PVN STEELS
460 Hillside Avenue • Hillside, New Jersey 07205 • Tel. (201) 964-5300

B1

William M. Lanza
President

September 13th, 1989

Mr. E. William Brach
Chief, Vendor Inspection Branch
Division of Reactor Inspection
and Safeguards
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 99901129-89-01

Dear Mr. Brach:

Enclosed please find the response of Meredith Corporation, Pressure Vessel Nuclear Steels (PVN) to your letter dated July 21st, 1989, which enclosed Inspection Report No. 99901129/90-01, relating to the NRC inspections of PVN conducted on November 2-4, 1988 and February 1-3, 1989.

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

Sincerely yours,

William M. Lanza

WML:imf
Enclosure

CERTIFIED MAIL

B14

RESPONSE OF MEREDITH CORPORATION, PRESSURE VESSEL NUCLEAR STEELS TO NRC NOTICE OF NONCONFORMANCE, DOCKET NO. 99901129/89-01

September 13th, 1989

Nonconformance 89-01-01:

"Contrary to Subsection NCA 3867.4(e) of ASME Section III, Meredith Corporation certified material supplied by American Tank and Fabricating Company (ATF) and H. T. Potts without testing each piece of material or establishing traceability by surveying, qualifying, and auditing the Quality System Program at ATF and H.T. Potts."
NRC Inspection Report No. 99901129/89-02, p. 2.

PVN Response:

According to the NRC Inspection Report, the NRC's review of approximately 105 nuclear and non-nuclear purchase orders in PVN's files revealed "three exceptions" to PVN's "usual practice as a holder of ASME certification number QSC-366 ... to order from domestic suppliers who are ASME approved suppliers, have been audited by Meredith, or supply commercial grade material which is properly upgraded by Meredith." Inspection Report, page 3. For the reasons explained in sections (a), (b), and (c) below, PVN believes that the three "exceptions" cited by the NRC in fact represent instances in which stock material was properly upgraded by PVN in compliance with NCA 3867.4(e) of ASME Section III.

a. Anchor Darling Valve Order

According to the NRC Inspection Report, PVN "supplied six pieces of steel plate to Anchor Darling Valve Company (ADV) to be used as replacement parts for valves at the DOE N Reactor located in Hanford, Washington. Meredith purchased the plate from ATF who had purchased the material from U.S. Steel Corporation (USX). Records of this purchase indicate that Meredith had not audited ATF and had not tested a sample of each plate that was supplied to ADV." Inspection Report, p.3

In fact, the six pieces of steel plate that PVN supplied to ADV were all cut from a single piece of steel plate, with heat number 2R2321. Pursuant to PVN's specification, ATF had supplied PVN with one 4" x 12" test sample from the parent plate for each heat of material used. See Attachment A hereto. Because PVN had not audited ATF, PVN had a product analysis and other requirements of the ADV specification performed and certified on the single piece of stock material from which the six pieces were cut, as required by NCA 3867.4(e). Thus, PVN had mechanical and chemical tests, and a Charpy impact test, performed on a sample from the piece of stock material from which the six pieces were cut, and provided the results to ADV. See Attachment B hereto. In addition, PVN had ultrasonic tests performed on each piece cut from the plate, and provided to ADV the results of such tests. See Attachment C hereto. PVN's certificate of conformance concerning all the required upgrade testing was dated August 6, 1987.

Thus, PVN believes that it complied with the requirements of NCA 3867.4(e) with respect to the ADV order referenced in the Inspection Report. Significantly, PVN had audited the QA programs of Spectrum Laboratories and Amspec, the contractors that performed the UT and the mechanical and chemical tests on the material provided to ADV. In addition, the NRC Inspection Report noted that based on a review of all PVN upgrade testing orders to Spectrum Laboratories for the period 1983 through 1988, "no nonconformances to NCA 3800 were identified." Inspection Report, p. 4.

Two unexpected discrepancies were subsequently discovered in connection with ADV order, however. First, when ADV had UT testing performed on the material supplied by PVN, ADV's contractor, Conam, found that four of the six pieces failed to meet the test requirements. This fact caused ADV to place all six pieces of PVN-supplied material on "hold." Following discussions between ADV and PVN, PVN had the UT tests repeated by its contractor, Amspec, and all six pieces were again found acceptable, consistent with the PVN certificate of conformance. Neither ADV, Conam, PVN, nor Amspec could figure out why the results obtained by Amspec and Conam were different.

Finally, PVN and ADV agreed to have the material tested -- and the prior test results reviewed -- by a third contractor, Hellier Associates. Hellier found that four pieces failed and two passed. Significantly, however, Hellier also discovered that the original UT tests performed by Amspec had been evaluated according to the criteria in SA578 Level II rather than SA578 Level I. See Attachment D hereto. This inadvertent discrepancy was not discovered until June, 1988. Thereafter, ADV and PVN agreed to settle the matter, and ADV returned the entire shipment to PVN.

While the material was on hold at ADV and the companies were working on resolving the UT test confusion, PVN discovered that the Charpy test that had been performed on the material supplied to ADV had not been performed on a transverse test specimen, as PVN had specified in its order. The Charpy test results received by PVN had indicated that the material satisfied ADV's specifications, and therefore PVN had accepted the results and shipped the material to ADV; the test report had not indicated that the test had been performed in the transverse direction. See Attachment B hereto. When PVN learned that the test had not been performed on a transverse test specimen, PVN requested that the test be repeated in that way. The results of the retesting indicated that the material did not satisfy ADV's specifications.

Because ADV had decided not to use any of the material supplied by PVN while it was "on hold" in light of the unresolved UT test discrepancies, and, indeed, ultimately it was all returned to PVN, it never became necessary for PVN to inform ADV of the repeated impact test results.

b. **Bechtel Order**

According to the NRC Inspection Report, "Bechtel PO BF-32154, dated January 9, 1987, was issued to Meredith for various sizes of SA-240 type 304L and 316L stainless steel plate to be used at the South Texas nuclear plant. ASME Section III, (Class 2), NCA 3800, 10 CFR 50, Appendix B, and 10 CFR 21 were imposed on Meredith. Meredith filled the order with material supplied by H. T. Potts of Philadelphia, Pennsylvania on Meredith PO 00541, dated February 6, 1987. Meredith did not perform upgrade tests on each piece of plate and did not audit H. T. Potts." Inspection Report, p. 4.

In fact, PVN performed upgrade testing on all pieces of stock material it received from H. T. Potts for the Bechtel order, in compliance with NCA 3867.4(e), before it certified and shipped the requested material to Bechtel.

Bechtel originally ordered 20 pieces of steel plate, two of each of ten different sizes. Bechtel agreed to PVN's proposal to supply upgraded material in filling the order. See Attachment E hereto. In response to PVN's Purchase Order No. 00541, H. T. Potts supplied PVN with material from ten pieces of steel plate. In response to PVN's specification stated on the PVN purchase order, H. T. Potts also provided PVN with a 6" x 6" sample piece from the parent plate for each heat of material used for testing purposes. See Attachment F hereto.

PVN had its contractor, Spectrum Laboratories, perform product analysis on each piece of plate from which the Bechtel order had been cut. PVN had previously audited the QA Program of Spectrum Laboratories, and as noted above, in its inspection, the NRC found "no nonconformances to NCA 3800" in any PVN upgrade testing orders to Spectrum from 1983 through 1988. PVN provided to Bechtel the Spectrum Laboratories report setting forth the results of both chemical and mechanical tests, and a certificate of conformance. See Attachment G hereto. No other tests were required to satisfy Bechtel's specifications. Thus, PVN believes that it performed upgrade tests on each piece of stock material provided to Bechtel in full compliance with NCA 3867.4(e).

c. **Congdon & Carpenter Order**

According to the NRC Inspection Report, "Congdon and Carpenter PO S-9805, dated June 22, 1987, was issued to Meredith for three pieces of 6-inch thick by 29 1/4-inches by 33 1/2-inches of SA 516 Grade 70 steel plate. ASME Section III (Class 3), NCA 3800 was imposed on Meredith. Meredith filled the order with material supplied by ATF on Meredith PO 00734, dated July 6, 1987. Meredith did not perform upgrade tests on each piece of plate and did not audit ATF." Inspection Report, p. 4.

In fact, the three pieces of steel plate that PVN supplied to Congdon & Carpenter were all cut from a single piece of steel plate, heat number 802T36840. Pursuant to PVN's specifications, ATF provided to PVN a 4" x 12" test sample from the parent plate for each heat of material used. See Attachment H hereto.

Because PVN had not audited ATF, PVN had a product analysis and other requirements of the Congdon & Carpenter specification performed and certified on the single piece of stock material from which the three pieces were cut, as required by NCA 3867.4(e).

PVN had its contractor, Spectrum Laboratories, perform product analyses on the single piece of plate from which the Congdon & Carpenter order had been cut. As noted above, PVN had previously audited the QA program of Spectrum Laboratories, and in its inspection, the NRC found "no nonconformances to NCA 3800" in any PVN upgrade testing orders to Spectrum from 1983 through 1988. PVN provided to Congdon & Carpenter the report of such analyses setting forth the results of both chemical and mechanical tests. See Attachment I hereto. In addition, PVN had ultrasonic tests performed on each of the three pieces cut from the plate, by its contractor Amspec. See Attachment J hereto. PVN also certified the results of all tests to Congdon & Carpenter. See Attachment K hereto. Thus, PVN believes that it performed upgrade tests on each piece of stock material provided to Congdon & Carpenter in full compliance with NCA 3867.4(e).

d. Subsequent PVN Actions

As noted, PVN believes that it acted in compliance with all applicable requirements given the facts and circumstances presented in the three instances cited in the Inspection Report. Nonetheless, following receipt of the Report, PVN has reviewed the portions of its QA Manual and its Standard Operating Procedures which address upgrading of stock materials to confirm that they conform to the requirements stated in NCA 3867.4(e). In addition, all PVN employees who are involved in placing and filling purchase orders have been required to review all applicable PVN procedures and ASME requirements which govern the upgrading of stock materials, and have been reminded that all such procedures and requirements must be followed in every case. Finally, in light of the UT discrepancy and Charpy test confusion, which arose in connection with the ADV order, all PVN employees who are involved in requesting or evaluating test results have been reminded that with respect to every order, they must confirm (a) that appropriate acceptance criteria have been applied in performing tests and in evaluating test results, and (b) that all required test specifications have been followed. See Attachment L.

Nonconformance 89-01-02:

"Contrary to Criterion V of Appendix B to 10 CFR Part 50 and Meredith Standard Operating Procedure (SOP) No. 8, "Record Retention," Revision O, dated February 20, 1988, nuclear sales order folders were not color coded as required for the control of documents on nuclear procurements. This resulted in NRC inspectors not being able to readily identify nuclear sales orders while selecting the sample of orders to be inspected." Inspection Report, p.2.

PVN Response and Subsequent Actions:

According to the NRC Inspection Report, "the inspectors noted that red dots were missing from some file folders which contained nuclear orders." Inspection Report, p. 4. Based on PVN's review of its files, it appears that red dots had fallen off approximately 15 file folders, among all the folders containing orders from 1983 through 1988. The red dots apparently fell off because the glue on the back of the dots had dried up over the years.

Following the NRC inspection, PVN took the following actions to address this nonconformance. First, every file folder for nuclear and non-nuclear orders from 1983 through 1988 was reviewed to confirm that every file containing a nuclear order contained a red dot. Second, the few red dots, which had apparently fallen off - approximately 15 - were replaced. Third, all folders containing nuclear orders were physically separated from the folders containing non-nuclear orders and were placed in separate filing cabinets, which are now designated as "nuclear order cabinets". Thus, PVN now has a redundant system for designating and identifying nuclear orders: They are color coded with red dots, and they are stored in separate filing cabinets. All relevant PVN employees have been trained concerning the new filing procedures for nuclear orders, and PVN's procedures will be revised to reflect the new filing system. See Attachment M.

MEREDITH CORPORATION
PVN PRESSURE VESSEL · NUCLEAR Steels
480 HILLSIDE AVENUE, HILLSIDE, N.J. 07205
(201) 964-5300
TELECOPY (201) 964-5306

PURCHASE ORDER

(216)

PURCHASE ORDER DATE	ORDER NUMBER
7-6-87 1501	00733 DO

American Tank & Fab.
12314 Elmwood Avenue
Cleveland, Ohio 44111
Attention: Dave Hantz

Advise When Ready

TERMS	SHIP VIA	FOB	FREIGHT TERMS
1/2% Ten Net 30	Truck	Shipping Point	Collect

ORDERED QTY.	UNIT	DESCRIPTION	COST	UNIT	REQUIRED DATE
		ASME SA 516-70 NORMALIZED CHARPY IMPACT TESTED AT + 32°F 40 MILS LATERAL EXPANSION TEST TO BE DONE IN THE TRANSVERSE DIRECTION. PARTS TO BE UT'D TO 578 LEVEL 1 100% NO WELD REPAIR STATEMENT ON EACH MILL T/R.			
3	pcs.	24" 990" MALE DISC SEGMENT F-5568 (ALP) E-A 341-1 (3) PER DRAWING	$ 875.00	EA.	
3	pcs.	24" 990" FEMALE DISC SEGMENT F-5568 (ALP) E-A-341-1 (3) PER DRAWING	$ 875.00	EA.	
		U.T. CHARGE	$ 225.00	LOT	
		NO WELD REPAIR STATEMENT	$ 50.00	PER HEAT USED	
		ONE 4" X 12" TEST SAMPLE OF EACH HEAT OF MATERIAL USED.	N/C		
		TWO (2) COPIES OF MILL T/R'S ATTENTION: DEAN LANZA			
		INVOICES WILL NOT BE PROCESSED UNTIL PROPER TEST REPORTS ARE FURNISHED.			

Our Purchase Order Number must appear on all documents, invoices, shipping notices and notarized test reports must be rendered in six copies or as otherwise specified. materials and service furnished on this order must be of the kind and quality specified subject to our inspection and acceptance at destination. All rejected materials will held for disposition, subject to shippers risk and expense

MEREDITH CORPORATION-PRESSURE VESSEL-NUCLEAR STEE

Signed _____

SALES ORDER FILE

QUALITY ASSURANCE APPROVED _____ 7/1
Signed Date

PVN and or agent to have free access to vendor's or sub-vendor's plant or facility during the process of this order.

(201) 752-1400

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

CORROSION TESTING
METALLURGICAL TESTING
MECHANICAL TESTING
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
X-RAY

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

REPORT OF MECHANICAL TESTS

DATE August 11, 19 87

ORDER No. P.O. #00767

LABORATORY No. 41804

The following results were obtained from our tests of this material.

Type of sample submitted 1 pc. 7" x 4" x 12", Ht. #2R2321, Slab #0301

Marked as follows USS, SA-516-70 MT
Sec. II & III, 1983 Edition thru Winter 1985
Addenda, NB, Class 1, NB2000, NCA-3867.4(e),
NCA-3800 & 10CFR21 applies

Q A APPROVED
PRESSURE VESSEL-NUCLEAR STEELS INC.
8-11-87

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
2P2321	.20	9,150	45,750	15,700	78,500	24.0	52.6

This service was supplied under a Quality Systems Program, Rev. 2 dtd 1-23-80 as qualified by Meredith Corp. as meeting the requirements of NCA-3800. Meredith Corp. Audit date 11-17-86.

TEST PROCEDURE:-

Sample Size .505" Rd.
Strain Rate .0001 in/in. per min.
Stress Strain Diagram Reference 41804
Test Specification - ASTM E-8

CALIBRATION PROCEDURE:-

Test Instrument SATEC
Calibration Date 5-2-87
In accordance with ASTM E-4.
Extensometer MAIB S/N 851
In accordance with ASTM E-83

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold G. Schanck

H. G. SCHANCK, DIRECTOR

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854
(201) 752-1400
MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTS
PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date August 11, 1987

Laboratory No. 41804

Marked P.O. #00767

Attention: Mr. Hamilton Vazquez

Element	Sample 2R2321	Sample	Sample Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel				
Iron				
Phosphorus	0.021		0.035 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.30		0.77 - 1.30	
Titanium				
Silicon	0.19		0.13 - 0.45	
Chromium				
Sulfur	0.017		0.025 max.	
Carbon	0.29		0.31 max.	
Cobalt				
Molybdenum				
Columbium + Tantalum				
Vanadium				
Tungsten				

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
5-4-87

Sample Description: Sec. II & III, 1983 E thru Winter 1985 Add, NB Class 1 NB2000, NCA3867.4(e), NCA-3800 & 10CFR21 applies
1 pc. 7" x 4" x 12", Ht. #2R2321, Slab #0301, USS, SA516-70 MT

Test Method

X-Ray Diffraction	
X-Ray Fluorescent	
Emission Spectro (Vacuum)	XXX
Emission Spectro (Air)	
Wet Chemistry	XXX
Atomic Absorption	
Infared	
Gas Chromatography	

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 1261-1265

ASTM Test Method: E350, E415

Matrix Material: Wrought

This service was supplied under a Quality Systems Program, Rev. 2 dtd 1-23-80 as qualified by Meredith Corp. as meeting the requirements of NCA-3800. Meredith Corp. Audit date 11-17-86.

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold G. Schaack
Director

Garrett G. Schaack
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

CORROSION [redacted] TESTING
PROFESSIONAL ENGINEERING

MEREDITH CORPORATION

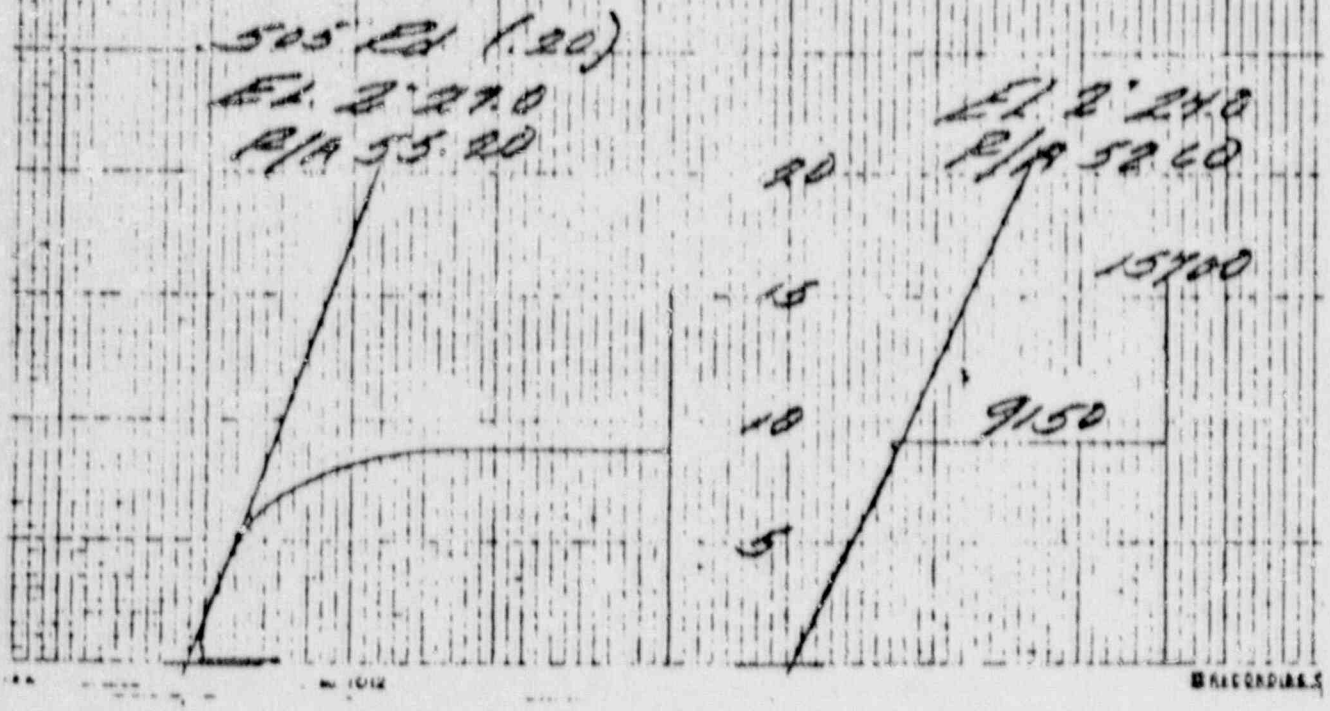
Pressure Vessel Nuclear Steels
601 Millside Avenue
Millside, NJ 07205

Attention: Mr. H. Vazquez

P.O. #00767
Lab No. 41806

1 pc. 6" x 4" x 12", Ht. #80ZT36840, Slab #S10512 Bach. Steel, SA-516-70 MT
Sec. II & III, 1974 Ed. No Add., NC Class 2 (NCA-3867.4(a) 1983 Edition)
NCA-3800 and 10CFR 21 applied

1 pc. 7" x 4" x 12", Ht. #2R1321, Slab #0301, USS, SA516-70 MT
Sec. II & III, 1983 Ed. thru Winter 1985 Add., NB Class 1, NB2000
NCA3867.4(a), NCA3800 and 10CFR21 Applied



Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.

Date 8-11-87

By

HERRON TESTING LABORATORIES, INC.
5405 E. SCHAAF ROAD • CLEVELAND, OHIO 44131
(216) 524-1450 • FAX: (216) 524-1459
"Testing and Analysis Since 1911"

CHARLOTTE DIVISION
12001 E Westinghouse Blvd
Charlotte, North Carolina 28217
(704) 588-1111 • FAX: (704) 588-5412

To:

American Tank & Fab.

12314 Elmwood Ave.
Cleveland, OH 44111

Page 1 of
Herron File No. 87070614
Purchase Order No. W8089
Shipper No 10096
Date Reported July 24, 1987

SAMPLE DESCRIPTION: ONE 7" X 4" X 6" STEEL, HEAT 2R2321, SLAB 0301, MATL. SA-516 GRADE 70 STEEL.

MECHANICAL TESTING

Wiedeman-Baldwin, Model SI-IC, S/N 1068.
10mm x 10mm x 55mm Charpy V-Notch Impact Bars

Temp. Deg. F	Impact Strength (Foot Pounds)	Mils Lateral Expansion	% Ductile Fracture Area
+32	63	47	65
	68	52	70
	72	53	70
	68 AVG.		

Respectfully submitted,
HERRON TESTING LABORATORIES, INC.

Gregory J Cznadel
Gregory J Cznadel
Engineering Technician

UK-1000 ATT 2U 7/30/87

AMSPEC
Inspection For Protection

August 4,1987

REVISED COPY - 8/12/87

Meredith Corporation
Pressure Vessel Nuclear
460 Hillside Avenue
Hillside New Jersey 07205

ATTENTION: Mr. Hamilton Vasquez

Re: Ultrasonic Inspection of Three Female and Three Male Disc Segments

INTRODUCTION

Amspec Technical Services, Inc. was requested to preform an Ultrasonic Inspection of (3) three male disc segments and (3) three female disc segments, in order to establish the possible presence of material defects due to manufacture. Material specifications and size are as follows; (3) three pieces, thickness 7 inches,diameter 24 inches, 990 Male Disc Segment per F-5568 E-A341-1 (3),Heat Number 2R2321, Slab Number 0301, Grade: SA516-70 MT, MFG: USS / (3) three pieces, thickness 7 inches, diameter 24 inches, 990 Female Disc Segments per F-5569 E-A341-1 (3),Heat Number 2R2321,Slab Number 0301, Grade: SA516-70 MT, MFG: USS.

The inspection was preformed at Meredith Corporation, Hillside, New Jersey, under purchase order #00768

TEST PROCEDURE AND RESULTS

On August 3,1987, an Ultrasonic Inspection was performed on the above mentioned pieces in accordance with: Section III 1983 Edition thru Winter 1985 Addenda, NB Class 1,UT per NB 2532.1,SA 578 Level II, 100% Scan,NCA3800 & 10CFR21 Applies. The above mentioned code specifications were used in conjunction with AMSPEC-UT-1-86 procedure requirements.

Krautkramer Branson sonoray Model USK-6 pulse echo sound generator along with a 2.25 Mhz, 1 inch diameter straight beam transducer was used for the inspection.

Calibration of the inspection equipment was preformed in accordance with the above mentioned codes and procedures.

The above mentioned pieces were found to be ACCEPTABLE.

COMMENT

A verbal and written report was rendered to Meredith Corporation, on August 3, 1987 by Jonathan P. Coulson Level III of Amspec Technical Services,Inc.

Jonathan P. Coulson
Jonathan P. Coulson
Vice President/General Manager
Amspec Technicla Services, Inc.

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 8-6-87
By

JPC/tm

The American Inspection Co., Inc.
PO Box 154
Itasca, IL 60143-0154
(312) 250-8522

The American Inspection Co., Inc.
4215 Cardinal Drive
Beaumont, TX 77705
(409) 842-9693

Amspec Technical Services, Inc.
PO Box 715
48 Kimball Street
Westfield, NJ 07091
(201) 654-9161

Amspec of Puerto Rico
Cond. El Senorial
Suite 615
Ponce, Puerto Rico 00731
(809) 844-0330

The American Inspection Co., Inc.
PO Box 8117
Sunny Isle, Christiansted
St. Croix, USVI 00820
(809) 778-1330

HAJ

HELLIER ASSOCIATES, INC.

Technical Training & Consulting

Essex Plaza, P.O. Box 818
Essex, CT 06426
Telephone (203) 767-2113 / Telex 910-240-9340 / Fax No. (203) 767-2115

June 1, 1988

Mr. G. W. Knieser
Anchor/Darling Valve Company
701 First Street
P. O. Box 3428
Williamsport, PA 17701-0428

Dear Mr. Knieser:

Enclosed please find a copy of Carl Eriksson's trip report and an invoice for his services.

I regret the delay in transmitting this to you and trust it has not caused any inconvenience.

Please note that Mr. Vazquez of Meredith Corporation requested a copy of the report. We have not distributed this report to anyone so you may want to comply with his request.

Please call me if you have any questions.

Very truly yours,

HELLIER ASSOCIATES, INC.

Charles J. Hellier

CJH/slo
enclosures

HAI

HELLIER ASSOCIATES, INC.

Technical Training & Consulting

Essex Plaza, P.O. Box 818
Essex, CT 06426
Telephone (203) 767-2113 Telex 910-240-9340 Fax No. (203) 767-2115

TRIP REPORT

To: C. Hellier
From: C. Eriksson

Location: Anchor Darling Valve Co. - Williamsport, PA

On May 3, 1988 a visit was made to the Anchor Darling Valve Co. in Williamsport, PA. The purpose of the trip was to ultrasonic examine six (6) pieces of SA516 grade 70 plate purchased to ASME III class #1 requirements. The material as provided by Meredith Corp., Hillside, NJ was certified as being acceptable. Shop tests were also performed using ultrasonics by CONAM (contracted by Anchor Darling) since plate edge laminations were noted during fa rication and further investigation was required. The CONAM ultrasonic shop tests rejected four (4) pieces and accepted two (2). The original inspection agency, AMSPEC (contracted by Meredith Corp.) then reexamined the pieces in the shop and reaffirmed their original evaluation of all pieces being acceptable.

Results of the HAI examination are attached and are consistent with the CONAM findings including marginal acceptances of the Ser. #2 Male piece.

After the HAI tests were completed a review was made of the AMSPEC test reports. It appeared that their findings were also nearly consistent with the CONAM & HAI results, however, their evaluation criteria was different. It appeared that the criteria used by AMSPEC was SA578 Level II which allows a much larger reflector size thus resulting in accepting the pieces. HAI stated that if our evaluation was made to the Level II criteria all pieces would have been acceptable.

A meeting was then held with Anchor Darling personnel, Hamilton Vazquez, QA Manager and Vice President of Meredith Corp. and HAI. All results were presented and discussed pointing out the differences in criteria. HAI then performed ultrasonic tests on the pieces to demonstrate the basis of our findings. Mr. Vazquez was satisfied and in agreement with the work performed and will follow up with his contractor, AMSPEC.

Mr. Vazquez requested a copy of our test report to be sent to him.

Carl Eriksson
Carl W. Eriksson

May 5, 1988
Date

HAJ

HELLIER ASSOCIATES, INC.
Technical Training & Consulting
Essex Plaza, P.O. Box 818
Essex, CT 06426
Telephone (203) 767-2113 Telex 910-240-9448 Fax No (203) 767-2115

TEST REPORT

Examination Date: 5/3/88
Location: Anchor Darling Valve Co., Williamsport, PA
Material Examined: Six (6) pieces of SA516 Grade 70 plate.

Instrument: Sonic Mark I Ser #13989E
Transducer: KB Aerotech 1" diameter 2.25 MH C11/805 Alpha
Couplant: Exosen #30

Method: Straight beam in accordance with SA578 with the following exceptions:

1. Evaluations were not performed at locations where back surface machining or welding affected signal response.
2. 100% scanning was performed until a rejectable condition was encountered. Additional scanning was then performed for general information only.

Evaluation Criteria: NB section of ASME III 1977 thru Winter 1979 Addenda.

Results: Discs 24-990 GT Heat #2R2321

Ser. #1 Male	-	Rejectable
Ser. #2 Male	-	Acceptable (Marginal)
Ser. #3 Male	-	Rejectable
Ser. #1 Female	-	Rejectable
Ser. #2 Female	-	Rejectable
Ser. #3 Female	-	Acceptable

1. All rejects were based on two (2) or more indications greater than 50% of the initial back reflection accompanied by a 50% loss of back reflection encompassed within a 3" diameter circle.
2. Results also show numerous reflectors at various depths and amplitudes in all pieces except for Ser. #3 Female which was relatively clear.
3. There was no concentration of reflectors in the mid plate area.

Carl Eriksson
Carl W. Eriksson

May 5, 1988
Date

BECHTEL - SAN CITY, TEXAS

Please Print Clearly

Please Provide Extension No. of Pages 1 Including Cover DATE 3-6-87

Telephone No (201)964-5301 FAX No.

TO: Karen Zaruga

LOCATION: Palo Verde Nuclear

FROM: DENISE A PEECOOK

LOCATION: Bechtel Energy Corporation

Direct Line 512-912-9095
Telecopy 512-972-5980

SPECIAL INSTRUCTIONS Karen, upgraded material is OK per engineering, we will expect material to arrive onsite by 3/23/87. Thank You

Do you want your copies back? Yes ___ No ___

Denise Peecook

PVN
PRESSURE VESSEL · NUCLEAR steels
460 HILLSIDE AVENUE, HILLSIDE, N.J. 07205
(201) 964-5300
TELECOPY (201) 964-5306

PURCHASE ORDER

PURCHASE ORDER DATE	ORDER NUMBER
2-6-87 1095	00541

H.T. Potts
Division Of All American Metals, Inc.
3750 D. Street
Philadelphia, PA 19139
Attention: Carol McSwain

PVN

TERMS	SHIP VIA	F O B	FREIGHT TERMS
1/2% Ten Net 30	Your Truck	Delivered	Prepaid

ORDERED QTY	UNIT	DESCRIPTION		COST	UNIT	REQUIRED DATE
		ASME 240 Tp 304L SS DOMESTIC NO WELD REPAIR 2 B FINISHED 1 SIDE.				
		SA 240 Tp 304L				
2	pcs.	1/16" x 96" x 48"	212#	$ 1.48 -	LB.	
		SA 240 Tp 316L				
2	pcs.	1/16" x 96" x 48"	212#	$ 1.94 -	LB.	
		SA 240 Tp 304L				
2	pcs.	1/8" x 96" x 48"	322#	$ 1.47	LB.	
		SA 240 Tp 316L				
2	pcs.	1/8" x 96" x 48"	322#	$ 1.92 -	LB.	
		SA 240 Tp 304L				
2	pcs.	1/4" x 96" x 48"	691#	$ .08 -	LB.	
		SA 240 Tp 316L				
2	pcs.	1/4" x 96"x 48"	~~691#~~	$ 1.50	LB.	
		304L				
2	pcs.	3/8" x 96" x 48"	~~2,037#~~	$ 1,14	LB.	

3/19/87
126729

3/13/87
126 003

Our Purchase Order Number must appear on all documents, invoices, shipping notices and notarized test reports must be tendered in six copies or as otherwise specified. Materials and service furnished on this order must be of the kind and quality specified subject to our inspection and acceptance at destination. All rejected materials will be held for disposition, subject to shippers risk and expense.

MEREDITH CORPORATION-PRESSURE VESSEL-NUCLEAR STEE

Signed

QUALITY ASSU[illegible]E APPROVED

Signed

Date

TRAFF

PVN and or agent to have free access to vendor's or sub-vendor's plant or facility during the process of this order.

MEREDITH CORPORATION
PRESSURE VESSEL · NUCLEAR steels

460 HILLSIDE AVENUE, HILLSIDE, N.J. 07205
(201) 964-5300
TELECOPY (201) 964-5308

PURCHASE ORDER

PURCHASE ORDER DATE	ORDER NUMBER
2-6-87 1095	00541

H.T. Potts
Division Of All American Metals, Inc.
3750 D. Street
Philadelphia, PA 19139
Attention: Carol McSwain

PVN

TERMS	SHIP VIA	F.O.B.	FREIGHT TERMS
1/2% Ten Net 30	Your Truck	Delivered	Prepaid

ORDERED QTY	UNIT	DESCRIPTION		COST	UNIT	REQUIRED DATE
		316L				
2	pcs.	3/8" x 96" x 48"	1,037#	$ 1.46	LB.	
		304L				
2	pcs.	1/2" x 96" x 48"	1,382#	$ 1.14	LB.	
		316L				
1	pcs.	1/2" x 96" x 48"	1,382#	$ 1.52	LB.	

4/12/87-136003

3/23/87-137126

PLEASE SUPPLY A 6 X 6 SAMPLE PIECE OF EACH HT FOR TESTING PURPOSES.

INVOICES WILL NOT BE PROCESSED UNTIL PROPER TEST REPORTS ARE FURNISHED.

TWO COPIES MILL T/R'S
ATTENTION: DEAN LANZA

Purchase Order Number must appear on all documents, invoices, shipping notices
notarized test reports must be rendered in six copies or as otherwise specified
materials and service furnished on this order must be of the kind and quality specified
subject to our inspe and acceptance at destination. All rejected materials will
ted for disposition. t to shippers risk and expense

MEREDITH CORPORATION-PRESSURE VESSEL-NUCLEAR STEELS

Signed

MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date March 26, 1987

Laboratory No. 41197

marked P.O. #HV 00569/1095

Attention: Mr. H. Vazquez

Element	Sample One	Sample	Sample	Sample
Copper				
Tin				
Lead				
Zinc				
[illegible]el	10.23			
Iron				
Phosphorus	0.010			
Antimony				
Aluminum				
Magnesium				
Manganese	1.68			
Titanium				
[illegible]on	0.67			
Chromium	16.45			
Sulfur	0.001			
Carbon	0.017			
Cobalt				
Molybdenum	2.09			
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	0.038			

Sample Description: 1 pc. ½" x 6" x 8" Heat No. 894457, Mfr. Allegheny Ludl Ref: Houston Lighting & Power P.O. N BF-32154, ASME SA240, 316L, Sec. 3 1980 Ed. thru S'82 Add, Cl. 2 and NCA-3867.4 NCA-3800 & 10CFR21 applie

Test Method

X-Ray Diffraction
X-Ray Fluorescent XXX
Emission Spectro (Vacuum) XXX
Emission Spectro (Air)
Wet Chemistry XXX
Atomic Absorption
Infared
Gas Chromatography

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845-849

ASTM Test Method: E353, E322, E415

Matrix Method: Wrought

Q.A. Program audited and approved by PVN on Nov. 17, 1986.

Q.A. APPROVED PRESSURE VESSEL NUCLEAR STEELS INC. PVN Date 3/26/87 By

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

[redacted]

01) 752-1400

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 0885

ROSION TESTING
SICAL TESTING
HANICAL TESTING
EMICAL ANALYSIS
RASONIC INSPECTION
RAY

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

REPORT OF MECHANICAL TESTS

DATE March 26, 19 87

ORDER No. HV 00569/1095

LABORATORY No. 41197

The following results were obtained from our tests of this material.

Type of sample submitted 1 pc. ½" x 6" x 8", Heat No. 894457, Mfr. Allegheny Ludlum, Ref: Houston Lighting & Power P.O. No. BF-32154, ASME SA-240, 316L, Sec. 3, 1980 Ed thru S'82 Add, Cl. 2 and NCA-3867.4 NCA-3800 & 10CFR21 applies

Marked as follows

Sample No.	Area	Yield Load lbs.	Yield Strength psi .2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
One	.1285	6,600	51,360	10,725	83,465	53.0	
2/ Program audited and approved by PVN on Nov. 17, 1986.							
		PVN Q. A. APPROVED PRESSURE VESSEL NUCLEAR STEELS INC.					
		Date 3/26/87 By DS					

T PROCEDURE:-

ple Size .500 x .257

n Rate .0001 in/in. per min.

n Strain Diagram Reference 41197

Specification – ASTM F-8

IBRATION PROCEDURE:-

Instrument SATEC

bration Date 5-7-86

ccordance with ASTM F-4.

nometer MA1B S/N 851

ccordance with ASTM F-83

Quality Assurance Inspection System complies with MIL-I-45208 A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold Schanck

H. C. SCHANCK, DIRECTOR

ples returned upon request only. Held for a period of 30 s maximum. The liability of this laboratory relative to report shall not exceed the amount of the invoice.

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Ave.
Hillside, NJ 07205

Purchase Order HV 00569/1095
Lab No. 41197

1 pc. ¼" x 6" x 8" Heat No. B94457
Mfr. Allegheny Ludlum
Ref: Houston Lighting & Power Co.
PO #BF-32154, ASME SA-240, 316L
Sec. 3, 1980 Edition thru S;82 Add,
Cl. 2 and NCA-3867.4, NCA-3800 and 10CFR21
Applies

10725

.500 x .257 (.1285)

EA 2" 530 / 6600

RENEW CHART

RENEW CHART

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 0885
(201) 752-1400

CORROSION TESTING
SICAL TESTING
HANICAL TEST NG
EMICAL ANALYSIS
ULTRASONIC INSPECTION
X-RAY

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 4.10.87
By

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

REPORT OF MECHANICAL TESTS

DATE April 7, 19 87

ORDER No. P.O. #569 CO #1

LABORATORY No. 41235

The following results were obtained from our tests of this material.

Type of sample submitted ASME SA-240, Sec. 3, '80 Ed. thru S/82 Add. Cl. 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies

Marked as follows Ref: Houston Lighting & Power #BF32154, Mfr. LTV

1 pc. 16 ga, 304L, Heat #73392

1 pc. 11 ga, 304L, Heat #94527

Sample No.	Area	Yield Load lbs.	Yield Strength psi .2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
73392	.02875	1,390	48,348	2,700	93,913	52.0	
1 27	.05875	2,915	49,617	5,375	91,489	57.0	

ST PROCEDURE:-
mple Size #73392 - .0575 x .500
#94527 - .1175 x .500
ain Rate .0001 in/in. per min.
ese Strain Diagram Reference 41235
at Specification - ASTM E-8

LIBRATION PROCEDURE:-
at Instrument SATEC
libration Date 5-7-86
accordance with ASTM E-4.
tensometer MAIB S/N 851
accordance with ASTM E-83

mples returned upon request only. Held for a period of 30 ys maximum. The ability of this laboratory relative to s report shall not exceed the amount of the invoice.

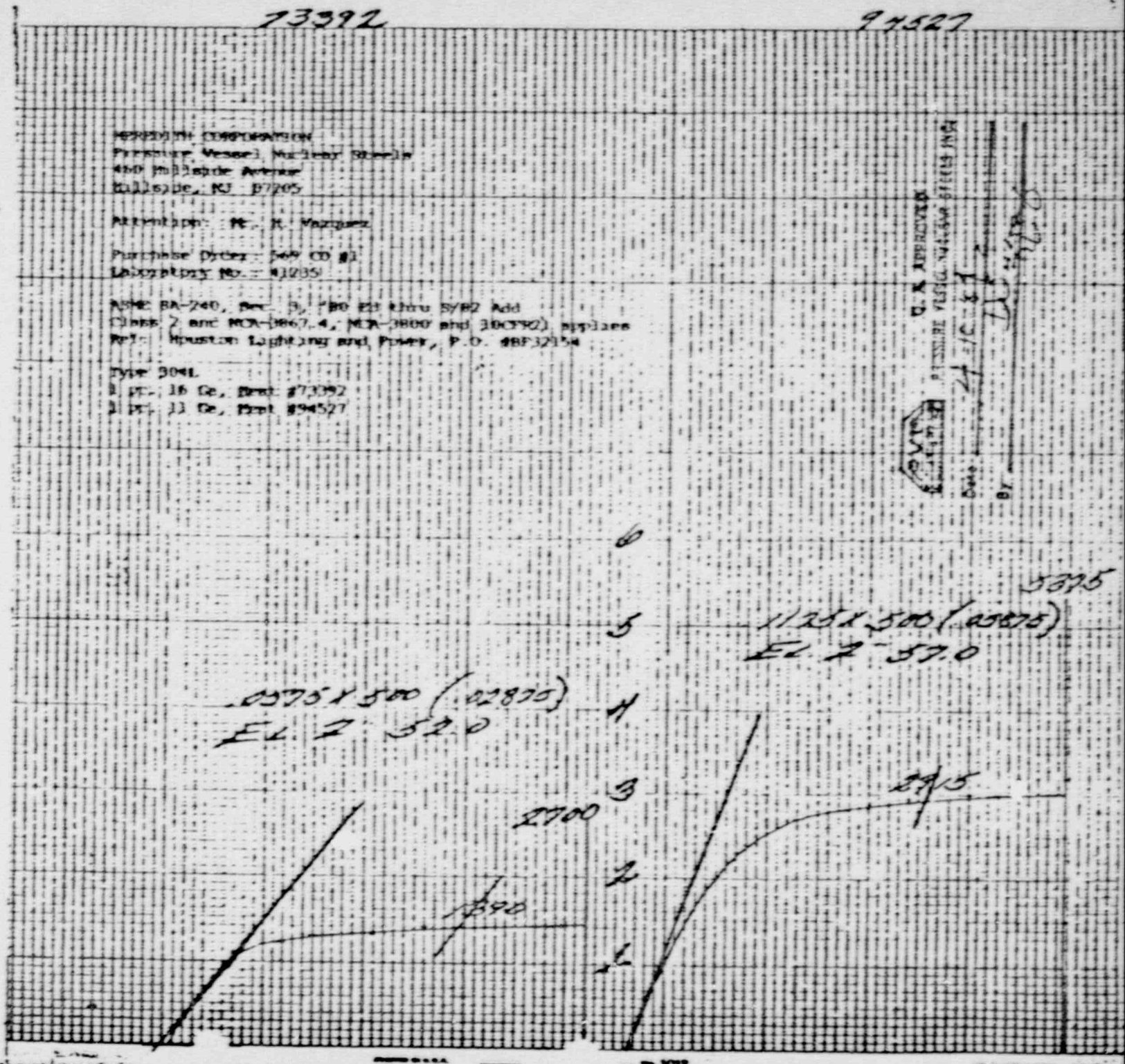
Quality Assurance Inspection System complies with MIL-I-45208 A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold Schanck

H. C. SCHANCK, DIRECTOR


73392
94527
Pressure Vessel Nuclear Steels
400 Hillside Avenue
Hillside, NJ 07205
Purchase Order: 3409 CD #1
Laboratory No. = 81035
ASME SA-240, Sec. II, 1980 Ed thru S/A82 Add
Class 2 and MCA-1967.4, MCA-3800 and 3803(2) applies
Ref: Houston Lighting and Power, P.O. #BF32154
Type 304L
1 pc. 16 Ga, Heat #73392
1 pc. 11 Ga, Heat #94527
.0375 x 500 (.02835)
E_L = 52.0
.1251 x 500 (.09375)
E_L = 52.0
2700
2975
6
5
4
3
2
1

SPECTROMETER
CAL ANALYSIS
SONIC INSPECTION
STRUCTIVE TESTING

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

EDITH CORPORATION
ssure Vessel Nuclear Steels
Hillside Avenue
lside, New Jersey 07205

ention: Mr. Hamilton Vazquez

Date April 8, 1987

Laboratory No. 41235

marked P.O. #569 CO #1

	Sample	Sample	Sample	Sample
			T304L	
nt	73392	94527	Requirements*	
r				
—				
	8.98	8.61	8.00 - 12.00	
horus	0.026	0.024	0.045 max.	
ony				
num				
esium				
anese	1.92	1.81	2.00 max.	
ium				
n	0.62	0.67	1.00 max.	
nium	18.94	18.89	18.00 - 20.00	
	0.018	0.012	0.030 max.	
n	0.013	0.021	0.030 max.	
t				
denum				
bium + lum				
dium				
ten				
rogen	0.100	0.086	0.10 max.	

Sample Description ASME SA-240, Sec. 3 '80 Ed. thru S/82 Add. Cl. 2 & NCA3867.4 NCA-3800 & 10CFR21 applies
1 pc. 16 ga, 304L, Heat #73392
1 pc. 11 ga, 304L, Heat #94527
Ref. Houston Lighting & Power #BF321

Test Method Mfr. LTV

X-Ray Diffraction
X-Ray Fluorescent XXX
Emission Spectro (Vacuum) XXX
Emission Spectro (Air)
Wet Chemistry XXX
Atomic Absorption
Infared
Gas Chromatography

*SA240

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845/849

ASTM Test Method: E353, E322, E415

Matrix Method: Wrought

Q. A. APPROVED
[illegible] NUCLEAR STEELS INC.
Date 4-12-87
By [signature]

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

[signature]

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

SPECTRUM LABORATORIES INC.
524 PELHAM AVE PISCATAWAY, NEW JERSEY 08854
(201) 752-1400
MASS SPECTROMETER CHEMICAL ANALYSIS ULTRASONIC INSPECTION NON-DESTRUCTIVE TESTING
PHYSICAL TESTING MECHANICAL TESTING FIELD TESTING X-RAY

REPORT OF CHEMICAL TESTS

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date April 10, 1987

Laboratory No. 41254

Marked P.O. #569

Attention: Mr. Hamilton Vazquez

Sample Description: ASME SA-240, Sec. 3, 1980 Ed. S'82 Add., Cl. 2, NCA-3867. NCA-3800 and 10CFR21 applies, Ref: Houston Lighting and Power BF32154 1 pc. 3/8" thick, 316L, Heat #15661

Element	Sample 15661	Sample	Sample Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
[illegible]	10.41		10.00 - 14.00	
Iron				
Phosphorus	0.017		0.045 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.65		2.00 max.	
Titanium				
[illegible]con	0.67		1.00 max.	
Chromium	16.85		16.00 - 18.00	
Sulfur	0.009		0.030 max.	
Carbon	0.015		0.030 max.	
Cobalt				
Molybdenum	2.11		2.00 - 3.00	
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	.061		0.10 max.	

Test Method

X-Ray Diffraction
X-Ray Fluorescent XXX
Emission Spectro (Vacuum) XXX
Emission Spectro (Air)
Wet Chemistry XXX
Atomic Absorption
Infared
Gas Chromatography

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845/849

ASTM Test Method: E353, E415, E.

Matrix Method: Wrought

Q. A. APPROVED
PRESSURE VESSEL CLEAR STEELS INC.
Date 4-10-87
By DS

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

CORROSION & METALLURGICAL TESTING
PROFESSIONAL ENGINEERING

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

Date April 10, 1987

Laboratory No 41254

Marked P.O. #569

Element	Sample 34943	Sample 051151P	Sample Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel	8.94	8.57	8.00 - 12.00	
Iron				
Phosphorus	0.013	0.010	0.045 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.56	1.78	2.00 max.	
Titanium				
Silicon	0.56	0.42	1.00 max.	
Chromium	18.91	19.25	18.00 - 20.00	
Sulfur	0.011	0.002	0.030 max.	
Carbon	0.021	0.020	0.030 max.	
Cobalt				
Molybdenum				
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	0.096	0.085	0.10 max.	

Sample Description: ASME SA-240, Sec. 3, 1980 Ed. S'82 Add., Cl. 2, NCA-3867.4 NCA-3800 and 10CFR21 applies. Ref: Houston Lighting and Power BF32154
1 pc. 3/8" thick, 304L, Ht. #34943
1 pc. 1/2" thick, 304L, Ht. #051151P

Test Method

- X-Ray Diffraction
- X-Ray Fluorescent XXX
- Emission Spectro (Vacuum) XXX
- Emission Spectro (Air)
- Wet Chemistry XXX
- Atomic Absorption
- Infared
- Gas Chromatography

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845-849

ASTM Test Method: E322, E415, E353

Matrix Method: Wrought

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.

Date 4-10-87

By DS

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

CORROSION & METALLURGICAL TESTING
PROFESSIONAL ENGINEERING

(201) 752-1400

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

ROSION TESTING
SICAL TESTING
ECHANICAL TESTING
HEMICAL ANALYSIS
LTRASONIC INSPECTION
-RAY

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 4-10-87
By

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

REPORT OF MECHANICAL TESTS

DATE April 7, 19 87

ORDER No. P.O. #569 CO #1

LABORATORY No. 41235

The following results were obtained from our tests of this material.

Type of sample submitted ASME SA-240, Sec. 3, '80 Ed. thru S/82 Add. Cl. 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies

Marked as follows Ref: Houston Lighting & Power #BF32154, Mfr. LTV

1 pc. 16 ga, 316L, Heat #94507

1 pc. 11 ga, 316L, Heat #E52636

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
94507	.030	1,250	41,667	2,490	83,000	48.0	
E52636	.0580	2,800	48,275	4,720	81,379	56.0	

-T PROCEDURE :-
#94507 - .060 x .500
ple Size #E52636 - .116 x .500
n Rate .0001 in/in. per min.
ss Strain Diagram Reference 41235
Specification - ASTM E-8

IBRATION PROCEDURE :-
Instrument SATEC
bration Date 5-7-86
ccordance with ASTM E-4.
nsometer MA1B S/N 851
rdance with ASTM E-83

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold Schanck

H. C. SCHANCK, DIRECTOR

ples returned upon request only. Held for a period of 30 s maximum. The ability of this laboratory relative to report shall not exceed the amount of the invoice.

97507 E52696

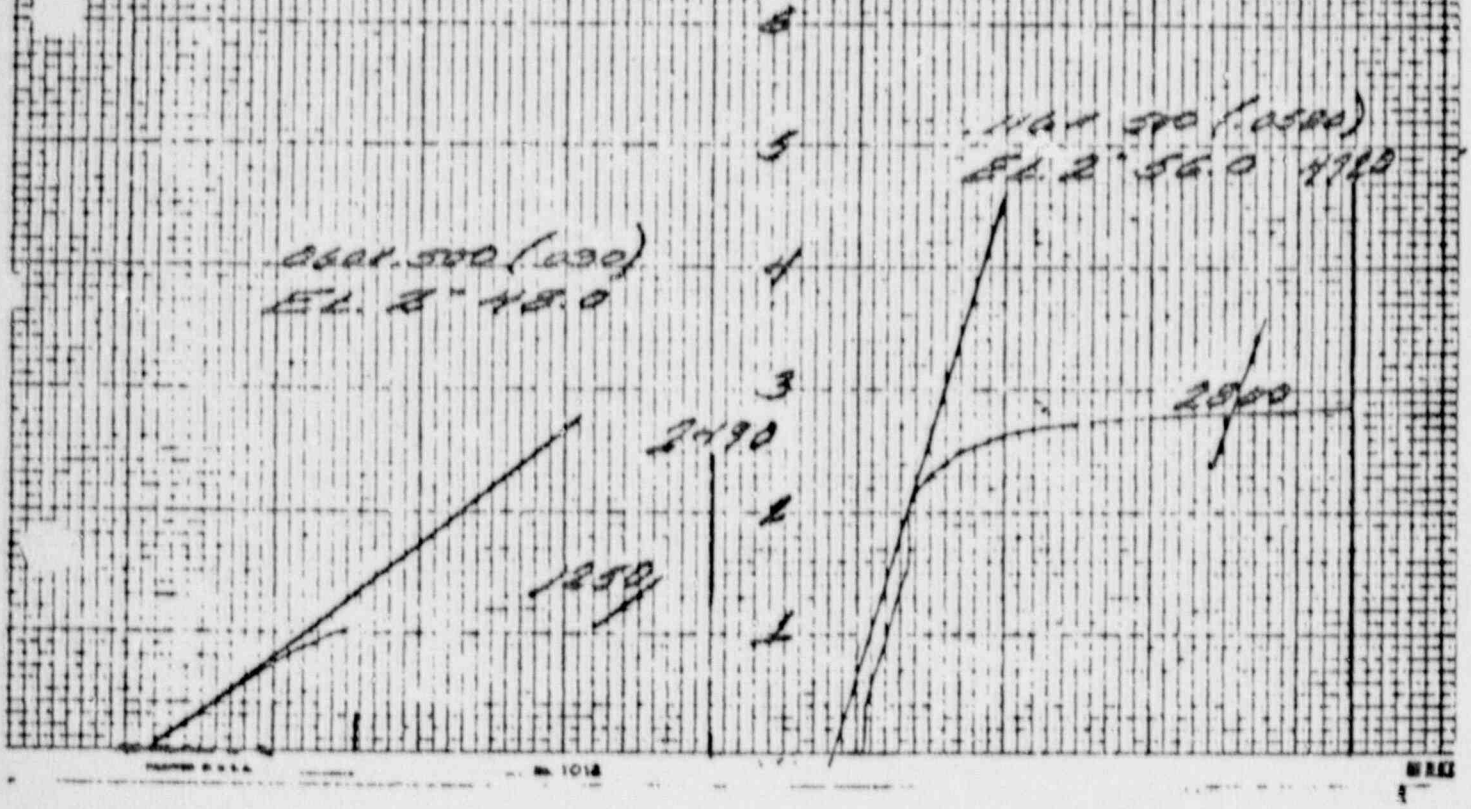
HARRIMAN CORPORATION
Pressure Vessel Nuclear Steels
468 Hollands Avenue
Hillsdale, NJ 07205

Attention: Mr. H. Marquez

Purchase Order: B69 CD #1
Laboratory No.: 42208

ASME SA-240, Sec. 3, '80 Ed thru B/82 Add
Class 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies
Ref.: Houston Lighting and Power, P.O. #BF32154

Type 316L
1 pc. 55 Dy, Heat #94507
1 pc. 55 Dy, Heat #E52696



Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 4-10-87
By DJ

MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING

(201) 752-1400

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

EREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date

Laboratory No. 41235

Attention: Mr. Hamilton Vazquez

marked P.O. #569 CO #1

Element	Sample 94507	Sample E52636	Sample T316L Requirements*	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel	10.3[illegible]	11.22	10.00 - 14.00	
Iron				
Phosphorus	0.030	0.027	0.045 max.	
Antimony				
[illegible]minum				
Magnesium				
Manganese	1.87	1.86	2.00 max.	
Titanium				
Silicon	0.49	0.64	1.00 max.	
Chromium	16.68	17.13	16.00 - 18.00	
Sulfur	0.010	0.018	0.030 max.	
Carbon	0.011	0.023	0.030 max.	
Cobalt				
Molybdenum	2.02	2.01	2.00 - 3.00	
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	0.043	0.030	0.10 max.	

Sample Description ASME SA-240, Sec. 3 '80 Ed. thru S/82 Add. Cl. 2 & NCA3867.4 NCA-3800 & 10CFR21 applies
1 pc. 16 ga, 316L, Heat #94507
1 pc. 11 ga, 316L, Heat #E52636
Ref. Houston Lighting & Power #BF321

Test Method Mfr. LTV

X-Ray Diffraction
X-Ray Fluorescent XXX
Emission Spectro (Vacuum) XXX
Emission Spectro (Air)
Wet Chemistry XXX
Atomic Absorption
Infared
Gas Chromatography

*SA240

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845-849

ASTM Test Method: E353, E322, E415

Matrix Method: Wrought

4-10-81

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

EROSION TESTING
YSICAL TESTING
ECHANICAL TESTING
HEMICAL ANALYSIS
LTRASONIC INSPECTION
-RAY

Q. A. APPROVED
PRESSURE VESSEL-NUCLEAR STEELS INC.
Date 2/-10-87
By

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

REPORT OF MECHANICAL TESTS

DATE April 9, 1987

ORDER No P.O. #569

LABORATORY No. 41254

The following results were obtained from our tests of this material.

Type of sample submitted ASME SA-240, Sec. 3, 1980 Ed, S'82 Add, Class 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies

Marked as follows Ref: Houston Lighting & Power BF32154

1 pc. 3/8" thick, 304L, Heat #34943

1 pc. 3/8" thick, 316L, Heat #15661

1 pc. 1/2" thick, 304L, Heat #051151P

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
34943	.2342	11,200	47,822	19,900	84,970	62.0	
15661	.2331	11,800	50,622	19,800	84,942	58.0	
051151P	.3044	14,250	46,813	26,200	86,071	66.0	

T PROCEDURE:-
#34943 - .596 x .393
#15661 - .590 x .395
#051151P - .591 x .515

ple Size

in Rate .0001 in/in. per min.

ss Strain Diagram Reference 41254

Specification - ASTM E-8

IBRATION PROCEDURE:-

Instrument SATEC

bration Date 5-7-86

ordance with ASTM E-4.

nsometer MA1B S/N 851

ordance with ASTM E-83

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck

H. C. SCHANCK, DIRECTOR

0511511P

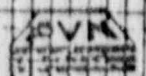
MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
450 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

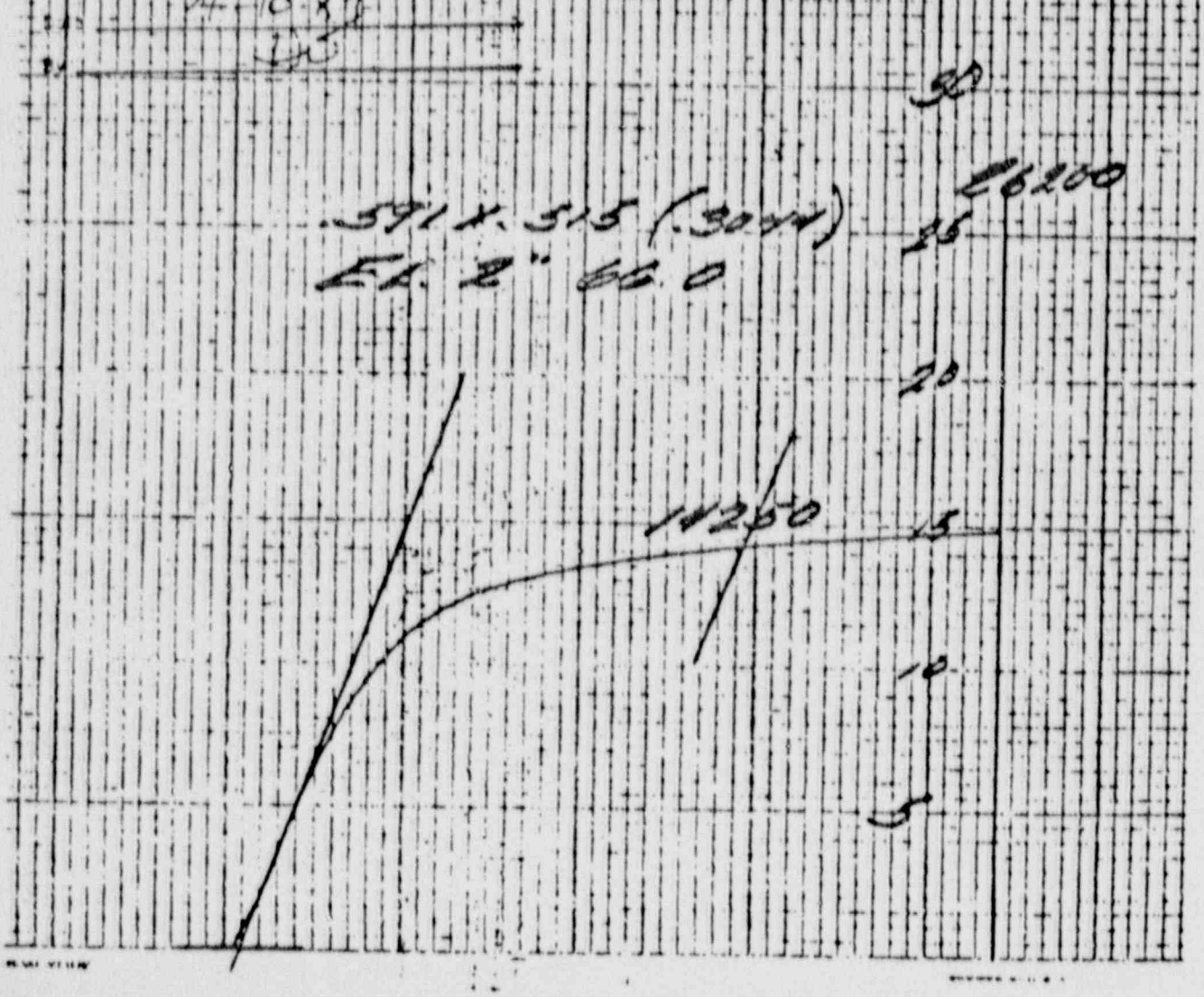
Purchase Order: 559
Laboratory No.: 41254

ASME SA-240, Sec. II, 1980 Ed. B"82 Addn.
Class 2 and NCA-3857.4, NCA-3800 and 10CFR21 applies
Ref: Houston Lighting & Power BF 32154

1 pc. 1/2" thick, 304L, Heat #0511511P



Q.A. APPROVED
[illegible]



34943

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

Purchase Order: 569
Laboratory No.: 41254

ASME SA-240, Sec. 3, 1980 Ed, S'82 Add.
Class 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies
Ref: Houston Lighting & Power BF 32156

1 pc. 3/8" thick, 304L, Heat #34943

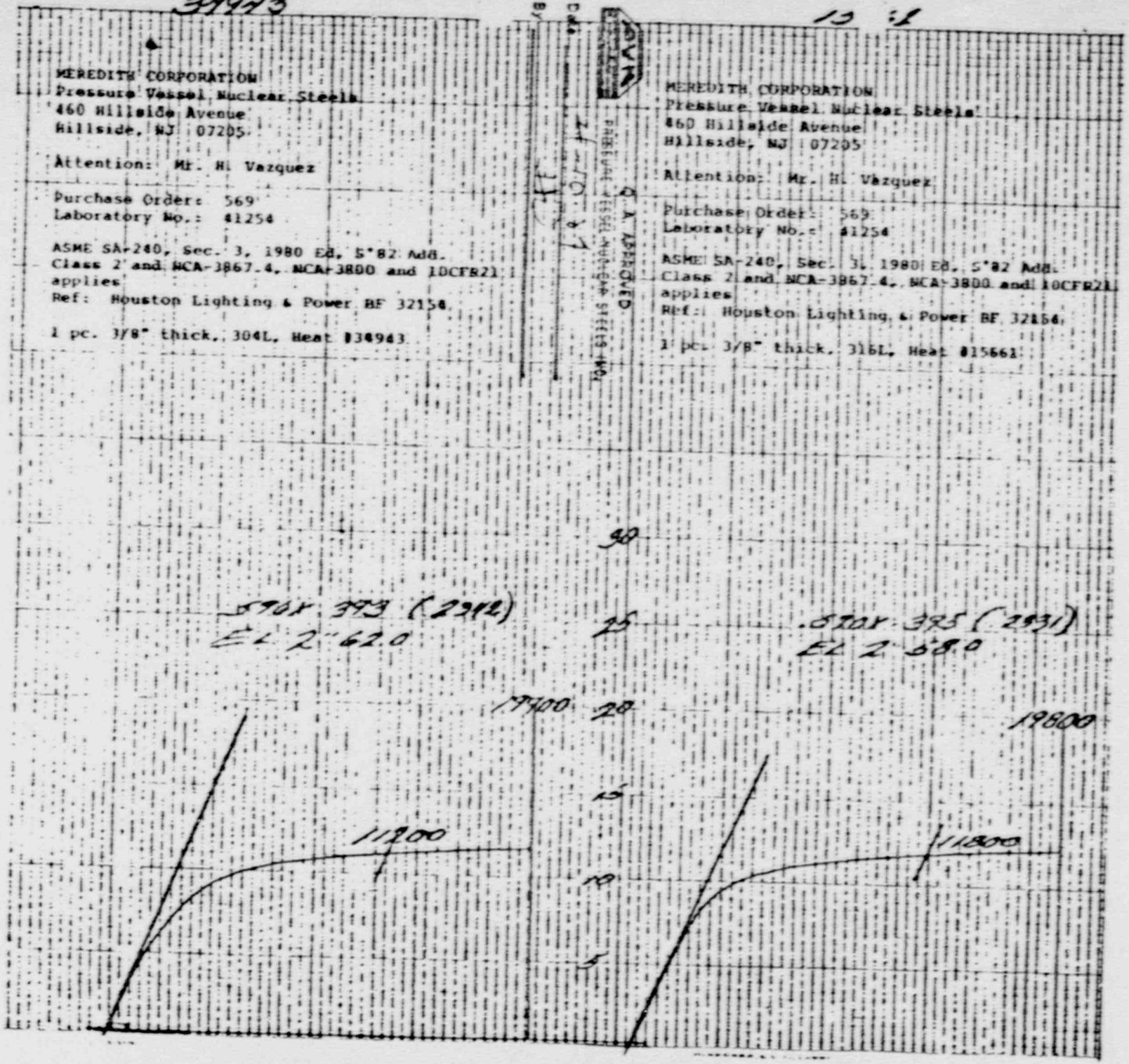
MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

Purchase Order: 569
Laboratory No.: 41254

ASME SA-240, Sec. 3, 1980 Ed, S'82 Add.
Class 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies
Ref: Houston Lighting & Power BF 32156

1 pc. 3/8" thick, 316L, Heat #15661



SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

EROSION TESTING
SICAL TESTING
CHANICAL TESTING
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
X-RAY

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

REPORT OF MECHANICAL TESTS

DATE April 16, 19 87

ORDER No. 1569

LABORATORY No. 41300

CORRECTED COPY

The following results were obtained from our tests of this material.

Type of sample submitted ASME SA-240, 316L, Sec. 3, '80 Ed. thru S'82 Add.

Marked as follows Class 2 and NCA-3867.4, NCA-3800 & 10CFR21 applies

Ref: Houston Lighting & Power BF32154

1 pc. 1/2" thick Plate, Heat #107032F

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
107032F	.2342	11,650	49,745	21,500	91,000	63.0	

Q. A. APPROVED
FOR PRESSURE VESSEL NUCLEAR STEELS
4-18-87

TEST PROCEDURE:-

Sample Size .481 x .487

Strain Rate .0001 in/in. per min.

Stress Strain Diagram Reference 41300

Test Specification - ASTM E-8

CALIBRATION PROCEDURE:-

Test Instrument SATEC

Calibration Date 5-7-86

In accordance with ASTM E-4.

Extensometer MA1B S/N 851

In accordance with ASTM E-83

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

H. C. SCHANCK, DIRECTOR

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854
(201) 752-1400
MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING
PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date April 23, 1987
CORRECTED COPY
Laboratory No. 41300-2
marked P.O. #569

Attention: Mr. H. Vazquez

Element	Sample 107032F	Sample	Sample T316L Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel	11.11		10.00 - 14.00	
Iron				
Phosphorus	0.036		0.045 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.68		2.00 max.	
Titanium				
Silicon	0.59		1.00 max.	
Chromium	17.29		16.00 - 18.00	
Sulfur	0.006		0.030 max.	
Carbon	0.028		0.030 max.	
Cobalt				
Molybdenum	2.13		2.00 - 3.00	
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	0.056		0.10 max.	

Sample Description: ASME SA-240, 316L, Sec 3, '80 Ed. thru S'82 Add, Cl. 2 and NCA-3867.4, NCA-3800 & 10CFR21 appl; Ref: Houston Lighting & Power BP321; 1 pc. 1/2" thick, Heat #107032F

Test Method

X-Ray Diffraction	
X-Ray Fluorescent	XXX
Emission Spectro (Vacuum)	XXX
Emission Spectro (Air)	
Wet Chemistry	XXX
Atomic Absorption	
Infared	
Gas Chromatography	

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845-849

ASTM Test Method: E353, E415, E322

Matrix Method: Wrought

PVIS Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 4-24-87
By DJ

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

CORRECTED COPY

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attn: Mr. H. Vazquez

Purchase Order 569
Laboratory No. 41300

ASME SA-240, 316L, Sec. 3, '80 Ed. thru S'82 Add
Cl. 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies
Ref: Houston Lighting & Power BF32154
1 pc. ½" thick Plate, Heat #107032F

29

4500

20

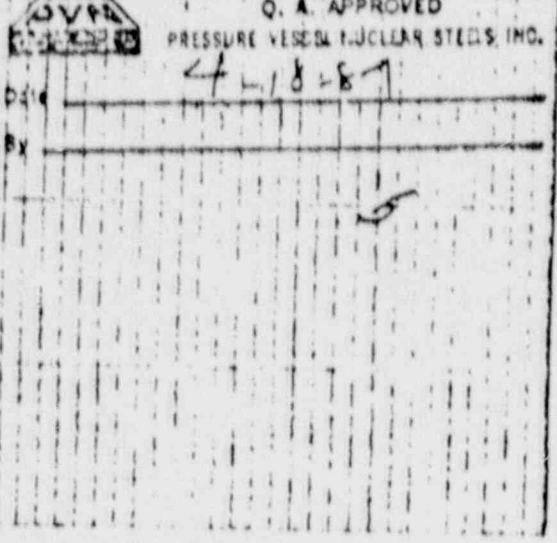
481K 487 (2342)

EL 2" 63.0

15

11450

10



5

SPECTRUM LABORATORIES INC.

524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

(201) 752-1400

MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

EREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date April 16, 1987

Laboratory No 41296

marked P.O. #569

Attention: Mr. H. Vazquez

Element	Sample 94921	Sample	Sample T304L Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel	8.80		8.00 - 12.00	
Iron				
Phosphorus	0.015		0.045 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.73		2.00 max.	
Titanium				
Silicon	0.67		1.00 max.	
Chromium	19.03		18.00 - 20.00	
Sulfur	0.020		0.030max.	
Carbon	0.024		0.030 max.	
Cobalt				
Molybdenum				
Columbium + Tantalum				
Vanadium				
Tungsten				
Nitrogen	0.064		.10 max.	

Sample Description ASME SA-240, 304L, Sec. 3, '80 Ed, thru S'82 Add, Cl. 2 and NCA-3867.4, NCA-3800 and 10CFR21 applies, Ref: Houston Lighting & Powe BF32154, Mfr. J&L Mfg. 1 pc. ½" thick, Heat #94921

Test Method

X-Ray Diffraction
X-Ray Fluorescent XXX
Emission Spectro (Vacuum) XXX
Emission Spectro (Air)
Wet Chemistry XXX
Atomic Absorption
Infared
Gas Chromatography

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 845-849

ASTM Test Method: E353, E322, E415

Matrix Method: Wrought

Q. A. APPROVED

Date 4/21/87

By

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

CORROSION & METALLURGICAL TESTING
PROFESSIONAL ENGINEERING

(201) 752-1400

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

ROSION TESTING
SICAL TESTING
MECHANICAL TESTING
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
X-RAY

METALLURGICAL TESTING
PROFESSIONAL ENGINEERING
NON-DESTRUCTIVE TESTING
FIELD TESTING
MASS SPECTROMETER

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. H. Vazquez

REPORT OF MECHANICAL TESTS

DATE April 16, 19 87

ORDER No. #569

LABORATORY No. 41296

The following results were obtained from our tests of this material.

Type of sample submitted ASME SA-240, 304L, Sec. 3, '80 Ed, thru S'82 Add

Marked as follows Class 2 and NCA-3867.4, NCA-3800 & 10CFR21 applies

Ref: Houston Lighting & Power BF32154

1 pc. ½" thick Plate, Heat #94921

Mfr. J & L Mfg.

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
One	.121	7,470	61,735	11,120	91,900	38.0	

TEST PROCEDURE:-

Sample Size .480 x .252

Strain Rate .0001 in/in. per min.

Stress Strain Diagram Reference 41296

Test Specification - ASTM E-8

CALIBRATION PROCEDURE:-

Test Instrument SATEC

Calibration Date 5-7-86

In accordance with ASTM E-4.

Extensometer MA1B S/N 851

In accordance with ASTM E-83

Q. A. APPROVED

Date 4/20/87

By

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

H. C. SCHANCK, DIRECTOR

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

Purchase Order: 569
Laboratory No.: 41296

ASME SA-240, 304L. Sec. 3, '80 Ed. thru S'82 Add
Cl. 2 and NCA-3867.4, NCA-3800 & 10CFR21 applies
Ref: Houston Lighting & Power BP3[illegible]54
1 pc. ½" thick Plate, Heat #94921
Mfr. J & L Mfg.

Heat 252 (.121)
EL. 2 38.0

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC
Date 4/24/87
By

No. 1012

MEREDITH CORPORATION
PRESSURE VESSEL-NUCLEAR STEELS
480 Hillside Avenue, Hillside, N.J. 07205-1187 • (201) 964-5300

CUSTOMER: BECHTEL ENERGY CORP. DATE: APRIL 10, 1987
AGENT FOR HOUSTON LIGHTING & POWER CO.
ADDRESS: PROJECT MANAGER
P.O. BOX 15
BAY CITY, TX 77414

CERTIFICATE OF CONFORMANCE

WE CERTIFY THAT THE MATERIAL SUPPLIED AGAINST YOUR ORDER NUMBER BF-32154 AND OUR REFERENCE NUMBER 01095 MEETS OR EXCEEDS THE REQUIREMENTS OF YOUR PURCHASE ORDER AS EVIDENCED BY THE ATTACHED COPIES OF THE PRODUCER'S TEST REPORTS. ALL MATERIALS ARE SUPPLIED IN ACCORDANCE WITH OUR QUALITY ASSURANCE PROGRAM COVERED BY A.S.M.E. CERTIFICATION NUMBER QSC-366, EXPIRATION DATE MARCH 5, 1988.

ASME SA 240 TYPE 304L STAINLESS STEEL SECTION III 1980 EDITION THRU SUMMER 1982 ADDENDA CLASS 2 NCA3800 & 10CFR21 APPLY UPGRADED STOCK

MFG.: J&L SPECIALTY PRODUCTS

2 PCS. 8' x 4' x 1/4"
HEAT # 94921

UPGRADE TESTING PERFORMED BY SPECTRUM LABORATORIES.

NO WELD REPAIR PERMITTED ON THIS MATERIAL

MEREDITH CORPORATION
PRESSURE VESSEL NUCLEAR STEELS

HAMILTON VAZQUEZ
VICE PRESIDENT-QUALITY ASSURANCE

ASME SA 240 TYPE 316L STAINLESS STEEL SECTION III 1980 EDITION THRU SUMMER 1982 ADDENDA CLASS 2 NCA3800 & 10CFR21 APPLY UPGRADED STOCK

MFG.: ELECTRALLOY CORPORATION

2 PCS. 8' x 4' x 1/2"
HEAT # 10703-2F

MEREDITH CORPORATION
PRESSURE VESSEL-NUCLEAR STEELS
460 Hillside Avenue, Hillside, N. J. 07205-1187 • (201) 964-5300

CUSTOMER: BECHTEL ENERGY CORP. DATE: MARCH 20, 1987
AGENT FOR HOUSTON LIGHTING & POWER CO.
ADDRESS: PROJECT MANAGER
P.O. BOX 15
BAY CITY, TX 77414

"REVISED COPY - 3/26/87"
CERTIFICATE OF CONFORMANCE

WE CERTIFY THAT THE MATERIAL SUPPLIED AGAINST YOUR ORDER NUMBER BF-32154 AND OUR REFERENCE NUMBER 01095 MEETS OR EXCEEDS THE REQUIREMENTS OF YOUR PURCHASE ORDER AS EVIDENCED BY THE ATTACHED COPIES OF THE PRODUCER'S TEST REPORTS. ALL MATERIALS ARE SUPPLIED IN ACCORDANCE WITH OUR QUALITY ASSURANCE PROGRAM COVERED BY A.S.M.E. CERTIFICATION NUMBER QSC-366, EXPIRATION DATE MARCH 5, 1988.

ASME SA 240 TYPE 316L
STAINLESS STEEL SECTION
III 1980 EDITION THRU
SUMMER 1982 ADDENDA CLASS
2 NCA 3800 & 10CFR21
APPLY UPGRADED STOCK

MFG.: ALLEGHANY LUDLUM
COATESVILLE, PA

1 PC. 1/4" x 8' x 4'
HEAT # 894457

UPGRADE TESTING PERFORMED
BY SPECTRUM LABORATORIES.

MEREDITH CORPORATION
PRESSURE VESSEL NUCLEAR STEELS

HAMILTON VAZQUEZ
VICE PRESIDENT-QUALITY ASSURANCE

MEREDITH CORPORATION
PRESSURE VESSEL-NUCLEAR STEELS
480 Hillside Avenue, Hillside N J 07205-1187 • (201) 964-5300

CUSTOMER: BECHTEL ENERGY CORP. DATE: APRIL 10, 1987
AGENT FOR HOUSTON LIGHTING & POWER CO.
ADDRESS: PROJECT MANAGER
P.O. BOX 15
BAY CITY, TX 77414

CERTIFICATE OF CONFORMANCE

WE CERTIFY THAT THE MATERIAL SUPPLIED AGAINST YOUR ORDER NUMBER BF-32154 AND OUR REFERENCE NUMBER 01095 MEETS OR EXCEEDS THE REQUIREMENTS OF YOUR PURCHASE ORDER AS EVIDENCED BY THE ATTACHED COPIES OF THE PRODUCER'S TEST REPORTS. ALL MATERIALS ARE SUPPLIED IN ACCORDANCE WITH OUR QUALITY ASSURANCE PROGRAM COVERED BY A.S.M.E. CERTIFICATION NUMBER QSC-366, EXPIRATION DATE MARCH 5, 1988.

ASME SA 240 TYPE 304L STAINLESS STEEL SECTION III 1980 EDITION THRU SUMMER 1982 ADDENDA CLASS 2 NCA3800 & 10CFR21 APPLY
UPGRADED STOCK

MFG.: JESSOP STEEL

2 PCS. 8' x 4' x 3/8"
HEAT # 34943

MFG.: ALLEGHANY LUDLUM

2 PCS. 8' x 4' x 1/2"
HEAT # 051151P

MEREDITH CORPORATION
PRESSURE VESSEL NUCLEAR STEELS

HAMILTON VAZQUEZ
VICE PRESIDENT-QUALITY ASSURANCE

MFG.: LTV STEEL

2 PCS. 8' x 4' x 1/16"
HEAT # 73392

2 PCS. 8' x 4' x 1/8"
HEAT # 94527

UPGRADE TESTING PERFORMED BY SPECTRUM LABORATORIES.

NO WELD REPAIR PERFORMED ON THIS MATERIAL.

MEREDITH CORPORATION
PRESSURE VESSEL-NUCLEAR STEELS
480 Hillside Avenue, Hillside, N.J. 07205-1187 • (201) 964-5300

CUSTOMER: BECHTEL ENERGY CORP. DATE: APRIL 10, 1987
AGENT FOR HOUSTON LIGHTING & POWER CO.
ADDRESS: PROJECT MANAGER
P.O. BOX 15
BAY CITY, TX 77414

CERTIFICATE OF CONFORMANCE

WE CERTIFY THAT THE MATERIAL SUPPLIED AGAINST YOUR ORDER NUMBER BF-32154 AND OUR REFERENCE NUMBER 01095 MEETS OR EXCEEDS THE REQUIREMENTS OF YOUR PURCHASE ORDER AS EVIDENCED BY THE ATTACHED COPIES OF THE PRODUCER'S TEST REPORTS. ALL MATERIALS ARE SUPPLIED IN ACCORDANCE WITH OUR QUALITY ASSURANCE PROGRAM COVERED BY A.S.M.E. CERTIFICATION NUMBER QSC-366, EXPIRATION DATE MARCH 3, 1988.

ASME SA 240 TYPE 316L STAINLESS
STEEL SECTION III 1980 EDITION
THRU SUMMER 1982 ADDENDA CLASS
2 NCA3800 & 10CFR21 APPLY
UPGRADED STOCK

MEREDITH CORPORATION
PRESSURE VESSEL NUCLEAR STEELS

HAMILTON VAZQUEZ
VICE PRESIDENT-QUALITY ASSURANCE

MFG.: LTV STEEL

2 PCS. 8' x 4' x 1/16"
HEAT # 94507

2 PCS. 8' x 4' x 1/8"
HEAT # E52636

MFG.: JESSOP STEEL

2 PCS. 8' x 4' x 3/8"
HEAT # 15661

UPGRADE TESTING PERFORMED
BY SPECTRUM LABORATORIES.

NO WELD REPAIR PERFORMED ON THIS MATERIAL.

PVN
PRESSURE VESSEL · NUCLEAR steels
460 HILLSIDE AVENUE, HILLSIDE, N.J. 07205
(201) 964-5300
TELECOPY (201) 964-5306

PURCHASE ORDER

PURCHASE ORDER DATE	ORDER NUMBER
7-6-87 1473	00734DJL

American Tank & Fab.
12314 Elmwood Avenue
Cleveland, Ohio 44111
Attention: Dave Hantz

Advsie When Ready

TERMS	SHIP VIA	F O B	FREIGHT TERMS
1/2% Ten Net 30	Truck	Shipping Point	Collect

ORDERED	UNIT	DESCRIPTION	COST	UNIT	REQUIRED DATE
		ASME 516-70 NORMALIZED UT 435 100% SCAN NO WELD REPAIR STATEMENT ON MILL T/R'S (BOTH OR LORENS PLATE ONLY)			
3	pcs.	6" x 29 1/4" x 33 1/2"	$1,013.00	EA.	
1	pc.	4" X 12" TEST SAMPLE OF EACH HEAT OF MATERIAL USED.	N/C		
1		NO WELD REPAIR STATEMENTS	$ 50.00 PER	HEAT	USED.
		TWO (2) COPIES OF MILL T/R'S ATTENTION: DEAN LANZA			
		INVOICES WILL NOT BE PROCESSED UNTIL PROPER TEST REPORTS ARE FURNISHED.			

Our Purchase Order Number must appear on all documents, invoices, shipping notices and notarized test reports. Must be rendered in six copies or as otherwise specified. Materials and service furnished on this order must be of the kind and quality specified, subject to our inspection and acceptance at destination. All rejected materials will be held for disposition, subject to shippers risk and expense.

MEREDITH CORPORATION-PRESSURE VESSEL-NUCLEAR STEEL

Signed _____

SALES ORDER FILE

QUALITY ASSURANCE APPROVED _____ _____
Signed Date

PVN and or agent to have free access to vendor's or sub-vendor's plant or facility during the process of this order.

(201) 752-1400

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854

MEREDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Attention: Mr. Hamilton Vazquez

REPORT OF MECHANICAL TESTS

DATE August 11, 1987

ORDER No. P.O. #00767

LABORATORY No. 41804

The following results were obtained from our tests of this material.

Type of sample submitted 1 pc. 6" x 4" x 12", Ht. #802T36840, Slab #S10512

Marked as follows Beth. Steel, SA516-70 MT
Sec. II & III, 1974 Edition, No Addenda, NC
Class 2 (NCA-3867.4(e) 1983 Edition)
NCA-3800 & 10CFR21 applies

Sample No.	Area	Yield Load lbs.	Yield Strength psi 2% offset	Tensile Load lbs.	Tensile Strength psi	% EL. 2"	R. A. %
802T36840	.20	8,750	43,750	15,350	76,750	27.0	55.20

This service was supplied under a Quality Systems Program, Rev. 2 dtd 1-23-80 qualified by Meredith Corp. as meeting the requirements of NCA-3800. Meredith Corp. Audit date 11-17-86.

TEST PROCEDURE:-

Sample Size .505" Rd.
Strain Rate .0001 in/in. per min.
Stress Strain Diagram Reference 41804
Test Specification - ASTM E-8

CALIBRATION PROCEDURE:-

Test Instrument SATEC
Calibration Date 5-2-87
In accordance with ASTM E-4.
Extensometer MA1B S/N 851
In accordance with ASTM E-83

Quality Assurance Inspection System complies with MIL-I-45208 A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

H. C. SCHANCK, DIRECTOR

SPECTRUM LABORATORIES INC.
524 PELHAM AVE. PISCATAWAY, NEW JERSEY 08854
(201) 752-1400

MASS SPECTROMETER
CHEMICAL ANALYSIS
ULTRASONIC INSPECTION
NON-DESTRUCTIVE TESTING

PHYSICAL TESTING
MECHANICAL TESTING
FIELD TESTING
X-RAY

REPORT OF CHEMICAL TESTS

REDITH CORPORATION
Pressure Vessel Nuclear Steels
460 Hillside Avenue
Hillside, New Jersey 07205

Date August 11, 1987

Laboratory No. 41804

marked P.O. #00767

Attention: Mr. Hamilton Vazquez

Element	Sample 802T36840	Sample	Sample Requirements	Sample
Copper				
Tin				
Lead				
Zinc				
Nickel				
Iron				
Phosphorus	0.026		0.035 max.	
Antimony				
Aluminum				
Magnesium				
Manganese	1.13		0.77 - 1.30	
Titanium				
Silicon	0.22		0.13 - 0.45	
Chromium				
Sulfur	0.016		0.04 max.	
Carbon	0.23		0.31 max.	
Cobalt				
Molybdenum				
Columbium + Tantalum				
Vanadium				
Tungsten				

Sample Description: Sec. II & III, 1974 Ed No Add, NC Cl. 2 (NCA3867.4(e) 1983 Ed), NCA3800 & 10CFR21 applies
1 pc. 6" x 4" x 12", Ht. #802T36840
Slab #S10512, Beth. Steel
SA516-70 MT

Test Method

- X-Ray Diffraction
- X-Ray Fluorescent
- Emission Spectro (Vacuum) XXX
- Emission Spectro (Air)
- Wet Chemistry XXX
- Atomic Absorption
- Infared
- Gas Chromatography

The samples tested in this report were calibrated by use of

National Bureau of Standards No's. 1261-1265

ASTM Test Method: E350, E415

Matrix Method: Wrought

This service was supplied under a Quality Systems Program, Rev. 2 dtd 1-23-80 as qualified by Meredith Corp. as meeting the requirements of NCA-3800. Meredith Corp. Audit date 11-17-86.

Quality Assurance Inspection System complies with MIL-I-45208A, ASTM E-548, and ASME Sec. III, Par. NCA-4000.

We certify this is a true report of results obtained from our tests of this material.

SPECTRUM LABORATORIES INC.

Harold C. Schanck
Director

Garrett C. Schanck
Metallurgist

Samples returned upon request only. Held for a period of 30 days maximum. The liability of this laboratory relative to this report shall not exceed the amount of the invoice.

MEREDITH CORPORATION

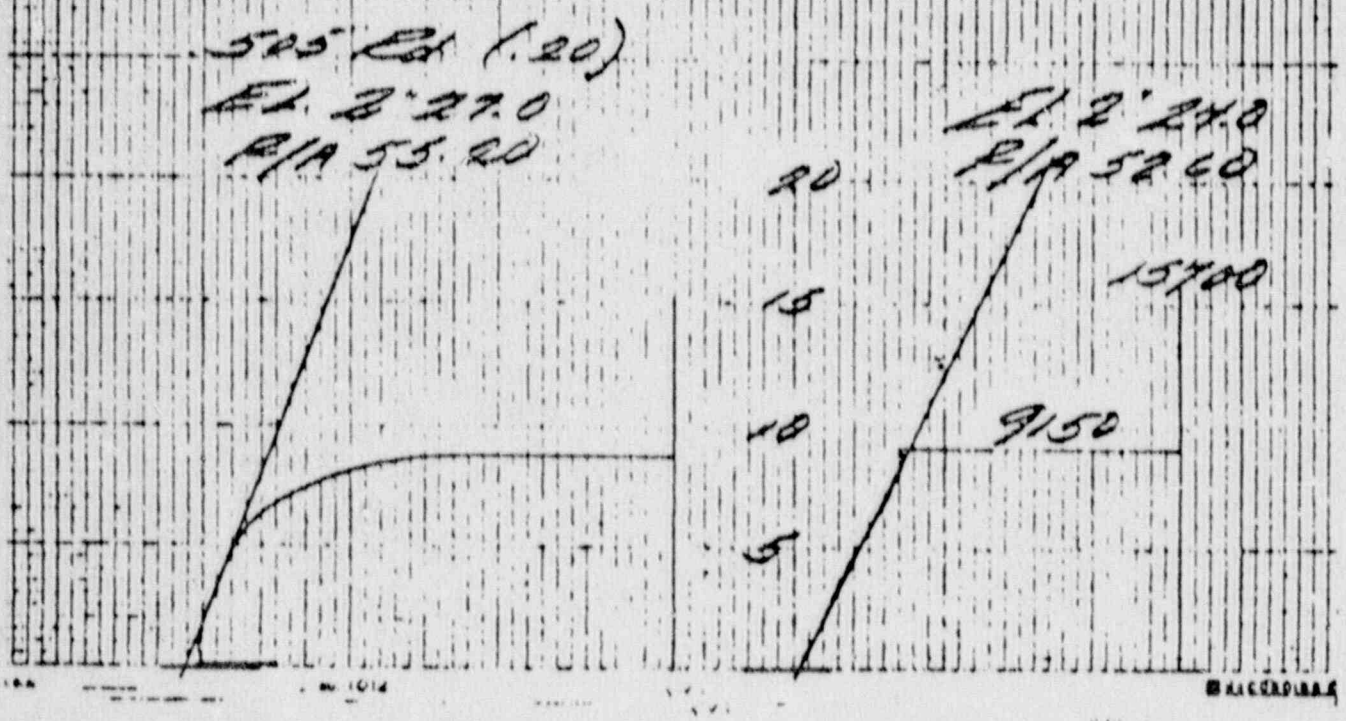
Pressure Vessel Nuclear Steels
660 Hillside Avenue
Hillside, NJ 07205

Attention: Mr. H. Vazquez

P.O. #00787
Deb No. 61806

1 pc. 6" x 6" x 12", Ht. #802T36840, Slab #S10512 Bath. Steel, SA-516-70 MT
Sec. II & III, 1974 Ed. No Add., NC Class 2 (NCA-3867.7(a) 1981 Edition)
NCA-3800 and 10CFR 21 applies

1 pc. 7" x 6" x 12", Ht. #2R2321, Slab #0301, U99, SA516-70 MT
Sec. II & III, 1981 Ed. thru Winter 1985 Add., NB Class 1, NB2000
NCA3867.7(a), NCA3800 and 10CFR21 applies



Congdon & Carpenter
P.O. #01473
P.O. #05 9805
pcs. 6 x 29¼ x 33½

6"

Q. A. APPROVED
PRESSURE VESSEL NUCLEAR STEELS INC.
Date 8-11-87
BY DPS

AMSPEC
Inspection For Protection

August 4, 1987

Meredith Corporation
Presure Vessel Nuclear
460 Millside Avenue
Hillside, New Jersey 07205

ATTENTION: Mr. Hamilton Vasquez

RE: Ultrasonic Inspection of Three Carbon Steel Plates

INTRODUCTION

Amspec Technical Services, Inc. was requested to preform an Ultrasonic Inspection of Three (3) carbon steel plates, in order to establish the possible presence of material defects due to manufacture. Material specifications and size are as follows; Size:6"X 29½"X 38½",Heat Number:802T36840, Slab Number:S10512, MFG:Beth, Grade: SA516-70 MT.

The above mentioned size and specifications apply to all three (3) plates.

The inspection was preformed at Meredith Corporation, Hillside, New Jersey, under purchase order #00768

TEST PROCEDURE AND RESULTS

On August 3, 1987, an Ultrasonic Inspection was preformed on the above mentioned plates in accordance with: Section III 1974 Edition,No Addenda,NC Class 2, UT per SA435 100% Scan,NCA3800 & 10CFR21 Applies.The above mentioned code specifications were used in conjunction with AMSPEC-UT-1-86 procedure requirements.

A Krautkramer Branson sonoray Model USK-6 pulse echo sound generator along with a 2.25 MHz, 1 inch diameter straight beam transducer was used for the inspection.

Calibration of the inspection equipment was preformed in accordance with the requirements of the above mentioned codes and procedures.

The above mentioned plates were found to be ACCEPTABLE.

COMMENT

A verbal and written report was rendered to Meredith Corporation, on August 3,1987 by Jonathan P. Coulson, Level III of Amspec Technical Services,Inc.

Jonathan P. Coulson
Jonathan P. Coulson
Vice President/General Manager
Amspec Technical Services, Inc.

JPC/tm

☐ The American Inspection Co., Inc.
P.O. Box 154
Itasca, IL 60143-0154
(312) 250-8522

☐ The American Inspection Co., Inc.
4215 Cardinal Drive
Beaumont, TX 77705
(409) 842-9077

✓ Amspec Technical Services, Inc.
P.O. Box 713
48 Kimball Street
Woodbridge, NJ 07095
(201) 855-0101

☐ Amspec of Puerto Rico
Cond. El Senorial
Suite 615
Ponce, Puerto Rico 00731

☐ The American Inspection Co., Inc.
P.O. Box 8117
Sunny Isle, Christiansted
St. Croix, USVI 00820

MEREDITH CORPORATION
PRESSURE VESSEL-NUCLEAR STEELS
460 Hillside Avenue, Hillside, N.J. 07205-1187 • (201) 964-5300

CUSTOMER: Congdon & Carpenter
ADDRESS: 10 Tower Road
Seekonk, MA 02771
Attn: Mr. Bill Hyde

DATE: August 5, 1987

"REVISED COPY - 8/11/87"

CERTIFICATE OF CONFORMANCE

WE CERTIFY THAT THE MATERIAL SUPPLIED AGAINST YOUR ORDER NUMBER S 9805 AND OUR REFERENCE NUMBER 01473 MEETS OR EXCEEDS THE REQUIREMENTS OF YOUR PURCHASE ORDER AS EVIDENCED BY THE ATTACHED COPIES OF THE PRODUCER'S TEST REPORTS. ALL MATERIALS ARE SUPPLIED IN ACCORDANCE WITH OUR QUALITY ASSURANCE PROGRAM COVERED BY A.S.M.E. CERTIFICATION NUMBER QSC-366, EXPIRATION DATE MARCH 5, 1988.

ASME SA 516-70 NORMALIZED
PRESSURE VESSEL PLATE
SECTION III CLASS # 1974
EDITION NO ADDENDA
U.T. A 435 100% SCAN USE
BETH PLATE MAG PARTICLE

3 pcs 6 x 29 1/4 x 33 1/2

Heat #802T36840

Mfg: Bethlehem Steel

MEREDITH CORP.
PRESSURE VESSEL NUCLEAR STEELS

HAMILTON VAZQUEZ
VICE PRESIDENT - QUALITY ASSURANCE

ATTACHMENT "L"

PVN STEELS

QUALITY ASSURANCE MEMO

MEMO TO: W.M. LANZA DATE: SEPTEMBER 12, 1989

FROM: H. VAZQUEZ
Q.A. DEPARTMENT

SUBJECT: UPGRADE TESTING REQUIREMENTS & DOCUMENT REVIEW

AS A RESULT OF THE NRC INSPECTION, WE HAVE REVIEWED THE PORTION OF THE Q.A. MANUAL AND STANDARD OPERATING PROCEDURES THAT PERTAIN TO THE ABOVE REFERENCED. IN ADDITION, ALL PVN EMPLOYEES WHO ARE INVOLVED IN PLACING AND FILLING PURCHASE ORDERS HAVE BEEN REQUIRED TO REVIEW ALL APPLICABLE PVN PROCEDURES AND ASME REQUIREMENTS WHICH GOVERN THE UPGRADING OF STOCK MATERIALS, AND HAVE BEEN REMINDED THAT ALL SUCH PROCEDURES AND REQUIREMENTS MUST BE FOLLOWED IN VERY CASE.

IN THE AREA OF DOCUMENT REVIEW, ALL PVN EMPLOYEES WHO ARE INVOLVED IN REQUESTING OR EVALUATING TEST RESULTS HAVE BEEN REMINDED THAT WITH RESPECT TO EVERY ORDER, THEY MUST CONFIRM (a) THAT APPROPRIATE ACCEPTANCE CRITERIA HAVE BEEN APPLIED IN PERFORMING TESTS AND IN EVALUATING TEST RESULTS, AND (b) THAT ALL REQUIRED TEST SPECIFICATIONS HAVE BEEN FOLLOWED.

PERSONNEL IN ATTENDANCE WERE THE FOLLOWING:

DIANE ROWE
IRENE MAKRIS
DEAN J. LANZA

460 Hillside Avenue • Hillside, New Jersey 07205 • Telephone (201) 964-5300

ATTACHMENT "M"

PVN STEELS

QUALITY ASSURANCE MEMO

MEMO TO: WILLIAM M. LANZA DATE: SEPTEMBER 12, 1989

FROM: HAMILTON VAZQUEZ
Q.A. DEPARTMENT

SUBJECT: NUCLEAR SALES ORDER FILES

AS A RESULT OF THE NRC INSPECTION, SOME FILES WERE FOUND NOT TO HAVE THE RED DOTS INDICATING NUCLEAR STATUS OF THE ORDER. AS A RESULT, THE FOLLOWING STEPS WERE TAKEN:

A) EVERY FILE FOLDER FOR NUCLEAR AND NON-NUCLEAR ORDERS FROM 1985 THROUGH 1988 WAS REVIEWED TO CONFIRM THAT EVERY FILE CONTAINING A NUCLEAR ORDER CONTAINED A RED DOT.

B) THE NEW RED DOTS WHICH HAD APPARENTLY FALLEN OFF, APPROXIMATELY 15, WERE REPLACED.

C) ALL FOLDERS CONTAINING NUCLEAR ORDERS WERE PHYSICALLY SEPARATED FROM THE FOLDERS CONTAINING NON-NUCLEAR ORDERS AND WERE PLACED IN SEPARATE FILING CABINETS, WHICH ARE NOW DESIGNATED AS NUCLEAR ORDER CABINETS.

AS A RESULT OF THIS REVIEW, PVN NOW HAS A REDUNDANT SYSTEM FOR DESIGNATING AND IDENTIFYING NUCLEAR ORDERS: THEY ARE COLOR CODED WITH RED DOTS, AND THEY ARE STORED IN SEPARATE FILING CABINETS. PVN EMPLOYEES HAVE BEEN TRAINED CONCERNING THE NEW FILING PROCEDURES FOR NUCLEAR ORDERS, AND PVN'S PROCEDURES WILL BE REVISED TO REFLECT THE NEW FILING SYSTEM.

PERSONNEL IN ATTENDANCE WERE THE FOLLOWING:

DIANE ROWE
IRENE MAKRIS
DEAN J. LANZA

460 Hillside Avenue • Hillside, New Jersey 07205 • Telephone (201) 964-5300

B2

LANE & MITTENDORF
120 WOOD AVENUE SOUTH
METRO PARK (ISELIN), NEW JERSEY 08830
(201) 494-6868
TELECOPIER (201) 494-7271

99 PARK AVENUE
NEW YORK, NEW YORK 10016
(212) 972-3000
TELECOPIER (212) 972-5647
573-9879

340 ROYAL PALM WAY
PALM BEACH, FLORIDA 33480
(407) 832-6966

818 18TH STREET, N.W.
WASHINGTON, D.C. 20006
(202) 785-4949
TELECOPIER (202) 466-5289
466-2914

22 GROSVENOR SQUARE
LONDON W1X 0DY
(01) 491-4805
TELECOPIER (01) 408-0079

September 25, 1989

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
M/S 11-E-4
Washington, D.C. 20555

RE: Information Notice No. 89-56
Alloy & Carbon Steel, Co.
Mr. Louis Mikosh, President

Dear Mr. Rossi:

Thank you for taking the time to discuss this matter with me today.

As we discussed, I shall be presenting to you in the near future my proposed Supplemental Statement, correcting factual inaccuracies that are set forth in the Information Notice, particularly those portions of the Attachment which have already been withdrawn, modified, or otherwise corrected during the course of pretrial proceedings before the U.S. District Court for the District of New Jersey.

For your information, in the meantime, I enclose a copy of the United States Department of the Navy Suspension Memorandum dated June 26, 1989.

I look forward to working with you on this most important matter.

Very truly yours,

WILLIAM C. CAGNEY

WCC:bap
Enclosure
cc: Mr. Louis R. Mikosh
President, Alloy & Carbon Steel, Co.

8910200226 15pp

B15

C. 93 to all
118 staff

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

July 20, 1989

NRC INFORMATION NOTICE NO. 89-56: QUESTIONABLE CERTIFICATION OF MATERIAL SUPPLIED TO THE DEFENSE DEPARTMENT BY NUCLEAR SUPPLIERS

Addressees:

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose:

This information notice is being provided to alert addressees to a possible problem with the certification of material furnished by Meredith Corporation, Pressure Vessel Nuclear (PVN) and Alloy & Carbon Steel Company, Incorporated (ALLOY) of Hillside, New Jersey. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

On May 4, 1989, the U.S. Department of Justice, District of New Jersey, issued information that corporate officers for PVN and ALLOY were indicted for their alleged roles in selling commercial-grade steel as military-grade steel which was used to build and repair U.S. Navy submarines and surface ships. The 27-count indictment rendered on May 4, 1989, by a Newark Federal Grand Jury, charges the defendants, some of whom are presently employees of PVN, with substituting commercial-grade steel for military-grade steel and fraudulently documenting the substitutions as meeting military specifications. From April 1984 through August 1985 the defendants allegedly caused nonconforming steel to be shipped to Department of Defense contractors. The defendants allegedly falsely marked and stenciled steel, created false documentation bearing the letterhead of various companies, falsely altered manufacturer issued certified material test reports (CMTRs), caused fraudulent chemical and physical test certificates to be prepared for tests that had not been performed, and prepared false certificates of conformance (C of Cs) for steel that did not conform to purchase requirements. Attachment 1 contains a copy of OVERT ACTS from the indictment that identifies faulty documents, heat numbers, and manufacturers' names.

Discussion:

During NRC inspections of PVN conducted the weeks of November 2, 1988 and February 1, 1989, three examples of material supplied to ASME Section III requirements without adequate basis were discovered. In all three cases PVN purchased stock material and sold it as meeting the requirements of Section III without performing the upgrade testing required by NCA-3867.4(e). In addition, it was also noted that PVN had altered CMTRs received from American Tank and Fabricating Company (ATF). On material ATF had purchased from an ASME Quality Systems Certificate (QSC) holder as stock material and subsequently sold to PVN, PVN had removed ATF's name from the "Sold To" and "Shipped To" blocks of the CMTR and inserted PVN's name and address. Based on the indication that the material was purchased directly from an ASME QSC holder, the customer would not be looking for upgrade testing results nor suspect the material was not in conformance with code requirements.

On June 13 and 14, 1989, Virginia Power conducted an audit of PVN. The audit examined a sample of purchase orders which consisted of 16 safety-related purchase orders, encompassing 30 individual line items of various types of safety-related materials. The 16 safety-related purchase orders were issued between September 1, 1988 and May 4, 1989. From the sample of 30 line items, Virginia Power auditors determined that in 3 cases PVN purchased material from unapproved suppliers and in 17 cases PVN supplied commercial grade material. In all 20 cases, PVN certified that the material met all the requirements of Virginia Power's purchase orders, including Appendix B to 10 CFR 50. However, there is no indication that PVN took any action to determine that the materials supplied were suitable for safety-related applications prior to certifying the material met the requirements of Appendix B.

Addressees may wish to review nuclear procurements from these vendors to ensure that appropriate bases exist for the use of PVN or ALLOY supplied material. Further, addressees may wish to contact the steel mills identified as the manufacturer of the procured materials to confirm traceability of the material and to inform one of the NRC technical contacts listed below of any materials identified as not originating from the manufacturer indicated in the documentation or having material properties different from those indicated in the documentation. The NRC is interested in obtaining information on material supplied by PVN or ALLOY in which discrepancies have been found that are similar to those described above or in the indictment described in Attachment 1. The NRC is particularly interested in discrepancies discovered as a result of independent verification testing of chemical and mechanical properties and information on recent procurements.

Addressee audits of material manufacturers and suppliers which include a review of the basis for certifications provided by vendors and the supporting tests and records of traceability can prevent problems such as those discussed above. Addressees may wish to review the adequacy of previous vendor audits and their general vendor approval process in light of Information Notice No. 88-35, "Inadequate Licensee Performed Vendor Audits" and the above information.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact one of the technical contacts listed below or the Regional Administrator of the appropriate regional office.

Charles E. Rossi

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contacts: Ramon Cilimberg, NRR
(301) 492-3220

Ed Baker, NRR
(301) 492-0959

M/S 11-E-4
U.S. NRC
Wash
20555

Attachments:
1. Overt Acts
2. List of Recently Issued NRC Information Notices

Section Chief,
Vendor Inspection Branch

Did June inspection.
Before, "Supplier" said heard they were violated,
sent Ed copy of article.

Would not reveal name

OVERT ACTS

In furtherance of the conspiracy and to effect the illegal objects thereof, the following overt acts were committed:

TODD SHIPYARD PURCHASE ORDER NUMBER SF-16373

1. On or about June 18, 1985, defendant Alloy received an order from Todd Shipyard ("Todd"), specifically Todd Purchase Order SF-16373, which called for, among other items, two pieces of steel plate with dimensions 3/8" x 96" x 240" and 3/8" x 96" x 120", Specification MIL-S 22698 Grade HT.

2. On or about June 20, 1985, defendant Thomas Syms issued Alloy Purchase Order Number 5318 to Levinson Steel Company for, among other items, two pieces of American Society of Testing Materials ("ASTM") A588 plate with dimensions 3/8" x 96" x 240" and 3/8" x 96" x 240".

3. On or about June 25, 1985, defendant Alloy received the steel from Levinson for Purchase Order Number 5318.

4. In or about June 1985, defendant Alloy received Certified Mill Test Reports indicating that the 3/8" plate mentioned in the preceding paragraphs was manufactured to ASTM A588 specifications, heat number F00402, by United States Steel Corporation.

5. On or about June 27, 1985, defendant Louis Mikosh signed a Certificate of Test, which he caused to be supplied to Todd, that indicated the three-eighths inch steel plate was produced by Phoenix Steel Corporation to MIL-S-22698,

Grade HT specification, heat number 93372, knowing full well that this was a false and fraudulent statement.

CRAFT MACHINE WORKS ORDER NUMBER 2P18708-7

6. In or about December 1984, defendant PVN received an order from Craft Machine Works ("Craft"), order number 2P18708-7, which called for, among other items, the following pieces of steel:

SPECIFICATION	DIMENSIONS	HEAT NUMBER
MIL-S-16113	1"x96"x120"	401N7311
MIL-S-16113	1 1/2"x96"x120"	411S3321

7. On or about December 13, 1984, defendant Hamilton Vasquez signed PVN's sales order number 01527 indicating that PVN was shipping steel of military specification in fulfillment of the Craft order.

8. In or about December 1984, defendant PVN issued Certified Mill Test Reports to Craft for the military specification steel described in Overt Act 6 when in fact the defendant PVN had shipped commercial grade steel to Craft.

9. In or about March 1985, Craft notified defendant PVN that independent testing performed on the steel shipped to Craft indicated that the PVN supplied steel was deficient as military specification steel.

10. On or about March 18, 1985, defendant William Lanza answered Craft's letter and offered to have the steel retested.

11. In or about June 1985, defendant Hamilton Vasquez traveled to Newport News, Virginia to arrange for new testing of the disputed steel but no test was performed.

TIM SHULER & ASSOCIATES PURCHASE ORDER NUMBER 401

12. On or about October 15, 1984, Tim Shuler & Associates ("Tim Schuler") ordered from defendant Alloy on purchase order number 401, among other items, 130 pieces of 3" x 3" x 1/4" x 20' steel angles, with military specification MIL-S-22698B, Grade AH36T.

13. On or about November 12, 1984, defendant Alloy shipped Tim Shuler 130 pieces of structural steel, each piece measuring 3" x 3" x 1/4" x 20', bearing heat number 81672 and purporting to be MIL-S-22698B, Grade AH36T Class U.

14. On or about November 12, 1984, defendant Louis Nash signed an Alloy Certificate of Test certifying that the 130 pieces of steel bearing heat number 81672 was military specification steel and that the certificate of test was a true copy of a test report on file at Alloy when, in fact, he knew that certification was false and fraudulent and a forgery.

15. On or about November 12, 1984, defendant Alloy provided Tim Shuler Associates with a forged and fraudulent Atlantic Steel Company Certified Mill Test Report for heat number 81672 falsely certifying that the steel Alloy was providing to Tim Shuler was military specification steel when, in truth and in fact, it was commercial grade steel.

DIVERSIFIED METALS INC. ORDER NUMBER 1548

16. On or about May 3, 1984, Diversified Metals placed an order with defendant PVN on purchase order number 1548 for 25 pieces of 3/8" x 4" x 20' steel bars, with military specification MIL-S-20166B, Grade HT.

17. On or about May 2, 1984, PVN issued a purchase order number 8573 to Arco Steel Company, for 25 pieces of 3/8" x 4" x 21' flat bar, commercial specification ASTM A588.

18. On or about May 4, 1984, defendant Dean Lantz signed a PVN Certificate of Test certifying that 25 pieces of steel bearing heat number A1053 was military specification steel and that the certificate of test was a true copy of a test report on file at PVN when, in fact, he knew that certification was false and fraudulent.

19. On or about May 4, 1984, defendant PVN provided Diversified Metals with a forged and fraudulent Atlantic Steel Company Certified Mill Test Report for heat number A1053 falsely certifying that the steel PVN was providing to Diversified Metals was military specification steel when, in truth and in fact, it was commercial grade steel.

BLANK DOCUMENTS

20. During the period of this Indictment, defendant Louis Mikosh, improperly and wrongly kept blank Atlantic Steel Company Certified Mill Test Reports in his office which he periodically caused to be forged so to falsely certify commercial grade steel was military specification steel.

21. During the period of this Indictment, defendant Louis Mikosh improperly and wrongly kept blank American Bureau of Shipping documents in his office which he periodically caused to be forged so to certify that steel he was shipping complied with ABS standards.

All in violation of Title 18, United States Code, Section 371.

COUNT 4

1. Paragraphs 1, and 3 through 13 of Count 1 of this Indictment are realleged and incorporated as though set forth in full herein.

2. On or about May 30, 1985, in Hillside in the District of New Jersey and elsewhere, the defendants

LOUIS NIKOSH and
ALLOY & CARBON STEEL, INC.

in a matter within the jurisdiction of a department and agency of the United States, that is, the United States Department of Defense and the United States Navy, did knowingly and willfully make and use and cause to be made and used a false, fictitious and fraudulent statement and representation and did make and use and cause to be made and used a false writing and document knowing the document and writing contained a false, fictitious and fraudulent statement and entry in that the defendants provided a forged Bethlehem Steel Certified Mill Test Report to Colonnas Shipyard knowing full well that the heat number and specification listed thereon were not the true heat number and specification for the steel shipped to Colonnas Shipyard.

In violation of Title 18, United States Code, Sections 1001 and 2.

DEPARTMENT OF THE NAVY
THE ASSISTANT SECRETARY OF THE NAVY
(SHIPBUILDING AND LOGISTICS)
WASHINGTON, D.C. 20360 5000

JUN 26 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Thomas Syms
94 Tennisson Street
Cartaret, NJ 07008

Dear Mr. Syms:

Pursuant to the procedures in Subpart 9.4 of the Federal Acquisition Regulation (FAR) and Subpart 209.4 of the Department of Defense FAR Supplement, copies of which are enclosed, the Department of the Navy is suspending you from contracting with any agency in the executive branch of the Federal Government. The basis for this action is set forth in the enclosed Memorandum.

The suspension is for a temporary period pending completion of legal proceedings, unless sooner modified or terminated pursuant to the procedures in FAR 9.4, and will be effective throughout the executive branch of the Federal Government. During the period of suspension, offers will not be solicited from, contracts will not be awarded to, existing contracts will not be renewed or otherwise extended for, and approval or consent will not be given to subcontracts with you (where such approval or consent is required), unless the acquiring agency's head or an authorized representative determines in writing that there is a compelling reason to make an exception. During the period of suspension, no Government contractor may enter into a subcontract equal to or in excess of $25,000 with you unless there is a compelling reason to do so and the contractor first notifies the contracting officer and further complies with the provisions of FAR 9.405-2(b). Further, during the period of suspension, your employment with any other organization doing business with the Government will be carefully examined to determine its impact on the responsibility of that organization as a Government contractor or subcontractor. Suspended contractors are excluded from conducting business with the Government as agents or representatives of other contractors.

Within thirty calendar days after receipt of this notice, you or a representative on your behalf, may submit, either in person or in writing, information and argument in opposition to the suspension, as set forth in FAR 9.407-3(c)(5).

Sincerely,

Everett Pyatt

EVERETT PYATT

Enclosures

DEPARTMENT OF THE N..VY
OFFICE OF THE ASSISTANT SECRETARY
(SHIPBUILDING AND LOGISTICS)
WASHINGTON, DC 20360-5000

S' 6.23

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE NAVY FOR SHIPBUILDING AND LOGISTICS

Subj: SUSPENSION OF LOUIS MIKOSH, WILLIAM LANZA, THOMAS SYMS, HAMILTON VAZQUEZ, DEAN LANZA, ALLOY CARBON AND STEEL COMPANY, INCORPORATED, MEREDITH CORPORATION PRESSURE VESSEL NUCLEAR STEEL

BACKGROUND:

On 4 May 1989, in the United States District Court, District of New Jersey, the subject companies and individuals were indicted for various crimes related to their participation in a conspiracy to defraud the United States.

The indictment alleges: The subject companies were subcontractors that provided steel to Navy shipbuilders and ship repair contractors. The subject companies falsely represented that they were providing steel that met military specifications, as ordered by the Navy prime contractors, when, in fact, they knew they were providing commercial grade steel that did not meet military specifications. Among other things, the subject companies falsified markings on the steel, altered certified test reports provided by the mills that manufactured the steel and prepared false test reports. The subject companies knew that the steel they were providing would ultimately be used by the Navy. The conspiracy ran, approximately, from April 1984 through August 1985. The companies accepted payments totalling approximately $52,093 for steel which they knew did not meet the required military specifications.

Mr. Louis Mikosh was the President and Chief Executive Officer of Alloy Carbon and Steel Company, Incorporated (Alloy Carbon and Steel) and was also Vice President of Meredith Corporation, Pressure Vessel Nuclear Steel (PVNS). Mr. William Lanza was the Vice President of Alloy Carbon and Steel and the President of PVNS. Mr. Thomas Syms, Mr. Dean Lanza and Mr. Hamilton Vazquez were, respectively, the purchasing agent for Alloy Carbon and Steel, the Vice President of Operations for PVNS and the quality control manager for PVNS.

The subject firms and individuals were charged with violating the following sections of Title 18, United States Code:

Louis Mikosh:	one count in violation of Section 371 - conspiracy to defraud the United States. four counts in violation of Sections 1001 and 2 - false statements. four counts in violation of Section 1341 - mail fraud.
William Lanza:	one count in violation of Section 371 - conspiracy to defraud the United States. one count in violation of Sections 1001 and 2 - false statements.
Thomas Syms:	one count in violation of Section 371 - conspiracy to defraud the United States. two counts in violation of Sections 1001 and 2 - false statements.
Hamilton Vazquez:	one count in violation of Section 371 - conspiracy to defraud the United States. ten counts in violation of Sections 1001 and 2 - false statements. one count in violation of Section 1341 - mail fraud.
Dean Lanza:	one count in violation of Section 371 - conspiracy to defraud the United States. nine counts in violation of Sections 1001 and 2 - false statements. eight counts in violation of Section 1341 - mail fraud.
Alloy Carbon and Steel Company:	one count in violation of Section 371 - conspiracy to defraud the United States. four counts in violation of Sections 1001 and 2 - false statements. four counts in violation of Section 1341 - mail fraud.
PVNS:	one count in violation of Section 371 - conspiracy to defraud the United States. ten counts in violation of Sections 1001 and 2 - false statements. eight counts in violation of Section 1341 - mail fraud.

IMPACT ON THE NAVY:

The subject companies and individuals knowingly provided steel which did not meet Navy specifications and concealed the true nature of the product they provided from the Navy and others. The Navy was potentially at risk since the Navy relied upon the product being what the Navy had ordered, when, the product provided was not what was ordered.

DISCUSSION:

The criminal violations with which the subject companies and individuals have been charged indicate that these firms and individuals are lacking in the honesty and integrity necessary to do business responsibly with the Federal Government. FAR 9.407-2(b) states that indictment for violations such as those with which the parties have been charged constitutes adequate evidence for suspension. The Government needs to be protected from doing business with the subject companies and individuals, pending completion of legal proceedings. The causes for the suspensions of Alloy Carbon and Steel, FVNS, Messrs. Mikosh, William Lanza, Syms, Vazquez, and Dean Lanza are FAR 9.407-2(a)(1),(3) and (5).

RECOMMENDATION:

The Debarment Committee recommends that Mr. Louis Mikosh, Mr. William Lanza, Mr. Thomas Syms, Mr. Hamilton Vazquez, Mr. Dean Lanza, Alloy Carbon and Steel Company, Incorporated and Meredith Corporation, Pressure Vessel Nuclear Steel, be advised that the Navy is placing their names on the procurement section of the Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs in a suspended status for a temporary period pending the completion of legal proceedings, unless sooner modified or terminated pursuant to FAR Subpart 9.4. During this time these companies and individuals will be precluded from contracting with any agency in the executive branch of the Federal Government.

Recommend that you approve this course of action and sign the accompanying letters.

NAVY DEBARMENT COMMITTEE

Charles A. Mills

CHARLES A. MILLS
Chairman

Stephen Parvin
STEPHEN PARVIN
Member

Deborah E. Tronic
DEBORAH E. TRONIC
Member

CONCUR E. Glassman 6/22/89
ASN (S&L) CBM DATE

Approved Everett Pyatt 6/26/89
ASN (S&L) DATE