

UNITED STATES DEPARTMENT OF TRANSPORTATION  
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION  
OFFICE OF PIPELINE SAFETY

HAZARDOUS LIQUID PIPELINE SAFETY VIOLATION REPORT

1. <u>Inspector Name</u> <i>Michael A. Schwartzkopf</i>	2. <u>Date of Inspection</u> <i>11-13 Dec 2001</i>	3. <u>CPF No.</u>	22	00	25	00	6
4. <u>Pipeline Operator/Owner</u> <i>Exxon/Mobil Pipeline Company</i>							
5a. <u>Headquarters Address</u> <i>77002 800 Bell Street, Houston TX</i>				5b. <u>Telephone Number</u> <i>(713) 656-2227</i>			
6. <u>Inspection Location</u> <i>Foreman, AR</i>				7. <u>Inspection Unit</u> No. <u>1</u> of <u>1</u>			
8. <u>Portion of System Inspected (Describe Location and Facility)</u> <i>Pump stations at Foreman, Glenwood, Conway &amp; Strasburg, AR and pipeline in AR</i>							
9. <u>Nature and Size of Operator</u> Number of Miles <u>296 miles</u>							
Commodities Transported <u>Crude oil</u>							
Relevant Details With Respect to the System <u>Pump station at Foreman, AR</u>							
10. <u>Nature of Probable Violation (check as many as applicable)</u>							
<input type="checkbox"/>	1. Problem in Design or Materials						
<input type="checkbox"/>	2. Problem in Construction						
<input type="checkbox"/>	3. Reporting Requirements						
<input type="checkbox"/>	4. Test Requirements						
<input type="checkbox"/>	5. Personnel Qualification and Training						
<input type="checkbox"/>	6. Anti-Drug Program						
<input type="checkbox"/>	7. Other Operations						
<input type="checkbox"/>	8. Corrosion Control						
<input checked="" type="checkbox"/>	9. Pressure Control						
<input type="checkbox"/>	10. Other Maintenance/Monitoring						
<input type="checkbox"/>	11. Inadequate Procedures						
<input type="checkbox"/>	A. Construction						
<input type="checkbox"/>	B. Corrosion Control						
<input type="checkbox"/>	C. Operations						
<input type="checkbox"/>	D. Maintenance						
<input type="checkbox"/>	E. Training						

11a. CFR §§ Violated: 195.406(a)

11b. Summarize What The Regulation Requires That Operator Did Not Do:

The pipeline is to be operated at or below the pressure that is 80% of the hydrostatic test pressure.

12. Provide Detailed Information About the Violation:

On 3 May 2000 the station discharge pressure exceeded the MOP, this occurred at Foreman station. For 1-1/2 hours the pressure was 906 - 910 psig, MOP is 890 psi. A hi-alarm was sent to and acknowledged by the controller but action was not taken to lower the pressure or call out a technician to check the control valve. The controller was increasing the ~~pressure~~ flow

13. Public and/or Environmental Concerns in Area of Violation: rate.

Lack of prompt reaction to offset overpressure will lead to unsafe conditions endangering public.

14a. Person Interviewed: Mike Adams Title Pipeline Safety Advisor

14b. Comments of Person Interviewed:

Controller was increasing flow from Consistency Tank Farm, he acknowledged the alarm and

expected the pumps to control the pressure

15. Supporting Documents/Materials

Item No.	Description (include date)	Source of Documents	Remarks
1	Pressure chart for Foreman station 2 May 2000	Copied at Foreman station	
2	SCADA print-out for Foreman station 8 Jun 2002	Exxon Mobil	
3	E-mail of 28 Jun 2002 with information on hydrotest & MOP determination	Mike Adams, Exxon Mobil	
4	SCADA print-out for hourly station pressure, 20" North	Mike Adams, Exxon Mobil	

16. Inspector's Signature

Date



6 Feb 2002

17. Compliance History

Date	Place	Brief Description of Prior Noncompliance/ Violation	CPF No./Date of Warning Letter	Outcome
None	N/A	N/A	N/A	N/A

18. Gravity of Offense

One time occurrence found in pipeline records

19. Degree of Culpability

Operator's pipeline safety advisor stated that the controller did receive the high discharge pressure alarm and did not take action other than to monitor until pressure reduced below max

20. Ability to Continue in Business

Yes. Large operator

21. Ability to Pay

Yes, no obvious cash flow problems.

22. Good Faith in Attempting to Achieve Compliance

Operator promptly corrected any other items noted - response was prompt, aggressive, and thorough. Operator admitted problem.

23a. Proposed Remedy

- Warning Letter
- Civil Penalty: Recommended Amount \$ 25,000 JAB
- Compliance Order
- Hazardous Facility Order
- Notice of Amendment

23b. Analysis of Proposed Remedy

Overpressure was single occurrence identified, operator should handle internally. Reason for penalty is that controller did not initiate corrective action upon receiving high discharge alarm.

24. Region Chief's Signature

Date

*Frederick A. Jansen*

*2/14/02*

SUNDAY

NOON

6 PM

MIDNIGHT

6 AM

MONDAY  
NOON

1500

1375

1250

1125

1000

875

750

625

500

375

250

125

62.5

31.25

15.625

7.8125

3.90625

1.953125

0.9765625

0.48828125

0.244140625

0.1220703125

0.06103515625

0.030517578125

0.0152587890625

0.00762939453125

0.003814697265625

0.0019073486328125

0.00095367431640625

0.000476837158203125

0.0002384185791015625

0.00011920928955078125

0.000059604644775390625

0.0000298023223876953125

EMERGENCY CONTROLS CORPORATION  
BUFFALO, NEW YORK

*Tanner*

*Cal*

5-2-2001

PX 899689

3 Mt pool  
check show 950  
mail to check SCAs  
result to see  
what process  
controls show

THURSDAY

WEDNESDAY

P-TYPE	E-TYPE	REC-NUM	MESSAGE-TEXT
0	17	104	050301C 7:30:15 FOREMAN STA SUCT PRES ROC POS 440.63 416.25 18.94
0	17	106	050301C 7:30:15 FOREMAN STA DISC PRES ROC POS 440.00 415.00 18.93
0	17	107	050301C 7:30:29 FOREMAN DNST LINE PRES CNO SEPT PUMP START 441.25 416.88 18.95
1	1	444	050301C 7:30:58FOREMAN UNIT 3
0	18	104	050301C 7:30:47 FOREMAN STA SUCT PRES ROC NEG 129.63 448.75 19.34
0	17	105	050301C 7:30:47 FOREMAN STA TWTI PRES ROC POS 595.31 453.75 35.35
0	17	106	050301C 7:30:47 FOREMAN STA DISC PRES ROC POS 597.50 455.63 19.43
0	17	107	050301C 7:30:47 FOREMAN DNST LINE PRES ROC POS 595.63 454.88 19.44
0	18	104	050301C 7:30:56 FOREMAN STA SUCT PRES ROC NEG 287.50 427.50 17.92
0	17	106	050301C 7:30:56 FOREMAN STA DISC PRES ROC POS 627.50 597.50 21.39
0	17	107	050301C 7:31:25 FOREMAN DNST LINE PRES ROC POS 626.25 595.63 21.36
0	18	104	050301C 7:31:25 FOREMAN STA SUCT PRES ROC NEG 252.50 271.88 17.36
0	18	106	050301C 7:31:25 FOREMAN STA DISC PRES ROC NEG 616.25 643.75 22.12
0	18	107	050301C 7:31:25 FOREMAN DNST LINE PRES ROC NEG 615.00 641.25 22.08
6	8	25	050301C 8:08:15#FOREMAN SCAN START
6	9	106	050301C10:11:18 FOREMAN STA SUCT PRES HITP ALARM 902 900
6	5	104	050301C10:16:11 FOREMAN STA SUCT PRES HITP ALARM 491 488
6	6	106	050301C12:04:37 FOREMAN STA SUCT PRES HIOPRETIURN 483 494
0	18	104	050301C12:59:54 FOREMAN STA DISC PRES ROC NEG 897 906
0	18	106	050301C12:59:54 FOREMAN STA SUCT PRES ROC NEG 327.50 366.25 18.36
0	18	107	050301C12:59:54 FOREMAN STA DISC PRES ROC NEG 761.88 790.63 24.81
6	18	25	050301C13:06:13#FOREMAN DNST LINE PRES ROC NEG 756.88 786.25 24.72
6	1	25	050301C13:06:36#FOREMAN DOWN DRT
6	1	25	050301C13:13:57#FOREMAN DOWN IN
6	2	25	050301C13:18:24#FOREMAN DOWN OUT
6	8	25	050301C14:35:33 FOREMAN SCAN IN
6	9	25	050301C14:35:33 FOREMAN SCAN HALT
6	8	25	050301C16:44:15 FOREMAN SCAN START
6	9	25	050301C16:44:15 FOREMAN SCAN HALT
6	1	25	050301C15:25:55#FOREMAN SCAN START
6	2	25	050301C15:25:55#FOREMAN SCAN OUT
13	1	437	050301C23:12:18 FOREMAN AUTO LAUNCH CNO SEPT UNIT ARM
1	5	433	050301C 0:38:02 FOREMAN AUTO LAUNCH AUTHORIZED ARMED
			SCROOPER IN ALARM IN

1201 Elm Street  
Dallas, Texas 75221  
Phone: 214-658-2345  
Fax: 214-658-2017



# Fax

**To:** Michael Schwarzkopf **From:** John D. Terito

**Fax:** 404-562-3569 **Date:** January 8, 2002

**Phone:** **Pages:** 2 Including Cover Sheet

**Re:** Foman Event Information **CC:** Mike Adams

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Urgent**
- For Review**
- Please Comment**
- Please Reply**
- Please Recycle**

**Comments:**

Mr. Schwarzkopf,

Per my conversation with Mike Adams, I am supplying you with a copy of the Control Center event log for Foman station for the date of May 3, 2001.

Regards,

John D. Terito

**Schwarzkopf, Michael A. (OPSATLANTA)**

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**From:** m.h.adams@exxonmobil.com  
**Sent:** Monday, January 28, 2002 7:35 AM  
**To:** michael.a.schwarzkopf@rspa.dot.gov  
**Subject:** MAOP at Foreman Station

Mike, here is how the MOP at Foreman was determined. This information was prepared by our Area Engineer in Corsicana. Hopefully his explanation will help you with your decision. If you need anything else, please let me know.

Mike Adams  
ExxonMobil Pipeline Co.  
713-656-3926 - Office  
713-898-1566 - Cell Phone  
800-246-9204 - Pager  
713-656-8232 - Fax

----- Forwarded by M H Adams/Dallas/Mobil-Notes on 01/28/02 06:12 AM -----

Chris D Gorman

To: M H Adams/Dallas/Mobil-Notes@xom  
cc: Dale P Comeaux/Dallas/Mobil-Notes, Larry

E

01/27/02 02:13  
Wilson/Houston/ExxonMobil@xom,  
PM

Hawthorne/Dallas/Mobil-Notes@xom, Larry D  
Lynn Hulse/Dallas/Mobil-Notes  
Subject: MAOP at Foreman Station

Mike here is the info you asked for:

Hydrostatic Test Report HO-1821 dated August 7, 1991 indicates the minimum test pressure, at the test site, during an 8 hr period was 1117 psig. Pipe is 0.312" X 20", API 5LX-42.

Elevation at the test site was 432 ft. which is approximately 2 foot higher than the discharge at Foreman. So correcting for elevation, the discharge end of the Foreman to Glenwood segment saw a minimum test pressure of 1118 psig.

Taking 80% of the minimum test pressure yields 894.4 psig (68.2%SMYS) as the MAOP at Foreman, so 890 psig (67.9% SMYS) was used for the Discharge Setpoint Limit (i.e. control valve setting). For comparison, the DOT 72% SMYS pressure limit for the same pipe would be 943.5 psig with a minimum test pressure required of 1179.4 psig.

I understand the control valve allowed the discharge pressure to drift to 910 psig for some period of time before returning to the 890 set point. This additional 20 psi was 15.6 psi or 1.7% over (1.017 MAOP) our MAOP per hydrotest. The corresponding maximum stress level in the pipe was only 69.4% SMYS per code formula, with the actual stress being even less.

CFR 195 allows us 10% over our MAOP (1.10 MAOP) for "upset and transient conditions". So for our 894.4 MAOP that would be 983.8 psig. However, the HI-Discharge Shutdown Set Point (i.e. pressure switch setting) at Foreman is set at only 935 psig which is 40 psi above the 890 control valve setting or 4% over MAOP (1.04 MAOP). Even at 935 psig the pipe stress is only 71% of SMYS per code formula, with actual stresses being less.

So it is evident that with the current protective device settings at Foreman Station we should never exceed 104% of our MAOP, much less 110%



, MAOP, even if the control valve were to fail. It looks like the drift in the control valve set point was a transient condition that cleared itself up. However, neither ANSI B31.4 nor DOT CFR Part 195 define the time duration for what a "upset or transient condition" is. All things considered I think this will be seen as more a compliance interpretation matter than a safety related matter.

Please let me know if you have any questions or need any more info.....

Chris Gorman  
Area Engineer, Pipelines and Terminals  
Corsicana, TX 75110  
903-654-5323

