

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

April 5, 1984

Mr. James P. O'Reilly
Regional Administrator
Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Serial No. 440A
NO/DWL:acm
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-'
NPF-7

Dear Mr. O'Reilly:

VIRGINIA ELECTRIC AND POWER COMPANY
RESPONSE TO IE BULLETIN 83-07
APPARENTLY FRAUDULENT PRODUCTS SOLD BY RAY MILLER, INC.

In response to the initial NRC notification of apparently fraudulent Ray Miller, Inc. material in late 1982, Vepco has made a considerable effort to identify and locate any materials received from the Ray Miller organization. Information on our initial effort was provided to you in our letter from Mr. T. Justin Moore, Jr. to Mr. Richard C. DeYoung (NRC) dated February 9, 1983 (Serial No. 049).

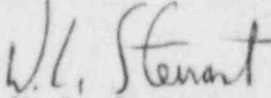
Vepco has continued our efforts to identify, locate, and evaluate the impact of Ray Miller materials in our nuclear facilities. IE Bulletin 83-07, dated July 22, 1983, provided additional information toward our review of this concern and requested that reports be submitted detailing the results of our efforts. Attachment 1 to this letter provides our response to IEB 83-07 for the Surry Power Station. Surry's response contains test results for some Ray Miller, Inc. material which was available for testing. Attachment 2 provides our IEB 83-07 response for the North Anna Power Station. 57

We firmly believe as a result of our evaluations that the impact on plant safety due to the unauthorized substitution of materials by Ray Miller, Inc. is negligible. We believe that our engineering, operations, and quality assurance programs continue to provide reasonable assurance that our nuclear facilities are designed, constructed, and operated to provide the highest degree of public safety.

The information contained in this response is accurate and true to the best of my knowledge. If there are any questions or we can be of additional assistance in resolving the Ray Miller concern, please contact us.

Very truly yours,

8405070367 840405
PDR ADOCK 05000280
Q PDR


W. L. Stewart

cc: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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IE11

ATTACHMENT 1

SURRY POWER STATION

SURRY POWER STATION

RESPONSE TO IE BULLETIN 83-07

APPARENTLY FRAUDULENT PRODUCTS SOLD BY RAY MILLER, INC.

Background: In late 1982, Surry Power Station personnel learned that Ray Miller was under indictment for selling fraudulent products, some of which may have been purchased by nuclear power plants. Based on this information, a review was conducted of what turned out to be approximately 30 purchase orders that had been submitted to Ray Miller, Inc. for stock material. All material identified by this preliminary review that was still in stock was removed from stock and placed in a non-issue status. The NRC was informed of these actions and a meeting was held in Bethesda, Md. to discuss the generic issues. Based on the meeting, it was decided to conduct random sampling of the material which had been placed in non-issue status. This testing revealed no failures, however the material remained in non-issue status. Results of this testing are provided in the response. Surry decided to eventually dispose of the material rather than re-categorizing or justifying its use. In July 1983, NRC issued IE Bulletin 83-07 which provided information regarding specific purchase orders for which materials were apparently substituted. Additional reviews of non-stock item purchase order were conducted. As a result a total of over 320 additional purchase orders were identified as being placed with Ray Miller, Inc. Licensees were requested to determine where suspect material had been installed in plants, evaluate its safety significance, and tag or dispose of the suspect material not yet installed. Licensees were also requested to examine and test materials from other Ray Miller offices which were not included in the NRC identified list of apparently fraudulent materials. Vepco's responses to IEB 83-07 inquiries are as follows:

Item 1: Based on a review of the lists of Ray Miller, Inc. customers who received apparently fraudulent materials (IEB 83-07, Attachments 1 and 2), and pertinent information obtained from any of these companies either directly or indirectly:

- (a) Identify those companies on the lists that supplied materials or services to your facility (include subcontractors as well as major contractors)

Response:

As a result of a review of the available purchase order information, ten companies (in addition to Ray Miller) listed in the attachments to IEB 83-07 were identified as potential suppliers of Ray Miller materials to Vepco. Of these ten suppliers, two were identified as end users of the apparently fraudulent material by supplements 1 and 2 of IEB 83-07. Three companies provided the suspect material to other companies or suppliers, none of which were subsequent suppliers to Vepco. Two companies identified as potential suppliers did not provide any safety-related materials to the Surry facility.

Seven purchase orders (PO's) for safety-related materials were received from the three remaining companies. These PO's were reviewed and were either small diameter tubing or components not suspect as Ray Miller fraudulent materials.

Note: The above information was obtained from the best available cross-reference source of supplier names. The source was a computer listing containing safety-related PO's over a time period of 1974 through 1980. The list contained over 1500 PO's and is believed to be reasonably complete. A review of all available PO's against the IEB Attachment 1 & 2 lists was deemed impractical on the basis of the large volume of effort required and the fact that rarely did a PO identify previous suppliers. Information on previous suppliers would have been necessary to positively identify any material as coming through the Ray Miller organization.

Most material identified from our review was supplied directly by Ray Miller, Inc. Where a third company was identified, it has been determined that the material supplied was either qualified, not intended for use in a safety-related system, or of such a dimension (e.g., 3/4" stainless steel pipe plugs) that even complete failure in service would not be a serious challenge to plant integrity.

Item 1: (b) Determine whether any of the fraudulent Ray Miller, Inc. materials were provided or used at your facility.

Response:

Attachments 1 and 2 of IE Bulletin 83-07 identify several PO's from Ray Miller as containing apparently fraudulent materials. Surry Power Station has records of receipts of the following:

<u>Purchase Order</u>	<u>Description</u>	<u>Remarks</u>
60122	Stainless steel piping and fittings for Liquid Waste Radiation Monitoring System	All material was received and apparently issued as none was in stock at time of investigation upon initial notification in 1982.
75243	Small diameter (less than 1" O.D. stainless steel tubing)	All material was received and apparently issued as none was in stock at time of investigation upon initial notification in 1982.
21980	Small diameter (less than 1") stainless steel pipe plugs	12 1/4" 3000# pipe plugs were ordered, but 150# plugs were provided along with fraudulent documentation. One plug was located, tested at 4500#, and did not fail. All other material was received and apparently issued as none was in stock at time of investigation upon initial notification in 1982.

Purchase Orders numbered 68471, 59818, and 75819 were not located. All suspect material from these PO's was small diameter tubing where welded for seamless material was substituted.

Our review provided in Item 1a above provides reasonable assurance that little, if any, fraudulent material found its way to Surry indirectly from Ray Miller.

Item 1: (c) Determine whether any of the apparently fraudulent material supplied to you was installed in safety-related systems at your facility, or is still in stock.

Response:

Vepco was unable to determine if apparently fraudulent materials were used in Safety-Related systems due to method used at time of receipt of items with regard to documenting where issued item was used. However, the intended purpose for which the material was procured or its small dimensions would pose little threat to system integrity even in the event of complete failure. Any item supplied by Ray Miller, Inc. which was in stock at the time of the NRC's original notification in late 1982 was removed from stock and placed in the reject area of the warehouse. These items will not be used at this station and are being disposed of.

Item 1: (d) If other Ray Miller, Inc. materials not listed in Attachments 1 and 2 have been identified by your own initiative, determine whether any was installed in safety-related systems at your facility, or is still in stock.

Response:

As indicated in the Background section of this response, a review of non-stock PO's identified approximately 320 additional PO's placed with Ray Miller. Of these, only about 50 were in the time frame identified in IEB 83-07 and, in general, the purchased material was small diameter tubing or pipe. We are unable to determine if any of these materials were used in a Safety- Related system due to method used at time of receipt of items with regard to documenting where issued item was used. None of this material is still in stock.

Item 2: For Ray Miller, Inc. materials, both the NRC-identified apparently fraudulent materials (listed in Attachments 1 and 2), and other materials identified by your own initiative, that are installed in safety-related systems of your facility:

- (a) Evaluate the safety significance of the presence of these materials assuming the fraud is as identified in the attachments of assuming material failure.

Response:

Vepco was unable to make an adequate evaluation with regard to the safety significance of material listed because of lack of adequate documentation of specific locations of suspect material. However,

since any pipe, fittings, tubing or flanges installed in safety-related systems are adequately tested to conditions beyond their intended operating conditions prior to use, it is believed that any suspect Ray Miller material has and will continue to maintain system integrity and is acceptable for use.

Item 2: (b) Determine the disposition of the installed material: e.g., use as is, remove and replace, etc.

Response:

Due to the inability to positively identify the location of Ray Miller material, any Ray Miller material in place in safety-related system will be used as is. Our response to Item 2a provides adequate justification for this position.

Item 3: For all material from Ray Miller, Inc. still in stock, whether identified by Item 1 or previously identified by your own initiative:

- (a) Segregate into two groups: (1) material included in the purchase orders listed in the fraudulent data file, and (2) all other material supplied by Ray Miller, Inc., regardless of the branch office that supplied the material.
- (b) For the material included in the fraudulent data file:
 - (1) Discard the material, or
 - (2) Tag or otherwise mark the materials for use only in systems not important to safety.
- (c) For material supplied by Ray Miller that is not included in the fraudulent data file, do one of the following:

- (1) Discard the material
- (2) Tag or otherwise mark the materials for use only in systems not important to safety, or
- (3) Subdivide material into groups of identical items and examine and test material in each group in accordance with either Item (i) or (ii), below.
 - (i) Perform sufficient comprehensive examinations and tests to qualify each group of material for use in systems important to safety. If there are less than 10 identical items in the group, each item should be examined. If there are 10 or more identical items, a statistical sampling plan may be used to demonstrate with 90% of the material conforms to the purchase specifications. Groups of material found acceptable may be used as desired.
 - (ii) Perform comprehensive examinations and tests of a limited sample of each group of identical items. The minimum sample size is to be two items, or 10% of the items in the group whichever is greater. Examination and test of this limited sample does not provide a high degree of assurance that the entire group satisfies the procurement specifications. The NRC will compile the results of all the data received, determine

the statistical significance of the results, and advise industry of the overall results and conclusions. Therefore, a utility should not use the material in systems important to safety until the NRC's evaluation is complete.

Response:

All identified Ray Miller material not in use was segregated from stock. Although there is no intention of using any of this segregated material in safety-related systems in the future, representative examinations and tests were performed. The results are provided in the following pages of this report.

1a

Material Examination and Test Results

Description of Material Examined & Tested Plug, Pipe 3/8"

Key Procurement Specifications ASTM A182-F304

Date of Purchase 10-26-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 20

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3865547

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A183, F304

MATERIAL: 3/8" Dia. Pipe Plug, 304 CRES

NNS LAB. NUMBER: 809-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.01	18.86	1.80	9.08	.37	.032	.007

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

DISTRIBUTION: 3 Copies/Newport News Industrial Corp.

Material Examination and Test Results

Description of Material Examined & Tested 1" Coupling
Key Procurement Specifications ASTM A182 F304
Date of Purchase 04-15-77
Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va
Quantity of Material in Stock 10
Quantity of Material Examined and Tested 1
Tests & Examinations Performed See Attached
Test Results See Attached
Stock Item 3825747



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F304

MATERIAL: 1" Dia. Coupling, 304 CRES

NNS LAB. NUMBER: 806-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.05	19.18	1.50	8.87	.58	.032	.014

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested E11, 90° 1 1/2 inch

Key Procurement Specifications ASTM A182-F304

Date of Purchase 01-08-81

Ray Miller Branch Office That Supplied the Materials. Charleston, W. Va

Quantity of Material in Stock 13

Quantity of Material Examined and Tested 2

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3840912

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F304

MATERIAL: 2" Dia. 90° Elbow, 304 CRES

NNS LAB. NUMBER: 417-W

RESULTS OF TEST:

Sample	Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
#1	.06	19.63	1.56	9.85	.37	.025	.003
#2	.05	18.76	1.54	9.58	.41	.029	.003

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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4a

Material Examination and Test Results

Description of Material Examined & Tested Pipe 2 1/2" Sch 40

Key Procurement Specifications ASTM A312 TP 304

Date of Purchase 01-08-81

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 20 feet

Quantity of Material Examined and Tested 1 foot

Tests & Examinations Performed See Attached

Test ResultsSee Attached

STock Item 3885492

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 380-2000



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A312

MATERIAL: 2 1/2" Dia. Pipe, 304 CRES

NNS LAB. NUMBER: 418-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.06	18.96	1.48	9.70	.53	.023	.004

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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5a

Material Examination and Test Results

Description of Material Examined & Tested Tubing, 1/2" Seamless

Key Procurement Specifications ASTM A269

Date of Purchase 10-09-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 168 feet

Quantity of Material Examined and Tested 1 foot

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3655470



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A269, 304

MATERIAL: 1/2" Dia. Tube, 304 CRES

NNS LAB. NUMBER: 419-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.02	19.07	1.89	9.16	.41	.027	.007

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Tee, Pipe 2"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 08-27-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 4

Quantity of Material Examined and Tested 2

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3870498



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 2" Dia. Tees, 316 CRES

NNS LAB. NUMBER: 420-W

RESULTS OF TEST:

Sample	Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
#1	.06	17.32	1.78	12.21	2.13	.59	.023	.009
#2	.07	17.31	1.75	12.09	2.17	.59	.024	.009

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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7a

Material Examination and Test Results

Description of Material Examined & Tested Coupling, Pipe 2"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 06-19-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 24

Quantity of Material Examined and Tested 2

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3825906

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peterzell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 2" Couplings, 316 CRES

NNS LAB. NUMBER: 421-W

RESULTS OF TEST:

Sample	Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
#1	.05	17.93	1.44	12.36	2.09	.41	.022	.021
#2	.06	17.70	1.45	12.46	2.12	.39	.022	.023

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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8a

Material Examination and Test Results

Description of Material Examined & Tested Pipe 1 1/2" Sch 160

Key Procurement Specifications ASTM A312-TP304

Date of Purchase 06-04-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 63 feet

Quantity of Material Examined and Tested 1 foot

Tests & Examinations Performed See attached

Test Results See attached

Stock item 3885509

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-135

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A312, TP 304

MATERIAL: 1 1/2" Dia. Tube, 304 CRES

NNS LAB. NUMBER: 422-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.07	19.68	1.99	10.04	.48	.031	.008

Conforms to specification.

J. H. Arthur, Jr. 1/21/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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9a

Material Examination and Test Results

Description of Material Examined & Tested Pipe 3/4" Sch. 40

Key Procurement Specifications ASTM A312-TP304

Date of Purchase 04-21-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. VA

Quantity of Material in Stock 105 feet

Quantity of Material Examined and Tested 1 foot

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3885470

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A312, TP304

MATERIAL: 3/4" Dia. Sch. 40 Pipe

NNS LAB. NUMBER: 795-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.06	19.07	1.82	9.60	.60	.031	<.01

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Flange, Blind 1"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 01-28-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 7

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3850153

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 330-2000



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 1 1/4" Dia. Blind Flange, 316 CRES

NNS LAB. NUMBER: 810-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.06	17.43	1.93	12.73	2.06	.22	.024	.019

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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11a

Material Examination and Test Results

Description of Material Examined & Tested Tee, pipe 3/4"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 08-27-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 21

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3870476

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 3/4" Dia. Pipe Tee

NNS LAB. NUMBER: 802-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.08	17.09	1.65	12.63	2.45	.42	.027	.028

Conforms to specification.

J. H. Arthur, Jr. 2/7/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Nipple, pipe 1" x 2"

Key Procurement Specifications ASTM A312-F316

Date of Purchase 01-28-80

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 15

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3856576

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A312, F316, 316 CRES

MATERIAL: 1" x 2" Sch. 80 Pipe Nipple, 316 CRES

NNS LAB. NUMBER: 799-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.04	16.42	1.71	12.00	2.43	.41	.022	.014

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Pipe 1"

Key Procurement Specifications ASTM A312 -TP-316

Date of Purchase 08-30-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 105 Feet

Quantity of Material Examined and Tested 1 foot

Tests & Examinations Performed See attached

Test Results See Attached

Stock Item 3885474

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A312, TP316

MATERIAL: 1" Dia. Sch. 60 Pipe, CRES

NNS LAB. NUMBER: 796-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.06	16.48	1.82	12.23	2.05	.53	.031	.014

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Plug, pipe 1"

Key Procurement Specifications ASTM A182-F304

Date of Purchase 08-30-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 5

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3865710

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 380-2000



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F304

MATERIAL: 1" Pipe Plug, 304 CRES

NNS LAB. NUMBER: 804-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.01	18.37	1.59	8.66	.54	.029	.008

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Tee, pipe 1/4"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 08-27-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va.

Quantity of Material in Stock 11

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock item 3870464

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 380-2000



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 1/4" Dia. Pipe Tee, 316 CRES

NNS LAB. NUMBER: 808-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.04	17.90	1.43	12.77	2.00	.27	.020	.026

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

DISTRIBUTION: 3 Copies/Newport News Industrial Corp.

Material Examination and Test Results

Description of Material Examined & Tested Pipe Bushing 1/4" to 3/4"

Key Procurement Specifications 316 S/S

Date of Purchase 08-22-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 11

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock item 3805600

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 1/4" x 3/4" Pipe Bushing, 316 CRES

NNS LAB. NUMBER: 801-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.07	16.67	1.70	10.24	2.01	.52	.020	.022

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Reducer 1 1/4" to 1"

Key Procurement Specifications ASTM A182-F304

Date of Purchase 08-27-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 23

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3806115

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F304

MATERIAL: 1 1/4" x 1" Reducer, 304 CRES

NNS LAB. NUMBER: 798-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.03	18.71	.80	9.33	.47	.027	.012

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Reduced 1 1/2 to 1 1/4

Key Procurement Specifications ASTM A182 - F304

Date of Purchase 05-23-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 12

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3806135

DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F304

MATERIAL: 1 1/2" x 1 1/4" Reducer, 304 CRES

NNS LAB. NUMBER: 807-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Silicon	Phosphorus	Sulphur
.01	19.42	1.99	10.68	.38	.022	.003

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested Coupling 3/4 pipe

Key Procurement Specifications ASTM A182-F316

Date of Purchase 05-23-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 2

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3825743

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 380-2000



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DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 3/4" Dia. Pipe Coupling, 316 CRES

NNS LAB. NUMBER: 803-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.05	16.70	1.51	10.05	2.09	.26	.024	.018

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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20a

Material Examination and Test Results

Description of Material Examined & Tested Coupling, Pipe 1"

Key Procurement Specifications ASTM A182-F316

Date of Purchase 03-09-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va.

Quantity of Material in Stock 6

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See Attached

Test Results See Attached

Stock Item 3825746



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 1" Dia. Pipe Coupling, 316 CRES

NNS LAB. NUMBER: 800-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.04	16.39	1.36	10.12	2.09	.52	.029	.022

Conforms to specification.

J. H. Arthur, Jr. 2/4/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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Material Examination and Test Results

Description of Material Examined & Tested 3/4 Diameter 45° Elbow 316

Key Procurement Specifications F 182 - F 316

Date of Purchase 03-09-79

Ray Miller Branch Office That Supplied the Material S. Charleston, W. Va

Quantity of Material in Stock 10

Quantity of Material Examined and Tested 1

Tests & Examinations Performed See attached

Test Results See Attached

Stock item 3835745

Newport News Shipbuilding

A Tenneco Company

4101 Washington Avenue
Newport News, Virginia 23607
(804) 380-2000



DESTRUCTIVE TESTING REPORT

REQUESTED BY: Miriam Peternell, Newport News Industrial Corp.

CUSTOMER: VEPCO-Surry

CHARGE NUMBER: 5176L-139

TEST REQUIRED: Chemical Analysis

SPECIFICATION: ASTM A182, F316

MATERIAL: 3/4" Dia. 45° Elbow, 316 CRES

NNS LAB. NUMBER: 797-W

RESULTS OF TEST:

Carbon	Chrome	Manganese	Nickel	Moly	Silicon	Phosphorus	Sulphur
.07	16.98	1.66	12.62	2.45	.48	.025	.014

Conforms to specification.

J. H. Arthur, Jr. 2/7/83
J. H. Arthur, Jr. Date
Section Manager, Laboratory Services

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ATTACHMENT 2

NORTH ANNA POWER STATION

NORTH ANNA POWER STATION

RESPONSE TO IE BULLETIN 83-07

APPARENTLY FRAUDULENT PRODUCTS SOLD BY RAY MILLER, INC.

Background: In late 1982, North Anna Power Station personnel learned that Ray Miller was under indictment for selling fraudulent products, some of which may have been purchased by nuclear power plants. Based on this information, a review was conducted of what turned out to be 42 purchase orders that had been submitted to Ray Miller, Inc. for construction material. An additional 4 PO's were identified from a supplier who had received material from Ray Miller. A review of this suspect material was performed. Information obtained from this review is contained in the following responses. In July 1983, NRC issued IE Bulletin 83-07 which provided information regarding specific purchase orders for which materials were apparently substituted. Licensees were requested to determine where suspect material had been installed in plants, evaluate its safety significance, and tag or dispose of the suspect material not yet installed. Licensees were also requested to examine and test materials from other Ray Miller offices which were not included in the NRC identified list of apparently fraudulent materials. Vepco's responses to IEB 83-07 inquiries are as follows:

Item 1: Based on a review of the lists of Ray Miller, Inc. customers who received apparently fraudulent materials (IEB 83-07, Attachments 1 and 2), and pertinent information obtained from any of these companies either directly or indirectly:

- (a) Identify those companies on the lists that supplied materials or services to your facility (include subcontractors as well as major contractors)

Response:

As a result of a review of the available purchase order information, ten companies (in addition to Ray Miller) listed in the attachments to IEB 83-07 were identified as potential suppliers of Ray Miller materials to Vepco. Of these ten suppliers, two were identified as end users of the apparently fraudulent material by supplements 1 and 2 of IEB 83-07. Three companies provided the suspect material to other companies or suppliers, none of which were subsequent suppliers to Vepco. Two companies identified as potential suppliers did not provide any safety-related materials to the North Anna facility.

Ten purchase orders (PO's) for safety-related materials were received from the three remaining companies. These PO's were reviewed and were either components not suspect as Ray Miller fraudulent materials or verification was made that the materials were shipped directly from the manufacturer and were never in Ray Miller, Inc. possession.

Note: The above information was obtained from the best available cross-reference source of supplier names. The source was a computer listing containing safety-related PO's over a time period of 1974 through 1980. The list contained over 1500 PO's and is believed to be reasonably complete. A review of all available PO's against the IEB Attachment 1 & 2 lists was deemed impractical on the basis of the large volume of effort required and the fact that rarely did a PO

identify previous suppliers. Information on previous suppliers would have been necessary to positively identify any material as coming through the Ray Miller organization.

Most material identified from our review was supplied directly by Ray Miller, Inc. Where a third company was identified, it was determined that the material supplied was not material identified as suspect since it typically was a component part (e.g. valve) and not pipe, tubing or fitting/flange material.

Item 1: (b) Determine whether any of the fraudulent Ray Miller, Inc. materials were provided or used at your facility.

Response:

Attachments 1 and 2 of IE Bulletin 83-07 identify several PO's from Ray Miller as containing apparently fraudulent materials. North Anna Power Station records indicate no receipts of apparently fraudulent Ray Miller material.

Our review provided in Item 1a above provides reasonable assurance that little, if any, fraudulent material found its way to North Anna indirectly from Ray Miller.

Item 1: (c) Determine whether any of the apparently fraudulent material supplied to you was installed in safety-related systems at your facility, or is still in stock.

Response:

No apparently fraudulent material has been identified as being received at the North Anna facility.

Item 1: (d) If other Ray Miller, Inc. materials not listed in Attachments 1 and 2 have been identified by your own initiative, determine whether any was installed in safety-related systems at your facility, or is still in stock.

Response:

As indicated in the Background section of this response, a review of PO's identified approximately 42 PO's placed with Ray Miller. These PO's contained 356 line items placed with Ray Miller, Inc. The time span of these purchases was 1/26/71 to 6/24/74. Of the 42 PO's placed with Ray Miller only 12 indicated possible safety-related applications. Of the 12 PO's identified as possibly safety-related, one was shipped directly from the manufacturer, and one was used for the North Anna 3 lower containment liner. The remaining 10 PO's (containing 20 line items) contained 6 tubing line items, and 14 pipe or fitting line items. Objective evidence is available that the 14 pipe or fitting line items were not used in safety-related systems. The use of the 6 tubing line items is specified as follows.

- 3 - Level Control Pipe - 1/2", Type 304 A269
- 1 - Containment liner bottom - 3/8", Type 316
- 1 - Containment liner - 1/2", Type 316
- 1 - unidentified use - 5/8", Type 316 A269

An evaluation was performed to assess the safety significance of having Ray Miller material in these 5 identified locations assuming that substitutions had been made of the specified tubing material. It was concluded that even suspect material would perform its intended function since the quality of potentially substituted tubing would have been adequate for the actual applications.

Item 2: For Ray Miller, Inc. materials, both the NRC-identified apparently fraudulent materials (listed in Attachments 1 and 2), and other materials identified by your own initiative, that are installed in safety-related systems of your facility:

- (a) Evaluate the safety significance of the presence of these materials assuming the fraud is as identified in the attachments of assuming material failure.

Response:

This question is answered in part in Item 1d. However, since any pipe, fittings, tubing or flanges installed in safety-related systems are adequately tested to conditions beyond their intended operating conditions prior to use, it is believed that any suspect Ray Miller material, which may have been installed, has and will continue to maintain system integrity and is acceptable for use.

Item 2: (b) Determine the disposition of the installed material: e.g., use as is, remove and replace, etc.

Response:

Based on the determination of safety significance provided in Item 1d, any installed Ray Miller material will be used as is.

Item 3: For all material from Ray Miller, Inc. still in stock, whether identified by Item 1 or previously identified by your own initiative:

- (a) Segregate into two groups: (1) material included in the purchase orders listed in the fraudulent data file, and (2) all other material supplied by Ray Miller, Inc., regardless of the branch office that supplied the material.
- (b) For the material included in the fraudulent data file:
 - (1) Discard the material, or
 - (2) Tag or otherwise mark the materials for use only in systems not important to safety.
- (c) For material supplied by Ray Miller that is not included in the fraudulent data file, do one of the following:
 - (1) Discard the material
 - (2) Tag or otherwise mark the materials for use only in systems not important to safety, or
 - (3) Subdivide material into groups of identical items and examine and test material in each group in accordance with either Item (i) or (ii), below.

- (i) Perform sufficient comprehensive examinations and tests to qualify each group of material for use in systems important to safety. If there are less than 10 identical items in the group, each item should be examined. If there are 10 or more identical items, a statistical sampling plan may be used to demonstrate with 90% of the material conforms to the purchase specifications. Groups of material found acceptable may be used as desired.
- (ii) Perform comprehensive examinations and tests of a limited sample of each group of identical items. The minimum sample size is to be two items, or 10% of the items in the group whichever is greater. Examination and test of this limited sample does not provide a high degree of assurance that the entire group satisfies the procurement specifications. The NRC will compile the results of all the data received, determine the statistical significance of the results, and advise industry of the overall results and conclusions. Therefore, a utility should not use the material in systems important to safety until the NRC's evaluation is complete.

Response:

No Ray Miller material was available for testing.