



# Nebraska Public Power District

COOPER NUCLEAR STATION  
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321  
TELEPHONE (402)825-3811  
FAX (402)825-5211

QAD970133

50-298

June 18, 1997

TO: NUPIC Membership

FROM: Richard Gibson - ATL  
Senior QA Specialist  
NPPD at Cooper Nuclear Station

SUBJECT: Supplemental Information to NPPD Audit No. SA97-029 dated May 23, 1997

Dear NUPIC Member Representatives:

As a result of our internal critique and various comments and concerns from fellow NUPIC Members and the audited company, Nova Machine Products, Inc., supplemental information is being provided as clarification to the original report. The original report and associated checklist had inadvertently omitted details of the audit that were necessary to fully depict how the Nova QA program is established and implemented.

Please maintain the attached clarification report as part of the original package and replace associated checklist pages in the original report.

If you have any questions concerning this supplement, please do not hesitate to call me at (402) 825-5583.

Sincerely,

Richard L. Gibson - ATL  
Senior QA Specialist  
NPPD at Cooper Nuclear Station

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Q004

cc: NUPIC Audit Team  
Nova Supplier File

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## Clarification to SA97-029

### Sampling Plans

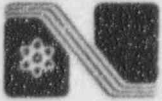
The sampling plans utilized at Nova Machine Products include ANSI/ASQCZ1.4 (MIL-STD-105E) for inspection activities and EPRI 7218 for commercial grade dedication activities.

The documented basis for utilizing EPRI 7218 for dedication activities includes ANSI B18.12, ANSI N45.2, N45.2.10 and N45.2.13 and the Industrial Fastener Institute's Fastener Standards 6th Edition. Although the bases for utilizing the EPRI guidelines is adequate, it may not satisfy the 95/5 percent confidence level in all cases.

As a result of conversations after this audit report was distributed, the following information is being given to the NUPIC organization for evaluation in accordance with the individual utility's QA Program requirements. Because of the NRC's dedication guidance regarding 95/5 percent confidence level in all cases, a utility's procurement document must be specific in detailing the necessary critical characteristics and possible safety applications of a part or component if 95/5 percent confidence is required.

### Deficiency SA97-029-01

Additional information was requested by certain NUPIC utilities regarding the finding, SA97-029-01. During review of procurement activities, the audit team noted procurement documents that were issued to vendors with incorrect QA Program references and goods received into stock with incorrect QA Program reference requirements on Certificate of Conformances/Compliances.



QAD970131

June 17, 1997

Mr. Jim Fitzwilliams  
NOVA Machine Products, Inc.  
PO Box 30879  
Middleburg Heights, OH 44130

Subject: Supplemental Information to NPPD Audit No. SA97-029 dated May 23, 1997

Dear Mr. Fitzwilliams:

As a result of our internal critique and various comments and concerns from fellow NUPIC members and yourself, supplemental information is being provided as clarification to the original report.

The original report had inadvertently omitted details of the audit that were necessary to fully depict how the NOVA QA program is effectively being implemented.

Please maintain this letter and attachments as part of the original report package.

If you have any questions concerning this supplement, please do not hesitate to call me at (402) 825-5583.

Sincerely,

Richard L. Gibson - ATL  
Senior QA Specialist  
NPPD at Cooper Nuclear Station

cc: Audit Team Members

## Clarification to SA97-029

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# Nebraska Public Power District

COOPER NUCLEAR STATION  
P.O. BOX 96, BROWNVILLE, NEBRASKA 68321  
TELEPHONE (402)825-3811  
FAX (402)825-5211

QAD970115  
May 23, 1997

Mr. Jim Fitzwilliam  
Quality Assurance Manager  
Nova Machine Products Corporation  
18001 Sheldon Road  
P.O. Box 30287  
Middleburg Heights, Ohio 44130

Dear Mr. Fitzwilliam:

This is to provide you with the results of the NPPD QA Supplier Audit #SA97-029. This audit, performed April 23-25, 1997, in your Middleburg Heights, OH, facilities resulted in one (1) finding and one (1) observation which will require your corrective action response within 30 days of your receipt of this report. The results of this audit are being provided to the membership of the Nuclear Procurement Issues Committee (NUPIC) in accordance with our original arrangements for the audit. It will be the responsibility of each NUPIC Member to review these results and determine applicability to their respective plants.

Attached to this letter as Attachment A is an "Executive Summary" and, as Attachment B, an "Audit Abstract." "Persons Contacted" are listed in Attachment C. The actual finding/observation forms follow. Please use these finding/observation forms for your corrective action response. All details of the audit are provided in these documents.

Your assistance and cooperation in the performance of this audit were appreciated. If you should have any questions or concerns with regard to this report, please call me at (402) 825-5583.

Sincerely,

Richard L. Gibson  
Sr. QA Specialist - Audit Team Leader  
Cooper Nuclear Station

J.S. Larson  
QA Supplier Supervisor/NUPIC Rep.  
Cooper Nuclear Station

RLG:mrc

Attachments

cc: NUPIC Membership  
NUPIC Audit Team  
Nova Supplier File

**EXECUTIVE SUMMARY**  
**1997 NUPIC JOINT UTILITY AUDIT OF NOVA MACHINE PRODUCTS**  
**APRIL 23/25, 1997**

Nova Machine Products Corporations, Middleburg Heights, OH is a manufacturer and distributor of various types of fasteners which are supplied to nuclear utilities under their ISO-9001 Program, and the American Society of Mechanical Engineers Boiler & Pressure Vessel Code (ASME) Section III and applicable sections of 10CFR50 Appendix B and ANSI N45.2.

The scope for this audit was to verify effective performance of the Nova Quality Assurance Program, as described by their Quality Assurance Manual 4th Edition and associate procedures.

There was one (1 ) finding and one (1) observation identified during the course of the audit. Listed below is a brief description of these discrepancies:

**Finding:** (97-029-01) Identified a lack of adequate reviews during processing of procurement documents;

**Observation:** (97-028-A) Noted that there is no requirement to issue procedure revisions in a timely manner. This poses a potential for procedures to be used by staff that have incorrect revisions. It should be noted that this is being issued for program enhancement, no actual conditions were identified in which incorrect revision of procedures were being used.

The audit remains **OPEN** pending successful response, verification, and closure of each item note above.

SA97-029  
**SUPPLIER AUDIT ABSTRACT**

**SUPPLIER NAME:** Nova Machine Products Corporation  
18001 Sheldon Road  
Middleburg Heights, OH 44130

**PERSONS CONTACTED:** See Attachment "C"

**AUDIT TEAM:** RL Gibson - Sr. QA Specialist  
Nebraska Public Power\*  
RL Kelley - QA Technical Specialist  
Nebraska Public Power\*  
FL Boyle - QA Engineer  
Niagara Mohawk Power\*  
Present at the entrance and exit conference \*

**AUDITS DATE:** April 24-26, 1997

**AUDIT SCOPE:** The verification of effective performance of the Nova Machine Products Corporation QA Program as described by the Quality Assurance Manual, 4th Edition, dated 8-23-96 and associated implementing procedures, in the Middleburg Heights, OH office. Audit planning input received from NUPIC members directed the audit to include sampling plan, traceability of material, and dimensional verification activities.

**AUDIT STATUS:**

There was one (1) finding and one (1) observation identified during the performance of this audit. Each of the items will require a corrective action response. None of the concerns, however, resulted in a recommendation of supplier limitations or restrictions. The audit remains **OPEN** pending successful response, verification, and closure of each item.

**AUDIT SUMMARY:**

Review of work document, QA Manual, and procedures and direct observation of various Nova Machine Product activities associated with the manufacturing of fasteners, determined that Nova has established a Quality Assurance Program that meets 10CFR50 Appendix B, ANSI N45.2 and ASME Section III requirements as committed to in their QA Manual dated 8-23-96. With the exception of the one (1) finding and one (1) observation (neither considered by the audit team as being safety significant), it was determined that the Nova QA Program is being effectively implemented. As previously noted, the concerns will require a response and corrective actions prior to this audit being closed.

### Order Entry

NUPIC Member input for this audit was received from several members and items being evaluated are included on the PBSA Worksheets. Handling of these orders by Nova was reviewed and verified to be as described in the Nova's Nuclear Quality Manual Section 11 and associated procedure NP-15.

Order entry reviews are conducted on all incoming orders by QC personnel to ensure Nova is able to meet specified QA requirements as well as ASME Code requirements as applicable. Upon completion of this initial review, the document goes to the production planner who makes the "Job" traveler/work document which is used to provide detailed instruction on how to manufacture or process the material. This "Job" document includes pre, inprocess and final inspection activities. It also includes processing activities such as NDE, pre-heat, plating and systems 21 or 22 gaging inspection.

**This area was evaluated as satisfactory with no findings or observations.**

### Design

No design activities are performed by NOVA. However, NOVA does participate in dedication of certain manufactured/purchased commercial grade items. Dedication practices were directly observed during the verification of their sampling plan which includes inspection and testing of material. Additional dedication activities were evaluated. They consisted of verifying critical characteristics (CMTR'S reviews, chemical and mechanical testing, etc.) and performance of CGI surveys and source surveillance when applicable.

**This area was evaluated as satisfactory with no findings or observations.**

### Software Control

No software "Safety Related" activities are conducted by NOVA. Therefore, this section of the audit is considered Non Applicable.

### Procurement Control

Suppliers are evaluated by audit and the status is maintained on an Approved Vendors List (AVL). Several vendors audits were selected and reviewed and it was verified that NOVA was implementing their QA Program (Section 6.5) requirements as they apply to vendor audits. The AVL details the suppliers limitations, scope of activities or products, location, applicable QA program and date of audit performed and due.

All materials and commodities are receipt inspected. NP-11 provides detailed instructions on what areas must be inspected during "Receipt Inspection" activities.

**This area was evaluated as unsatisfactory due to the lack of adequate review of procurement documents as referenced in finding 97-029-01.**



### **Material Control, Handling, Storage & Shipping**

An effective material control program was observed in place at the NOVA facility. Material was found to be clearly identified, segregated, and controlled at initial receipt through final packaging and storage. The material status is identified through blue accept tags, red reject tags, yellow hold tags, manila rework/repair tag, orange "risk release" and green "OK TO SHIP" tags, when required for nonconforming materials. All material identification documents clearly identify the order number, description, part number and the heat lot number. Traceability of subdivided materials was maintained through all fabrication processes. Material traceability records are maintained through the assembly process.

The audit team observed receipt inspection, in-process inspection and packaging/shipping activities throughout the audit. Appropriate material controls were being conducted by Nova personnel.

**This area was evaluated as satisfactory with no findings or observations.**

### **Fabrication/Assembly/Special Processes**

Fabrication processes associated with the manufacturing of various types of fasteners were controlled by JOB documents that accompany the materials through various sequences of operation. The computer generated "JOB" data reports identify the required materials, applicable work activity, drawings, and inspection status to verify acceptance of the product prior to releasing for packaging and shipping.

NOVA Machine contracts out all its special processes. These processes include heat treating, nondestructive testing, welding, chemical testing and plating/coating. Review of documents, associated with special processes, were found to be within NOVA procedural requirements.

**These areas were evaluated as satisfactory with no findings.**

### **Tests and Inspections**

NOVA Machine Products has proper controls in place to ensure testing and inspection of materials and products are performed adequately. NOVA utilizes ANSI/ASQC Z.1.4 (MIL-STD-105E), for their sampling plans, which is incorporated into their QA Manual, Section 12. The documented basis for utilizing this plan includes ANSI 18.12, ANSI N45.2, N45.10, AND N45.2.13. It also considers the Industrial Fastener Institute "Fastener Standards, 6th Edition".

Several JOB's were directly observed by the audit team, and it was noted that the activities were being conducted by personnel who were very knowledgeable in their respective areas and the implementation of procedures requirement was evident. JOB orders include proper critical characteristics to be tested and inspected for commercial grade dedication products. The JOB order adequately addresses commercial grade dedication products, which NOVA Machine Products terms an "upgrade".

"Screw Tread Gaging Systems for Dimensional Acceptability" for threaded fasteners that meet ANSI-ASME B 31.1, was discussed with NOVA personnel. It was determined that NOVA does use, as applicable, System 22 gaging process for external treads and gaging System 21 for internal treads.

**This area was evaluated as satisfactory with no findings.**

### Calibration

Throughout the audit several pieces of test equipment were observed being used. This equipment was all appropriately tagged and statused per NOVA's QA Manual and procedure NP-G1. Records of calibration were reviewed for this equipment and all found to be acceptable and traceable to NIST as applicable.

During the audit it was also noted that calibration activities, performed by outside vendors, were performed by vendors who were on NOVA's AVL and that they had been properly audited.

**This area was evaluated as satisfactory with no findings.**

### Document Control/Adequacy

Document control activities and procedures were found to be effective and properly implemented. All documents were reviewed and approved as required.

Issuance and control of distribution were discussed with personnel responsible for those duties, and they were aware of their duties and responsibilities. However, one (1) observation was identified concerning the issuance of revisions of procedures in a timely manner. Reference the attached observation 97-029-A for further details.

**This area was evaluated as satisfactory with no findings. The observation is being issued as a program enhancement item which does require written response.**

### Organization/Program

NOVA's Quality Assurance Manual clearly defines the responsibilities and duties of management. Interviews and observation of quality activities, demonstrated that these duties are being implemented. The QA Manual also dictates that QA personnel are given independence to identify problems.

Results of the audit also verified that management adequately assesses the quality program by evaluating the quarterly "Quality Program Status and Adequacy Report" and by review of the yearly internal audit.

The Quality Assurance Manual (QAM) section 19 and 24 addresses how NOVA identifies and controls nonconformance issues. NOVA processes demonstrated that their quality program has the necessary controls to adequately identify and resolve nonconformances (NCRs). Four (4) nonconformances were selected to verify this activity.

An established 10CFR21 procedure (NP-09 - rev 7) is being developed by NOVA and it was verified that it was properly posted and that it was the current revision.

Documented program controls are established for performing periodic internal audits. Internal quality audits are required to be performed at least once every year. The completed audit packages reviewed contained appropriate audit plans, supporting checklist, and a comprehensive audit report. Findings as a result of the audit process were also documented and follow-up performed when appropriate. The auditors performing the internal audits were found to have no direct responsibilities in the areas audited.

During the course of this audit it was verified that NOVA has established and implemented an external audit process that meets their Quality Program. A random sample of vendor audits was reviewed and it was determined that these audits were performed using pre-approved and comprehensive checklists. The audits were performed by certified and qualified auditors as required by their program. In addition, these audits were conducted as scheduled and properly logged.

NOVA has well established corrective action procedures and processes. Only five (5) Corrective Action Reports (CAR's) were issued during the 1996 time period to date. Three (3) of these NCR's were selected to verify that appropriate management review, approval and actions were being taken to address adverse conditions and to prevent recurrence of these conditions. All were found to have been adequately addressed.

Training activities for NOVA personnel are established via procedure (NP-71 rev.1). Procedure requirements for the certification/qualification of inspectors and auditors were verified. Training activities are controlled by supervisors. Training records for individuals from various disciplines were reviewed and it was determined that adequate training and records were being maintained.

When appropriate, eye examinations were verified and all were completed as required.

NOVA's QA Program provides the necessary measures to adequately assure records are properly maintained. Records were reviewed and it was verified that they were legible, identifiable and retrievable. Changes were reviewed and approved to the same level as the original records.

Direct review of several NOVA Certificates of Compliance/Conformance demonstrated that these documents were being properly reviewed and signed by only authorized personnel. The authority to sign C of C's is identified in the QAM and procedure NP15 (rev. 1).

**These areas were evaluated as satisfactory with no findings noted.**

**Technical Specialist Summary:**

The focus of the Technical Specialist's tasks was the evaluation of NOVA's sampling plan. NOVA Machine Products Inc. is utilizing ANSI Z1.4 (MIL-STD-105E) for its sampling plan for all aspects of inspection; either receipt, in process, or final inspection. In addition to this plan, for final inspection the number of defects allowed is zero (0) for all sampling. The company has a documented justification for utilizing this as their sampling plan that is sound. The inspectors observed by the team were knowledgeable and aligned with the requirements of the standard.

Technical aspects of inspection performance and product acceptance were reviewed by all members of the audit team and found acceptable.

**ASSESSMENT OF CORRECTIVE ACTION EFFECTIVENESS FROM NUPIC AUDIT CONDUCTED BY AEP DATED 9/7/95:**

No discrepancies were identified during the above referenced NUPIC Audit. As such, this portion of the audit is considered Non Applicable.

**STATUS OF NRC INSPECTIONS**

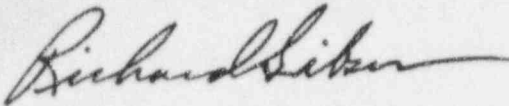
The NUREG-0040 data base was reviewed to determine if any adverse documentation exist concerning NOVA Machine Products Corporation. No items were identified concerning NOVA.

**CONCLUSION:**

In the audit exit, NOVA management was advised that the expectation of the 1997 NUPIC Audit Team was that the corrective action, to address each of the identified observations, would be given their full commitment.

It was the judgement of the audit team that NOVA has a QA Program that meets the intent of 10CFR50 App B. No recommendation for limiting NOVA nuclear safety-related scope of supply was made. NOVA is considered approved, without restriction. Corrective actions on the one (1) finding and one (1) observation shall be submitted to NPPD within 30 days of receipt of this audit report.

For the 1997 NUPIC Audit Team:

A handwritten signature in cursive script, appearing to read "Richard Gibson".

RL Gibson - Audit Team Leader  
Sr QA Specialist  
Cooper Nuclear Station

**PERSONS CONTACTED INCLUDED:**

<u>Name</u>	<u>Position</u>
+ John Burk	General Manager
*+ Jim Fitzwilliam	Quality Assurance Manager
*+ David Nenstiel	QC Inspector
Bob Bwoks	Warehouseman
Rod Miller	Warehouseman
Tony Hollaway	QC Inspector
Chuck Notola	Level III QC Inspector
Mike Tiberio	Account Executive
John Hoose	Account Executive

\* Attended Audit Entrance

+ Attended Audit Exit

NEBRASKA PUBLIC POWER DISTRICT  
QUALITY ASSURANCE  
SUPPLIER EVALUATION REPORT

Page 1 of 2

SUPPLIER: NOVA Machine Products Corporation  
LOCATION: 18001 Sheldon  
Middleburg Heights, OH 44130

QASER NO.: SA97-029-01  
REPORT TYPE: Finding  
RESPONSE REQUIRED: Yes

PERSON CONTACTED/TITLE: Jim Fitzwilliams, QA Manager

REQUIREMENTS: (10CFR50 APPENDIX B - FINDING ONLY): VII, "Control of Purchased Material, Equipment, and Services"

SUPPLIER DOCUMENT TITLE/PARAGRAPH/DESCRIPTION:

QAM Section 12, "Control of Purchases" states in part:

12.4.1.3 The following requirements shall be included on the PO as applicable:

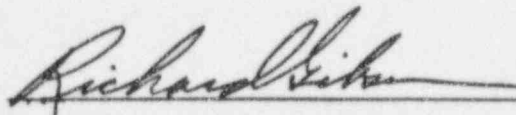
a) Reference the approved quality program/procedure with revision and date or QSC number..."

NP-14, "Review of Vendor Certifications" states in part:

"4.1.1 Material and services received shall be reviewed for the required information and compliance to material and program requirements"

NONCOMPLIANCE/OBSERVATION:

Four of six purchase orders from Nova to subsuppliers were received with incorrect QA Program/procedure referenced. This included one PO that requested the incorrect QAM, and three that were received as satisfactory but contained references to QA Programs were not the same as referenced on purchase order.



LEAD AUDITOR

5-23-97

DATE

SUPPLIER: NOVA Machine Products Corporation

QASER NO.: SA97-029-01

LOCATION: 18001 Sheldon  
Middleburg Heights, OH 44130

REPORT TYPE: Finding

RESPONSE REQUIRED: Yes

CORRECTIVE ACTION REPLY:

RESPONSE REQUIRED BY (DATE): 6/25/97

A. IMMEDIATE:

B. IDENTIFY THE ROOT CAUSE OF THE DEFICIENCY AND THE EFFECTS, IF ANY, ON THE PRODUCTS OR SERVICES SUPPLIED:

C. TO PREVENT RECURRENCE:

\_\_\_\_\_  
SUPPLIER QA REPRESENTATIVE

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

FOLLOW-UP / CLOSEOUT:  
REVIEW / VERIFICATION COMMENTS:

CORRECTIVE ACTION COMPLETE:

\_\_\_\_\_  
LEAD AUDITOR

\_\_\_\_\_  
DATE



NEBRASKA PUBLIC POWER DISTRICT  
QUALITY ASSURANCE  
SUPPLIER EVALUATION REPORT

Page 1 of 2

SUPPLIER: NOVA Machine Products Corporation

QASER NO.: SA97-029-A

LOCATION: 18001 Sheldon

REPORT TYPE: Observation

Middleburg Heights, OH 44130

RESPONSE REQUIRED: Yes

PERSON CONTACTED/TITLE: Jim Fitzwilliams, QA Manager

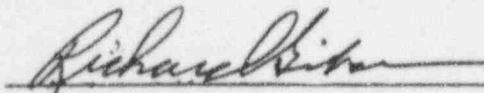
REQUIREMENTS: (10CFR50 APPENDIX B - FINDING ONLY): Not Applicable

SUPPLIER DOCUMENT TITLE/PARAGRAPH/DESCRIPTION:

Not Applicable

NONCOMPLIANCE/OBSERVATION:

It was observed that distribution of approved procedures is not required to be done in a timely manner. It is accomplished over a period of time with the training of the new procedures for the manual holders. This poses a potential for different revisions of a procedure to be utilized in the facility.



LEAD AUDITOR

5-23-97

DATE

SUPPLIER: NOVA Machine Products Corporation

QASER NO.: SA97-029-A

LOCATION: 18001 Sheldon

REPORT TYPE: Observation

Middleburg Heights, OH 44130

RESPONSE REQUIRED: Yes

CORRECTIVE ACTION REPLY:

RESPONSE REQUIRED BY (DATE): 6/25/97

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B. IDENTIFY THE ROOT CAUSE OF THE DEFICIENCY AND THE EFFECTS, IF ANY, ON THE PRODUCTS OR SERVICES SUPPLIED:

C. TO PREVENT RECURRENCE:

\_\_\_\_\_  
SUPPLIER QA REPRESENTATIVE

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

FOLLOW-UP / CLOSEOUT:  
REVIEW / VERIFICATION COMMENTS:

CORRECTIVE ACTION COMPLETE:

\_\_\_\_\_  
LEAD AUDITOR

\_\_\_\_\_  
DATE