

# ENERGY STEEL & SUPPLY CO.

January 16, 1991

Mr. Stewart Magruder  
USNRC Vendor Compliance  
U.S. Nuclear Regulatory Commission  
Mail Stop 9D4  
Washington D. C., 20555



WORLD HEADQUARTERS  
2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057 U.S.A.  
(313) 377-4990

TELECOPY: (313) 377-2938  
TELEX: 798815  
EASYLINK: 62819432

Home of the "Duke of Duke".

99901106

RE: General Fasteners Company  
ES&SC NCR #0334

Dear Mr. Magruder:

In reference to our recent telecom on the above subject I submit to you the following for your review and comment:

ES&SC Non-Conformance Report No. 0334 was written to investigate resolution to the issues pertinent to Nuclear Safety Related materials supplied to ES&SC by the General Fastener Company (GENFA). The primary issues of concern are:

- 1) The General Fastener Company was unable to provide ES&SC with objective evidence that safety related materials supplied by them to ES&SC were procured by them in accordance with the requirements of 10 CFR 50 Appendix B and 10 CFR Part 21.
- 2) The materials in question have, for the most part been supplied to the ES&SC customers as safety related.

Upon completion of the above referenced ES&SC NCR #0334, it has been concluded by ES&SC that the nonconforming condition is programmatic in nature and does not result in any significant loss in confidence in the reliability of the material. Therefore ES&SC is recommending that the disposition for the material as "use as is" based on the conditions providing evidence on the NCR. A copy of the NCR will be issued to the customers in possession of the material for their disposition.

Thank you for your cooperation regarding the above matter. If there are any questions regarding the above do not hesitate in contacting me.

Very truly yours,

Robert J. Paton  
Vice President,  
Quality Assurance

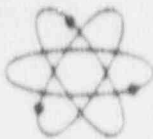
RJP/s

cc: M. Mitchell  
T. Fabbri  
QA file

enclosure: ES&SC NCR 0334; utility letters issued

TE09  
11

9102060126 210116  
PDR 04999 EMVESC  
99901106 PDR



Energy Steel & Supply Co.

Non-Conformance/Corrective Action Report

NCR No. 0334

Purchase Order No. GENFA 1986-87 Invoice No. N/A  
ALL S/R PO'S

Date 12/07/90

Type of Non-Conformance  Material  
 Document  
 Other

Person Identifying Non-Conformance: Robert J. Paton, V.P., Q.A.

Non-Conformance Description: The General Fastener Company of Livonia, MI was found to be nonconforming in the implementation of their 10 CFR 50 Appendix B program for the supply of materials to ES&SC on the attached listed purchases (att. # A). The General Fastener Company (GENFA) was unable to supply objective evidence to ES&SC that materials supplied by them to ES&SC as Safety Related (10 CFR 50 Appendix B, 10 CFR Part 21) were procured by GENFA from their suppliers/manufacturers in accordance with the requirements of 10 CFR 50 Appendix B and 10 CFR Part 21, as required by the ES&SC purchase orders to GENFA.

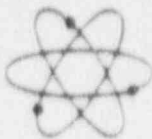
By: RJP  Date: 10/18/90

Recommended Disposition:  use-as-is  
 repair to original specification  
 rejected  
 replace  Other

10 CFR Part 21 Reportability  Yes  No

Comments (include technical justification, repair procedure, replacement or rejection procedure):

- 1) The customers receiving the material in question from ES&SC have been notified via letter dated 11/14/90 (copies attached), that there is question with regard to conformance to the purchase order requirements.
- 2) ES&SC has performed product testing for five (5) of the items that had quantities still in stock at ES&SC. Testing for all five consisted of chemical and physical analysis to the requirements of the material specification for one (1) representative piece per each of the five items sampled. Results of the the testing indicated that the material was in conformance with the original CMTR'S and specifications.
- 3) ES&SC review of the vendor trend analysis reports for 1987 and 1986 found that there has been only one nonconformance report written for GENFA (NCR #0126 dated 3/9/87), and none issued for 1986. The results of of each years vendor trend analysis exhibits very little to no negative confidence in GENFA'S ability to provide quality products.
- 4) In review of the above, and the audit report for GENFA, it is now considered that the confidence in the material supplied by GENFA has been strengthened. The nonconformance may be considered as programmatic in nature and not resultant in any significant loss in confidence in the reliability of the material.



5) Conditions that provide evidence that material may be acceptable to use as is:

- a) The audit report for GENFA exhibited that it was apparent that GENFA had a verification and traceability program in effect during the time period in question.
- b) The historical trending for GENFA exhibits confidence in the vendors ability to supply quality material.
- c) Product sample testing exhibited no material deviations from the requirements of the material specifications.
- d) ES&SC performed visual receipt inspection of the material for conformance to the purchase order requirements which included sampling inspection for general dimensional conformance and product marking requirements.
- e) To date there has been no known nonconformances issued by the customers against any of the material shipped for discrepant material conditions causing the material to be unsuitable for use.

The results and considerations of this report will be issued to the USNRC for comment.

By: RJP [Signature] Date: 01/04/91

Corrective Action (to prevent recurrence): The approved vendor files have been examined and it has been determined that this appears to be an isolated case. The current methods and policies employed by ES&SC in the approval of vendors is more strictly monitored than was done during the period in question. The current quality staff at ES&SC is more proficient and knowledgeable in the intent and applicability of codes and regulations as currently invoked on nuclear safety related materials. The acceptability of a vendor based on audit results alone as typified by this case is not feasible to the current practices and policies of ES&SC.

By: RJP [Signature] Date: 01/04/91

|   |                        |                |
|---|------------------------|----------------|
| Disposition Approval (Signature & Date)   | <u>TMF [Signature]</u> | <u>1/8/91</u>  |
| Disposition Verified (Signature & Date)   | <u>RJP [Signature]</u> | <u>1/10/91</u> |
| Corrective Action Approval (Sig & Date)   | <u>TMF [Signature]</u> | <u>1/8/91</u>  |
| Corrective Action Verified (Sig & Date)   | <u>RJP [Signature]</u> | <u>1-10-91</u> |
| Non-Conformance Closed (Signature & Date) | <u>MRM [Signature]</u> | <u>1-16-91</u> |

TABLE #1

NCR #0334  
ATTACHMENT "A"

## ORDER TRACE DATA

| ES&SC<br>PO# | * GENFA SUBTIER<br>* MANUFACTURER                                    | * ES&SC*<br>* SO#            | ES&SC<br>* CUSTOMER & PO #        | *SHIP DATE*             |
|--------------|--|------------------------------|-----------------------------------|-------------------------|
| 605027       | GENFA SUPPLIED C OF C ONLY   | 1679 -<br>(2787)             | ILLINOIS POWER<br>(X-33863)       | 05/30/86                |
| 606024       | CARPENTER TECH. CORP.  | 1745 -<br>(2888)             | ILLINOIS POWER<br>(X-35761)       | 06/23/86                |
| 607049       | GENFA SUPPLIED C OF C ONLY   | 1839 -<br>(3036)             | HUNTER CORP.<br>(N-2944)          | 07/31/86                |
| 609054       | "  | 1997 -<br>(3269)             | NEBRASKA PUB. PWR.<br>(259964)    | 10/03/86                |
| 610012       | SUPERIOR WASHER<br>KEYSTONE THREADED PRODUCTS<br>B & G MANUFACTURING | 2105 -<br>(3636)             | VERMONT YANKEE<br>(28804)         | 12/23/83                |
| 610032       | KEYSTONE THREADED PRODUCTS   | 2061 -<br>(3513, 3533, 3681) | DETROIT EDISON<br>(NR-150250)     | 11/24&26/86<br>01/05/87 |
| 610073       | B & G MANUFACTURING  | 2093 -<br>(3430)             | HUNTER CORP.<br>(N-3005)          | 11/12/86                |
| 611024       | "  | 2148 -<br>(3520)             | VERMONT YANKEE<br>(28977)         | 11/25/86                |
| 611037       | LAKE ERIE SCREW  | 2158 -<br>(3597)             | ALABAMA POWER<br>(QP-1289)        | 12/15/86                |
| 701050       | B & G MANUFACTURING  | 2383 -<br>(3839, 3912)       | BELL POWER<br>(GPN-1533)          | 2/11&24/87              |
| 702007       | INFASCO  | 2408 -<br>(3910)             | VEPCO<br>(SNS-118933)             | 02/23/87                |
| 702099       | "  | 2495 -<br>(3978)             | MILL PWR/DUKE PWR<br>(N10325-14)  | 03/09/87                |
| 703025       | GENFA C OF C ONLY  | 2546 -<br>(3975)             | ROCHESTER GAS<br>(NQ-10606-BJD)   | 03/06/87                |
| 704062       | B & G MANUFACTURING  | 2688 -<br>(4268)             | VEPCO<br>(CSY-128425)             | 05/05/87                |
| 706025       | "  | 2844 -<br>(5164)             | CONSUMERS POWER<br>(5019-9659-QA) | 06/26/87                |
| 706030       | INFASCO  | 2862 -<br>(5152)             | NEBRASKA PUB. PWR.<br>(270624)    | 06/22/87                |
| 706042       | NIPPON FASTENER<br>INFASCO<br>KAWASAKI STEEL                         | 2898 -<br>(5158)             | HUNTER CORP.<br>(N3119)           | 06/24/87                |
| 710033       | ONO MANUFACTURING<br>SUMITOMO METALS                                 | 3232 -<br>(3232)             | MORRISON CONST.<br>(F01867)       | 10/19/87                |



MATERIAL TRACE DATA

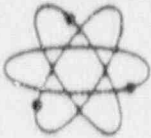
NCR #0334

ATTACHMENT "A"

| GENFA  | MATERIAL  | SPEC  | QUANTITY  | CUSTOMER  | CERT  |  |   |
|--------|---|---|---|---|---|--|---|
| PO     | DESCRIPTION   | GRADE   | RECVD   | SHIPPED   | STK BAL   | CUST & SO#   | QA CD   |
| 605027 | 1/4-20 HX NUTS  | A563-B  | 5500  | 5500  | 0   | ILLPO 1679   | 124   |
| 606024 | RD 1-1/4X12'  | A193-B8   | 1   | 1   | 0   | ILLPO 1745   | 124   |
| 607049 | HX SKT CAP SCREW<br>1/4-20X3/4"   | T-304   | 100   | 100   | 0   | HUNCO 1839   | 124   |
| 609054 | 1/4-20X1/2" BOLT<br>1/4" LOCK WASHERS   | A449<br>ANSI<br>B18.21.1  | 200<br>200  | 200<br>200  | 0<br>0  | NEBPU 1997   | 1234  |
| 610012 | THD ROD 1/2-13X12'<br>" " 5/8-11X12'<br>" " 1-1/8-8X12'<br>" " 7/8-9X12'<br>FLT WASHER 3/4"<br>HVYHXBLT 3/8-16X3/4<br>" " 1/4-20X3/4<br>HVYHXNUT 3/8-16<br>" " 1/4-20<br>HVYHXBLT 1-8X4"<br>" " 1-8X6"<br>HVYHXNUT 1-1/2"-8 | A193-B7<br>" "<br>" "<br>" "<br>118-8STNLS<br>A193-B7<br>" "<br>A194 GR 8<br>A194 GR2H<br>A193 GRB7<br>" "<br>A194 GR2H | 1<br>1<br>1<br>2<br>100<br>49<br>50<br>50<br>25<br>12<br>25 | 1<br>1<br>1<br>2<br>100<br>49<br>50<br>50<br>25<br>12<br>25 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | VERYA 2105<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" " | 1,4<br>"<br>"<br>"<br>"<br>"<br>"<br>"<br>"<br>"<br>" |
| 610032 | THD ROD 1 4X3'<br>" " 5/16X3'<br>" " 3/8X3'<br>" " 1/2X3'<br>" " 5/8X3'<br>" " 3/4X3'<br>" " 7/8X3'<br>" " 1"X3'  | A193 GRB7<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "  | 12<br>12<br>12<br>12<br>12<br>12<br>12<br>12                | 12<br>12<br>12<br>12<br>12<br>12<br>12<br>12                | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                | DETFE 2061<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "                      | 1234<br>"<br>"<br>"<br>"<br>"<br>"<br>"               |
| 610073 | THD ROD 1-3/8-6X12<br>HX NUTS 1-3/8"-6  | A193 GRB7<br>A194 GR2H  | 4<br>120  | 4<br>120  | 0<br>0  | HUNCO 2093<br>" "  | 1234<br>"   |
| 611024 | HVYHXBLT 1-8X7"<br>HVYHXNUTS 1-8  | A193 GRB8<br>A194 GR2H  | 50<br>50  | 50<br>50  | 0<br>0  | VERYA 2148<br>" "  | 124<br>"  |
| 611037 | HXBLT 3/4-10X2-1/4  | SAE GR 5  | 146   | 25  | 121   | ALAPO 2158   | 1234  |
| 701050 | HXBLT 3/8-16X1-3/4<br>" " 3/8-16X2<br>" " 3/8-16X2-1/2<br>" " 3/8-16X3-1/2  | A307 GR A<br>" "<br>" "<br>" "  | 50<br>50<br>50<br>50  | 28<br>32<br>16<br>12  | 22<br>18<br>34<br>38                                | BELPO 2383<br>" "<br>" "<br>" "  | 1234<br>"<br>"<br>"                                   |
| 702007 | HCPSCS 1/6-18X1-1/4<br>" 3/8-16X1-1/4   | J429 GR 8<br>" "  | 100<br>100  | 100<br>100  | 0<br>0  | VIRPO 2408<br>" "  | 124<br>"  |
| 702099 | HXBLT 1/2-13X1-1/2  | A325 T-1  | 100   | 100   | 0   | DUKPO 2495   | 124   |
| 703025 | BOLT 3/8-16X2-1/2<br>NUT 3/8-16   | J429 GR 2<br>A194 GR2H  | 50<br>50  | 50<br>50  | 0<br>0  | ROCGA 2545<br>" "  | CQ<br>"   |
| 704062 | HXCPCSRW 1/4-20X2<br>" 5/16-18X5/8<br>" 5/16-18X1<br>HVYHXNUT 1/2-13<br>" 1/4-20  | A193 GRB7<br>" "<br>" "<br>A194 GR2H<br>" "   | 995<br>200<br>994<br>191<br>167                             | 995<br>200<br>994<br>191<br>167                             | 0<br>0<br>0<br>0<br>0                               | VIRPO 2688<br>" "<br>" "<br>" "<br>" "   | 124<br>"<br>"<br>"<br>"                               |
| 706025 | THD ROD 5/8-11X3'   | A193 GRB6   | 6   | 6   | 0   | CONPO 284  | 1234  |
| 706030 | HXCPCSRW 1/2-13X1"<br>" 5/8-11X2-1/2<br>HVYHXNUT 1/2-13<br>" 5/8-11   | A449 GR 5<br>" "<br>A194 GR2H<br>" "  | 50<br>50<br>50<br>50  | 50<br>50<br>50<br>50  | 0<br>0<br>0<br>0                                    | NEBPU 2862<br>" "<br>" "<br>" "  | 1234<br>"<br>"<br>"                                   |
| 706042 | HX BLT 7/8-9X3-1/2<br>HVY HX NUT 7/8-9<br>FLT WASHER 7/8"   | A325<br>A563<br>F436  | 48<br>48<br>48  | 48<br>48<br>48  | 0<br>0<br>0   | HUNCO 2898<br>" "<br>" "   | "<br>"<br>"   |
| 710033 | FLT WASHER 1/2"   | F436 HARD   | 100   | 00  | 0   | MORCO 3232   | 124   |

QA CD: 1 = 10 CFR PT21; 2 = 10 CFR 50 APPENDIX B; NON-Q  
 3 = ANSI N45.2; 4 = ES&SC QA PROGRAM MANUAL; CQ = COMMERCIAL  
 QUALITY

4



NRC FASTENER INVESTIGATION (GENFA) 10/23/90

The following is a listing of Nuclear Safety Related (10 CFR Part 21) ES&SC Purchase Orders issued to the General Fastener Company that do not contain a General Fastener Co. Certificate of Conformance or Compliance as part of the General Fastener Co. supplied documentation or the C of C does not reference 10 CFR 50 Appendix B or 10 CFR part 21 as required by the ES&SC Purchase Order.

| <u>ES&amp;SC PO #</u> | <u>ORDER DATE</u> | <u>MTRL HT#</u>                      | <u>Manufacturer Name</u>  |
|-----------------------|-------------------|--------------------------------------|---|
| *606024               | 06/06/86          | 864996                               | CARTECH/PRDTN.TH.D.PROD.  |
| 702007                | 02/04/87          | B17867<br>A17328                     | INFASCO<br>INFASCO  |
| *703025               | 03/06/87          | REF#703025                           | UNKNOWN GENFA CofC ONLY   |
| 704062                | 04/13/87          | 690E-366<br>KC8419<br>409964         | B & G MANUFACTURING<br>B & G MANUFACTURING<br>B & G MANUFACTURING |
| 706025                | 06/25/87          | 3049E                                | B & G MANUFACTURING   |
| 706042                | 06/18/87          | R45418<br>C21157<br>2-38878          | NIPPON FASTENER<br>INFASCO<br>ONO MFG/KAWASAKI STEEL              |
| 706030                | 06/08/87          | B19022<br>A17458<br>RN0252<br>C21036 | INFASCO<br>INFASCO<br>INFASCO<br>INFASCO                          |

NOTE:

- \* = General Fastener Co. C of C does not reference 10 CFR 50 Appendix B nor 10 CFR Part 21.

Purchase order numbers not preceded with "\*" did not contain GENFA C of C.

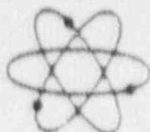
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| NAME/ADDRESS   | DOCUMENT SENT        | DATE SENT | RESPONSE REC'D  |
|--|----------------------|-----------|---|
| Morrison Construction<br>La Salle County Stat<br>2601 N. 21st Road<br>Marseilles, IL 61341                                       | General Fastener Ltr | 11/14/90  |   |
| Hunter Corporation<br>C/O Commonwealth Ed<br>101 Shiloh Blvd.<br>Zion, IL 60099  | General Fastener Ltr | 11/14/90  |   |
| Mr. John Larson<br>QA Supplier Supv.<br>Nebraska Pub Pwr Dist<br>P.O. Box 499<br>Columbus, NE 68601                              | General Fastener Ltr | 11/14/90  | General Technician Tony/Riz<br>402-563-8526<br>MIKE HENRY-PARTIAL<br>REPLACEMENT HEADAD |
| Mr. Michael J. Fox<br>Senior QA Consultant<br>Consummer Power Co.<br>Palisades Power Plt<br>1945 W. Parnall<br>Jackson, MI 49201 | General Fastener Ltr | 11/14/90  |   |
| Virginia Power Co.<br>Innsbrook Techn Ctr<br>5000 Dominion Blvd.<br>Glen Allen, VA 23060<br>Mgr Licensaing & Pgrma               | General Fastener Ltr | 11/14/90  |   |
| Rochester Gas & Elec<br>Manager Nuclear Lic<br>& Safety<br>49 East Avenue<br>Rochester, NY 14604                                 | General Fastener Ltr | 11/14/90  |   |
| Mr Chuck Christopher<br>Bell Power/Ginna Stat<br>P.O. Box 156<br>Ontario Ctr, NY 14520   | General Fastener Ltr | 11/14/90  |   |
| Mr. C.A. Robinson<br>EC-12/QA<br>Duke Power Co.<br>P.O. Box 33189<br>Charlotte, NC 28242   | General Fastener Ltr | 11/14/90  | 12-18-90 (LETTER)<br>CA ROBINSON<br>MTRAL INSTALLED IM<br>NON-SAFETY APPLICATION        |
| Alabama Pwr Co.<br>Farley Nuc Plt<br>US Hwy 955<br>Columbia, AL 36319  | General Fastener Ltr | 11/14/90  |   |

## LOG

| NAME/ADDRESS   | DOCUMENT SENT        | DATE SENT | RESPONSE REC'D   |
|--|----------------------|-----------|--|
| Vermont Yankee Nuclear<br>Governor Hunt Road<br>Vernon, VT 05354<br>ATTN: QA   | General Fastener Ltr | 11/14/90  |  |
| Mr. Jerry Bragg<br>Supervisor Proc QA<br>Detroit Edison Co.<br>Fermi Nuclear<br>6400 N. Dixie Hwy<br>Newport, MI 48166 | General Fastener Ltr | 11/14/90  | JERRY BRAGG<br>12-6-90 VERBAL<br>1-4-91 VERBAL<br>REQUEST FOR PARTIAL<br>REPLACEMENT |
| Ms. P.A. Irons<br>QA, V-905<br>Clinton Power Station<br>P.O. Box 678<br>Clinton, IL 61727                              | General Fastener Ltr | 11/14/90  |  |





# ENERGY STEEL & SUPPLY CO.



WORLD HEADQUARTERS  
2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057 U.S.A.  
(313) 377-4990

TELECOPY: (313) 377-2338  
TELEX: 798815  
EASYLINK: 62819432

Home of the "Duke of Nuke".

November 14, 1990

Gentlemen  
Virginia Power Co.  
Innsbrook Technical Center  
5000 Dominion Blvd.  
Glen Allen, VA 23060  
ATTN: Mgr Licensing & Programs

RE: General Fasteners Company  
11820 Globe Road  
Livonia, MI 48150-1180

*TYPICAL*

Dear Gentlemen

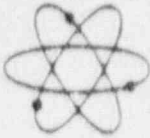
During a recent review of vendor files, we have discovered that General Fasteners Company who was on the Energy Steel & Supply Co. (ESSC) Approved Vendors List from June 12, 1986 until November 10, 1987, for the supply of NON-ASME "safety-related" fasteners, did not provide certain Certificates of Compliance/Conformance (COC's) as required by our purchase orders.

ESSC now believes that there is the possibility that some of the fasteners provided to us by General Fastener may not have been provided under the quality assurance requirements of 10 CFR 50 appendix B, or the requirements of 10 CFR Part 21.

The orders in question cover material we have provided you on the attached ES&SC Certificate of Conformance.

ALL material ordered by ESSC from General Fasteners, Inc. was ordered correctly. ALL of our purchase orders to General Fasteners Company required them to provide material under the provisions of their Quality Assurance Manual audited and approved by ESSC, and in accordance with the provisions of 10 CFR 50 appendix B and 10 CFR Part 21.

During this time period General Fasteners Company supplied fasteners for a total of eighteen (18) orders. Of the total of eighteen orders, seven (7) orders were furnished with Certified Mill Test Reports (CMTR's) as required, but we did not receive General Fasteners Company's Certificate of Compliance (COC), or the COC provided was incomplete.



TYPICAL

Page 2

We contacted General Fastener, Inc. to obtain the COC's for the seven (7) orders that had missing or incomplete COC's. We were informed by General Fasteners Company that they have had several QA Manager changes and that the people responsible for providing the COC's were no longer employed by General Fasteners Company, could not find the files that would have contained the COC's, and therefore, would not be able to furnish COC's.

Additionally, we have requested copies of audits which were supposedly conducted by General Fasteners Company for the supply of material that was furnished to ESSC, but have only received one audit in response to our request. We feel there should have been at least eight audits conducted.

We wish to point out that we have never experienced a single quality problem with any material furnished by General Fasteners Company, but since they are unable to furnish COC's and provide objective evidence of procuring the materials in accordance with the requirements of 10 CFR 50 appendix B and 10 CFR Part 21, we must consider the possibility that any fasteners furnished to ESSC with the requirements of 10 CFR 50 appendix B or 10 CFR Part 21 imposed, may not have been furnished under their Quality Assurance Program as required.

Therefore, we request you review the attached CofC and evaluate the installation/application of the fasteners to determine their suitability for use. Since the material furnished to you was purchased by ESSC as "safety-related" no additional testing or upgrading was performed.

ESSC has been in contact with the NRC concerning this matter. We would appreciate your responding to this letter no later than February 1, 1991, to advise us of your disposition on this material.

If you have any questions please do not hesitate to contact me.

Very truly yours,

*Robert J. Paton*

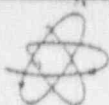
Robert J. Paton  
Vice President,  
Quality Assurance

RJP:m

cc: File

Attachments

9



**ENERGY STEEL  
& SUPPLY CO.**

2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057  
(313) 377-4990

- Certificate of Compliance  
 Statement of Conformance

CUSTOMER: Virginia Electric & Power  
Surry Power Station  
Route 650 off Hwy. 10  
Surry, VA 23833

*TYPICAL*

DATE  
May 5, 1987  
OUR ORDER NO.  
2688  
YOUR ORDER NO.  
CSY 128425

| ITEM | QUANTITY | DESCRIPTION                  | HEAT OR REFERENCE NO. |
|------|----------|------------------------------|-----------------------|
| 1    | 995 pcs  | HEX CAPSCREW 1/4"-20 x 2"    | 680E-366              |
| 2    | 200 pcs  | HEX CAPSCREW 5/16"-18 x 5/8" | 680E366               |
| 3    | 191 pcs  | HVY HEX NUT 1/2"-13          | KC8419                |
| 4    | 167 pcs  | HVY HEX NUT 1/4"-20          | 409964                |
| 5    | 994 pcs  | HEX CAPSCREW 5/16"-18 x 1"   | 680E366               |

This is to certify that the material furnished for your order and described above, complies to the requirements of the applicable material specifications, as reported on the attached copies of the manufacturer's certified material test reports, and meets all requirements of your purchase order.

(THE FOLLOWING APPLY AS INDICATED)

- This is to certify that the material supplied for your order conforms to the requirements of specification.  
Items 1, 2, 5: ASTM A-193-86 Gr. B7 Item 3, 4: ASTM A-194-85a Gr. 2H
- This is to certify that the material furnished for your order was supplied in accordance with our identification and verification program per the quality requirements of ASME Section III, Division 1, Sub-article NA-3700/NCA-3800 and complies to the applicable requirements, as specified, of ASME Section III, Subsection \_\_\_\_\_, Class \_\_\_\_\_, \_\_\_\_\_ Edition  
\_\_\_\_\_ Addenda.
- This is to certify that repair by welding was not performed on the material described above.
- This is to certify that to the best of our knowledge this material, during the manufacturing processes, tests and inspections, has not come into direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.
- This is to certify that your order was furnished in accordance with the following specifications and/or procedures:  
10 CFR 50 Appendix B, 10 CFR Part 21 apply
- This is to certify that this order was supplied in accordance with our Quality System Program, Revision 7,  
Dated 9-12-86.
- This is to certify that this order was supplied in accordance with our Quality System Certificate number (QSC-511) which expires on 10-17-89.

ENERGY STEEL & SUPPLY CO.

*Kelly A. Pratt*  
AUTHORIZED  
Kelly A. Pratt, Q.A. Coordinator

10





# ENERGY STEEL & SUPPLY CO.

2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057  
(313) 377-4990

- Certificate of Compliance
- Statement of Conformance

*TYPICAL*

CUSTOMER: Virginia Power  
North Anna Const. Site  
Warehouse 10, Route 700  
Mineral, VA 23117

DATE February 20, 1987  
OUR ORDER NO. 2408  
YOUR ORDER NO. SNS-118933

| ITEM | QUANTITY | DESCRIPTION                            | HEAT OR REFERENCE NO. |
|------|----------|--|-----------------------|
| 1    | 100 pcs. | HEX CAP SCREW 5/16''-18 UNC 2A X 1-1/4 | B17867                |
| 2    | 100 pcs. | HEX CAP SCREW 3/8''-16 UNC 2A X 1-1/4  | A 17328               |

This is to certify that the material furnished for your order and described above, complies to the requirements of the applicable material specifications, as reported on the attached copies of the manufacturer's certified material test reports, and meets all requirements of your purchase order.

(THE FOLLOWING APPLY AS INDICATED)

- This is to certify that the material supplied for your order conforms to the requirements of specification. SAE J 429, GR. 8
- This is to certify that the material furnished for your order was supplied in accordance with our identification and verification program per the quality requirements of ASME Section III, Division 1, Sub-article NA-3700/NCA-3800 and complies to the applicable requirements, as specified, of ASME Section III, Subsection \_\_\_\_\_, Class \_\_\_\_\_, \_\_\_\_\_ Edition \_\_\_\_\_ Addenda.
- This is to certify that repair by welding was not performed on the material described above.
- This is to certify that to the best of our knowledge this material, during the manufacturing processes, tests and inspections, has not come into direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.
- This is to certify that your order was furnished in accordance with the following specifications and/or procedures: 10 CFR 50 APPENDIX B, 10 CFR PART 21 APPLY
- This is to certify that this order was supplied in accordance with our Quality System Program, Revision 7, Dated 9-12-86.
- This is to certify that this order was supplied in accordance with our Quality System Certificate number (QSC-511) which expires on 10-17-89.

ENERGY STEEL & SUPPLY CO.

*Kelly A. Pratt*  
AUTHORIZED  
Kelly A. Pratt, Q.A. Coordinator

(11)



ENERGY STEEL & SUPPLY CO.  
 2715 PALDAN DRIVE  
 AUBURN HILLS, MI 48325  
 313 277-4950

PURCHASE ORDER NO. 012011

MOEME 1-714-892-1961

MMA LABORATORIES  
 15171 PIPELINE LANE  
 HUNTINGTON BEACH, CA 92649

ENERGY STEEL & SUPPLY CO.  
 2715 PALDAN DRIVE  
 AUBURN HILLS, MI 48325

SHIP VIA F.O.B. CONFIRMING TO TERMS DUE DATE PO OR

UPS NEXT DAY YOUR FLT-FRI PP NET 30 DAYS 0/00/00 12/06/90

QTY ITEM# DESCRIPTION PRICE AMOUNT

OUR MATERIAL YOU ARE TO TEST  
 ACCORDING TO THE ATTACHED  
 SUPPLEMENTARY SHEET.  
 SEE SRP #4669, 4670, 4671, 4672,  
 4673.

p010--> \*TECHNICAL REQUIREMENTS\*  
 THE FOLLOWING REQUIREMENTS NOTED BELOW ARE  
 AN INTEGRAL PART OF THIS PURCHASE ORDER  
 AND MUST BE ADHERED TO.

p013--> NUCLEAR "SAFETY RELATED"\*\*\*"SAFETY RELATED"

p020--> CERTIFICATIONS MUST BE COMPLETE AND OF  
 MICROFILMABLE QUALITY.

p030--> CERTIFICATION OF TESTING IS REQUIRED.

p032--> CERTIFICATIONS ARE REQUIRED

p040--> THE ATTACHED SUPPLEMENTARY SHEET/S ARE AN  
 INTEGRAL PART OF THIS ORDER. **5** PAGES

p052--> 10 CFR 50 APPENDIX B APPLIES

p053--> ANSI N-45.2-71/77 APPLIES

p054--> NQA-1 APPLIES

p056--> 10 CFR PART 21 APPLIES

p060--> A STATEMENT THAT MATERIAL/SERVICES WERE  
 SUPPLIED IN ACCORDANCE WITH YOUR QA PROGRAM

REV. ( **3** ) DTD: **6/13/90** AUDITED ON ~~10/17/89~~ **10-18-90**  
 & APPROVED BY ESSC UN: **7-10-90** IS REQ'D. **11-5-90**

101 --> PAYMENT OF INVOICES WILL BE POSTED  
 THE DATE CORRECT CERTIFICATIONS IS  
 RECEIVED.

p000--> \*\*\*ENERGY STEEL INTERNAL USE ONLY!\*\*\*

p001--> Q.A. REVIEW/ APPROVAL ( **JK** ) DATE: **126/90**

p002--> DATE: / /

p003--> TRACE NO. **GENFA**

BILLING/QA

\*\*\* CONTINUED ON NEXT PAGE \*\*\*

**12**

ENERGY STEEL & SUPPLY CO.  
2715 PALDAN DRIVE  
AUBURN HILLS, MI 48326  
313 377-4900

PURCHASE ORDER NO. 912011

MMA LABORATORIES  
15171 PIPELINE LANE  
HUNTINGTON BEACH, CA 92649

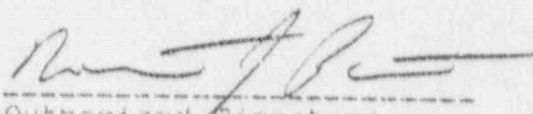
ENERGY STEEL & SUPPLY CO.  
2715 PALDAN DRIVE  
AUBURN HILLS, MI 48326

SHIP VIA F.D.B. CONFIRMING TO TERMS DUE DATE PO DATE  
UPS NEXT DAY YOUR PLT-FRT PP NET 30 DAYS 0/00/00 12/06/90

QTY ITEM# DESCRIPTION PRICE AMOUNT

TOTAL

GENFA

  
Authorized Signature Date 12/6/90

BILLING/CA

13

DISCOUNTS OFFERED DATE

MATERIAL UPGRADE PROCESS SHEET

TO: Mr. Jay Heber  
 MMA Laboratories  
 15171 Pipeline Lane  
 Huntington Beach, Ca 92649

Testing P.O. No. 012011  
 Tally/Tag No. 000013  
 Heat Code \_\_\_\_\_  
 SEQ No. \_\_\_\_\_  
 Sales Order No. \_\_\_\_\_  
 Material P.O. No. 611037

- (x) ANSI N-45.2-77/71 Applies
- (x) NQA-1 Applies
- (x) 10 CFR 50 Appendix B
- (x) 10 CFR Part 21 Applies
- (x) All testing to be performed in accordance with your QA Manual First Edition, Revision #3, dated June 13, 1990 audited and approved on ~~10/17/89~~ 10/18/90 with subsequent annual review and approval on ~~7/10/90~~ 11-5-90

- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND/OR IN ACCORDANCE WITH SECTION II SPECIFICATION OF THE A.S.M.E. B & PV CODE, SECTION III, NCA-3800 AS OUTLINED HEREIN.
- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND IN ACCORDANCE WITH ASME SECTION III, SUBSECTION ( ), CLASS ( ), ( ) EDITION THROUGH THE ( ) ADDENDA.

REMARKS: \_\_\_\_\_

| ITEM     | HEAT NO.      | PRODUCT DESCRIPTION            | QTY      | GAUGE    | WIDTH    | LENGTH   |
|----------|---------------|--------------------------------|----------|----------|----------|----------|
| <u>1</u> | <u>L02131</u> | <u>3/4-10 x 2 1/4 Hex Bolt</u> | <u>1</u> | <u>-</u> | <u>-</u> | <u>-</u> |

| SRP NO.     | HEAT CODE | TEST TO:    | ( ) ASME SA- | GRADE                |
|-------------|-----------|-------------|--------------|----------------------|
| <u>4669</u> | _____     | ( ) ASTM A- | _____        | GRADE _____          |
|             |           | ( ) ASTM B- | _____        | ALLOY _____          |
|             |           | (x) SAE J-  | <u>429</u>   | ALLOY <u>Grade 5</u> |
|             |           | ( ) AMS     | _____        | _____                |
|             |           | ( ) AA      | _____        | _____                |
|             |           | ( )         | _____        | _____                |
|             |           | ( )         | _____        | _____                |

\*(Test PO#, Lot No., Coil No., Etc...)

(x) CHEMISTRY:

| C     | Mn    | S     | P     | Si    | Cr    | Mo    | Ni    | Cu    | Al    | B     | V     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Ti    | Pb    | Fe    | Zn    | N     |       |       |       |       |       |       |       |
| _____ | _____ | _____ | _____ | _____ |       |       |       |       |       |       |       |

- (x) PHYSICALS: (Tensile, yield, elongation, red. of area) ( ) BEND TEST
  - (x) HARDNESS: Rockwell 0 Brinell \_\_\_\_\_, Other \_\_\_\_\_
  - ( ) CHARPY IMPACT TESTS REQUIRED IN ACCORDANCE WITH ASME SECTION III, SUB-SECTION \_\_\_\_\_, CLASS \_\_\_\_\_, 19 \_\_\_\_\_ EDITION THROUGH THE \_\_\_\_\_ 19 \_\_\_\_\_ ADDENDA, NCA-3800.
  - ( ) TEST TEMPERATURE AT \_\_\_\_\_ F ( ) ABSORBED ENERGY \_\_\_\_\_ FT. LBS.
  - ( ) LOWEST SERVICE TEMPERATURE REPORTED IS \_\_\_\_\_ F.
- >ORIENTATION & LOCATION OF TEST SPECIMEN: \_\_\_\_\_

( ) TELECOPY TEST RESULTS UPON COMPLETION TO ENERGY STEEL & SUPPLY CO. (313)377-2812 AUTOMATIC.

ENERGY STEEL & SUPPLY CO.

14 \_\_\_\_\_ 12-6-90  
 SIGNATURE DATE



MATERIAL UPGRADE PROCESS SHEET

TO: Mr. Jay Haber  
 MMA Laboratories  
 15171 Pipeline Lane  
 Huntington Beach, Ca 92649

Testing P.O. No. 012011  
 Tally/Tag No. \_\_\_\_\_  
 Heat Code \_\_\_\_\_  
 SEQ No. \_\_\_\_\_  
 Sales Order No. \_\_\_\_\_  
 Material P.O. No. 701050

- (x) ANSI N-45.2-77/71 Applies
- (x) NCA-1 Applies
- (x) 10 CFR 50 Appendix B
- (x) 10 CFR Part 21 Applies
- (x) All testing to be performed in accordance with your QA Manual First Edition, Revision #3, dated June 13, 1990 audited ~~and on 10/17/90~~ on 10/17/90 with subsequent annual review and approval on 7/10/90. 11-5-90

( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND/OR IN ACCORDANCE WITH SECTION II SPECIFICATION OF THE A.S.M.E. B & PV CODE, SECTION III, NCA-3800 AS OUTLINED HEREIN.

( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND IN ACCORDANCE WITH ASME SECTION III, SUBSECTION ( ), CLASS ( ), ( ) EDITION THROUGH THE ( ) ADDENDA.

REMARKS:

| ITEM     | HEAT NO.       | PRODUCT DESCRIPTION                | QTY      | GAUGE    | WIDTH    | LENGTH   |
|----------|----------------|------------------------------------|----------|----------|----------|----------|
| <u>2</u> | <u>655K423</u> | <u>Hvy Hex Bolt 3/8-16 x 1 3/4</u> | <u>1</u> | <u>-</u> | <u>-</u> | <u>-</u> |

| SRP NO.     | HEAT CODE | TEST TO:    | ( ) ASME SA- | GRADE          |
|-------------|-----------|-------------|--------------|----------------|
| <u>H670</u> |           | ( ) ASTM A- | <u>307</u>   | GRADE <u>A</u> |
|             |           | ( ) ASTM B- |              | ALLOY          |
|             |           | ( ) SAE J-  |              | ALLOY          |
|             |           | ( ) AMS     |              |                |
|             |           | ( ) AA      |              |                |
|             |           | ( )         |              |                |
|             |           | ( )         |              |                |

HEAT/LOT REFERENCE NO.\*

\*(Test PO#, Lot No., Coil No., Etc...)

() CHEMISTRY:

| C  | Mn | S  | P  | Si | Cr | Mo | Ni | Cu | Al | B | V |
|----|----|----|----|----|----|----|----|----|----|---|---|
|    |    |    |    |    |    |    |    |    |    |   |   |
| Ti | Pb | Fe | Zn | N  |    |    |    |    |    |   |   |

- () PHYSICALS: (Tensile, yield, elongation, red. of area) ( ) BEND TEST
  - () HARDNESS: Rockwell OR Brinell \_\_\_\_\_, Other \_\_\_\_\_
  - ( ) CHARPY IMPACT TESTS REQUIRED IN ACCORDANCE WITH ASME SECTION III, SUB-SECTION \_\_\_\_\_, CLASS \_\_\_\_\_, 19 \_\_\_\_\_ EDITION THROUGH THE \_\_\_\_\_ 19 \_\_\_\_\_ ADDENDA, NCA-3800.
  - ( ) TEST TEMPERATURE AT \_\_\_\_\_ F ( ) ABSORBED ENERGY \_\_\_\_\_ FT. LBS.
  - ( ) LOWEST SERVICE TEMPERATURE REPORTED IS \_\_\_\_\_ F.
- >ORIENTATION & LOCATION OF TEST SPECIMEN: \_\_\_\_\_

( ) TELECOPY TEST RESULTS UPON COMPLETION TO ENERGY STEEL & SUPPLY CO. (313)377-2812 AUTOMATIC.

ENERGY STEEL & SUPPLY CO.

15 [Signature] 12-6-90



MATERIAL UPGRADE PROCESS SHEET

TO: Mr. Jay Haber  
 MMA Laboratories  
 15171 Pipeline Lane  
 Huntington Beach, Ca 92649

Testing P.O. No. 012011  
 Tally/Tag No. \_\_\_\_\_  
 Heat Code \_\_\_\_\_  
 SEQ No. \_\_\_\_\_  
 Sales Order No. \_\_\_\_\_  
 Material P.O. No. 701050

- (x) ANSI N-45.2-77/71 Applies
- (x) NCA-1 Applies
- (x) 10 CFR 50 Appendix B
- (x) 10 CFR Part 21 Applies
- (x) All testing to be performed in accordance with your QA Manual First Edition, Revision #3, dated June 13, 1990 audited and on 10/18/90 approved on 10/17/89 with subsequent manual review and approval on 7/18/90. 11-5-90

- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND/OR IN ACCORDANCE WITH SECTION II SPECIFICATION OF THE A.S.M.E. B & PV CODE, SECTION III, NCA-3800 AS OUTLINED HEREIN.
- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND IN ACCORDANCE WITH ASME SECTION III, SUBSECTION ( ), CLASS ( ), ( ) EDITION THROUGH THE ( ) ADDENDA.

REMARKS:

| ITEM     | HEAT NO.        | PRODUCT DESCRIPTION       | QTY      | GAUGE    | WIDTH    | LENGTH   |
|----------|-----------------|---------------------------|----------|----------|----------|----------|
| <u>3</u> | <u>578T7197</u> | <u>3/8-16x2 Hw/Hr Bit</u> | <u>1</u> | <u>—</u> | <u>—</u> | <u>—</u> |

| SRP NO.     | HEAT CODE | TEST TO:    | ( ) ASME SA- | GRADE          |
|-------------|-----------|-------------|--------------|----------------|
| <u>4671</u> | _____     | ( ) ASTM A- | <u>357</u>   | GRADE <u>A</u> |
|             |           | ( ) ASTM B- | _____        | ALLOY _____    |
|             |           | ( ) SAE J-  | _____        | ALLOY _____    |
|             |           | ( ) AMS     | _____        | _____          |
|             |           | ( ) AA      | _____        | _____          |
|             |           | ( )         | _____        | _____          |
|             |           | ( )         | _____        | _____          |

HEAT/LOT REFERENCE NO.\*

\*(Test PO#, Lot No., Coil No., Etc...)

( ) CHEMISTRY:

| C     | Mn    | S     | P     | Si    | Cr    | Mo    | Ni    | Cu    | Al    | B     | V     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Ti    | Pb    | Fe    | Zn    | N     |       |       |       |       |       |       |       |

- ( ) PHYSICALS: (Tensile, yield, elongation, red. of area) ( ) BEND TEST
  - ( ) HARDNESS: Rockwell \_\_\_\_\_, Brinell \_\_\_\_\_, Other \_\_\_\_\_
  - ( ) CHARPY IMPACT TESTS REQUIRED IN ACCORDANCE WITH ASME SECTION III, SUB-SECTION \_\_\_\_\_, CLASS \_\_\_\_\_, 19 \_\_\_\_\_ EDITION THROUGH THE \_\_\_\_\_ 19 \_\_\_\_\_ ADDENDA, NCA-3800.
  - ( ) TEST TEMPERATURE AT \_\_\_\_\_ F ( ) ABSORBED ENERGY \_\_\_\_\_ FT. LBS.
  - ( ) LOWEST SERVICE TEMPERATURE REPORTED IS \_\_\_\_\_ F.
- >ORIENTATION & LOCATION OF TEST SPECIMEN: \_\_\_\_\_

( ) TELECOPY TEST RESULTS UPON COMPLETION TO ENERGY STEEL & SUPPLY CO. (313)377-2812 AUTOMATIC.

ENERGY STEEL & SUPPLY CO.

(16) Ron J. [Signature] 12-6-90

MATERIAL UPGRADE PROCESS SHEET

TO: Mr. Jay Haber  
 MMA Laboratories  
 15171 Pipeline Lane  
 Huntington Beach, Ca 92649

Testing P.O. No. 012011  
 Tally/Tag No. \_\_\_\_\_  
 Heat Code \_\_\_\_\_  
 SEQ No. \_\_\_\_\_  
 Sales Order No. \_\_\_\_\_  
 Material P.O. No. 717050

- (x) ANSI N-45.2-77/71 Applies
- (x) NQA-1 Applies
- (x) 10 CFR 50 Appendix B
- (x) 10 CFR Part 21 Applies
- (x) All testing to be performed in accordance with your QA Manual First Edition, Revision #3, dated June 13, 1990 audited and approved on ~~10/17/89~~ 11-5-90 with subsequent annual review and approval on ~~7/10/90~~ 11-5-90

- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND/OR IN ACCORDANCE WITH SECTION II SPECIFICATION OF THE A.S.M.E. B & PV CODE, SECTION III, NCA-3800 AS OUTLINED HEREIN.
- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND IN ACCORDANCE WITH ASME SECTION III, SUBSECTION ( ), CLASS ( ), ( ) EDITION THROUGH THE ( ) ADDENDA.

REMARKS: \_\_\_\_\_

| ITEM     | HEAT NO. | PRODUCT DESCRIPTION              | QTY      | GAUGE | WIDTH | LENGTH |
|----------|----------|----------------------------------|----------|-------|-------|--------|
| <u>4</u> |          | <u>Hvy Hx Bit 3/8-16 x 2 1/2</u> | <u>1</u> |       |       |        |

| SRP NO.     | HEAT CODE      | TEST TO:    | ( ) ASME SA- | GRADE          |
|-------------|----------------|-------------|--------------|----------------|
| <u>4172</u> | <u>655K423</u> | (x) ASTM A- | <u>307</u>   | GRADE <u>A</u> |
|             |                | ( ) ASTM B- |              | ALLOY          |
|             |                | ( ) SAE J-  |              | ALLOY          |
|             |                | ( ) AMS     |              |                |
|             |                | ( ) AA      |              |                |
|             |                | ( )         |              |                |
|             |                | ( )         |              |                |

HEAT/LOT REFERENCE NO.\* \_\_\_\_\_

\*(Test PO#, Lot No., Coil No., Etc...)

(x) CHEMISTRY:

| C  | Mn | S  | P  | Si | Cr | Mo | Ni | Cu | Al | B | V |
|----|----|----|----|----|----|----|----|----|----|---|---|
|    |    |    |    |    |    |    |    |    |    |   |   |
| Ti | Pb | Fe | Zn | N  |    |    |    |    |    |   |   |

- (x) PHYSICALS: (Tensile, yield, elongation, red. of area) ( ) BEND TEST
  - (x) HARDNESS: Rockwell \_\_\_\_\_ Brinell \_\_\_\_\_, Other \_\_\_\_\_
  - ( ) CHARPY IMPACT TESTS REQUIRED IN ACCORDANCE WITH ASME SECTION III, SUB-SECTION \_\_\_\_\_, CLASS \_\_\_\_\_, 19 \_\_\_\_\_ EDITION THROUGH THE \_\_\_\_\_ 19 \_\_\_\_\_ ADDENDA, NCA-3800.
  - ( ) TEST TEMPERATURE AT \_\_\_\_\_ F ( ) ABSORBED ENERGY \_\_\_\_\_ FT. LBS.
  - ( ) LOWEST SERVICE TEMPERATURE REPORTED IS \_\_\_\_\_ F.
- >ORIENTATION & LOCATION OF TEST SPECIMEN: \_\_\_\_\_

( ) TELECOPY TEST RESULTS UPON COMPLETION TO ENERGY STEEL & SUPPLY CO. (313)377-2812 AUTOMATIC.

ENERGY STEEL & SUPPLY CO.

12 [Signature] 12-6-90

MATERIAL UPGRADE PROCESS SHEET

TO: Mr. Jay Haber  
 MMA Laboratories  
 15171 Pipeline Lane  
 Huntington Beach, Ca 92649

Testing P.O. No. 012011  
 Tally/Tag No. \_\_\_\_\_  
 Heat Code \_\_\_\_\_  
 SEQ No. \_\_\_\_\_  
 Sales Order No. \_\_\_\_\_  
 Material P.O. No. 701050

- (x) ANSI N-45.2-77/71 Applies
- (x) NCA-1 Applies
- (x) 10 CFR 50 Appendix B
- (x) 10 CFR Part 21 Applies
- (x) All testing to be performed in accordance with your QA Manual First Edition, Revision #3, dated June 13, 1990 audited ~~and approved on 10/17/89~~ on 10/18/90 with subsequent annual review and approval ~~on 7/10/90, 11-5-90~~

- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND/OR IN ACCORDANCE WITH SECTION II SPECIFICATION OF THE A.S.M.E. B & PV CODE, SECTION III, NCA-3800 AS OUTLINED HEREIN.
- ( ) OUR MATERIAL YOU ARE TO PERFORM TESTING ON TO INSURE COMPLIANCE WITH THE SPECIFICATION/S OUTLINED AND IN ACCORDANCE WITH ASME SECTION III, SUBSECTION ( ), CLASS ( ), ( ) EDITION THROUGH THE ( ) ADDENDA.

REMARKS:

| ITEM     | HEAT NO.        | PRODUCT DESCRIPTION           | QTY      | GAUGE    | WIDTH    | LENGTH   |
|----------|-----------------|-------------------------------|----------|----------|----------|----------|
| <u>5</u> | <u>578T7197</u> | <u>3/8-16x3 1/2 40y Hc BH</u> | <u>1</u> | <u>—</u> | <u>—</u> | <u>—</u> |

| SRP NO.     | HEAT CODE | TEST TO:                                | ( ) ASME SA-       | GRADE          |
|-------------|-----------|---|--------------------|----------------|
| <u>4673</u> | <u>—</u>  | ( <input checked="" type="checkbox"/> ) | ASTM A- <u>307</u> | GRADE <u>A</u> |
|             |           | ( )                                     | ASTM B-            | ALLOY          |
|             |           | ( )                                     | SAE J-             | ALLOY          |
|             |           | ( )                                     | AMS                |                |
|             |           | ( )                                     | AA                 |                |
|             |           | ( )                                     |                    |                |
|             |           | ( )                                     |                    |                |

HEAT/LOT REFERENCE NO.\*

\*(Test PO#, Lot No., Coil No., Etc...)

| CHEMISTRY: |    |    |    |    |    |    |    |    |    |   |   |
|------------|----|----|----|----|----|----|----|----|----|---|---|
| C          | Mn | S  | P  | Si | Cr | Mo | Ni | Cu | Al | B | V |
|            |    |    |    |    |    |    |    |    |    |   |   |
| Tl         | Pb | Fe | Zn | N  |    |    |    |    |    |   |   |

- () PHYSICALS: (Tensile, yield, elongation, red. of area) ( ) BEND TEST
- () HARDNESS: Rockwell HR Brinell \_\_\_\_\_, Other \_\_\_\_\_
- ( ) CHARPY IMPACT TESTS REQUIRED IN ACCORDANCE WITH ASME SECTION III, SUB-SECTION \_\_\_\_\_, CLASS \_\_\_\_\_, 19\_\_\_\_ EDITION THROUGH THE \_\_\_\_\_ 19\_\_\_\_ ADDENDA, NCA-3800.
- ( ) TEST TEMPERATURE AT \_\_\_\_\_ F ( ) ABSORBED ENERGY \_\_\_\_\_ FT. LBS.
- ( ) LOWEST SERVICE TEMPERATURE REPORTED IS \_\_\_\_\_ F.

ORIENTATION & LOCATION OF TEST SPECIMEN: \_\_\_\_\_

( ) TELECOPY TEST RESULTS UPON COMPLETION TO ENERGY STEEL & SUPPLY CO. (313)377-2812 AUTOMATIC.

ENERGY STEEL & SUPPLY CO.

18 Ron J. [Signature] 12-6-91





|   |                          |
|---|--------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY | PART NUMBER: ITEM #1     |
| DATE: 12/12/90                          | HEAT NUMBER: L02131      |
| P.O. NO.: 012011                        | SPECIFICATION: SAE-J-429 |
| MMA W.O. NO.: BDE-12-10-32169           | DESCRIPTION: SEE BELOW   |

DESC: 3/4-10 x 2 1/4 HEX FLT  
TALLY/TAG # 000015 SRP # 4669

WE SUBMIT THE FOLLOWING DETERMINATIONS:

Alloy: SAE J 429 GR.5

| Chemistry |   |           | Specification Range |           |           |
|-----------|---|-----------|---------------------|-----------|-----------|
| C         | = | 0.39      | %                   | 0.28      | % 0.55 %  |
| Mn        | = | 0.89      | %                   | 0.0000    | % N/S %   |
| P         | = | 0.01      | %                   | 0.0000    | % 0.048 % |
| S         | = | 0.02      | %                   | 0.0000    | % 0.058 % |
| Si        | = | 0.23      | %                   | 0.0000    | % N/S %   |
| Cr        | = | 0.22      | %                   | 0.0000    | % N/S %   |
| Ni        | = | 0.01      | %                   | 0.0000    | % N/S %   |
| Mo        | = | 0.14      | %                   | 0.0000    | % N/S %   |
| Fe        | = | REMAINDER |                     | REMAINDER |           |

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

|   |                     |                 |   |
|---|---------------------|-----------------|---|
| E | CUST                | _____           | Q |
| S | P.O.                | _____           | A |
| S | & ITEM              | _____ QTY _____ | D |
| S | REVIEWED & APPROVED | _____           | E |
| C | BY                  | KS              | T |
|   | DATE                | 12-13-90        |   |

RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

  
\_\_\_\_\_  
AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED PENDING OUR WRITTEN APPROVAL.





# MMA LABORATORIES

15171 PIPELINE LANE • HUNTINGTON BEACH, CA 92648 • 714/892-1961 • FAX 714/892-8159

|   |                          |
|---|--------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY | PART NUMBER: ITEM #1     |
| DATE: 12/12/90                          | HEAT NUMBER: L02131      |
| P.O. NO.: 012011                        | SPECIFICATION: SAE-J-429 |
| MMA W.O. NO.: BDE-12-10-32169A          | DESCRIPTION: SEE BELOW   |

DESC: 3/4-10 x 2 1/4 HEX BLT  
TALLY/TAG # 000015 SRP # 4669

WE SUBMIT THE FOLLOWING DETERMINATIONS:

|                                     |   |
|-------------------------------------|---|
| E CUST _____                        | Q |
| S P.O. _____                        | A |
| & ITEM _____ QTY _____              | D |
| S REVIEWED & APPROVED               | E |
| C BY <u>JS</u> DATE <u>12-13-90</u> | S |
|                                     | T |

\*\*\* CONTINUED FROM W.O. # 32169 \*\*\*

### ELASTIC PROOF LOAD RESULTS (EXTERNALLY THREADED FASTENER)

AN ELASTIC PROOF LOAD TEST WAS PERFORMED ON THIS FASTENER TO A LOAD OF 28,390 POUNDS AND HELD FOR 10 SECONDS. UPON COMPLETION OF THE PROOF LOAD, THE FASTENER WAS REMOVED AND RE-MEASURED TO THE NEAREST 0.0001" TO DETECT ANY PERMANENT DEFORMATION. PROOF LOAD RESULTS INDICATE THAT THIS FASTENER CONFORMS TO SPECIFICATION REQUIREMENTS. PROOF LOAD BASED ON 85,000 PSI ✓

### WEDGE TENSILE RESULTS (REQUIREMENTS = 120,000 PSI MIN)

ULTIMATE TENSILE STRENGTH - #1 139,800 PSI ACTUAL FRACTURED AT  
USING A 6 DEGREE WEDGE THREADS

### HARDNESS TEST RESULTS

ACTUAL HARDNESS = HRC 28.5 REQUIREMENTS = HRB 25 - 34

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

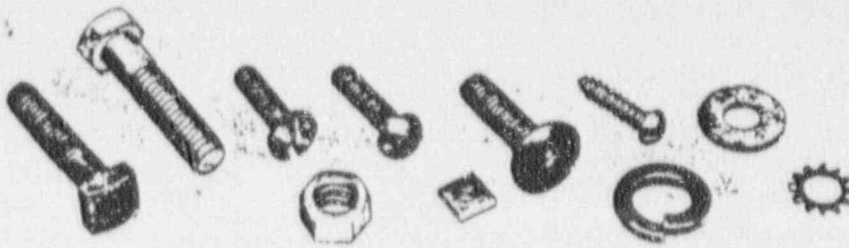
RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

\_\_\_\_\_  
AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED PENDING OUR WRITTEN APPROVAL.

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**GF** GENERAL FASTENERS CO.

BRASS-STEEL-ALLOYS-STANDARD & SPECIAL BOLTS NUTS SCREWS WASHERS-SEREW MACHINI PARTS & ALLIED PRODUCTS

CERTIFICATION OF COMPLIANCE

ENERGY STEEL & SUPPLY CO.  
2715 PALDAN  
AUBURN HILLS, MI 48057

Date NOV 25, 1986

Gentlemen:

With reference to your order 2158 611037 dated 11-12-86  
referenced by our shipper number 41655 dated 11-25-86

The material on the above order complies in all respects with the  
SAE J429 specifications and  
ANSI B18.2.1 1965

We certify that it has been purchased and inspected as per the requirements of 10 CFR 50 Appendix B and that we are in full compliance with 10 CFR Part 21.

GENERAL FASTENERS COMPANY  
by Donald J. Roberts  
Quality Control Department

ENERGY STEEL & SUPPLY CO.  
Q.A. Dept.  
By [Signature] date 12-4-86

11820 GLOBE ROAD · LIVONIA, MICHIGAN 48150-1180 · (313) 591-9500

(21)

DATE:

11/20/86

Lake Erie Screw Corporation  
 13001 Athens Avenue  
 Cleveland, Ohio 44107  
 216-521-1800

CUSTOMER: General Fasteners

ORDER NO: 282250C

DATE SHIPPED: 11/20/86

CUST. PART NO:

SPECIFICATION: Gr. 5

DESCRIPTION: 3/4-10 x 2 1/4  
Hex Head Cap

STEEL TYPE: 1038H Mod

LOT NO: 090585

STEEL HEAT NO: LQ2131

QUANTITY: 150 pieces

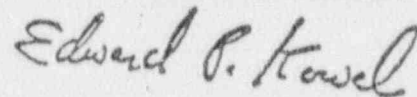
STEEL CHEMISTRY

| C   | Mn  | P    | S    | Si  | Ni | Cr | Mo | B  | Cu |
|-----|-----|------|------|-----|----|----|----|----|----|
| .37 | .88 | .010 | .017 | .23 | -- | -- | -- | -- | -- |

MECHANICAL PROPERTIES

| Wedge<br>Tensile Strength |         | Proof Load |        | Surface Hardness |     | Core Hardness |     |
|---------------------------|---------|------------|--------|------------------|-----|---------------|-----|
| lbs.                      | psi     | lbs.       | elong. | BHN              | Rc  | BHN           | Rc  |
|                           | 140,100 |            |        |                  | C32 |               | C32 |

We hereby certify that the above is correct and that the parts furnished have been manufactured and inspected in accordance with applicable quality requirements. We also certify that all parts substantially conform to the drawing, specifications and conditions set forth on the purchase order and/or Lake Erie quotation. These parts have been manufactured to the requirements of the Lake Erie Screw Corporation Statistical Process Control Program and are covered by the Lake Erie Screw Corporation warranty as stated on our quotation. SPC data is on file at our company.

LAKE ERIE SCREW CORPORATION


Edward P. Kowel  
 Quality Assurance Manager

PRODUCT MANUFACTURED IN THE UNITED STATES OF AMERICA

# United States Steel Corporation

01.000.0772 (REV. 6-84) CAT NO. 852322

## Metallurgical Test Report



CONTRACT NO.

LORAIN WORKS

P.O. DATE

PURCHASE ORDER NO.

05/24/85

8619-R6-ADON#2

SHIPPERS NO.

MILL ORDER NO.

INVOICE NO.

812641

6/26/85

JC62600

355-56890

VEHICLE IDENTITY

178291

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MFGD, SAMPLED, TESTED, AND OR INSPD. IN ACCORDANCE WITH THE SPECIFICATION AND FULL-FILLS REQUIREMENTS IN SUCH RESPECTS.

LAKE ERIE SCREW CORP  
13001 ATHENS AVE  
CLEVELAND OHIO 44107

LAKE ERIE SCREW CORP  
13001 ATHENS AVE  
LAKWOOD OHIO

SHIP TO

PREPARED BY THE OFFICE OF:  
E.L. BARTCLOTTA MGR. Q.

DATE 6/27/85

HR BARS CARBON C.34/.43 MN.80/1.10 P.04 MAX S.05  
MAX SI.15/.30 COARSE GRAIN RRQ-A SPECIAL  
HARDENABILITY COLD WORKING QUALITY

01 MILL THRU 5/16 INCH

9.

| Q. NO.  | MATERIAL DESCRIPTION |                      |        | QUAN- TITY | WEIGHT | HEAT NO. | TEST OR PIECE IDENTITY | YIELD PT. | TENSILE STR. | ELONGATION % |       | % RED. OF AREA | BE |    |    |    |    |    |    |    |  |
|---|----------------------|----------------------|--------|------------|--------|----------|------------------------|-----------|--------------|--------------|-------|----------------|----|----|----|----|----|----|----|----|--|
|   | THICKNESS OR SECTION | WIDTH DIA OR PT. WT. | LENGTH |            |        |          |                        |           |              | IN 8"        | IN 2" |                |    |    |    |    |    |    |    |    |  |
| 1   | 25/32RDS             |                      |        |            |        | L02131   |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| 1   | 25/32RDS             |                      |        |            |        | L02132   |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| END QUENCH HARDENABILITY (RC) TEST RESULTS (J DISTANCES-SIXTEENTHS) |                      |                      |        |            |        |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| HEAT NO   | 1                    | 2                    | 3      | 4          | 5      | 6        | 7                      | 8         | 9            | 10           | 11    | 12             | 13 | 14 | 15 | 16 | 20 | 24 | 28 | 32 |  |
| L02131  | 54                   | 52                   | 50     | 44         | 35     |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| L02132  | 54                   | 53                   | 51     | 46         | 39     |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| TYPE OF TEST CAST   |                      |                      |        |            |        |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| NORMALIZED 0000 F   |                      |                      |        |            |        |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |
| AUSTENITIZED 1550 F   |                      |                      |        |            |        |          |                        |           |              |              |       |                |    |    |    |    |    |    |    |    |  |

| Q. NO.                        | TYPE | C  | MN | P   | S   | SI | CU | NI | CR | MO | SN | AL | N | V | B | TI | CB | CO |
|-------------------------------|------|----|----|-----|-----|----|----|----|----|----|----|----|---|---|---|----|----|----|
| L02131                        |      | 37 | 88 | 010 | 017 | 23 |    |    |    |    |    |    |   |   |   |    |    |    |
| L02132                        |      | 37 | 89 | 011 | 020 | 21 |    |    |    |    |    |    |   |   |   |    |    |    |
| OF DATA THIS SHEET ***        |      |    |    |     |     |    |    |    |    |    |    |    |   |   |   |    |    |    |
| KILLED COARSE GRAIN AVERAGE # |      |    |    |     |     |    |    |    |    |    |    |    |   |   |   |    |    |    |
| KILLED COARSE GRAIN AVERAGE # |      |    |    |     |     |    |    |    |    |    |    |    |   |   |   |    |    |    |

CAD300 DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

23



DATE:

12/9/86

13001 Athens Avenue  
Cleveland, Ohio 44107  
216 521-1800

CUSTOMER: General Fasteners Company

ORDER NO: 792290C

DATE: 11/20/86

CUSTOMER PART NO:

SPECIAL FINISH: Gr. 5

DESCRIPTION: 3/4-10 x 2 1/4  
Hex Head Cap

STEEL TYPE: 1038H Mod

LOT NO: 090585

STEEL HEAT NO: L02131

QUANTITY: 150 pieces

STEEL CHEMISTRY

| C   | Mn  | P    | S    | Si  | Ni | Cr | Mo | B  | Cu |
|-----|-----|------|------|-----|----|----|----|----|----|
| .37 | .88 | .010 | .017 | .23 | -- | -- | -- | -- | -- |

MECHANICAL PROPERTIES

| Wedge<br>Tensile Strength |         | Proof Load |        | Surface Hardness |     | Core Hardness |     |
|---------------------------|---------|------------|--------|------------------|-----|---------------|-----|
| lbs.                      | psi     | lbs.       | elong. | BHN              | Rc  | BHN           | Rc  |
| 135,300                   | 137,700 | 28,400     | .0001  | C31              | C31 | C31           | C31 |
| 137,700                   | 139,100 | 28,400     | .0002  | C32              | C32 | C32           | C32 |
| 139,100                   | 140,500 | 28,400     | .0002  | C32              | C32 | C32           | C32 |
| 140,500                   | 141,900 | 28,400     | .0001  | C32              | C32 | C32           | C32 |
| 141,900                   | 143,300 | 28,400     | .0002  | C32              | C32 | C32           | C32 |

We hereby certify that the above is correct and that the parts furnished have been manufactured and inspected in accordance with applicable quality requirements. We also certify that all parts substantially conform to the drawing, specifications and conditions set forth on the purchase order and/or Lake Erie quotation. The parts have been manufactured to the requirements of the Lake Erie Screw Corp. Statistical Process Control Program and are covered by the Lake Erie Screw Corporation warranty as stated on our quotation. SPC data is on file at our company.

**ENERGY STEEL & SUPPLY CO.**  
Q.A. Dept.  
By SP date 12/28/86

LAKE ERIE SCREW CORPORATION

*Edward P. Kowel*

Edward P. Kowel  
Quality Assurance Manager

PRODUCT MANUFACTURED IN THE UNITED STATES OF AMERICA



# MMA LABORATORIES

15171 PIPELINE LANE • HUNTINGTON BEACH, CA 92649 • 714/892-1961 • FAX 714/892-8159

|  |                           |
|--|---------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY                        | PART NUMBER: ITEM #2      |
| DATE: 12/12/90   | HEAT NUMBER: 655K423 ✓    |
| P.O. NO.: 012011   | SPECIFICATION: ASTM-A-307 |
| MMA W.O. NO.: BDE-12-10-32172                                  | DESCRIPTION: SEE BELOW    |
| DESC: 3/8-16 X 1 3/4 HVY HEX BLT<br>TALLY/TAC # 535 SRP # 4670 |                           |

WE SUBMIT THE FOLLOWING DETERMINATIONS:

Alloy: ASTM-A-307 GR.A

| Chemistry |   |           | Specification Range |                 |
|-----------|---|-----------|---------------------|-----------------|
| C         | = | 0.21      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Mn        | = | 0.77      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| P         | = | 0.013     | ⊗ ✓                 | 0.0000 ⊗ 0.06 ⊗ |
| S         | = | 0.013     | ⊗ ✓                 | 0.0000 ⊗ 0.15 ⊗ |
| Si        | = | 0.01      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Cr        | = | 0.04      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Ni        | = | 0.01      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Mo        | = | 0.01      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Cu        | = | 0.02      | ⊗                   | 0.0000 ⊗ N/S ⊗  |
| Fe        | = | REMAINDER |                     | REMAINDER       |

|                     |               |
|---------------------|---------------|
| AGENCY              |               |
| CUST                |               |
| S PO                |               |
| BY                  |               |
| REVIEWED & APPROVED | DATE 12-18-90 |

WEDGE TENSILE RESULTS (REQUIREMENTS = 4,650 LBS MIN)

ACTUAL FRACTURED AT  
ULTIMATE TENSILE STRENGTH - #1 7,441 LBS / THREADS  
USING A 10 DEGREE WEDGE

### HARDNESS TEST RESULTS

ACTUAL HARDNESS = HRB 97.5 ✓ REQUIREMENTS = HRB 69 - 100

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED PENDING OUR WRITTEN APPROVAL.

25



STEEL FASTENERS - BOLT, NUT, WASHER, RIVET, SCREW, WOOD SCREW, NAIL, ANCHOR BOLT, ETC.

CERTIFICATION OF COMPLIANCE

ENERGY STEEL AND SUPPLY  
AUBURN HILLS, MI.

Date FEB 13, 1987

Gentlemen:

With reference to your order 701050 dated FEB 11, 1987  
referenced by our shipper number 55190 dated FEB 13, 1987

The material on the above order complies in all respects with the  
ASTM A-307 GR B WYV HEX BOLT specifications and

We certify that it has been purchased and inspected as per the requirements of 10 CFR 50 Appendix B and that we are in full compliance with 10 CFR Part 21.

ENERGY STEEL & SUPPLY CO.  
Q. A. Dept.  
By R date 2-23-87

GENERAL FASTENERS COMPANY  
by [Signature]  
Quality Control Department

11820 GLOBE ROAD • LIVONIA, MICHIGAN 48150-1180 • (313) 591-9500

26

**CERTIFICATE  
OF TEST**

**B & G manufacturing co. inc.**

P. O. BOX 269 • 3067 UNIONVILLE PIKE  
HATFIELD, PA. 19440

TO:

GENERAL FASTENERS  
11820 GLOBE ROAD  
LIVONIA, MI 48150

ENERGY STEEL & SUPPLY CO.  
Q.A. Dept.  
by *[Signature]* date 2-11-87

CUSTOMERS ORDER NO.  
32156QCC  
OUR ORDER NO.  
47466

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| A                     | 50 PCS.         | 655K423            | 3/8 - 16 X 1-3/4 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        | SPECIAL TESTS                       |
| Tensile strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7360                  |                 |                    |                        | RB 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                   |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|---------------------|-------------------------------------|
| B                     | 50 PCS.         | 578T7197           | 3/8 - 16 X 2 IN LG  | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                     | SPECIAL TESTS                       |
| Tensile strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area % | Hardness                            |
| 7440                  |                 |                    |                     | RB 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                     |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur             | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| C                     | 50 PCS.         | 655K423            | 3/8 - 16 X 2-1/2 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        | SPECIAL TESTS                       |
| Tensile strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7080                  |                 |                    |                        | RB 92                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                   |                                     |

WE HEREBY CERTIFY THAT THE FOREGOING DATA IS A TRUE COPY OF THE DATA FURNISHED US BY THE PRODUCING MILL, AND/OR MATERIAL SUPPLIER.

DATE 2/9/87

FEB 10 1987

B & G MANUFACTURING CO.

GENERAL FASTENERS  
LIVONIA, MICHIGAN  
SUBJECT TO WEIGHT & COUNT

*[Signature]*  
AUTHORIZED TEST DEPARTMENT CLERK

27





# MMA LABORATORIES

15171 PIPELINE LANE • HUNTINGTON BEACH, CA 92649 • 714/892-1961 • FAX 714/892-8159

|   |                           |
|---|---------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY                   | PART NUMBER: ITEM #3      |
| DATE: 12/12/90  | HEAT NUMBER: 578T7197     |
| P.O. NO.: 012011  | SPECIFICATION: ASTM-A-307 |
| MMA W.O. NO.: BDE-12-10-32170                             | DESCRIPTION: SEE BELOW    |
| DESC: 3/8-16 X 2 HVY HX BLT<br>TALLY/TAG # 536 SRP # 4671 |                           |

WE SUBMIT THE FOLLOWING DETERMINATIONS:

Alloy: ASTM-A-307 GR.A

| Chemistry |   |           | Specification Range |
|-----------|---|-----------|---------------------|
| C         | = | 0.22 %    | 0.0000 % N/S %      |
| Mn        | = | 0.72 %    | 0.0000 % N/S %      |
| P         | = | 0.014 %   | 0.0000 % 0.05 %     |
| S         | = | 0.013 %   | 0.0000 % 0.15 %     |
| Si        | = | 0.01 %    | 0.0000 % N/S %      |
| Cr        | = | 0.04 %    | 0.0000 % N/S %      |
| Ni        | = | 0.06 %    | 0.0000 % N/S %      |
| Mo        | = | 0.01 %    | 0.0000 % N/S %      |
| Cu        | = | 0.02 %    | 0.0000 % N/S %      |
| Fe        | = | REMAINDER | REMAINDER           |

|        |                     |
|--------|---------------------|
| CUST   | GRADE               |
| S P.O. | ITEM                |
| &      | QTY                 |
| S C    | REVIEWED & APPROVED |
|        | DATE 12/13/90       |
|        | BY                  |

WEDGE TENSILE RESULTS (REQUIREMENTS = 4,650 LBS MIN)

ACTUAL FRACTURED AT  
ULTIMATE TENSILE STRENGTH - #1 7,048 LBS / THREADS  
USING A 10 DEGREE WEDGE

HARDNESS TEST RESULTS

ACTUAL HARDNESS = HRB 97.5 / REQUIREMENTS = HRB 69 - 100

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

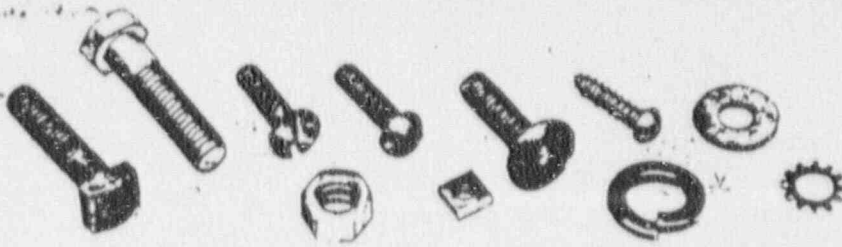
RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED PENDING OUR WRITTEN APPROVAL.

28



CERTIFICATION OF COMPLIANCE

ENERGY STEEL AND SUPPLY  
AUBURN HILLS, MI.

Date FEB 13, 1987

Gentlemen:

With reference to your order 701050 dated FEB 11, 1987

referenced by our shipper number 55190 dated FEB 13, 1987

The material on the above order complies in all respects with the

ASTM A-307 GR B HVY HEX BOLT specifications and

We certify that it has been purchased and inspected as per the requirements of 10 CFR 50 Appendix B and that we are in full compliance with 10 CFR Part 21.

ENERGY STEEL & SUPPLY CO.  
Q. A. Dept.  
By R date 2-23-87

GENERAL FASTENERS COMPANY  
by [Signature]  
Quality Control Department

# CERTIFICATE OF TEST

**B & G manufacturing co. inc.**

P. O. BOX 269 • 3067 UNIONVILLE PIKE  
HATFIELD, PA. 19440

TO:

GENERAL FASTENERS  
11820 GLOBE ROAD  
LIVONIA, MI 48150

ENERGY STEEL & SUPPLY CO.  
Q.A. Dept.

date 2-11-87

CUSTOMERS ORDER NO.  
32156QCC  
OUR ORDER NO.  
47466

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| A                     | 50 PCS.         | F55K423            | 3/8 - 16 X 1-3/4 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        |                                     |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7360                  |                 |                    |                        | RJ 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon                             |
|                       |                 | .012               | .012                   |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|---------------------|-------------------------------------|
| B                     | 50 PCS.         | 578T7197           | 3/8 - 16 X 2 IN LG  | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                     |                                     |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area % | Hardness                            |
| 7440                  |                 |                    |                     | RB 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                     |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur             | Silicon                             |
|                       |                 | .012               | .012                |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| C                     | 50 PCS.         | 655K423            | 3/8 - 16 X 2-1/2 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        |                                     |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7080                  |                 |                    |                        | RB 92                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon                             |
|                       |                 | .012               | .012                   |                                     |

WE HEREBY CERTIFY THAT THE FOREGOING DATA IS A TRUE COPY OF THE DATA FURNISHED US BY THE PRODUCING MILL, AND/OR MATERIAL SUPPLIER.

DATE 2/9/87

FEB 19 1987

B & G MANUFACTURING CO.

GENERAL FASTENERS  
LIVONIA, MICHIGAN  
SUBJECT TO WEIGHT & COUNT

*David A. London*  
AUTHORIZED TEST DEPARTMENT CLERK

30





# MMA LABORATORIES

15171 PIPELINE LANE • HUNTINGTON BEACH, CA 92649 • 714/892-1961 • FAX 714/892-8159

|   |                           |
|---|---------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY                       | PART NUMBER: ITEM #4      |
| DATE: 12/12/90  | HEAT NUMBER: 655R423      |
| P.O. NO.: 012011  | SPECIFICATION: ASTM-A-307 |
| MMA W.O. NO.: BDE-12-10-32171                                 | DESCRIPTION: SEE BELOW    |
| DESC: 3/8-16 X 2 1/2 HVY HX BLT<br>TALLY/TAG # 537 SRP # 4672 |                           |

WE SUBMIT THE FOLLOWING DETERMINATIONS:

Alloy: ASTM-A-307 GR.A

| Chemistry |             | Specification Range |
|-----------|-------------|---------------------|
| C         | = 0.18 %    | 0.0000 % N/S %      |
| Mn        | = 0.77 %    | 0.0000 % N/S %      |
| P         | = 0.013 %   | 0.0000 % 0.06 %     |
| S         | = 0.013 %   | 0.0000 % 0.15 %     |
| Si        | = 0.01 %    | 0.0000 % N/S %      |
| Cr        | = 0.04 %    | 0.0000 % N/S %      |
| Ni        | = 0.01 %    | 0.0000 % N/S %      |
| Mo        | = 0.01 %    | 0.0000 % N/S %      |
| Cu        | = 0.02 %    | 0.0000 % N/S %      |
| Fe        | = REMAINDER | REMAINDER           |

|         |         |      |      |
|---------|---------|------|------|
| CUST    | ES & SC | ITEM | DATE |
| ES & SC | ES & SC | DATE | DATE |
| ES & SC | ES & SC | DATE | DATE |
| ES & SC | ES & SC | DATE | DATE |

REVIEWED BY: JCS DATE: 12/13/90

WEDGE TENSILE RESULTS (REQUIREMENTS = 4,650 LBS MIN)  
 ACTUAL FRACTURED AT  
 ULTIMATE TENSILE STRENGTH - #1 7.177 LBS / THREADS  
 USING A 10 DEGREE WEDGE

HARDNESS TEST RESULTS  
 ACTUAL HARDNESS = HRB 95.5 / REQUIREMENTS = HRB 69 - 100

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED. PENDING OUR WRITTEN APPROVAL.

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CERTIFICATION OF COMPLIANCE

ENERGY STEEL AND SUPPLY  
AUBURN HILLS, MI.

Date FEB 13, 1987

Gentlemen:

With reference to your order 701050 dated FEB 11, 1987  
referenced by our shipper number 55190 dated FEB 13, 1987

The material on the above order complies in all respects with the  
ASTM A-307 GR B HVY HEX BOLT specifications and

We certify that it has been purchased and inspected as per the  
requirements of 10 CFR 50 Appendix B and that we are in full  
compliance with 10 CFR Part 21.

ENERGY STEEL & SUPPLY CO.  
Q. A. Dept.  
By R date 2-23-87

GENERAL FASTENERS COMPANY  
by Charles A. Roberts  
Quality Control Department

**CERTIFICATE  
OF TEST**

**B & G manufacturing co. Inc.**

F. O. BOX 269 • 3067 UNIONVILLE PIKE  
MATFIELD, PA 19440

TO:

GENERAL FASTENERS  
11820 GLOBE ROAD  
LIVONIA, MI 48150

ENERGY STEEL & SUPPLY CO.  
Q.A. Dept

by *[Signature]* date 2-11-67

CUSTOMERS ORDER NO.  
321560CC  
OUR ORDER NO.  
47466

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| A                     | 50 PCS.         | 655K423            | 3/8 - 16 X 1-3/4 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        | SPECIAL TESTS                       |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7360                  |                 |                    |                        | RB 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                   |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|---------------------|-------------------------------------|
| B                     | 50 PCS.         | 578T7197           | 3/8 - 16 X 2 IN LG  | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                     | SPECIAL TESTS                       |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area % | Hardness                            |
| 7440                  |                 |                    |                     | RB 90                               |
| CHEMICAL ANALYSIS     |                 |                    |                     |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur             | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                |                                     |

| ITEM NO.              | QUANTITY        | HEAT NO.           | SIZE                   | MATERIAL AND SPECIFICATION          |
|-----------------------|-----------------|--------------------|------------------------|-------------------------------------|
| C                     | 50 PCS.         | 655K423            | 3/8 - 16 X 2-1/2 IN LG | HVY HEX BOLTS<br>ASTM A307-80 GR. B |
| MECHANICAL PROPERTIES |                 |                    |                        | SPECIAL TESTS                       |
| Tensile Strength PSI  | Yield Point PSI | % Elongation in 2" | Reduction of Area %    | Hardness                            |
| 7080                  |                 |                    |                        | RB 92                               |
| CHEMICAL ANALYSIS     |                 |                    |                        |                                     |
| Carbon                | Mang.           | Phos.              | Sulphur                | Silicon Nickel Chromium Moly.       |
|                       |                 | .012               | .012                   |                                     |

WE HEREBY CERTIFY THAT THE FOREGOING DATA IS A TRUE COPY OF THE DATA FURNISHED US BY THE PRODUCING MILL, AND/OR MATERIAL SUPPLIER.

DATE 2/9/67

FEB 17 1967

B & G MANUFACTURING CO.

GENERAL FASTENERS  
LIVONIA, MICHIGAN  
SUBJECT TO WEIGHT & COUNT

*[Signature]*  
AUTHORIZED TEST DEPARTMENT CLERK

33



# MMA LABORATORIES

15171 PIPELINE LANE • HUNTINGTON BEACH, CA 92648 • 714/892-1961 • FAX 714/892-8159

|   |                           |
|---|---------------------------|
| CUSTOMER: ENERGY STEEL & SUPPLY COMPANY                       | PART NUMBER: ITEM #5      |
| DATE: 12/12/90  | HEAT NUMBER: 578T7197     |
| P.O. NO.: 012011  | SPECIFICATION: ASTM-A-307 |
| MMA W.O. NO.: BDE-12-10-32168                                 | DESCRIPTION: SEE BELOW    |
| DESC: 3/8-16 X 3 1/2 HVY HX BLT<br>TALLY/TAG # 610 SRP # 4673 |                           |

WE SUBMIT THE FOLLOWING DETERMINATIONS:

Alloy: ASTM-A-307 GR.A

| Chemistry |           | Specification Range |
|-----------|-----------|---------------------|
| C =       | 0.19 %    | 0.0000 % N/S %      |
| Mn =      | 0.75 %    | 0.0000 % N/S %      |
| P =       | 0.015 %   | 0.0000 % 0.06 %     |
| S =       | 0.012 %   | 0.0000 % 0.15 %     |
| Si =      | 0.02 %    | 0.0000 % N/S %      |
| Cr =      | 0.04 %    | 0.0000 % N/S %      |
| Ni =      | 0.03 %    | 0.0000 % N/S %      |
| Mo =      | 0.01 %    | 0.0000 % N/S %      |
| Cu =      | 0.03 %    | 0.0000 % N/S %      |
| Fe =      | REMAINDER | REMAINDER           |

RECEIVED  
 E. CUST  
 S. P.O.  
 & HEN  
 S. C  
 BY JCS  
 DATE 12-13-90

WEDGE TENSILE RESULTS (REQUIREMENTS = 4,650 LBS MIN)

ULTIMATE TENSILE STRENGTH - #1 6,572 LBS / ACTUAL FRACTURED AT  
 USING A 10 DEGREE WEDGE THREADS

HARDNESS TEST RESULTS

ACTUAL HARDNESS = HRB 94.0 / REQUIREMENTS = HRB 69 - 100

ANSI N-45.2-77/71, NOA-1, 10 CFR 50 APPENDIX B, 10 CFR 21 APPLIES

ALL PRODUCTS SUPPLIED ON ENERGY STEEL & SUPPLY CO. PURCHASE ORDER 012011 WERE FURNISHED IN ACCORDANCE WITH THE MMA LABORATORY QUALITY ASSURANCE MANUAL, 1ST ED., REV. 3, DATED 06/13/90, WHICH WAS AUDITED ON 10/18/90, AND APPROVED BY ES&SC ON 11/05/90.

RESPECTFULLY SUBMITTED,

THE ANALYSIS REPORTED ON THIS CERTIFICATION HAS BEEN PERFORMED IN ACCORDANCE WITH MMA QC/QA MANUAL AND RELATED PROCEDURES, FIRST EDITION DATED 06/13/90, REVISION 3.

AUTHORIZED SIGNATURE

THE INFORMATION CONTAINED ON THIS CERTIFICATION REPRESENTS ONLY THE MATERIAL TESTED. REPRODUCTION RIGHTS ARE RESERVED PENDING OUR WRITTEN APPROVAL.



STANDARD STEEL COMPANY - STANDARD SPECIAL STEEL COMPANY - WASHINGTON, D.C. - NEW YORK, N.Y. - PHOENIX, ARIZONA - PORTLAND, OREGON - RICHMOND, VIRGINIA - ST. LOUIS, MISSOURI - TAMPA, FLORIDA - WASHINGTON, D.C.

CERTIFICATION OF COMPLIANCE

ENERGY STEEL AND SUPPLY  
AUBURN HILLS, MI.

Date FEB 13, 1987

Gentlemen:

With reference to your order 701050 dated FEB 11, 1987  
referenced by our shipper number 55190 dated FEB 13, 1987  
The material on the above order complies in all respects with the  
ASTM A-307 GR B HVY HEX BOLT specifications and

We certify that it has been purchased and inspected as per the requirements of 10 CFR 50 Appendix B and that we are in full compliance with 10 CFR Part 21.

ENERGY STEEL & SUPPLY CO.  
Q. A. Dept.  
By R date 2-23-87

GENERAL FASTENERS COMPANY  
by [Signature]  
Quality Control Department



# CERTIFICATE OF TEST

**B & S Manufacturing Co. Inc.**  
 P. O. BOX 269 • 3067 UNIONVILLE PIKE  
 HATFIELD, PA. 19400

TO: GENERAL FASTENERS  
 11820 GLOBE ROAD  
 LIVONIA, MI 48150  
 ATTN: HERB

ENERGY SYSTEMS  
 O.J. COOK  
 By [Signature] Date 2-24-87

CUSTOMER ORDER NO.  
 32156700A  
 OUR ORDER NO.  
 47608

| ITEM NO.           | QUANTITY  | HEAT NO.              | SIZE                   | MATERIAL AND SPECIFICATION              |
|--------------------|-----------|-----------------------|------------------------|---|
| A                  | 50 PCS.   | 578T7197              | 3/8 - 16 X 3-1/2 IN LG | HVY HEX HD EXR TS<br>ASTM A307-80 GR. B |
| TENSILE PROPERTIES |           | MECHANICAL PROPERTIES |                        | SPECIAL TESTS                           |
| Yield Point        | Tensile   | Elongation            | Reduction of Area      | Hardness                                |
| 6520               |           |                       |                        | RD 92                                   |
| CHEMICAL ANALYSIS  |           |                       |                        |   |
| Carbon             | Manganese | Phosphorus            | Sulfur                 | Other                                   |
| .22                | .75       | .012                  | .012                   |   |

| ITEM NO.           | QUANTITY  | HEAT NO.              | SIZE              | MATERIAL AND SPECIFICATION |
|--------------------|-----------|-----------------------|-------------------|----------------------------|
|                    |           |                       |                   |                            |
| TENSILE PROPERTIES |           | MECHANICAL PROPERTIES |                   | SPECIAL TESTS              |
| Yield Point        | Tensile   | Elongation            | Reduction of Area | Hardness                   |
|                    |           |                       |                   |                            |
| CHEMICAL ANALYSIS  |           |                       |                   |                            |
| Carbon             | Manganese | Phosphorus            | Sulfur            | Other                      |
|                    |           |                       |                   |                            |

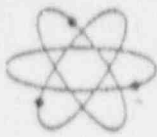
| ITEM NO.           | QUANTITY  | HEAT NO.              | SIZE              | MATERIAL AND SPECIFICATION |
|--------------------|-----------|-----------------------|-------------------|----------------------------|
|                    |           |                       |                   |                            |
| TENSILE PROPERTIES |           | MECHANICAL PROPERTIES |                   | SPECIAL TESTS              |
| Yield Point        | Tensile   | Elongation            | Reduction of Area | Hardness                   |
|                    |           |                       |                   |                            |
| CHEMICAL ANALYSIS  |           |                       |                   |                            |
| Carbon             | Manganese | Phosphorus            | Sulfur            | Other                      |
|                    |           |                       |                   |                            |

WE HEREBY CERTIFY THAT THE FOREGOING DATA IS A TRUE COPY OF THE DATA FURNISHED US BY THE PRODUCING MILL AND/OR MATERIAL SUPPLIER.

DATE  
 2/12/87

B & S MANUFACTURING CO.  
*Mervin A. Linder*  
 AUTHORIZED TEST DEPARTMENT SUPERVISOR

FORM 1 - 10872 - 058 87107 06, 00 803



# ENERGY STEEL & SUPPLY CO.

March 11, 1987

## INTRA-COMPANY MEMORANDUM

TO: Michael R. Mitchell  
FROM: William F. Snody  
SUBJECT: Trend Analysis of 1986 NCR

COPY

Total number of non-conformances are 8.

Total number of open non-conformances are 0.

### NCR Breakdown

| <u>VENDOR</u> | <u>NUMBER OF NCR'S</u> | <u>NUMBER OF P.O.'S</u> | <u>ERROR</u> |
|---------------|------------------------|-------------------------|--------------|
| V-019         | 1                      | 17                      | 5.8%         |
| V-025         | 1                      | 25                      | 4 %          |
| QV-070 *      | 1                      | 3 (rec. in 86)          | 33.3%        |
| QV-192        | 1                      | 27                      | 3.7%         |
| QV-217        | 1                      | 7                       | 14.3%        |
| QV-233 **     | 1                      | 3                       | 33.3%        |

\* Vendor # QV-70 has a high percentage of NCR's to orders, however only 8 pieces out of 73 were mis-marked. To present a more accurate picture of vendor performance, the correct percentage would be 10.9% for actual material supplied.

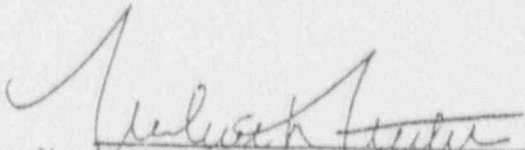
\*\* NCR written against this vendor is not a true NCR, please refer to the NCR # 118 for more information.

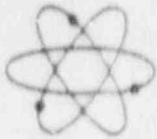
Two NCR's written were internal.

NCR# 0116 was a form change to more effectively show our NCR's closed.

NCR# 0119 was our failure to pass on the requirement of 10 CFR Part 21, on one order which we were able to resolve.

I believe the performance history of all vendors to be acceptable for 1986 and believe that no action is required as a result of this trend analysis report.

  
(reviewed) Michael R. Mitchell, President



# ENERGY STEEL & SUPPLY CO.

# COPY

## INTRA-COMPANY MEMORANDUM

TO: FILE  
FROM: ROBERT J. PATON QA MGR.  
SUBJECT: TREND ANALYSIS OF 1987 NCR'S

DATE: MARCH 16, 1988

Page 1 of 2

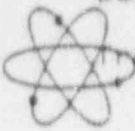
Total number of vendors used in 1987 are 150  
Total number of non-conformance reports are 21.  
Total number of open non-conformance reports are 0.

### NCR BREAKDOWN:

| <u>Vendor</u> | <u>No. of NCRs</u> | <u>No. of P.O.</u> | <u>Error Rate</u> |
|---------------|--------------------|--------------------|-------------------|
| AFCST*        | 1                  | 4                  | 25.00%            |
| BETST**       | 2                  | 4                  | 50.00%            |
| CAPPI         | 1                  | 12                 | 8.33%             |
| CHITU***      | 1                  | 3                  | 33.33%            |
| GENFA         | 1                  | 19                 | 5.26%             |
| INLST****     | 1                  | 1                  | 100.00%           |
| NOVMA         | 2                  | 169                | 1.18%             |
| RYERS         | 3                  | 70                 | 4.29%             |
| TEXBO*****    | 4                  | 32                 | 12.50%            |
| USSTE         | 3                  | 76                 | 3.95%             |
| WELMI*****    | 1                  | 6                  | 16.67%            |

### Notes:

Some vendors performance can be more correctly represented by comparing the number of pieces that actually were non-conforming to the total number of pieces supplied. (See page 2 for results)



Trend analysis of 1987 NCRs continued

COPY

Indepth analysis of vendors with greater than 10% Error Rate

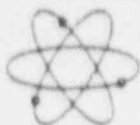
| <u>Vendor</u> | <u>NCR Pieces</u> | <u>Total Pieces</u> | <u>Error Rate</u> |
|---------------|-------------------|---------------------|-------------------|
| AFUST*        | 12                | 1,510               | 0.79%             |
| BETST**       | 11                | 31                  | 35.48%            |
| CHITU***      | 3                 | 3                   | 100.00%           |
| INLST****     | 3                 | 15                  | 20.00%            |
| TEXBO*****    | 415               | 1,866               | 22.24%            |
| WELMI*****    | 3                 | 21                  | 14.29%            |

After reviewing the above data along with a study of the content and severity of the NCR reports it has been determined that no action is required with exception to WELMI which has been down graded in its status as a quality vendor. Continued close surveillance of all vendors with an error rate above 10% is however considered necessary.

RJP/s  
cc:MRM

| APPROVED BY        |                     |
|--------------------|---------------------|
| <u>JMM</u>         | Date <u>3-16-88</u> |
| <u>[Signature]</u> | Date <u>3-16-88</u> |





Energy Steel & Supply Co.

Non-Conformance/Corrective Action Report

NCR No. 0126 Purchase Order No. 703025 Invoice No. 3975

Date March 9, 1987 Type of Non-Conformance  Material  
 Document  
 Other

Person Identifying Non-Conformance William F. Snody to Phil Brown (RG&E), Bob Ramsey (V-245), and Mike Kirkland (Energy Steel & Supply Co.)

Non-Conformance Description Material supplied for RG&E P.O.#NQ-10616-B-JD (Items 2 & 3 only were not supplied with the quality assurance requirements of ANSI N45.2 - 1971 and 10 CFR part 21, as required by their Purchase Order.

By: William F. Snody Date: 3-9-87

Recommended Disposition:  use-as-is  
 repair to original specification  
 rejected  
 replace  other

Comments (include technical justification, repair, procedure, replacement or rejection procedure): RG & E personnel are reviewing their use of the items concerned to determine if they need replacement or if they can delete the requirements of ANSI N 45.2 - 1971 and 10 CFR Part 21 for these two items only.

By: William F. Snody Date: 3-13-87

Corrective Action (to prevent recurrence) Talked to Mike Kirkland and Bob Ramsey (V-245) about acting on quality related orders on verbal communication only. Both parties understand this is how problems such as this arise and both will not ship material in the future without hardcopy P.O.'s.

By: William F. Snody Date: 3-13-87

|   |                           |                |
|---|---------------------------|----------------|
| Disposition Approval (Signature & Date) | <u>William F. Snody</u>   | <u>3-13-87</u> |
| Disposition Verified (Signature & Date) | <u>Richard R. Umbreit</u> | <u>3-13-87</u> |
| Corrective Action Approval (Sig & Date) | <u>William F. Snody</u>   | <u>3-13-87</u> |
| Corrective Action Verified (Sig & Date) | <u>Richard R. Umbreit</u> | <u>3-13-87</u> |
| Non-Conformance Closed (Sig & Date)     | <u>Richard R. Umbreit</u> | <u>3-21-87</u> |



ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001

TELEPHONE  
AREA CODE 716 548-2700

September 21, 1987

Mr. Robert Payton  
QA manager  
Energy Steel & Supply Company  
2715 Paldan Drive  
Auburn Hills, Michigan 48057

ENERGY STEEL & SUPPLY CO.  
Q. A. Dept.  
By JS date 9-23-87

Reference: RGE P.O.# NQ-10616-B-JD  
RGE NCR# G-87-142

Dear Mr. Payton:

As per our telecon today, RGE performed an internal evaluation of items #2 #3 on RGE P.O.# NQ-10616-B-JD.

The internal evaluation indicated the product, although not provided to a specific QA Program, was satisfactory for the end use here at RGE.

Due to Energy Steel notification to RGE of the problem, Energy Steel was not recorded as "responsible" for the deficiency.

Sorry for the hand-written note, but only critical items are receiving typing at RGE due to budget constraints —

If I can be of further assistance, please call.

Yours truly,  
Philip S. Brown  
QA Manager

C: Supplier File

41

ENERGY STEEL & SUPPLY CO.  
TELEPHONE AND CONFERENCE MEMORANDUM

FILE \_\_\_\_\_

DATE 9-21-87

BY: BOB PATON

WORK ORDER NO. WV 3973  
50# 2546

TELEPHONE CALL  CONFERENCE

WITH: PHIL BROWN - 716-724-8144

COMPANY: R.G. + E, PO# NO-10616-B-JD

SUBJECT: NCR # 126

NOTES: WAS THE MTL ACCEPTED WITHOUT REQUIREMENTS?

WAS THERE ANY CORRESPONDENCE? NO - GA 7142

MATERIAL WAS USED AS IS - PER RG + E

MATERIAL DEFICIENCY FORM # GA 7142,

VERBAL RECONFIRMATION OF AS IS USE BY RG + E 9-21-87

BOB PATON / PHIL BROWN,

NEED CHANGE ORDER DELETING REQUIREMENTS OR LETTER

PHIL BROWN WILL SEND LETTER TODAY 9-21-87

Copies To:

Energy Steel & Supply Co.  
2715 Paldan Drive  
Auburn Hills, MI 48057

PURCHASE ORDER NO.

2548  
703025

VENDOR CODE

V-245

# PURCHASE ORDER

TO: General Fasteners Co.  
12000 Globe  
Livonia, MI

SHIP TO: Our Pick-Up

48150

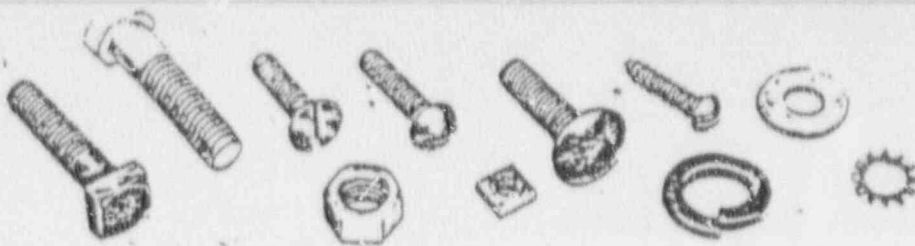
3-6-87

| P.O. DATE         | SHIP VIA   | F.O.B.                                    | TERMS                        |                             |          |
|-------------------|--|---|------------------------------|-----------------------------|----------|
| 3/6/87            | Our Truck  | Origin                                    | Net 30 Days                  |                             |          |
| BUYER<br>Michigan | FREIGHT<br>Prepaid   | REQ. DATE<br>3-6-87                       | CONFIRMING TO<br>S.O. Number | REMARKS<br>DO NOT DUPLICATE | TAX<br>M |
| QTY. REQ.         | ITEM NO.   | DESCRIPTION                               | UNIT COST                    | AMOUNT                      |          |
| 999999            | N29B9298   | BOLT 3/8''-16 X 2-1/2''<br>SAE J 429 GR 2 | 0.0000                       | 0.00                        |          |
| 999999            | N29B9299   | NUT 3/8''-16<br>ASTM A 194 GR 2H          | 0.0000                       | 3.00                        |          |
| 1                 | Q.A. REVIEW/APPROVAL (FP) 3/9/87   |   |                              |                             |          |
| 3                 | CERTIFICATION REQUIRED   |   |                              |                             |          |
| 13                | CERTIFICATION OF CONFORMANCE REQUIRED W/SHIPMENT   |   |                              |                             |          |
| 24                | MATERIAL IS TO BE MARKED IN ACCORDANCE WITH MATERIAL SPEC                                    |   |                              |                             |          |
| 25                | EACH BUNDLE IS TO BE TAGGED WITH HEAT#, PO#, GRADE, QTY, ETC                                 |   |                              |                             |          |
| 29                | ANSI N-45.2 APPLIES  |   |                              |                             |          |
| 31                | 10 CFR PART 21 APPLIES   |   |                              |                             |          |
| 52                | <del>PLEASE PRINT NAME AND ADDRESS OF SUPPLIER AND TELEPHONE NUMBER AND CITY AND STATE</del> |   |                              |                             |          |
| 47                | ALL CERTIFICATIONS MUST BE OF MICROFILMABLE QUALITY  |   |                              |                             |          |
| 47                | PAYMT WILL BE MADE FROM DATE MATL AND CERT IS RECEIVED                                       |   |                              |                             |          |
| 28                | 10 CFR 50 APPENDIX B APPLIES   |   |                              |                             |          |

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*[Signature]*  
AUTHORIZED SIGNATURE





BRASS · STEEL · ALLOYS · STANDARD & SPECIAL BOLTS, NUTS, SCREWS, WASHERS · SCREW MACHINE PARTS & ALLIED PRODUCTS

CERTIFICATION OF COMPLIANCE

DATE: 3/6/87

ENERGY STEEL

THIS IS TO CERTIFY THAT THE PARTS IDENTIFIED BELOW HAVE BEEN PROCESSED IN CONFORMANCE WITH YOUR REQUIREMENTS

P.O. NO.

703025

DATE SHIPPED

3/6/87

| QUANTITY | PART NO. | DESCRIPTION                                  |
|----------|----------|--|
| 50       |          | 3/8-16 X 2-1/2 HHCSSGR 2<br>PER SAE J429 GR2 |
| 50       |          | 3/8-16 HVY 2H NUT A194 GR 2H                 |

ENERGY STEEL & SUPPLY CO.  
Q.A. Dept.  
By ms date 3-6-87

WE CERTIFY THAT PARTS LISTED ABOVE ARE TO SPECIFICATIONS OF MATERIAL, HARDNESS, STRENGTH AND PLATING REQUIRED TO DRAWINGS AND PART NO.

GENERAL FASTENERS CO.

BY: Herbert A. Cole  
QUALITY CONTROL MANAGER

Energy Steel & Supply Co.  
2715 Paldan Drive  
Auburn Hills, MI 48057

**SALES ORDER** 2546

CUSTOMER NO. ROCHEST

BILL TO: Rochester Gas & Electric  
89 East Ave.  
Rochester, NY

SHIP TO: Rochester Gas & Electric  
Ginna Station  
1503 Lake Road  
Ontario, NY

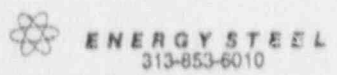
14649

14519

*36-87*

*SATURDAY DELIVERY*

| DATE                  |         | SHIP VIA            |             | F.O.B.  |            | TERMS                  |  |
|-----------------------|---------|---------------------|-------------|---|------------|------------------------|--|
| 3/ 6/87               |         | Fed Ex. Overnight A |             | Origin  |            | 0.5 & 10 / Net 30 Days |  |
| PURCHASE ORDER NUMBER |         | ORDER DATE          |             | SALESPERSON   |            | OUR ORDER NUMBER       |  |
| NQ10616BJD            |         | 3/ 6/87             |             | Kirkland  |            | 703025                 |  |
| QUANTITY              |         |                     | ITEM NUMBER | DESCRIPTION   | UNIT PRICE | AMOUNT                 |  |
| REQUIRED              | SHIPPED | S.O.                |             |   |            |                        |  |
| 50                    |         |                     |             | BOLT 3/8''-16 X 2-1/2''                               |            |                        |  |
| 999999                |         |                     |             | SAE J 429 GRADE 2                                     |            |                        |  |
| 50                    |         |                     |             | NUT 3/8''-16  |            |                        |  |
| 999999                |         |                     |             | ASTM A-194 GRADE 2A 2H                                |            |                        |  |
|                       |         |                     |             | <i>KP 3-6-87</i>                                      |            |                        |  |
| 1                     |         |                     |             | Q.A. REVIEW/APPROVAL ( <i>RP</i> ) <i>3/6/87</i>      |            |                        |  |
| 3                     |         |                     |             | CERTIFICATION REQUIRED                                |            |                        |  |
| 13                    |         |                     |             | CERTIFICATION OF CONFORMANCE REQUIRED W/SHIPMENT      |            |                        |  |
| 24                    |         |                     |             | MATERIAL IS TO BE MARKED IN ACCORDANCE WITH MATER     |            |                        |  |
| 25                    |         |                     |             | EACH BUNDLE IS TO BE TAGGED WITH HEAT#, PO#, GRADE, ( |            |                        |  |
| 29                    |         |                     |             | <del>ANSI N-45.2 APPLIES</del>                        |            |                        |  |
| 30                    |         |                     |             | PACKAGING IN ACCORDANCE WITH ANSI N-45.2.2 LEVEL      |            |                        |  |
| 31                    |         |                     |             | <del>ANSI N-45.2 APPLIES</del> <i>7/25</i>            |            |                        |  |
| 33                    |         |                     |             | DO NOT SHIP WITHOUT RECEIPT OF CUSTOMER PURCHASE (    |            |                        |  |
| 34                    |         |                     |             | HEAT # VERIFIED W/CA( ) / / . OK TO PROCESS (         |            |                        |  |
| 35                    |         |                     |             | DO NOT SHIP UNLESS ESSC QA DEPT AUTHORIZES RELEASE    |            |                        |  |
| 48                    |         |                     |             | INSPECTED BY ( <i>W. B. ...</i> ) DATE <i>3/6/87</i>  |            |                        |  |



*Thank You*  
*45*

*9/2*



# ENERGY STEEL & SUPPLY CO.

2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057  
(313) 377-4990

- Certificate of Compliance
- Statement of Conformance

CUSTOMER: Rochester Gas & Electric  
Ginna Station  
1503 Lake Rd.  
Ontario, NY 14519

DATE  
March 6, 1987  
OUR ORDER NO.  
2545  
YOUR ORDER NO.  
NQ-10616-BJD

| ITEM | QUANTITY | DESCRIPTION           | HEAT OR REFERENCE NO. |
|------|----------|-----------------------|-----------------------|
| 2    | 50 pcs   | BOLT 3/8"-16 x 2-1/2" | 703025                |
| 3    | 50 pcs   | NUT 3/8"-16           | 703025                |

This is to certify that the material furnished for your order and described above, complies to the requirements of the applicable material specifications, as reported on the attached copies of the manufacturer's certified material test reports, and meets all requirements of your purchase order.

(THE FOLLOWING APPLY AS INDICATED)

- This is to certify that the material supplied for your order conforms to the requirements of specification.  
Item 1: SAE J429 Gr. 2 Item 2: ASTM A-194 Gr. 2H
- This is to certify that the material furnished for your order was supplied in accordance with our identification and verification program per the quality requirements of ASME Section III, Division 1, Sub-article NA-3700/NCA-3800 and complies to the applicable requirements, as specified, of ASME Section III, Subsection \_\_\_\_\_, Class \_\_\_\_\_, \_\_\_\_\_ Edition  
\_\_\_\_\_ Addenda.
- This is to certify that repair by welding was not performed on the material described above.
- This is to certify that to the best of our knowledge this material, during the manufacturing processes, tests and inspections, has not come into direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.
- This is to certify that your order was furnished in accordance with the following specifications and/or procedures:  
Packaged in accordance with ANSI N45.2.2 Level C
- This is to certify that this order was supplied in accordance with our Quality System Program, Revision \_\_\_\_\_, Dated \_\_\_\_\_.
- This is to certify that this order was supplied in accordance with our Quality System Certificate number (QSC-511) which expires on 10-17-89.

ENERGY STEEL & SUPPLY CO.

*Kelly A. Pratt*  
AUTHORIZED  
Kelly A. Pratt, Q.A. Coordinator

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ROCHESTER GAS AND ELECTRIC CORPORATION  
89 EAST AVE, ROCHESTER, NY. 14649-0001

PURCHASE ORDER

2546 + 2545

ORIGINAL

BILL TO: P.O. BOX 40660  
ROCHESTER, NY. 14604

SHIP TO: ROCHESTER GAS & ELECTRIC  
GINNA STATION  
1503 LAKE RD  
ONTARIO NY 14519

NOTICE: YOUR FEDERAL TAX ID NUMBER MUST APPEAR ON ALL INVOICES  
9901712-001  
ENERGY STEEL AND SUPPLY CO.  
2715 PALDAN DRIVE  
AUBURN HILLS MI 48057

|   |          |
|---|----------|
| PURCHASE ORDER NO.  |          |
| NR-10616-B-3  |          |
| SUPPLEMENT NO.  | REV.     |
| DATE OF ORDER   | 03/10/87 |
| ALL BILLS, SHIPPING PAPERS AND PACKING SLIPS MUST BE PREPARED WITH PURCHASE ORDER NUMBER. FAILURE TO DO SO MAY RESULT IN REFUSAL OF SHIPMENT OR DELAY OF PAYMENT. |          |
| PLEASE IDENTIFY ALL MATERIALIZED PURCHASE ORDER NUMBERS.  |          |

| QUANTITY  | UNIT        | DESCRIPTION   | MARKING        | UNIT PRICE | TOTAL |
|---|-------------|---|----------------|------------|-------|
| 03/07/87  | NET 30 DAYS | FEDERAL EXPRESS                                       | SHIPPING POINT | 99666      |       |
| PLEASE DIRECT ALL QUESTIONS TO: J. DI LUCCI AT (716) 724  |             |   |                |            |       |
| 1   | 1           | 1" THICK X 48" X 96" A-36 PLATE                       |                |            |       |
| 2   | 50          | 3/8" NUTS, THD. NC, ASTM A-194, GRADE 2H              |                |            |       |
| 3   | 50          | 3/3" X 2 1/2" CAP SCREWS, THD. NC. SAE J-429, GRADE 2 |                |            |       |
| 4   | 1           | SET UP CHARGE, HANDLING, EXPEDITING (BREAK IN CHARGE) |                |            |       |
| <p>THIS PARAGRAPH REFERS TO ALL ITEMS: PRODUCTS SENT TO ROCHESTER GAS AND ELECTRIC CORPORATION SHALL NOT BE MANUFACTURED OR PROCESSED BY TEXAS BOLT COMPANY.</p> <p>FOR ITEMS: 1 2 3</p> <p>ITEMS AND/OR SERVICES SHALL BE FURNISHED TO A QUALITY ASSURANCE PROGRAM THAT MEETS THE REQUIREMENTS OF ANSI N45.2 1971. ALL DOCUMENTATION SHALL ACCOMPANY SHIPMENT AND REFERENCE APPLICABLE CODES, STANDARDS, RG&amp;E P.O. NUMBER/REQUIREMENTS AND SHALL BE ATTESTED TO BY PERSON(S) WHOSE FUNCTION OR POSITION IS IDENTIFIED IN THE QA PROGRAM.</p> <p>FOR ITEMS: 1 2 3</p> |             |   |                |            |       |

ENERGY STEEL & SUPPLY CO.  
QA Dept  
Date 3-6-87

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- INSTRUCTIONS TO VENDOR
1. COMPLETE ACKNOWLEDGEMENT COPY AND FORWARD TO ADDRESS SHOWN HEREON
  2. SEND BILL OF LADING AND SHIPPING MEMO TO DESTINATION
  3. NOTIFY US PROMPTLY IF UNABLE TO MAKE COMPLETE SHIPMENT BY ABOVE REQUIRED DATE
  4. ALL SHIPMENTS ARE TO BE PREPAID UNLESS OTHERWISE SPECIFIED
  5. PREPAID BY OPERATION CHARGES MUST BE SHOWN AS SEPARATE ITEM ON INVOICE

NY STATE SALES TAX PERM NO D7000121  
ENR IDENTIFICATION NO 16-0612110

THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE FRONT AND REVERSE THEREOF AND TO ANY FURTHER RESTRICTIONS OR CONDITIONS AND OTHER MATERIALS MADE A PART HEREOF BY THE U.S.





ROCHESTER GAS AND ELECTRIC CORPORATION  
89 EAST AVE. ROCHESTER, NY. 14649-0001

# PURCHASE ORDER

ORIGINAL

BILL TO: P.O. BOX 40660  
ROCHESTER, NY. 14604

SHIP TO: ROCHESTER GAS & ELECTRIC  
GINNA STATION  
1503 LAKE RD  
ONTARIO NY 14519

NOTICE: YOUR FEDERAL TAX ID NUMBER MUST APPEAR ON ALL INVOICES  
9901712-001  
ENERGY STEEL AND SUPPLY CO.  
2715 PALDAN DRIVE  
AUBURN HILLS MI 48057

|  |     |
|--|-----|
| PURCHASE ORDER NO.   |     |
| NQ-10616-B-  |     |
| SUPPLEMENT NO.   | REV |
| DATE OF ORDER  |     |
| 03/10/8  |     |
| ALL INVOICES, SHIPPING PAPERS AND PACKING SLIPS ABOVE PURCHASE ORDER NUMBER MUST COMPLY OR DELAY OF PAYMENT. |     |
| PLEASE IDENTIFY ALL MATERIALS MADE IN THE UNITED STATES OF AMERICA.  |     |

| DATE   | TERMS       | VIA             | SHIP TO        | SHIP FROM | ATTENTION  |
|--|-------------|-----------------|----------------|-----------|------------|
| 03/07/87   | NET 30 DAYS | FEDERAL EXPRESS | SHIPPING POINT | 99666     | J. DITUCCI |
| <p>PACKAGING, SHIPPING AND HANDLING SHALL MEET <del>THE</del> REQUIREMENTS OF ANSI <del>465-2-2-1972</del>.</p> <p>FOR ITEMS: 1 2 3<br/>THE SUPPLIER SHALL FURNISH A <del>CERTIFICATE OF CONFORMANCE</del>.</p> <p>FOR ITEMS: 1 2 3<br/>THE SUPPLIER'S QA PROGRAM SHALL BE SUBJECT TO AN AUDIT BY RGE AND/OR OUR AUTHORIZED AGENTS. PERSONNEL PERFORMING THE AUDIT SHALL HAVE FREE ACCESS TO THE SUPPLIER'S FACILITIES.</p> <p>FOR ITEMS: 1 2 3<br/>ALL NONCONFORMANCES AND DISPOSITIONS TO THE PURCHASE ORDER REQUIREMENTS SHALL BE SUBMITTED TO RGE FOR APPROVAL.</p> <p>NOTE: PLEASE SHIP ONE PIECE OF STEEL PLATE 1" X 6" X 0.12" WITH THE NUTS AND CAP SCREWS. THE BALANCE OF THE PLATE SHOULD BE SHIPPED BY COMMON CARRIER.</p> <p>THE REQUIREMENT OF <del>ASER PART 2</del> APPLIES TO THIS</p> |             |                 |                |           |            |

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- INSTRUCTIONS TO VENDOR
- COMPLETE ACKNOWLEDGEMENT COPY AND FORWARD TO ADDRESS SHOWN THEREON
  - SEND BILL OF LADING AND SHIPPING SLIP TO DESTINATION
  - NOTIFY US PROMPTLY IF UNABLE TO MAKE COMPLETE SHIPMENT BY ABOVE REQUIRED DATE
  - ALL SHIPMENTS ARE TO BE FREIGHT UNLESS OTHERWISE SPECIFIED
  - PREPAID PORTATION CHARGES MUST BE SHOWN AS SEPARATE ITEM ON INVOICE

NY STATE SALES TAX PERMIT NO. 07000121  
EMP. IDENTIFICATION NO. 15-0612110

THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE BACK AND REVERSE HEREOF AND TO ANY FURTHER RESTRICTIONS, SPECIFICATIONS AND OTHER MATERIALS MADE A PART HEREOF BY US.

PAGE 2  
-CONTINUE

M. J. 20



ROCHESTER GAS AND ELECTRIC CORPORATION  
89 EAST AVE, ROCHESTER, NY. 14649-0001

**PURCHASE ORDER**

ORIGINAL

BILL TO: P.O. BOX 40680  
ROCHESTER, NY. 14604

SHIP TO: ROCHESTER GAS & ELECTRIC  
GINNA STATION  
1503 LAKE RD  
ONTARIO NY 14519

NOTICE: YOUR FEDERAL TAX ID NUMBER MUST APPEAR ON ALL INVOICES  
9901712-001  
ENERGY STEEL AND SUPPLY CO.  
2715 PALDAN DRIVE  
AUBURN HILLS MI 48057

|   |          |
|---|----------|
| PURCHASE ORDER NUMBER   |          |
| NQ-10616-B-J  |          |
| SUPPLEMENT NO.  | REVISION |
| DATE OF ORDER   |          |
| 03/10/87  |          |
| ALL INVOICES, SHIPPING PAPERS AND PACKS<br>SHOW ABOVE PURCHASE ORDER NUMBER.<br>COMPLY OR RESULT IN REFUSAL OF SHIP<br>OR DELAY OF PAYMENT. |          |
| PLEASE IDENTIFY ALL MATERIALS<br>ROCHESTER GAS AND ELECTRIC MATERIALS.  |          |

|                 |             |                 |                |       |                                      |  |
|-----------------|-------------|-----------------|----------------|-------|--------------------------------------|--|
| 03/07/87        | NET 30 DAYS | FEDERAL EXPRESS | SHIPPING POINT | 99666 | PLEASE DIRECT ALL QUESTIONS TO BUYER |  |
|                 |             |                 |                |       | J. DITUCCI                           |  |
|                 |             |                 |                |       | AT (716) 724-1                       |  |
| PURCHASE ORDER. |             |                 |                |       |                                      |  |
|                 |             |                 |                |       |                                      |  |

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- INSTRUCTIONS TO VENDOR
1. COMPLETE ACKNOWLEDGEMENT COPY AND FORWARD TO ADDRESS SHOWN THEREIN
  2. SEND BILL OF LADING AND SHIPPING NEWS TO DESTINATION
  3. NOTIFY US PROMPTLY IF UNABLE TO MAKE COMPLETE SHIPMENT BY ABOVE REQUIRED DATE
  4. ALL SHIPMENTS ARE TO BE PREPAID UNLESS OTHERWISE SPECIFIED
  5. FREIGHT AND PORTATION CHARGES MUST BE SHOWN AS SEPARATE ITEM ON INVOICE

NY STATE SALES TAX REFUND NO. DE900127  
EMP. IDENTIFICATION NO. 15-084211D

THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS  
PRINTED ON THE REVERSE HEREOF AND TO ANY FURTHER  
INSTRUCTIONS, SPECIFICATIONS AND OTHER MATERIALS MADE A PART  
HEREOF BY THE BUYER.



BRASS · STEEL · ALLOYS · STANDARD & SPECIAL BOLTS · NUTS · SCREWS · WASHERS · SCREW MACHINE PARTS & ALLIED PRODUCTS

November 7, 1990

Mr. Robert Payton  
Vice President Quality Assurance  
2715 Paldan Drive  
Auburn Hills, MI 48057

Dear Robert:

In answer to your letter dated October 23, 1990 regarding Certificates of Conformance/Compliance, and vendor audits, we have conducted an extensive search for these missing documents. At this time I regret to inform you that we have not located any of the missing documents, if they should exist at all.

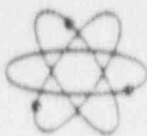
Should you have any questions, please do not hesitate in contacting me.

Sincerely,  
*John Hall*  
John Hall  
Quality Product Analyst

JH:amk

cc: David Grossman  
File

50



# ENERGY STEEL & SUPPLY CO.



WORLD HEADQUARTERS  
2715 PALDAN DRIVE  
AUBURN HILLS, MI 48057 U.S.A.  
(313) 377-4990

TELECOPY: (313) 377-2338  
TELEX: 796815  
EASYLINK: 62819432

Home of the "Duke of Nuke".

October 23, 1990

Mr. David Grossman  
Vice President and General Manager  
General Fastener Company  
11820 Globe Road  
Livonia, MI 48150-1180

RE: Certificates of Conformance/Compliance, Vendor Audits

Dear Mr. Grossman:

As of this date Energy Steel & Supply Co. has received only one (1) of the vendor audits requested in my letter of June 23, 1990 to Mr. John Hall. It is of the utmost importance that you supply evidence of these audits as originally requested or issue written notification to ES&SC that the subject audit reports are not available, do not exist, or have not been performed in accordance with the requirements of 10 CFR 50 Appendix B.

It has also come to our attention that several orders were supplied to ES&SC by your company with the proper mill certifications, but without a General Fastener Company Certificate of Conformance or Compliance as required by our purchase orders.

Attached you will find the listing of the seven (7) ES&SC Purchase Orders that require your submittal of Certificates of Conformance/Compliance. Please review the list and note that the applicable requirements of Title 10 of the Code of Federal Regulations Parts 50 Appendix B (10 CFR 50 Appendix B) and Part 21 (10 CFR Part 21) applies to these purchases, which will require a statement of conformance/compliance to these regulations as part of the material certification (C of C).

Thank you for your cooperation regarding the above matter. If there are any questions regarding the above do not hesitate in contacting me.

Very truly yours,

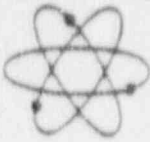
Robert J. Paton  
Vice President,  
Quality Assurance

RJP/s

cc: M. Mitchell  
T. Fabbri  
QA file  
J. Armenta - USNRC

enclosure (1)





NRC FASTENER INVESTIGATION (GENFA) 10/23/90

The following is a listing of Nuclear Safety Related (10 CFR Part 21) ES&SC Purchase Orders issued to the General Fastener Company that do not contain a General Fastener Co. Certificate of Conformance or Compliance as part of the General Fastener Co. supplied documentation or the C of C does not reference 10 CFR 50 Appendix B or 10 CFR part 21 as required by the ES&SC Purchase Order.

| <u>ES&amp;SC PO #</u> | <u>ORDER DATE</u> | <u>MTRL HT#</u>                      | <u>Manufacturer Name</u>  |
|-----------------------|-------------------|--------------------------------------|---|
| *606024               | 06/06/86          | 864996                               | CARTECH/PRDTN.TH.D.PROD.  |
| 702007                | 02/04/87          | B17867<br>A17328                     | INFASCO<br>INFASCO  |
| *703025               | 03/06/87          | REF#703025                           | UNKNOWN GENFA C of C ONLY   |
| 704062                | 04/13/87          | 680E-366<br>KC8419<br>409964         | B & G MANUFACTURING<br>B & G MANUFACTURING<br>B & G MANUFACTURING |
| 706025                | 06/25/87          | 3049E                                | B & G MANUFACTURING   |
| 706042                | 06/18/87          | R45418<br>C21157<br>2-36878          | NIPPON FASTENER<br>INFASCO<br>ONO MFG/KAWASAKI STEEL              |
| 706030                | 06/08/87          | B19022<br>A17458<br>RN0252<br>C21036 | INFASCO<br>INFASCO<br>INFASCO<br>INFASCO                          |

NOTE:

\* = General Fastener Co. C of C does not reference 10 CFR 50 Appendix B nor 10 CFR Part 21.

Purchase order numbers not preceded with "\*" did not contain a GENFA C of C.