



World Headquarters

October 22, 1979

Chicago Regional Office  
Nuclear Regulatory Commission  
799 Roosevelt Road, Building 4  
Glen Ellyn, Illinois 60137

Attention: Mr. Gaston Fiorelli

Gentlemen:

This letter is to advise you that corrective action has been taken in regard to the potentially defective parts reported by B-Line Systems, Inc. on September 24, 1979. Mr. Pike of Ernst-Comstock has informed B-Line Systems that none of the parts identified in our letter of September 24, 1979 have been installed in safety related applications at Cleveland Electric Illuminating's Perry Nuclear Power Station.

B-Line Systems has taken the additional precautionary measure of re-calling all parts which were in storage at the Perry Nuclear Power Station to preclude their inadvertent use in safety related areas.

In light of the facts stated above, B-Line Systems, Inc. considers the reported potential defects to be satisfactorily resolved.

Sincerely yours,

B-LINE SYSTEMS, INC.

*Thomas R. Gold, Sr.*  
Thomas R. Gold, Sr.  
President

/mg

8005280 804

*Dep of* OCT 25 1979  
~~7911140120~~

# B-LINE SYSTEMS, INC.

## INTEROFFICE MEMORANDUM

To: Tom Gold Sr.

Date: 9/24/79

From: Charles Hays  
Ken Radmer  
Gary Warning

Subject: Material Review Board  
Investigation of 1/4"  
Plate Material

The following is a synopsis of the events and the consequent recommendations of the MRB regarding possible defects in 1/4" plate material.

9/10/79 During a routine Q. C. inspection, Inspector Gary Warning noticed a hair-line crack on the inside radius of a B-267 wing fitting. Warning procured a hammer and struck the part on the outside bend radius opposite the apparent crack. This caused the part to split in two along the bend line. Warning questioned the press foreman to determine what material lot the parts were run from. The press foreman told him that the parts were made from 1/4" plate material procured from Jones & Laughlin Steel. Warning informed Chuck Hays (the Materials Manager) of this and Hays contacted the mill to arrange for a Metallurgical examination of the steel. A check of records revealed that the suspect material was received on 5/2/79. Sales was instructed to begin a review of all orders shipped on or after 5/2/79 which required reporting under LOCFR Part 21. A Q.C. hold was placed on all parts on the shelf which were fabricated from 1/4" plate. A brief meeting was held between the Q.C. Inspector, the Materials Manager, and the Production Manager. It was decided to continue the hammer blow type examination of parts on the shelf to hopefully determine expeditiously which parts were potentially defective.

9/11/79 Hammer testing continued under Q.C. supervision.

9/12/79 J & L metallurgist (Mr. J. Schaeffer) arrived and picked up flat samples cut from the suspect J & L material and some B-267 fittings. He promised a report no later than 9/21/79.

9/13/79 Hammer testing continued under Q.C. supervision.

9/14/79 The president of B-Line was advised by B-Line Engineering Manager that the hammer test should be stopped since the results thus far were inconclusive and non-quantifiable. The president agreed to this and charged B-Line Engineering with beginning a testing program which would yield results which could be used to determine if the parts were defective. Samples of a B-144 were sent to St. Louis Testing Labs for analysis.

9/17/79 A review of production records had yielded the information that certain parts on the shelf had not been produced after 5/2/79. Chuck Hays sent a memo to Tom Gold releasing these parts for shipment. St. Louis Testing Labs reported that chemical tests on the B-144's were normal for low carbon steel on the first four elements. They further reported laminar type indications on the cross sectioned samples.

9/18/79 Engineering testing program was begun. The J & L metallurgist contacted Chuck Hays and reported that his analysis has shown that the J & L material flat samples were to specification but that the B-267 samples contained significant amounts of copper and nickel which would be indications of a "corten" or ASTM type 606 steel.

9/19/79 Based on the report from J & L samples were taken from material purchased from Rolled Steel and sent to St. Louis Testing for analysis. The receipt date for the Rolled Steel material was determined to be 7/17/79.

9/20/79 The Engineering department reported that the testing had been completed on all parts except for wing type fittings and that as yet, no defective parts had been found.

9/21/79 The sales group reviewing orders for 10CFR21 reporting were instructed to group the orders in two headings. One for all orders shipped on or after 5/2/79, and one for all orders shipped on or after 7/17/79.

9/24/79 Laboratory report 79P3225 was received from St. Louis Testing Labs. This report confirmed the fact that the Rolled Steel material was, in fact, the "corten" type material which the B-267's were made from. Engineering completed their testing program and found no failures on any parts made from 1/4" plate. It was determined by the sales group that only the Perry Nuclear Project of Cleveland Electric Illuminating Company had product from 1/4" plate shipped to them since 7/17/79.

Conclusion: Although the testing program produced no evidence of non-conformance in B-Line parts, the Material Review Board feels that the product made from 1/4" plate shipped to the Ferry Project since 7/17/79 should be recalled and a report filed in accordance with 10CFR Part 21. The Review Board recommends this strictly on the basis that "corten" type material is not our standard 1/4" plate material.

*Charles D. Hays*

Charles Hays

*K. Radmer*

Ken Radmer

*Gary Warning*

Gary Warning

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POOR ORIGINAL



**B-Line Systems**

MANUFACTURERS OF CABLE TRAY, STRUT SYSTEMS & ENCLOSURES

509 W. MONROE ST. • P.O. BOX 326  
HIGHLAND, ILLINOIS 62249  
PHONE: 618-654-2184

POOR ORIGINAL

DMR NUMBER H-110

DATE 11/19/79

PART NUMBER 1/4 sheet steel

DESCRIPTION 50 x 120 1/2 x 1/4

QUANTITY \_\_\_\_\_

PURCHASE ORDER NO. 41220

DATE RECEIVED 7/17/79

DATE INSPECTED 9/26/79

INSPECTED BY Gary Warning

## DEFECTIVE MATERIAL REPORT

**Vendor**  
Rolled Steel Corp  
6101 West Oakton  
Skokie, IL 60076

### LIST OF DEFECTS

ITEM NUMBER	DESCRIPTION OF DEFECTIVE ITEM	NO. OF SAMPLES	NO. OF DEFECTIVE SAMPLES	TOTAL DEFECTIVE QUANTITY	DESCRIPTION OF DEFECT
1	50 x 120 1/2 x 1/4 Sheet steel	35,844# 84 pcs	35844# 84 pcs	35844# 84 pcs	Material should be 1008-1010 is corten
2	Formed Parts	7731# Parts	7731# Parts	7731# Parts	Material should be 1008-1010 is corten

### DISPOSITION

8 SAMPLES ENCLOSED

BEING RETURNED TO VENDOR FOR:

X CREDIT

REPLACEMENT

REWORK

DEBIT NO.

COMMENTS:

**WRITTEN REPLY REQUESTED  
WITHIN TEN DAYS**

REVIEWED BY:

*Gary Warning*  
QUALITY ASSURANCE DEPARTMENT

*Kenneth*  
PURCHASING DEPARTMENT

#### GENERAL NOTES

- (1) B-Line Systems Inc. reserves the right to reject and return any shipment in which the average percentage of defects is determined to be 2% or greater. The percent of defects is to be determined by a sampling procedure by which the probability of rejection of a shipment of less than 2% defectives is not greater than 10%.
- (2) B-Line Systems Inc. has not found it practicable to accurately estimate additional manufacturing, tooling, processing and inspection costs prior to actual use of parts in production. However, we will guarantee that the sum of these costs will not exceed 30% of the price we are billed for the entire shipment received. We reserve the right, however, to discontinue use of such shipment at any time and to return the unused portion for credit and/or replacement.

PURCHASING COPY

C. D. TROWBRIDGE, Director



# St. Louis Testing Laboratories, Inc.

2810 CLARK AVENUE • ST. LOUIS, MO. 63103  
831-8080 Code 314

Chemical, Metallurgical, Physical, Non-Destructive, Spectrographic,  
Agricultural Testing and Analyses  
Investigations, Research and Development, Inspection, Field Services



September 20, 1979  
Invoice No. 79-5376  
Lab No. 79P3225  
PO No. 42398

B-LINE SYSTEMS, INC.  
509 W. Monroe  
Highland, IL 62249

Attention: Mr. Charles Hays

## REPORT OF TESTS

### MATERIAL:

1/4 inch by 2 inch by 12 inch HRP & O material (purchased from Rolled Steel and Feralloy) were delivered to the Laboratory on September 19, 1979.

### SUBJECT:

Cross section and macroetch to determine whether lamination exists in the material.

### PROCEDURE:

Three (3) sections of the body of the sample were cut through the thickness of the metal. These sections were polished and subjected to a macroetch using a 50 percent hydrochloric acid (approximately 37%) and 50 percent water at a temperature of between 160° and 180°F. The samples were etched for approximately fifteen (15) minutes.

### TEST RESULTS:

The etched sections were visually examined at 5X magnification, with the following results:

- (1) Sample 1 from Rolled Steel is free from any lamination-type indications visible.
- (2) Sample 2 from Feralloy has lamination-type indications visible, which are located at the approximate midpoint of the material.

**Saint Louis  
Testing  
Laboratories, Inc.**



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2610 Clark Avenue  
St. Louis, Missouri 63103  
314/531-8080

B-Line Systems  
Invoice No. 79-5376  
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The attached photomacrographs (at 3X magnification) of the two (2) material samples are included to provide your company with the required documentary evidence. Also included are the etched sample sections.

Respectfully submitted,

A handwritten signature in cursive script, reading "Robert O. Peterson". The signature is written in dark ink and is positioned above the printed name.

Robert O. Peterson  
Metallurgist

Enclosures  
ROP/kvh

**Saint Louis  
Testing  
Laboratories, Inc.**



B-LINE SYSTEMS, INC.  
509 West Monroe Street  
Highland, Illinois 62249

Attention: Mr. Chuck Hays

Appendix D  
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3810 Clark Avenue  
St. Louis, Missouri 63103  
314/531-8080

September 20, 1979  
Invoice No. 79-5376  
Lab No. 79C2676  
PO No. 42398

REPORT OF TESTS

MATERIAL SUBMITTED: Two (2) samples identified below

TESTS REQUESTED: Chemical Testing

RESULTS:

<u>Sample</u>	<u>Carbon,%</u>	<u>Silicon,%</u>	<u>Sulfur,%</u>	<u>Manganese,%</u>	<u>Phosphorus,%</u>	<u>Nickel,%</u>	<u>Chromium,%</u>	<u>Molybdenum,%</u>
Rolled Steel 1/4" x 2" x 12"	.12	.16	.023	.36	.013	.12	.07	.02
Feralloy 1/4" x 2" x 12"	.08	.10	.020	.48	.009	.11	.06	.02

Respectfully submitted,

W. Dee Trowbridge  
Assistant Director

WDT:mbn

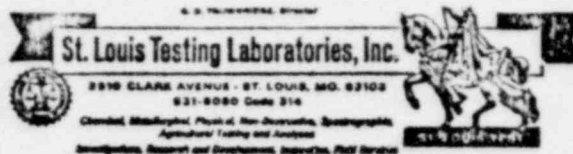
B-LINE SYSTEMS, INC.

509 W. Monroe

Highland, IL 62249

Attn: Charles Hays

PO#42398



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Report No. 79-5376 Date September 20 19 79

Lab No. 79P3225

FORM S 11

ORIGINAL		REDUCED		REDUCTION IN AREA	YIELD POINT		TENSILE STRENGTH		ELONGATION In 2.0 Inches	
Diameter	Area	Diameter	Area	Per Cent	Actual	Per Sq. In.	Actual	Per Sq. In.	Inches	%

	WIDTH	THICKNESS	AREA							
#1	.517	.249	.1287	5260	40870	7640	59362	.75	37.5	
#2	.517	.245	.1267	5600	44198	7490	59116	.72	36.0	

Yield taken at drop of dial.

1/4" X 2" X 12" HRP&O

#1 - Rolled steel

#2 - Feralloy

1/4" X 2" X 12"

1/4" X 2" X 12"

Respectfully submitted,

C. D. Trowbridge  
C. D. Trowbridge, Director.



# ERNST-COMSTOCK

## A JOINT VENTURE

Perry Nuclear Power Station

P. O. Box 761

Painesville, Ohio 44077  
Phone: (216) 259 - 3755

October 11, 1979

Cleveland Electric Illuminating Co.  
P.O. Box 5000  
Cleveland, Ohio 44101

Attention: Mr. Stu Tulk

Re: B-Line Systems, Inc.  
10 CFR 21 letter dated September 24, 1979

Dear Sir:

In regards to the certified letter received by Ernst-Comstock from B-Line Systems, Inc. (dated 9/24/79, attached) concerning possible defects in certain conduit fittings, as listed in the attached letter, a thorough review and takeoff (attached) of all conduit SS drawings was performed by the Ernst-Comstock Engineering and Quality Control Departments.

It has been determined from this review that none of the listed fittings are used for safety-related installations. In addition, fittings, as identified by Mr. J. Hughes, NRC Inspector, (Ref: B-104; B-115; B-127; B-238) are not to be used in safety-related installations.

The above referenced conduit fittings, currently in stock in the Ernst-Comstock warehouse are being removed from the shelves and will be exchanged for acceptable fittings by the manufacturer.

If there are any questions concerning the content of this letter, please feel free to contact the undersigned.

Sincerely yours,

Thomas W. Packy  
Quality Control Engineer

TWP/gsc

CONTROL NO. Q-79-10-1847

W/Attachments

cc: G. King - LKCE  
T. Woodman - LKC  
J. Klena - LKC  
J. Newsome - LKC  
G. Leidich - P/O

RECEIVED  
OCT 11 1979

EOS: QUALITY  
ENGINEERING