Appendix G

Relief Valve Group Factual Report

Attorney Letter dated June 4, 2001, re Handwritten Notations On RV 1919 Instrument Sheet

RIDDELL WILLIAMS P.S.

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June 4, 2001

Mr. Allan C. Beshore
Investigator-in-Charge
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, D.C. 20594-2000

Re: Olympic Pipe Line Explosion
Bellingham, Washington
Date of Incident: 6/10/99

Dear Mr. Beshore:

I write on behalf of Daniel Measurement and Control, Inc. ("Daniel") in response to: (i) the May 10, 2001 letter from Bob Trainor to Johnny Parrish regarding a handwritten notation on the instrument data sheet for RV 1919; and (ii) a subsequent question from Peter Katchmar to Mr. Parrish regarding the same instrument data sheet.

With respect to Mr. Trainor's question, although the handwritten notation is not initialed, the notation was most likely made by James Johnson. Mr. Johnson works in Daniel's manufacturing operations order entry group located in Statesboro, Georgia. Such a handwritten notation would be used to indicate the appropriate spring set for the specified relief pressure. In this case, the handwritten "70-180" notation directly above the typewritten "100" on line 35 in the "Relief" section in all likelihood refers to the spring range used for a 100 psi setting for the model 1760 pilot control valve on the model 760 pressure relief valve. As you know, RV 1919 was shipped with a pilot control pressure set point of 100 psi. This set point was indicated, among other places, on the 27803 Order Acknowledgment dated March 19, 1998, and again on the certified print, 760.234-1-K, dated February 2, 1998. NTSB was previously provided copies of both of these documents.

Subsequent to Mr. Trainor's letter inquiry, Mr. Katchmar asked Mr. Parrish about the meaning of the "740" in the pressure section of the instrument data sheet. 740 psi is the maximum flange pressure rating for an ANSI 300 rated piece of equipment. This is an industry standard. As the product literature previously provided to NTSB indicates, Daniel does not offer a pilot control

valve for the model 760 control valve that reaches the maximum flange pressure rating. The maximum pressure setting that Daniel offers for an ANSI 300 rated valve is 650 psi. With respect to RV 1919, as discussed above, the instrument date sheet from Olympic/Jacobs Engineering indicates on Line 35, third box in the right hand column, a pressure relief setting of 100 psi. This 100 psi pressure set point was confirmed in subsequent documentation to Olympic/Jacobs Engineering.

If you have any further questions, please do not hesitate to contact me or Mr. Parrish.

Sincerely,

Michael J. Robinson
of
RIDDELL WILLIAMS P.S.

MJR/mmd
cc: Mr. Johnny Parrish

National Transportation Safety Board
Washington, D.C. 20594

May 10, 2001

Mr. Johnny Parrish
Fisher-Rosemount Petroleum
19267 Highway 301 North
P.O. Box 450
Statesboro, Georgia 30459-0450

Re: In the matter of the investigation of the rupture of an Olympic Pipe Line liquid pipeline, Bellingham, Washington, on June 10, 1999

Dear Mr. Parrish:

As part of the National Transportation Safety Board's ongoing investigation of the Olympic Pipe Line accident in Bellingham, Washington, I am developing an operational history for RV 1919, including information about its specifications, purchase, shipment, installation, and modifications prior to the accident.

To that end, I have reviewed copies of the invoices and the instrument data sheet for RV 1919 that were submitted to the Safety Board by Olympic and Fisher-Rosemount. I noted that the copy of the instrument data sheet for RV 1919 that Fisher-Rosemount provided to Mr. Zimmerman and me during our November 1999 visit to your Statesboro plant has a handwritten notation "70-180" above the circled entry of "100" at line 34. These handwritten notations did not appear on copy of the data sheet provided by Olympic. (See attached copies.)

Please verify, if possible, (1) who made this notation, (2) what is the meaning of the notation "70-180," and (3) why was this notation made . I would appreciate a response by May 21, 2001.

I will be out of the office from May 14 through May 21. In my absence, you can contact Mr. Allan Beshore at 202-314-6201 or beshora@ntsb.gov with any questions. Thank you for your cooperation and assistance.

Sincerely,

Robert H Trainor

Robert H. Trainor
Chemical Engineer

Encl: 2

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GENERAL	1 | Tag Number	| Item No.	RV-1919		
	2 | Manufacturer	| Model	BROOKS		8" 300# RFF Model 760
	3 | P&ID No.	| Requisition Item No.	D-1902		
	4 | Service		Full flow relief		
	5 | Line No. / Vessel No.		16-0-105-300A	/	
	6 | Nozzle (Full, Semi)				
	7 |				
DESIGN DATA	8 | Design Code		P		
	9 | Governing Conditions	| Design Purpose	Blocked Outlet		
	10 | Type				
	11 | Calculated Orifice Area				
	12 | Selected Orifice Area				
	13 | Orifice Designation				
	14 | Inlet Size	| Rating	8	in	300# RF Flange
	15 | Outlet Size	| Rating	8	in	300# RF Flange
	16 | Bonnet Type				
	17 | Cap Type	| Lever			
	18 | Gag	| Bellows			
	19 | Flange Finish				
MATERIALS	20 | Body		Steel		
	21 | Nozzle / Disc				
	22 | Nozzle Ring				
	23 | Disc Holder				
	24 | Guide				
	25 | Bellows				
	26 | Spring				
	27 | Bonnet Stud Bolting				
PROCESS CONDITIONS	28 | Fluid	| Phase	Diesel		
	29 | Flow Units		US gal/min		
	30 | Flow @ Relieving Conditions		8400		
	31 | Required Capacity				
	32 | Molecular Weight				
	33 | Pressure	| Operating			
	34 | psig	| Process Set | Spring Set	740		70-80
	35 | Temperature °F	| Operating | Design | Relief			100
	36 | Back Pressure (Constant)		64	psig	
	37 | Back Pressure (Variable)			psig	
	38 | Back Pressure (Built-up)				
	39 | % Accumulation	| % Reseat	10		
	40 | Compressibility Factor Z				
	41 | Latent Heat of Vaporization			kcal IT/kg	
	42 | Specific Heat Ratio Cv/Cp				
	43 | Specific Gravity @ Conditions		0.87		
	44 | Viscosity		3.7	cP	
	45 | Barometric Pressure				
	46 | Reaction Force				
	47 |				

Notes: 1. ASME certified Calculations are to be supplied with bid.
2. Materials are to be suitable for 15% MTBE service.

No.	By	Date	Revision
0	GR	12/17/97	FOR PURCHASE
B	GR	8/25/97	FOR BID
A	GR	8/20/97	FOR REVIEW

INSTRUMENT SPECIFICATION

Relief Valve style 2

Sheet of

Code: 63 | Dwg. No.: | Rev.: 0

Provided to the NTSB by Fisher-Rosemount Petroleum RN Brauner 5/10/01

GENERAL	1	Tag Number	Item No.	RV-1919			
	2	Manufacturer	Model	BROOKS		8" 300# RFF Model 760	
	3	P&ID No.	Requisition Item No.	D-1902			
	4	Service		Full flow relief			
	5	Line No. / Vessel No.		16-0-106-300A	/		
	6	Nozzle (Full, Semi)					
	7						
DESIGN DATA	8	Design Code		P			
	9	Governing Conditions	Design Purpose	Blocked Outlet			
	10	Type					
	11	Calculated Orifice Area					
	12	Selected Orifice Area					
	13	Orifice Designation					
	14	Inlet Size	Rating	8	in	300# RF Flange	
	15	Outlet Size	Rating	8	in	300# RF Flange	
	16	Bonnet Type					
	17	Cap Type	Lever				
	18	Gag	Bellows				
	19	Flange Finish					
MATERIALS	20	Body		Steel			
	21	Nozzle / Disc					
	22	Nozzle Ring					
	23	Disc Holder					
	24	Guide					
	25	Bellows					
	26	Spring					
	27	Bonnet Stud Bolting					
PROCESS CONDITIONS	28	Fluid	Phase	Diesel			
	29	Flow Units		US gal/min			
	30	Flow @ Relieving Conditions		8400			
	31	Required Capacity					
	32	Molecular Weight					
	33	Pressure	Operating				
	34	psi-g	Process Set / Spring Set	740			
	35	Temperature °F	Operating / Design / Relief				100
	36	Back Pressure (Constant)		64	psi-g		
	37	Back Pressure (Variable)			psi-g		
	38	Back Pressure (Built-up)					
	39	% Accumulation	% Reseat	10			
	40	Compressibility Factor Z					
	41	Latent Heat of Vaporization			kcal IT/kg		
	42	Specific Heat Ratio Cv/Cp					
	43	Specific Gravity @ Conditions		0.87			
	44	Viscosity		3.7	cP		
	45	Barometric Pressure					
	46	Reaction Force					
	47						

Notes: 1. ASME certified Calculations are to be supplied with bid.
2. Materials are to be suitable for 15% MTBE service.

No.	By	Date	Revision
0	GR	12/17/97	FOR PURCHASE KJG
B	GR	8/26/97	FOR BID
A	GR	8/20/97	FOR REVIEW

INSTRUMENT SPECIFICATION

Relief Valve style 2

Code: 63 | Dwg. No.: | Rev.: 0

Sheet of

1 - FERNDALE INLET RELIEF VALVE

Provided to the NTSB
by Olympic Pipe Line Co.
R N Grainer 5/10/01

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