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U.S. Nuclear Regulatory Commission  
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Gentlemen:

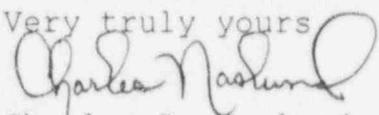
ULRNC-3602

**Callaway Plant**  
**Docket Number 50-483**  
**Callaway Nuclear Plant Inservice Testing Program Update**

This letter transmits Revision 18 of the Callaway Nuclear Plant Inservice Testing (IST) Program. IST Program updates have been made via Revisions 15a, 16, and 17 which are included in Revision 18. In accordance with the guidance provided in NUREG 1482 "Guidelines for Inservice Testing at Nuclear Power Plants," this revision is being provided to reflect major changes to the IST Program. Attachment 1 is a brief description of the changes, and Attachment 2 contains a copy of Revision 18 of the IST Program.

If you have any questions concerning this submittal, please contact us.

Very truly yours

  
Charles D. Naslund

Attachments

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Revision 15a Summary of Changes to the IST Program

Engineering evaluations have been performed for these changes and no Unreviewed Safety Question exists as a result of this revision. The following table explains all changes by component.

<b>Components Affected</b>	<b>Description of Change</b>	<b>Justification for change</b>
ENHV0001, ENHV0006, ENHV0007, ENHV0012, ENV0002, ENV0003, ENV0004, ENV0008, ENV0009, and ENV0010	Components were changed from "passive" to "active".	An engineering evaluation determined that several containment spray valves have an active safety function in the closed direction. These components were already receiving the code required testing for active components and therefore only needed to be administratively changed in the Inservice Test Program component list to be active.

Revision 16 Summary of Changes to the IST Program

Engineering evaluations have been performed for these changes and no Unreviewed Safety Question exists as a result of this revision. The following table explains all changes by component.

<b>Components Affected</b>	<b>Description of Change</b>	<b>Justification for change</b>
PAL01A, PAL01B, and PAL02	Changed the test frequency of the AFW pumps from monthly to quarterly. Reference OL Amendment 108.	A recent change to the Technical Specifications revised the periodicity from 31 days to 92 days on a staggered test basis. Changing the frequency is in accordance with Technical Specifications and ASME/ANSI OMA-1988 Part 6, Section 5.1
PEF01B, ABPV0002, ABPV0003, ABHV0011, ABHV0012, BB8948C, BB8010A, BB8010B, BB8010C, BBHV8157B, BBV0474, BBV0476, BBV0479, BBV0480, BBV8001B, BBV8002B, BGV0605, ECV0083, ECV0084, EGHV0054, EJHV0025, EMHV8923A, EPHV8950A, EPHV8950D, GSHV0004, HBHV7150, SJHV0018, SJHV0019, and SJHV0005	Changed the drawing coordinates.	This is a clarification to more accurately reflect the drawing coordinates. There are no changes to the testing of the components. This change is administrative.
n/a	Added a "SV" code for Solenoid Valves to "VLV Type" in Section 2.1.	"SV" was being used for solenoid valve in Revision 15 and needed to be defined. This is an administrative change that does not affect valve testing.
ABHV0011, ABHV0014, ABHV0017, ABHV0020, AEFV0039, AEFV0040, AEFV0041, and AEFV0042	Corrected the Actuator Type from AO (Air Operated) to HO (Hydraulic Operated).	The actuator type was incorrectly identified. This is an administrative change that does not affect valve testing.
ALHV0005, ALHV0006, ALHV0007, ALHV0008, ALHV0009, ALHV0010, ALHV0011, and ALHV0012	Changed the safety position from "C/O" to "O/C".	This is a change to make this column consistent with the rest of the IST program. This is an administrative change that does not affect valve testing.
ALHV0036, BB8378A, BB8379B, BGHV8112, BNHV8813, EFHV0023, EFHV0024, EFHV0025, EFHV0026, EFHV0060, EGHV0060, EJ8969B, EJFCV0611, EJHV8804B, EJHV8811B, EM8815, EMHV8801A, EMHV8801B, EMHV8803A, EMHV8803B, EMHV8923A, and EMHV8843	Revised the description to components to match the description in the Master Equipment List.	This is a change to make the description consistent with the rest of the IST program. This is an administrative change that does not affect valve testing.

Components Affected	Description of Change	Justification for change
BBV0118, BBV0148, BBV0178, BBV0208, BBV0122, BBV0152, BBV0182, BBV0212, ECV0095, ECV0096, EMHV8923A, and EMHV8923B	The listed valve size was changed in accordance with plant drawings.	The listed valve size was incorrect. This is an administrative change that does not affect valve testing.
BGLCV0459 and BGLCV0460	Added valves to the IST Program and added a "COLD SHUTDOWN JUSTIFICATION" "BG-09".	A recent evaluation determined that these valves have an active safety function to close. Adding these valves to the IST Program is a conservative change as it increases testing.
BGV0605 and BGV0606	Corrected the description to change "UPSTEAM" to "UPSTREAM".	This is a correction to a typographical error. This is an administrative change that does not affect valve testing.
BGV0645	Added to the IST Program.	The IST program did not indicate that the valve was being tested. However, OSP-BG-V001C tests this valve on a quarterly frequency (ST-04054) for closure. This is an administrative change that does not affect valve testing.
BLHV8047	Changed "SO" to "AO" in the "ACT." column.	The actuator type was incorrectly identified. This is an administrative change that does not affect valve testing.
BMHV0019, BMHV0020, BMHV0021, and BMHV0022	Added "FT/Q" to the "TEST PERF/FREQ." column.	The IST program did not indicate that the valve was being tested to fail closed. However, this testing was being performed on a quarterly basis in accordance with OSP-BM-V0001(ST-00061). This is an administrative change that does not affect valve testing.
ECHV0011 and ECHV0012	Changed the "VLV TYPE" column from "BT" to "BF".	The valve type was incorrectly identified. This is a correction to a typographical error that does not affect valve testing.
EGHV0072, EGHV0073, EGHV0074, EGHV0075, and FCHV0312	Corrected an error in the "VLV TYPE" column from "GT" to "GB".	The valve type was incorrectly identified. This is a correction to a typographical error that does not affect valve testing.
EJHV0023, EJHV0024, EJHV0025, and EJHV0026	Changed the valve function to "PASSIVE". The following changes to Tests Performed and frequency were made: Deleted "FS/Q" and added "LJ/RF" for components EJHV0023 and EJHV0025, and added "PI/RF" to EJHV0024 and EJHV0026. Changed Valve Type from "GB" to "GT" for EJHV0023, EJHV0024 and EJHV0025. (Note: Tests Perf/Freq was subsequently revised again in Revision 17.)	The safety classification, test performed, frequency and valve type for these valves were incorrect. This is an administrative change that does not affect valve testing.
EJHV8701A	A "/" was placed between "LT RF" located in the "TESTS PERF/FREQ" column.	This is a correction to a typographical error. This is an administrative change that does not affect valve testing.

Components Affected	Description of Change	Justification for change
EMHV8801A	Changed the valve category from "A,C" to "B".	The valve Category was incorrectly identified. The correct category is "B". This is an administrative change that does not affect valve testing. Correct testing was performed.
GTHZ0004, GTHZ0005, GTHZ0006, GTHZ0007, GTHZ0008, GTHZ0009, GTHZ0010, GTHZ0011, and GTHZ0012	Corrected the Actuator Type from "SO" (Solenoid Operated) to "AO" (Air Operated).	The Actuator Type was incorrectly identified. This is an administrative change that does not affect valve testing.
GTHZ0006, GTHZ0007, GTHZ0008, and GTHZ0009	Changed the "Active or Passive" field and added Note 1.	The fields were simplified to make them easier to understand. This is an administrative change that does not affect valve testing.
JEV0086	Changed "SFTY POS" from "0" (zero) to "O".	This was a typographical error. The capital letter 'O' is the correct entry for this field. This is a correction that does not affect valve testing.
KBV0001 and KBV0002	Added to the IST Program.	These are passive containment isolation valves and have been tested by procedure OSP-KB-LL098. This change is administrative and does not affect valve testing.
KCHV0253	Added "PI/RF" to the "TESTS PERF/FREQ." column. (Note: Tests Perf/Freq was subsequently revised again in Revision 17.)	The Tests Performed list was incomplete. The Leak Test and Position Indication Test are being performed on a refueling frequency by procedure OSP-KC-LL067. This is an administrative change that does not affect valve testing.
LFHV0105, LFHV0106, and LFFV0095	Changed "GA" to "GT" in the "VLV TYPE" column.	These were typographical errors. This is an administrative change that does not affect valve testing.
LFFV0096, SJHV0005, SJHV0006, SJHV0127, SJHV0128, SJHV0129, SJHV0130, SJHV0131, and SJHV0132	Changed "GL" to "GB" in the "VLV TYPE" column.	These were typographical errors. This is an administrative change that does not affect valve testing.
n/a	Revised the labeling format of Relief Requests/Cold Shutdown Justifications/Refueling Justifications to make them administratively consistent.	This is only a clarification to make the IST Program document more consistent. This is an administrative change that does not affect valve testing.

Revision 17 Summary of Changes to the IST Program

Engineering evaluations have been performed for these changes and no Unreviewed Safety Question exists as a result of this revision. The following table explains all changes by component.

Components Affected	Description of Change	Justification for change
n/a	Section 2.1, page 2, the codes "2" (for 2 years) and "J" (for Appendix J frequencies) were added for frequency.	These codes are more consistent by indicating the required test frequency rather than indicating the actual test frequency. This is an administrative clarification.
n/a	Section 2.2, Column "TESTS PERF/FREQ.", changed all Position Indications to "PI/2" and changed all Appendix J leak rate valve tests to "LJ/J".	This was modified to support the changes above. This is an administrative change to be consistent with allowed Code specified frequencies.
BBV0118, BBV0148, BBV0178 and BBV0208	Valves were changed from an "Active" closed Safety Position to a "Passive" open Safety Position and removed the "FS/RF" test requirement.	An engineering evaluation determined that these valves have a passive open safety function.
BGV0135, KAV0039, KAV0648, KAV0649, KAV0650, KAV0651, and KCV0478	Added "C" for the "VLV CAT."	Even though these valves are passive, the passive check valves will be identified as category 'C'. This is an administrative change. This has no impact to the testing of the valves.
n/a	Revised the "CATEGORY" section of Refuel Justification BB-04, Refuel Justification EM-03, and Cold Shutdown Justification BG-06 to reflect the Valve Category in the corresponding table.	This is an administrative change. This has no impact on the testing of the valves.
EGLV0001 and EGLV0002	Added to the IST program.	An engineering evaluation determined that these valves have a passive safety function in the closed position. Therefore, a position indication test is required. Adding these valves to the IST Program is a conservative change as it adds more testing.
EGHV0058, EGHV0059, EGHV0060, EGHV0061, and EGHV0062	Valves safety position were changed from "O/C" to "C".	An engineering evaluation determined that these valves only have the active function to close.

**Revision 18 Summary of Changes to the IST Program**

Engineering evaluations have been performed for these changes and no Unreviewed Safety Question exists as a result of this revision. The following table explains all changes by component.

<b>Components Affected</b>	<b>Description of Change</b>	<b>Justification for change</b>
ABV0085; ABV0087	The safety position of these components was revised from "O/C" to "C".	These valves are normally locked in the open position in order to ensure steam supplies are available for the TDAPP. In the event of a SGTR, these valves must be closed to stop offsite release paths. As these are manual isolation valves without remote position indication there are no testing requirements in the open (passive) position. Thus, the safety function column for these valves has been changed to "C"(active position). Verification that these valves can be closed will continue to be done during refueling outages as stated in Refueling Justification AB-03.
BGV0135	Changed the SFTY POS column from "C" to "O/C". Added "PS/RF" to the TEST PERF/FREQ column. Changed the active or passive column to add "ACTIVE". Added BG02 to the RR OR TST DEF JUST column.	This component has been determined to have an active safety function in the partial open position in order for it to relieve pressure between BGHV8100/8112 in the event they become isolated and pressure between these containment isolation valves increases. In the normally closed position this valve serves a passive function for containment isolation. Per Table 1 of OM-10 this valve requires valve seat leak rate testing (Category A passive valve test per paragraph 4.2.2) and exercise testing (Category C active check valve per OM-10 paragraph 4.3.2). Refueling Justification BG-02 was revised to test the open function of this valve on a extended test frequency. Since this valve does not have remote position indication it does not require position indication testing per OM-10 paragraph 4.1.
BN8717	This valve has been added to the IST program as a passive component with remote position indication.	This valve prevents RHR inventory from being diverted back to the RWST. During Modes 1,2,3,4 this valve is maintained locked closed (padlocked). During Modes 5 and 6 this valve can be opened for refueling pool inventory changes. Due to the safety significance of this flowpath, this valve has been provided with ESFAS status panel indication (remote position indication). Per OM-10 Table 1 Category B passive valves require position indication testing per paragraph 4.1.
BNV0011	This valve has been added to the IST program as a passive component with remote position indication.	This component is the RWST isolation valve. The RWST is the borated water supply to support ECCS injection. This valve ensures the ECCS pumps have a suction flowpath from the RWST. Due to the safety significance of this flowpath, this valve has been provided with ESFAS status panel indication (remote position indication). Per OM-10 Table 1 Category B passive valves require position indication testing per paragraph 4.1.

Components Affected	Description of Change	Justification for change
EGHV0071 & EGHV0126	These valves have been added to the IST program as passive components with remote position indication.	EGHV0071 and 126 are isolation valves in the CCW flowpath to the containment CCW loads. EGHV0071 is normally maintained in the open position as part of the primary CCW flowpath to containment. EGHV0126 is an isolation valve in the bypass line around EGHV0071. EGHV0126 can be opened to maintain CCW flow to containment in the event EGHV0071 is closed. These valves are considered passive components. Per OM-10 Table 1 Category B passive valves require position indication testing per paragraph 4.1
EJFCV0618 & EJFCV0619	These valves have been added to the IST program as passive components with remote position indication.	These components are isolation valves on the RHR heat exchanger bypass line. During the normal ECCS lineup these valves are maintained in the closed position. This ensures that RHR flow is directed through the RHR heat exchanger for maximum RCS cooling for the recirculation phase of RHR operation. These valves are only taken out of the closed position for testing or RHR flow/temperature control during cold shutdown or refueling outages. These valves are considered passive components. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.
EJHCV0606 & EJHCV0607	These valves have been added to the IST program as passive components with remote position indication.	These components are isolation valves on the outlet of the RHR heat exchangers. During the normal ECCS lineup these valves are maintained in the open position to ensure RHR injection flow to the RCS following a large break LOCA. These valves are only taken out of the full open position for testing or RHR flow/temperature control during cold shutdown or refueling outages. These valves are considered passive components. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.
EJHV0014 & EJHV0015	These valves have been added to the IST program as passive components with remote position indication.	These components can be opened to direct a portion of RHR flow to the nuclear sampling system for testing. These valves are assumed closed during all other modes of operation for RHR. These valves are considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.
EMHV8889A,B,C,& D	These valves have been added to the IST program as passive components with remote position indication.	These components are isolation valves in the SIS test header. They are typically maintained in the closed position with air isolated to preclude inadvertent opening. They are normally only opened for RCS pressure isolation leak rate testing (BB8949A,B,C & D). These valves are installed at a seismic boundary which will ensure that the assumed SI pump flow is directed to the RCS in the event of a line break downstream of these valves. These valves are considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1

Components Affected	Description of Change	Justification for change
EMHV8924	This valve has been added to the IST program as passive component with remote position indication.	EMHV8924 is an isolation valve between the RHR pumps and SIP/CCP's. This flowpath is used when it becomes necessary to supply the suction of the CCP's and SIP's from RHR. Isolation of this valve while in Modes 1,2,3 places the plant in Technical Specification 3.0.3. Due to the safety significance of this flowpath the valve handwheel is locked in the open position with the associated supply breaker locked in the open position. This valve is considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.
EMV0006	The ACTIVE or PASSIVE classification for this valve was changed to "ACTIVE". In addition, "FS/RF" was added to the TESTS PERF/FREQ column along with refueling justification EM-08. This change was identified while reviewing changes to EPV0046 which is a similar valve.	This check valve is a containment isolation valve in the SI Accumulator fill line. Although this penetration is typically isolated by EMHV8888, it is being considered an active valve since this flowpath is routinely used during normal plant operation. Justification EM-08 was developed to extend the required testing to refueling outages. As an active Category A,C check valve OM-10 requires a leak test per paragraph 4.2.2 and an exercise test per paragraphs 4.2.1 and 4.3.2. Since this valve is not equipped with remote position indication it is exempt from position indication test requirements.
EMHV8882	This valve has been added to the IST program as a passive component with remote position indication.	EMHV8882 is an isolation valve in the SIS test header. It is typically maintained in the closed position. EMHV8882 is normally only opened for RCS pressure isolation leak rate testing (BBV0001, 22.40 & 59). EMHV8882 is installed at a seismic boundary which will ensure that the assumed high head injection flow is directed to the RCS in the event of a line break downstream of this valve. EMHV8882 is considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.
EPHV8808A/D	Revised the TESTS PERF/FREQ and SFTY POS columns such that testing in the open direction is indicated as a PASSIVE function.	This change is in accordance with RFR 17044A. EPHV8808A/D are normally open valves with electrical power removed. These valves have a safety position in the open direction (passive function). These valves still have a safety function in the closed direction. EPHV8808A/D will require position indication testing in both directions but will only require stroke time testing in the closed direction.
EPHV8875A,B,C & D EPHV8878A,B,C & D	These valves have been added to the IST program as passive components with remote position indication.	These components are isolation valves in the nitrogen supply lines and borated water supply lines to the SI Accumulators. These valves are opened intermittently during normal plant operation to adjust the SI Accumulators level and/or pressure. Typically these valves are maintained closed. Since these valves are also located at seismic boundaries they are assumed to maintain SI Accumulator operability in the event of a line break upstream of these valves. These valves are considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1.

Components Affected	Description of Change	Justification for change
EPHV8877A,B,C & D	These valves have been added to the IST program as passive components with remote position indication.	These components are isolation valves in the SIS test header. They are typically maintained in the closed position and only opened for RCS pressure isolation valve leak rate testing (EP8956A,B,C & D). These valves are also installed at a seismic boundary which will ensure SI Accumulator inventory is directed to the RCS in the event of a line break downstream of these valves. These components are considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1
EPHV8879A,B,C & D	These valves have been added to the IST program as a passive component with remote position indication.	These components are isolation valves in the SIS test header. They are typically maintained in the closed position with supply air isolated and are only opened following outages for RCS pressure isolation valve leak rate testing (BB8948A,B,C & D). These valves are also installed at a seismic boundary which will ensure SI Accumulator/ECCS inventory is directed to the RCS in the event of a line break downstream of these valves. These components are considered passive. Per OM-10, Table 1, Category B passive valves require position indication testing per paragraph 4.1
EPV0046	The ACTIVE or PASSIVE classification for this valve was changed to "ACTIVE". In addition, "FS/RF" was added to the TESTS PERF/FREQ column along with refueling justification EP-06.	This check valve is a containment isolation valve in the nitrogen supply line. Although this penetration is typically isolated by EPHV8880, it is considered an active valve since this flowpath is routinely used during normal plant operation. Justification EP-06 was developed to extend the required testing to refueling outages. As an active Category A,C check valve, OM-10 requires a leak test per paragraph 4.2.2 and an exercise test per paragraphs 4.2.1 and 4.3.2. Since this valve is not equipped with remote position indication it is exempt from position indication test requirements.
GSHV0030 & GSHV0035	Valves were added to the IST program as active Category B valves.	These valves are required to open to allow sampling of containment atmosphere post accident. These valves are also required to maintain the integrity of the hydrogen analyzers sample lines by isolation of the non seismic piping downstream. Per OM-10, Category B active valves are subject to quarterly exercise testing per paragraph 4.2.1 and position indication testing per paragraph 4.1 every 2 years. These valves are considered to have open and closed active safety functions