findings documented in and since the first quarter of 2016. Identify the status of the corrective actions and any effectiveness reviews completed or scheduled not provided in the documents provided. Include a copy of any effectiveness reviews that were performed. Include a cross-reference to the NRC identification number (report number and item number).

ADMIN

36. A copy of the latest Braidwood organizational chart (showing names and including hourly personnel) and a phone listing.

37. A list of the dates, times, and location for all scheduled meetings associated with the implementation of the CAP. Include any work order screening meetings. Please also provide the time and location of work group morning briefing meetings.

5-YEAR REVIEW

NOTE: Requests in Items 38 through 41 refer to items and reports associated with the 4kV and 480 volt essential power and the Emergency Diesel Generators.

38. An Excel or equivalent sortable list of AR/CRs associated with the above listed item(s) going back to July 1, 2013. Please indicate in the list the status of the AR/CR (e.g. open, closed, working, etc.), initiation date, closure date, number of developed corrective actions and indication if any remain open, the classification/priority, and a descriptive title of the AR/CR.
39. A copy of site performance indicators (PIs), if any, associated with the above listed item(s) going back to 2013. Only provide a copy of any recurring PIs for end of year documents for 2017, 2016, etc. Also include a copy of the latest PI data.
40. A copy of the System Health Report sections, or equivalent documents, for the above listed systems, as they were presented in the fourth quarter reports/end-of-year of each year starting in 2013 until the current date. Provide a copy of the most recent report.
41. A copy of any Maintenance (a)(1) action plans with completion status for the above listed items, that were developed since July 1, 2013.

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 ARs/CRs generated in preparation for this (if not already provided as part of the data package).
- e. A copy of the QA Manual/QA Topical Report (if not already provided as part of the data package).
- 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 2017.
- 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/nuclear promise initiative(s)/CAP2). Include your expectations for personnel using the CAP 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 approximately 20 to 40 personnel, either in groups of 4 to 8 individuals or by walking around, to seek information about the plant's SCWE. The lead inspector will randomly choose, from your furnished organization charts, people he would like to interview in groups and provide those names and groupings to you and ask you to set up times and locations. For this, the inspector will need access to organization charts showing position titles and names. The inspector will provide his selections at least one day prior to a suggested interview date. Each interview session will last about 40 to 70 minutes. The inspector will ask you to schedule the interview sessions at least 90 minutes apart.

The inspector will ask you to refrain from debriefing personnel after the interviews; your briefing of personnel prior to the sessions is acceptable, but not required. Also, other team members may be talking to personnel about your staff's perception of the site's SCWE and CAP effectiveness.