MEGGITT

July 11, 2013
Ref: GG 0713-003

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

cc: Richard A. Rasmussen, Chief
Electrical Vendor Branch
Div. of Construction Inspection and Operational Programs
Office of New Reactors

Subject: Response to Notices of Violation and Nonconformances

Reference: (a) Voice message from Greg Galletti, NRC, on 11 June 2013.

(b) Voice message from Greg Galletti, NRC, on 01 July 2013.

(c) Nuclear Regulatory Commission Inspection Report, Docket No. 99901421/2013-201.

(d) Notice of Violation 99901421/2013-201-01, Notice of Nonconformance 99901421/2013-201-02, and Notice of Nonconformance 99901421/2013-201-03.

As granted by reference (a) and reaffirmed by reference (b), an extension was granted for this response until 12 July 2013.

This letter acknowledges receipt of reference (c). Meggitt Safety Systems, Inc. (MSSI) has reviewed Notice of Violation and Notices of Nonconformance of reference (d) and has enclosed responses to each.

If you have any questions regarding this letter, I can be reached either by phone (805) 584-4100 Ext. 8368 or e-mail at gene.griffis@meggitt.com.

Sincerely,
MEGGITT SAFETY SYSTEMS, INC.

Gene Griffis
Manager, Quality Assurance

Enclosures:
1. MSSI response to Notice of Violation 99901421/2013-201-01
2. MSSI response to Notice of Nonconformance 99901421/2013-201-02
3. MSSI response to Notice of Nonconformance 99901421/2013-201-03

IE09
NRO

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Response to NRC Notice of Violation 99901421/2013-201-01
Docket Number: 99901421
Inspection Report Number: 99901421/2013-201

Statement of Violation:

Meggitt failed to adopt appropriate procedures in accordance with 10 CFR 21.21(a)(1) and 10 CFR 21.21(a)(2) and failed to document and evaluate deviations in accordance with 10 CFR 21.51. Specifically, Meggitt's 10 CFR Part 21 implementing procedure, quality assurance procedure (QAP) 6-009, "10CFR21 Reporting Procedure," revision G, failed to include the following provisions:

1. Evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practical, and, except as provided in paragraph (a)(2) of this section, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected.

2. Ensure that if an evaluation cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person within 60 days of discovery of the deviation or failure to comply.

In addition, Meggitt failed to document and evaluate deviations identified in their corrective action program as required by 10 CFR 21.51. Specifically, CAR 13-007, regarding inspection of commercial grade items, met the criteria established by Meggitt for evaluation for reportability under 10 CFR 21, however, no records were available to confirm that an evaluation had been completed.

Response to Items 1 and 2 of Notice of Violation

1. Reason for the noncompliance:

Meggitt Safety System Inc.'s (MSSI) 10CFR21 Reporting procedure, QAP 6-009 (formerly QAP 15-02), was revised subsequent to an NRC visit in 1995, where they pointed out that for MSSI's products, MSSI did not have the capability to evaluate potential deficiencies. That much of what was contained in the reporting procedure was the responsibility of the utilities. All that MSSI could do with a potentially reportable issue was to notify our customers and provide whatever assistance was required for the customer/utility to perform the necessary evaluation.

Since that time, MSSI's reporting procedure was reviewed during every audit by NUPIC and every nuclear customer MSSI supplies to and, considering the limitation in our capability of evaluating potential nonconformances or noncompliance, our procedure was deemed adequate. It was only the most recent audits by the NRC and NUPIC that pointed out an inadequacy in the reporting timeline.

2. Corrective action steps taken and the results achieved:

MSSI QAP 6-009, "10CFR21 Reporting Procedure" has been revised to revision H, to ensure that the requirements of 10CFR21.21(a), (b) and (d) are clearly identified.

3. Corrective action steps that will be taken to avoid noncompliance:

MSSI QAP 6-009, "10CFR21 Reporting Procedure" has been revised to revision H, to ensure that the requirements of 10CFR21.21(a), (b) and (d) are clearly identified.

4. Date the corrective action will be completed:

QAP 6-009, Revision H, has been revised and released. A copy is attached.

Response to additional issue cited

1. Reason for the noncompliance: At the time Corrective Action Request INT 13-007 was generated, it was determined that the discrepancy was not potentially reportable. Engineering did not follow up with the documented justification for that determination.

2. Corrective action steps taken and the results achieved:

The discrepant parts were in MSSI's control. The discrepancy was caused by the Receiving Inspector not following the procedure properly for material verification, even after he was reminded of the proper method. The method the inspector used made the part a sacrificial part. Instead of scrapping the parts tested, he included them with the rest of the lots that went to stock. The subject parts were not installed in any pump assembly. The parts were captured and scrapped. The inspector involved had his employment terminated. At the time the Internal Corrective Action Request was generated, it was evident that the discrepancy was not potentially reportable, but Engineering did not follow through with documenting the justification. Engineering has since documented the engineering justification for determining the discrepancy was not potentially reportable.

3. Corrective action steps that will be taken to avoid noncompliance:

   The problem was discussed with the other inspectors to ensure they understood the procedures. The Corrective Action Form, QAD-100, was revised to highlight the requirement for an Engineering Justification when determining the discrepancy is not potentially reportable.

4. Date the corrective action will be completed:

   The Corrective Action Form, QAD-100, has been revised and the Engineering Justification for CAR INT 13-007 has been completed and attached to the CAR. Copies are attached.

Attachments:

1. QAP 6-009, Revision H, "10 CFR 21 Reporting Procedure"
2. QAD – 100-1a&b, Revision 03/13, "Corrective Action Request & Discrepancy Investigation" Form
3. Engineering Justification for CAR INT 13-007

Meggitt Safety Systems

QUALITY ASSURANCE PROCEDURE

QAP 6-009

10CFR21 REPORTING PROCEDURE

Prepared: 6/5/13 G. Griffis	Eng.:	QA: S. Kahm for 6/6/13	SIZE A	FSCM NO. 25693	QAP 6-009
Mfg.:	Checked: 6/5/13 C. Barnes			REV. H	SHEET 1 OF 11

REVISIONS

REV	DATE	DESCRIPTION	APPROVAL
E	06-13-97	New QAP Number Only (WER QAP 15-02)	GG / SED
F	04-02-03	Changed to MSSI Format, Revised Paragraph 2.1.3 "C", 5.1, 5.1.2, Deleted Figure 2 and renumbered Figures.	GG / TS
G	10-15-09	Changed to current format and significantly revised	GG / RT
H	05-21-13	Extensively revised	GG / SK

1.0 PURPOSE

To establish the procedure for reporting to nuclear customers and the Nuclear Regulatory Commission (NRC) deviations or possible noncompliance's which could, on evaluation, constitute substantial safety hazards in accordance with 10CFR21.

2.0 SCOPE

2.1 To ensure the safe operation of nuclear power reactors, the Nuclear Regulatory Commission (NRC) requires that any information indicating that unsafe conditions exist be reported to the NRC and the nuclear power plants.

2.2 Any deviations or failures to comply that could possibly be safety related issues are required to be brought to the attention of MSSI management and to be reviewed to determine if they should be reported to the NRC and nuclear customers.

3.0 REFERENCE DOCUMENTATION

3.1 MSSI DOCUMENTS

3.1.1 Quality Assurance Manual

3.1.2. QAP 6-001, "Nonconforming Material"

3.2 OTHER SPECIFICATIONS

3.2.1 Atomic Energy Act of 1954

3.2.2 Energy Reorganization Act of 1974, Section 206, Figure 1

3.2.3 10CFR21 — "Reporting of Defects and Noncompliance"

3.2.4 10CFR50, Appendix B — "Quality Assurance Criteria for Nuclear Power Plants & Fuel Reprocessing Plants"

3.2.5 NRC Administrative Letter 94-04, dated 11 April 1994, "Change of the NRC Operations Center Commercial Telephone & Facsimile Numbers"

3.3 Standard Forms

3.3.1 Material Review Report (MRR), QAD 301 or equivalent.

3.3.2 Material Removal Ticket (MRT), QAD 276

3.3.3 Corrective Action Request (CAR), Form QAD 100-1a & b

3.3.4 Possible Nuclear Hazard Reporting Form, QAD 184

3.3.5 Decision Flow Chart, Figure 2

4.0 DEFINITIONS (10CFR21)

4.1 BASIC COMPONENT

4.1.1 A component of a nuclear power reactor plant structure, system, component or part thereof necessary to assure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents.

4.1.2 Basic components include safety related design, analysis, inspection, testing, fabrication, replacement parts or consulting services that are associated with the component hardware.

4.2 DEFECT

4.2.1 A deviation in a basic component delivered to a purchaser for use in a facility or an activity subject to 10CFR21 regulations, if on the basis of an evaluation, the deviation could create a substantial safety hazard; or

4.2.2 The installation, use or operation of a basic component containing a defect as defined above; or

4.2.3 A deviation in a portion of a facility subject to the construction permit or manufacturing licensing requirements of 10CFR50 provided the deviation could, on the basis of an evaluation, create a substantial safety hazard and a portion of the facility containing the deviation has been offered to the purchaser for acceptance; or

4.2.4 A condition or circumstance involving a basic component that could contribute to the exceeding of a safety limit, as defined in the technical specifications of a license for operation issued pursuant to 10CFR50.

4.3 DEVIATION

A departure from the technical requirements included in a procurement document.

4.4 DISCOVERY

The completion of the documentation first identifying the existence of a deviation or failure to comply potentially associated with a substantial safety hazard.

4.5 EVALUATION

The process of determining whether a particular deviation could create a substantial hazard or determining whether a failure to comply is associated with a substantial safety hazard.

4.6 FAILURE TO COMPLY

When a facility, activity or basic component supplied to such facility or activity fails to comply with the Atomic Energy Act of 1954, or any applicable rule or regulation.

4.7 NOTIFICATION

The preferred method is by facsimile to the NRC Operations Center. If notification cannot be made this way, The notification can be made by telephonic communication to the NRC Operations Center or written transmittal of information to the NRC Document Control Desk.

4.8 SUBSTANTIAL SAFETY HAZARD

A loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any licensed facility or activity.

5.0 PROCEDURE

5.1 RESPONSIBILITY

5.1.1 All employees are responsible for informing their supervisor; Quality Assurance; or Vice President / Director of Quality Assurance; formally or informally, of any deviation or failure to comply that could possibly be a safety related issue they may feel exists, with regard to any parts supplied to any nuclear power reactor plant. If any employee knowing of a possible deviation or failure to comply does not feel that the issue is being properly dealt with, the employee can notify the NRC directly.

5.1.2 Any manager or supervisor who is informed of a possible safety related deviation or failure to comply regarding parts supplied to a nuclear customer shall inform the Vice President / Director of Quality Assurance.

5.1.3 Engineering and Quality Engineering are responsible for examining possible deviations or failures to comply and to inform the Vice President / Director of Quality Assurance if a reportable deviation or failure to comply appears to exist.

5.1.4 The Vice President / Director of Quality Assurance is responsible for notifying the President, the NRC and any applicable nuclear customers of a reportable deviation or possible failure to comply.

5.1.5 Contract Administration is responsible for determining which nuclear customers were supplied any parts or services that have been identified as having a reportable deviation or possible failure to comply, and informing the Vice President / Director of Quality Assurance.

5.1.6 The President is responsible for ensuring compliance with 10CFR21.

5.2 POSTING REQUIREMENTS

5.2.1 The following documents are required to be posted in conspicuous locations within the company:

5.2.1.1 Section 206 of the Energy Reorganization Act of 1974

5.2.1.2 10CFR21 - "Reporting of Defects and Noncompliance"

5.2.1.3 This Quality Assurance Procedure, QAP 6-009

5.2.2 Quality Assurance shall post the documents listed in section 5.2.1 in conspicuous locations for employees to see.

5.2.3 As a minimum, the documents shall be posted in the following locations:

5.2.3.1 Near time clock(s)

5.2.3.2 Bulletin boards on manufacturing floor

5.2.3.3 Receiving Inspection

5.2.3.4 Material Review Board (MRB) area

5.3 IDENTIFICATION

NOTE: See Flow Chart, Figure 2.

5.3.1 In most cases, MSSI does not have the capability to evaluate deviations or failures to comply in order to identify the existence of defects or failures to comply associated with a substantial safety hazard. MSSI does not know what systems and/or redundancies the utility may have in place to address or mitigate such issues. If a deviation is discovered, the process in this procedure shall be followed.

5.3.2 Nonconformance's in material/hardware/equipment are initially documented on MRRs or MRTs. They are reviewed and dispositioned in MRB by Engineering and Quality Assurance. Any nonconformance that does or could exist in any safety related material/hardware/equipment delivered to a nuclear customer shall be

documented on a "Report of Possible Nuclear Safety Hazard" form. Engineering shall provide sufficient detail of the nonconformance and potential impact to assist the Vice President / Director of Quality Assurance in determining whether or not a report is required.

5.3.3 Other nonconformance's or failures to comply could be discovered through audits or surveys; inspections; reviews of reports, tests, or inspections; Corrective Action Requests, dedication of Commercial Grade Items similar to any dedicated previously, notification from suppliers, etc. These shall be brought to the attention, through any suitable means, to the Vice President / Director of Quality Assurance.

5.3.4 Any employee who has even a concern that a deviation may exist in any material/hardware/equipment supplied as nuclear safety related, or any person or material/hardware/equipment has failed to comply with any nuclear requirements is encouraged to make that information known. Making that information known is more important than how to report it. The information can be reported formally or informally. It can be reported verbally to supervisors; managers; QA; or the Vice President / Director of Quality Assurance. It can be reported anonymously by phone or by filling out the "Report of Possible Nuclear Safety Hazard" form, QAD 184, and forwarding it to the Vice President / Director of Quality Assurance.

5.3.5 Of primary importance is reporting what could be a deviation or failure to comply that might create a substantial safety hazard at any nuclear power reactor plant. If any employee knows that a possible deviation or failure to comply has been identified in accordance with Sections 5.1.1, 5.1.2 or 5.1.3 but which has not been properly dealt with, that employee can make a telephone report to the NRC. These reports can be made confidentially or anonymously and the NRC will accept collect calls to make these reports.

5.3.6 Completion of QAD 184 constitutes "discovery" as defined in Section 4.4 above and shall be done expeditiously and submitted to the Vice President / Director of Quality Assurance for review.

5.4 REVIEW BY THE VICE PRESIDENT / DIRECTOR OF QUALITY ASSURANCE

5.4.1 The Vice President / Director of Quality Assurance shall review all reports, and associated support information, of possible deviations or failures to comply as detailed above. Engineering and/or Quality Engineering shall support the Vice President / Director of Quality Assurance as necessary.

5.5 NOTIFICATION

5.5.1 The Vice President / Director of Quality Assurance must notify the NRC and any applicable nuclear customers when information is obtained that reasonably indicates a deviation or failure to comply has been discovered in any product that has been supplied as a safety related item to a nuclear power reactor plant, even if that item was supplied by another manufacturer.

5.5.2 Upon discovery, the Vice President / Director of Quality Assurance shall inform the President and Contract Administration within twenty four hours. The Vice President / Director of Quality Assurance shall notify the NRC and customers identified by Contract Administration within five working days if it is determined that MSSI is unable to perform the evaluation.

5.5.3 In the event that a defect or failure to comply has in fact occurred, the Vice President / Director of Quality Assurance shall notify the NRC within two days following receipt of the information, as well as any affected customer.

5.5.3.1 Written notification to the NRC shall be made within 30 days following receipt of information by the Vice President / Director of Quality Assurance on the identification of a defect or failure to comply, to the following address:

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

5.5.4 In the absence of the Vice President / Director of Quality Assurance, the President shall perform the review and notification requirements of Sections 5.3.1 and 5.3.2.

5.5.5 Notification shall be made by facsimile to:

NRC OPERATIONS CENTER
(301) 816-5151

5.5.6 If notification cannot be sent by facsimile, then it shall be made by telephone to the primary number: (301) 816-5100. The backup number is (301) 951-0550. Verification that the facsimile has been received should be made by calling the NRC Operations Center.

5.6 REPORT CONTENT

5.6.1 The report shall include, but need not be limited to, the following information, to the extent known:

5.6.1.1 Name and address of the individual(s) informing the NRC.

5.6.1.2 Identification of the facility, activity or the basic component supplied for such facility or activity within the United States which fails to comply or contains a deviation.

5.6.1.3 Identification of the firm supplying the basic component which fails to comply or contains a deviation.

5.6.1.4 Nature of the deviation or failure to comply.

5.6.1.5 The date on which the information of such deviation or failure to comply was obtained or confirmed.

5.6.1.6 In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations of 10CFR21.

5.6.1.7 The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

5.6.1.8 Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

5.7 SUPPORT OF CUSTOMER EVALUATION

5.7.1 MSSI shall support, as necessary, nuclear customers in their evaluation process of any reported potential deviation or failure to comply.

5.8 MSSI EVALUATION

5.8.1 If it is determined that MSSI can evaluate the deviation or failure to comply, Quality Engineering shall coordinate the evaluation with Design Engineering, Manufacturing Engineering and any other resources deemed appropriate. The Evaluation or an Interim Report, if the evaluation cannot be completed within 60 days, shall be generated and submitted to the Vice President / Director of Quality Assurance who shall submit it to the NRC within 60 days of discovery of the deviation.

5.9 RECORDS

5.9.1 Records of reviews and any supporting documentation of reported deviations or failures to comply shall be retained for a minimum of five (5) years after the date of the evaluation.

5.9.2 Any notifications sent to purchasers and affected licensees shall be retained for a minimum of five (5) years.

5.9.3 A record of the purchasers of basic components must be retained for ten (10) years after delivery of the basic component or service associated with a basic component.

NOTICE TO ALL EMPLOYEES
THIS FACILITY IS SUBJECT TO THE PROVISIONS OF
SECTION 206 OF THE ENERGY REORGANIZATION ACT OF 1974

NONCOMPLIANCE

SECTION 206(A) – ANY INDIVIDUAL VICE PRESIDENT / DIRECTOR OF QUALITY ASSURANCE , OR RESPONSIBLE OFFICER OF A FIRM CONSTRUCTION, OWNING, OPERATING, OR SUPPLYING THE COMPONENTS OF ANY FACILITY OR ACTIVITY OR ACTIVITY WHICH IS LICENSED OR OTHERWISE REGULATED PURSUANT TO THE ATOMIC ENERGY ACTION OF 1954 AS AMENDED, OR PURSUANT TO THIS ACT, WHO OBTAINS INFORMATION REASONABLY INDICATING THAT SUCH FACILITY OR ACTIVITY OR BASIC COMPONENTS SUPPLIED TO SUCH FACILITY OR ACTIVITY:

1. FAILS TO COMPLY WITH THE ATOMIC ENERGY ACT OF 1954, AS AMENDED, OR ANY APPLICABLE RULE, REGULATION, ORDER, OR LICENSE OF THE COMMISSION RELATING TO SUBSTANTIAL SAFETY HAZARDS, OR

2. CONTAINS A DEFECT WHICH COULD CREATE A SUBSTANTIAL, SAFETY HAZARD, AS DEFINED BY REGULATIONS WHICH THE COMMISSION SHALL PROMULGATE, SHALL IMMEDIATELY NOTIFY THE COMMISSION OF SUCH FAILURE TO COMPLY, OR OF SUCH PERSON HAS ACTUAL KNOWLEDGE THAT THE COMMISSION HAS BEEN ADEQUATELY INFORMED OF SUCH DEFECT OR FAILURE TO COMPLY.

(B) ANY PERSON WHO KNOWINGLY AND CONSCIOUSLY FAILS TO PROVIDE THE NOTICE REQUIRED BY SUBSECTION (A) OF THIS SECTION SHALL BE SUBJECT TO A CIVIL PENALTY IN AN AMOUNT EQUAL TO THE AMOUNT PROVIDED BY SECTION 234 OF THE ATOMIC ENERGY ACTION OF 1954, AS AMENDED.

(C) THE REQUIREMENTS OF THIS SECTION SHALL BE PROMINENTLY POSTED ON THE PREMISES OF ANY FACILITY LICENSED OR OTHERWISE REGULATED PURSUANT TO THE ATOMIC ENERGY ACT OF 1956, AS AMENDED.

(D) THE COMMISSION IS AUTHORIZED TO CONDUCT SUCH REASONABLE INSPECTIONS AND OTHER ENFORCEMENT ACTIVITIES AS NEEDED TO INSURE COMPLIANCE WITH THE PROVISIONS OF THIS SECTION.

FEDERAL REGULATIONS WHICH ESTABLISH PROCEDURES AND REQUIREMENTS FOR IMPLEMENTATION OF SECTION 206 CAN BE FOUND IN TITLE 10, CODE OF FEDERAL REGULATIONS, PART 21 (10CFR21).

ANY EMPLOYEE WHO WISHES TO EXAMINE THE PROVISIONS OF 10CFR21, OR WHO WISHES TO MAKE A REPORT AS REQUIRED BY SECTION 206, SHOULD PROMPTLY CONTACT HIS SUPERVISOR OR HIS DEPARTMENT MANAGER AND CONSULT THE NUCLEAR PROGRAM MANAGER FOR APPROPRIATE DEFINITIONS AND REPORTING INSTRUCTIONS.

FIGURE 1
(Reference – use latest revision)

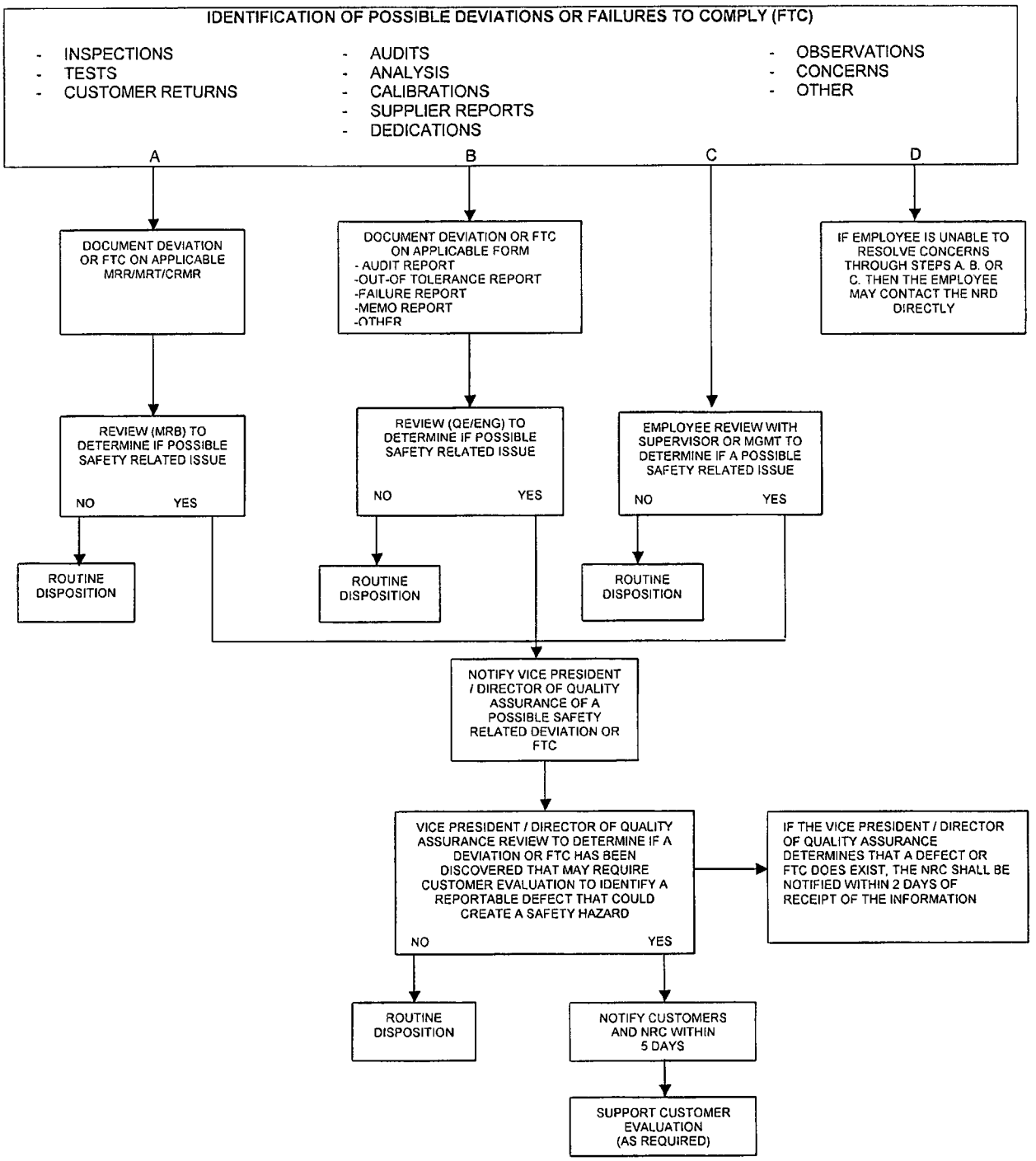

FIGURE 2

SIZE A	FSCM NO. 25693	QAP 6-009
	REV. H	SHEET 11 OF 11

Meggitt Safety Systems
1915 Voyager Avenue
Simi Valley, CA 93063
Phone: 805-584-4100
FAX: 805-577-8962
e-mail:

CORRECTIVE ACTION REQUEST
&
DISCREPANCY INVESTIGATION
NO.

Issued by:

DATE:	**REPLY DUE DATE:**
SUPPLIER/DEPARTMENT:	**RESPONSIBILITY:**
PART NUMBER:	**PO/SO/WO NUMBER:**
SERIAL NUMBER:	**REFERENCE:**

1. DESCRIPTION OF DISCREPANCY:

Pc:

DOES THE CITED DISCREPANCY INVOLVE A PART HAVING A NUCLEAR SAFETY RELATED FUNCTION?
YES ☐ NO ☐
IF YES, IS IT POTENTIALLY REPORTABLE IN ACCORDANCE WITH 10CFR21? IF IT IS, REFER TO QAP 6-009 FOR REPORTING. IF IT IS NOT, REFER TO QAP 6-008 FOR AN ENGINEERING JUSTIFICATION.
YES ☐ NO ☐

2. CONTAINMENT (IF APPLICABLE)
IS CONTAINMENT REQUIRED: YES ☐ NO ☐
IF YES, ISSUE 48 HOUR CONTAINMENT CHECKLIST, FORM QAD 368

ROOT CAUSE ANALYSIS
ADEQUATE ROOT CAUSE ANALYSIS NEEDS TO BE PERFORMED TO SATISY BOTH INTERNAL AND CUSTOMER REQUIREMENTS. REFER TO QAP 6-008, SECTION 5.6 FOR INSTRUCTIONS. THE 5 WHYS SHALL BE COMPLETED, AS A MINIMUM, AND SUBMITTED WITH THE CAR RESPONSE.

3. CAUSE (ROOT CAUSE ANALYSIS DETERMINED BY INVESTIGATION):

CORRECTIVE ACTION REQUEST NO.		
4. CORRECTIVE ACTION – WRITTEN RESPONSE SHALL INCLUDE THE FOLLOWING: A. ACTION TAKEN TO CORRECT DISCREPANCY. B. ACTION TAKEN TO PREVENT RECURRENCE. C. ACTION TAKEN TO DETERMINE IMPACT ON PREVIOUS PARTS, PROCESSES OR PROCEDURES. D. DUE DATE FOR IMPLEMENTATION.		
SIGNATURE:	TITLE:	DATE:
MANAGERS SIGNATURE:	TITLE:	DATE:
** FOR MSSI QUALITY ASSURANCE USE ONLY **		
DISPOSITION: { } ACCEPTED { } REJECTED		Reason for Rejection: See Below
MSSI QA SIGNATURE	DATE	New Car Number:
** FOR MSSI QUALITY ASSURANCE USE ONLY **		
{ } REASON FOR REJECTION	MSSI QA SIGNATURE:	DATE:
VERIFICATION OF CORRECTIVE ACTION COMPLETED TO BE DOCUMENTED IN ON-LINE CAR LOG		
IMPLEMENTATION EFFECTIVENESS VERIFIED TO BE DOCUMENTED IN ON-LINE CAR LOG		

MEGGiTT

Date: 8Jul13

To: Gene Griffis, Quality Engineering

From: Jim Low, Engineering

Subject: **Engineering Justification for CAR INT 13-007**

Upon review of the details associated with the Pump Valve Disks P/N: 116A139P14, subject of CAR: INT 13-007, Engineering deems that the internal part discrepancy is not reportable under 10CFR21 for the following reasons:

- The part in question was damaged as part of a destructive testing for the verification of a production lot and should have been condemned
- The subject part was never installed into a pump and/or put into service by a utility.
- The valve disk provides no sealing boundary of containment or sub-systems.
- If the installation oriented the part correctly, the part would indeed have functioned correctly, without incident. If oriented incorrectly, the valve disk would not have sealed and the pump performance would have shown an immediate degradation during post-installation functional test.
- Performance testing is performed on 100% of components per ITP-CAMS-055, which would identify any anomalies.
- The part was recovered and removed from stock, with the remainder of the components in stock being fully compliant.

Jim Low
Engineering Manager, Nuclear Gas Analyzers

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Response to NRC Notice of Nonconformance 99901421/2013-201-02
Docket Number: 99901421
Inspection Report Number: 99901421/2013-201

Statement of Nonconformance:

Contrary to Criterion III, "Design Control", of 10 CFR 50, Appendix B , in that, in part, "applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions" and also, in part, "measures shall 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"; and to Criterion V, "Instructions, Procedures and Drawings," of 10 CFR 50, Appendix B, and states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances..."; and Meggitt Standard Operating Requirements (SOR) 101, revision 5, dated January 20, 2009, Meggitt did not adequately consider both environmental conditions (environmental qualification) and performance requirements (seismic requirements) in establishing the suitability of application of certain safety-related SSCs.

1. Meggitt SOP 108, "Commercial Grade Item Dedication (CGI)," revision 4, dated October 6, 2008 and QAP 5-009, "Commercial Grade Dedication," revision F, dated January 5, 2009, do not provide sufficient guidance on the need to consider seismic or environmental qualification when identifying a component's critical characteristics. The procedures also lack guidance on what tests should be performed to ensure design changes have not been made that would invalidate the qualification of commercially procured replacement components.

   As a result, Meggitt's technical evaluation to establish, in part, suitability of application of replacement parts, regarding 120 VAC replacement relays supplied to AREVA under purchase order 1010002025, dated January 18, 2010, did not adequately consider seismic or environmental qualification requirements, and subsequently did not require performance of testing or analysis to ensure that the replacement parts, were identical in form, fit, and function to those that were previously qualified and tested.

   Additionally, Meggitt's Commercial Grade Dedication sheet, "CGD 015" did not provide sufficient guidance on how to measure input power when testing commercial grade relays and the accompanying data sheet did not provide sufficient evidence that all tests had been satisfactorily performed.

Response to Notice of Nonconformance

1. Reason for the noncompliance:

Regarding the components and parts used in the H_2/O_2 Gas Analyzer systems, the Commercial Grade Item (CGI) Dedication process at Meggitt Safety Systems (MSSI) was considered to be adequate since MSSI has routinely undergone numerous audits by NUPIC and other nuclear customers which have reviewed the CGI process, without finding or discrepancy. However, in light of the current refocusing of scrutiny worldwide on CGI Dedication, MSSI recognizes the requirement for a reevaluation of MSSI's Commercial Grade Dedication Program. MSSI's program did not previously delineate the documentation requirements and continuing maintenance guidelines for CGI adequately.

2. Corrective action steps taken and the results achieved:

For the specific instance cited within the Notice of Nonconformance, the replacement 120VAC mechanical signal-control relay, an Engineering evaluation has been performed to examine the current adequacy of the components that have been delivered to the user community, including the current adequacy of the seismic and environmental qualification. This specific component is currently undergoing an increased-level qualification test, which will reconfirm the qualification capabilities.

3. Corrective action steps that will be taken to avoid noncompliance:

MSSI has undertaken a systematic overhaul of its CGI program as currently delineated in Standard Operating Procedure (SOP) 108, "Commercial Grade Item Dedication (CGI)". Document SOP-108 is being revised to include specific instructions and requirements to document the initial CGI engineering evaluation, and within this evaluation, the specifically identify the criterion and methodology for any subsequent changes from a commercial supplier that may affect qualification (seismic or environmental).

Document SOP-108 will give specific guidelines for both the documentation of the engineering evaluation of a commercial part and guidelines to include analysis for the monitoring of any future changes with regard to established qualification. In addition, a new document class CGE (Commercial Grade Evaluation) will be instituted to document, in parallel with the CGD-prefixed document, the Technical Evaluation performed for each item dedication in accordance with EPRI documents NP-5652 and TR-106439 (whereas the CGD documents will define the Critical Characteristics and Methods of Verification recurring testing requirements) in order to dedicate the commercial item.

MSSI will systematically review and revise each of its existing CGD-prefixed documents to include this evaluation documentation on an "as-used, attrition basis", with the current CGI scope of supply receiving the first priority.

For the specific instance cited in the Notice of Nonconformance, CGD-015 for the previously mentioned mechanical relay, requirements will be delineated to provide clear and precise direction as to the testing methodology and the evidence of testing and data sheet to be provided as a permanent record of test.

4. Date the corrective action will be completed:

The MSSI CGI Dedication program currently encompasses over 25 years of historical documentation and evaluations. As such, a systematic approach to revision will be required whereby the current scope of supply for CGI components will be addressed first.

The projected revision date of SOP-108, including revision and review is 30 Sep 2013, with active CGI component CGE generation commencing immediately thereafter (final completion of active CGI component review/revision is by 31 Dec 2013. CGD-015 for the mentioned mechanical relay will be completed first.

The scheduled completion date of the qualification program referred to under "Corrective Action Steps Taken" is 30 Aug 2013.

Response to NRC Notice of Nonconformance 99901421/2013-201-03
Docket Number: 99901421
Inspection Report Number: 99901421/2013-201

Statement of Nonconformance:

Contrary to Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR 50, Appendix B, which states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."; Criterion IX, "Control of Special Processes," of 10 CFR 50, Appendix B, which states, in part, "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualifies personnel using qualified procedures..."; and Meggitt Procedure MP-378, "Weld Procedure Development, Approval and Control," which states, in part that "all qualification test results shall be reviewed and approved by manufacturing engineering, quality engineering, and production management"; as of March 20, 2010, Meggitt did not perform an adequate qualification test evaluation to develop a qualified weld schedule (WS) consistent with the requirements of the welding program and Class 1E cable connector design specifications. In addition, the WS qualification test report had not been adequately reviewed and approved by all the required engineering disciplines, including manufacturing engineering, as required by MP-378.

Specfifically, WS-472, "Butt Weld 304L stainless steel," and the associated procedure qualification test record, dated November 23, 2010, failed to adequately document the weld penetration examination results in a way consistent with the requirements of the test and detailed design drawing 133126, "Transition Assembly," revision B, dated August 02, 2010. As a result, the actual weld penetration depths from use of the WS, were inconsistent with the recorded weld qualification test results and detailed design drawing requirements.

Response to Notice of Nonconformance

1. Reason for the noncompliance: The Manufacturing Engineer Technician improperly followed the verbal instructions from the Design Engineer who was developing the part detail drawing in parallel with the weld development and qualification. An outdated form was used to document the verbal criteria. The form was created by a company that Meggitt Safety Systems, Inc. (MSSI) acquired, a Kaman RF cable company, which was not updated after the acquisition. There has been an ongoing effort to consolidate procedures from several different acquisitions, which had not been completed with regard to the welding qualification. Most of the welds developed or revised since the Kaman acquisition involved RF cables, using the Kaman form. When WS-472 was developed and qualified, the ME Technician continued using the Kaman form instead of following the requirements of MP-

378, "Weld Procedure Development, Approval and Control". In evaluating the weld results he documented that they exceeded the requirements and informed the appropriate personnel, but didn't revise the test record to show the final weld criteria nor get all the proper signatures for acceptance of the weld.

2. Corrective action steps taken and the results achieved: During the audit, MSSI had the weld samples re-inspected by a Receiving Inspection Mechanical Inspector, and witnessed by an NRC Auditor. The final acceptance criteria for weld penetration was 0.030" minimum; the actual penetration results of the three samples ranged 0.041 – 0.045". The qualification test record for WS-472 has been corrected.

3. Corrective action steps that will be taken to avoid noncompliance: MP 378 has been revised to ensure the instructions for developing and approving weld schedules are complete and clear, and that the weld qualification process is clear and understandable. The procedure also includes a Test Report form and format that is easy to follow and clearly shows all the criteria and results and approval requirements.

4. Date the corrective action will be completed: Revisions to WS-472 and MP-378 have been completed. Copies are attached.

Attachments:

1. WS-472, Revision B, Dated 4/4/13
2. MP-378, Revision E, "Weld Procedure Development, Approval and Control"

APPROVAL, MFG. ENGR.	APPROVAL, PROD. MANG.	WELD SCHEDULE AMI 207 A ORBITAL WELDER	ASSY.NO
ME-7 4-4-13	MFG 34 4/4/13		133126
APPROVAL, Q.A. QSD QE 4-4-13		SCHEDULE: 472 REV B PAGE 1 OF 1 / DATE 4/4/13	

PART NO. 1 TRANSITION COLLAR 133188-1

PART NO. 2 TRANSITION PLATE 133198-1

SPECIAL CONDITIONS _____

MATERIAL # 1	
TRANSITION COLLAR O.D. 1.12 WALL THK: .060	
MATERIAL TYPE 304 SST	
MATERIAL # 2	
TRANSITION PLATE O.D. 1.12 WALL THK: .060	
MATERIAL TYPE 304 SST	

CIRCUMFERENCE	3.5	I.P.M	18
RPM	5.1	SECS/REV	11.8
DEGREES/SEC	30.7	PULSE	ON
PENETRATION REQ.	.030" MIN	ACTUAL	.030"-.045"
ELECTEODE ANGLE	0°	ELECTEODE GAP	.020"

GAS TYPE Ar 98% +H_2 2% TOOLING NO. HS-8838 WELD HEAD SIZE LARGE (9-2500)

GAS-FLOW RATE: 40 SCFH WELD HEAD RPM RANGE 1-50

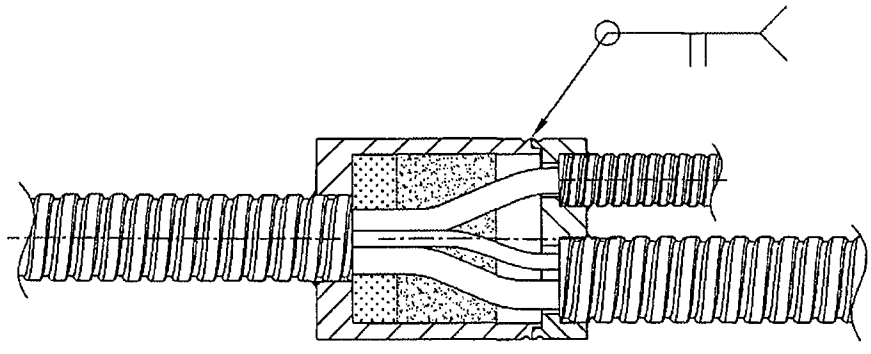
PROG. #	OD	WALL	TYPE	MAT
(064)	1.12	.060	SP	SST

PRE-PURGE-	POST	UP-SLOPE-DOWN	ROT--DLY
10	8	0.0 0.5	CW 0.2

LVL	PLUSE	ROT	PRI--RPM--BAC
1	ON	CONT	5.6

	TIME	PRI--AMP--BCK		PRI-PULSE-BCK	
1	12.3	50.0	25.0	0.04	0.02

NOTES: INSTALL TOOLING SO THE ELECTRODE IS IN THE CENTOR OF THE WELD PREP



MEGGITT Meggitt Safety Systems

Electronic Resources Division
Whittaker Corporation
1955 North Surveyor Avenue
Simi Valley, California 93063
FSCM: 72152

ENGINEERING DEPARTMENT

DOCUMENT

MP 378

TITLE

WELD PROCEDURE DEVELOPMENT, APPROVAL AND CONTROL

CURRENT DESIGN ACTIVITY CAGE CODE 25693
MEGGITT SAFETY SYSTEMS INC
1915 VOYAGER AVENUE
SIMI VALLEY, CALIFORNIA 93063-3348

SENSITIVE BUT UNCLASSIFIED – EXPORT CONTROLLED – EAR RESTRICTED
THIS TECHNOLOGY CONTAINS TECHNICAL DATA CONTROLLED UNDER THE EXPORT ADMINISTRATION REGULATIONS (15 CFR 730-774)

ECCN: EAR99

APPROVALS			CONTROLLED DISTRIBUTION		
PREPARED: Huddleston 9/17/90	ENG: --	Q.A.: R. Couser 9/20/90	SIZE A	CAGE CODE: 72152	MP 378
MFG: J. Sobelman 9/20/90	CHECKED K. Huddleston 9/19/90			REV. E	SHEET 1 of 10

REV.	DATE	DESCRIPTION	APPROVALS	
A	19900917	Initial Release	KH	RC
B	20090126	Revised per ECO 203911	AN	AL
C	20092009	Revised per ECO 203944	AN	AL
D	20091005	Revised per ECO 204694	AN	AL
E	20130522	Revised per ECO 208406	[signature]	[signature]

(R)

SIZE A	CAGE CODE 72152	MP 378
	REV. E	SHEET 2 OF 10

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1.0 SCOPE

This procedure applies to the preparation, qualification, release and control of weld schedules used for Meggitt Safety Systems (MSSI) production.

2.0 PURPOSE

This procedure sets forth the process to be followed to develop the specific procedure for welding MSSI products.

3.0 REFERENCE DOCUMENTS

3.1 Meggitt Safety Systems Documents

3.1.1 Quality Assurance Manual

3.1.2 Manufacturing Training Procedure, MDP-8500

3.1.3 Material Review Board, QAP 6-004

3.1.4 Standard Test Procedure, STP-2189

3.1.5 Inspection Instruction Visual Inspection for Welds, II-124

4.0 WELD PROCEDURE (SCHEDULE) PREPARATION

In this document the Weld Procedures may be referred to as Weld Schedule, WS.

4.1 MSSI Manufacturing Engineering shall prepare written weld procedure schedule, (WS) for welding used in the manufacture of MSSI production products. A WS shall list all parameters for the welding process and description of parts in the junction necessary for the production welder to produce welds in conformance with MSSI design engineering requirements, see appendix A. The format of the WS may deviate from the example in appendix A provided the all the indicated information is present. Controlled electronic forms of the WS are considered equivalent to hard copies for the purpose of production release and access.

4.2 As a minimum the WS shall include the base metal specification type and grade to be joined by welding, type of filler material, (if applicable), thickness, and other variables deemed necessary for a consistent conforming weld.

5.0 WELD PROCEDURE (SCHEDULE) QUALIFICATION AND APPROVAL

5.1 MSSI Manufacturing Engineering shall qualify the WS by preparing a minimum of three (3) identical weld joint samples using the specified parameters. Additional samples may be required per customer direction.

5.2 The weld(s) specimens produced shall be subjected to the following verification:

5.2.1 Visual Examination

The exposed surface of all weld joints shall be visually examined per II–124.

5.2.2 Helium Leak Test (for hermetic welds)

The weld sample shall be helium leak tested per STP-2189.

5.2.3 Pull Test (as applicable)

Pull test methods and results shall be performed and documented as required by the associated design requirements.

5.2.4 Weld Penetration Examination

The weld joint sample shall be sectioned transverse to the direction of weld and the surface of section shall be ground and polished to suitable finish. The polished section shall be examined visually and at a magnification from 3X to 10X for fusion characteristics and weld defects. The section shall than be etched to reveal macrostructure and reexamined at 3X to 10X to measure the weld bead parameters e.g., weld bead penetration, weld bead width, etc. The etched section shall be examined for any weld defects per II–124.

5.3 The qualification test results shall be reviewed and approved by MSSI Manufacturing Engineering, Quality Engineering and the Production Manager responsible for the welding operation prior to release to production. Evidence of this approval shall be a signed or stamped and dated master weld schedule, reference Appendix A. Latest Qualification Test Record Form is on file with Manufacturing Engineering and should be filled out electronically and manually (where applicable), reference Appendix B.

5.4 Approved master weld schedules and weld sample macrosections shall be filed and maintained indefinitely by Quality Engineering.

6.0 WELD PROCEDURE (SCHEDULE) RELEASE TO MSSI PRODUCTION.

6.1 The approved current revision of weld schedules, WS's, shall be controlled by Manufacturing Engineering and available for review by authorized personnel via revision controlled paper or electronic copies of the current master WS.

6.1.1 Release to Production

The Manufacturing Engineering Technician shall maintain the master weld schedule file and will ensure that the weld schedule binders are updated with the current approved weld.

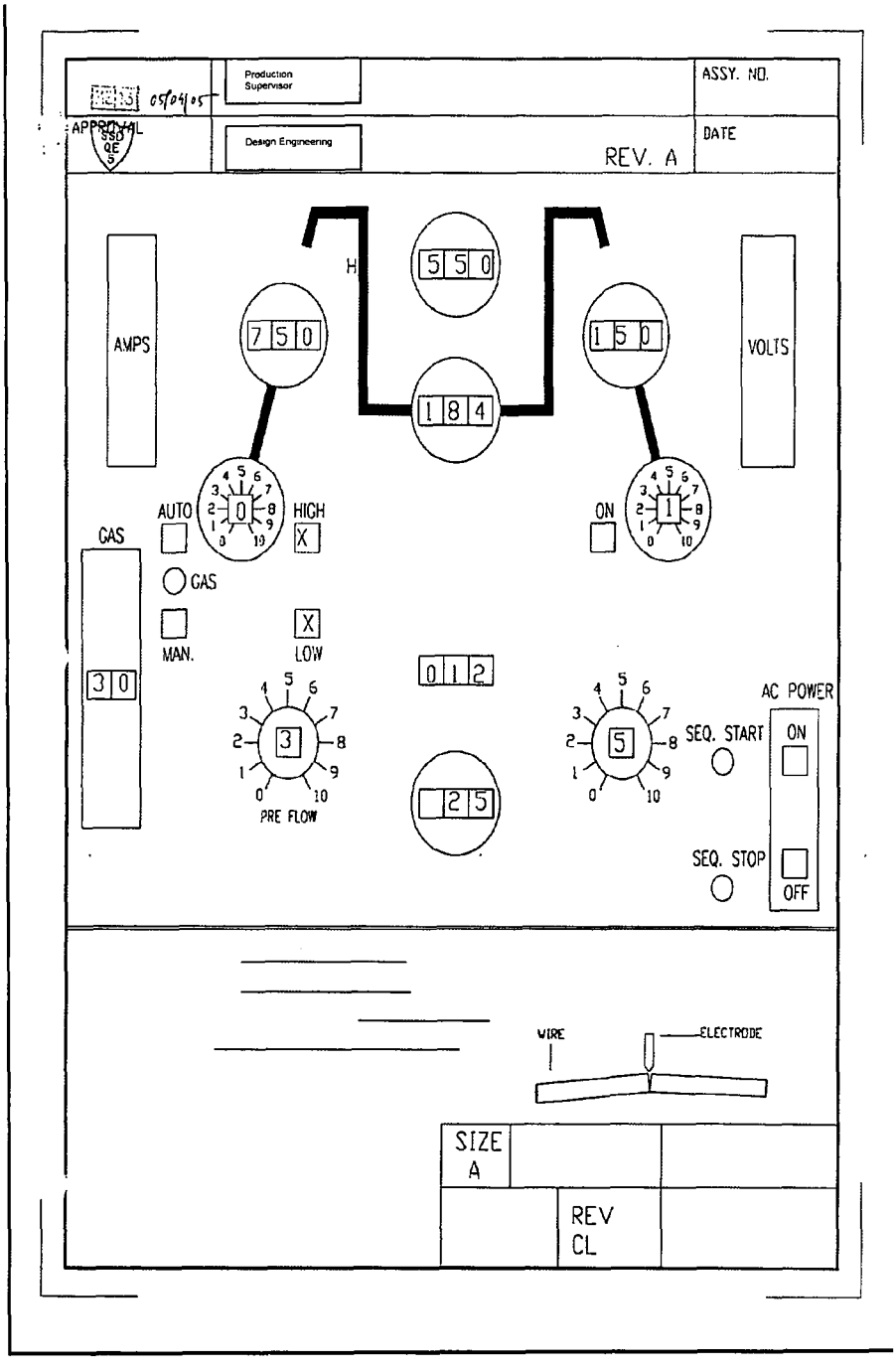
6.2 Manufacturing Engineering shall refer to the approved weld schedule(s) on the production router as applicable prior to release to production.

Production Supervision shall ensure production personnel are successfully trained per the current revision WS prior to its utilization in MSSI production in accordance with MDP-8500, MSSI Manufacturing Training Procedure.

7.0 WELD PROCEDURE (SCHEDULE) MODIFICATION AND REVISION CONTROL

7.1 There shall be no deviations from the parameters of the WS in normal production unless the proposed change is documented and qualified per paragraphs 4.0, 5.0 and 6.0 of this procedure or as approved and documented in accordance with MSSI Material Review Board, QAP 6-004, and applicable customer contractual requirements.

APPENDIX A
Example of Approved Master Weld Schedule
(Page 1 of 1)



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APPENDIX B

WELDING PROCEDURE QUALIFICATION
TEST RECORD

WELDING PROCEDURE QUALIFICATION TEST RECORD

Weld Schedule: _____ Weld Type: _____ Date: _____

Weld Process: _____ Machine used: _____

Materials (S) Certification: _____ Or W.O./P.O. Number: _____

Materials (S) Certification: _____ Or W.O./P.O. Number: _____

Material Thickness of Least Cross Sectional Area: _____

Inert Gas Composition: _____

Specification: _____

Qualification procedure: _____

_____

_____

_____

_____

1. Results of visual examination of weld joint after welding per II-124 or II-266
Other applicable criteria:

_____

_____

_____

Table1

Sample #	Accepted	Failure type and location	Stamp	Date

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2. Results of helium leak testing of the weld joint after welding per STP-2189
Other applicable criteria:

Table 2

Sample #	Results (calculated automatically)		Failure type and location	Spec requirements		Actual Values	Stamp	Date
	Accepted	Rejected		Min	Max			

3. Results of pull test after welding
Other applicable criteria:

Table 3

Sample #	Results (calculated automatically)		Failure type and location	Spec requirements		Actual Values	Stamp	Date
	Accepted	Rejected		Min	Max			

4. Results of sectioning weld joint after
Other applicable criteria:

_____

_____

Table 4

Sample #	Results (calculated automatically)		Failure type and location	Spec requirements		Actual Values	Stamp	Date
	Accepted	Rejected		Min	Max			

Comments:

_____

_____

This examination was performed by Meggitt Safety Systems Inc.

This testing was performed by: _____

We certify that the statement in these records are correct and that the test welds were prepared, welded, and tested to the intent of any other applicable Meggitt Safety Systems Procedures.

We also certify that the welding procedure defined by Schedule _____
meets procedure and performance requirements for welding assemblies.

Signatures: **Date:**

QA Engineer _____ _____

MFG Engineer _____ _____

Production Manager _____ _____

Note: Applicable test records may be attached.
Latest copy is available on the "O" drive
under O:\MFG ENGINEERING\MEconfig\WELD
SCHEDULE\qual_record.xls