



PUBLIC SERVICE COMPANY OF COLORADO

P. O. BOX 840 - DENVER, COLORADO 80201

OSCAR R. LEE
VICE PRESIDENT

July 30, 1984
Fort St. Vrain
Unit No. 1
P-84244

Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Defective Threaded Rod
Material - 10CFR21 Report

Dear Sir:

On June 18, 1984, Public Service Company of Colorado received material under PSC Purchase Order N-4501 for use in reinforcement of safety related masonry block walls at its Fort St. Vrain Nuclear Generating Station. The material in question was 5/8" diameter, all threaded rod, purchased under specification ASTM A193, B16.

A visual examination (Attachment 1) of the material during receiving identified fifteen (15) of a total of sixty (60) rods as having longitudinal cracks on the surface which were deeper than the thread roots. Public Service Company's Quality Assurance Division preliminarily attributed these defects to forging laps in the original stock material.

The Purchase Order required the supplier, Texas Bolt Company of Houston, Texas, to perform a visual examination of the thread area of final machined parts to identify discontinuities such as laps, seams, or cracks which are not acceptable per the referenced ASTM specification.

A Non-Conformance Report (NCR) 84-187 (Attachment 2) was written against the entire shipment of rods. The NCR disposition required that all defective material be returned to the vendor. The remaining forty-five (45) rods were to be examined by magnetic particle testing. One (1) additional rod was rejectable by this testing.

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Texas Bolt Company was contacted by telephone on June 18, 1984, and notified of the non-conformance. The above sixteen (16) rods were returned and replaced by Texas Bolt Company on Purchase Order N-4501, Supplement B. For this shipment, in addition to the visual examination, Public Service Company required that the rods be magnetic particle tested by Texas Bolt Company prior to shipment. A magnetic particle test report was provided by Texas Bolt indicating that no defects were identified (Attachment 3). However, five (5) rods of this shipment also contained defects similar to the original order. The defective rods on Supplement B were dispositioned via NCR 84-205 and the entire shipment was rejected.

All of the threaded rods in both shipments were from the same heat lot, #8087367.

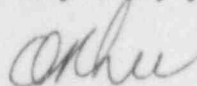
Fort St. Vrain has suspended procurement of quality related materials directly from Texas Bolt Company. All past Purchase Orders have been reviewed to determine if any other material from heat #8087367 had been previously received. No other material from this heat has been received or placed into stock.

The material was ordered for the specific purpose of a design modification to reinforce safety related masonry block walls at Fort St. Vrain. However, 5/8" diameter threaded rod purchased under specification ASTM A193, B16, is a standard component which could conceivably be used in a number of safety related applications (such as flange bolting).

Although we have determined no material from heat #8087367 has previously been received or used at Fort St. Vrain our 10CFR21 Evaluation Committee has determined that the subject would be of interest to the industry. Their evaluation, as well as the 10CFR21 Report, is enclosed as Attachment 4.

If you have further questions in this regard, please contact Mr. J. W. Gahm or Mr. C. H. Fuller at (303) 785-2223.

Very truly yours,



O. R. Lee

ORL/alk

cc: John T. Collins

ATTACHMENT 1

RECEIVING INSPECTION REPORTS

PURCHASE ORDERS N-4501 AND N-4501, SUPPLEMENT B



PUBLIC SERVICE COMPANY OF COLORADO
FORT ST. VRAIN NUCLEAR GENERATING STATION
RECEIVING INSPECTION REPORT

MAT'L REC'D DATE <i>6/18/84</i>	P.O. NO. <i>N-5401 - "A"</i>
SUPPLIER <i>Texas Bolt Co.</i>	MFGR <i>same</i>
MATERIAL <i>all thread rod 5/8" & nuts</i>	

INSPECTION POINT	A	R	NR	COMMENT #
1) PHYSICAL DAMAGE INCLUDING FIRE, EXCESSIVE EXPOSURE, ROUGH HANDLING, TIE DOWN FAILURE, ETC.	✓			
2) CORRECT IDENTIFICATION AND MARKING	✓			
3) ACCEPTABLE CLEANLINESS LEVEL	✓			
4) ADEQUATE PROTECTIVE COVERS, SEALS, PRESERVATIVES & COATINGS	✓			
5) CORRECT PART NUMBERS			✓	
6) CORRECT PHYSICAL PROPERTIES			✓	
7) ACCEPTABLE DIMENSIONS			✓	
8) ACCEPTABLE WORKMANSHIP			✓	
9) ACCEPTABLE DOCUMENTATION			✓	①
10) CORRECT CONFIGURATION			✓	
11) ACCEPTABLE TEST RESULTS			✓	①
12) SUPPLIER PERFORMANCE			✓	①
13) QUALIFIED SUPPLIER VERIFIED			✓	
14) PACKAGING, SHIPPING & HANDLING			✓	
15)				

COMMENTS: ① A visual examination was performed as required by P.O. Fifteen (15) all thread rods were rejected due to laps in material. Due to such a high rejection rate the remaining 45 rods will be sent to NDE Services for Magnetic Particle Coating. See NCR # 84-187

<input checked="" type="checkbox"/> ACCEPT <input checked="" type="checkbox"/> PS/PO COMPLETE	<input type="checkbox"/> REJECT - RETURN TO SUPPLIER
<input checked="" type="checkbox"/> HOLD - SEE COMMENT # _____	HOLD TAG # _____
<input checked="" type="checkbox"/> HOLD - SEE NCR # <i>84-187</i>	REJECT TAG # _____
QA/QC INSPECTOR <i>J M Eleanis</i>	<i>6-18-84</i>
(SIGNATURE)	(DATE)

P.O. CLEARED: Per disposition of NCR # 84-187 material was Magnetic Particle Inspected by NDE Services, see attached test report. Sixteen rejected lengths (Reject tag # 00168) all thread rod was returned to manufacture on P.C.M. # 132741. Replacement rods will be received on P.S. "B".

J M Eleanis (SIGNATURE) *6/19/84* (DATE)



PUBLIC SERVICE COMPANY OF COLORADO
FORT ST. VRAIN NUCLEAR GENERATING STATION
RECEIVING INSPECTION REPORT

MAT'L REC'D DATE <u>6/29/84</u>		P.O. NO. <u>N-5401 B'</u>	
SUPPLIER <u>Jesper Bolt Co.</u>		MFGR <u>same</u>	
MATERIAL <u>5/8" ϕ all thread rod</u>			

INSPECTION POINT	A	R	NR	COMMENT #
1) PHYSICAL DAMAGE INCLUDING FIRE, EXCESSIVE EXPOSURE, ROUGH HANDLING, TIE DOWN FAILURE, ETC.	✓			
2) CORRECT IDENTIFICATION AND MARKING	✓			
3) ACCEPTABLE CLEANLINESS LEVEL	✓			
4) ADEQUATE PROTECTIVE COVERS, SEALS, PRESERVATIVES & COATINGS	✓			
5) CORRECT PART NUMBERS			✓	
6) CORRECT PHYSICAL PROPERTIES			✓	
7) ACCEPTABLE DIMENSIONS			✓	
8) ACCEPTABLE WORKMANSHIP	✓			①
9) ACCEPTABLE DOCUMENTATION	✓			
10) CORRECT CONFIGURATION			✓	
11) ACCEPTABLE TEST RESULTS			✓	①
12) SUPPLIER PERFORMANCE			✓	①
13) QUALIFIED SUPPLIER VERIFIED	✓			
14) PACKAGING, SHIPPING & HANDLING	✓			
15)				

COMMENTS: ① A visual examination per P.O. found 5 of 16 rods to have linear indications. These 5 are rejected and the remaining 11 will need to be tested & pass accepted before use.

☐ ACCEPT (PS/PO COMPLETE)
☐ HOLD - SEE COMMENT #
☒ HOLD - SEE NCR # 84-205

☒ REJECT - RETURN TO SUPPLIER
 HOLD TAG # _____
 REJECT TAG # 00171

QA/QC INSPECTOR _____ [SIGNATURE] _____ [DATE]

P.O. CLEARED: _____

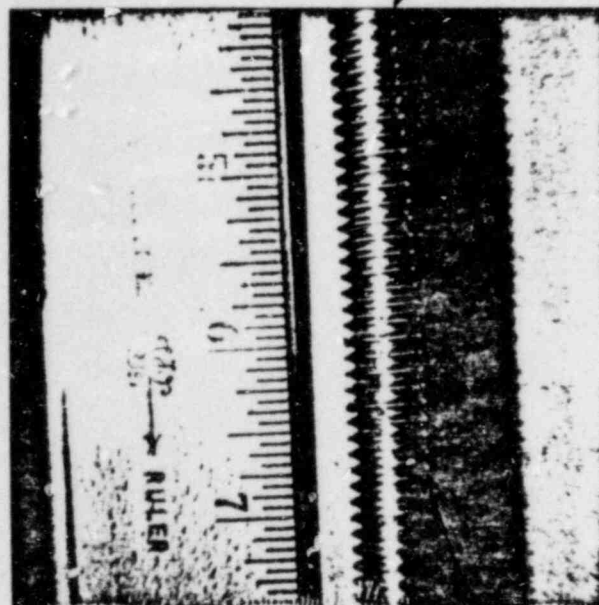
_____ [SIGNATURE] _____ [DATE]



↑
DEFECT

7-20-84

LINEAR DEFECT



5/8" X 10' ALL THREADS Rod 6
TEXAS BOLT CO.

7-20-84

ATTACHMENT 2

NON-CONFORMANCE REPORTS

#84-187 FOR PURCHASE ORDER N-4501

#84-205 FOR PURCHASE ORDER N-4501, SUPPLEMENT B



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

NONCONFORMANCE REPORT

NO. 84-187

DESCRIPTION			
ITEM NAME 5/8" ϕ ALL THREAD ROD	ITEM NO. 1791628	DATE RESPONSE DUE 7-6-84	
SYSTEM NO. N/A	EQUIPMENT NO. N/A	LOCATION RECEIVING WHSE.	REF. DOC. NO. N-5401
DESCRIPTION OF NONCONFORMANCE Visual examination of all thread rod was performed as required, by above P.O.. Fifteen of sixty rods were found to have linear indications (laps).			
WHAT CAUSED THE NONCONFORMANCE? unknown			
INITIATED BY <i>J.M. Edwards</i> (SIGNATURE)		6/18/84 (DATE)	QA REVIEW <i>Schuyler</i> (SIGNATURE) 6-18-84 (DATE)
DISPOSITION <input checked="" type="checkbox"/> RET. TO VENDOR <input type="checkbox"/> SCRAP <input type="checkbox"/> REWORK <input type="checkbox"/> REPAIR <input checked="" type="checkbox"/> USE AS IS			
INSTRUCTIONS THE 45 RODS WHICH HAD NO VISUALLY DETERMINED LAPS SHALL BE SENT OUT FOR TESTING BY MAGNETIC PARTICLE METHOD. THESE RODS ARE TO BE SEGREGATED BY THE TESTER, WITH THE ACCEPTANCE CRITERIA BEING NO PRESENCE OF LINEAR INDICATIONS. THE RODS THAT ARE REJECTED BY TEST RESULTS ARE TO BE RETURNED TO THE VENDOR FOR REPLACEMENT. ACCEPTABLE RODS SHALL BE USED UPON RECEIPT AND ACCEPTANCE OF RODS AND TEST REPORT BY PSC QA. TEST REPORT SHALL BE FILED WITH P.O. ALL 15 RODS THAT WERE VISUALLY REJECTED ARE TO BE RETURNED TO VENDOR AND REPLACED BY SAME. <i>G.A. Turner</i> 6/18/84			
AUTHORIZATION / APPROVALS		DISPOSITION / IMPLEMENTATION	
PLANT MANAGEMENT: <i>N/A</i> (SIGNATURE)	(DATE)	COMPLETED / RESPONSIBLE SUPERVISOR: <i>N/A</i> (SIGNATURE)	(DATE)
NED: <i>Schuyler</i> (SIGNATURE)	6/18/84 (DATE)	VERIFIED BY QC: <i>J.M. Edwards</i> (SIGNATURE)	6/19/84 (DATE)
QA: <i>Schuyler</i> (SIGNATURE)	6-18-84 (DATE)	PORC REQ'D: <input type="checkbox"/> YES <input type="checkbox"/> NO NFSC REQ'D: <input type="checkbox"/> YES <input type="checkbox"/> NO <i>Schuyler</i> (SIGNATURE)	6-18-84 (DATE)



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

NONCONFORMANCE REPORT

NO. 84-205

DESCRIPTION			
ITEM NAME	ITEM NO.	DATE RESPONSE DUE	
5/8" ϕ ALL THREAD ROD	1791628	7-20-84	
SYSTEM NO.	EQUIPMENT NO.	LOCATION	REF. DOC. NO.
N/A	N/A	Receiving Whse.	N-5401 (B)
DESCRIPTION OF NONCONFORMANCE			
VISUAL EXAMINATION OF ALL THREAD ROD WAS PERFORMED AS REQUIRED BY ABOVE P.O. FIVE OF 16 RODS WERE FOUND TO HAVE LINEAR INDICATIONS (LAPS). (THESE 16 RODS ARE THE REPLACEMENTS FOR THOSE RODS REJECTED ON SHIPMENT 'A' OF 6-18-84 ON T 'S P.O., REF. NCR # 84-187.)			
WHAT CAUSED THE NONCONFORMANCE?			
UNKNOWN			
INITIATED BY	QA REVIEW		
<i>M. E. Eberhart</i> (SIGNATURE)	<i>W. C. Quinn</i> (SIGNATURE)	6/29/84 7/29/84 (DATE) (DATE)	
DISPOSITION			
DISPOSITION	<input checked="" type="checkbox"/> RET. TO VENDOR	<input type="checkbox"/> SCRAP	<input type="checkbox"/> REWORK <input type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS
INSTRUCTIONS			
ENGINEERING FEELS THAT THIS MATERIAL IS UN-ACCEPTABLE FOR ITS INTENDED USE. ALL 16 RODS SHALL BE RETURNED TO VENDOR. THIS ADDITIONAL MATERIAL IS NOT REQUIRED FOR CN 1280B, THE JOB WHICH THIS MATERIAL WAS ORDERED FOR.			
M.P. Muller 7/11/84			
AUTHORIZATION / APPROVALS		DISPOSITION IMPLEMENTATION	
PLANT MANAGEMENT:	COMPLETED / RESPONSIBLE SUPERVISOR:		
(SIGNATURE) (DATE)	(SIGNATURE) (DATE)		
VED:	VERIFIED BY QC:		
<i>R. L. L...</i> (SIGNATURE)	<i>W. C. Quinn</i> (SIGNATURE)	7-13-84 (DATE)	
CA:	PORC REQ'D: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NFSC REQ'D: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	7-16-84 (DATE)	
<i>W. C. Quinn</i> (SIGNATURE)	<i>W. C. Quinn</i> (SIGNATURE)	7-16-84 (DATE)	

ATTACHMENT 3

EXAMINATION TEST REPORTS
SUPPLIED BY TEXAS BOLT COMPANY

4821 TELEPHONE ROAD
HOUSTON, TEXAS 77061
(713) 645-8923

☐ WORK ORDER
☐ NOTICE
☐ INSPECT ON REPAIR

F.A. & REPAIR STATION NO. 205-3

BILL
TO

TEXAS BOLT

SHIPPED
TO

INSTR. P.C. NO.	DATE RECEIVED	INVOICE NO.	CLASSIFICATION	SHIPMENT	DATE SHIPPED	INVOICE DATE
QUANTITY	PART NUMBER	ITEM	HOURS	UNIT PRICE	TOTAL	
50		5/8" Q X 20" R/L Pulsar Service Co of Colorado P.O. # 5401 T.B. # 17786	<input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD	<input checked="" type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL	5-17-64	

☒ MAGNETIC
☐ PENETRANT

☐ WATNAFLUX
☒ MAGNAFLUX
☐ CYCLO
☐ SPOTCHECK

RADIOGRAPHIC

☐ X-RAY
☐ GAMMA RAY
☐ CONTACT
☐ SPEED

ULTRASONIC

☐ HARDNESS
☐ DEMAGNETIZE
☐ OTHER

APPLICABLE SPECIFICATIONS OR PROCESS STANDARDS

I.I.I. SECT. II

PAID INSPECTED IN ACCORDANCE WITH AMERICAN INDUSTRIAL INSPECTION, INC.
STANDARD STANDARDS UNLESS OTHERWISE SPECIFIED

Terms: Net 30 days

REMARKS: STD. NOT PROC

ALL 50 PCS TESTED OK.

INDUSTRIAL INSPECTION, INC.

Certified and in Accordance with terms and
conditions on the reverse side of this document.

CUSTOMER SIGNATURE

INSPECTOR SIGNATURE

TEXAS BOLT COMPANY

REPORT No. _____

CUSTOMER P.O. No. N5401

P. O. BOX 1211

HOUSTON, TEXAS 77251-1211

SPECIFICATIONS: 10 CFR 21 APPLIES
ASTM A193 GRADE B16
ASTM A194 GRADE 4

TEXAS BOLT ORDER No. 177786

6/6/84 jh

REPORT OF PHYSICAL AND CHEMICAL TESTS

ITEM	Description	Material	Quantity	No. Pcs. Tested	Step Block Tensile	Ultimate Tensile PSI	Yield Strength	Elong %	RA. %	Hardness	Minimum Tempering Temperature
ALL THREAD RODS	1. 5/8" x 10-12' RANDOM LENGTH	B16	600'	4		143,600	128,300	18.5	57.5		1200°F
HEAVY HEX NUTS	5/8"	4047	2,300	6	PROOF LOAD RESULTS 39,550 LBS. O. K.					31/32 RC	1100°F
ELEVATED TEMPERATURE TEST 24 HRS. AT 1100°F --- DIN --- 269											
"ALL MATERIAL IS OF U. S. ORIGIN AND MANUFACTURE."											
"ALL MATERIAL IS IN ACCORDANCE WITH TEXAS BOLT'S QUALITY ASSURANCE MANUAL, REV. 7, DATED 4/26/83."											

Item No.	VISUAL MAGNIFIED Inspection			Heat Number	C	Mn	Si	S	P	Cr	Ni	Mo	V			
	No. Tested	Accepted	Rejected													
1.	600'	600'	0	8087367	.400	.57	.30	.022	.008	.95		.51	.27			
5/8"	2,300	2,300	0	AVG. CHEM CHECK	.401	.58	.33	.025	.006	.96		.52	.29			
				6064469	.47	.83	.22	.030	.015		.23					
				AVG. CHEM CHECK	.49	.85	.21	.031	.017		.25					
INSPECTOR EVALUATION APPROVED BY: MADALYNNE STOCKTON, LEVEL 1 INSPECTOR																

STATE OF TEXAS
COUNTY OF HARRIS

Subscribed and sworn to before me this 6th day of June, 19 84.

I certify the above results to be correct as contained in the records of the company.

Caroline J. Parker
Notary public in and for Harris County, Texas.
My commission expires May 26, 1988

Madalynne Stockton

FOR PUBLIC SERVICE CO. OF COLORADO

TEXAS BOLT COMPANY

CUSTOMER P.O. No. N5401 "REPLACEMENT"

P. O. BOX 1211

HOUSTON, TEXAS 77251-1211

REPORT No. _____

10 CFR PART 21 APPLIES

SPECIFICATIONS: ASTM A193 GRADE B16

TEXAS BOLT ORDER No. 177786

6-19-84 sc

REPORT OF PHYSICAL AND CHEMICAL TESTS

REPORT OF PHYSICAL AND CHEMICAL TESTS																
ITEM	Description	Material	Quantity	No. Pcs. Tested	Step Block Tensile	Ultimate Tensile PSI	Yield Strength	Elong %	RA. %	Hardness	Minimum Tempering Temperature					
	ALL THREAD ROD 1. 5/8" X 10 TO 12 FT.	B16	160 FT.	2		143,800	128,400	18.1	57.0		1200°F.					
"ALL MATERIAL IS IN ACCORDANCE WITH TEXAS BOLT'S QUALITY ASSURANCE MANUAL, REV. 7, DATED 4/26/83."																
"ALL MATERIAL IS OF U.S. ORIGIN AND MANUFACTURED."																
Item No.	Visual XXXXX Inspection			Heat Number	C	Mn	Si	S	P	Cr	Ni	Mo	V			
	No. Tested	Accepted	Rejected													
1.	160 FT.	160 FT.	0	8087367 AVG. CHEM CHECK	.400 .401	.57 .58	.30 .33	.022 .025	.008 .00	.95 .96		.51 .52	.27 .29			
INSPECTOR EVALUATION APPROVED BY: EDWARD J. CHARANZA, LEVEL III INSPECTOR																
ATE OF TEXAS																

STATE OF TEXAS
COUNTY OF HARRIS

Subscribed and sworn to before me this 19th day of June, 1984

I certify the above results to be correct as contained in the records of the company.

Frederick L. Roberts
 Notary Public in and for Harris County, Texas.
 My commission expires May 14, 1988

Edward J. Charanza

ATTACHMENT 4

10CFR21 COMMITTEE EVALUATION

10CFR21 REPORT



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

PART 21 REPORT EVALUATION

NO. P 21-0020

PAGE 1 OF 2

- A DESCRIBE DEFECT OR FAILURE-TO-COMPLY Linear surface indications were visually observed in fifteen (15) of sixty (60) all threaded rods which were to be used for reinforcement of safety related masonry block walls. Material was ordered under Public Service Company Purchase Order N-4501, which required visual examination by the vendor under Specification ASTM A193, B16. Subsequent replacement of defective material was also defective.

B PRELIMINARY EVALUATION

ANSWER EACH OF THE FOLLOWING

- | | YES | NO | |
|---|-------------------------------------|-------------------------------------|---|
| 1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | SAFETY RELATED PLANT STRUCTURE, SYSTEM, COMPONENT, PART? |
| 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | PLANT FEATURES DESCRIBED IN THE FSAR? |
| 3 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | PLANT FEATURES ADDRESSED IN THE TECHNICAL SPECIFICATIONS? |
| 4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | SUBJECT OF AN APPLICABLE NRC REGULATION? |
| 5 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SITUATION IS NOT REPORTABLE UNDER THE CRITERIA OF TECH SPEC AC 7.2c, 7.5.2a, OR 7.5.2b. |

NOTE: AT LEAST ONE "YES" BOX MUST BE CHECKED ABOVE FOR THE DEFECT OR FAILURE-TO-COMPLY TO HAVE THE POTENTIAL FOR CREATING A SUBSTANTIAL SAFETY HAZARD.

C DETERMINE IF A SUBSTANTIAL SAFETY HAZARD EXISTS

- ☐ NO A SITUATION WHICH COULD CONTRIBUTE TO THE RELEASE OF LICENSED MATERIAL.
- ☐ NO A SITUATION WHICH COULD CONTRIBUTE TO PUBLIC RADIOACTIVITY EXPOSURE EXCEEDING THE CALCULATED EXPOSURES OF FSAR DBA NO. 2 BY 25 PERCENT.
- ☒ YES A SITUATION WHICH COULD RESULT IN FAILURE OF A SAFETY RELATED COMPONENT OR DEVICE TO OPERATE.
- ☐ NO A DEFICIENCY IN THE DESIGN, CONSTRUCTION, INSPECTION, TESTING, OR USE OF A LICENSED FACILITY OR MATERIAL WHICH COULD DOWNGRADE THE MARGIN OF SAFETY.
- ☐ NO A SITUATION THAT COULD RESULT IN A FAILURE OF THE PHYSICAL SECURITY SYSTEM TO MEET THE APPROVED SECURITY PLAN.

- D ☐ NO THE DEFECT OR FAILURE-TO-COMPLY MEETS NONE OF THE ABOVE CRITERIA.



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

PART 21 REPORT EVALUATION

NO. P 21 -0020

PAGE 2 OF 2

E EVALUATION NOTES AND COMMENTS

- 1) Standard type material which could have been used in a number of applications, such as safety related piping flanges. Although this material was identified as being defective prior to its use, and appears to be limited to heat #8087367, others should be made aware of the problem.
- 2) Implementation of Texas Bolt inspection appears deficient.
- 3) Bolting not specifically addressed in Final Safety Analysis Report, but potential uses of this material are.

F EVALUATION TEAM AND OTHER PARTICIPANTS

- 1 Fuller
- 2 Orlin
- 3 Niehoff
- 4 Prenger (Guest)
- 5
- 6

G CONCLUSION

THE EVALUATION TEAM HAS CONCLUDED ☒ UNANIMOUSLY ☐ BY MAJORITY VOTE THAT THE DEFECT OR FAILURE TO COMPLY DESCRIBED ON THE ATTACHED PART 21 REPORT ☒ DOES ☐ DOES NOT CREATE A SUBSTANTIAL SAFETY HAZARD.

MAJORITY

Mr. Niehoff
(SIGNATURE)

Dr. Orlin
(SIGNATURE)

Charles Fuller
(SIGNATURE)

MINORITY

(SIGNATURE)

H PART 21 REPORT TO THE NRC NO. 50-267/ 84-01 ☐ REPORT NOT REQUIRED

EVALUATION TEAM LEADER

Charles Fuller
(SIGNATURE)

07/30/89
(DATE)

I REMARKS

DISTRIBUTION

VICE PRESIDENT, ELECTRIC PRODUCTION
NUCLEAR SITE ENGINEERING MANAGER
SUPERINTENDENT, QA SERVICES (ORIGINAL)
TECHNICAL / ADMINISTRATIVE SERVICES MANAGER
RECORDS STORAGE BUILDING
PART 21 REPORT INITIATOR

VICE PRESIDENT, ENGINEERING AND PLANNING
QUALITY ASSURANCE MANAGER
MANAGER, NUCLEAR ENGINEERING
MANAGER, NUCLEAR PRODUCTION
MANAGER OF PURCHASING AND STORES



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

PART 21 REPORT TO THE NRC

NO. 50-267 / 84-01

PAGE 1 OF 3

1 FACILITY: FORT ST. VRAIN NUCLEAR GENERATING STATION.

2 BASIC COMPONENT OR ACTIVITY THAT FAILS-TO-COMPLY OR CONTAINS A DEFECT:

5/8" Diameter x 10' length, all threaded rod, heat #8087367.

Supplied by: Texas Bolt Company
P. O. Box 1211
Houston, Texas 77251

Purchased under: Purchase Order N-4501 and Purchase Order N-4501, Supplement B.
Specification ASTM A193, B16.

3 IDENTIFICATION OF FIRM CONSTRUCTING THE FACILITY OR SUPPLYING THE BASIC COMPONENT OR ACTIVITY THAT FAILS-TO-COMPLY OR CONTAINS A DEFECT:

Supplier - Texas Bolt Company, P. O. Box 1211, Houston, Texas 77251

4 NATURE OF THE DEFECT OR FAILURE-TO-COMPLY AND THE SAFETY HAZARD WHICH IS CREATED OR COULD BE CREATED BY SUCH DEFECT OR FAILURE-TO-COMPLY:

Under Purchase Order N-4501: Fifteen (15) of sixty (60) threaded rods had longitudinal cracks (laps) detected under visual receipt inspection. Of the remaining forty-five (45) rods which were magnetic particle tested, one (1) additional rod was rejected.

Under Purchase Order N-4501, Supplement B: Five (5) of sixteen (16) threaded rods for the replacement shipment had longitudinal cracks (laps) detected under visual receipt inspection.



PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

PART 21 REPORT TO THE NRC

NO. 50 - 267/ 84-01

PAGE 2 OF 3

- 5 DATE ON WHICH THE INFORMATION OF DEFECT OR FAILURE TO COMPLY WAS OBTAINED:

July 30, 1984

- 6 IN THE CASE OF A BASIC COMPONENT WHICH CONTAINS A DEFECT OR FAILURE TO COMPLY, THE NUMBER AND LOCATION OF ALL SUCH COMPONENTS IN USE AT THE FACILITY:

None. Defective material was identified during receiving inspection and prior to use. No other material of this heat number is in use at Fort St. Vrain.

- 7 CORRECTIVE ACTION THAT HAS BEEN, OR WILL BE TAKEN; THE NAME OF THE INDIVIDUAL OR ORGANIZATION RESPONSIBLE FOR THE ACTION AND THE LENGTH OF TIME THAT HAS BEEN OR WILL BE TAKEN TO COMPLETE THE ACTION:

- a. For Purchase Order N-4501, the fifteen (15) rods identified by visual examination to be defective were rejected. All remaining rods were magnetic particle tested and one (1) additional rod was rejected under this test. These sixteen (16) rods were returned to vendor for replacement.
- b. For Purchase Order N-4501, Supplement B, sixteen (16) replacement rods were received. Of these, five (5) were rejectable by visual examination. All sixteen (16) rods were rejected and sent back to the vendor. No replacements were requested or received.

(continued on Page 3)

- 8 ADVICE RELATED TO THE DEFECT OR FAILURE TO COMPLY ABOUT THE FACILITY, ACTIVITY, OR BASIC COMPONENT THAT HAS BEEN, IS BEING, OR WILL BE GIVEN TO PURCHASERS OR LICENSEES.

Texas Bolt Company was to perform a visual examination of the material prior to the first shipment. A magnetic particle test was also requested for the replacement shipment. These tests/inspections were not performed in sufficient depth by Texas Bolt Company to identify the defects.

- 9 NOTIFICATION TO THE NRC BY:

O. R. LEE
VICE PRESIDENT, ELECTRIC PRODUCTION
PUBLIC SERVICE COMPANY OF COLORADO
P. O. BOX 840
DENVER, COLORADO 80201

O. R. Lee

(SIGNATURE)

7-31-84

(DATE)

7. (continued)

- c. Procurement of all quality related materials directly from Texas Bolt Company has been suspended.
- d. All previous Purchase Orders were reviewed to determine if any other material from heat #8087367 has been received. No other material from this heat has been received or is in use.