NEI Comments on Draft IMC-0326, Operability Determinations

Item #	Affected Section	Comment/Basis	Recommendation
1	4.09, Operable-Operability	The section repeats information better described in other sections and is incorrect or misleading in some cases. 1. **Wording:** *When a condition is discovered that calls into question the TS required SSC's ability to perform the specified safety function, an OD should be made to determine if the SSC's specified safety function can be performed.* **Basis:** Recommend the sentence be deleted. It is inconsistent with other portions of the document, such as Section 06.02, "The presumption of operability is only lost when it is apparent that a condition has been identified that causes a substantive functional impact or would be expected to have a substantive functional impact during an event requiring the SSC to perform its specified safety function." 2. **Wording:** *In addition, TS operability considerations require that an SSC meet all surveillance requirements (SRs) (as specified in SR Applicability SR 3.0.1). An SSC that does not meet a SR must be declared inoperable because the LCO operability requirement(s) are not met.* **Basis:** This is incorrect and should be deleted. SR 3.0.1 states that when an SR is not met or performed within the specified frequency, the LCO is not met. It does not state the system is inoperable. It is best to not mix TS usage rules with operability. 3. **Wording:** *A system is expected to be tested and maintained to perform as designed.* **Basis:** This statement is not related to the definition of operability and should be deleted. 4. **Wording:** *When an SSC capability is degraded to a point where it cannot perform with reasonable assurance, the SSC should be judged inoperable.* **Basis:** This is discussed more thoroughly under 06.02, "Presumption of Operability," and 04.10 "Reasonable Assurance." Recommend it be	Delete information after the first sentence in the last paragraph of the operable-operability definition. If kept, should be; "degraded to a point where it cannot perform the specified safety function with reasonable assurance…"

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		deleted.	
2	04.11, "Specified Function/Specified Safety Function"	1. **Wording:** *The specified function/specified safety function of an SSC is that specified safety function(s) in the CLB for the facility.*" **Basis:** This sentence implies that all of the SSC functions described in the CLB are specified safety functions required for operability. That position is inconsistent of other portions of the IMC as described below and should be revised or deleted. • Section 03.01, "Scope of SSCs for Operability Determinations," states: *SSCs may also have design functions that do not perform a necessary and related support function for TS SSCs. These design functions are not within the scope of an OD.* *For example, (1) Nuclear Service Water supplied to components that do not have a TS specified safety function or a necessary and related support function and, (2) station battery nonconformance with the Station Blackout Rule, 10 CFR 50.63, "Loss of all alternating current power," would not necessarily render operating or shutdown DC Source Limiting Condition for Operation (LCO) requirements not met and therefore inoperable.* (NEI agrees with this section. It points out that not all functions in the CLB are specified safety functions.) • Section 08.01, "Relationship between the General Design Criteria (GDC) and the Technical Specifications," states: *The GDC and the TS differ from each other in that the GDC specify requirements for the design of nuclear power reactors, whereas the TS specifies requirements for the operation of nuclear power reactors. As such, the GDC cover a broad*	Update "Specified Function/Specified Safety Function, "definition to eliminate incorrect, inconsistent, or duplicative information. Also, consider the wording and bases used in NEI 18-03 definition and appendix B. Eliminate portions that add no additional value ; *"…expected to perform as designed, tested and maintained"* *"when system capability is degraded…"*

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		category of SSCs that are important to safety, including those SSCs that are covered by TS. Failure to meet GDC, as described in the licensing basis (e.g., nonconformance with the CLB for protection against flooding, seismic events, tornadoes) should be treated as a condition and evaluated to determine if the condition calls into question the ability of SSCs to perform their specified safety function(s) or necessary and related support function(s) and perform an OD if necessary. (NEI agrees that the plant design, described in the CLB, is separate from the TS requirements on plant operation, which is circumscribed by the specified safety functions.) 2. **Wording:** *In addition to providing its specified safety function(s), an SSC is expected to perform as designed, tested and maintained.*" **Basis:** This sentence is inconsistent with the TS and other portions of the IMC described below and should be deleted. • The TS definition of operability states, "A [SSC] shall be OPERABLE ... when it is capable of performing its specified safety function(s), and when all necessary attendant [support systems] are also capable of performing their related support function(s)." There is no regulatory basis for the IMC to add additional requirements. 3. **Wording:** *an SSC is expected to perform as designed.* **Basis:** The phrase, under the definition of specified safety function, strongly implies that any degradation from the design condition renders a component incapable of performing its specified safety function. That is inconsistent with the following statement in the IMC: • Section 06.02, "Presumption of Operability," states: *It should be noted, that once a condition is identified that may impact the function of an SSC, the presumption of operability is not necessarily lost. The presumption of operability is only lost*	

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		when it is apparent that a condition has been identified that causes a substantive functional impact or would be expected to have a substantive functional impact during an event requiring the SSC to perform its specified safety function. • Section 6.05, "Timing of Operability Determinations," states: *Conditions that do not result in a substantive functional impact can be reviewed under the corrective action program.* (NEI agrees that a deviation from the design condition that does not have a substantive functional impact does not result in failure to perform the specified safety function.) • Section 08.01. "Relationship between the General Design Criteria (GDC) and the Technical Specifications," states: *[T]he GDC covers a broad category of SSCs that are important to safety, including those SSCs that are covered by TS. The safety analysis report describes the design capability of the facility to meet the GDC (or a plant-specific equivalent). The staff safety evaluation report documents the acceptability of safety analysis report analyses. The analyses and evaluation included in the safety analysis serve as the basis for TS issued with the operating license.* *The TS limiting conditions for operation, according to 10 CFR 50.36(c)(2)(i), "are the lowest functional capability or performance levels of equipment required for safe operation of the facility." Section 182 of the Atomic Energy Act of 1954, as amended and as implemented by 10 CFR 50.36, requires that those design features of the facility that, if altered or modified, would have a significant effect on safety, be included in the TS. Thus, TS are intended to ensure that the most safety significant design features of a plant, as determined by the safety analysis, maintain their capability to perform their safety functions, i.e.,*	

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		that SSCs are capable of performing their specified safety functions or necessary and related support functions. This section clearly illustrates the difference between the design described in the CLB and the specified safety functions required to be met by the TS. The specified safety functions of an SSC are a subset of the functions described in the CLB. 4. **Wording:** *an SSC is expected to perform as ... tested and maintained.* **Basis:** The phrase adds no value to the definition of specified safety function and should be deleted. SSCs are tested by the TS SRs, as described by SR 3.0.1 and SR 3.0.2. These usage rules do not use the term "operable" or "operability." It is best to not mix TS usage rules with operability. The TS do not describe the performance of maintenance. The phrase adds no value and is confusing. 5. **Wording:** *When system capability is degraded to a point where it cannot perform with reasonable expectation or reliability, the SSC should be judged inoperable*." **Basis:** The sentence is duplicative of other sections of the IMC, is not related to the definition of specified safety function, and should be deleted. The topic is discussed more thoroughly under 06.02, "Presumption of Operability," and 04.10 "Reasonable Assurance."	
3	08.09, "Technical Specification Operability vs. ASME OM Code Criteria"	The following portion of the first paragraph should be deleted: **1. Wording:** *Position 8 in Attachment 1 to Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," defines the starting point for the completion time in TS actions for ASME pump and valve testing. When performance data fall outside the required action range, regardless of whether the limit is equal to the TS limit or more restrictive, the pump or valve must be declared inoperable immediately (the word "inoperative" is used in the text of the ASME Code, i.e., the pump or valve is both "inoperative" and inoperable) and the LCO must be declared not met and the*	Delete the portion of the first paragraph that references outdated information. As discussed at the public meeting, the guidance provided should reference the specific Code language. Specifically, the statement that "the LCO must be declared not met" is not contained within the code requirements.

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		applicable conditions must be entered. *The NRC does not accept durations specified by the ASME OM Code for analyzing test results as a reason for postponing entry into a TS action statement. As soon as data are recognized as being within the required action range for pumps or as exceeding the limiting-value full-stroke time for valves, the associated component must be declared inoperable, and if subject to the TS, the completion time specified in the action statement must be started at the time the component was declared inoperable. For inoperable pumps and valves that are part of an ASME IST program but not subject to TS, the actions required by the applicable sections of the ASME code are applicable.* **Basis:** These paragraphs are both taken from Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," Attachment 1, "Potential Generic Deficiencies Related to IST Programs and Procedures," Position 8, "Starting Point for Time Period in TS ACTION Statements." The GL position is based on ASME Section XI IWP-3220, IWP-3230, and IWP-3100-2. The ASME Section XI requirements discussed in Generic Letter 89-04 have been replaced with the O&M Code. Therefore, the discussion in Generic Letter 89-04 is no longer valid. The intent of Position 9 is to state that the time allowed by the ASME Code for analyzing data does not apply when the operability of TS equipment is called into question. NEI agrees this is correct, but it is not needed to be stated in this section. Note that the Generic Letter was published in 1989 and the concept of "operability evaluations" was not introduced until 1991. **2.** **Wording:** *When performance data fall outside the required action range, regardless of whether the limit is equal to the TS limit or more restrictive, the pump or valve must be declared inoperable*	Therefore. when a pump or valve is determined to be 'inoperable' or "inoperative" as dictated by code language, the guidance should be changed to evaluate for system operability for the involved TS LCO, as applicable.

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		immediately **Basis**: NEI does not agree that a pump or valve in the required action range must be assumed to be inoperable. However, we agree that in such a condition the operability of the component is called into question and must be evaluated.	
4	06.06, Timing of Operability Determinations	**Wording**: "Operability is assessed continuously and upon identification of a condition, the licensee shall assess the presumption of operability of the SSC immediately and without unnecessary delay." **Basis**: It would be more appropriate to state "should" or change wording to state what the inspector is expected to see as it looks like the IMC is directing licensee actions.	Change "SHALL" to "SHOULD or change wording to provide guidance to the inspector. It looks like the IMC is providing licensee actions.
5	08.07, Use of Seismic Margin Assessment in Operability Decisions	**Wording**: 'If an SMA is used, the seismic demand shall be the recently developed Ground Motion Response Spectra (GMRS) for the Fukushima 2.1 seismic evaluation, and its application shall be consistent with EPRI NP-6041-SL." **Basis**: It would be more appropriate to state "should" or "the NRC staff recognizes the …" or change wording to state what the inspector is expected to see as it looks like the IMC is directing licensee actions.	Change "SHALL" to "SHOULD or change wording to provide guidance to the inspector. It looks like the IMC is providing licensee actions.
6	06.01 Continuous Assessment of Operability	**Wording**: It is acceptable for an inspector to ask the licensee for the basis for the functional impact decision if it is not clear. **Basis**: Similar to the practices, there is no separate documentation that supports the presence or absence of a degraded and/or non-conforming condition. Could be implied that the basis for answering the three required entry criteria is documented.	Consider adding wording that makes it clear that this may not be documented information.
7	06.04 Reasonable Assurance of Operability	**Wording**: "Assurance" has replaced "Expectation" **Basis:** • The meaning of "Expectation" is distinct from "Assurance" and has been in consistent and widespread use since it is inception in Generic Letter 91-18. Each site's procedure currently utilizes "expectation" and	Retain the existing definition of "Reasonable Expectation of Operability".

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		any alteration would induce confusion. • "Expectation" was clarified in RIS 2005-20 in order to support the timely declaration of Operability via the Immediate Operability Determination. That is, the use of "Expectation" at that stage allows the operating staff to make a timely declaration while supporting a continuing investigation, if needed. • The term "Reasonable Assurance" is used elsewhere within the regulations and there is no basis to utilize this definition. • At the most fundamental level "Expectation" and "Assurance" are describing entirely distinct concepts, with "Expectation" supporting the timely declaration of the results of an Immediate Operability Determination.	
8	Deleted	Deleted	Deleted
9	06.06 Timing of Operability Determinations	**Wording:** The embedded example includes: The absence of these indirect effects could be used to support a reasonable expectation of continued operability. **Basis:** This appears to be an attempt to provide guidance that might have be useful during a recent industry event. In that instance, the "absence of indirect effects…" could have been used as part of demonstrating the absence of a substantive functional impact.	Alter the wording as follows: The absence of these indirect effects could be used to support either the absence of a substantive functional impact or the reasonable expectation of continued operability, depending upon whether the formal OD process was entered.
10	08.02 Single Failures	**Wording:** "Any nonconformance with a GDC incorporated in the licensing basis by which the capability of an SSC to withstand a single failure is compromised should be treated as a condition and evaluated to determine if an OD is warranted." Add the following words; "If the GDCs do not require single failure protection for a given situation, then, as introduced above, the GDC would be part of the facility's design, but not part	After; "Any nonconformance with a GDC incorporated in the licensing basis by which the capability of an SSC to withstand a single failure is compromised should be treated as a condition and evaluated to determine if an OD is warranted." Add:

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		of its operation governed by a TS LCO." **Basis:** If a plant, especially older sites were never intended to incorporate single failure protection for an event. Therefore, even if redundant SSCs exist, then no entry into an individual LCO is possible. Sites that were designed and/or licensed to the 1967 GDCs for protection against natural phenomena fall into this category.	"If the GDCs do not require single failure protection for a given situation, then, as introduced above, the GDC would be part of the facility's design, but not part of its operation governed by a TS LCO."
11	08.05 Use of Temporary Manual Action in Place of Automatic Action in Support of Operability	**Wording:** This section has been largely copied from IMC 0326 **Basis:** The use of 10 CFR 50.59 typically determines the acceptability of a given Manual Action.	Add these words at the end of this section: Licensees may use the guidance in NEI 96-07, Revision 1, "Guidelines for Implementing 10 CFR 50.59," which is endorsed by Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments."
12	04.08, Operability Determination (OD)	**Wording:** "A decision by an SRO on the operating crew that there is reasonable assurance that an SSC can perform its specified safety function(s)." the word "expectation" would be more appropriate. **Basis:** Reasonable Expectation from previous IMC has been changed to Reasonable Assurance. As stated in Item #7 of this table, Reasonable Expectation has been used since 1991 and currently used by SROs and we recommended keeping "reasonable expectation." Even if Reasonable Assurance definition is not changed back to Reasonable Expectation, "expectation" would still better match the description of the SRO action and is consistent with "assurance" and "expectation" usage throughout the document.	Change "assurance" to "expectation" as this is associated with an SRO assessment. "A decision by an SRO on the operating crew that there is reasonable expectation that an SSC can perform its specified safety function(s)."
13	04.10, Reasonable Assurance	**Wording:** "A Subsequent determination of operability should be based on the licensee's reasonable assurance from the evidence collected that the SSCs are capable of performing…" the word "expectation" would be more appropriate. **Basis:** Reasonable Expectation from previous IMC has been changed to Reasonable Assurance. As stated in Item #7 of this table, Reasonable Expectation has been used since 1991 and currently used by SROs and we	Change "assurance" to "expectation" as this is associated with an SRO assessment. "A Subsequent determination of operability should be based on the licensee's reasonable expectation from the evidence

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		recommended keeping "reasonable expectation." Even if Reasonable Assurance definition is not changed back to Reasonable Expectation, "expectation" would still better match the description of the SRO action and is consistent with "assurance" and "expectation" usage throughout the document.	collected that the SSCs are capable of performing…"
14	06.09, Operator Awareness and Responsibilities	1. **Wording:** "A senior licensed operator on the operating shift crew…" 2. **Wording:** "Whoever prepares the evaluation of the condition should inform the licensed operators responsible…" **Basis:** Inconsistent usage of senior licensed operator vice licensed Senior Reactor Operator (SRO) as described in the IMC 0326-03 Applicability Section. "It is the responsibility of licensed Senior Reactor Operator (SRO) to…" Definitions and other sections of 0326 used SRO throughout. Only Section 06.09 needs to be updated.	Change "senior licensed operator" and "licensed operators" to "licensed senior reactor operator (SRO)"
15	8.12, Flaw Evaluation	Paragraph prior to ASME Class 1 Components section: in two places the phrase "degraded but operable" is used contradicting position under section 4.10 "an SSC is either operable or inoperable"	Replace phrase "degraded but operable" with "operable"
16	08.12 Flaw Evaluation/ 08.13 Operational Leakage from Class 1, 2, and 3 Components	The wording in this section does not clearly describe the additional available methods that can be used when evaluating operability. For example, as written, the inspectors may assume that non-mandatory appendix U must be used to evaluate class 2 or 3 moderate energy systems flaws and in support of an operability determination. Appendix U applies to piping, tanks, and vessels. When flaws are identified in valve bodies for example, the IMC does not provide information that ASME Sect. XI IWC & IWD for Class 2 & 3 moderate energy systems allows for evaluation and acceptance criteria specified by the owner. ASME Sect. XI companion guide Chapter 35 describes criteria that can be used by the licensee when evaluating operability including; analysis, test or partial test, operating experience, and engineering judgement. This is important for online applications with systems in service as the available techniques and assessment methods could be more limiting than during ISI exam windows with systems out of service. The use of engineering judgement and other technical acceptable methods could play a larger role when performing operability determinations with systems in service. The current wording could imply that a system is "inoperable" if the use of "code acceptable methods" is not practical	**08.12 Flaw Evaluation, page 19** **Change** the last sentence above "ASME Class 1 Components" to; "To determine that Class 2 or 3 piping is operable, licensees should evaluate the integrity of the component using Nonmandatory Appendix U or other technically acceptable methods defined by the licensee and should use reasonable engineering judgement to select methods for other operability considerations." **08.12 Flaw Evaluation, page 20**, In the 2nd paragraph under "ASME Class 2 and 3 Components,"

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		resulting in a short duration TS LCO, premature removing of technical specification equipment/trains from service, or even TS 3.0.3 entries for issues on common headers. The section also states; "a relief request/alternative can be submitted and at a minimum, verbally approved by the NRC before the completion time expires." This implies that a relief request is a tool for determining operability of a Tech Spec SSC and conflicts with the responsibilities of a licensed SRO when assessing operability. Consistent with RIS 2005-20 Rev. 1 addressing common header issues. The recommendations provided will expand on the areas described in section 08.12 and 8.13 for what tools are available when assessing operability. Additional considerations identified on 8/16. • Consider adding a statement that if a licensee uses an alternative analytical method in an initial operability determination as discussed in 08.04 for evaluating structural integrity, it is expected that ASME Code, NRC approved Code Case, or GL 90-05 is used, if available, or a relief request is submitted and approved by the NRC. Another way to state this concept; • It is not expected that the licensee will call a deficient condition inoperable solely on not being able to assess structural integrity through an ASME or NRC approved method however, it is expected that the licensee follows the ASME requirements including submitting a relief request for use of an alternative analytical method, as applicable.	**Change;** "If it is identified that a flaw does not meet the criteria in ASME Code, construction code acceptance standards, or an NRC-accepted ASME code case as listed in RG 1.147, the component should be declared inoperable and the applicable TS action statement is to be addressed at that time. Alternatively, a relief request/alternative can be submitted and at a minimum, verbally approved by the NRC before the completion time expires." **To**; "If the licensee determines that the flaw is unacceptable for continued operation, operability needs to be assessed for technical specification LCO applicability." **08.12 Flaw Evaluation, page 20,** Paragraph above "Methods Acceptable to Evaluate Structural Integrity" **Change;** "The table below summarizes methods for evaluating structural integrity of defects found in boiling or pressurized water-cooled nuclear power facilities on components (including supports) classified as ASME Code Class 1, Class 2, and Class 3 components."

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			To; "The table below summarizes methods for evaluating structural integrity of defects found in boiling or pressurized water-cooled nuclear power facilities on components (including supports) classified as ASME Code Class 1, Class 2, and Class 3 components. When assessing operability for Class 2 & 3 moderate energy systems, operating experience and engineering judgement can be used in cases where other methods would be impractical." 08.13, Operational Leakage from ASME Code Class 1, 2, and 3 Components, page 22 2nd paragraph. **Change;** "Alternatively, the licensee may evaluate the structural integrity of leaking Class 2 or Class 3 moderate-energy components using the criteria of ASME code case N-513, N-705 or any other applicable NRC approved methodology as indicated in the table in Section 08.12, "Flaw Evaluation."" **To;** "Alternatively, the licensee may evaluate the structural integrity of leaking Class 2 or Class

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			3 moderate-energy components using the criteria of ASME code case N-513, N-705 or any other applicable NRC approved methodology as indicated in the table in Section 08.12, "Flaw Evaluation." Operating experience and engineering judgement are acceptable methods to assess operability especially in cases where other methods would be impractical." Additional considerations identified on 8/16. • Consider adding a statement that if a licensee uses an alternative analytical method in an initial operability determination as discussed in 08.04 for evaluating structural integrity, it is expected that ASME Code, NRC approved Code Case, or GL 90-05 is used, if available, or a relief request is submitted and approved by the NRC. Another way to state this concept; • It is not expected that the licensee will call a deficient condition inoperable solely on not being able to assess structural integrity through an ASME or NRC approved method however, it is expected that the licensee follows the ASME requirements including submitting a relief request for use of an alternative analytical method, as applicable.

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17	06.06 Timing of Operability Determinations	In the first paragraph, change" assurance" to "expectation." Basis: To match the language that the SRO uses.	**Change** as highlighted below; Operability is assessed continuously and upon identification of a condition, the licensee shall assess the presumption of operability of the SSC immediately and without unnecessary delay. If the condition results in a substantive functional impact on the SSC then the licensee should enter the OD process. While an OD may be based on limited information, the information should be sufficient to conclude that there is reasonable expectation that the SSC is capable of performing the required specified safety function.
18	06.06 Timing of Operability Determinations	In the 2nd paragraph, add words to ensure clarity when in the operability determination process. Basis: Adds clarity with regards to actions in the OD process and changes "assurance" to "expectation" to match the language that the SRO uses.	**Change** in the 2nd paragraph; "In any case, if the available information is incomplete, the licensee should collect any additional information that is material to the determination (i.e., information that could result in a change to determination) commensurate with the safety significance of the condition, and then promptly make an operability determination based on the complete set of information. If, at any time, information emerges that negates a previous determination that there is a reasonable assurance that the SSC is operable the licensee should declare the SSC inoperable." **To;**

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			"Following entry into the Operability Determination process, if additional information is warranted, the licensee should collect any additional information that is material to the determination (i.e., information that could result in a change to the operability determination's conclusion) commensurate with the safety significance of the condition, and then promptly make an operability determination based on the complete set of information. If, at any time, information emerges that negates a previous determination that there is a reasonable expectation that the SSC is operable the licensee should declare the SSC inoperable."
19	07.02 System Configuration during Surv and Operability Testing	Eliminate the word "root" in the following statement. Basis: Root Cause is a specific CAP evaluation process. The cause should be identified, not root cause.	Test failures should be examined to determine the cause and correct the problem before resumption of testing. Repetitive testing to achieve acceptable test results without identifying the ~~root~~ cause or correction of a problem in a previous test is not acceptable as a means to establish or verify operability and may constitute "preconditioning."
20	06.02 Presumption of Operability	Clarify the last sentence to reinforce that questions alone do not get addressed in the Operability Determination Process until a deficient condition is confirmed and has a substantive functional impact. Basis: Questions alone would not screen through the Three Required Criteria unless there is a deficient condition identified to have a substantive functional impact. This is a key element to the SRO burden reduction.	After the statement: Note that a question, concern or presence of a condition alone does not necessarily invalidate the presumption of operability. Add: Questions should be addressed through

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			other appropriate station processes until such time that a deficient condition is confirmed.