STATE OF WASHINGTON
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 • Olympia, Washington 98504-7250
(360) 664-1160 • TTY (360) 586-8203

Ref. No. Docket PG-101617

June 9, 2011

James Reed, President
Bow Lake, Inc.
18050 32nd Ave S.
Seattle, WA 98188

Dear Mr. Reed:

RE: 2010 Master Meter System Standard Inspection – Bow Lake, Inc.

This letter is to inform you that docket PG-101617 will be closed as of June 9, 2011. On June 7, 2011, the commission received copies of maintenance records from PSE. Copies of the annual district regulator inspection report and odorant readings in your area are enclosed for your records. This provides the information we needed to complete the inspection conducted at Bow Lake, Inc. on November 15, 2010.

Staff understands that Bow Lake Inc. is continuing to wait for PSE to determine if they will or will not take over the existing master meter system and what the cost would be.

Pipeline Safety appreciates Bow Lake Inc.'s updates and cooperation during this inspection. If you have any questions, or if we may be of any assistance, please contact Patti Johnson at (360) 870-4915. Please refer to Dockets PG-101617 in any future correspondence regarding this inspection.

Sincerely,

David D. Lykken
Pipeline Safety Director

cc. Robert Mayfield

Enclosure

Lake
Regulator Inspect.
Doc # 1011617

PSE PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1244545

RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: PGRPC002 : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: GRS-2459 *Call #* 7
Category: G Distribution

2009

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X:
Location Y:
RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
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	:	TS DEPOLARIZATION READ REQUIRD	:

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.

Performed annual inspection. 0% gas reads detected.

Requested by: ***Req'd Start:*** 07/01/2009 ***Req'd End:*** 09/20/2009 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/26/2009 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

N o V a u l t s

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1244545

RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **7**
Category: **G Distribution**

2009

Reading for:	Type:	Value:	UoM	Evaluation code
	ATMOSPHERIC CORROSION		EA	1 - No Corrosion
Run 1 of Stage 1 of RS-2459	RUN 1 INLET PRESS	39.60	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 OUTLET PRESS FOUND	4.90	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 OUTLET PRESS LEFT	4.90	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 LOCKUP PRESS FOUND	5.00	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 LOCKUP PRESS LEFT	5.00	PSI	
Relief 1 of Stage 1 of RS-2459	RELIEF 1 OVER PRESS FOUND	10.00	PSI	
Relief 1 of Stage 1 of RS-2459	RELIEF 1 OVER PRESS LEFT	10.00	PSI	

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1244546
VA-06369 : INLET VALVE TO D.R. 2459
RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **7**
Category: G **Distribution**

2009

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X: 10 FT E of CL 32 AVE S
Location Y: 28 FT S of CL S 180 ST

RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
End Spec Inst

VA-06369 Instructions **Equipment W/C: PGRPC002 : P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: INLET VALVE TO D.R. 2459
Special Instr: -
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	:	TS DEPOLARIZATION READ REQUIRD	:

Notification Long Text:
Operated valve. 0% gas reads detected.

Requested by: ***Req'd Start:*** 07/01/2009 ***Req'd End:*** 09/20/2009 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/26/2009 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
INLET VALVE TO D.R. 2459	VALVE 06369 INSPECTION		EA	Valve Inspection Successful

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1244547
VA-06370 : OUTLET VALVE FROM D.R. 2459
RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **7**
Category: G **Distribution**

2009

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X: 0 FT
Location Y: 0 FT

RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
End Spec Inst

VA-06370 Instructions **Equipment W/C: PGRPC002 : P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: OUTLET VALVE FROM D.R. 2459
Special Instr: -
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	:	TS DEPOLARIZATION READ REQUIRD	:

Notification Long Text:
Operated valve. 0% gas reads detected.

Requested by: ***Req'd Start:*** 07/01/2009 ***Req'd End:*** 09/20/2009 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/26/2009 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
OUTLET VALVE FROM D.R. 2459	VALVE 06370 INSPECTION		EA	Valve Inspection Successful

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1288360

RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **8**
Category: **G Distribution**

2010

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X:
Location Y:
RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
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	:	TS DEPOLARIZATION READ REQUIRD	:

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.

Performed annual inspection on master meter. Reg locked up normally. Relief checks good. o% gas detected. MSA#1009.

Requested by: ***Req'd Start:*** 07/01/2010 ***Req'd End:*** 09/26/2010 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/17/2010 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

N o V a u l t s

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1288360

RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **8**
Category: **G Distribution**

2010

Reading for:	Type:	Value:	UoM	Evaluation code
	ATMOSPHERIC CORROSION		EA	1 - No Corrosion
Run 1 of Stage 1 of RS-2459	RUN 1 INLET PRESS	39.00	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 OUTLET PRESS FOUND	5.00	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 OUTLET PRESS LEFT	5.00	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 LOCKUP PRESS FOUND	5.10	PSI	
Run 1 of Stage 1 of RS-2459	RUN 1 LOCKUP PRESS LEFT	5.10	PSI	
Relief 1 of Stage 1 of RS-2459	RELIEF 1 OVER PRESS FOUND	10.40	PSI	
Relief 1 of Stage 1 of RS-2459	RELIEF 1 OVER PRESS LEFT	10.00	PSI	

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1288361
VA-06369 : INLET VALVE TO D.R. 2459
RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **8**
Category: G **Distribution**

2010

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X: 10 FT E of CL 32 AVE S
Location Y: 28 FT S of CL S 180 ST

RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
End Spec Inst

VA-06369 Instructions **Equipment W/C: PGRPC002 : P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: INLET VALVE TO D.R. 2459
Special Instr: -
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	:	TS DEPOLARIZATION READ REQUIRD	:

Notification Long Text:
0% gas reads detected. Operated valve.

Requested by: ***Req'd Start:*** 07/01/2010 ***Req'd End:*** 09/26/2010 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/17/2010 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
INLET VALVE TO D.R. 2459	VALVE 06369 INSPECTION		EA	Valve Inspection Successful

PUGET SOUND ENERGY
The Energy To Do Great Things

G1 - Inspection Notification 1288362

VA-06370 : OUTLET VALVE FROM D.R. 2459

RS-2459 : MM Master Meter (RS-2459) IM ID # 1067

Assigned to: **PGRPC002** : P.C. Tech 2 Carl Blythe (GTO)
Maintenance Plan: **GRS-2459** *Call #* **8**
Category: G **Distribution**

2010

Street: 18050 32 AVE S
City: Sea-Tac ***Plat:*** 214.073
Location X: 0 FT
Location Y: 0 FT

RS-2459 Instructions **Functional Location W/C: PGRPC002: P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: MM-MASTER METER (INDUSTRIAL METER ID 1067)
Special Instr: MSA located behind front gate guard shack. -
End Spec Inst

VA-06370 Instructions **Equipment W/C: PGRPC002 : P.C. Tech 2 Carl Blythe (GTO)**
DESCRIPTION: OUTLET VALVE FROM D.R. 2459
Special Instr: -
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	:	TS DEPOLARIZATION READ REQUIRD	:

Notification Long Text:

0% gas reads detected. Operated valve.

Requested by: ***Req'd Start:*** 07/01/2010 ***Req'd End:*** 09/26/2010 ***Last Carried Out:*** 06/17/2010
Carried Out: 06/17/2010 ***Compl. by:*** CBLYTH

Completion Text:

[ ] Misc. Required

Miscellaneous Text:

Reading for:	Type:	Value:	UoM	Evaluation code
OUTLET VALVE FROM D.R. 2459	VALVE 06370 INSPECTION		EA	Valve Inspection Successful

King County Solar Roads
Fall Brook Park
Dec 101617

Date	Meas/TotCtrRdg	DocMeasUnit	Equipment	Read by	Notification
04/25/2011	0.27	%	OT-0038	JPOOLE	1389028
03/28/2011	0.33	%	OT-0038	JPOOLE	1358985
02/24/2011	0.22	%	OT-0038	JPOOLE	1315254
01/31/2011	0.24	%	OT-0038	JPOOLE	1307236
12/27/2010	0.25	%	OT-0038	JPOOLE	1304525
11/26/2010	0.17	%	OT-0038	JPOOLE	1302229
10/28/2010	0.17	%	OT-0038	JPOOLE	1299638
09/27/2010	0.27	%	OT-0038	JPOOLE	1296720
08/30/2010	0.33	%	OT-0038	JPOOLE	1293855
07/30/2010	0.23	%	OT-0038	JPOOLE	1290259
06/28/2010	0.27	%	OT-0038	JPOOLE	1287418
05/24/2010	0.25	%	OT-0038	JPOOLE	1283574
04/26/2010	0.24	%	OT-0038	JPOOLE	1279474
03/26/2010	0.23	%	OT-0038	JPOOLE	1275864
02/27/2010	0.15	%	OT-0038	JPOOLE	1272287
01/24/2010	0.15	%	OT-0038	JPOOLE	1264528
12/14/2009	0.16	%	OT-0038	JPOOLE	1261921
11/30/2009	0.21	%	OT-0038	JPOOLE	1259574
10/28/2009	0.15	%	OT-0038	JPOOLE	1257074
09/24/2009	0.19	%	OT-0038	LDAUEN	1253588
08/24/2009	0.14	%	OT-0038	JPOOLE	1250359
07/28/2009	0.13	%	OT-0038	JPOOLE	1246773
06/22/2009	0.20	%	OT-0038	JPOOLE	1242969
05/28/2009	0.15	%	OT-0038	LDAUEN	1236946
04/20/2009	0.16	%	OT-0038	LDAUEN	1232569
03/20/2009	0.06	%	OT-0038	LDAUEN	1228378
02/23/2009	0.21	%	OT-0038	LDAUEN	1222676
01/21/2009	0.06	%	OT-0038	LDAUEN	1214633
12/12/2008	0.13	%	OT-0038	LDAUEN	1211889
11/19/2008	0.09	%	OT-0038	DBOURD	1209022
10/03/2008	0.11	%	OT-0038	DBOURD	1206603
09/08/2008	0.08	%	OT-0038	DBOURD	1203242
08/06/2008	0.01	%	OT-0038	DBOURD	1200072
07/10/2008	0.05	%	OT-0038	DBOURD	1196737
06/09/2008	0.07	%	OT-0038	LDAUEN	1193366
05/07/2008	0.15	%	OT-0038	LDAUEN	1189267
04/04/2008	0.09	%	OT-0038	LDAUEN	1185213
03/07/2008	0.08	%	OT-0038	LDAUEN	1181302
02/01/2008	0.08	%	OT-0038	LDAUEN	1176722
01/07/2008	0.20	%	OT-0038	LDAUEN	1169451
12/10/2007	0.14	%	OT-0038	LDAUEN	1166887
11/02/2007	0.08	%	OT-0038	LDAUEN	1164104
10/05/2007	0.20	%	OT-0038	LDAUEN	1161419
09/10/2007	0.12	%	OT-0038	LDAUEN	1158029
08/10/2007	0.15	%	OT-0038	LDAUEN	1154696
07/03/2007	0.16	%	OT-0038	LDAUEN	1151635
06/04/2007	0.00	%	OT-0038	DBOURD	1148654
05/03/2007	0.08	%	OT-0038	LDAUEN	1144843
04/06/2007	0.11	%	OT-0038	LDAUEN	1141227
03/02/2007	0.22	%	OT-0038	LDAUEN	1137710

Date	Meas/TotCtrRdg	DocMeasUnit	Equipment	Read by	Notification
04/25/2011	0.27	%	OT-0038	JPOOLE	1389028
03/28/2011	0.33	%	OT-0038	JPOOLE	1358985
02/24/2011	0.22	%	OT-0038	JPOOLE	1315254
01/31/2011	0.24	%	OT-0038	JPOOLE	1307236
12/27/2010	0.25	%	OT-0038	JPOOLE	1304525
11/26/2010	0.17	%	OT-0038	JPOOLE	1302229
10/28/2010	0.17	%	OT-0038	JPOOLE	1299638
09/27/2010	0.27	%	OT-0038	JPOOLE	1296720
08/30/2010	0.33	%	OT-0038	JPOOLE	1293855
07/30/2010	0.23	%	OT-0038	JPOOLE	1290259
06/28/2010	0.27	%	OT-0038	JPOOLE	1287418
05/24/2010	0.25	%	OT-0038	JPOOLE	1283574
04/26/2010	0.24	%	OT-0038	JPOOLE	1279474
03/26/2010	0.23	%	OT-0038	JPOOLE	1275864
02/27/2010	0.15	%	OT-0038	JPOOLE	1272287
01/24/2010	0.15	%	OT-0038	JPOOLE	1264528
12/14/2009	0.16	%	OT-0038	JPOOLE	1261921
11/30/2009	0.21	%	OT-0038	JPOOLE	1259574
10/28/2009	0.15	%	OT-0038	JPOOLE	1257074
09/24/2009	0.19	%	OT-0038	LDAUEN	1253588
08/24/2009	0.14	%	OT-0038	JPOOLE	1250359
07/28/2009	0.13	%	OT-0038	JPOOLE	1246773
06/22/2009	0.20	%	OT-0038	JPOOLE	1242969
05/28/2009	0.15	%	OT-0038	LDAUEN	1236946
04/20/2009	0.16	%	OT-0038	LDAUEN	1232569
03/20/2009	0.06	%	OT-0038	LDAUEN	1228378
02/23/2009	0.21	%	OT-0038	LDAUEN	1222676
01/21/2009	0.06	%	OT-0038	LDAUEN	1214633
12/12/2008	0.13	%	OT-0038	LDAUEN	1211889
11/19/2008	0.09	%	OT-0038	DBOURD	1209022
10/03/2008	0.11	%	OT-0038	DBOURD	1206603
09/08/2008	0.08	%	OT-0038	DBOURD	1203242
08/06/2008	0.01	%	OT-0038	DBOURD	1200072
07/10/2008	0.05	%	OT-0038	DBOURD	1196737
06/09/2008	0.07	%	OT-0038	LDAUEN	1193366
05/07/2008	0.15	%	OT-0038	LDAUEN	1189267
04/04/2008	0.09	%	OT-0038	LDAUEN	1185213
03/07/2008	0.08	%	OT-0038	LDAUEN	1181302
02/01/2008	0.08	%	OT-0038	LDAUEN	1176722
01/07/2008	0.20	%	OT-0038	LDAUEN	1169451

How to read odor report:

Odorization Requirements and Odor Level Testing 2650.1000

1. Scope

This Operating Standard establishes the requirements for monitoring the level of odorant in the Company's pipelines.

2. Responsibilities

2.1 The *Manager Engineering* shall be responsible for:

2.1.1 Determining the number and locations of odor level sampling sites and maintaining a list in accordance with Sections 6 and 8 of this Operating Standard; and,

2.1.2 Responding to reports of unacceptable odor level test results in accordance with Section 7 of this Operating Standard and ensuring that records of such actions are maintained in accordance with Section 8 of this Operating Standard.

2.2 The *Manager Gas First Response* and the *Manager System Control and Protection* shall be responsible for ensuring that:

2.2.1 Properly calibrated odor level detection instruments are used by field personnel;

2.2.2 Personnel performing odor level testing are trained to do so, and in general, report consistent results from month to month;

2.2.3 Odor level tests are conducted in accordance with this Operating Standard;

2.2.4 Odor level test results that are outside the levels defined in Section 7.4 are reported immediately to the *Manager Engineering*; and,

2.2.5 Odor level test results are recorded and maintained in accordance with Section 8 of this Operating Standard.

2.3 The *Manager Metering Network Services* shall ensure that:

2.3.1 Odorization instruments are repaired and calibrated according to Operating Standard 2450.1600;

2.3.2 Odorization instruments issued for field use are properly calibrated; and,

2.3.3 Records of odor level detection instrument calibration are properly completed and maintained for each instrument.

3. General Requirements

(CFR 192.625 and WAC 480-93-015)

3.1 Combustible gas that is transported by intrastate pipeline shall contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit (LEL), the gas is readily detectable by a person with a normal sense of smell.

3.1.1 One-fifth LEL for natural gas is 0.8% gas in air. (1/5 of 4% = 0.8% gas in air.)

3.1.2 One-fifth LEL for propane is 0.44% gas in air. (1/5 of 2.2% = 0.44% gas in air.)

3.1.3 The Readily Detectable Odor Level is the lowest concentration that a person with a normal sense of smell can identify the odor as being associated with natural gas or propane.

3.2 A combustible gas in an interstate transmission line in a Class 3 or Class 4 location shall comply with the requirements of Section 3.1 of this Operating Standard unless:

3.2.1 At least 50 percent of the length of the line downstream from that location is in a Class 1 or Class 2 location;

3.2.2 The line transports gas to any of the following facilities which received gas without an odorant from that line before May 5, 1975:

3.2.2.1 An underground storage field;

3.2.2.2 A gas processing plant;

3.2.2.3 A gas dehydration plant; or,

3.2.2.4 An industrial plant using gas in a process where the presence of an odorant:

3.2.2.4.1 Makes the end product unfit for the purpose for which it is intended;

3.2.2.4.2 Reduces the activity of a catalyst; or,

3.2.2.4.3 Reduces the percentage completion of a chemical reaction.

3.2.3 In the case of a lateral line which transports gas to a distribution center, at least 50 percent of the length of that line is in a Class 1 or Class 2 location; or,

3.2.4 The combustible gas is hydrogen intended for use as a feedstock in a manufacturing process.

3.3 Periodic sampling of combustible gases shall be conducted to ensure the proper concentration of odorant at the frequency specified in Section 4 of this Operating Standard.

3.3.1 Odor level tests (sniff tests) shall be conducted using an odor level detection instrument in accordance with Field Procedure 4675.1000.

4. Frequency

(CFR 192.625 and WAC 480-93-015)

4.1 Odor level tests (sniff tests) shall be conducted at the following frequencies:

4.1.1 Sampling sites on natural gas systems shall be tested monthly;

4.1.2 Sampling sites on propane distribution systems fed by a tank farm shall be tested monthly;

4.1.3 Individual propane customers shall be tested annually; and,

4.1.4 Six liquid propane tanks at Swarr shall be tested annually until all 39 tanks have been tested. Once all tanks have been tested, repeat.

5. Odor Level Detection Instrument

5.1 The odor level detection instrument mixes natural gas or propane with air in specified concentrations in accordance with the manufacturer specification and will then give a reading of the readily detectable level. Detection of the odor is accomplished with the human nose.

5.2 Odor level detection instruments shall be calibrated in accordance with Operating Standard 2450.1600.

5.2.1 If the instrument cannot be calibrated to the manufacturer's specifications, it shall be immediately returned to the manufacturer or an authorized agent for repair.

6. Odor Level Sampling Sites

6.1 Odor level sampling sites should be selected to ensure that all gas within the piping system contains the required odorant concentration. When selecting locations for odor level testing, the following shall be considered:

6.1.1 The size and configuration of the system;

6.1.2 Location of gate stations;

6.1.3 High and low flow areas in the system;

6.1.4 Dead ends of the systems located away from the odorizer sites;

6.1.5 Locations suspected of low odorant levels within the system; and,

6.1.6 Locations with the capacity to store large volumes of liquid propane.

7. Odor Level Test Procedure

7.1 Odor level testing shall be performed in accordance with Field Procedure 4675.1000.

7.2 Odor level testing at Swarr shall be performed in accordance with Field Procedures 4675.1000 and 4675.2000.

7.2.1 Test the readily detectable odor level reading of propane gas in air using the HeathTech Odorator.

7.2.2 Test the ethyl mercaptan concentration using the iSMELL-1000. If the concentration of ethyl mercaptan is below 22 ppm using the iSMELL, repeat test an additional three times making sure to purge the lines between each test and verify that liquid propane is present. Take the average of the four test results. Use results only to monitor for odorant fade and verify the accuracy of the HeathTech Odorator results.

7.3 The readily detectable odor level reading shall be recorded on the work order.

7.4 The person performing the test shall notify the *Manager Engineering* immediately if the readily detectable odor level testing results in any of the following readings (notification shall not be delayed beyond the current work shift):

7.4.1 If natural gas: greater than 0.8% natural gas in air.

7.4.2 If propane gas: greater than 0.44% propane gas in air.

7.4.3 If liquid propane at Swarr: less than 22 ppm of ethyl mercaptan in propane gas.

7.5 Odorant concentrations that do not meet the requirements of Section 7.4 of this Operating Standard shall be promptly investigated and immediate corrective action shall be initiated.

8. Records

8.1 Results of odor level tests containing the following information shall be recorded in SAP or the specific facility maintenance database and retained for a period of 5 years:

8.1.1 Instrument serial number;

8.1.2 Odor level sampling site;

8.1.3 Date and time of test;

8.1.4 Readily detectable odor level (percent gas or propane in air or ppm in liquid propane);

8.1.5 Name of person performing the test; and,

8.1.6 Tank numbers (if liquid propane at Swarr).

8.2 Results of odor level detection instrument calibration for each instrument shall be recorded on the "Odor Level Detection Instrument Calibration Record" in accordance with Operating Standard 2450.1600. This record shall be retained for five years.

8.3 A record of corrective actions taken in response to unacceptable odor level test results shall be prepared and retained for five years.

8.4 Record ethyl mercaptan level results on the detector tube if testing liquid propane with the iSMELL-1000 Odorizer.

8.5 A list of systems that require sampling and the associated odor level sampling sites shall be maintained.

9. Covered Task Summaries

The following PSE Covered Task Summaries (CTS) apply to this standard:

9.1 CTS 1501 Odorization – Mains and Transmission Lines
CTS 1501a Odorization – Equipment O&M

10. References

The following PSE documents apply to this standard:

10.1 Gas Operating Standards

2400.0500 Gas System Description
2400.1000 Definitions
2450.1600 Instrument Calibration

10.2 Gas Field Procedures

4675.1000 Odor Level Testing Using the HeathTech Odorator
4675.2000 Odor Level Testing Using the iSMELL-1000 Odorator