



Namco Controls
2100 West Broad Street | Elizabethtown, NC 28337 | U.S.A.
September 6, 2016

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Terry W. Jackson, Chief
Quality Assurance Vendor Inspection Branch-1
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Subject: Reply to a Notice of Non-conformance
Docket No: 99901470
Reference NRC Inspection Report No. 99901470/2016-202
Non-conformance 99901470/2016-202-01
Non-conformance 99901470/2016-202-02
Non-conformance 99901470/2016-202-03
Non-conformance 99901470/2016-202-04

Dear Sir/Madam:

Namco Controls, has reviewed NRC Inspection Report No. 99901470/2016-202, and is enclosing responses to said non-conformances.

Should there be any questions or need for additional information, Namco Controls will be pleased to provide the same. I may be contacted by phone at (910) 879-5845 or by email at jim.borst@sptech.com.

Sincerely yours,

Jim Borst
Quality Assurance Manager
Namco Controls

Attachment: Namco Controls Response to NRC Notice of Nonconformance

Distribution: K. Sutherby, J. Fuller, J. Stack, J. Kean, R. Pullenayegam, C. Clausen, S. Vanderslice

IED9
NRD

Namco Controls Response
NRC Notice of Nonconformance Inspection Report 99901470/2016-202, Dated August 29, 2016

A. Nonconformance 99901470/2016-202-01

Criterion III, "Design Control," of Appendix B, to 10 CFR Part 50, states, in part, that "Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components."

Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50 states, in part, that "these measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery."

Namco Procedure QCP-002, "Inspection and Dedication," Revision S, dated August 31, 2015, Section 8.0, "Sampling Procedures," Subsection 8.1.1, "Piece Level Parts and Subassemblies," states, in part, "the specific plan chosen depends upon the type of product, method of manufacture and other relevant factors. Inspection of piece level parts and subassemblies shall be performed in accordance with the applicable drawing, specifications, and the Dimensional Inspection Report (DIR)."

Contrary to the above, as of July 15, 2016, Namco failed to ensure the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components. Additionally, Namco failed to establish appropriate measures that included provisions for source evaluation of subcontractors and examination of products upon delivery. Specifically:

1. Namco failed to adequately verify the material composition critical characteristic of the contact plates during the examination of products upon delivery for the EA 184-73026 contact plates purchase order (PO) numbers: 1) 70122, dated March 24, 2016; 2) 67998, dated February 22, 2016; and 3) 72248, dated April 29, 2016. The DIR sampling plan required a sample size of 13 out of 2000 contact plates for material inspection per PO but Namco only sent one contact plate for the three POs to be tested at Applied Technical Services.

2. Namco failed to perform an adequate engineering evaluation for the change in sample population identified from ANSI/ASQC Z1.4-1993 and MIL-STD-105E to EPRI TR-017218-RI for the control of the critical characteristics for PO 70608 Part Number EA182-91026, and PO 75580 Part Number EA185-93025, when a commercial-grade survey was not conducted to verify that the supplier had lot and batch control to ensure traceability of material.

This issue has been identified as Nonconformance 99901470/2016-202-01.

Namco Controls Response
NRC Notice of Nonconformance Inspection Report 99901470/2016-202, Dated August 29, 2016

(1) The reason for the noncompliance, or if contested, the basis for disputing the noncompliance.

NAMCO Response:

NAMCO acknowledges Nonconformance 99901470/2016-202-01.

- 1) In regards to Nonconformance 99901470/2016-202-01(1), Namco acknowledges that only one sample was sent for testing rather than thirteen as called out on the DIR. The rationale behind this decision was based on the premise that this testing was solely for the purpose of verifying the material as it was called out on the C of C provided by the supplier. The material testing conducted was not meant to be used in conjunction with dimensional inspections on the DIR for the purpose of using Method 1 for the CGD process. The method of CGD for this part at the time for this supplier was believed to be Method 2, Commercial Grade Survey of the supplier.
- 2) In regards to Nonconformance 99901470/2016-202-01(2), Namco acknowledges at the time of the audit there was no written engineering evaluation for the change in sampling plan to EPRI guidelines other than what was written in Namco Control Document LP2016-2-DOC001. In order to meet the requirements of NQA-1 for CGD Method 1, Namco followed a sampling plan detailed in internal document QCP-002, the population sampling plan used was ANSI/ASQC Z1.4-1993 and MIL-STD-105E. The original sampling plans in the DIRs used AQL sample size S-1 based on suppliers being surveyed (CGD - Method 2). However, it was decided that in order to apply CGD - Method 1 the sampling plan should be heightened. As such, Namco changed the sampling plan guidance to follow EPRI TR-017218-RI for the control of critical characteristics called out on the DIR. The engineering justification for the change that the EPRI guidelines is more restrictive than MIL-STD-105E in that it allows Zero Defects in a lot/batch before having to move to a 100% inspection.

(2) The containment and corrective steps that have been taken and the results achieved.

NAMCO Response:

- 1) As noted in 2B, below, the inspections, including material inspections have been raised to heightened EPRI guidelines until the supplier has completed the CGD survey allowing for Method 2 material approval.
- 2) Internal Corrective Action/ Preventative Action, CAPA # 16-095 Commercial Grade Dedication 8D, initiated 7/12/2016.
 - A. Containment: All Namco Nuclear material was pulled from stock location and quarantined in Quality Lab.
 - B. Containment: A Plan for Every Part (PfEP), which included a Method for CGD, was developed by a cross-functional team (Quality, Engineering, and Manufacturing) and captured on Dimensional Inspection Reports (DIRs), Inspection Reports (IRs), Control Document LP2016-2-DOC001 (creation and release date 9Jun2016) to address all Namco Nuclear parts and assemblies.

(3) The corrective steps that have been taken to avoid noncompliance.

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NAMCO Response:

- 1) All suppliers will be reviewed for acceptance to CGD – Method 2 survey allowing return to the MIL-STD-105E S-1 inspection levels. Until suppliers are approved for Method 2 material (and dimensional inspections) will follow the CGD – Method 1 with enhanced EPRI sample size requirements.
- 2) Inspectors tasked with receiving inspections under Namco's CGD processes have been trained on the CGD process. The additional requirements not yet captured in the DIRs will be documented on the Purchase Order as an additional step in the Quality Engineer's PO review process.

(4) The date when corrective action will be completed.

NAMCO Response:

- 1) On-going. Namco is performing CGD – Method 2 surveys, and will continue to use CGD – Method 1 for non-surveyed suppliers. Namco estimates it will take one year to perform CGD surveys on all suppliers, as appropriate.
- 2) A. Completed, May – June 2016). B. Completed

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B. Nonconformance 99901470/2016-202-02

Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50, states, in part, "Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures."

Namco Quality Manual, Revision N, Section XV, Section 3.0, "Program Control," states, in part, that nonconforming parts and subassemblies are to be identified, documented and segregated, pending disposition. It also states, in part, that rework or repair instructions shall be documented, and rework or repaired items are re-inspected to the original requirements.

Procedure NSP60-004, "Processing Nonconforming Material, Parts, Components and Services," Revision N, describes "use as is" dispositions of discrepant items as items that are nonconforming, but the discrepancy does not adversely impact the fit, form, function, or qualification per the appropriate QTR, but there must be a technical justification included on the Inspection Report (IR) form. In addition, inspection [staff] issues an IR for the items to be sorted, and for discrepancies identified as rework, inspection [staff] shall issue an IR containing repair/rework instructions.

Contrary to the above, as of July 15, 2016, Namco failed to establish measures to identify, control, document, segregate, and disposition materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation and failed to review, accept, reject, repair or rework nonconforming items in accordance with documented procedures, as illustrated in the following examples.

- 1. Namco failed to establish measures for the use of nonconformance reports (NCRs) and their differentiation from inspection reports (IRs) in their Quality Assurance Manual and Procedure NSP 60-0004.*
- 2. Namco failed to provide a technical justification for the disposition of "use as is" for IR 30-4702, IR 30-4948, IR 30-4860, IR 30-5314, IR 30-5440, IR 30-4649 and NCR 2539. Specifically, the disposition lacked the basis for why the discrepancy did not impact form, fit, or function.*
- 3. Namco failed to evaluate how the disposition in IRs and NCRs may affect the acceptance of the sample and lot in its entirety when the selected sampling plans stated in the DIRs only allows one piece to be rejected.*
- 4. Namco failed to provide objective evidence for rework instructions, rework inspections, sort results, sort re-inspections, and return to vendor or scrap results as required per Procedure NSP 60-0004 for IRs and NCRs dispositioned as "re-work" or "sort."*

This issue has been identified as Nonconformance 99901470/2016-202-02.

Namco Controls Response

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(1) The reason for the noncompliance, or if contested, the basis for disputing the noncompliance.

NAMCO Response:

NAMCO acknowledges Nonconformance 99901470/2016-202-02, with the exception of (1).

- 1) In regards to Non-conformance 99901470/2016-202-02(1), it is believed that there was some confusion with regards to the use/purpose of the NCR form and how it relates to our Inspection Report (IR) form, QF-66. NSP60-0004, *Processing Nonconforming Material, Parts, Components and Services*, Paragraph 11.7, instructs that should Corrective and Preventative Actions will be required based on IRs (as appropriate) that NSP60-0011, *Corrective Action Requests* implemented. NSP60-0011, Paragraph 5.2, informs that "All corrective action requests will be processed as described in ISO 9001 Corrective and Preventive Action Procedure 8.5.2. See Non-conformance 99901470/2016-202-03 for additional information on this subject including an example of the process.
- 2) In regards to Nonconformance 99901470/2016-202-02(2), Namco acknowledges that an adequate technical justification was not given for the disposition of "use-as-is," for the following: IR 30-4702, IR 30-4948, IR 30-4860, IR 30-5314, IR 30-5440, IR 30-4649 and NCR 2539. Namco MRB team which consists of engineering, quality, and manufacturing did evaluate each IR/NCR stated above to ensure that the non-conformance did not affect fit, form, and function or qualification per the appropriate QTR for the item. It was determined during the disposition process that none of these areas would be affected and thus, a "use-as-is" disposition was given. NSP60-0004, Paragraph 8.1.1, informs that parts or assemblies written up on IR with the disposition of Use As-Is that *"The items are nonconforming, but the discrepancy does not adversely impact the fit, form, function, material or qualification per the appropriate QTR."* Based on this we know that the Qualified Engineer must consider this before making his/her disposition. However, Namco does acknowledge that there was a shortcoming in adequately defining this technical rationale with a written explanation on each form. With better guidance and instruction received as a result of the audit Namco MRB associates are more aware of the level of disposition required to adequately satisfy the intent and requirement to provide written technical justification for each disposition given while calling out a technical standard to support the disposition.
- 3) In regards to Nonconformance 99901470/2016-202-02 (3), Namco acknowledges that they do not have a written process in place that would affect the acceptance of the sample and lot in its entirety when the selected sampling plans stated in the DIRs only allows one piece to be rejected. However, Namco inspectors have been trained to use the AQL sample size to determine the number of parts to inspect, but do not use the "Accept On/Reject On" values. The Namco inspectors will write up the nonconformance(s) on an IR when they find even a single nonconformance. The MRB team would take into consideration the nonconformance and if it was deemed to affect fit, form, function, material or qualification then the disposition would be to either inspect the lot 100% and sort good parts from bad, or rework into compliance to the specification, or scrap, or return to vendor. In no instance would an IR be dispositioned as Use As-Is if the discrepancy was deemed to affect fit, form, function, material or qualification per the appropriate QTR.

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- 4) In regards to Nonconformance 99901470/2016-202-02 (4), Namco acknowledges that the recording of rework instructions, rework inspections, sort results, sort re-inspections, and return to vendor or scrap results as required per Procedure NSP 60-0004 for IRs (NCRs are not referenced in our NSPs but rather) dispositioned as "re-work" or "sort," were not adequate. Namco has made a commitment to record all rework instructions in detail on the bottom of the IR when simple instructions can be captured in words, or on a Floor Job Instruction (FJI) sheet when more detailed instructions (including the use of photographs or images) are required.

(2) The containment and corrective steps that have been taken and the results achieved.

NAMCO Response:

- 1) Not applicable, see above.
- 2) Namco and its MRB team have been trained on the technical justification expectations of the NRC for the dispositions given "Use As-Is." Dispositions given by the MRB team will now include a more detailed technical justification with reference to recognized industry standards, when applicable, to support rationale for dispositions "Use As-Is" for nonconforming material.
- 3) Training of the Namco inspectors already addresses what to do when the selected sampling plans stated in the DIRs only allows one piece to be rejected. However, as this is not documented this requirement will be added to the appropriate section in NSP60-0004, Processing Nonconforming Material, Parts, Components and Services
- 4) Namco MRB team has been trained to include detailed instructions rework, inspection result, sort result details on the bottom of the IR in the appropriate area set aside for this information or on an FJI should the level of detail required to perform the work necessitate.

(3) The corrective steps that have been taken to avoid noncompliance.

NAMCO Response:

- 1) Not applicable, see above.
- 2) NSP60-0004 will be revised to incorporate language that requires more detailed technical justification with reference to recognized industry standards, when applicable, to support rationale for dispositions "Use As-Is" for nonconforming material.
- 3) NSP60-0004 will be revised to incorporate language that mandates even single quantity rejections to be captured and written up on an IR.
- 4) NSP60-0004 will be revised to incorporate language to address the requirements for detailed instructions rework, inspection result, sort result details on the bottom of the IR in the appropriate area set aside for this information or on an FJI should the level of detail required to perform the work necessitate.

(4) The date when corrective action will be completed.

NAMCO Response:

Namco Controls Response

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- 1) Not applicable, see above.
- 2) NSP60-0004 will be updated no later than 28Oct16.
- 3) NSP60-0004 will be updated no later than 28Oct16.
- 4) NSP60-0004 will be updated no later than 28Oct16.

C. Nonconformance 99901470/2016-202-03

Criterion XVI, "Corrective Action," of Appendix B, to 10 CFR Part 50, states, in part, that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Namco Quality Manual, Revision N, dated January 15, 2009, Section XVI, "Corrective Action", Step 2.1 states, "Conditions adverse to quality, such as supplier product or system nonconformities, and internal product or system non conformities, shall be promptly identified and corrected. Conditions significantly adverse to quality shall be documented on a Corrective Action Request (CAR) and processed in accordance with documented procedures." Step 2.1.1 states, in part, that steps to prevent recurrence should be identified and there should be verification that the corrective action has been implemented."

Contrary to the above, NAMCO failed to provide measures to assure significant conditions adverse to quality were promptly corrected in order to preclude repetition. Specifically, the NRC Inspection team identified the following examples where Namco opened and closed CARs but the corrective actions were ineffective to correct the significant condition adverse to quality and did not adequately verify implementation.

1. Namco provided conflicting close out disposition information on inspection reports and non-conformances as the identified in CAR 14-0011, which was closed on December 31, 2014. The NRC inspection team identified that NCR 2681, dated July 1, 2016, and NCR 2539, dated April 23, 2015, provided conflicting close-out information, where both nonconformance reports dispositioned the discrepant material "use as is" but also marked "Part Reject" in the header of NCR form. In IR 30-5139 (EH160-03097), dated January 15, 2015, the Material Review Board circled "Return to Vendor" and "Use-as-Is (with justification)" simultaneously without a technical justification.

2. Namco failed to correct CAPA 15-171, closed November 30, 2015, for Contact Block EA181-60010. CAPA 15-171 corrective actions required a revision to work instructions to include a pressure setting for contact blocks EA181-60010. After discussions regarding the pressure setting with Namco quality inspectors, the NRC inspection team identified that Namco had not updated the work instructions.

3. Namco failed to adequately correct CAPA/NCR Ref. No: E04450 and Engineering Change Request (ECR) 4547 for incorrect dimensions to Namco contact carrier EA184-43031 drawing. The NRC inspection team identified that from June 7, 2013, to July 23, 2015, Namco opened seven IRs due to the incorrect dimensions in the drawing. The team also found the design change described in E04450 and ECR 4547 had not been entered in to the corrective action program.

This issue has been identified as Nonconformance 99901470/2016-202-03.

(1) The reason for the noncompliance, or if contested, the basis for disputing the noncompliance.

NAMCO Response:

Namco Controls Response

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NAMCO acknowledges Non-conformance 99901470/2016-202-03, with the exception of (1).

- 1) In regards to Non-conformance 99901470/2016-202-03(1), it is believed that there was some confusion with regards to the use/purpose of the NCR form and how it relates to our Inspection Report (IR) form, QF-66. NSP60-0004, *Processing Nonconforming Material, Parts, Components and Services*, Paragraph 11.7, instructs that should Corrective and Preventative Actions will be required based on IRs (as appropriate) that NSP60-0011, *Corrective Action Requests* implemented. NSP60-0011, Paragraph 5.2, informs that "All corrective action requests will be processed as described in ISO 9001 Corrective and Preventive Action Procedure 8.5.2. Our ISO 9001 Procedure 8.5.2, Paragraph 5.7.1 that the supplier will be issued an NCR for product non-conformances. The NCR form is generated from a Lotus Notes database. In the creation/generation of the form the author(s) implemented a header that would later allow for filtering the reasons for the form into four categories, consisting of: Advance Deviation, Material Purge, Part Reject and Scrap. When an IR is written it is for nonconforming material. Nonconforming material inherently falls into the Part Reject category of the four mentioned above. The final disposition of the part(s) in question will appear on the IR and in the body of the NCR form. The header simply conveys the category, and not the final disposition, which will absolutely be captured on the IR as this is the governing tool for material disposition. An example of this is shown in NCR 2539 for PN EA742-12600 where the IR 30-5218 disposition is *Use-As-Is (With Justification)*, the NCR header shows *Part Reject* box ticked, and the body of the NCR lists in the Comments section *UAI DOES NOT AFFECT FUNCTION*. (See Supporting Documents Section, 202-03(1)-1).
With regard to IR 30-5139, the Final Disposition section does contain two final dispositions, *Use As Is* (UAI) and *Return to Vendor* (RTV). The rationale is that there were multiple nonconformances; the first was a paperwork issue where the CofC did not contain Part Number or the Revision Level, the second was for failing to meet performance specification (spring rate). At Namco we disposition each nonconformance that appears on the IR form. The missing Part Number and Revision was *Use As Is* (after confirming the receipt was against the proper Part Number and Revision). Conversely, the spring rate failure was deemed unsuitable for use and was therefore dispositioned as *Return to Vendor*. The most restrictive disposition as it pertains to nonconforming material will always take precedence. In this case RTV will supersede UAI. (See Supporting Documents Section, 202-03(1)-2)
- 2) In regards to Non-conformance 99901470/2016-202-03 (2), Namco acknowledges that corrective actions for CAPA 15-171 were not satisfactorily completed to address the revision of work instructions as it relates to addressing the pressure required to properly assemble the contact block EA181-60010.
- 3) In regards to Non-conformance 99901470/2016-202-03 (3), Namco acknowledges that seven IRs were opened due to incorrect position of leader lines on drawing EA184-43031 over the time frame of 7Jun13 through 23Jul15 and that E04450 (create date 22Jan15) and E04547 (create date 4Mar15) have yet to be completed and signed off. Namco's procedures, NSP60-0011, Paragraph 5.3, states *Corrective action requests are issued based on whether or not the identified non-conformance impacts the safe operation or performance of the product, the ability of the product to perform its intended function, internal or external costs or the frequency*

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of recurrence. Given that there is no issue with the physical part itself, but rather improper leader line location this would necessitate the need for a CAPA.

(2) The containment and corrective steps that have been taken and the results achieved.

NAMCO Response:

- 1) Not applicable, see above.
- 2) The Nuclear Product Work Order Routing for Part Number EA181-60010 Sequence 30 was updated on 14Jul16 (during NRC audit) to add "*SET PRESS TO 500 (+/-10% PSI) & STAKE*". This Sequence requires the Associate performing this operation to sign-off as complete and compliant (see Supporting Documents Section, 202-03(2) Additionally, CAPA 15-171 does indicate that the Manufacturing Engineer verified that "*Subsequent parts did not crack as confirmed by QC Inspection.*" at the time that this CAPA was closed. In response to the NRC's finding the Quality Manager reviewed the IR Log and confirmed that during the time when CAPA 15-171 was opened (30Oct15) and closed (30Nov15) there were no additional IRs generated for contact block EA181-60010. As of this writing, there have been no additional IRs written for damaged contact block EA181-60010.
- 3) ECR E04450 has been closed as *Rejected* with the note *Duplicate: see ECR E04547*. ECR E04547 is in process of being released and is currently awaiting Engineering review and sign-off. The containment of this issue is that while the drawing change has taken a while to be completed all receipts of this component have been written up on IRs to capture the discrepancy.

(3) The corrective steps that have been taken to avoid noncompliance.

NAMCO Response:

- 1) Not applicable, see above.
- 2) Revision to Nuclear Product Work Order Routing for Part Number EA181-60010 Sequence 30 was updated on 14Jul16 (during NRC audit) to add "*SET PRESS TO 500 (+/-10% PSI) & STAKE*" has been completed.
- 3) Not applicable, see above.

(4) The date when corrective action will be completed.

NAMCO Response:

- 1) Not applicable, see above.
- 2) Complete.
- 3) E04547 will be reviewed and signed off no later than 21Oct16.

D. Nonconformance 99901470/2016-202-04

Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50, states, in part, that "Activities affecting quality shall be prescribed by documented instructions, procedures, and drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Section 5, "Instructions, Procedures, and Drawings," of the Namco Quality Assurance Manual (QAM) outlines Namco's system of instruction, procedures, drawings, and other documents controlling activities that affect quality. Section 5, states, in part, that, "Work Order Routing and Assembly Inspection Record (AIR) are the primary documents used to provide instruction and indicate verification and completion of applicable manufacturing operations, inspections, and tests." Namco AIRs QF-24A, Revision K, and QF-24B, Revision H, are the controlling procedures for the assembly and testing of EA170/EA180 and EA740 limit switches, respectively.

Contrary to the above, as of July 15, 2016, NAMCO failed to ensure that personnel performed activities affecting quality in accordance with documented work instructions and processing documents and failed to ensure that assembly and test procedures included appropriate quantitative acceptance criteria for determining that important activities have been satisfactorily accomplished, as illustrated in the following examples.

- 1. Namco failed to ensure that electrical continuity testing of EA180 limit switches was accomplished in accordance with Procedure QF-24A.*
- 2. Namco failed to verify that the appropriate lubrication of EA180 switches was accomplished in accordance with Procedure QF-24A.*
- 3. Namco failed to ensure that for mandatory hold points specified in its procedures, work did not proceed beyond such hold point until the required inspections were complete.*
- 4. Namco failed to include appropriate quantitative acceptance criteria in Procedure QF-24B to determine if trip travel tests for the EA740 limit switch were satisfactorily accomplished.*

This has been identified as Notice of Nonconformance 99901470-2015-202-04.

(1) The reason for the noncompliance, or if contested, the basis for disputing the noncompliance.

NAMCO Response:

NAMCO acknowledges Non-conformance 99901470/2016-202-04.

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- 1) In regards to Non-conformance 99901470/2016-202-04(1), though it was signed prematurely, the sequence of the tests does not affect the qualification of the switch. The test was mistakenly signed out of order by the inspector, however all switches are inspected 100% and must pass prior to continuing along in the process and being certified and given a C of C.
- 2) In regards to Non-conformance 99901470/2016-202-04(2), at the beginning of each week the Namco inspectors prepare a list of the test equipment that is standardly used to perform both "pre-inspections" and "in-process inspections." This pre-inspection test equipment is used to inspect specific features on the housings and shafts during the kit validation inspection phase. The in-process inspection test equipment is used to inspect the features and performance requirements during the top-level build and includes things like go/no go gages and torque wrenches. Also included on the in-process inspection test equipment list are the consumables that have lot numbers and expiration dates (as applicable), such grease, oil and thread locker. During the build that was being witnessed by the NRC it so happened that one of the consumables was expended mid-lot and a new container was opened and used. The lot and expiration date of this new bottle was not recorded by the Quality inspector, until brought to his/her attention by the NRC inspector. In this particular instance a batch of oil had run out and replaced with a new batch in the cell. The oil had not been transcribed on the sheet being used by the inspectors for use on the AIR. This is not an approved process by Namco quality management and has been addressed as such with the inspectors.
- 3) In regards to Non-conformance 99901470/2016-202-04(3), over time the Namco assemblers and inspectors have developed work habits/processes to improve efficiencies when dealing with large order lot sizes. Typically, when an order lot size exceeds the available work surface space the assembler will break the build lot into smaller sub-groups and process these sub-groups up to hold points, which will be witnessed by the inspector, but not signed off at that time until all sub-groups have made it up to the hold point. However, sub-groups will move beyond the hold point by the assembler after given the "okay" by the inspector. This process of somewhat reflects "single piece flow" and while may be efficient it is not captured this way in the AIR and therefore is not an approved process.
- 4) In regards to Non-conformance 99901470/2016-202-04(4), the AIR does not include quantitative acceptance criteria, nor has it for more than twenty years. The Namco inspectors are trained on the appropriate acceptance criteria and when interviewed by the NRC inspector was able to provide accurate information as it pertains to the trip travel test.

(2) The containment and corrective steps that have been taken and the results achieved.

NAMCO Response:

- 1) The Quality Manager was made aware of this condition at the daily report-out during the NRC's audit. The Quality Manager briefed the Namco assemblers and inspectors the following morning and instructed that it was imperative to follow the AIR in the sequence noted and to continue to do so until such time that the AIR has been reviewed and possibly revised to incorporate some of the techniques/sequences that have evolved over time.

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- 2) The weekly pre-inspection and in-process inspection test equipment list will no longer include the information for the consumables that require recording of lot information. This action will require that the inspector review this information during the in-process portion of the inspection. The AIR will also include changes to the sequence and location where this information is to be recorded so it ties in more closely with the actual work/inspection sequence performed.
- 3) The Quality Manager was made aware of this condition at the daily report-out during the NRC's audit. The Quality Manager briefed the Namco assemblers and inspectors the following morning and instructed that it was imperative to follow the AIR in the sequence noted and to continue to do so until such time that the AIR has been reviewed and possibly revised to incorporate some of the techniques/sequences that have evolved over time.
- 4) The AIR is under review by Engineering and Quality to address the items found in 1), 2) and 3) and approved changes are incorporated so will the appropriate quantitative acceptance criteria for the trip travel test.

(3) The corrective steps that have been taken to avoid noncompliance.

NAMCO Response:

- 1) Namco Quality, Manufacturing Engineering and Design Engineering are reviewing the AIR taking into consideration the findings noted above and will determine acceptable changes that will not affect the Qualification of the limit switches. Until such time, the assemblers and inspectors are to follow the AIR as currently written. Periodically, the process is visually audited by the Namco Quality Engineer and the Quality Manager to ensure adherence to the documented process is being followed. To date there have been no failure to adhere to the documented process.
- 2) Namco Quality, Manufacturing Engineering and Design Engineering are reviewing the AIR taking into consideration the findings noted above and will determine acceptable changes that will not affect the Qualification of the limit switches. Until such time, the assemblers and inspectors are to follow the AIR as currently written. Periodically, the process is visually audited by the Namco Quality Engineer and the Quality Manager to ensure adherence to the documented process is being followed. To date there have been no failure to adhere to the documented process.
- 3) Namco Quality, Manufacturing Engineering and Design Engineering are reviewing the AIR taking into consideration the findings noted above and will determine acceptable changes that will not affect the Qualification of the limit switches. Until such time, the assemblers and inspectors are to follow the AIR as currently written. Periodically, the process is visually audited by the Namco Quality Engineer and the Quality Manager to ensure adherence to the documented process is being followed. To date there have been no failure to adhere to the documented process.
- 4) Update to the AIR will address this nonconformance.

(4) The date when corrective action will be completed.

NAMCO Response:

- 1) The AIR will be updated no later than 15Nov16.

Namco Controls Response

NRC Notice of Nonconformance Inspection Report 99901470/2016-202, Dated August 29, 2016

- 2) The AIR will be updated no later than 15Nov16.
- 3) The AIR will be updated no later than 15Nov16.
- 4) The AIR will be updated no later than 15Nov16.

Non-Conformance Report

Assigned MRB Members

NCR Filter Setting.
All others are
dispositions

☐ Adv. Deviation ☐ Material Purge ☒ Part Reject ☐ Scrap

Engineering	Materials James Detloff/ETown/Dana herControls	QA / QC William Lewis/ETown/Dana herControls	Finance	Manufacturing John Petty/ETown/Dana herControls	Vendor
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NCR #: 2539	Part Number: EA742-12600	Rev: L	Description: STATIONARY CONTACT STRIP	Date Opened: 04/23/2015
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Supplier/Cell Resp: LAYSTROM MANUFACTURING CO	Sub-Assembly: 30-5218	Corrective Action: Required CA Due Date:	MRB Cage Location: Please Enter the location in the Cage or RTC if an internal vendor	RejectedQty: 1000	Lot Qty: 1,000
Originator: John Petty/ETown/Dana herControls	Orig. Cell/Dept: 0057	Qty Accepted: 1000	Qty. Scrapped:	Qty. Reworked:	Qty. Returned:

ADV. DEV. APPROVAL	MAT'L PURGE ORDER	RETURN TO VENDOR INFORMATION		
Date: 4/22/2015	Date:	P.O. #: 48392	RMA #: NA	
Authorization (Design Eng.): D GALINDO	Quality Authorization:	Debit Memo #: NA	RTV Date: NA	Buyer/Planner: KAY

#	Specification	Non-Conformance	Comments
1	.251-.255	.256-.2565	UAI DOES NOT AFFECT FUNCTION
2			
3			
4			

Processed by: BW	Inspected and Reviewed by (Quality): BW
Rework Process and Instructions: USE AS IS	Cell: 0057

Inspection Report Link:



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IR# 30-5139INSPECTION REPORT (IR) Page 1 of 1Date: 1-15-15

Namco Controls

Part Number: EH160-03097 Rev: 3 Description: Internal SpringLot Size: 50 Sample Size: 13/1 Inspected By: BW NC
24Supplier: Lee Spring Purchase Order #: 43039 W/O #: NA

***** Nonconformity *****

Item #	Description
1	Missing Danaher Part Number and revision level on CoFC
7	Spring rate .66xLn = .814 @ .546-.676
8	Spring rate .833 - 1.018 @ .718-.847

Remarks: _____

***** Final Disposition *****

Item #	Description / Instructions	Final Dispo.
1	Verify spring length on 5 springs in addition to DIR requirements IF correct, use as is.	<u>UAI</u>
7, 8	Does not need specification	<u>RTV</u>

Technical Justification: In addition to DIR inspection to commercially dedicate the parts, verifying the length shows that they are the correct Namco part. The P.O. number tied to EH160-03097 rev 4 is also referenced on the CoFC.

MATERIAL REVIEW BOARD: Scrap / Rework / Sort Return to Vendor Use-As-Is (With Justification)Engineering 7m A/n Date: 1/16/16Quality Assurance Wells Date: 1/9/15Manufacturing Key Merritt Date: 1/9/15

QF-66 Rev F Inspection Report

IR closed by: BW NC Date: 1/16/15
24

Nuclear Product Work Order RoutingWork Order No. **424013**Part No: **EA181-60010**Date: **10/4/2016**Description: **CONT BLK ASSY NSP60-0010**

Sequence	Operation	Work Center	Operation
5	66	9325	ISSUE DOCUMENTATION - UPDATED ON 7/14/2016 BY JWP € <i>AR 10/4/16</i>
10	1000	9600	ISSUE MATERIAL € WEAR CLEAN EXAMINATION GLOVES OR FINGER COTS WHEN € HANDLING PARTS. PLACE CONTACT STRIPS IN CLEAN € PLASTIC BAGS & SEAL. SUPPLY CLEAN BAGS FOR € PROCESSING PARTS. € <i>AR 10/4/16</i>
30	3010	9400	CLEAN WORK STATION WITH ALCOHOL USING A LINT FREE € CLEANING MATERIAL. WEAR CLEAN EXAMINATION GLOVES € OR FINGER COTS WHEN HANDLING PARTS. SET PRESS TO 500 € (+/-10% PSI) & STAKE. INSPECT 100% OF FINISHED PARTS € <i>AR 10/4/16</i>
35	3020	9400	SECURE (8) SCREWS € <i>AR 10/4/16</i>
40	3099	9400	CLEAN PARTS WITH ALCOHOL USING A € LINT FREE CLEANING MATERIAL. AFTER CLEANING- € PLACE PARTS INTO CLEAN PLASTIC TOTE TRAY OR CLEAN € CARDBOARD BOX LINED WITH CLEAN PLASTIC BAG AND € COVER. € <i>AR 10/4/16</i>
45	1500	9329	INSPECT PRESSED STRIPS FOR CRACKS IN INSERTS € <i>72 10-4-16</i>
50	1510	9329	INSPECT PER NSP-60-0010 € CHECK FOR PROPER STORAGE AND SEALING. € HANDLE PARTS W/CLEAN EXAMINATION GLOVES OR FINGER € COTS. RE-CLEAN ANY PARTS THAT ARE HANDLED DURING € INSPECTION AND REPLACE INTO PLASTIC BAG AND SEAL. €
9999	1999	9600	STOCK PER NSP60-0010 €

12
ON