

From: [George, Gerond](#)
To: [Eitel, Lee E](#); [Pohlman, Randall A](#)
Cc: [Lange, Sara M](#); [Wink, Roger C](#); [Gardner, Susan](#); [Yeminy, Matityahu](#); [Makor, Shiattin](#)
Subject: Fourth Information Request Callaway DBA inspection
Date: Thursday, February 27, 2020 11:15:00 AM

Fourth Request for Information
Design Bases Assurance Inspection (Teams)
Callaway Plant
Inspection Report: 05000483/2020011

Please track each request separately, by inspector and component, in your tracking database. If you have any questions, please contact Gerond George at 8172001562 or Gerond.George@nrc.gov

Requests for Information

[Maty Yeminy](#)

MP 17-006, ESW Water Hammer Mitigation Modification

1. RELAP5 simulations that demonstrates TEF05B and TEF05D, each with a volume of 5 cubic feet, discharge an adequate air mass to supply each B train cooler, SGN01B and SGN01D.
2. The specification and other procurement documents used to procure the accumulators for modification MP 17-006, ESW Water Hammer Mitigation.
3. The last test result (completed procedure) and testing frequency of the check valve which is used in the injection line to the ESW piping to prevent back-flow of ESW into the accumulator.
4. Provide the analysis demonstrating that 2.5 gallons of air at 5 psig is sufficient for dampening the water hammer such that the forces associated with it are acceptable. If it is the RELAP5 analysis, that was previously requested, please state so and provide the page number(s).
5. Please provide the isometric drawings of the ESW system and specify the location of the accumulator(s).

[Susan Gardner](#)

NB02, 4.16kV Bus NB02

1. Specification E-092
2. Provide CR for the MRFF on 1E 4160V system, NB, that occurred in last 18 months per system health report
3. CR 201206963
4. Design change package that replaced the Magne-Blast breakers in the NB02 bus and PMTs
5. Circuit breaker health report for 4160V
6. CARS 201400839

[Shiattin Makor](#)

20190019, Part 21 Ametek Solid State Controls

1. Any associated corrective action documents (with attachments)
2. Any associated changes (i.e., modifications, calculations, etc.)

NG02, 480V Bus NG02

1. Provide short circuit, coordination studies, load flow calcs, open phase fault, protective device coordination, ac/dc arc flash analysis, optimal power flow analysis calcs
2. Provide vendor docs, any components/subcomponents past recommended life
3. PM and ST procedures and request for last 3 years in addition to mte schedule
4. Any condition reports in last 3 years relating to selected components
5. Provide last modification or replacement made to components
6. Provide service life of components and subcomponents
7. Provide aging management review/evaluation

480 V MCC NG03C/NG06E

1. Provide short circuit, coordination studies, load flow calcs, open phase fault, protective device coordination, ac/dc arc flash analysis, optimal power flow analysis calcs
2. Provide vendor docs, any components/subcomponents past recommended life
3. PM and ST procedures and request for last 3 years in addition to mte schedule
4. Any condition reports in last 3 years relating to selected components
5. Provide last modification or replacement made to components
6. Provide service life of components and subcomponents
7. Provide aging management review/evaluation

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From: [George, Gerond](#)
To: [Eitel, Lee E](#); [Pohlman, Randall A](#)
Cc: [Lange, Sara M](#); [Wink, Roger C](#); [Gardner, Susan](#); [Yeminy, Matityahu](#); [Braisted, Jonathan](#)
Subject: Revised Third Information Request Callaway DBA inspection
Date: Wednesday, February 26, 2020 10:51:00 AM

**Third Request for Information
Design Bases Assurance Inspection (Teams)
Callaway Plant
Inspection Report: 05000483/2020011**

Please track each request separately, by inspector and component, in your tracking database. If you have any questions, please contact Gerond George at 8172001562 or Gerond.George@nrc.gov

Requests for Information

Maty Yeminy

Diesel Generator Supply Fan, CGM01A

1. Provide testing of air flow rate performed for the EDG supply fan. Please include the most recent test as well as pre-op testing.

MP 17-006, ESW Water Hammer Mitigation Modification

1. What pressure, and what is the volume of the air tank(s) designed to inject air into the ESW system upon loss of pressure or loss of offsite power?
2. How many such air tanks are there?
3. What other systems will the air tank(s) inject air into?

Susan Gardner

MP 16-0027, Approval of Remanufactured ESFAS and LSELS Circuit Boards

1. Please provide WOs and results from the performance of the last SRs:
 - 3.8.1.11
 - 3.8.1.12
 - 3.8.1.16
 - 3.8.1.17
 - 3.8.1.18
 - 3.8.1.19
 - 3.8.1.21
2. Provide the basis for definition of Mild Environment Area in MP 16-0027, page 24 of 47. That is, temperature <110F. Does the Specification E-092 meet this requirement? Does the maximum 104F specified by the vendor meet requirements for anticipated abnormal conditions?
3. PO 690891
4. DRS-CCI report ER16-0390/01, "Alternate Parts Equivalency Evaluation", released as CEC drawing J-104-00593. Include any component manufacturer's data sheets on the replacement components.
5. Are the new components more vulnerable to EMI?
6. Did changes introduce any firmware, such as what may reside in a PROM?

Jonathan Braisted

MD AFW Pump

1. IST Program plan, bases document, etc.
2. Results from most recent testing / surveillances (all types) and procedures
3. Vendor manual(s) for pump and motor
4. List of applicable P&IDs
5. List of preventive maintenance tasks (with titles, frequency) for pump and motor
6. List of corrective action program documents (with titles/descriptions) for both MD AFW pumps and motors (past 5 years)
7. List of relevant MD AFW pump and motor calculations
8. Applicable design bases document for AFW

SI Accumulator Check Valves EP8818 A, B, C, D

1. List of applicable P&IDs
2. IST program plan, bases document, etc.
3. If applicable, check valve (condition) monitoring program procedure
4. Vendor manual(s) for valves
5. Copies of most recent tests (all types), surveillances, and procedure(s)
6. Applicable design bases document for SI accumulators and/or check valves
7. List of preventive maintenance tasks (with titles, frequency) for each valve
8. List of corrective action program documents (with titles/descriptions) for these check valves (past 5 years)

MP-05-3025, Maximum Allowed Temperature of CST and AFW System

1. Any associated 50.59 documentation (i.e., screening, evaluation, etc.)

201801880, OE received from CPSES related to CCW system cross tie valves See Extended Description

1. Any associated corrective action documents (with attachments)
2. Any associated changes (i.e., modifications, calculations, etc.)

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From: [George, Gerond](#)
To: ["Eitel, Lee E"; "Pohlman, Randall A"](#)
Cc: ["Lange, Sara M"; "Wink, Roger C"; Gardner, Susan; Yeminy, Matityahu; Braisted, Jonathan](#)
Subject: Third Information Request Callaway DBA Inspection
Date: Wednesday, February 26, 2020 9:49:00 AM

**Third Request for Information
Design Bases Assurance Inspection (Teams)
Callaway Plant
Inspection Report: 05000483/2020011**

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Requests for Information

[Maty Yeminy](#)

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[Susan Gardner](#)

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[Jonathan Braisted](#)

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7. List of relevant MD AFW pump and motor calculations
8. Applicable design bases document for AFW

SI Accumulator Check Valves EP8818 A, B, C, D

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To: [Eitel, Lee E](#)
Cc: [Pohlman, Randall A](#); [Lange, Sara M](#); [Wink, Roger C](#); [Gardner, Susan](#); [Yeminy, Matityahu](#)
Subject: Second Information Request Callaway DBA inspection
Date: Tuesday, February 25, 2020 9:58:00 AM

**Second Request for Information
Design Bases Assurance Inspection (Teams)
Callaway Plant
Inspection Report: 05000483/2020011**

Please track each request separately, by inspector and component, in your tracking database. If you have any questions, please contact Gerond George at 8172001562 or Gerond.George@nrc.gov

Requests for Information

[Gerond George](#)

1. Full version of ZZ-278, Callaway Human Reliability Analysis, Rev. 4

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[Maty Yeminy](#)

Diesel Generator Supply Fan, CGM01A

1. Please schedule an interview to discuss the EDG ventilation system for 10:30 AM. I request that the plant HVAC Engineer and the EDG System Engineer be present.
2. Please schedule and interview to discuss the ESW Water Hammer Mitigation Modification. I request that the Project Engineer (if still on site) attend the interview, as well as a Mechanical Design Engineer familiar with the modification. The interview should be followed with a walk down of the modification. Please schedule the interview to start after lunch on Monday.
3. The calculation determining the worst case (maximum) heat load in the EDG room.
4. The limiting high temperature in the EDG room and the safety related component whose temperature limit is the lowest.
5. The drawing depicting the ventilation system for the EDG room.
6. The EDG HVAC fan(s) drawing(s).
7. The EDG HVAC fan vendor's installation, operation, and maintenance manual for the fan(s).
8. The maximum design ambient temperature for Callaway.
9. The EDG room HVAC heat removal calculation.
10. Any room temperature measurements while the EDG was fully loaded (including outside temperature measurements during the same time).

[Susan Gardner](#)

MP 16-0027, Approval of Remanufactured ESFAS and LSELS Circuit Boards

1. PO's 690927 and 69059 and any specifications and test procedures required by PO
2. Is DRS-CCI an Appendix B supplier?
3. Procedure, "Standard Design Process" and its predecessor, Engineering

Design Guide, ZZ-006.

4. Copy of plant mock-up tests and receipt test procedures.
5. Are any of the new CB currently installed in plant? Did they all receive the receipt tests and the 90-day burn-in before installation?
6. Clark seismic testing report, ER/1079, rev. B
7. Specification and testing provided with original (obsolete) circuit boards to help determine similarities (or any dissimilarities) to new boards.
8. Post Maintenance testing issues, CR 201705931
9. CRs 201700941, 201703342, 20170250, and 201703699

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