

Appendix I



November 21, 2011

Mr. Jeffrey M. Thomas, Esq.
Gordon Tilden Thomas & Cordell, LLP
1001 Fourth Avenue, Suite 4000
Seattle, WA 98154-1007

RE: Puget Sound Energy- Ingham Fire
SEAL Job No. 21151.

Dear Mr. Thomas:

I have reviewed the photographs of the gas pipe lines with "holes" from the following addresses in Seattle, Washington:

1. 12040 Avenue NE (gas line crossing oil vent line); Figure 1
2. 913 NE Street (gas line crossing water service line); Figure 2
3. 1020 NE Street (gas line crossing abandoned water pipe); Figure 3
4. 12312 Avenue NE (gas line crossing sewer service); Figure 4.

In order to determine the nature of the "hole" and the cause of its formation in the above four (4) gas line sections (whether formed due to electrical arcing, corrosion, or some other means), the following metallurgical testing protocol is proposed:

1. Color photographs of the pipe sections and detailed photographs of the "hole".
2. Measurements of the inner and outer diameter of the pipes and the dimensions of the "hole".
3. Transversely cut the "hole" from the pipe sections at approximately 1 inch on both sides of the "hole" and remove the nearly 2" long section of the pipe containing the "hole".
4. Cut and split the pipe section containing the "hole" longitudinally at 90 degrees to the hole.
5. Examine and photograph the "hole" from the inside surface of the pipe.
6. Section the pipe piece containing the "hole" in a transverse direction through the center of the hole using a thin blade diamond saw or an equivalent cutting device using a coolant. Mount one of the sections in a metallurgical mount as a transverse cross section through the center of the "hole".
7. Prepare the metallographic mount by standard polishing procedure. Document the edge of the hole and the base alloy of the pipe in the as-polished condition and after etching with 2% Nital solution, using optical microscope.
8. Perform microhardness measurements on the metallurgical mounts at the edge of the "hole" and compare with the base alloy hardness, using a Knoop indenter and a 100 or 500 gram load (as necessary).

Mr. Jeffrey M. Thomas, Esq.
Gordon Tilden Thomas & Cordell, LLP

Page 2

Please do not hesitate to contact me if you have any further questions regarding this protocol.

Sincerely,

SEAL LABORATORIES

A handwritten signature in blue ink that reads "Arun Kumar". The signature is written in a cursive style with a large, stylized 'A' and 'K'.

Arun Kumar, Ph.D.
President



(a)



(b)

Figure 1. Color photographs showing the "hole" in the gas pipe line from 12040 Ave NE.

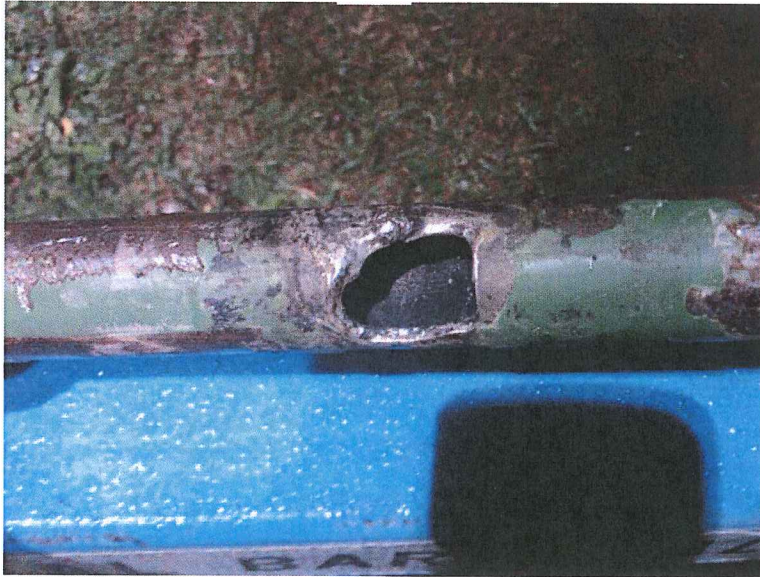


(a)

Figure 2. A color photograph showing the wrapped gas pipe line (right) from 913 NE Street containing a "hole".



(a)



(b)

Figure 3. Color photographs showing the “hole” in the gas pipe line from 1020 NE Street.



(a)



(b)

Figure 4. Color photographs showing the “hole” in the gas pipe line from 12312 Ave NE.

Appendix II



700 South Industrial Way
Seattle, WA 98108

VISITOR'S LOG

Inspection
PSE

ATTN: Persons who enter or depart this facility may be subject to an inspection of their personal effects.
- MDE Inc.

DATE	TIME IN	TIME OUT	FULL NAME (Please Print)	COMPANY	PHONE #	PURPOSE OF VISIT	MDE CONTACT	MDE JOB #
12/20/11	8:40AM		ARUN KUMAR	SEAL Labs	310-322-2011	Testing		
12/20/11	8:40	11:45	Glenn Johnson	A. Global	509 539-4119	PSE		
12/20/11	8:40	11:45	John Biskey	Biskey's Forensic Exp	503 675-3864	"		
12/20/11	8:45		Gwend Johnson	A. Global	509 539-9312	"		
12/20/11	8:45		Jessie HADLEY	NW Coors	360 236 4570	"		
12/20/11	8:50		VICTORIA LIEM	INVESTIGATIVE SCIENCES	425 883 8365	Testing		
12/20/11	8:55		Ed Iskra	unified investigations	360-575-8392	PSE Pipe Testing		
12/20/11	8:55		Kuang Chu	WUTC	360-870-4830	PSE		
12/20/11	8:55		Az Jones	WUTC	360-664-1321	PSE		
12/20/2011	8:55		Bryan Templeton	CASE Forensics	425-725-5550	PSE		
12/20/2011	9:00		Doug Barovskiy	MDE	2066222007	SCL		
12/20	9:00		Keith Clue	MDE	2066222007			
12/20	9:07		Matt Pece	Gordon Tilden	206-467-6477	PSE		
12/20	9:10		Stephanie Silva	PSE	425-754-2237	Investigation		
12/20	9:10		Jace newmaster	PSE	425-457-1237	Investigation		

9316 Lakeview Ave. SW, Bldg. 21, Ste. C
Lakewood, WA 98496
Office 253-588-2730 ■ 800-307-4351
Fax 253-588-2733 ■ www.uis-usa.com
eiskra@uis-usa.com
Edward Iskra, CPEI
Special Investigator
Bremerton, WA
360-275-8392



