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Docket No. PG-071388

PUGET SOUND ENERGY

Puget Sound Energy, Inc.
P.O. Box 90868
Bellevue, WA 98009-0868

July 17, 2007

Carole J. Washburn, Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, WA 98504-7250

Attn: Alan Rathbun, Pipeline Safety Director

RE: District Regulator RS #2302 Uprate/PSE Work Order 865000182

Dear Mr. Rathbun:

Pursuant to WAC 480-93-155, Puget Sound Energy (PSE) is submitting a written plan for uprating district regulator station RS 2302 from an MAOP of 464 psig to 580 psig. The request for pressure authorization to operate the inlet piping of the station at an MOP of 562 psig is being submitted under a separate cover.

If you require any additional information, please contact me at (425) 462-3748.

Sincerely,

Kaaren Daugherty, PE
Consulting Engineer, Standards and Compliance

Enclosures

cc: Eric Markell
Karl Karzmar
Sue McLain
Duane Henderson
Stephanie Kreshel

RMS
2

PUGET SOUND ENERGY

Date: 5/30/07

To: Order # 865000182

From: Jeff Webb, Project Engineer

Subject: RS-2302 HP Uprate

A. Purpose

PSE proposes to increase the Maximum Allowable Operating Pressure (MAOP) of its facilities off the South Tacoma 8" Lateral. Williams Northwest Pipeline (WNWP) owns and operates the lateral, and meters and regulates at the South Tacoma Gate Station at the beginning of the lateral. Downstream of the South Tacoma Gate Station, WNWP has an MAOP of 562 psig on the lateral; upstream of the South Tacoma Gate Station WNWP mainlines have a 960 psig MAOP. Currently, PSE's facilities limit the operating pressure of the lateral to 464 psig.

PSE has a district regulator (RS-2302) and an odorizer (RS-1352) co-located at the South Tacoma Gate Station. PSE's South Tacoma Town Border Station (TBS, RS-2716) is located at the end of the lateral. (Refer to Schematic A.)

PSE proposes to increase the MAOP of RS-2302 from 464 to 580 psig and to increase the MAOP of the odorizer to 960 psig per PSE Gas Operating Standard (GOS) 2575.2500. The odorizer was previously retested to 1440 psig on October 18, 2005. RS-2302 will be retested to 870 psig. The retest procedure for RS-2302 will be in a separate document. Additionally, the TBS has been completely rebuilt with an MAOP of 960 psig.

B. Records Review Summary

Requirements:

Gas System Engineering and Project Management conducted a review and evaluation of the design, operation, and maintenance records of the regulating station being uprated in accordance with PSE Gas Operating Standard 2575.2500 to ensure that the proposed pressure increase is safe and complies with federal and state regulations (DOT Part 192.557 and WAC 480-93-155). The review is documented on the applicable System Review Forms and included the following:

1. The design and construction records of affected gas facilities, including pipe, fittings, valves, and both active and inactive services.

2. The design and construction records of affected upstream and downstream pressure regulating stations and meter sets (including sufficiency of overpressure protection.

3. Previous operating pressures and length of time at those pressures for mains and services.

4. The MAOP and MOP of each system connected to the system being uprated.

5. Leakage and leak repair history.

6. Cathodic protection readings on mains for the past three years.

7. The most recent CP reading on each attached service that is electrically isolated. (N/A)

8. The condition and depth of the pipe from the Exposed Pipe Condition Reports.

Summary of findings:

Based on the above record review, a summary of the findings is given below:

1. The lowest rated component(s) on the regulating station and associated piping has a pressure rating of at least 720 psig.

2. The piping for the regulating station has an MAOP of 464 psig, as determined by the original test pressure.

3. Currently, there are no leaks located within the project area that are under evaluation. Review and evaluation of repaired leak history indicates the system integrity is sound.

4. The last leak survey of the entire system was conducted in October 2006. No leaks were found.

5. The cathodic protection review indicates that the system is acceptable to uprate from a corrosion perspective. Any CP discrepancies requiring corrective action are detailed on the PFW form.

6. EPCR findings were acceptable.

C. Preliminary Field Work

Requirements

1. The Maintenance Program Coordinator shall verify that a leak survey has been performed within the last 12 months on all facilities being uprated. If no leak survey has been performed within the last 12 months on any section of pipe being uprated, the Maintenance Program Coordinator shall schedule a leak survey on that particular section. Leaks found shall be classified and recorded in accordance with PSE Gas Operating Standard 2625.1300. **All Grade A and B(A) leaks shall be repaired before the start of the uprate. Gas First Response shall also assess Grade B(1), B(2), and C leaks for the likelihood of an upgrade in leak classification as the result of increased system pressure and have such leaks repaired before the start of the uprate.**

2. If it has been more than one year since the last inspection (last inspection completed on 10/3/06) on any active regulator station listed in the System Review Form "Regulator Station", Pressure Control shall inspect the station. A maintenance work order shall be generated for any required repairs.

3. Pressure Control shall verify all work on pressure regulator stations (e.g. spring/orifice change outs, relief upgrades) listed on PFW Form has been completed in accordance with revised District Regulator Data Sheets.

4. Industrial Meter Operations shall verify all work on industrial or pressure delivery metersets (i.e. spring/orifice changes outs) listed on PFW Form has been completed in accordance with the MSA Design Data sheet.

5. Pressure Control and/or Gas First Response shall access, grease, and operate the following valves and be prepared to operate them during the uprate. A work order for "locate and operate" shall be initiated in SAP for any valve that cannot be accessed or operated. The PM shall add these work orders to the PFW Form.

Valve #	Location
VA-01936	Inlet Valve
VA-07584	Outlet Valve
Other station valves as outlined in retest procedure	

6. Copies of any Exposed Pipe Condition Reports that are generated during the process of completing Preliminary Field Work should be sent to the Project Engineer for review prior to the uprate, and the originals should be sent to the Supervisor, Corrosion Control.

D. Notifications and Responsibilities

The PM shall be responsible for notifying the following parties two weeks prior to beginning the uprate.

Williams Gas Pipelines West (Williams): Williams' Local District Operations to coordinate efforts associated with operating their valve at the station.

PSE Gas Control: Gas Control shall monitor system pressure where RTU's are available (see RTU Table in section D, Not Applicable) and report any abnormalities to the PM during the uprate.

Maintenance Program Coordinator: The Maintenance Program Coordinator shall schedule leak survey contractor (HEATH) to perform the leak survey.

Total Energy System Planning: System Planning shall provide information about any other construction projects that they know of, and inform the PM of the potential impacts of those projects on the uprate, or ways in which the uprate may effect other projects. System Planning shall also provide information regarding the timing or temperature constraints that may need to be taken into account while performing this uprate procedure.

Gas First Response: First Response Supervisor shall review the active leak list prior to the uprate. Gas First Response shall also review all leaks classified during the uprate and plan resources to handle leak repairs and classification upgrades when the pressure is increased.

SC&P Pressure Control: Pressure Control shall raise, control, and monitor system pressures controlled by PSE during the uprate, and administer the retest procedure.

Gas Engineering: Gas engineering shall write and approve procedure documents and review system review forms and research.

E. Uprate Procedure

1. Retest the regulating station (RS-2302) per the approved procedure with subject line "DR #2302 Retest for HP Uprate" (attached).

2. Once all pressure authorization requests and uprate procedures have been reviewed and approved, request WNWP to increase operating pressure on their lateral.

F. Uprate Completion

1. The PM shall notify Gas Control upon completion of the uprate.

2. Pressure Control shall send all pressure charts and the Pressure Recording Form, Gas Control shall send all RTU data, HEATH shall send all survey records, and the Construction Foreman shall send as-builts to the PSE PM.

3. Based on the results of the final leak survey and the specifics of the system that was uprated, the PM shall consult with the Project Engineer to consider scheduling a leak survey of the system for 30 days after the date of completion of the uprate.

4. The PM shall submit the Uprate Approval Form for final approval and validation of the new MAOP to the Manager Delivery Services Engineering and Manager Total Energy System Planning.

5. The PM and Project Engineer shall verify all work on the Post Uprate Work Form are completed and the form signed before closing out the project.

6. The PM is to ensure all signed System Review Forms listed below are included in the original job packet.

A. Preliminary Field Work (PFW)
B. Post Uprate Work (PUW)
C. Uprate Approval
D. Pressure Recording
E. HP Connecting System
F. Main Components
G. Main
H. Uprate Procedure
I. Regulator Station
J. IMO MSA Review
K. HP Service
L. Valve
M. Material Specifications

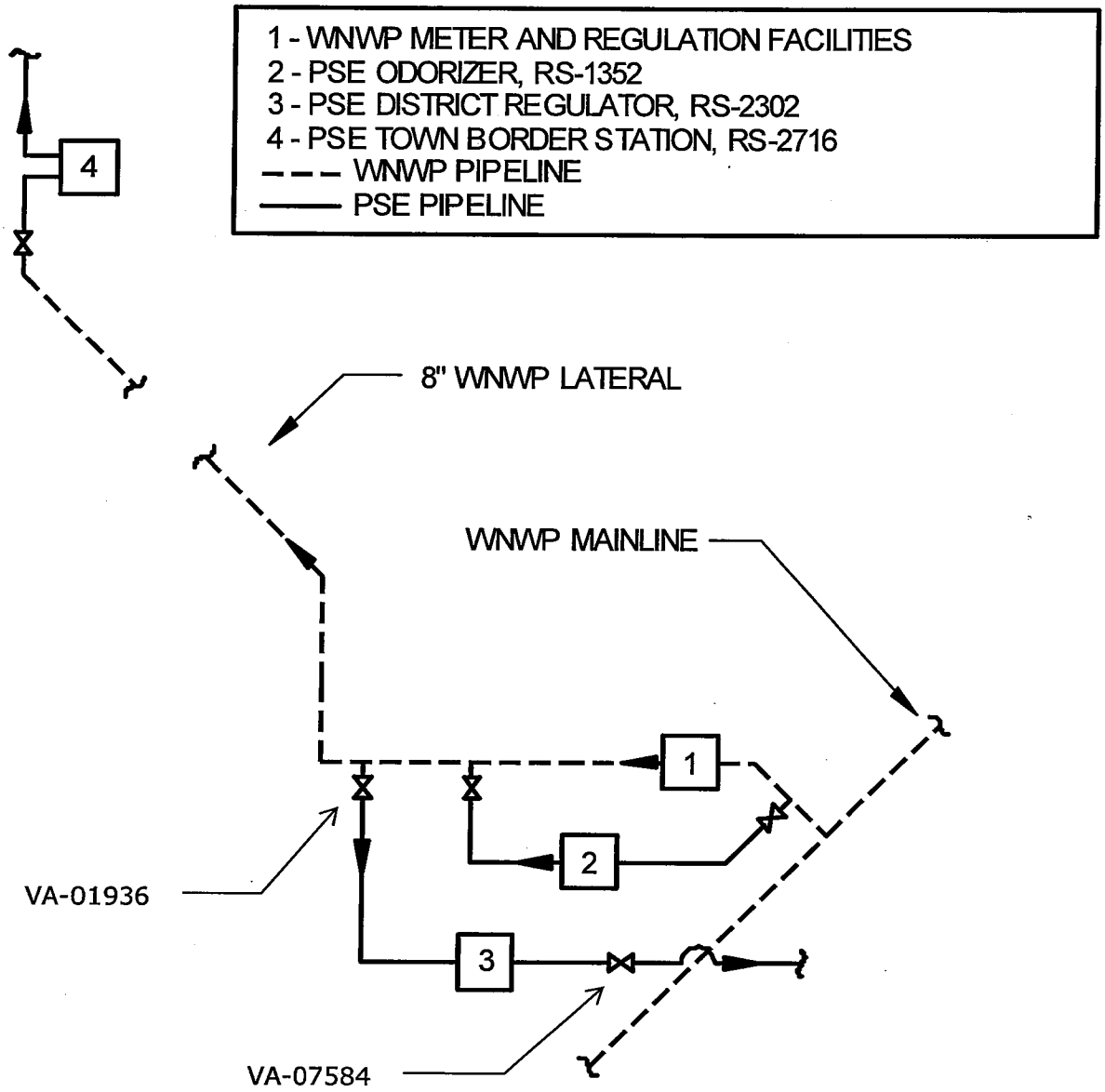
Prepared by	Approved by	Approved by
Jeff Webb, PE *Senior Engineer* *Gas Engineering*	5-31-07 *Larry Anderson, PE* *Consulting Engineer* *TES Planning*	5-30-07 *Joe Ewing, PE* *Consulting Engineer* *Gas Engineering*

Attachments:

A - System Maps/Schematics
B - Leakage report
C - CP report
D - System Review forms

cc: Williams Northwest Pipeline
Project Management
TES Planning
Gas Control
Maintenance Program Coordinator
QA&I Department
Corrosion Control – South
SC&P Pressure Control – South
Instrumentation
Gas First Response

Project Phone List			
Name	Title	Office	Mobile
Don Frieze	Project Engineer	425-462-3862	206-604-3946
Grant Jensen	Williams NW Pipeline	425-868-1010	x, 2051
Bob Parker	Project Manager	425-462-3937	206-604-3338
Dana Kaul	TES Planning	425-462-3994	206-396-1084
Larry Anderson	TES Planning	425-462-3946	206-399-9236
Gas Control	Gas Control	425-882-4622	
Gary Swanson	Maint. Prgm Coord	425-462-3960	
Rich Hake	QA&I Lead Inspector	253-395-6944	253-261-9180
Dave Moffett	Corrosion Control Supervisor	253-476-6216	
Jim Chartrey	Press Ctrl Supervisor	253-476-6088	206-604-5743
Bill Molden	Pressure Control		206-571-2545
Paul Bench	Pressure Control		253-405-8309
Loretta Baggenstos	Instrumentation Supervisor	206-766-6841	425-754-5716
John Hander	Gas First Response Supervisor	253-476-6326	253-405-7194



SCHEMATIC A
S TACOMA LATERAL AND FACILITIES

Attachment B

Transmission Patrol Report

OP MAP:	260068	Quarter : 1 2 3 4	PI Inspector Area:	1 (floater to cove	Approx. Footage:	0
			PI Cell Phone:	253-377-7038	District Operation Area:	

Maintenance Log

Inspect Before:
9/21/2007

DATE	REMARKS	F-OO1 submitted	PI Notified? (yes/no)	Number of Leaks Found	Vegetation management needed?	Inspector:
12/7/2006	Boeing Fredrickson Odorizer & South Tacoma Odorizer - No new structures or HCA's	No	No	0	No	Van Scoyoc
5/9/2007	No concerns	No	No	0	No	Allen, E

Attachment C

January 16, 2007
J# 109017034 (865000182)
Job Title: S. Tacoma Lateral HP Uprate
Reviewer: Steve Dickison SD

SYSTEM RECORDS REVIEW-Cathodic Protection

There is 1 galvanic system providing cathodic protection for the high-pressure gas main proposed for uprate. It is listed in the table below. There are no separately protected main or services affected by the proposed uprate. The data is attached. The following table summarizes the data.

system	Type (Note 1)	# of TS	# of PSP's	# of unacceptable PSP's	longest remediation time, days	average remediation time, days
031067	GA	2	14	0	0	0
total		2	14	0		0

Notes: 1) IC = impressed current system
G = galvanic system
TS(Ind) = separately protected service or main

The percentage of cathodic protection (CP) readings outside of acceptable criteria, during the past three years, is .0% (0 out of 14), measured on the main proposed for uprate. The average time to restore low CP reads to acceptable CP levels was 0 days. The South Tacoma gate station, DR and odorizer at this location were critical bond tested on February 24, 2006.

There are currently 0 active or repaired leaks in this area. There is 1 Exposed Pipe Condition Report associated with STW, for the pipe being studied. The report indicates the pipe is in good condition and the coating bonded and in fair to good condition.

Current cathodic protection (CP) readings on the entire system are within acceptable levels. The piping under review has received satisfactory cathodic protection historically, and is acceptable for uprate from a corrosion perspective.

PUGET SOUND ENERGY

Data Sheet

History Range: 01/01/2000 to 01/16/2007

Galvanic FL: GA-031067 - 176 ST E & 78 AVE E(*)

DESCRIPTION: 176 ST E & 78 AVE E
Special Instr: (see plat # 262071)
End Spec Inst

Current Status: **CRTE / CNST** *Work Center:* **PCCST01** - C.C.S. TECH 1 Scott Salazar (OLY)

Street: 176 ST E & 78 AVE E *City:* Puyallup *Plat:* 262.068

Location X: 223 FT E of C/L *Location Y:* 20 FT S of C/L

CP SYSTEM PROTECTED FEET: 7,228 CRITICAL BOND START DATE: 10/20/2005

CRITICAL BOND TESTED DATE: 10/26/2005 CRITICAL BOND COMPLETED DATE: 02/24/2006

RETIRED DATE: ? Default Retired Date (Y/N)?: ?

Test Site: TS-028016 - Test Site 028016 of GA-031067

Street: 176 ST E & 78 AVE E *City:* Puyallup *Plat:* 262.071

Location X: 223 FT E of C/L OF 78 AVE E *Location Y:* 20 FT S of C/L OF 176 ST E

TEST POINT LOCATION: Wire Box CRITICAL BOND INDICATOR: No

ISOLATION FACILITY TYPE: ? ASSOCIATED REG STATION: NONE

RETIRED DATE: ? Default Retired Date (Y/N)?: ?

Notification	Date	By	PSP on	PSP off	PSP Inst Off	100mV Delta?
F380574	01/05/2000	SGUTHR	1200			
F404913	02/27/2001	AJOHAN	1000			
F433399	02/20/2002	AJOHAN	1312			
F459636	02/04/2003	DHART	1213			
1021793	02/12/2004	AJOHAN	930			
1051498	02/25/2005	AJOHAN	950			
1077847	03/01/2006	MBABCO	1305			

Test Site: TS-028017 - Test Site 028017 of GA-031067

Street: S TAC GATE STATION # 2302 (ODOR *City:* Tacoma *Plat:* 262.068

Location X: 0 FT *Location Y:* 0 FT

TEST POINT LOCATION: Service CRITICAL BOND INDICATOR: No

ISOLATION FACILITY TYPE: ? ASSOCIATED REG STATION: NONE

RETIRED DATE: ? Default Retired Date (Y/N)?: ?

Notification	Date	By	PSP on	PSP off	PSP Inst Off	100mV Delta?
F380575	01/05/2000	SGUTHR	1200			
F404914	03/08/2001	DLAGER	1000			
F433400	02/15/2002	AJOHAN	1150			
F459637	02/04/2003	DHART	1145			
1021794	02/03/2004	AJOHAN	1160			
1051499	02/25/2005	AJOHAN	910			
1077848	04/26/2006	JBILLI	1060			

South Tacoma Lateral HP Uprate
EPCR Report

Order:109017034

Notification	Description	City/County	SAP Order	Inspected By	Company	Date	Main/Service	Length inspected	Pipe size	Pressure
10655551	262.068 176 ST E & 62 AVE E PUYALLUP	PUYALLUP PIERCE	863000546	BRIAN LACKIE	Pilchuck	10/3/2006	Main	6	1/2"	HP

South Tacoma Lateral HP Uprate
EPCR Report

Order:109017034

Pipe Type	Pipe depth	Ist PSP	2nd PSP	Location X	Location Y	Coating Type	Coating condition	Coating adhesion	Coating damage	External corrosion
Steel Wrap	24	-1.2	-1.2	4' N S FENCE	22' E W FENCE	X-Tru Coat	Good	Bonded	No	No

Attachment D

PUGET SOUND ENERGY

HP Main Review

Uprate Job Number: 86500182 - RS-2302
Uprate from 464 psig to 580 psig

	Main I.D.	Installation Date	Job Number	Pipe Size (inches)	Pipe Grade	Wall Thickness (inches)	Material Type	Test Pressure (psig)	Established Segment MAOP (psig)	%SMYS at ( ) psig	%SMYS at ( ) psig	Comments
1	No HP mains are affected by this uprate									#VALUE!	#VALUE!	
2										#VALUE!	#VALUE!	
3										#VALUE!	#VALUE!	
4										#VALUE!	#VALUE!	
5										#VALUE!	#VALUE!	
										#VALUE!	#VALUE!	

Operating History		
Operating Pressure (psig)	From	To
440	Jan-00	May-03
420	May-03	Aug-03
445	Aug-03	Current

* To be calculated for main sections

Note: 1. Pipe Grade should be typed as; if Grade B = Gr. B, and if X42 or something similar = X42, etc.

2. Wall Thickness should be typed using three digits after the decimal point.

I certify that the research of this information was performed according to company standards;

Researched by: J. H. W. Date: 4-25-07

I certify that the calculations performed based on this information was performed according to company standards;

Calculations Performed by: _____ Date: _____

I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;

Evaluated by: _____ Date: _____

PUGET SOUND ENERGY

HP Main Component Review*

Uprate Job Number: 865000182 - RS-2302
Uprate from 464 psig to 580 psig

	Main I.D.	Job Number	Drawing Number	Sheet	Component	Quantity	Pressure Rating (psig)	Main Size (inches)	Main Grade	Wall Thickness (inches)	%SMYS** of branch connection @ current psig	%SMYS** of branch connection @ proposed psig	Comments
1	**NO HP MAINS ON THIS UPRATE**												
2													
3													
4													
5													

* All components not associated with Regulator Stations (see Regulator Station Review form) and HP services (see Active HP Service Review form)
** To be calculated for branch connections (if applicable)

I certify that the research of this information was performed according to company standards;

Researched by: JJ Ull Date: 4-25-07

I certify that the calculations performed based on this information was performed according to company standards;

Calculations Performed by: JJ Ull Date: /

I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;

Evaluated by: JJ Ull Date: ↓

PUGET SOUND ENERGY

Regulator Station Review

Uprate Job Number: 865000182 - RS-3202
Uprate from 464 psig to 580 psig

	D.R. Number	Main I.D.	Date Installed	Job Number	Retirement Method	Drawing Number	U/S Tie-in	Pressure Rating (psig)	*MAWP* at Branch Connection @ current psig	MAWP* at Branch Connection @ proposed psig	Inlet Valve	Pressure Rating (psig)	Flanges (ANSI)	Inlet Header Valve	Pressure Rating (psig)	Flanges (ANSI)	Strainers	Pressure Rating (psig)	Flanges (ANSI)	1st Stage Regs	Pressure Rating (psig)	Flanges (ANSI)	1st Interstage Valve	Pressure Rating (psig)	Flanges (ANSI)	2nd Stage Regs	Pressure Rating (psig)	Flanges (ANSI)	By-Pass Valve	Pressure Rating (psig)	Flanges (ANSI)	Control/SCTU/Gauge Taps on Upstream/1st Stage	Pressure Rating (psig)	Other Components	Pressure Rating (psig)	Flanges (ANSI)	Overpressure Protection	Pressure Rating (psig)	Pass/Fail	Inlet Test Pressure	U/S Segment MAOP	Comments
1	2302	Williams	August-90	905-225	Active	3D8-566	8" x 6" tee	N/A	N/A	N/A	4" Fig. 2045 1/2	740	N/A	2" Fig. 2045 1/4	720	300	2" Brooks D2600	720	300	2" Mooney FG-30	720	300	N/A	N/A	N/A	2" Mooney FG-30	740	300	2" Fig. 2045 1/2**	740	300	1/2" x 6" thd nipple	N/A	4" Kerotest insulated coupling***, 3/4" service tee H17501	720	N/A	N/A	N/A	N/A	696	464	Monitor overpressure protection. Revised on 109006704. **By-pass valve for future heater. ***Per Kerotest rep, coupling is class 300.
1																																											
2																																											
3																																											
4																																											
5																																											
6																																											
7																																											
8																																											
9																																											
10																																											

* To be calculated for branch connections (if applicable)
All weld caps used to retire regulator stations tested to 415 psig or higher.

I certify that the research of this information was performed according to company standards;
Researched by: _____ Date: 4-25-07

I certify that the calculations performed based on this information was performed according to company standards;
Calculations Performed by: _____ Date: _____

I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;
Evaluated by: _____ Date: _____

I certify that the Overpressure Protection on applicable facilities is adequate for the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;
Evaluated by: _____ Date: _____

PUGET SOUND ENERGY

Commercial-Industrial MSA Service Review

Uprate Job Number: 86500182 - RS-2302
Uprate from 464 psig to 580 psig

								Dates at Pressure			Service Pipe		MSA only										
	Address	Original Job Number	Copy of D4 ?	Pressure Account ID #	Installation Date	Test Pressure	Operating Pressure	From	To	Established MAOP	Pipe Size	Material Type	1st Stage Reg	Pressure Rating	2nd Stage Reg	Pressure Rating	Meter Type	Pressure Rating	Overpressure Protection	Pressure Rating	Relief Review Pass/Fail	Comments
1	NO COMMERCIAL-INDUSTRIAL MSA'S AFFECTED BY THIS UPDRATE																					
2																						
3																						
4																						
5																						
6																						
7																						
8																						

I certify that the research of this information was performed according to company standards;
Researched by: _____ Date: 4-25-07
I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form and MSA data sheets are completed;
Evaluated by: _____ Date: _____
I certify that the Overpressure Protection on applicable facilities is adequate for the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;
Evaluated by: _____ Date: _____

PUGET SOUND ENERGY

System Valve Review*

Uprate Job Number: 865000182 - RS-2302
Uprate from 464 psig to 580 psig

	Valve Number	Valve Type	Valve Size	Pressure Rating (psig)	Flanges (ANSI)	Location	Inspection Date	Maintenance W.O. required to operate valve	Maintenance W.O. completed	Comments
1	**No valves outside the station are affected by this uprate.**									
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

* Does not include valves associated with Regulator Stations (see Regulator Station Review form) or HP services (see Active HP Service Review form)

I certify that the research of this information was performed according to company standards;
Researched by: _____ Date: 4-25-07
I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form and MSA data sheets are comple
Evaluated by: _____ Date: _____

PUGET SOUND ENERGY

HP Service Review

Uprate Job Number: 865000182 - RS-2302
Uprate from 464 psig to 580 psig

											Service Pipe only							MSA only																							
	Address	Main I.D.	Job Number	D4	Pressure Account ID #	Installation Date	Retirement Method	U/S Tie-in	Pressure Rating (psig)	%SMYS* of Branch Connection @ proposed psig	Inlet Valve	Pressure Rating (psig)	Pipe Size	Pipe Grade	Wall Thickness (inches)	Material Type	%SMYS* @ proposed psig	Inlet Riser Valve	Pressure Rating (psig)	Flanges (ANSI)	Strainer	Pressure Rating (psig)	Flanges (ANSI)	1st Stage Reg	Pressure Rating (psig)	Flanges (ANSI)	2nd Stage Reg	Pressure Rating (psig)	Flanges (ANSI)	Meter Type	Pressure Rating (psig)	Flanges (ANSI)	Control/RTU/Gauge Taps on Upstream/Interstage	Pressure Rating (psig)	Other Components	Pressure Rating (psig)	Flanges (ANSI)	Overpressure Protection	Pass/Fail	Test Pressure	U/S Segment MAOP	Comments
1																																										
2	No HP Services are affected by this uprate.																																									
3																																										
4																																										
5																																										
6																																										
7																																										
8																																										
9																																										
10																																										
11																																										
12																																										

* To be calculated for branch connections (if applicable) and service piping

I certify that the research of this information was performed according to company standards;
Researched by: [signature] Date: 4-25-07
I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form and MSA data sheets are completed;
Evaluated by: ✓ Date: ✓
I certify that the Overpressure Protection on applicable facilities is adequate for the proposed MAOP, provided the modifications identified on Preliminary Field Work Form are completed;
Evaluated by: ✓ Date: ✓

PUGET SOUND ENERGY

Material Specification

Uprate Job Number: 865000182 - RS-2302

Uprate from 464 psig to 580 psig

Material Specification	% SMYS @ MAOP (580 psig)
Pipe: 4" x 0.188", X42	16.53
Weld Fittings 4" x 0.237", Y-42	13.12
Pipe: 2" x 0.154", Gr. B	12.78
Pipe: 6" x 0.280", X-42	16.34
Weld Fittings 6" x 0.280", Y-52	13.20

I certify that the research of this information was performed according to company standards;

Researched by: _____ Date: 4-25-07

I certify that the system can be uprated to the proposed MAOP, provided the modifications identified on Preliminary Field Work Form and MSA data sheets are completed;

Evaluated by: _____ Date: _____

PUGET SOUND ENERGY

MAOP's of Connecting Systems and Facilities

Uprate Job Number: 865000182 - RS-2302
Uprate from 464 psig to 580 psig

	DR Number/Block Valve Number/HP service and Address	Plat Map	Pressure Controlman	MAOP	MOP	Initial Set Pressure	Pressure Reads after Incremental Increase 1	2	3	4	Comments
1	WILLIAMS NWP, 30" MAINLINE	262.068	N/A	960	960	N/A	N/A	N/A	N/A	N/A	
2	IP-290	262.068	N/A	60	60	N/A	N/A	N/A	N/A	N/A	Downstream IP System
3											
4											

I certify that the research of this information was performed according to company standards;

Researched by: JH WH Date: 4-25-07

I certify that the pressures of the Regulator Stations and adjacent facilities have been properly checked and adjusted according to company standards;

Pressure Control: N/A Date: _____

PUGET SOUND ENERGY

Preliminary Field Work

Uprate Job Number: 865000182 - RS-2302

Uprate from 464 psig to 580 psig

	SAP Number	Person Assigned	Address	Description	Completion Date	Completed by
1	865000182	J Webb	S Tacoma Gate Station	Retest DR 2302		

I certify that the modifications required prior to performing the uprate have been completed;

Project Manager_____ Date_____

PUGET SOUND ENERGY

REV. 1

Date: 7/3/07

To: Order #865000182

From: Jeff Webb, Project Engineer

Subject: DR #2302 Retest for HP Uprate

Scope:
This procedure identifies the steps necessary to retest DR #2302 in order to increase the MAOP to 580 psig, per Gas Operating Standard 2575.2500. Approximately 150' of 4" regulator station piping, from the inlet tie-in point on a 4" Williams Valve to the station outlet valve, will be tested with natural gas at or above a pressure of 870 psig (not to exceed 877 psig) for one hour to establish a station MAOP of 580 psig (the limiting branch connection reaches 20% SMYS at 580 psig). The station is in a class 3 location and will experience a maximum hoop stress of 25% SMYS during the pressure test.

A. Equipment Needed

- Test medium (Natural Gas)
- CNG Flatbed Truck (Not recommended that a Bowgen Trailer be used)
- Blow Down Stacks
- Pressure and temperature gauges (spring gauges, recording charts, manometer), hoses, and test connections
- Natural Gas CGI

B. Safety Precautions, Preliminary Work and Notification

- Recognize and control potential ignition sources.
- Direct venting of gas up and away from people, buildings, and traffic.
- Where practical, sections of HP main shall be covered with steel plates during testing.
- Notify PSE Construction Coordinator (or PSE Q/A inspector) prior to beginning the job.
- Notify Project Engineer 48 hours before beginning the leak test.
- Notify the proper Fire, Police Departments before venting the gas.

C. DR-2302 Pretest Requirements

1. DR #2302 can not be shut down until Bethel GS (RS-2685) gas delivery pressure is raised to 55 PSIG minimum.

2. Pressure Control shall notify Gas Control and TES-Planning (call Dana Kaul or Tony Sayavong) at least 48 hours prior to shut down of the station.

3. The PSE PM shall schedule Heath Consultants at least 1 week prior to the test.

4. The PSE PM shall notify Troy Slack (360-507-4600) with William's at least two full weeks prior to the uprate and ask for their assistance with operating William's valve A.

5. The CNG equipment shall be filled to full capacity with natural gas and ready for use to raise the pressure in the isolated station piping to the required test pressure.

6. Verify odorizer injection valve, located on PSE piping downstream of valve B, is closed and plugged. If not, contact Project Engineer. Odorant injection on Williams 8" HP line is to continue throughout this procedure.

7. Ambient local temperature for the shutdown period (7am to 9am) must be forecasted to be above 40° F.

8. Excavate valve H and be prepared to install a pancake on the upstream side.

D. Prepare DR #2302 for Testing (See Figure 1)

1. <u>Test shutdown should occur as close to 7:00 AM as possible to ensure system sees peak demand.</u> Slowly back off feed at District Regulator # 2302 until station no longer feeds. Station should stop feeding at or above 45 PSIG. If station does not quit feeding at or above 45 psig, give the Project Engineer a call before backing the feed off any further.

2. Once regulator station 2302 is no longer feeding, wait until after 9:00am to ensure station is not needed for flow stability. Ensure system sees peak and has stabilized. Do not continue if system does not stabilize. Contact the Project Engineer and System Planning if the system does not stabilize and bring DR 2302 back online if necessary to prevent further pressure drop. When the system has been verified to

be stable, close Williams's valve A. **A pressure test will occur against Williams's Valve A later in the procedure so please lubricate and close valve to achieve the best possible seal.**

3. Close valve H.

4. Safely blow down outlet piping using existing purge fittings on the regulator runs. Then install a pancake on the upstream side of valve H (minimum thickness of pancake 0.5") for the pressure test.

5. Verify the 4" inlet valve (A) on the Williams Pipeline system is closed.

6. Install threaded plugs at ends of RTU and control line risers.

7. Remove Pilots and plug all connections.

8. Prepare all regulators, with the goal that gas will freely flow upstream and downstream, for the pressure test to insure a uniform test pressure.

9. Connect the CNG equipment to the station piping to be tested.

10. Ensure valves B, C, D, E, F, and G are open.

F. Test Inlet Piping – Refer to Attached Figure 1

Notes:

- It is *not* critical to obtain complete shut-off at the inlet valve provided the pressure in the test section remains within the prescribed pressure range for the duration of the test.

- When the test pressure has stabilized and it has been deemed safe Heath Consultants (leak surveyors) will start continuous gas monitoring of the test section. The leakage monitoring will last for the duration of the test.

1. Increase test pressure to approximately 585 pisg. Inspect piping being tested for leaks. Call Project Engineer before proceeding.

2. Further increase test pressure to between 870 and 875 psig **(do not exceed 877 psig)**. Maintain test pressure by continuing to inject CNG or vent gas as necessary to maintain pressures within this range for one hour, per Gas Standard 2525.3300. Notify the Project Engineer if unable to maintain the minimum test pressure. The test is to be approved by Project Engineer prior to blow down.

E. Return DR #2302 On-Line

1. Remove the CNG injection equipment and attach a vent stack.

2. Vent test pressure down to 450 psig, then close valves B, D, and F.

3. Williams to open Valve A. They are no longer required on site.

4. Further vent the test pressure to 0 PSIG between valves F, D, and H.

5. Close valves G and E to create a double block between the pancake and the 450 psig gas.

6. Remove the pancake on the upstream side of valve H and connect the piping.

7. Purge piping between valves D, F, and H to 100% gas.

8. Reassemble DR by restoring regulators and reconnecting pilots and plugged vent lines.

9. Pressure Control shall then restore regulators settings and perform stroke and lock-up test to insure proper operation. Return regulators to previous lockup pressure of 57 psig (downstream), 200 psig (interstage), and 64 psig (monitor).

10. Pressure Control shall notify Gas Control and TES-Planning that DR #2302 is back on line.

11. If the outlet pressure of the Bethel GS (RS-2685) was adjusted in step C1, Pressure Control to return to previous setting.

12. Pressure Control shall record the test results from pressure test on PSE Form 1928 and send this form and the recording chart to the Project Engineer.

13. The Project Engineer shall send leak survey results to the Maintenance Planner and keep a copy for the job folder.

14. Copies of all test, regulator, and valve records, as-built drawings, and as-built schematics to be sent to PSE Project Manager (Bob Parker, EST05E) to update Engineering records and include in job folder

Prepared by

Jeff Webb
Senior Engineer
Gas Engineering

Approved by

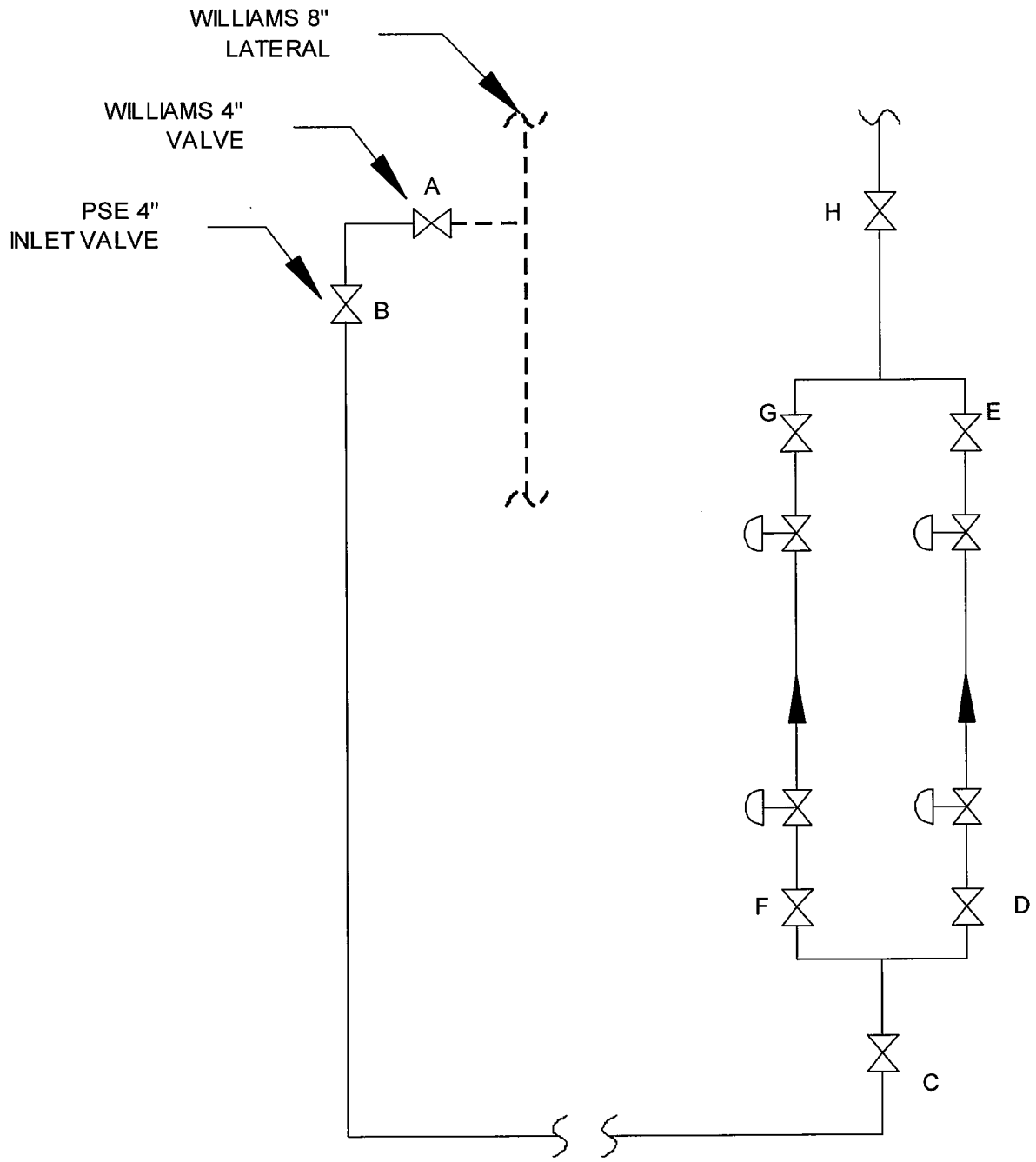
7/17/07
Dana Kaul
Senior Engineer
TES Planning

Approved by

for Joe Ewing 7/16/07
Consulting Engineer
Gas Engineering

cc: Gas Control
Pressure Control
Pilchuck
Quality Assurance and Inspection

Project Phone List				
Name	Title	Office		Mobile
Don Frieze	Project Engineer	425-462-3862		206-604-3946
Dave Lockhart	Quality Assurance and Inspection	360-476-6097		
Dana Kaul	TES Planner	425-462-3994		206-396-1084
Tony Sayavong	TES Planner	425-462-3847		425-766-0220
Dispatch	Gas Control	425-882-4622		
Joe Ewing	Consulting Engineer	425-4623953		206-255-8165
Jim Chartrey	Press Ctrl/Instr	253-476-6088		206-571-2476
Bob Parker	Project Manager	425-462-3937		206-604-3338
John Hander	First Response Supervisor	253-476-6326		
Larry Anderson	Consulting Engineer TESP	425-462-3946		206-399-9236
Troy Slack	William's Pipeline	360-507-4600		
Dave Naro	Project Manager-Pilchuck	206-418-4230		(206) 396-8761



RS-2302
FIGURE 1

MAPS

GO

HERE

[redacted]

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER: 905-225
I.R. NUMBER: 6F94-1
DATE: 1-12-91

JOB LOCATION: SO TAC. GATE STATION

CONTRACTOR OR FITTER: Pipeline
INSPECTOR: Roger Sheetz

SECTION TESTED:

TEST INFORMATION: STARTED: 4:00 A.M. (P.M.) PRESSURE: 696½ psig DATE: 1-11-91
COMPLETED: 4:00 A.M. (P.M.) PRESSURE: 696½ psig DATE: 1-12-91
TYPE TEST: NiTrogen LEAKAGE: X STRENGTH: X

TESTING MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC ☐ GAUGE ☐ SPRING ☐ RECORDING ☐ DEAD WEIGHT

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
1-11-91	4:pm	696½	
1-12-91	12:01 am	696	
1-12-91	4 pm	696½	

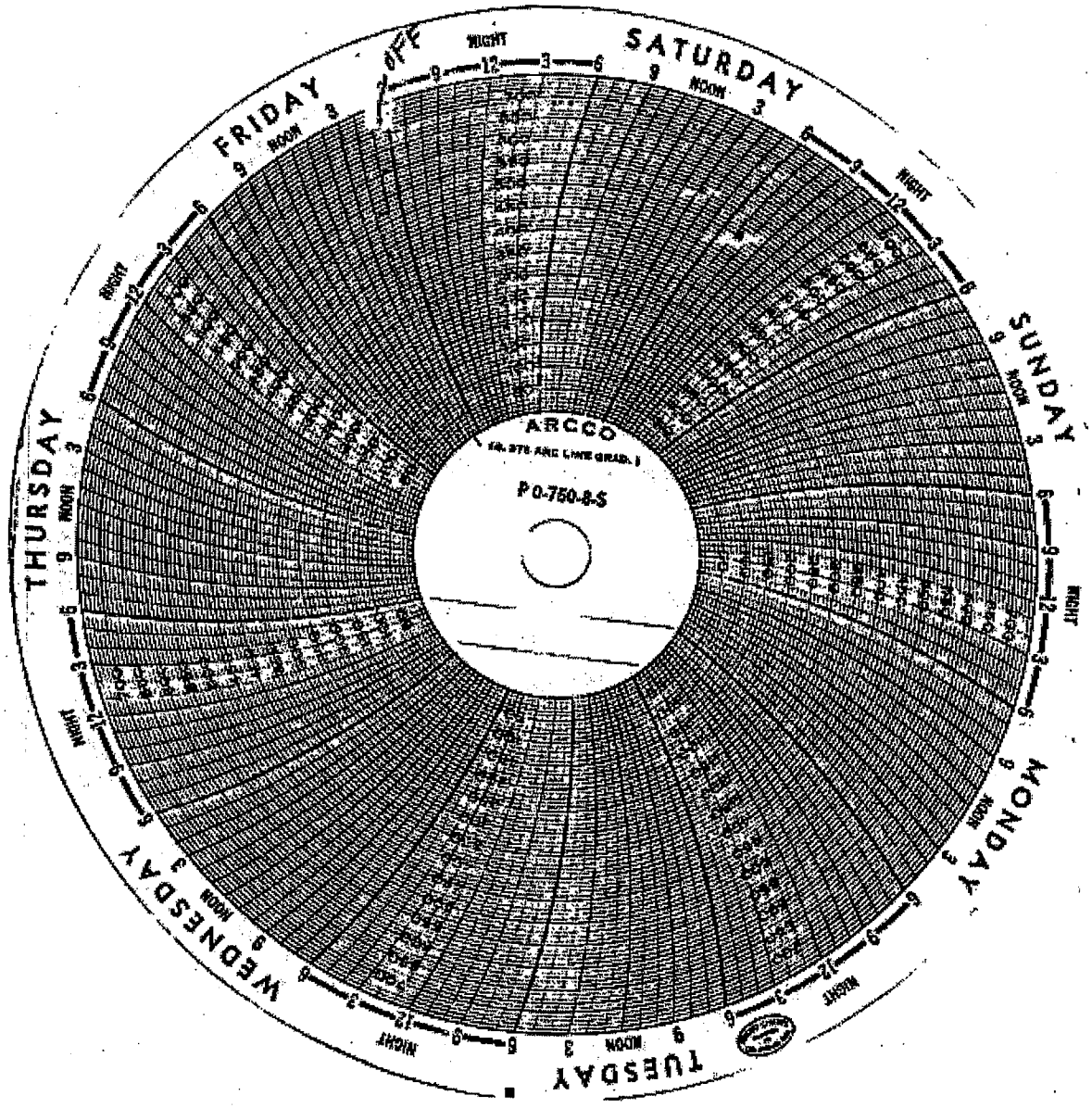
RESULTS: OK
ACCEPTED: X
REJECTED:

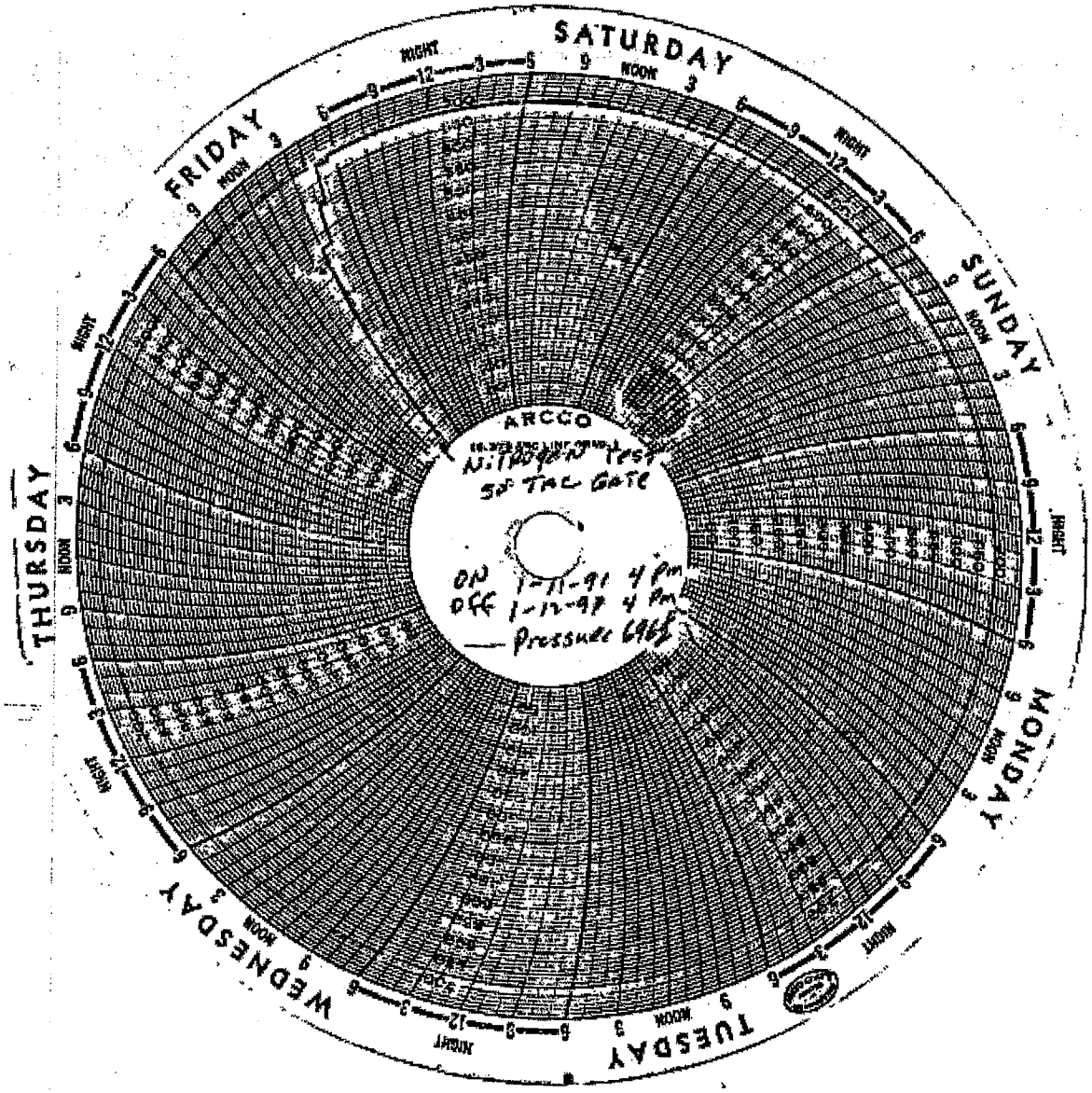
REMARKS: TESTED 4" INLET PIPING 200' 2" INLET PIPING 30' & 4" HEADER PIPING REG STATION (2302)

SIGNED: [signature]

WNG 800.1

[redacted]


SATURDAY
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
OFF
ARCCO
P 0-750-8-S


SATURDAY
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
NIGHT
NOON
ARCCO
Nitrogen Test
SF TAC GATE
ON 1-11-91 4 PM
OFF 1-12-91 4 PM
Pressure 6965

REPORT OF PRESSURE TEST ON NEW MAIN

WNG 746.2 S (7/93) O.P.S. 7.14

JOB NUMBER	IR NUMBER	DATE
109006704		01-29-00

JOB LOCATION: South Tacoma Gate 176th st E

CONTRACTOR OR FITTER: PSE INSPECTOR: _____

SECTION TESTED: 23' 4" first stage Reg pipe

TEST INFORMATION

STARTED 16:00 (AM) (PM) PRESSURE 803.4 PSIG DATE 01-29-00

COMPLETED 24:00 (AM) (PM) PRESSURE 803.5 PSIG DATE 01-29-00

TYPE OF TEST: ☐ LEAK ☑ STRENGTH

TEST MEDIUM: ☐ AIR ☑ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☑ SPRING ☑ RECORDING ☑ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	T 2	T 3	T 4
☐ BURIED	☐ BURIED	☐ BURIED	☐ BURIED
☑ EXPOSED	☑ EXPOSED	☐ EXPOSED	☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☑ ACCEPTED ☐ REJECTED BY: _____

☐ PHONE ☐ IN PERSON DATE: 01-29-00

REMARKS: _____

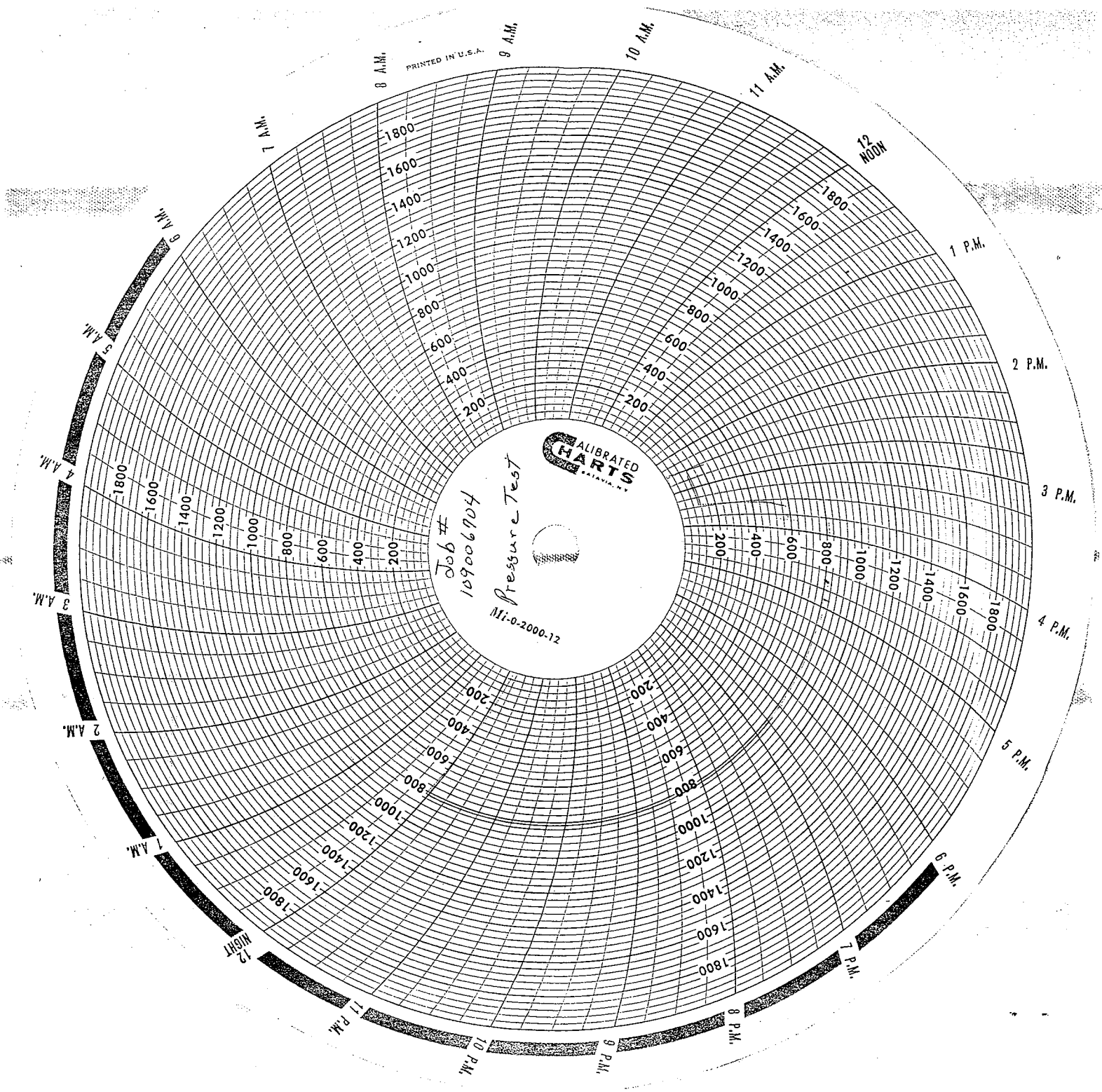
SIGNED: Lee Otte
PRESSURE CONTROL

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2*	T1	T2	T3	T4
		spring c	Dead wt	E Run	W Run		
01-29-00	14:30	110#		67.2	67		
" " "	14:45	110#		67.2	67		
" " "	15:00	111#		67.4	67		
" " "	15:15	111#		67.0	67.2		
" " "	15:30	111#		67.2	67.2		
" " "	16:00	101#	803.4	66.2	66		
" " "	16:30	101#	803.0	66	65.2		
" " "	17:00	101#	803.5	66.4	65.4		
" " "	17:30	101#	803.4	66.2	65.4		
" " "	18:00	101#	803.4	66.2	65.2		
" " "	18:30	101#	803.4	66.2	65.2		
" " "	19:00	101#	803.5	66.2	65.4		
" " "	19:30	101#	803.5	66.2	65.4		
" " "	20:00	101#	803.6	66.2	65.6		
" " "	20:30	101#	803.6	66.2	65.6		
" " "	21:00	101#	803.5	66.0	65.6		
" " "	21:30	101#	803.5	66.0	65.6		
" " "	22:00	101#	803.5	66.0	65.6		
" " "	22:30	101#	803.5	66.0	65.6		
" " "	23:00	101#	803.5	66.0	65.6		
" " "	23:30	101#	803.5	66.0	65.6		
" " "	24:00	101#	803.5	66.0	65.8		

*IF REQUIRED BY THE WRITTEN PROCEDURE


PRINTED IN U.S.A.
7 A.M.
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9 A.M.
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1 P.M.
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5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 MIDNIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
200
400
600
800
1000
1200
1400
1600
1800
CALIBRATED CHARTS
Job # 10900604
Pressure Test
MI-0-2000-12

PUGET SOUND ENERGY

G1 - Inspection Notification 1116979

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **4**
Category: **G Distribution**

Street: (SO TAC GATE)176 ST E & NW PLN
City: Puyallup ***Plat:*** 262.068
Location X: 27 FT S of N . P/L EASEMENT
Location Y: 18 FT W of E . P/L EASEMENT
RS-2302 Instructions **Functional Location W/C: PGRPC011: P.C. Tech 11 Paul Bench (TAC)**
DESCRIPTION: F-TWO STAGE DIST. REG.
Special Instr: ABOVE GROUND
End Spec Inst

Extra Lead Time required:			
PERMIT REQUIRED?	:	TRAFFIC CONTROL REQUIRED?	:
FLAGGER REQUIRED?	:	VACUUM ROAD BOX?	:
REQUIRES ADDITIONAL PEOPLE?	:	ACCESS ARRANGEMENT REQUIRED?	:
AUTO ASSIGN SERVICE PROVIDER?	:	SERVICE PROVIDER WORK CENTER	:
COORDINATE WITH PSE	:		

Notification Long Text:

Regulator Station Check List
[ ] Operate all Valves.
[ ] Check Pressures.
[ ] Check Strainer.
[ ] Check for leaks.
[ ] Check O/P protection.
[ ] Check stroke and lock-up.
[ ] Check atmospheric corrosion.
[ ] Check positions of all valves.
[ ] Check damage.
[ ] Check Signage.

Replaced (75 duro w/60) diaphragms both runs, both stages. Cleaned strainers both runs. Rebuilt mooney series 20 pilots (4) workers and monitors 1st stage both runs. Rebuilt ZSC100 pilots 2nd stage both runs. Retubed station.

Requested by: ***Req'd Start:*** 10/01/2006 ***Req'd End:*** 12/31/2006 ***Last Carried Out:*** 10/03/2006
Carried Out: 10/03/2006 ***Compl. by:*** PBENCH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code

PUGET SOUND ENERGY

G1 - Inspection Notification 1116979

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **4**
Category: **G Distribution**

Reading for:	Type:	Value:	UoM	Evaluation code
	ATMOSPHERIC CORROSION		EA	No Corrosion
Run 1 of Stage 1 of RS-2302	RUN 1 INLET PRESS	445.50	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS FOUND	202.10	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS LEFT	202.10	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS FOUND	205.00	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS LEFT	205.00	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS FOUND	66.00	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS LEFT	66.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 INLET PRESS		PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS FOUND	201.40	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS LEFT	201.40	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS FOUND	205.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS LEFT	205.00	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS FOUND	66.00	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS LEFT	66.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 INLET PRESS	202.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS FOUND	55.10	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS LEFT	55.10	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS FOUND	57.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS LEFT	57.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 INLET PRESS	202.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS FOUND	55.10	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS LEFT	55.10	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS FOUND	57.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS LEFT	57.00	PSI	

PUGET SOUND ENERGY

G1 - Inspection Notification 1070087

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **3**
Category: **G Distribution**

Street: (SO TAC GATE)176 ST E & NW PLN
City: Puyallup ***Plat:*** 262.068
Location X: 27 FT S of N . P/L EASEMENT
Location Y: 18 FT W of E . P/L EASEMENT
RS-2302 Instructions **Functional Location W/C: PGRPC011: P.C. Tech 11 Paul Bench (TAC)**
DESCRIPTION: F-TWO STAGE DIST. REG.
Special Instr: ABOVE GROUND
End Spec Inst

Extra Lead Time required:			
PERMIT REQUIRED?	:	TRAFFIC CONTROL REQUIRED?	:
FLAGGER REQUIRED?	:	VACUUM ROAD BOX?	:
REQUIRES ADDITIONAL PEOPLE?	:	ACCESS ARRANGEMENT REQUIRED?	:
AUTO ASSIGN SERVICE PROVIDER?	:	SERVICE PROVIDER WORK CENTER	:
COORDINATE WITH PSE	:		

Notification Long Text:

Regulator Station Check List
[ ] Operate all Valves.
[ ] Check Pressures.
[ ] Check Strainer.
[ ] Check for leaks.
[ ] Check O/P protection.
[ ] Check stroke and lock-up.
[ ] Check atmospheric corrosion.
[ ] Check positions of all valves.
[ ] Check damage.
[ ] Check Signage.

GT E31367

Requested by: ***Req'd Start:*** 10/01/2005 ***Req'd End:*** 12/31/2005 ***Last Carried Out:*** 10/03/2006
Carried Out: 10/18/2005 ***Compl. by:*** PBENCH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
	ATMOSPHERIC CORROSION		EA	No Corrosion
Run 1 of Stage 1 of RS-2302	RUN 1 INLET PRESS	440.00	PSI	

PUGET SOUND ENERGY

G1 - Inspection Notification 1070087

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **3**
Category: **G Distribution**

Reading for:	Type:	Value:	UoM	Evaluation code
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS FOUND	197.40	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS LEFT	197.40	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS FOUND	205.00	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS LEFT	205.00	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS FOUND	65.10	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS LEFT	66.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 INLET PRESS	440.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS FOUND	197.40	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS LEFT	199.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS FOUND	207.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS LEFT	205.00	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS FOUND	70.00	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS LEFT	66.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 INLET PRESS	198.50	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS FOUND	53.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS LEFT	54.30	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS FOUND	55.50	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS LEFT	57.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 INLET PRESS	198.50	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS FOUND	53.70	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS LEFT	54.30	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS FOUND	56.40	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS LEFT	57.00	PSI	

PUGET SOUND ENERGY

G1 - Inspection Notification 1041504

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **2**
Category: **G Distribution**

Street: (SO TAC GATE)176 ST E & NW PLN
City: Puyallup ***Plat:*** 262.068
Location X: 27 FT S of N . P/L EASEMENT
Location Y: 18 FT W of E . P/L EASEMENT
RS-2302 Instructions **Functional Location W/C: PGRPC011: P.C. Tech 11 Paul Bench (TAC)**
DESCRIPTION: F-TWO STAGE DIST. REG.
Special Instr: ABOVE GROUND
End Spec Inst

Extra Lead Time required:

PERMIT REQUIRED?	:	TRAFFIC CONTROL REQUIRED?	:
FLAGGER REQUIRED?	:	VACUUM ROAD BOX?	:
REQUIRES ADDITIONAL PEOPLE?	:	ACCESS ARRANGEMENT REQUIRED?	:
AUTO ASSIGN SERVICE PROVIDER?	:	SERVICE PROVIDER WORK CENTER	:
COORDINATE WITH PSE	:		

Notification Long Text:

Regulator Station Check List
[ ] Operate all Valves.
[ ] Check Pressures.
[ ] Check Strainer.
[ ] Check for leaks.
[ ] Check O/P protection.
[ ] Check stroke and lock-up.
[ ] Check atmospheric corrosion.
[ ] Check positions of all valves.
[ ] Check damage.
[ ] Check Signage.

Cleaned strainers both runs. Rebuilt mooney regs both runs both stages. Cleaned stem seats all pilots, 1st stage.
PSP rd 1100.

Requested by: ***Req'd Start:*** 10/01/2004 ***Req'd End:*** 12/30/2004 ***Last Carried Out:*** 10/03/2006
Carried Out: 12/01/2004 ***Compl. by:*** PBENCH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
	ATMOSPHERIC CORROSION		EA	No Corrosion

PUGET SOUND ENERGY

G1 - Inspection Notification 1041504

RS-2302 : RS-2302 176 ST E & NW PLN

Assigned to: **PGRPC011** : P.C. Tech 11 Paul Bench (TAC)
Maintenance Plan: **GRS-2302** *Call #* **2**
Category: **G Distribution**

Reading for:	Type:	Value:	UoM	Evaluation code
Run 1 of Stage 1 of RS-2302	RUN 1 INLET PRESS	435.00	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS FOUND	194.60	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 OUTLET PRESS LEFT	200.00	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS FOUND	203.00	PSI	
Run 1 of Stage 1 of RS-2302	RUN 1 LOCKUP PRESS LEFT	204.60	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS FOUND	65.40	PSI	
Mon Pil 1 of Run 1 of Stage 1 of RS-2302	RUN 1 OVER PRESS LEFT	66.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 INLET PRESS	435.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS FOUND	198.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 OUTLET PRESS LEFT	200.00	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS FOUND	203.40	PSI	
Run 2 of Stage 1 of RS-2302	RUN 2 LOCKUP PRESS LEFT	204.30	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS FOUND	68.00	PSI	
Mon Pil 1 of Run 2 of Stage 1 of RS-2302	RUN 2 OVER PRESS LEFT	66.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 INLET PRESS	200.00	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS FOUND	55.40	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 OUTLET PRESS LEFT	54.30	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS FOUND	58.50	PSI	
Run 1 of Stage 2 of RS-2302	RUN 1 LOCKUP PRESS LEFT	57.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 INLET PRESS	200.00	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS FOUND	55.20	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 OUTLET PRESS LEFT	54.10	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS FOUND	60.20	PSI	
Run 2 of Stage 2 of RS-2302	RUN 2 LOCKUP PRESS LEFT	57.00	PSI	