

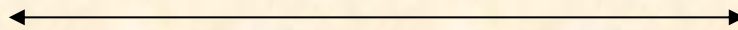
## **API Standard 622 Test Report**

“Type Testing of Process Valve  
Packing for Fugitive Emissions”  
Second Edition, 2011

*Performed for*

PBM, Inc.

<http://www.pbmvalve.com>



2" Valve Stem Assembly  
Product Code: SK-N042  
With Chesterton 1622 Packing  
Project Number: 212270  
Test Start Date: December 10, 2012



*Performed by*

**YARMOUTH RESEARCH AND TECHNOLOGY, LLC**

434 Walnut Hill Road  
North Yarmouth, ME 04097 USA  
(207) 829-5359

[info@yarmouthresearch.com](mailto:info@yarmouthresearch.com)

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**Yarmouth Research and Technology, LLC**

**API 622 PROJECT SUMMARY**

**Customer:** PBM, Inc.

**Start Date:** 10-Dec-12

**Project #:** 212270

*Fixture Information*

**Test Fixture:** 2" valve stem assembly

**Product Code:** SK-N042

**Source of Sample:** Customer

**Packing Description:** Chesterton 1622; SK-N042 - (4) pieces

*Test Conditions*

**Specification:** API 622, 2nd Edition, 2011

**Test Media:** 99% Methane

**Test Pressure:** 600 psig at ambient temperature

**Test Pressure:** 600 psig at 500 deg F.

**Cycling Rate:** 30 seconds per cycle

**Cycle Stroke:** 1/4 turn

**Recommended Packing Nut Torque:** 84 - 96 in-lbs

**Maximum Allowable Leakage:** 100 ppm

*Results*

**Average Test Pressure:** 600 psig

**Number of Mechanical Cycles Completed:** 1510

**Number of Thermal Cycles Completed:** 5

**Number of Packing Adjustments Required:** 0

**Cycle Number(s) of Packing Adjustments:**

**Average Leakage Throughout Test:** 3 PPM<sub>v</sub>

**Maximum Leakage Throughout Test:** 19 PPM<sub>v</sub>

*Witness*



Matthew J Wasielewski, PE

President, Yarmouth Research



# Yarmouth Research and Technology, LLC

**Customer:** PBM, Inc.

**Start Date:** 10-Dec-12

**Test Fixture:** 2" valve stem assembly

**Project #:** 212270

**Product Code:** SK-N042

**Packing Description:** Chesterton 1622; SK-N042 - (4) pieces

<i>Cycle Number</i>	<i>Bonnet Temp - (F)</i>	<i>Inside Temp (F)</i>	<i>Pressure (psig)</i>	<i>Stem Seal Leakage (PPMv)</i>		<i>Packing</i>
				<i>Avg.</i>	<i>Max.</i>	<i>Retorque</i>
						<i>See Note</i>
0	68	68	600	0	0	
50	72	72	600	0	0	
100	75	75	600	0	0	
150	77	76	600	1	1	
150	500	493	600	17	19	
200	501	494	600	12	13	
250	501	494	600	11	11	
300	500	494	600	6	6	
300	67	67	600	0	0	
350	69	69	600	0	0	
400	71	71	600	0	0	
450	72	72	600	0	0	
450	499	492	600	7	7	
500	499	493	600	5	6	
550	501	494	600	5	5	
600	501	494	600	3	4	
600	66	66	600	0	1	
650	69	69	600	1	1	
700	73	72	600	0	0	
750	74	74	600	0	1	
750	500	493	600	4	4	
800	500	493	600	4	4	
850	499	493	600	4	4	
900	500	493	600	3	3	
900	69	69	600	0	0	
950	73	73	600	0	0	
1000	73	73	600	0	0	
1050	75	75	600	0	0	
1050	500	493	600	3	3	
1100	501	494	600	3	3	
1150	500	494	600	3	4	
1200	501	494	600	3	3	
1200	70	70	600	0	0	
1250	72	72	600	1	1	

## Yarmouth Research and Technology, LLC

1300	73	73	600	1	1
1350	75	75	600	1	1
1350	501	495	600	1	1
1400	500	495	600	0	0
1450	501	495	600	0	0
1500	499	495	600	1	1
1500	73	73	600	0	0
1510	75	72	600	0	0
<b>Averages -&gt;</b>			<b>600</b>	<b>2</b>	<b>3</b>
<b>Maximums -&gt;</b>			<b>600</b>	<b>17</b>	<b>19</b>

***Packing Retorque Notes:***

	<i>Before Adjustment</i>		<i>After Adjustment</i>			
	<i>Nut Torque</i>		<i>Nut Torque</i>		<i>Number of Flats</i>	<i>Gland Height</i>
	<i>Side 1</i>	<i>Side 2</i>	<i>Side 1</i>	<i>Side 2</i>		
<b>1</b>						
<b>2</b>						

<b>Nut Torque at End of Test: (in-lb)</b>	30	<i>&lt;-Side 1</i>	20	<i>&lt;-Side 2</i>
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***Test Notes:***

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**Test Results:** The average and maximum leakage results shown below were calculated from 60 readings measured during a minute duration.  
*See data sheets for more detailed information.*

Yarmouth Research and Technology, LLC

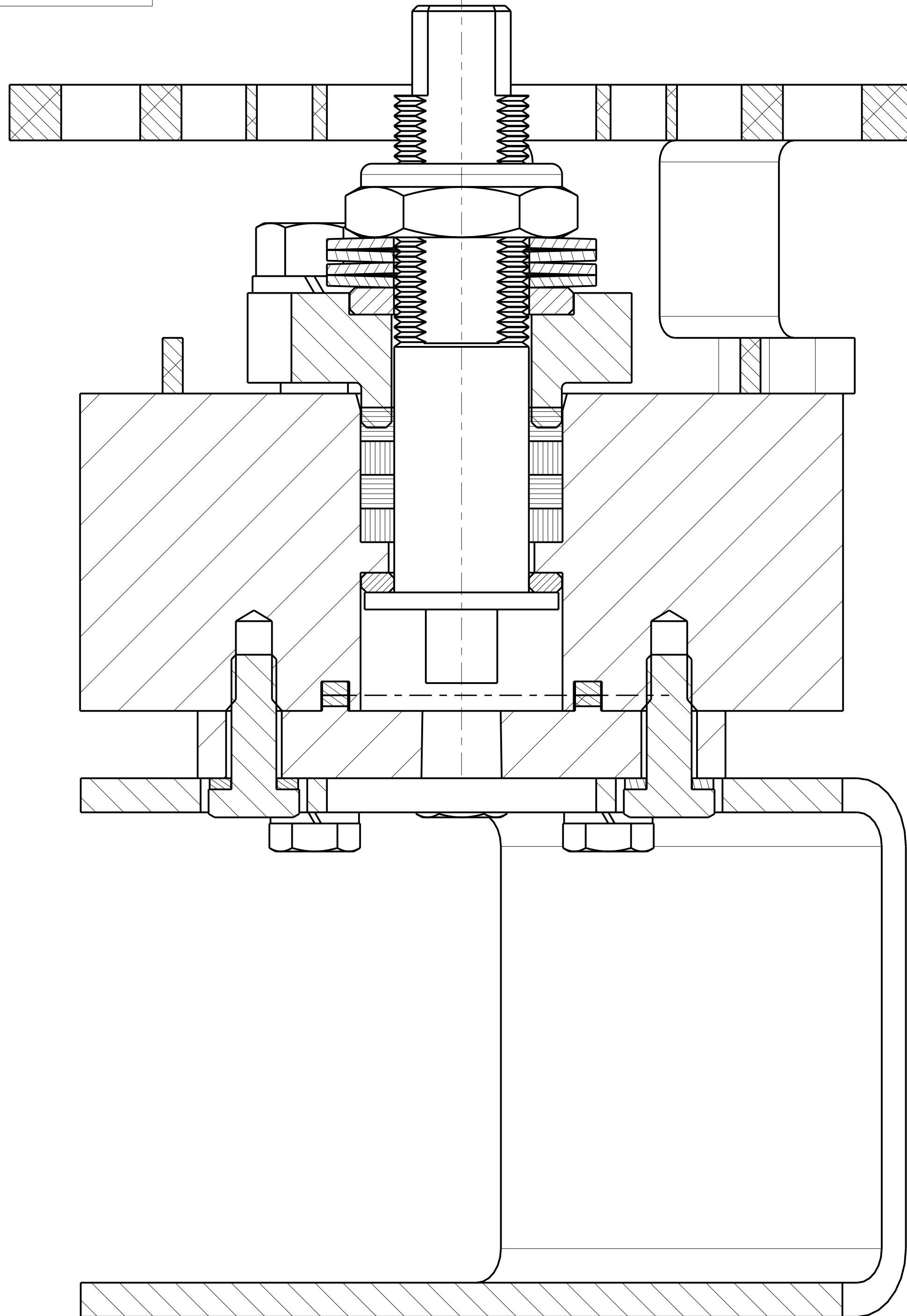


Valve setup for Test

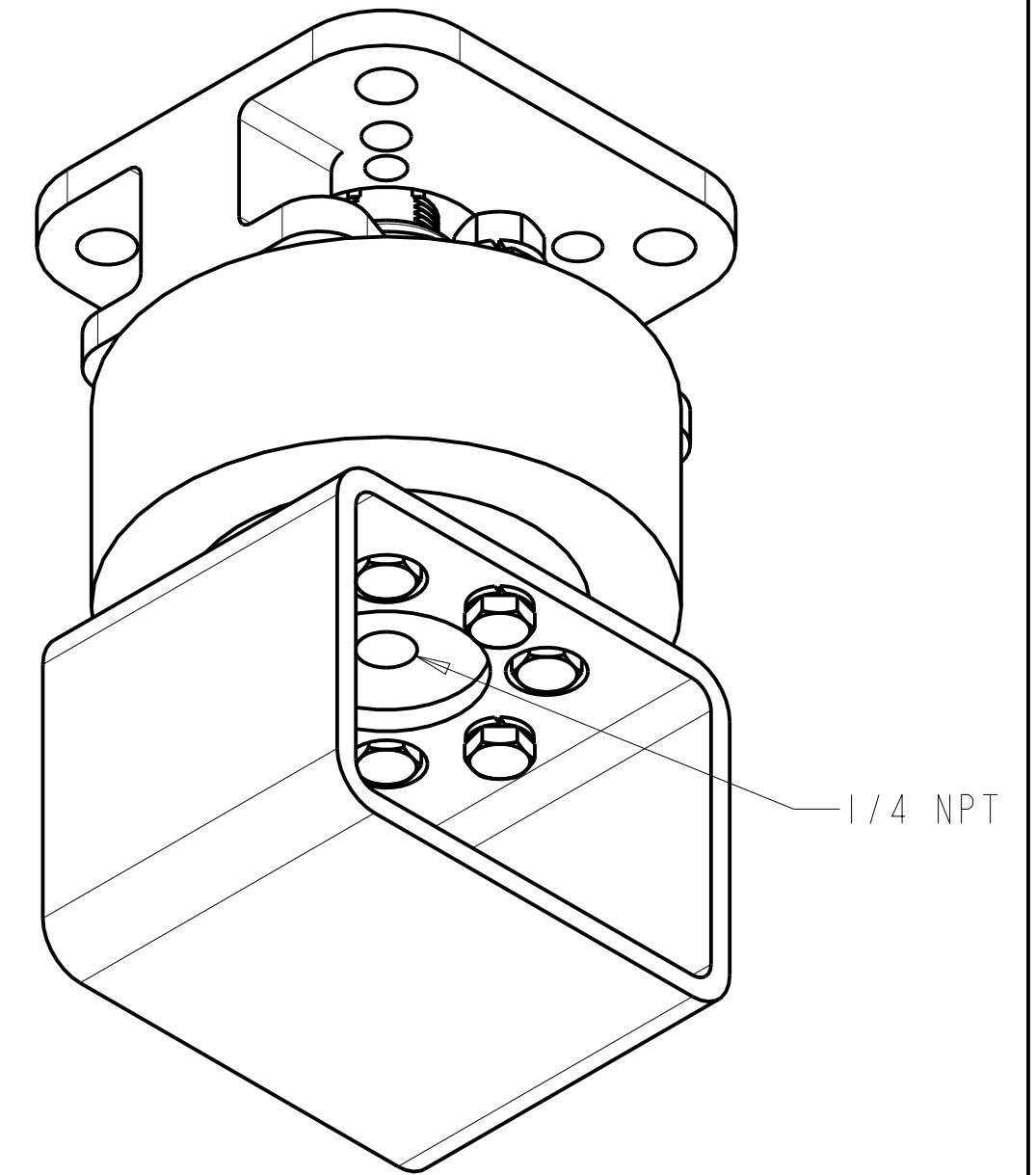
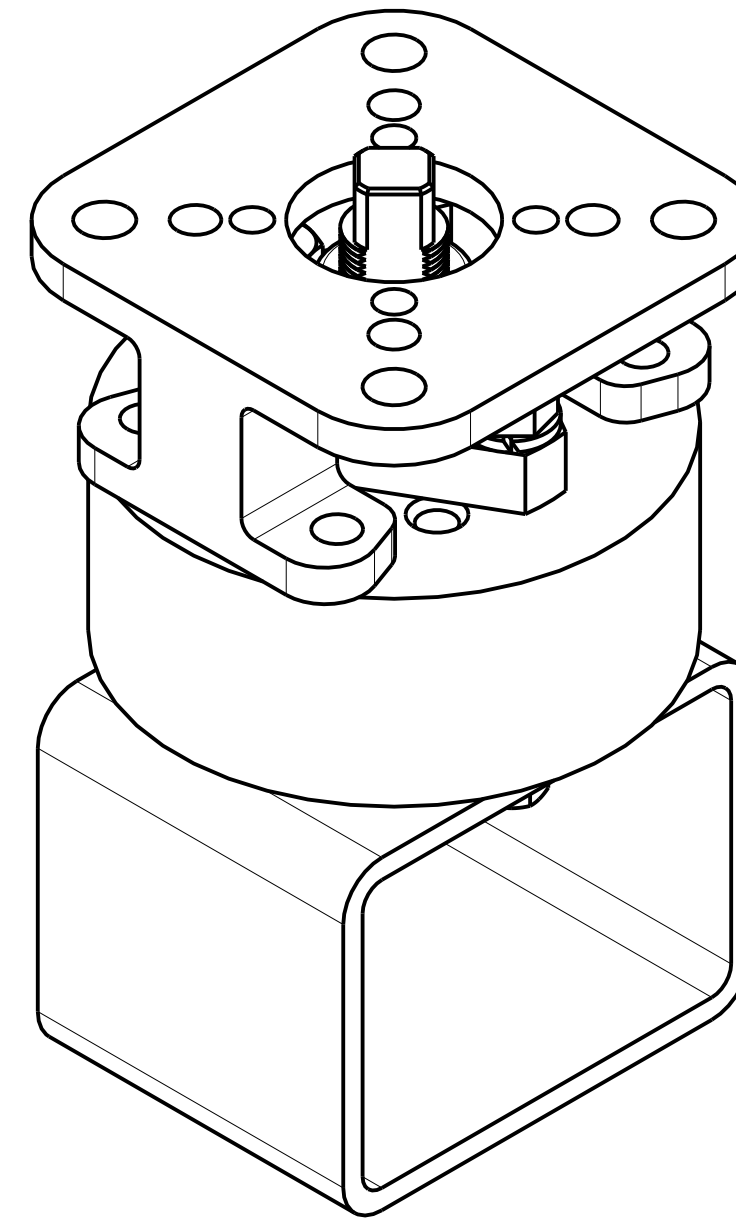


GENERIC NO.  
SK-N042

REV. No.	REV. DATE	CHK BY	APP BY	REMARKS
△	LJA 12/10/12			REVISED TO REFLECT BOLT-ON FOLLOWER DESIGN

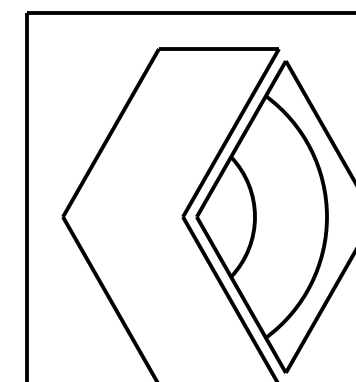


SECTION Z-Z



**PARTS LIST - SK-N042**

ITEM	PART NO.	DESCRIPTION	QTY.	MATERIAL
1	SPPKH635	STEM BEARING	1	PEEK
2	SPK-H510	SPRING WASHER (KEY #K1500-1-060, OR EQUAL)	4	301 SST
3	SPCGH535B--J219	LOWER STEM BEARING	1	METCAR M-1515
4	SK-N050-6B	GLAND PLATE	1	A479-S31603
5	SK-N042-5	STEM	1	A479, S31603
6	SK-N042-1	FUGITIVE EMISSIONS TEST BODY	1	SST
7	SK-N041-22	BRACKET	1	300 SER SST
8	SK-N041-9	STEM PACKING	4	DIE MOLDED GRAPHITE
9	SK-N041-3	COVER, TEST ASSEMBLY	1	SST
10	HWLKFMXN	LOCKING HEX NUT (3/4"-16)	1	300 SER SST
11	HWAKXGXL	LOCKWASHER (3/8")	2	18-8 SST
12	HWAKXEXL	LOCKWASHER (1/4")	8	18-8 SST
13	HWAKCG12	HEX CAPSCREW (3/8"-16 X 1-1/4" LG)	2	18-8 SST
14	HWAKCE06	HEX CAPSCREW (1/4"-20 X 3/4" LG.)	4	18-8 SST
15	HWAKCE04	HEX CAPSCREW (1/4"-20 X 1/2" LG.)	4	18-8 SST
16	CNGRH513B	2" GRAPHITE BONNET GASKET	1	GRAPHITE
17	BSK-H522---1	BRACKET	2	300 SER SST



PBM, Inc.  
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Phone: 724-863-0550  
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FUGITIVE EMISSIONS TEST FIXTURE  
FOR: STEM PACKING DESIGN EVALUATION

DR	INIT	DATE	SIZE	FSCM NUMBER	DWG. NO.	REV.
CHK	LJA	7/27/12	C	92021	SK-N042	1
APP			SCALE: 1.0	WEIGHT: N/A	SHEET 1 of 1	

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 0 **Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
10:08:46 AM	600	68	68	0.4
10:08:47 AM	600	68	68	0.4
10:08:48 AM	600	68	68	0.4
10:08:49 AM	600	68	68	0.4
10:08:49 AM	600	68	68	0.4
10:08:50 AM	600	68	68	0.4
10:08:51 AM	600	68	68	0.4
10:08:52 AM	600	68	68	0.4
10:08:53 AM	600	68	68	0.4
10:08:54 AM	600	68	68	0.4
10:08:55 AM	600	68	68	0.4
10:08:56 AM	600	68	68	0.3
10:08:57 AM	600	68	68	0.3
10:08:58 AM	600	68	68	0.3
10:08:59 AM	600	68	68	0.3
10:09:00 AM	600	68	68	0.3
10:09:01 AM	600	68	68	0.4
10:09:02 AM	600	68	68	0.4
10:09:03 AM	600	68	68	0.4
10:09:04 AM	600	68	68	0.4
10:09:05 AM	600	68	68	0.4
10:09:06 AM	600	68	68	0.4
10:09:07 AM	600	68	68	0.4
10:09:08 AM	600	68	68	0.4
10:09:09 AM	600	68	68	0.4
10:09:10 AM	600	68	68	0.4
10:09:11 AM	600	68	68	0.4
10:09:12 AM	600	68	68	0.4
10:09:13 AM	600	68	68	0.3
10:09:14 AM	600	68	68	0.3
10:09:15 AM	600	68	68	0.3
10:09:16 AM	600	68	68	0.3
10:09:17 AM	600	68	68	0.4
10:09:18 AM	600	68	68	0.4
10:09:19 AM	600	68	68	0.3
10:09:20 AM	600	68	68	0.4
10:09:21 AM	600	68	68	0.4
10:09:22 AM	600	68	68	0.4
10:09:23 AM	600	68	68	0.4
10:09:24 AM	600	68	68	0.4
10:09:25 AM	600	68	68	0.4
10:09:26 AM	600	68	68	0.4
10:09:27 AM	600	68	68	0.4
10:09:28 AM	600	68	68	0.4
10:09:29 AM	600	68	68	0.4
10:09:30 AM	600	68	68	0.4
10:09:31 AM	600	68	68	0.3
10:09:32 AM	600	68	68	0.3
10:09:33 AM	600	68	68	0.3
10:09:34 AM	600	68	68	0.3
10:09:35 AM	600	68	68	0.3
10:09:36 AM	600	68	68	0.3
10:09:37 AM	600	68	68	0.3
10:09:38 AM	600	68	68	0.3
10:09:39 AM	600	68	68	0.3
10:09:40 AM	600	68	68	0.4
10:09:41 AM	600	68	68	0.4
10:09:42 AM	600	68	68	0.3
10:09:43 AM	600	68	68	0.3
10:09:44 AM	600	68	68	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>68</b>	<b>68</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 50

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
10:46:37 AM	600	72	72	0.4
10:46:38 AM	600	72	72	0.4
10:46:39 AM	600	72	72	0.4
10:46:40 AM	600	72	72	0.4
10:46:41 AM	600	72	72	0.4
10:46:42 AM	600	72	72	0.4
10:46:43 AM	600	72	72	0.4
10:46:44 AM	600	72	72	0.4
10:46:45 AM	600	72	72	0.4
10:46:46 AM	600	72	72	0.4
10:46:47 AM	600	72	72	0.4
10:46:48 AM	600	72	72	0.4
10:46:49 AM	600	72	72	0.4
10:46:50 AM	600	72	72	0.4
10:46:51 AM	600	72	72	0.4
10:46:52 AM	600	72	72	0.4
10:46:53 AM	600	72	72	0.4
10:46:54 AM	600	72	72	0.4
10:46:54 AM	600	72	72	0.4
10:46:55 AM	600	72	72	0.4
10:46:56 AM	600	72	72	0.4
10:46:57 AM	600	72	72	0.4
10:46:58 AM	600	72	72	0.4
10:46:59 AM	600	72	72	0.4
10:47:00 AM	600	72	72	0.4
10:47:01 AM	600	72	72	0.4
10:47:02 AM	600	72	72	0.4
10:47:03 AM	600	72	72	0.4
10:47:04 AM	600	72	72	0.4
10:47:05 AM	600	72	72	0.4
10:47:06 AM	600	72	72	0.4
10:47:07 AM	600	72	72	0.4
10:47:08 AM	600	72	72	0.4
10:47:09 AM	600	72	72	0.4
10:47:10 AM	600	72	72	0.4
10:47:11 AM	600	72	72	0.4
10:47:12 AM	600	72	72	0.4
10:47:13 AM	600	72	72	0.4
10:47:14 AM	600	72	72	0.4
10:47:15 AM	600	72	72	0.4
10:47:16 AM	600	72	72	0.4
10:47:17 AM	600	72	72	0.4
10:47:18 AM	600	72	72	0.4
10:47:19 AM	600	72	72	0.4
10:47:20 AM	600	72	72	0.4
10:47:21 AM	600	72	72	0.4
10:47:22 AM	600	72	72	0.4
10:47:23 AM	600	72	72	0.4
10:47:24 AM	600	72	72	0.5
10:47:25 AM	600	72	72	0.5
10:47:26 AM	600	72	72	0.5
10:47:27 AM	600	72	72	0.5
10:47:28 AM	600	72	72	0.4
10:47:29 AM	600	72	72	0.4
10:47:30 AM	600	72	72	0.4
10:47:31 AM	600	72	72	0.4
10:47:32 AM	600	72	72	0.4
10:47:33 AM	600	72	72	0.4
10:47:34 AM	600	72	72	0.4
10:47:35 AM	600	72	72	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>72</b>	<b>72</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 100

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:15:24 AM	600	76	75	0.4
11:15:25 AM	600	76	75	0.4
11:15:26 AM	600	75	75	0.4
11:15:27 AM	600	76	75	0.4
11:15:28 AM	600	75	75	0.4
11:15:29 AM	600	76	75	0.4
11:15:30 AM	600	76	75	0.4
11:15:31 AM	600	75	75	0.4
11:15:32 AM	600	75	75	0.4
11:15:33 AM	600	75	75	0.4
11:15:34 AM	600	75	75	0.4
11:15:35 AM	600	75	75	0.4
11:15:36 AM	600	75	75	0.4
11:15:37 AM	600	75	75	0.4
11:15:38 AM	600	75	75	0.4
11:15:39 AM	600	75	75	0.4
11:15:40 AM	600	75	75	0.4
11:15:41 AM	600	75	75	0.4
11:15:42 AM	600	75	75	0.4
11:15:43 AM	600	75	75	0.4
11:15:44 AM	600	75	75	0.4
11:15:45 AM	600	75	75	0.4
11:15:46 AM	600	75	75	0.4
11:15:47 AM	600	75	75	0.3
11:15:48 AM	600	75	75	0.3
11:15:49 AM	600	75	75	0.3
11:15:50 AM	600	75	75	0.3
11:15:51 AM	600	75	75	0.3
11:15:52 AM	600	75	75	0.3
11:15:53 AM	600	75	75	0.3
11:15:54 AM	600	75	75	0.3
11:15:55 AM	600	75	75	0.3
11:15:56 AM	600	75	75	0.3
11:15:57 AM	600	75	75	0.3
11:15:58 AM	600	75	75	0.3
11:15:59 AM	600	76	75	0.3
11:16:00 AM	600	75	75	0.3
11:16:01 AM	600	75	75	0.3
11:16:02 AM	600	75	75	0.3
11:16:03 AM	600	75	75	0.3
11:16:04 AM	600	75	75	0.3
11:16:05 AM	600	75	75	0.3
11:16:06 AM	600	75	75	0.3
11:16:07 AM	600	75	75	0.3
11:16:08 AM	600	75	75	0.3
11:16:09 AM	600	75	75	0.3
11:16:10 AM	600	75	75	0.3
11:16:11 AM	600	75	75	0.3
11:16:12 AM	600	75	75	0.3
11:16:13 AM	600	75	75	0.3
11:16:13 AM	600	75	75	0.3
11:16:14 AM	600	75	75	0.3
11:16:15 AM	600	75	75	0.3
11:16:16 AM	600	76	75	0.3
11:16:17 AM	600	75	75	0.3
11:16:18 AM	600	75	75	0.3
11:16:19 AM	600	75	75	0.3
11:16:20 AM	600	75	75	0.3
11:16:21 AM	600	75	75	0.3
11:16:22 AM	600	75	75	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>75</b>	<b>75</b>	<b>0.3</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 150

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:47:49 AM	600	77	77	0.5
11:47:50 AM	600	77	77	0.5
11:47:51 AM	600	77	76	0.5
11:47:52 AM	600	77	77	0.5
11:47:53 AM	600	77	77	0.5
11:47:54 AM	600	76	77	0.5
11:47:55 AM	600	77	77	0.5
11:47:56 AM	600	76	77	0.5
11:47:57 AM	600	76	77	0.5
11:47:58 AM	600	77	76	0.5
11:47:59 AM	600	76	76	0.5
11:48:00 AM	600	77	77	0.5
11:48:01 AM	600	77	77	0.5
11:48:02 AM	600	77	76	0.5
11:48:03 AM	600	77	77	0.5
11:48:04 AM	600	76	77	0.5
11:48:05 AM	600	77	77	0.5
11:48:06 AM	600	77	77	0.5
11:48:07 AM	600	76	77	0.5
11:48:08 AM	600	76	76	0.5
11:48:09 AM	600	77	76	0.5
11:48:10 AM	600	77	77	0.5
11:48:11 AM	600	76	76	0.5
11:48:12 AM	600	76	76	0.5
11:48:13 AM	600	76	77	0.5
11:48:14 AM	600	76	77	0.5
11:48:15 AM	600	77	76	0.5
11:48:16 AM	600	77	77	0.5
11:48:17 AM	600	76	76	0.6
11:48:18 AM	600	76	76	0.6
11:48:19 AM	600	76	76	0.6
11:48:19 AM	600	76	77	0.7
11:48:20 AM	600	76	76	0.7
11:48:21 AM	600	76	76	0.8
11:48:22 AM	600	76	76	0.8
11:48:23 AM	600	76	76	0.8
11:48:24 AM	600	76	76	0.8
11:48:25 AM	600	76	76	0.9
11:48:26 AM	600	76	76	0.9
11:48:27 AM	600	76	76	0.9
11:48:28 AM	600	77	76	0.9
11:48:29 AM	600	76	76	0.9
11:48:30 AM	600	76	76	0.8
11:48:31 AM	600	76	76	0.8
11:48:32 AM	600	76	76	0.8
11:48:33 AM	600	76	76	0.8
11:48:34 AM	600	76	76	0.8
11:48:35 AM	600	76	76	0.8
11:48:36 AM	600	76	76	0.8
11:48:37 AM	600	76	76	0.8
11:48:38 AM	600	76	76	0.8
11:48:39 AM	600	76	76	0.7
11:48:40 AM	600	76	76	0.7
11:48:41 AM	600	76	76	0.7
11:48:42 AM	600	76	76	0.7
11:48:43 AM	600	77	76	0.7
11:48:44 AM	600	76	76	0.6
11:48:45 AM	600	76	76	0.6
11:48:46 AM	600	76	76	0.6
11:48:47 AM	600	76	76	0.6
<b>Averages -&gt;</b>	<b>600</b>	<b>77</b>	<b>76</b>	<b>0.6</b>
			<b>Maximum -&gt;</b>	<b>0.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 150

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:34:16 PM	600	502	495	18.3
1:34:17 PM	600	501	494	18.2
1:34:18 PM	600	501	494	18.2
1:34:19 PM	600	502	494	18.0
1:34:20 PM	600	502	496	17.7
1:34:21 PM	600	501	492	17.4
1:34:22 PM	600	501	493	17.2
1:34:23 PM	600	501	494	17.3
1:34:24 PM	600	501	494	17.5
1:34:25 PM	600	501	494	17.5
1:34:26 PM	600	502	494	17.6
1:34:27 PM	600	502	494	17.5
1:34:28 PM	600	501	493	17.4
1:34:29 PM	600	501	494	17.4
1:34:30 PM	600	501	494	17.4
1:34:31 PM	600	501	494	17.4
1:34:32 PM	600	504	495	17.3
1:34:33 PM	600	500	493	17.2
1:34:34 PM	600	501	493	17.1
1:34:34 PM	600	499	493	17.0
1:34:35 PM	600	501	493	17.0
1:34:36 PM	600	500	492	17.0
1:34:37 PM	600	500	492	17.0
1:34:38 PM	600	499	492	16.8
1:34:39 PM	600	502	495	16.8
1:34:40 PM	600	498	492	16.8
1:34:41 PM	600	499	492	16.8
1:34:42 PM	600	500	492	16.7
1:34:43 PM	600	501	494	16.4
1:34:44 PM	600	500	494	16.4
1:34:45 PM	600	499	492	16.4
1:34:46 PM	600	498	492	16.3
1:34:47 PM	600	497	490	16.3
1:34:48 PM	600	498	492	16.4
1:34:49 PM	600	498	492	16.4
1:34:50 PM	600	498	490	16.3
1:34:51 PM	600	496	490	16.5
1:34:52 PM	600	500	491	16.5
1:34:53 PM	600	501	492	16.5
1:34:54 PM	600	499	493	16.7
1:34:55 PM	600	498	491	16.8
1:34:56 PM	600	498	492	16.7
1:34:57 PM	600	500	492	16.8
1:34:58 PM	600	497	489	16.9
1:34:59 PM	600	498	492	17.1
1:35:00 PM	600	497	493	17.1
1:35:01 PM	600	499	492	17.4
1:35:02 PM	600	500	492	17.5
1:35:03 PM	600	500	492	17.7
1:35:04 PM	600	501	494	17.9
1:35:05 PM	600	499	491	17.8
1:35:06 PM	600	499	492	17.8
1:35:07 PM	600	499	491	17.9
1:35:08 PM	600	499	492	17.9
1:35:09 PM	600	499	492	18.2
1:35:10 PM	600	501	494	18.4
1:35:11 PM	600	499	493	18.6
1:35:12 PM	600	498	492	18.9
1:35:13 PM	600	501	494	19.1
1:35:14 PM	600	499	492	19.2
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>493</b>	<b>17.3</b>
			<b>Maximum -&gt;</b>	<b>19.2</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 200

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:12:54 PM	600	499	494	11.3
2:12:54 PM	600	498	492	11.1
2:12:55 PM	600	499	493	11.3
2:12:56 PM	600	499	492	11.1
2:12:57 PM	600	496	490	11.2
2:12:58 PM	600	498	492	11.2
2:12:59 PM	600	500	495	11.4
2:13:00 PM	600	499	494	11.6
2:13:01 PM	600	499	493	11.5
2:13:02 PM	600	502	494	11.7
2:13:03 PM	600	500	494	11.8
2:13:04 PM	600	500	492	11.7
2:13:05 PM	600	501	493	11.9
2:13:06 PM	600	498	492	12.0
2:13:07 PM	600	498	491	12.0
2:13:08 PM	600	501	493	12.1
2:13:09 PM	600	499	493	12.2
2:13:10 PM	600	500	494	12.1
2:13:11 PM	600	500	492	12.2
2:13:12 PM	600	501	494	12.2
2:13:13 PM	600	501	493	12.4
2:13:14 PM	600	500	492	12.3
2:13:15 PM	600	501	495	12.2
2:13:16 PM	600	499	491	12.1
2:13:17 PM	600	501	493	12.1
2:13:18 PM	600	502	494	12.1
2:13:19 PM	600	500	495	12.2
2:13:20 PM	600	500	494	12.2
2:13:21 PM	600	501	495	12.4
2:13:22 PM	600	503	493	12.5
2:13:23 PM	600	501	495	12.5
2:13:24 PM	600	502	495	12.4
2:13:25 PM	600	502	495	12.5
2:13:26 PM	600	503	494	12.5
2:13:27 PM	600	500	495	12.4
2:13:28 PM	600	503	497	12.3
2:13:29 PM	600	501	492	12.3
2:13:30 PM	600	501	495	12.4
2:13:31 PM	600	503	497	12.3
2:13:32 PM	600	504	496	12.2
2:13:33 PM	600	502	495	12.3
2:13:34 PM	600	502	494	12.3
2:13:35 PM	600	501	494	12.2
2:13:36 PM	600	502	495	12.2
2:13:37 PM	600	501	494	12.2
2:13:38 PM	600	501	494	12.2
2:13:39 PM	600	503	494	12.1
2:13:40 PM	600	502	495	12.2
2:13:41 PM	600	501	494	12.3
2:13:42 PM	600	501	495	12.1
2:13:43 PM	600	501	494	12.0
2:13:44 PM	600	501	493	12.0
2:13:45 PM	600	502	495	12.1
2:13:46 PM	600	501	494	11.9
2:13:47 PM	600	501	495	11.9
2:13:48 PM	600	502	495	11.9
2:13:49 PM	600	501	496	11.7
2:13:50 PM	600	499	492	11.7
2:13:51 PM	600	502	494	11.8
2:13:52 PM	600	501	495	11.7
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>12.0</b>
			<b>Maximum -&gt;</b>	<b>12.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 250

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:48:33 PM	600	500	495	10.0
2:48:34 PM	600	500	493	10.1
2:48:35 PM	600	499	491	10.1
2:48:36 PM	600	499	491	10.2
2:48:37 PM	600	501	493	10.3
2:48:38 PM	600	499	494	10.3
2:48:39 PM	600	499	494	10.3
2:48:40 PM	600	500	493	10.3
2:48:41 PM	600	500	495	10.2
2:48:42 PM	600	502	495	10.3
2:48:43 PM	600	499	494	10.2
2:48:44 PM	600	501	495	10.2
2:48:45 PM	600	498	491	10.3
2:48:46 PM	600	501	494	10.3
2:48:47 PM	600	503	495	10.5
2:48:48 PM	600	499	492	10.4
2:48:49 PM	600	498	490	10.5
2:48:50 PM	600	503	495	10.5
2:48:51 PM	600	503	496	10.6
2:48:52 PM	600	501	495	10.7
2:48:53 PM	600	501	495	10.6
2:48:54 PM	600	504	496	10.7
2:48:55 PM	600	503	496	10.7
2:48:56 PM	600	499	490	10.7
2:48:57 PM	600	502	495	10.8
2:48:58 PM	600	503	493	10.8
2:48:59 PM	600	501	494	10.7
2:49:00 PM	600	501	493	10.9
2:49:01 PM	600	501	495	10.8
2:49:02 PM	600	504	495	10.8
2:49:02 PM	600	503	496	10.8
2:49:03 PM	600	502	494	10.8
2:49:04 PM	600	499	492	10.8
2:49:05 PM	600	501	494	10.9
2:49:06 PM	600	498	490	10.9
2:49:07 PM	600	502	494	10.8
2:49:08 PM	600	502	496	10.9
2:49:09 PM	600	500	493	10.8
2:49:10 PM	600	498	491	10.8
2:49:11 PM	600	503	495	10.8
2:49:12 PM	600	500	494	10.8
2:49:13 PM	600	502	494	10.8
2:49:14 PM	600	502	494	10.8
2:49:15 PM	600	503	497	10.7
2:49:16 PM	600	503	496	10.8
2:49:17 PM	600	504	496	10.8
2:49:18 PM	600	502	495	10.7
2:49:19 PM	600	499	493	10.8
2:49:20 PM	600	501	493	10.8
2:49:21 PM	600	502	496	10.8
2:49:22 PM	600	502	494	10.8
2:49:23 PM	600	501	495	10.9
2:49:24 PM	600	502	495	10.8
2:49:25 PM	600	502	493	10.9
2:49:26 PM	600	503	496	10.9
2:49:27 PM	600	503	494	10.8
2:49:28 PM	600	501	494	11.0
2:49:29 PM	600	502	495	10.9
2:49:30 PM	600	503	496	10.8
2:49:31 PM	600	501	494	10.9
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>10.6</b>
			<b>Maximum -&gt;</b>	<b>11.0</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 300

**Date** 12/10/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:23:50 PM	600	504	496	6.2
3:23:51 PM	600	502	495	6.2
3:23:52 PM	600	500	492	6.2
3:23:53 PM	600	505	498	6.1
3:23:54 PM	600	500	495	6.2
3:23:55 PM	600	504	497	6.2
3:23:56 PM	600	501	494	6.1
3:23:57 PM	600	501	494	6.1
3:23:58 PM	600	500	494	6.1
3:23:59 PM	600	503	495	6.0
3:24:00 PM	600	502	496	6.0
3:24:01 PM	600	499	493	6.0
3:24:02 PM	600	500	493	6.0
3:24:03 PM	600	501	494	6.0
3:24:04 PM	600	500	494	6.0
3:24:05 PM	600	501	495	5.9
3:24:06 PM	600	499	494	5.9
3:24:07 PM	600	500	494	5.9
3:24:08 PM	600	500	495	5.8
3:24:09 PM	600	500	493	5.8
3:24:10 PM	600	499	494	5.8
3:24:11 PM	600	499	494	5.8
3:24:12 PM	600	499	494	5.8
3:24:13 PM	600	499	493	5.9
3:24:14 PM	600	500	495	5.9
3:24:15 PM	600	501	494	5.9
3:24:16 PM	600	499	493	5.9
3:24:17 PM	600	500	494	5.9
3:24:18 PM	600	499	494	5.9
3:24:19 PM	600	500	493	5.9
3:24:20 PM	600	501	494	5.9
3:24:21 PM	600	501	496	5.9
3:24:22 PM	600	500	494	5.9
3:24:23 PM	600	500	493	5.9
3:24:24 PM	600	499	491	5.9
3:24:25 PM	600	499	490	5.9
3:24:26 PM	600	500	493	5.9
3:24:27 PM	600	500	493	5.9
3:24:28 PM	600	498	491	5.9
3:24:29 PM	600	500	493	5.9
3:24:30 PM	600	499	493	5.9
3:24:31 PM	600	497	494	5.9
3:24:32 PM	600	500	492	5.9
3:24:33 PM	600	501	492	5.9
3:24:34 PM	600	498	491	5.9
3:24:35 PM	600	499	493	6.0
3:24:36 PM	600	500	492	5.9
3:24:37 PM	600	500	493	6.0
3:24:38 PM	600	500	494	6.0
3:24:39 PM	600	501	494	6.0
3:24:40 PM	600	498	492	6.0
3:24:40 PM	600	499	496	6.0
3:24:41 PM	600	500	495	6.0
3:24:42 PM	600	500	493	6.0
3:24:43 PM	600	501	495	6.1
3:24:44 PM	600	499	495	6.1
3:24:45 PM	600	500	494	6.1
3:24:46 PM	600	499	495	6.1
3:24:47 PM	600	500	493	6.2
3:24:48 PM	600	500	494	6.2
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>494</b>	<b>6.0</b>
			<b>Maximum -&gt;</b>	<b>6.2</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 300

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:12:18 AM	600	68	67	0.5
11:12:19 AM	600	67	66	0.4
11:12:20 AM	600	67	68	0.4
11:12:21 AM	600	68	68	0.4
11:12:22 AM	600	68	68	0.4
11:12:23 AM	600	67	68	0.4
11:12:24 AM	600	67	67	0.4
11:12:24 AM	600	68	67	0.4
11:12:25 AM	600	68	68	0.4
11:12:26 AM	600	68	68	0.4
11:12:27 AM	600	67	66	0.4
11:12:28 AM	600	68	67	0.4
11:12:29 AM	600	68	67	0.4
11:12:30 AM	600	68	67	0.4
11:12:31 AM	600	67	68	0.4
11:12:32 AM	600	67	67	0.5
11:12:33 AM	600	68	67	0.5
11:12:34 AM	600	67	67	0.5
11:12:35 AM	600	66	68	0.5
11:12:36 AM	600	67	68	0.5
11:12:37 AM	600	67	67	0.5
11:12:38 AM	600	68	68	0.5
11:12:39 AM	600	67	67	0.5
11:12:40 AM	600	66	68	0.4
11:12:41 AM	600	68	68	0.4
11:12:42 AM	600	67	67	0.4
11:12:43 AM	600	67	68	0.4
11:12:44 AM	600	67	67	0.4
11:12:45 AM	600	67	67	0.4
11:12:46 AM	600	67	67	0.4
11:12:47 AM	600	68	67	0.4
11:12:48 AM	600	66	67	0.4
11:12:49 AM	600	68	67	0.4
11:12:50 AM	600	68	67	0.4
11:12:51 AM	600	66	67	0.4
11:12:52 AM	600	68	68	0.4
11:12:53 AM	600	69	68	0.4
11:12:54 AM	600	67	67	0.4
11:12:55 AM	600	69	67	0.5
11:12:56 AM	600	68	68	0.4
11:12:57 AM	600	67	67	0.4
11:12:58 AM	600	67	67	0.4
11:12:59 AM	600	68	67	0.4
11:13:00 AM	600	68	67	0.4
11:13:01 AM	600	68	67	0.4
11:13:02 AM	600	68	68	0.4
11:13:03 AM	600	68	67	0.4
11:13:04 AM	600	67	67	0.4
11:13:05 AM	600	68	68	0.4
11:13:06 AM	600	66	67	0.3
11:13:07 AM	600	68	68	0.3
11:13:08 AM	600	67	67	0.3
11:13:09 AM	600	66	67	0.4
11:13:10 AM	600	67	67	0.4
11:13:11 AM	600	68	68	0.3
11:13:12 AM	600	68	66	0.3
11:13:13 AM	600	68	68	0.3
11:13:14 AM	600	67	67	0.3
11:13:15 AM	600	66	67	0.3
11:13:16 AM	600	68	68	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>67</b>	<b>67</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 350

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
12:05:00 PM	600	67	69	0.4
12:05:01 PM	600	70	69	0.4
12:05:02 PM	600	68	70	0.4
12:05:03 PM	600	66	71	0.4
12:05:04 PM	600	67	70	0.3
12:05:05 PM	600	69	70	0.4
12:05:06 PM	600	67	70	0.3
12:05:07 PM	600	69	70	0.3
12:05:08 PM	600	71	70	0.4
12:05:09 PM	600	69	70	0.4
12:05:10 PM	600	69	69	0.4
12:05:11 PM	600	69	70	0.4
12:05:12 PM	600	69	70	0.4
12:05:13 PM	600	69	69	0.4
12:05:13 PM	600	69	69	0.4
12:05:14 PM	600	68	67	0.4
12:05:15 PM	600	69	70	0.4
12:05:16 PM	600	69	70	0.4
12:05:17 PM	600	68	69	0.4
12:05:18 PM	600	69	69	0.4
12:05:19 PM	600	70	67	0.3
12:05:20 PM	600	70	68	0.4
12:05:21 PM	600	69	67	0.4
12:05:22 PM	600	71	68	0.4
12:05:23 PM	600	69	70	0.4
12:05:24 PM	600	68	69	0.4
12:05:25 PM	600	69	70	0.4
12:05:26 PM	600	68	70	0.4
12:05:27 PM	600	69	67	0.4
12:05:28 PM	600	68	69	0.4
12:05:29 PM	600	69	69	0.4
12:05:30 PM	600	70	69	0.4
12:05:31 PM	600	69	70	0.4
12:05:32 PM	600	70	68	0.4
12:05:33 PM	600	69	70	0.4
12:05:34 PM	600	68	69	0.4
12:05:35 PM	600	69	69	0.4
12:05:36 PM	600	68	70	0.4
12:05:37 PM	600	70	69	0.4
12:05:38 PM	600	69	68	0.4
12:05:39 PM	600	70	69	0.4
12:05:40 PM	600	69	68	0.4
12:05:41 PM	600	69	70	0.4
12:05:42 PM	600	69	68	0.4
12:05:43 PM	600	69	70	0.4
12:05:44 PM	600	71	70	0.4
12:05:45 PM	600	71	68	0.4
12:05:46 PM	600	70	69	0.4
12:05:47 PM	600	68	70	0.4
12:05:48 PM	600	67	71	0.4
12:05:49 PM	600	69	69	0.4
12:05:50 PM	600	68	69	0.4
12:05:51 PM	600	70	69	0.4
12:05:52 PM	600	69	68	0.4
12:05:53 PM	600	67	69	0.4
12:05:54 PM	600	69	70	0.4
12:05:55 PM	600	69	71	0.4
12:05:56 PM	600	71	68	0.4
12:05:57 PM	600	69	69	0.4
12:05:58 PM	600	69	70	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>69</b>	<b>69</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 400

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
12:39:43 PM	600	72	72	0.4
12:39:44 PM	600	71	74	0.4
12:39:45 PM	600	71	74	0.4
12:39:46 PM	600	71	71	0.4
12:39:47 PM	600	71	71	0.4
12:39:47 PM	600	71	72	0.4
12:39:48 PM	600	70	72	0.4
12:39:49 PM	600	70	70	0.4
12:39:50 PM	600	72	71	0.4
12:39:51 PM	600	72	72	0.4
12:39:52 PM	600	71	71	0.4
12:39:53 PM	600	70	71	0.4
12:39:54 PM	600	71	72	0.4
12:39:55 PM	600	73	71	0.4
12:39:56 PM	600	71	69	0.4
12:39:57 PM	600	72	71	0.4
12:39:58 PM	600	73	72	0.4
12:39:59 PM	600	72	71	0.4
12:40:00 PM	600	70	72	0.4
12:40:01 PM	600	71	71	0.4
12:40:02 PM	600	70	71	0.4
12:40:03 PM	600	71	71	0.4
12:40:04 PM	600	71	71	0.4
12:40:05 PM	600	70	71	0.4
12:40:06 PM	600	73	71	0.4
12:40:07 PM	600	70	72	0.4
12:40:08 PM	600	72	71	0.4
12:40:09 PM	600	71	72	0.4
12:40:10 PM	600	71	71	0.4
12:40:11 PM	600	72	73	0.4
12:40:12 PM	600	69	71	0.4
12:40:13 PM	600	71	71	0.4
12:40:14 PM	600	70	70	0.4
12:40:15 PM	600	71	70	0.4
12:40:16 PM	600	70	70	0.4
12:40:17 PM	600	72	71	0.4
12:40:18 PM	600	71	72	0.4
12:40:19 PM	600	72	71	0.4
12:40:20 PM	600	71	71	0.4
12:40:21 PM	600	71	71	0.4
12:40:22 PM	600	70	72	0.4
12:40:23 PM	600	70	73	0.5
12:40:24 PM	600	71	71	0.5
12:40:25 PM	600	71	72	0.5
12:40:26 PM	600	71	72	0.5
12:40:27 PM	600	71	71	0.5
12:40:28 PM	600	72	71	0.5
12:40:29 PM	600	71	71	0.5
12:40:30 PM	600	72	72	0.4
12:40:31 PM	600	72	71	0.4
12:40:32 PM	600	69	70	0.4
12:40:33 PM	600	70	71	0.4
12:40:34 PM	600	72	71	0.4
12:40:35 PM	600	70	72	0.4
12:40:36 PM	600	69	71	0.4
12:40:37 PM	600	70	71	0.4
12:40:38 PM	600	72	71	0.4
12:40:39 PM	600	71	71	0.4
12:40:40 PM	600	71	71	0.4
12:40:41 PM	600	72	71	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>71</b>	<b>71</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 450

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:19:14 PM	600	72	71	0.4
1:19:15 PM	600	72	72	0.4
1:19:16 PM	600	73	72	0.4
1:19:17 PM	600	72	72	0.4
1:19:18 PM	600	72	72	0.4
1:19:19 PM	600	73	72	0.4
1:19:20 PM	600	72	71	0.4
1:19:21 PM	600	72	72	0.4
1:19:22 PM	600	72	72	0.4
1:19:23 PM	600	72	72	0.4
1:19:24 PM	600	73	74	0.4
1:19:25 PM	600	73	73	0.4
1:19:26 PM	600	72	72	0.4
1:19:27 PM	600	73	74	0.5
1:19:28 PM	600	73	72	0.5
1:19:29 PM	600	72	73	0.5
1:19:29 PM	600	72	72	0.5
1:19:30 PM	600	72	72	0.5
1:19:31 PM	600	72	73	0.5
1:19:32 PM	600	72	72	0.4
1:19:33 PM	600	73	73	0.4
1:19:34 PM	600	72	72	0.4
1:19:35 PM	600	72	73	0.4
1:19:36 PM	600	73	72	0.4
1:19:37 PM	600	73	73	0.4
1:19:38 PM	600	72	72	0.4
1:19:39 PM	600	74	73	0.4
1:19:40 PM	600	72	72	0.4
1:19:41 PM	600	72	72	0.4
1:19:42 PM	600	72	72	0.4
1:19:43 PM	600	73	73	0.4
1:19:44 PM	600	72	72	0.4
1:19:45 PM	600	71	72	0.4
1:19:46 PM	600	73	72	0.4
1:19:47 PM	600	73	72	0.4
1:19:48 PM	600	72	71	0.4
1:19:49 PM	600	71	72	0.4
1:19:50 PM	600	72	72	0.4
1:19:51 PM	600	72	72	0.4
1:19:52 PM	600	72	72	0.3
1:19:53 PM	600	73	71	0.3
1:19:54 PM	600	72	72	0.4
1:19:55 PM	600	73	73	0.4
1:19:56 PM	600	72	71	0.4
1:19:57 PM	600	73	72	0.4
1:19:58 PM	600	73	72	0.4
1:19:59 PM	600	73	72	0.4
1:20:00 PM	600	72	71	0.4
1:20:01 PM	600	71	73	0.4
1:20:02 PM	600	73	73	0.3
1:20:03 PM	600	72	72	0.3
1:20:04 PM	600	72	72	0.3
1:20:05 PM	600	73	73	0.4
1:20:06 PM	600	73	72	0.4
1:20:07 PM	600	72	73	0.3
1:20:08 PM	600	72	73	0.3
1:20:09 PM	600	73	72	0.3
1:20:10 PM	600	72	73	0.3
1:20:11 PM	600	72	71	0.3
1:20:12 PM	600	72	72	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>72</b>	<b>72</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 450

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:27:07 PM	600	503	495	6.6
2:27:08 PM	600	503	495	6.6
2:27:09 PM	600	502	493	6.6
2:27:10 PM	600	502	495	6.6
2:27:11 PM	600	502	494	6.6
2:27:12 PM	600	502	493	6.5
2:27:13 PM	600	501	493	6.6
2:27:14 PM	600	502	494	6.6
2:27:15 PM	600	502	493	6.5
2:27:16 PM	600	502	493	6.5
2:27:17 PM	600	502	494	6.5
2:27:18 PM	600	502	494	6.4
2:27:19 PM	600	501	494	6.5
2:27:20 PM	600	500	493	6.4
2:27:21 PM	600	501	494	6.4
2:27:21 PM	600	500	494	6.4
2:27:22 PM	600	501	493	6.3
2:27:23 PM	600	501	492	6.3
2:27:24 PM	600	501	494	6.4
2:27:25 PM	600	500	493	6.3
2:27:26 PM	600	500	493	6.4
2:27:27 PM	600	501	493	6.4
2:27:28 PM	600	500	494	6.5
2:27:29 PM	600	499	492	6.5
2:27:30 PM	600	500	492	6.5
2:27:31 PM	600	499	493	6.5
2:27:32 PM	600	499	491	6.5
2:27:33 PM	600	498	492	6.5
2:27:34 PM	600	499	492	6.4
2:27:35 PM	600	499	492	6.5
2:27:36 PM	600	498	491	6.5
2:27:37 PM	600	499	491	6.4
2:27:38 PM	600	499	492	6.4
2:27:39 PM	600	498	492	6.5
2:27:40 PM	600	497	490	6.4
2:27:41 PM	600	499	492	6.5
2:27:42 PM	600	498	491	6.5
2:27:43 PM	600	498	491	6.5
2:27:44 PM	600	499	491	6.5
2:27:45 PM	600	499	492	6.5
2:27:46 PM	600	497	491	6.5
2:27:47 PM	600	498	491	6.5
2:27:48 PM	600	498	491	6.5
2:27:49 PM	600	499	491	6.5
2:27:50 PM	600	498	491	6.6
2:27:51 PM	600	498	491	6.6
2:27:52 PM	600	498	492	6.6
2:27:53 PM	600	497	491	6.6
2:27:54 PM	600	498	491	6.6
2:27:55 PM	600	498	491	6.6
2:27:56 PM	600	498	491	6.7
2:27:57 PM	600	498	491	6.7
2:27:58 PM	600	498	491	6.7
2:27:59 PM	600	498	491	6.7
2:28:00 PM	600	498	491	6.8
2:28:01 PM	600	498	491	6.8
2:28:02 PM	600	499	491	6.8
2:28:03 PM	600	499	492	6.9
2:28:04 PM	600	498	491	6.9
2:28:05 PM	600	499	491	6.9
<b>Averages -&gt;</b>	<b>600</b>	<b>499</b>	<b>492</b>	<b>6.5</b>
			<b>Maximum -&gt;</b>	<b>6.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 500

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:02:52 PM	600	501	494	5.2
3:02:53 PM	600	501	493	5.2
3:02:54 PM	600	502	495	5.3
3:02:55 PM	600	500	493	5.2
3:02:56 PM	600	500	495	5.2
3:02:57 PM	600	501	493	5.3
3:02:58 PM	600	499	493	5.4
3:02:59 PM	600	500	494	5.2
3:03:00 PM	600	500	493	5.2
3:03:01 PM	600	501	494	5.2
3:03:02 PM	600	499	493	5.2
3:03:03 PM	600	499	493	5.1
3:03:04 PM	600	500	493	5.2
3:03:05 PM	600	500	493	5.1
3:03:06 PM	600	499	492	5.2
3:03:07 PM	600	499	494	5.1
3:03:08 PM	600	500	493	5.1
3:03:09 PM	600	499	493	5.0
3:03:10 PM	600	499	492	5.1
3:03:11 PM	600	499	492	5.0
3:03:12 PM	600	498	492	5.1
3:03:13 PM	600	499	492	5.1
3:03:14 PM	600	498	491	5.1
3:03:15 PM	600	499	493	5.1
3:03:16 PM	600	499	492	5.1
3:03:17 PM	600	497	492	5.1
3:03:18 PM	600	498	493	5.1
3:03:19 PM	600	498	492	5.1
3:03:20 PM	600	498	492	5.2
3:03:21 PM	600	497	493	5.1
3:03:22 PM	600	499	492	5.2
3:03:23 PM	600	498	493	5.2
3:03:24 PM	600	499	493	5.1
3:03:25 PM	600	498	492	5.3
3:03:26 PM	600	499	493	5.1
3:03:27 PM	600	500	493	5.2
3:03:28 PM	600	500	493	5.2
3:03:29 PM	600	498	492	5.3
3:03:30 PM	600	499	493	5.2
3:03:31 PM	600	499	492	5.2
3:03:32 PM	600	499	494	5.3
3:03:33 PM	600	499	493	5.4
3:03:34 PM	600	500	493	5.4
3:03:35 PM	600	499	493	5.5
3:03:36 PM	600	500	493	5.5
3:03:37 PM	600	499	492	5.5
3:03:38 PM	600	501	494	5.5
3:03:39 PM	600	497	492	5.6
3:03:40 PM	600	501	493	5.5
3:03:41 PM	600	500	493	5.6
3:03:42 PM	600	502	494	5.7
3:03:43 PM	600	499	493	5.7
3:03:44 PM	600	500	494	5.7
3:03:44 PM	600	501	494	5.7
3:03:45 PM	600	500	493	5.8
3:03:46 PM	600	500	493	5.8
3:03:47 PM	600	502	494	5.9
3:03:48 PM	600	502	494	5.8
3:03:49 PM	600	501	494	5.9
3:03:50 PM	600	501	494	5.8
<b>Averages -&gt;</b>	<b>600</b>	<b>499</b>	<b>493</b>	<b>5.3</b>
			<b>Maximum -&gt;</b>	<b>5.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 550

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:39:25 PM	600	499	494	5.0
3:39:26 PM	600	500	492	5.1
3:39:27 PM	600	499	493	5.2
3:39:28 PM	600	499	493	5.2
3:39:29 PM	600	501	493	5.2
3:39:30 PM	600	500	493	5.1
3:39:31 PM	600	500	494	5.2
3:39:32 PM	600	500	494	5.2
3:39:33 PM	600	501	494	5.1
3:39:34 PM	600	500	494	5.3
3:39:35 PM	600	500	494	5.3
3:39:36 PM	600	501	494	5.2
3:39:37 PM	600	500	494	5.4
3:39:38 PM	600	501	494	5.3
3:39:39 PM	600	501	494	5.4
3:39:40 PM	600	500	495	5.3
3:39:41 PM	600	502	494	5.4
3:39:42 PM	600	502	493	5.3
3:39:43 PM	600	501	495	5.4
3:39:44 PM	600	502	495	5.3
3:39:45 PM	600	502	494	5.4
3:39:46 PM	600	502	494	5.2
3:39:47 PM	600	502	495	5.3
3:39:47 PM	600	502	495	5.2
3:39:48 PM	600	502	495	5.3
3:39:49 PM	600	502	495	5.2
3:39:50 PM	600	502	495	5.3
3:39:51 PM	600	503	495	5.2
3:39:52 PM	600	502	494	5.3
3:39:53 PM	600	502	496	5.3
3:39:54 PM	600	502	495	5.2
3:39:55 PM	600	502	495	5.3
3:39:56 PM	600	503	495	5.2
3:39:57 PM	600	502	494	5.2
3:39:58 PM	600	503	495	5.3
3:39:59 PM	600	501	496	5.1
3:40:00 PM	600	501	496	5.1
3:40:01 PM	600	502	495	5.3
3:40:02 PM	600	502	495	5.2
3:40:03 PM	600	502	495	5.1
3:40:04 PM	600	501	495	5.2
3:40:05 PM	600	501	495	5.2
3:40:06 PM	600	501	495	5.1
3:40:07 PM	600	502	495	5.0
3:40:08 PM	600	502	494	5.1
3:40:09 PM	600	501	495	5.2
3:40:10 PM	600	502	495	5.1
3:40:11 PM	600	501	495	5.0
3:40:12 PM	600	501	494	5.0
3:40:13 PM	600	500	494	5.0
3:40:14 PM	600	501	495	5.1
3:40:15 PM	600	501	495	5.1
3:40:16 PM	600	501	494	5.0
3:40:17 PM	600	501	494	5.0
3:40:18 PM	600	501	493	5.0
3:40:19 PM	600	499	494	5.0
3:40:20 PM	600	500	494	5.0
3:40:21 PM	600	501	494	4.9
3:40:22 PM	600	500	494	4.9
3:40:23 PM	600	499	494	4.8
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>5.2</b>
			<b>Maximum -&gt;</b>	<b>5.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 600

**Date** 12/11/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
4:38:24 PM	600	503	495	3.4
4:38:25 PM	600	502	495	3.4
4:38:26 PM	600	502	495	3.4
4:38:27 PM	600	502	495	3.4
4:38:28 PM	600	503	495	3.4
4:38:29 PM	600	502	495	3.4
4:38:30 PM	600	503	496	3.3
4:38:31 PM	600	503	496	3.3
4:38:32 PM	600	503	496	3.3
4:38:33 PM	600	502	494	3.3
4:38:34 PM	600	502	495	3.3
4:38:35 PM	600	502	495	3.3
4:38:36 PM	600	503	495	3.3
4:38:37 PM	600	501	494	3.3
4:38:38 PM	600	502	495	3.3
4:38:39 PM	600	503	495	3.3
4:38:40 PM	600	501	495	3.3
4:38:41 PM	600	502	495	3.3
4:38:42 PM	600	502	495	3.4
4:38:43 PM	600	502	495	3.4
4:38:44 PM	600	503	496	3.4
4:38:45 PM	600	502	496	3.5
4:38:46 PM	600	502	495	3.5
4:38:46 PM	600	502	494	3.4
4:38:47 PM	600	502	495	3.4
4:38:48 PM	600	501	496	3.4
4:38:49 PM	600	503	496	3.4
4:38:50 PM	600	502	494	3.4
4:38:51 PM	600	501	495	3.4
4:38:52 PM	600	503	494	3.3
4:38:53 PM	600	501	494	3.3
4:38:54 PM	600	500	494	3.4
4:38:55 PM	600	502	495	3.4
4:38:56 PM	600	502	494	3.4
4:38:57 PM	600	502	494	3.3
4:38:58 PM	600	501	494	3.3
4:38:59 PM	600	500	494	3.3
4:39:00 PM	600	501	494	3.3
4:39:01 PM	600	500	494	3.3
4:39:02 PM	600	501	493	3.3
4:39:03 PM	600	501	493	3.3
4:39:04 PM	600	501	494	3.4
4:39:05 PM	600	499	494	3.4
4:39:06 PM	600	500	494	3.4
4:39:07 PM	600	500	495	3.4
4:39:08 PM	600	499	495	3.4
4:39:09 PM	600	499	494	3.5
4:39:10 PM	600	499	493	3.6
4:39:11 PM	600	499	494	3.7
4:39:12 PM	600	499	493	3.6
4:39:13 PM	600	500	493	3.6
4:39:14 PM	600	500	494	3.6
4:39:15 PM	600	497	492	3.6
4:39:16 PM	600	500	495	3.6
4:39:17 PM	600	498	492	3.6
4:39:18 PM	600	498	493	3.6
4:39:19 PM	600	499	492	3.6
4:39:20 PM	600	498	493	3.6
4:39:21 PM	600	497	492	3.6
4:39:22 PM	600	498	492	3.6
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>3.4</b>
			<b>Maximum -&gt;</b>	<b>3.7</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 600

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
10:28:25 AM	600	67	66	0.2
10:28:26 AM	600	66	67	0.2
10:28:27 AM	600	67	66	0.2
10:28:28 AM	600	67	66	0.2
10:28:29 AM	600	65	67	0.3
10:28:30 AM	600	67	66	0.5
10:28:31 AM	600	66	67	0.5
10:28:32 AM	600	67	66	0.5
10:28:33 AM	600	66	67	0.5
10:28:34 AM	600	66	66	0.5
10:28:35 AM	600	65	67	0.5
10:28:36 AM	600	66	66	0.5
10:28:37 AM	600	66	66	0.5
10:28:38 AM	600	66	65	0.5
10:28:39 AM	600	65	66	0.5
10:28:40 AM	600	66	67	0.5
10:28:41 AM	600	67	66	0.5
10:28:42 AM	600	66	67	0.5
10:28:43 AM	600	66	66	0.5
10:28:44 AM	600	65	66	0.5
10:28:45 AM	600	66	65	0.5
10:28:46 AM	600	65	66	0.5
10:28:47 AM	600	66	65	0.5
10:28:48 AM	600	65	66	0.5
10:28:49 AM	600	65	66	0.5
10:28:50 AM	600	66	65	0.5
10:28:51 AM	600	65	66	0.5
10:28:51 AM	600	66	66	0.5
10:28:52 AM	600	65	65	0.5
10:28:53 AM	600	65	66	0.5
10:28:54 AM	600	66	66	0.5
10:28:55 AM	600	65	65	0.5
10:28:56 AM	600	66	65	0.5
10:28:57 AM	600	66	65	0.5
10:28:58 AM	600	65	67	0.5
10:28:59 AM	600	66	66	0.5
10:29:00 AM	600	66	66	0.4
10:29:01 AM	600	66	66	0.4
10:29:02 AM	600	66	66	0.4
10:29:03 AM	600	67	66	0.4
10:29:04 AM	600	66	66	0.4
10:29:05 AM	600	66	66	0.4
10:29:06 AM	600	66	65	0.5
10:29:07 AM	600	66	67	0.5
10:29:08 AM	600	67	66	0.5
10:29:09 AM	600	67	66	0.5
10:29:10 AM	600	66	66	0.5
10:29:11 AM	600	67	66	0.5
10:29:12 AM	600	66	67	0.5
10:29:13 AM	600	66	66	0.5
10:29:14 AM	600	66	66	0.5
10:29:15 AM	600	66	66	0.5
10:29:16 AM	600	65	66	0.5
10:29:17 AM	600	66	66	0.5
10:29:18 AM	600	66	66	0.5
10:29:19 AM	600	65	66	0.5
10:29:20 AM	600	66	66	0.5
10:29:21 AM	600	65	66	0.5
10:29:22 AM	600	65	65	0.5
10:29:23 AM	600	66	66	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>66</b>	<b>66</b>	<b>0.5</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 650

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:01:21 AM	600	69	69	0.7
11:01:22 AM	600	70	69	0.7
11:01:23 AM	600	69	70	0.7
11:01:24 AM	600	69	69	0.7
11:01:25 AM	600	69	69	0.7
11:01:26 AM	600	70	69	0.7
11:01:27 AM	600	69	69	0.7
11:01:28 AM	600	68	69	0.7
11:01:29 AM	600	69	69	0.6
11:01:30 AM	600	69	69	0.6
11:01:31 AM	600	70	69	0.6
11:01:32 AM	600	70	69	0.6
11:01:33 AM	600	69	69	0.6
11:01:34 AM	600	69	70	0.6
11:01:35 AM	600	68	69	0.6
11:01:36 AM	600	69	69	0.6
11:01:37 AM	600	70	69	0.6
11:01:38 AM	600	69	69	0.6
11:01:39 AM	600	69	69	0.6
11:01:40 AM	600	69	69	0.6
11:01:41 AM	600	70	69	0.6
11:01:42 AM	600	69	69	0.6
11:01:43 AM	600	69	68	0.6
11:01:44 AM	600	68	68	0.6
11:01:45 AM	600	68	70	0.6
11:01:46 AM	600	70	69	0.6
11:01:47 AM	600	69	69	0.6
11:01:48 AM	600	69	69	0.6
11:01:49 AM	600	70	69	0.6
11:01:50 AM	600	69	69	0.6
11:01:51 AM	600	69	69	0.6
11:01:52 AM	600	70	69	0.6
11:01:53 AM	600	68	69	0.6
11:01:54 AM	600	69	69	0.6
11:01:55 AM	600	69	68	0.6
11:01:56 AM	600	69	69	0.6
11:01:57 AM	600	69	70	0.6
11:01:58 AM	600	70	70	0.6
11:01:59 AM	600	69	69	0.6
11:01:59 AM	600	70	69	0.6
11:02:00 AM	600	69	70	0.6
11:02:01 AM	600	69	69	0.6
11:02:02 AM	600	69	69	0.6
11:02:03 AM	600	69	70	0.6
11:02:04 AM	600	69	69	0.6
11:02:05 AM	600	68	69	0.6
11:02:06 AM	600	70	70	0.6
11:02:07 AM	600	70	70	0.6
11:02:08 AM	600	70	69	0.6
11:02:09 AM	600	69	69	0.6
11:02:10 AM	600	70	68	0.6
11:02:11 AM	600	69	69	0.6
11:02:12 AM	600	68	68	0.6
11:02:13 AM	600	68	70	0.6
11:02:14 AM	600	69	69	0.6
11:02:15 AM	600	68	69	0.6
11:02:16 AM	600	70	69	0.6
11:02:17 AM	600	70	70	0.6
11:02:18 AM	600	68	69	0.6
11:02:19 AM	600	69	70	0.6
<b>Averages -&gt;</b>	<b>600</b>	<b>69</b>	<b>69</b>	<b>0.6</b>
			<b>Maximum -&gt;</b>	<b>0.7</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 700

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:31:43 AM	600	73	72	0.4
11:31:44 AM	600	71	74	0.4
11:31:45 AM	600	72	72	0.4
11:31:46 AM	600	72	73	0.4
11:31:47 AM	600	73	72	0.4
11:31:48 AM	600	72	72	0.4
11:31:49 AM	600	72	72	0.4
11:31:50 AM	600	72	73	0.4
11:31:51 AM	600	72	73	0.4
11:31:52 AM	600	72	72	0.4
11:31:53 AM	600	73	72	0.4
11:31:54 AM	600	72	73	0.4
11:31:55 AM	600	73	72	0.4
11:31:56 AM	600	72	73	0.4
11:31:57 AM	600	71	73	0.4
11:31:58 AM	600	73	72	0.4
11:31:59 AM	600	74	72	0.4
11:32:00 AM	600	73	73	0.4
11:32:01 AM	600	72	73	0.4
11:32:02 AM	600	73	72	0.5
11:32:03 AM	600	74	73	0.4
11:32:04 AM	600	73	71	0.4
11:32:05 AM	600	72	73	0.4
11:32:06 AM	600	73	72	0.4
11:32:07 AM	600	72	72	0.4
11:32:08 AM	600	75	72	0.4
11:32:09 AM	600	72	73	0.4
11:32:10 AM	600	74	73	0.4
11:32:11 AM	600	74	72	0.4
11:32:12 AM	600	74	73	0.4
11:32:13 AM	600	74	74	0.4
11:32:14 AM	600	73	72	0.4
11:32:15 AM	600	73	71	0.4
11:32:16 AM	600	72	72	0.4
11:32:17 AM	600	72	73	0.4
11:32:17 AM	600	72	73	0.4
11:32:18 AM	600	74	72	0.4
11:32:19 AM	600	74	70	0.4
11:32:20 AM	600	73	72	0.4
11:32:21 AM	600	72	72	0.4
11:32:22 AM	600	70	73	0.4
11:32:23 AM	600	72	71	0.4
11:32:24 AM	600	73	73	0.4
11:32:25 AM	600	74	72	0.4
11:32:26 AM	600	72	73	0.4
11:32:27 AM	600	74	72	0.4
11:32:28 AM	600	72	72	0.4
11:32:29 AM	600	72	73	0.4
11:32:30 AM	600	73	72	0.4
11:32:31 AM	600	73	72	0.4
11:32:32 AM	600	71	72	0.4
11:32:33 AM	600	75	72	0.4
11:32:34 AM	600	74	73	0.4
11:32:35 AM	600	73	73	0.4
11:32:36 AM	600	72	74	0.4
11:32:37 AM	600	75	73	0.4
11:32:38 AM	600	73	72	0.4
11:32:39 AM	600	74	72	0.4
11:32:40 AM	600	73	71	0.4
11:32:41 AM	600	71	74	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>73</b>	<b>72</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 750

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
12:09:44 PM	600	74	74	0.4
12:09:44 PM	600	75	74	0.4
12:09:45 PM	600	75	77	0.4
12:09:46 PM	600	74	75	0.4
12:09:47 PM	600	76	77	0.4
12:09:48 PM	600	73	73	0.4
12:09:49 PM	600	74	74	0.4
12:09:50 PM	600	73	73	0.4
12:09:51 PM	600	74	75	0.4
12:09:52 PM	600	76	74	0.4
12:09:53 PM	600	73	77	0.4
12:09:54 PM	600	75	75	0.4
12:09:55 PM	600	75	76	0.4
12:09:56 PM	600	72	73	0.4
12:09:57 PM	600	74	74	0.4
12:09:58 PM	600	72	72	0.4
12:09:59 PM	600	74	76	0.4
12:10:00 PM	600	75	74	0.4
12:10:01 PM	600	73	74	0.4
12:10:02 PM	600	75	75	0.4
12:10:03 PM	600	74	73	0.4
12:10:04 PM	600	76	73	0.4
12:10:05 PM	600	74	74	0.4
12:10:06 PM	600	73	75	0.4
12:10:07 PM	600	73	73	0.4
12:10:08 PM	600	72	74	0.5
12:10:09 PM	600	76	74	0.4
12:10:10 PM	600	74	74	0.4
12:10:11 PM	600	76	76	0.4
12:10:12 PM	600	75	76	0.4
12:10:13 PM	600	74	73	0.4
12:10:14 PM	600	73	74	0.4
12:10:15 PM	600	74	74	0.4
12:10:16 PM	600	74	73	0.4
12:10:17 PM	600	74	74	0.4
12:10:18 PM	600	75	75	0.4
12:10:19 PM	600	74	76	0.4
12:10:20 PM	600	73	74	0.4
12:10:21 PM	600	73	73	0.4
12:10:22 PM	600	75	73	0.4
12:10:23 PM	600	75	74	0.4
12:10:24 PM	600	74	73	0.4
12:10:25 PM	600	75	75	0.4
12:10:26 PM	600	74	73	0.4
12:10:27 PM	600	75	75	0.5
12:10:28 PM	600	73	75	0.5
12:10:29 PM	600	75	74	0.5
12:10:30 PM	600	76	74	0.5
12:10:31 PM	600	74	73	0.5
12:10:32 PM	600	74	76	0.5
12:10:33 PM	600	74	74	0.5
12:10:34 PM	600	74	75	0.5
12:10:35 PM	600	72	71	0.5
12:10:36 PM	600	75	74	0.5
12:10:37 PM	600	75	74	0.5
12:10:38 PM	600	73	74	0.5
12:10:39 PM	600	76	74	0.5
12:10:40 PM	600	74	73	0.5
12:10:41 PM	600	75	74	0.5
12:10:42 PM	600	73	75	0.5
<b>Averages -&gt;</b>	<b>600</b>	<b>74</b>	<b>74</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 750

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:51:02 PM	600	500	496	3.7
1:51:03 PM	600	502	492	3.6
1:51:03 PM	600	503	495	3.6
1:51:04 PM	600	503	494	3.6
1:51:05 PM	600	501	496	3.6
1:51:06 PM	600	503	494	3.6
1:51:07 PM	600	502	493	3.6
1:51:08 PM	600	502	494	3.6
1:51:09 PM	600	502	495	3.6
1:51:10 PM	600	500	496	3.6
1:51:11 PM	600	501	495	3.6
1:51:12 PM	600	499	494	3.7
1:51:13 PM	600	501	494	3.6
1:51:14 PM	600	501	493	3.7
1:51:15 PM	600	501	494	3.7
1:51:16 PM	600	501	495	3.7
1:51:17 PM	600	499	495	3.7
1:51:18 PM	600	502	495	3.6
1:51:19 PM	600	501	494	3.6
1:51:20 PM	600	501	495	3.6
1:51:21 PM	600	500	492	3.6
1:51:22 PM	600	501	494	3.6
1:51:23 PM	600	498	494	3.6
1:51:24 PM	600	499	494	3.6
1:51:25 PM	600	499	492	3.6
1:51:26 PM	600	499	493	3.7
1:51:27 PM	600	499	493	3.6
1:51:28 PM	600	499	492	3.6
1:51:29 PM	600	498	492	3.6
1:51:30 PM	600	499	492	3.6
1:51:31 PM	600	500	493	3.6
1:51:32 PM	600	499	493	3.6
1:51:33 PM	600	499	493	3.6
1:51:34 PM	600	500	493	3.6
1:51:35 PM	600	498	492	3.6
1:51:36 PM	600	496	491	3.6
1:51:37 PM	600	500	492	3.6
1:51:38 PM	600	498	493	3.6
1:51:39 PM	600	498	493	3.6
1:51:40 PM	600	499	492	3.6
1:51:41 PM	600	498	494	3.6
1:51:42 PM	600	498	492	3.6
1:51:43 PM	600	499	491	3.6
1:51:44 PM	600	498	493	3.6
1:51:45 PM	600	500	492	3.7
1:51:46 PM	600	501	495	3.7
1:51:47 PM	600	497	491	3.7
1:51:48 PM	600	500	493	3.7
1:51:49 PM	600	500	493	3.7
1:51:50 PM	600	501	493	3.8
1:51:51 PM	600	500	492	3.8
1:51:52 PM	600	500	494	3.8
1:51:53 PM	600	498	492	3.8
1:51:54 PM	600	498	492	3.8
1:51:55 PM	600	500	495	3.8
1:51:56 PM	600	499	493	3.9
1:51:57 PM	600	498	491	3.8
1:51:58 PM	600	499	493	3.8
1:51:59 PM	600	500	494	3.9
1:52:00 PM	600	500	493	3.8
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>493</b>	<b>3.7</b>
			<b>Maximum -&gt;</b>	<b>3.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 800

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:28:07 PM	600	499	493	4.1
2:28:08 PM	600	503	494	4.1
2:28:09 PM	600	501	494	4.0
2:28:10 PM	600	502	495	4.1
2:28:11 PM	600	500	492	4.1
2:28:12 PM	600	498	492	4.1
2:28:13 PM	600	500	493	4.1
2:28:14 PM	600	499	493	4.0
2:28:15 PM	600	500	493	4.1
2:28:16 PM	600	500	494	4.1
2:28:17 PM	600	499	495	4.1
2:28:18 PM	600	501	491	4.1
2:28:19 PM	600	498	493	4.2
2:28:20 PM	600	499	493	4.1
2:28:21 PM	600	501	494	4.2
2:28:22 PM	600	500	491	4.0
2:28:23 PM	600	500	494	4.1
2:28:24 PM	600	497	492	4.0
2:28:25 PM	600	499	494	3.9
2:28:26 PM	600	499	493	3.9
2:28:27 PM	600	500	494	3.9
2:28:28 PM	600	498	493	3.9
2:28:29 PM	600	500	494	3.8
2:28:30 PM	600	497	491	3.8
2:28:31 PM	600	502	495	3.8
2:28:32 PM	600	499	492	3.8
2:28:33 PM	600	499	492	3.8
2:28:34 PM	600	500	493	3.7
2:28:35 PM	600	499	493	3.7
2:28:36 PM	600	499	494	3.7
2:28:37 PM	600	500	494	3.7
2:28:38 PM	600	497	492	3.6
2:28:39 PM	600	497	491	3.6
2:28:40 PM	600	497	490	3.6
2:28:41 PM	600	499	492	3.7
2:28:42 PM	600	500	493	3.6
2:28:43 PM	600	499	493	3.6
2:28:44 PM	600	498	493	3.6
2:28:45 PM	600	498	493	3.6
2:28:46 PM	600	501	494	3.6
2:28:47 PM	600	498	493	3.7
2:28:48 PM	600	500	493	3.7
2:28:49 PM	600	500	494	3.6
2:28:50 PM	600	500	494	3.6
2:28:51 PM	600	501	493	3.6
2:28:52 PM	600	500	493	3.7
2:28:53 PM	600	498	493	3.7
2:28:54 PM	600	502	493	3.7
2:28:55 PM	600	497	492	3.7
2:28:56 PM	600	499	495	3.7
2:28:57 PM	600	500	492	3.7
2:28:58 PM	600	502	494	3.7
2:28:59 PM	600	498	493	3.7
2:29:00 PM	600	501	495	3.8
2:29:00 PM	600	500	492	3.8
2:29:01 PM	600	501	495	3.8
2:29:02 PM	600	501	493	3.8
2:29:03 PM	600	501	493	3.8
2:29:04 PM	600	501	496	3.9
2:29:05 PM	600	500	492	3.9
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>493</b>	<b>3.8</b>
			<b>Maximum -&gt;</b>	<b>4.2</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 850

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:28:22 PM	600	499	493	3.6
2:28:23 PM	600	499	493	3.5
2:28:24 PM	600	499	492	3.4
2:28:25 PM	600	499	492	3.7
2:28:26 PM	600	500	494	4.0
2:28:27 PM	600	499	493	3.4
2:28:28 PM	600	499	492	3.5
2:28:29 PM	600	500	492	3.2
2:28:30 PM	600	498	493	3.5
2:28:31 PM	600	498	492	3.7
2:28:32 PM	600	498	494	3.2
2:28:33 PM	600	498	493	3.4
2:28:34 PM	600	500	493	3.7
2:28:35 PM	600	498	493	3.4
2:28:36 PM	600	499	493	3.0
2:28:37 PM	600	499	492	3.3
2:28:38 PM	600	499	492	3.7
2:28:39 PM	600	498	493	3.6
2:28:40 PM	600	499	494	3.7
2:28:41 PM	600	499	493	3.6
2:28:42 PM	600	499	492	3.5
2:28:43 PM	600	500	492	3.8
2:28:44 PM	600	498	492	3.7
2:28:45 PM	600	499	493	3.6
2:28:46 PM	600	498	492	3.9
2:28:47 PM	600	500	493	3.6
2:28:48 PM	600	500	492	4.0
2:28:49 PM	600	498	493	3.5
2:28:50 PM	600	499	494	3.8
2:28:51 PM	600	498	493	3.3
2:28:52 PM	600	500	492	3.1
2:28:53 PM	600	499	494	3.6
2:28:54 PM	600	498	492	3.9
2:28:55 PM	600	500	493	3.2
2:28:56 PM	600	500	494	3.4
2:28:57 PM	600	499	493	3.6
2:28:58 PM	600	500	494	3.6
2:28:59 PM	600	499	493	3.2
2:29:00 PM	600	499	492	3.6
2:29:01 PM	600	499	492	3.5
2:29:02 PM	600	498	493	3.1
2:29:03 PM	600	499	493	3.5
2:29:04 PM	600	499	493	4.0
2:29:05 PM	600	498	493	3.8
2:29:06 PM	600	499	494	3.9
2:29:07 PM	600	499	493	3.7
2:29:08 PM	600	499	494	3.2
2:29:09 PM	600	500	493	3.7
2:29:10 PM	600	499	494	3.8
2:29:11 PM	600	498	492	3.3
2:29:12 PM	600	498	494	3.1
2:29:13 PM	600	499	493	3.5
2:29:14 PM	600	500	492	3.1
2:29:15 PM	600	500	493	3.8
2:29:16 PM	600	498	493	3.7
2:29:17 PM	600	500	492	4.0
2:29:18 PM	600	498	493	3.5
2:29:19 PM	600	500	494	3.6
2:29:20 PM	600	499	492	3.9
2:29:21 PM	600	499	493	3.6
<b>Averages -&gt;</b>	<b>600</b>	<b>499</b>	<b>493</b>	<b>3.6</b>
12:00:00 AM			<b>Maximum -&gt;</b>	<b>4.0</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 900

**Date** 12/12/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:43:30 PM	600	499	492	2.6
3:43:31 PM	600	499	492	2.6
3:43:32 PM	600	498	494	2.6
3:43:33 PM	600	499	494	2.6
3:43:34 PM	600	497	492	2.6
3:43:35 PM	600	498	493	2.6
3:43:36 PM	600	497	493	2.6
3:43:37 PM	600	498	491	2.6
3:43:38 PM	600	499	493	2.6
3:43:39 PM	600	499	494	2.6
3:43:40 PM	600	498	492	2.6
3:43:41 PM	600	499	494	2.6
3:43:41 PM	600	498	493	2.6
3:43:42 PM	600	496	491	2.6
3:43:43 PM	600	500	492	2.6
3:43:44 PM	600	500	493	2.6
3:43:45 PM	600	499	492	2.7
3:43:46 PM	600	498	493	2.6
3:43:47 PM	600	500	492	2.6
3:43:48 PM	600	497	492	2.6
3:43:49 PM	600	497	493	2.6
3:43:50 PM	600	498	491	2.6
3:43:51 PM	600	497	491	2.7
3:43:52 PM	600	501	492	2.7
3:43:53 PM	600	500	492	2.7
3:43:54 PM	600	501	490	2.7
3:43:55 PM	600	499	493	2.7
3:43:56 PM	600	503	495	2.8
3:43:57 PM	600	500	494	2.8
3:43:58 PM	600	502	493	2.8
3:43:59 PM	600	498	496	2.8
3:44:00 PM	600	497	493	2.8
3:44:01 PM	600	500	496	2.8
3:44:02 PM	600	500	494	2.9
3:44:03 PM	600	500	495	2.9
3:44:04 PM	600	499	494	2.9
3:44:05 PM	600	499	493	2.9
3:44:06 PM	600	501	494	2.9
3:44:07 PM	600	499	493	2.9
3:44:08 PM	600	503	492	2.9
3:44:09 PM	600	501	493	2.9
3:44:10 PM	600	501	495	3.0
3:44:11 PM	600	501	493	2.9
3:44:12 PM	600	501	494	2.9
3:44:13 PM	600	502	494	2.9
3:44:14 PM	600	501	495	2.9
3:44:15 PM	600	499	493	2.9
3:44:16 PM	600	502	494	2.9
3:44:17 PM	600	501	495	2.9
3:44:18 PM	600	500	495	2.9
3:44:19 PM	600	500	496	2.9
3:44:20 PM	600	501	495	2.9
3:44:21 PM	600	501	494	3.0
3:44:22 PM	600	501	494	3.0
3:44:23 PM	600	501	495	3.0
3:44:24 PM	600	503	494	3.0
3:44:25 PM	600	502	493	3.0
3:44:26 PM	600	501	496	3.0
3:44:27 PM	600	500	497	3.0
3:44:28 PM	600	501	494	3.0
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>493</b>	<b>2.8</b>
			<b>Maximum -&gt;</b>	<b>3.0</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 900

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
11:39:13 AM	600	69	69	0.4
11:39:14 AM	600	69	71	0.3
11:39:15 AM	600	70	69	0.3
11:39:16 AM	600	69	69	0.3
11:39:17 AM	600	69	71	0.3
11:39:18 AM	600	69	68	0.3
11:39:19 AM	600	70	69	0.3
11:39:20 AM	600	70	70	0.3
11:39:21 AM	600	69	68	0.3
11:39:22 AM	600	70	69	0.3
11:39:23 AM	600	69	70	0.3
11:39:24 AM	600	70	69	0.3
11:39:25 AM	600	70	70	0.3
11:39:26 AM	600	72	70	0.3
11:39:27 AM	600	69	70	0.3
11:39:28 AM	600	69	69	0.3
11:39:29 AM	600	69	69	0.3
11:39:30 AM	600	70	69	0.4
11:39:31 AM	600	71	71	0.3
11:39:32 AM	600	70	70	0.3
11:39:33 AM	600	70	68	0.4
11:39:34 AM	600	70	69	0.4
11:39:35 AM	600	69	67	0.4
11:39:36 AM	600	71	71	0.4
11:39:37 AM	600	69	70	0.4
11:39:38 AM	600	69	68	0.4
11:39:39 AM	600	69	69	0.4
11:39:40 AM	600	71	70	0.4
11:39:41 AM	600	70	70	0.4
11:39:42 AM	600	69	69	0.4
11:39:43 AM	600	70	70	0.4
11:39:44 AM	600	68	68	0.4
11:39:45 AM	600	69	71	0.4
11:39:46 AM	600	69	69	0.4
11:39:47 AM	600	68	68	0.4
11:39:48 AM	600	68	68	0.4
11:39:49 AM	600	71	70	0.4
11:39:50 AM	600	70	70	0.4
11:39:51 AM	600	69	69	0.4
11:39:52 AM	600	70	69	0.4
11:39:53 AM	600	70	70	0.4
11:39:54 AM	600	69	69	0.4
11:39:55 AM	600	68	69	0.4
11:39:55 AM	600	70	71	0.4
11:39:56 AM	600	69	70	0.3
11:39:57 AM	600	69	70	0.4
11:39:58 AM	600	69	69	0.3
11:39:59 AM	600	69	68	0.3
11:40:00 AM	600	70	69	0.3
11:40:01 AM	600	69	68	0.3
11:40:02 AM	600	69	69	0.4
11:40:03 AM	600	69	70	0.4
11:40:04 AM	600	70	69	0.4
11:40:05 AM	600	70	69	0.4
11:40:06 AM	600	70	68	0.4
11:40:07 AM	600	69	69	0.4
11:40:08 AM	600	71	69	0.4
11:40:09 AM	600	70	68	0.4
11:40:10 AM	600	68	68	0.4
11:40:11 AM	600	70	71	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>69</b>	<b>69</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 950

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
12:16:50 PM	600	73	73	0.4
12:16:51 PM	600	74	73	0.4
12:16:52 PM	600	73	73	0.4
12:16:53 PM	600	72	73	0.4
12:16:54 PM	600	73	74	0.3
12:16:55 PM	600	73	73	0.4
12:16:56 PM	600	74	73	0.3
12:16:57 PM	600	74	73	0.4
12:16:58 PM	600	73	72	0.3
12:16:59 PM	600	73	72	0.4
12:17:00 PM	600	73	74	0.4
12:17:01 PM	600	73	71	0.4
12:17:02 PM	600	74	73	0.4
12:17:03 PM	600	73	73	0.4
12:17:04 PM	600	74	72	0.4
12:17:05 PM	600	75	73	0.4
12:17:06 PM	600	72	74	0.4
12:17:07 PM	600	73	72	0.4
12:17:08 PM	600	73	73	0.4
12:17:09 PM	600	73	73	0.4
12:17:10 PM	600	73	72	0.4
12:17:11 PM	600	73	73	0.4
12:17:12 PM	600	73	73	0.4
12:17:13 PM	600	73	72	0.4
12:17:14 PM	600	74	73	0.4
12:17:15 PM	600	73	73	0.4
12:17:16 PM	600	73	74	0.4
12:17:17 PM	600	73	74	0.4
12:17:18 PM	600	73	73	0.4
12:17:19 PM	600	73	73	0.4
12:17:20 PM	600	74	73	0.4
12:17:21 PM	600	73	72	0.4
12:17:22 PM	600	73	73	0.4
12:17:23 PM	600	74	74	0.4
12:17:24 PM	600	73	73	0.4
12:17:25 PM	600	73	74	0.4
12:17:26 PM	600	73	73	0.4
12:17:27 PM	600	73	73	0.4
12:17:28 PM	600	73	73	0.4
12:17:28 PM	600	73	74	0.4
12:17:29 PM	600	73	74	0.4
12:17:30 PM	600	74	74	0.4
12:17:31 PM	600	73	73	0.4
12:17:32 PM	600	73	73	0.4
12:17:33 PM	600	73	74	0.4
12:17:34 PM	600	73	73	0.4
12:17:35 PM	600	73	73	0.4
12:17:36 PM	600	74	73	0.4
12:17:37 PM	600	73	73	0.4
12:17:38 PM	600	73	73	0.4
12:17:39 PM	600	73	74	0.4
12:17:40 PM	600	73	73	0.4
12:17:41 PM	600	72	74	0.4
12:17:42 PM	600	73	73	0.4
12:17:43 PM	600	73	73	0.4
12:17:44 PM	600	73	74	0.4
12:17:45 PM	600	72	73	0.4
12:17:46 PM	600	74	74	0.4
12:17:47 PM	600	73	74	0.4
12:17:48 PM	600	72	73	0.4
<b>Averages -&gt;</b>	<b>600</b>	<b>73</b>	<b>73</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1000

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:20:29 PM	600	72	73	0.3
1:20:30 PM	600	73	72	0.3
1:20:31 PM	600	71	73	0.3
1:20:32 PM	600	73	74	0.3
1:20:33 PM	600	73	74	0.3
1:20:34 PM	600	72	72	0.3
1:20:35 PM	600	73	73	0.4
1:20:36 PM	600	73	73	0.4
1:20:37 PM	600	73	72	0.3
1:20:38 PM	600	73	72	0.4
1:20:39 PM	600	73	72	0.4
1:20:40 PM	600	73	72	0.4
1:20:41 PM	600	73	73	0.4
1:20:42 PM	600	73	73	0.4
1:20:43 PM	600	72	72	0.4
1:20:44 PM	600	73	73	0.4
1:20:45 PM	600	73	73	0.4
1:20:46 PM	600	72	73	0.4
1:20:47 PM	600	73	72	0.4
1:20:48 PM	600	73	73	0.4
1:20:49 PM	600	73	72	0.4
1:20:50 PM	600	72	71	0.4
1:20:51 PM	600	72	73	0.3
1:20:52 PM	600	72	73	0.3
1:20:53 PM	600	73	73	0.3
1:20:54 PM	600	72	73	0.3
1:20:55 PM	600	72	72	0.3
1:20:56 PM	600	72	72	0.3
1:20:57 PM	600	72	73	0.3
1:20:58 PM	600	73	72	0.4
1:20:59 PM	600	73	72	0.4
1:21:00 PM	600	74	73	0.4
1:21:01 PM	600	73	73	0.3
1:21:02 PM	600	72	72	0.3
1:21:03 PM	600	72	74	0.3
1:21:04 PM	600	73	72	0.4
1:21:05 PM	600	72	72	0.4
1:21:06 PM	600	73	72	0.4
1:21:07 PM	600	73	73	0.4
1:21:08 PM	600	72	72	0.4
1:21:09 PM	600	72	73	0.4
1:21:10 PM	600	74	72	0.4
1:21:11 PM	600	74	72	0.4
1:21:12 PM	600	73	73	0.4
1:21:13 PM	600	73	72	0.4
1:21:14 PM	600	73	73	0.4
1:21:15 PM	600	73	73	0.4
1:21:16 PM	600	72	73	0.4
1:21:17 PM	600	73	74	0.4
1:21:18 PM	600	72	72	0.4
1:21:19 PM	600	72	72	0.4
1:21:20 PM	600	73	74	0.4
1:21:21 PM	600	73	72	0.4
1:21:22 PM	600	73	72	0.4
1:21:23 PM	600	72	72	0.4
1:21:24 PM	600	73	73	0.4
1:21:25 PM	600	72	72	0.4
1:21:26 PM	600	73	73	0.4
1:21:27 PM	600	72	73	0.4
1:21:28 PM	600	72	71	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>73</b>	<b>73</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1050

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:49:56 PM	600	77	76	0.3
1:49:57 PM	600	75	77	0.3
1:49:58 PM	600	75	75	0.4
1:49:59 PM	600	75	74	0.3
1:50:00 PM	600	77	77	0.3
1:50:01 PM	600	77	77	0.3
1:50:02 PM	600	75	76	0.3
1:50:03 PM	600	74	77	0.3
1:50:04 PM	600	77	74	0.3
1:50:05 PM	600	75	76	0.3
1:50:06 PM	600	75	75	0.3
1:50:07 PM	600	74	74	0.3
1:50:08 PM	600	76	76	0.3
1:50:09 PM	600	73	75	0.3
1:50:10 PM	600	76	77	0.3
1:50:11 PM	600	73	77	0.3
1:50:12 PM	600	75	75	0.3
1:50:13 PM	600	75	72	0.3
1:50:14 PM	600	78	74	0.4
1:50:15 PM	600	76	75	0.4
1:50:16 PM	600	74	77	0.4
1:50:17 PM	600	76	75	0.3
1:50:18 PM	600	75	78	0.4
1:50:19 PM	600	75	74	0.4
1:50:20 PM	600	73	77	0.4
1:50:21 PM	600	76	76	0.4
1:50:21 PM	600	76	74	0.4
1:50:22 PM	600	76	74	0.4
1:50:23 PM	600	75	75	0.4
1:50:24 PM	600	73	76	0.4
1:50:25 PM	600	77	72	0.4
1:50:26 PM	600	77	72	0.4
1:50:27 PM	600	75	76	0.4
1:50:28 PM	600	74	73	0.4
1:50:29 PM	600	76	74	0.4
1:50:30 PM	600	75	75	0.4
1:50:31 PM	600	75	75	0.4
1:50:32 PM	600	77	74	0.4
1:50:33 PM	600	77	77	0.4
1:50:34 PM	600	74	75	0.4
1:50:35 PM	600	75	74	0.4
1:50:36 PM	600	75	76	0.4
1:50:37 PM	600	78	75	0.3
1:50:38 PM	600	75	74	0.4
1:50:39 PM	600	76	76	0.4
1:50:40 PM	600	77	75	0.4
1:50:41 PM	600	72	75	0.4
1:50:42 PM	600	73	78	0.4
1:50:43 PM	600	77	74	0.4
1:50:44 PM	600	74	77	0.4
1:50:45 PM	600	75	76	0.4
1:50:46 PM	600	74	78	0.4
1:50:47 PM	600	74	75	0.4
1:50:48 PM	600	75	75	0.5
1:50:49 PM	600	75	76	0.5
1:50:50 PM	600	76	76	0.5
1:50:51 PM	600	74	76	0.5
1:50:52 PM	600	76	76	0.5
1:50:53 PM	600	74	76	0.5
1:50:54 PM	600	76	75	0.5
<b>Averages -&gt;</b>	<b>600</b>	<b>75</b>	<b>75</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1050

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:17:38 PM	600	500	492	2.4
3:17:39 PM	600	498	491	2.4
3:17:40 PM	600	499	494	2.4
3:17:41 PM	600	501	494	2.5
3:17:42 PM	600	499	490	2.5
3:17:43 PM	600	498	491	2.5
3:17:44 PM	600	500	492	2.5
3:17:45 PM	600	500	492	2.5
3:17:46 PM	600	499	491	2.5
3:17:47 PM	600	498	494	2.5
3:17:48 PM	600	499	492	2.5
3:17:49 PM	600	499	492	2.5
3:17:50 PM	600	497	492	2.6
3:17:51 PM	600	500	494	2.6
3:17:52 PM	600	499	492	2.6
3:17:52 PM	600	499	492	2.6
3:17:53 PM	600	499	491	2.6
3:17:54 PM	600	499	491	2.6
3:17:55 PM	600	499	494	2.6
3:17:56 PM	600	498	492	2.6
3:17:57 PM	600	500	491	2.6
3:17:58 PM	600	497	493	2.6
3:17:59 PM	600	500	492	2.7
3:18:00 PM	600	500	493	2.7
3:18:01 PM	600	500	494	2.7
3:18:02 PM	600	499	490	2.7
3:18:03 PM	600	497	493	2.7
3:18:04 PM	600	501	493	2.7
3:18:05 PM	600	499	497	2.7
3:18:06 PM	600	499	493	2.7
3:18:07 PM	600	502	491	2.7
3:18:08 PM	600	500	491	2.7
3:18:09 PM	600	500	491	2.7
3:18:10 PM	600	500	490	2.7
3:18:11 PM	600	500	493	2.7
3:18:12 PM	600	501	493	2.8
3:18:13 PM	600	499	491	2.8
3:18:14 PM	600	501	492	2.8
3:18:15 PM	600	502	493	2.9
3:18:16 PM	600	501	494	2.9
3:18:17 PM	600	503	493	2.9
3:18:18 PM	600	501	494	2.9
3:18:19 PM	600	499	494	2.9
3:18:20 PM	600	501	492	2.9
3:18:21 PM	600	501	495	2.9
3:18:22 PM	600	503	493	2.9
3:18:23 PM	600	503	493	2.9
3:18:24 PM	600	502	491	2.9
3:18:25 PM	600	502	495	2.9
3:18:26 PM	600	502	495	2.9
3:18:27 PM	600	503	497	2.9
3:18:28 PM	600	506	495	2.9
3:18:29 PM	600	500	496	2.9
3:18:30 PM	600	501	494	2.9
3:18:31 PM	600	501	495	2.9
3:18:32 PM	600	501	494	2.9
3:18:33 PM	600	502	494	2.9
3:18:34 PM	600	503	493	2.9
3:18:35 PM	600	502	495	2.9
3:18:36 PM	600	503	494	2.9
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>493</b>	<b>2.7</b>
			<b>Maximum -&gt;</b>	<b>2.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1100

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
4:03:42 PM	600	499	492	2.7
4:03:43 PM	600	499	493	2.7
4:03:44 PM	600	498	492	2.7
4:03:45 PM	600	500	493	2.7
4:03:46 PM	600	500	493	2.7
4:03:47 PM	600	500	492	2.7
4:03:48 PM	600	498	494	2.7
4:03:49 PM	600	500	494	2.7
4:03:50 PM	600	500	493	2.7
4:03:51 PM	600	500	492	2.8
4:03:52 PM	600	500	493	2.8
4:03:53 PM	600	500	493	2.8
4:03:54 PM	600	501	492	2.7
4:03:55 PM	600	500	493	2.8
4:03:56 PM	600	500	493	2.8
4:03:57 PM	600	500	493	2.8
4:03:58 PM	600	499	493	2.8
4:03:59 PM	600	501	493	2.8
4:04:00 PM	600	498	516	2.8
4:04:01 PM	600	501	492	2.8
4:04:02 PM	600	501	495	2.8
4:04:03 PM	600	500	496	2.8
4:04:04 PM	600	500	493	2.8
4:04:05 PM	600	501	495	2.9
4:04:06 PM	600	499	495	2.8
4:04:07 PM	600	502	494	2.8
4:04:08 PM	600	501	493	2.9
4:04:09 PM	600	501	493	2.9
4:04:10 PM	600	503	494	2.9
4:04:11 PM	600	502	495	2.9
4:04:12 PM	600	500	495	2.9
4:04:13 PM	600	501	494	2.9
4:04:14 PM	600	502	494	2.9
4:04:15 PM	600	502	495	2.9
4:04:16 PM	600	501	494	3.0
4:04:17 PM	600	503	494	3.0
4:04:18 PM	600	501	495	3.0
4:04:19 PM	600	501	494	3.0
4:04:19 PM	600	501	496	3.0
4:04:20 PM	600	501	494	3.0
4:04:21 PM	600	502	494	3.0
4:04:22 PM	600	501	493	3.0
4:04:23 PM	600	502	494	3.0
4:04:24 PM	600	504	493	3.0
4:04:25 PM	600	504	494	3.0
4:04:26 PM	600	502	494	3.0
4:04:27 PM	600	501	495	3.0
4:04:28 PM	600	502	493	3.0
4:04:29 PM	600	503	492	3.0
4:04:30 PM	600	501	496	3.0
4:04:31 PM	600	503	494	3.0
4:04:32 PM	600	503	494	3.0
4:04:33 PM	600	502	494	3.0
4:04:34 PM	600	499	495	3.0
4:04:35 PM	600	501	492	3.0
4:04:36 PM	600	501	495	3.0
4:04:37 PM	600	499	494	3.0
4:04:38 PM	600	501	495	3.0
4:04:39 PM	600	500	494	3.0
4:04:40 PM	600	503	493	2.9
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>2.9</b>
			<b>Maximum -&gt;</b>	<b>3.0</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1150

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
4:43:01 PM	600	498	491	3.3
4:43:02 PM	600	497	493	3.3
4:43:03 PM	600	499	491	3.3
4:43:04 PM	600	496	493	3.3
4:43:05 PM	600	499	493	3.3
4:43:06 PM	600	502	491	3.3
4:43:07 PM	600	500	494	3.3
4:43:08 PM	600	500	492	3.3
4:43:09 PM	600	498	493	3.3
4:43:10 PM	600	498	493	3.3
4:43:11 PM	600	499	493	3.3
4:43:12 PM	600	500	493	3.3
4:43:13 PM	600	498	492	3.3
4:43:14 PM	600	498	494	3.4
4:43:15 PM	600	497	492	3.3
4:43:16 PM	600	498	494	3.4
4:43:17 PM	600	499	492	3.4
4:43:18 PM	600	499	494	3.4
4:43:19 PM	600	499	494	3.4
4:43:20 PM	600	500	493	3.3
4:43:21 PM	600	499	492	3.3
4:43:22 PM	600	500	493	3.3
4:43:23 PM	600	498	495	3.4
4:43:24 PM	600	501	493	3.4
4:43:25 PM	600	499	494	3.3
4:43:26 PM	600	499	492	3.4
4:43:27 PM	600	502	494	3.4
4:43:28 PM	600	498	494	3.4
4:43:29 PM	600	499	494	3.4
4:43:30 PM	600	501	495	3.4
4:43:31 PM	600	501	493	3.5
4:43:32 PM	600	500	494	3.4
4:43:33 PM	600	499	494	3.4
4:43:34 PM	600	502	494	3.4
4:43:35 PM	600	502	495	3.5
4:43:36 PM	600	500	494	3.5
4:43:37 PM	600	502	495	3.5
4:43:38 PM	600	501	494	3.5
4:43:39 PM	600	501	494	3.5
4:43:40 PM	600	500	493	3.5
4:43:41 PM	600	502	496	3.5
4:43:42 PM	600	502	495	3.5
4:43:43 PM	600	503	495	3.5
4:43:44 PM	600	503	495	3.5
4:43:45 PM	600	502	495	3.5
4:43:46 PM	600	502	495	3.5
4:43:47 PM	600	501	494	3.5
4:43:47 PM	600	503	495	3.5
4:43:48 PM	600	502	495	3.5
4:43:49 PM	600	502	497	3.5
4:43:50 PM	600	502	495	3.5
4:43:51 PM	600	500	495	3.5
4:43:52 PM	600	502	494	3.5
4:43:53 PM	600	502	497	3.4
4:43:54 PM	600	502	495	3.4
4:43:55 PM	600	502	497	3.4
4:43:56 PM	600	503	494	3.4
4:43:57 PM	600	503	497	3.5
4:43:58 PM	600	501	497	3.4
4:43:59 PM	600	501	496	3.4
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>494</b>	<b>3.4</b>
			<b>Maximum -&gt;</b>	<b>3.5</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1200

**Date** 12/13/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
5:22:52 PM	600	499	494	2.6
5:22:53 PM	600	501	493	2.6
5:22:54 PM	600	500	493	2.6
5:22:55 PM	600	499	494	2.6
5:22:56 PM	600	500	494	2.6
5:22:57 PM	600	499	494	2.6
5:22:58 PM	600	499	493	2.6
5:22:59 PM	600	499	494	2.6
5:23:00 PM	600	498	495	2.6
5:23:01 PM	600	499	495	2.6
5:23:02 PM	600	501	492	2.6
5:23:03 PM	600	501	492	2.6
5:23:04 PM	600	500	495	2.7
5:23:05 PM	600	499	493	2.7
5:23:06 PM	600	500	494	2.7
5:23:07 PM	600	501	494	2.7
5:23:08 PM	600	498	494	2.7
5:23:09 PM	600	500	492	2.7
5:23:10 PM	600	499	494	2.8
5:23:11 PM	600	500	494	2.8
5:23:12 PM	600	501	493	2.8
5:23:13 PM	600	499	493	2.8
5:23:14 PM	600	500	494	2.8
5:23:15 PM	600	500	493	2.8
5:23:16 PM	600	500	495	2.8
5:23:17 PM	600	501	494	2.8
5:23:18 PM	600	502	494	2.8
5:23:19 PM	600	500	495	2.8
5:23:20 PM	600	501	494	2.8
5:23:21 PM	600	502	496	2.8
5:23:22 PM	600	498	494	2.8
5:23:23 PM	600	500	493	2.8
5:23:24 PM	600	503	495	2.9
5:23:25 PM	600	501	494	2.9
5:23:26 PM	600	502	495	2.9
5:23:27 PM	600	501	495	2.9
5:23:28 PM	600	500	494	2.9
5:23:29 PM	600	502	496	2.9
5:23:30 PM	600	500	493	2.9
5:23:31 PM	600	501	494	2.9
5:23:32 PM	600	502	495	2.9
5:23:33 PM	600	501	494	2.9
5:23:34 PM	600	501	494	2.9
5:23:35 PM	600	503	496	2.9
5:23:36 PM	600	502	496	2.9
5:23:37 PM	600	502	495	2.9
5:23:38 PM	600	502	494	2.9
5:23:39 PM	600	500	495	2.9
5:23:40 PM	600	502	495	2.9
5:23:41 PM	600	500	496	2.9
5:23:42 PM	600	502	495	2.9
5:23:43 PM	600	501	495	2.9
5:23:44 PM	600	501	496	2.9
5:23:44 PM	600	502	493	2.9
5:23:45 PM	600	500	496	2.9
5:23:46 PM	600	501	494	2.9
5:23:47 PM	600	502	495	2.9
5:23:48 PM	600	501	494	2.9
5:23:49 PM	600	501	495	2.9
5:23:50 PM	600	502	494	2.9
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>494</b>	<b>2.8</b>
			<b>Maximum -&gt;</b>	<b>2.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1200

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
8:29:37 AM	600	70	71	0.3
8:29:38 AM	600	71	69	0.3
8:29:39 AM	600	70	70	0.2
8:29:40 AM	600	70	71	0.3
8:29:41 AM	600	69	70	0.2
8:29:42 AM	600	71	71	0.3
8:29:43 AM	600	70	70	0.2
8:29:44 AM	600	70	70	0.3
8:29:45 AM	600	71	70	0.2
8:29:46 AM	600	70	70	0.2
8:29:47 AM	600	71	71	0.2
8:29:48 AM	600	70	69	0.2
8:29:49 AM	600	70	70	0.3
8:29:50 AM	600	72	71	0.3
8:29:51 AM	600	71	69	0.3
8:29:52 AM	600	71	71	0.2
8:29:53 AM	600	70	70	0.2
8:29:54 AM	600	70	71	0.2
8:29:55 AM	600	71	70	0.2
8:29:56 AM	600	70	69	0.2
8:29:57 AM	600	70	72	0.2
8:29:57 AM	600	70	69	0.2
8:29:58 AM	600	70	70	0.2
8:29:59 AM	600	71	71	0.2
8:30:00 AM	600	70	69	0.2
8:30:01 AM	600	70	70	0.2
8:30:02 AM	600	69	71	0.2
8:30:03 AM	600	69	70	0.2
8:30:04 AM	600	70	71	0.2
8:30:05 AM	600	69	70	0.2
8:30:06 AM	600	70	70	0.2
8:30:07 AM	600	71	70	0.2
8:30:08 AM	600	69	70	0.2
8:30:09 AM	600	71	71	0.2
8:30:10 AM	600	69	69	0.2
8:30:11 AM	600	71	70	0.2
8:30:12 AM	600	70	70	0.2
8:30:13 AM	600	68	70	0.2
8:30:14 AM	600	71	70	0.2
8:30:15 AM	600	70	70	0.2
8:30:16 AM	600	71	70	0.2
8:30:17 AM	600	70	71	0.2
8:30:18 AM	600	70	71	0.2
8:30:19 AM	600	69	69	0.2
8:30:20 AM	600	72	70	0.2
8:30:21 AM	600	70	70	0.1
8:30:22 AM	600	71	70	0.1
8:30:23 AM	600	71	71	0.1
8:30:24 AM	600	70	70	0.1
8:30:25 AM	600	71	70	0.1
8:30:26 AM	600	70	70	0.1
8:30:27 AM	600	71	70	0.1
8:30:28 AM	600	70	71	0.1
8:30:29 AM	600	69	69	0.1
8:30:30 AM	600	70	71	0.1
8:30:31 AM	600	71	71	0.1
8:30:32 AM	600	70	71	0.1
8:30:33 AM	600	71	71	0.1
8:30:34 AM	600	70	69	0.1
8:30:35 AM	600	70	71	0.1
<b>Averages -&gt;</b>	<b>600</b>	<b>70</b>	<b>70</b>	<b>0.2</b>
			<b>Maximum -&gt;</b>	<b>0.3</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1250

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
9:13:53 AM	600	72	72	0.8
9:13:54 AM	600	72	72	0.8
9:13:55 AM	600	72	73	0.8
9:13:56 AM	600	71	72	0.8
9:13:57 AM	600	73	73	0.8
9:13:58 AM	600	72	71	0.8
9:13:59 AM	600	72	73	0.8
9:14:00 AM	600	73	73	0.8
9:14:01 AM	600	71	72	0.8
9:14:02 AM	600	73	73	0.8
9:14:03 AM	600	73	72	0.8
9:14:04 AM	600	72	71	0.8
9:14:05 AM	600	73	72	0.8
9:14:06 AM	600	72	72	0.7
9:14:07 AM	600	72	72	0.7
9:14:08 AM	600	72	73	0.7
9:14:09 AM	600	72	72	0.8
9:14:10 AM	600	72	72	0.8
9:14:11 AM	600	71	72	0.8
9:14:12 AM	600	72	72	0.8
9:14:13 AM	600	73	73	0.8
9:14:14 AM	600	72	71	0.8
9:14:15 AM	600	73	72	0.8
9:14:16 AM	600	72	72	0.8
9:14:17 AM	600	72	73	0.8
9:14:18 AM	600	73	72	0.8
9:14:19 AM	600	71	72	0.8
9:14:20 AM	600	72	72	0.8
9:14:21 AM	600	73	73	0.8
9:14:22 AM	600	72	72	0.8
9:14:23 AM	600	72	73	0.8
9:14:24 AM	600	72	72	0.8
9:14:25 AM	600	71	71	0.8
9:14:26 AM	600	73	74	0.8
9:14:27 AM	600	72	71	0.7
9:14:28 AM	600	72	73	0.7
9:14:29 AM	600	72	73	0.7
9:14:30 AM	600	72	72	0.7
9:14:31 AM	600	72	74	0.7
9:14:32 AM	600	72	73	0.7
9:14:33 AM	600	72	72	0.7
9:14:34 AM	600	73	74	0.8
9:14:35 AM	600	72	72	0.8
9:14:36 AM	600	73	73	0.8
9:14:37 AM	600	72	73	0.8
9:14:38 AM	600	73	73	0.8
9:14:39 AM	600	73	73	0.8
9:14:39 AM	600	72	72	0.8
9:14:40 AM	600	72	73	0.8
9:14:41 AM	600	72	73	0.8
9:14:42 AM	600	72	72	0.8
9:14:43 AM	600	72	73	0.8
9:14:44 AM	600	72	73	0.8
9:14:45 AM	600	72	73	0.8
9:14:46 AM	600	72	72	0.8
9:14:47 AM	600	73	73	0.9
9:14:48 AM	600	71	72	0.8
9:14:49 AM	600	72	72	0.8
9:14:50 AM	600	74	74	0.8
9:14:51 AM	600	73	72	0.8
<b>Averages -&gt;</b>	<b>600</b>	<b>72</b>	<b>72</b>	<b>0.8</b>
			<b>Maximum -&gt;</b>	<b>0.9</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1300

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
9:56:33 AM	600	73	72	0.7
9:56:34 AM	600	73	74	0.7
9:56:35 AM	600	73	73	0.7
9:56:36 AM	600	72	72	0.7
9:56:37 AM	600	73	74	0.7
9:56:38 AM	600	72	73	0.8
9:56:39 AM	600	72	74	0.8
9:56:40 AM	600	72	74	0.7
9:56:41 AM	600	74	73	0.7
9:56:42 AM	600	73	74	0.7
9:56:42 AM	600	72	74	0.7
9:56:43 AM	600	73	73	0.7
9:56:44 AM	600	73	74	0.8
9:56:45 AM	600	73	73	0.8
9:56:46 AM	600	73	72	0.7
9:56:47 AM	600	73	74	0.7
9:56:48 AM	600	73	72	0.8
9:56:49 AM	600	73	73	0.7
9:56:50 AM	600	74	74	0.7
9:56:51 AM	600	72	72	0.7
9:56:52 AM	600	72	73	0.7
9:56:53 AM	600	74	73	0.8
9:56:54 AM	600	73	73	0.8
9:56:55 AM	600	73	73	0.7
9:56:56 AM	600	72	73	0.7
9:56:57 AM	600	74	73	0.8
9:56:58 AM	600	74	73	0.8
9:56:59 AM	600	72	72	0.8
9:57:00 AM	600	73	74	0.7
9:57:01 AM	600	74	73	0.8
9:57:02 AM	600	72	73	0.8
9:57:03 AM	600	74	73	0.8
9:57:04 AM	600	73	73	0.7
9:57:05 AM	600	74	73	0.7
9:57:06 AM	600	73	73	0.7
9:57:07 AM	600	72	73	0.7
9:57:08 AM	600	74	74	0.7
9:57:09 AM	600	74	74	0.8
9:57:10 AM	600	73	72	0.8
9:57:11 AM	600	74	74	0.8
9:57:12 AM	600	74	73	0.8
9:57:13 AM	600	73	73	0.8
9:57:14 AM	600	74	74	0.8
9:57:15 AM	600	73	73	0.8
9:57:16 AM	600	73	74	0.7
9:57:17 AM	600	74	73	0.8
9:57:18 AM	600	72	73	0.8
9:57:19 AM	600	74	74	0.8
9:57:20 AM	600	74	73	0.7
9:57:21 AM	600	73	74	0.8
9:57:22 AM	600	75	73	0.8
9:57:23 AM	600	72	73	0.8
9:57:24 AM	600	72	73	0.8
9:57:25 AM	600	73	75	0.7
9:57:26 AM	600	74	73	0.7
9:57:27 AM	600	73	73	0.7
9:57:28 AM	600	74	75	0.7
9:57:29 AM	600	73	73	0.7
9:57:30 AM	600	74	73	0.7
9:57:31 AM	600	74	74	0.7
<b>Averages -&gt;</b>	<b>600</b>	<b>73</b>	<b>73</b>	<b>0.7</b>
			<b>Maximum -&gt;</b>	<b>0.8</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1350

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
10:33:54 AM	600	74	74	0.8
10:33:55 AM	600	75	75	0.8
10:33:56 AM	600	75	75	0.8
10:33:57 AM	600	74	75	0.8
10:33:58 AM	600	76	75	0.8
10:33:59 AM	600	74	75	0.7
10:34:00 AM	600	75	75	0.8
10:34:01 AM	600	76	75	0.7
10:34:02 AM	600	74	75	0.7
10:34:03 AM	600	75	75	0.7
10:34:04 AM	600	75	75	0.8
10:34:05 AM	600	74	74	0.7
10:34:06 AM	600	75	76	0.8
10:34:07 AM	600	75	74	0.8
10:34:08 AM	600	74	75	0.8
10:34:09 AM	600	75	75	0.7
10:34:10 AM	600	74	75	0.8
10:34:11 AM	600	75	75	0.8
10:34:12 AM	600	76	75	0.8
10:34:13 AM	600	74	74	0.8
10:34:14 AM	600	76	76	0.8
10:34:14 AM	600	74	75	0.8
10:34:15 AM	600	75	75	0.8
10:34:16 AM	600	75	75	0.8
10:34:17 AM	600	75	74	0.8
10:34:18 AM	600	76	75	0.8
10:34:19 AM	600	76	76	0.8
10:34:20 AM	600	74	75	0.8
10:34:21 AM	600	76	76	0.8
10:34:22 AM	600	75	75	0.8
10:34:23 AM	600	75	75	0.8
10:34:24 AM	600	76	75	0.8
10:34:25 AM	600	76	74	0.8
10:34:26 AM	600	75	75	0.8
10:34:27 AM	600	75	75	0.8
10:34:28 AM	600	74	75	0.8
10:34:29 AM	600	75	76	0.8
10:34:30 AM	600	76	76	0.8
10:34:31 AM	600	75	74	0.8
10:34:32 AM	600	75	75	0.8
10:34:33 AM	600	75	75	0.8
10:34:34 AM	600	74	74	0.8
10:34:35 AM	600	75	76	0.8
10:34:36 AM	600	74	75	0.8
10:34:37 AM	600	75	76	0.8
10:34:38 AM	600	76	76	0.8
10:34:39 AM	600	75	75	0.8
10:34:40 AM	600	76	75	0.8
10:34:41 AM	600	75	75	0.8
10:34:42 AM	600	75	75	0.8
10:34:43 AM	600	76	75	0.8
10:34:44 AM	600	74	75	0.7
10:34:45 AM	600	76	75	0.7
10:34:46 AM	600	76	75	0.8
10:34:47 AM	600	74	75	0.8
10:34:48 AM	600	76	76	0.8
10:34:49 AM	600	76	76	0.8
10:34:50 AM	600	75	74	0.8
10:34:51 AM	600	76	76	0.8
10:34:52 AM	600	75	75	0.8
<b>Averages -&gt;</b>	<b>600</b>	<b>75</b>	<b>75</b>	<b>0.8</b>
			<b>Maximum -&gt;</b>	<b>0.8</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1350

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:20:56 PM	600	502	493	0.5
1:20:57 PM	600	500	495	0.5
1:20:58 PM	600	498	494	0.5
1:20:59 PM	600	499	494	0.5
1:21:00 PM	600	500	494	0.6
1:21:01 PM	600	499	495	0.6
1:21:02 PM	600	501	496	0.6
1:21:03 PM	600	503	494	0.6
1:21:04 PM	600	502	494	0.6
1:21:05 PM	600	500	495	0.6
1:21:06 PM	600	500	495	0.6
1:21:07 PM	600	501	496	0.6
1:21:08 PM	600	502	495	0.6
1:21:09 PM	600	500	495	0.6
1:21:10 PM	600	502	495	0.6
1:21:11 PM	600	500	496	0.6
1:21:12 PM	600	502	495	0.6
1:21:13 PM	600	501	495	0.6
1:21:14 PM	600	503	494	0.6
1:21:15 PM	600	500	496	0.6
1:21:16 PM	600	502	496	0.6
1:21:17 PM	600	502	494	0.5
1:21:18 PM	600	502	496	0.5
1:21:19 PM	600	502	495	0.5
1:21:20 PM	600	502	496	0.5
1:21:21 PM	600	501	496	0.5
1:21:22 PM	600	502	496	0.5
1:21:23 PM	600	501	495	0.5
1:21:24 PM	600	502	495	0.5
1:21:25 PM	600	502	496	0.5
1:21:26 PM	600	501	496	0.5
1:21:27 PM	600	501	496	0.5
1:21:28 PM	600	502	496	0.5
1:21:29 PM	600	501	495	0.5
1:21:30 PM	600	502	496	0.5
1:21:31 PM	600	499	495	0.5
1:21:32 PM	600	501	496	0.5
1:21:33 PM	600	503	496	0.5
1:21:34 PM	600	502	496	0.5
1:21:34 PM	600	502	496	0.5
1:21:35 PM	600	500	495	0.5
1:21:36 PM	600	501	495	0.5
1:21:37 PM	600	500	494	0.5
1:21:38 PM	600	501	495	0.5
1:21:39 PM	600	499	495	0.5
1:21:40 PM	600	501	495	0.5
1:21:41 PM	600	501	497	0.5
1:21:42 PM	600	501	494	0.5
1:21:43 PM	600	501	495	0.5
1:21:44 PM	600	499	494	0.5
1:21:45 PM	600	500	495	0.5
1:21:46 PM	600	497	494	0.6
1:21:47 PM	600	501	495	0.6
1:21:48 PM	600	499	496	0.6
1:21:49 PM	600	500	494	0.6
1:21:50 PM	600	500	494	0.6
1:21:51 PM	600	499	494	0.6
1:21:52 PM	600	500	495	0.6
1:21:53 PM	600	500	494	0.6
1:21:54 PM	600	500	494	0.6
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>495</b>	<b>0.5</b>
			<b>Maximum -&gt;</b>	<b>0.6</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1400

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
1:56:08 PM	600	502	497	0.2
1:56:09 PM	600	502	495	0.2
1:56:10 PM	600	503	496	0.2
1:56:11 PM	600	502	495	0.2
1:56:12 PM	600	501	496	0.3
1:56:13 PM	600	502	495	0.3
1:56:14 PM	600	501	496	0.3
1:56:15 PM	600	502	496	0.2
1:56:16 PM	600	502	496	0.3
1:56:17 PM	600	501	496	0.3
1:56:18 PM	600	502	497	0.2
1:56:19 PM	600	502	496	0.2
1:56:20 PM	600	501	496	0.2
1:56:21 PM	600	502	496	0.2
1:56:22 PM	600	501	497	0.3
1:56:23 PM	600	501	496	0.3
1:56:24 PM	600	501	497	0.2
1:56:25 PM	600	500	495	0.2
1:56:26 PM	600	502	497	0.2
1:56:27 PM	600	501	498	0.2
1:56:28 PM	600	500	496	0.2
1:56:29 PM	600	502	495	0.3
1:56:30 PM	600	500	495	0.3
1:56:31 PM	600	502	497	0.3
1:56:32 PM	600	499	494	0.3
1:56:33 PM	600	502	496	0.3
1:56:34 PM	600	501	496	0.3
1:56:35 PM	600	501	495	0.3
1:56:36 PM	600	500	496	0.3
1:56:37 PM	600	500	495	0.3
1:56:38 PM	600	500	495	0.3
1:56:39 PM	600	501	496	0.3
1:56:40 PM	600	500	495	0.2
1:56:41 PM	600	500	495	0.2
1:56:42 PM	600	499	495	0.2
1:56:43 PM	600	500	495	0.2
1:56:44 PM	600	500	496	0.2
1:56:45 PM	600	500	495	0.2
1:56:46 PM	600	499	495	0.2
1:56:47 PM	600	500	494	0.2
1:56:48 PM	600	500	494	0.2
1:56:49 PM	600	499	496	0.2
1:56:50 PM	600	500	495	0.2
1:56:51 PM	600	500	495	0.2
1:56:52 PM	600	499	496	0.2
1:56:53 PM	600	499	495	0.2
1:56:54 PM	600	499	494	0.2
1:56:55 PM	600	499	494	0.2
1:56:56 PM	600	498	494	0.2
1:56:57 PM	600	499	493	0.2
1:56:58 PM	600	499	494	0.3
1:56:59 PM	600	500	494	0.3
1:57:00 PM	600	499	495	0.2
1:57:01 PM	600	499	492	0.2
1:57:02 PM	600	499	494	0.2
1:57:03 PM	600	499	495	0.2
1:57:03 PM	600	498	494	0.2
1:57:04 PM	600	499	494	0.2
1:57:05 PM	600	498	493	0.2
1:57:06 PM	600	499	495	0.2
<b>Averages -&gt;</b>	<b>600</b>	<b>500</b>	<b>495</b>	<b>0.2</b>
			<b>Maximum -&gt;</b>	<b>0.3</b>



**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1450

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
2:38:54 PM	600	500	494	0.2
2:38:55 PM	600	498	494	0.2
2:38:56 PM	600	500	495	0.2
2:38:57 PM	600	498	493	0.2
2:38:58 PM	600	499	494	0.2
2:38:59 PM	600	500	494	0.2
2:39:00 PM	600	499	495	0.2
2:39:01 PM	600	501	495	0.2
2:39:02 PM	600	500	495	0.2
2:39:02 PM	600	500	495	0.2
2:39:03 PM	600	501	494	0.2
2:39:04 PM	600	500	495	0.3
2:39:05 PM	600	501	495	0.3
2:39:06 PM	600	501	494	0.3
2:39:07 PM	600	501	496	0.2
2:39:08 PM	600	501	495	0.2
2:39:09 PM	600	502	495	0.3
2:39:10 PM	600	502	496	0.3
2:39:11 PM	600	501	495	0.3
2:39:12 PM	600	502	496	0.3
2:39:13 PM	600	501	496	0.3
2:39:14 PM	600	501	495	0.3
2:39:15 PM	600	502	495	0.3
2:39:16 PM	600	503	496	0.3
2:39:17 PM	600	501	496	0.3
2:39:18 PM	600	503	496	0.2
2:39:19 PM	600	501	495	0.2
2:39:20 PM	600	500	496	0.3
2:39:21 PM	600	501	495	0.3
2:39:22 PM	600	503	496	0.3
2:39:23 PM	600	503	495	0.3
2:39:24 PM	600	502	496	0.3
2:39:25 PM	600	502	497	0.3
2:39:26 PM	600	502	497	0.3
2:39:27 PM	600	501	495	0.3
2:39:28 PM	600	502	496	0.3
2:39:29 PM	600	502	496	0.3
2:39:30 PM	600	501	496	0.3
2:39:31 PM	600	502	496	0.3
2:39:32 PM	600	501	495	0.3
2:39:33 PM	600	502	497	0.3
2:39:34 PM	600	502	495	0.3
2:39:35 PM	600	502	495	0.3
2:39:36 PM	600	503	495	0.3
2:39:37 PM	600	501	496	0.3
2:39:38 PM	600	501	495	0.3
2:39:39 PM	600	501	495	0.3
2:39:40 PM	600	501	497	0.4
2:39:41 PM	600	502	495	0.3
2:39:42 PM	600	501	495	0.3
2:39:43 PM	600	502	496	0.3
2:39:44 PM	600	500	496	0.3
2:39:45 PM	600	501	495	0.3
2:39:46 PM	600	500	495	0.3
2:39:47 PM	600	501	496	0.3
2:39:48 PM	600	499	494	0.3
2:39:49 PM	600	500	495	0.3
2:39:50 PM	600	502	495	0.3
2:39:51 PM	600	500	495	0.3
2:39:52 PM	600	500	495	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>501</b>	<b>495</b>	<b>0.3</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1500

**Date** 12/14/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
3:22:46 PM	600	500	495	1.1
3:22:47 PM	600	499	495	1.1
3:22:48 PM	600	500	495	1.1
3:22:48 PM	600	500	495	1.0
3:22:49 PM	600	500	495	1.1
3:22:50 PM	600	500	494	1.1
3:22:51 PM	600	500	496	1.1
3:22:52 PM	600	500	495	1.1
3:22:53 PM	600	500	495	1.1
3:22:54 PM	600	499	494	1.1
3:22:55 PM	600	500	495	1.1
3:22:56 PM	600	497	497	1.1
3:22:57 PM	600	500	493	1.1
3:22:58 PM	600	499	495	1.1
3:22:59 PM	600	498	495	1.1
3:23:00 PM	600	500	493	1.1
3:23:01 PM	600	497	494	1.1
3:23:02 PM	600	497	494	1.1
3:23:03 PM	600	497	495	1.1
3:23:04 PM	600	499	493	1.1
3:23:05 PM	600	499	494	1.1
3:23:06 PM	600	499	493	1.1
3:23:07 PM	600	499	494	1.0
3:23:08 PM	600	499	494	1.0
3:23:09 PM	600	498	494	1.1
3:23:10 PM	600	499	494	1.1
3:23:11 PM	600	497	493	1.1
3:23:12 PM	600	497	493	1.1
3:23:13 PM	600	498	494	1.1
3:23:14 PM	600	499	493	1.1
3:23:15 PM	600	498	495	1.0
3:23:16 PM	600	497	494	1.1
3:23:17 PM	600	499	494	1.1
3:23:18 PM	600	500	494	1.1
3:23:19 PM	600	499	494	1.1
3:23:20 PM	600	498	494	1.1
3:23:21 PM	600	499	494	1.1
3:23:22 PM	600	498	494	1.1
3:23:23 PM	600	499	495	1.1
3:23:24 PM	600	499	494	1.1
3:23:25 PM	600	500	494	1.1
3:23:26 PM	600	500	496	1.1
3:23:27 PM	600	499	494	1.1
3:23:28 PM	600	500	494	1.1
3:23:29 PM	600	499	494	1.2
3:23:30 PM	600	500	496	1.2
3:23:31 PM	600	500	495	1.2
3:23:32 PM	600	500	495	1.2
3:23:33 PM	600	500	496	1.2
3:23:34 PM	600	500	494	1.2
3:23:35 PM	600	500	495	1.2
3:23:36 PM	600	501	495	1.2
3:23:37 PM	600	501	495	1.2
3:23:38 PM	600	500	495	1.1
3:23:39 PM	600	500	495	1.1
3:23:40 PM	600	503	496	1.1
3:23:41 PM	600	501	497	1.2
3:23:42 PM	600	501	496	1.2
3:23:43 PM	600	502	495	1.2
3:23:44 PM	600	501	495	1.2
<b>Averages -&gt;</b>	<b>600</b>	<b>499</b>	<b>495</b>	<b>1.1</b>
			<b>Maximum -&gt;</b>	<b>1.2</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1500

**Date** 12/15/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
8:29:08 AM	600	71	73	0.4
8:29:09 AM	600	71	73	0.4
8:29:10 AM	600	71	73	0.4
8:29:11 AM	600	71	73	0.4
8:29:12 AM	600	72	73	0.4
8:29:13 AM	600	72	73	0.4
8:29:13 AM	600	72	73	0.4
8:29:14 AM	600	72	73	0.4
8:29:15 AM	600	71	73	0.4
8:29:16 AM	600	71	73	0.4
8:29:17 AM	600	71	73	0.4
8:29:18 AM	600	72	73	0.4
8:29:19 AM	600	161	73	0.3
8:29:20 AM	600	71	73	0.3
8:29:21 AM	600	71	73	0.4
8:29:22 AM	600	71	73	0.4
8:29:23 AM	600	71	73	0.4
8:29:24 AM	600	72	73	0.4
8:29:25 AM	600	71	73	0.4
8:29:26 AM	600	71	73	0.3
8:29:27 AM	600	71	73	0.3
8:29:28 AM	600	71	73	0.4
8:29:29 AM	600	72	73	0.4
8:29:30 AM	600	71	73	0.3
8:29:31 AM	600	71	73	0.3
8:29:32 AM	600	71	73	0.3
8:29:33 AM	600	72	73	0.3
8:29:34 AM	600	72	73	0.3
8:29:35 AM	600	71	73	0.3
8:29:36 AM	600	72	73	0.3
8:29:37 AM	600	71	73	0.3
8:29:38 AM	600	72	73	0.3
8:29:39 AM	600	71	73	0.3
8:29:40 AM	600	71	73	0.3
8:29:41 AM	600	71	73	0.3
8:29:42 AM	600	71	73	0.3
8:29:43 AM	600	71	73	0.4
8:29:44 AM	600	72	73	0.4
8:29:45 AM	600	71	73	0.4
8:29:46 AM	600	72	73	0.4
8:29:47 AM	600	72	73	0.4
8:29:48 AM	600	72	73	0.3
8:29:49 AM	600	72	73	0.3
8:29:50 AM	600	72	73	0.3
8:29:51 AM	600	72	73	0.3
8:29:52 AM	600	71	73	0.3
8:29:53 AM	600	71	73	0.3
8:29:54 AM	600	72	73	0.3
8:29:55 AM	600	72	73	0.3
8:29:56 AM	600	72	73	0.3
8:29:57 AM	600	71	73	0.3
8:29:58 AM	600	71	73	0.4
8:29:59 AM	600	71	73	0.4
8:30:00 AM	600	71	73	0.4
8:30:01 AM	600	71	73	0.4
8:30:02 AM	600	72	73	0.4
8:30:03 AM	600	71	73	0.4
8:30:04 AM	600	71	73	0.4
8:30:05 AM	600	71	73	0.4
8:30:06 AM	600	72	73	0.3
<b>Averages -&gt;</b>	<b>600</b>	<b>73</b>	<b>73</b>	<b>0.4</b>
			<b>Maximum -&gt;</b>	<b>0.4</b>

**Yarmouth Research and Technology, LLC**

**Valve Description:** PBM 2 inch SK-N042 with Chesterton 1622 Packing

**Cycle Number:** 1510

**Date** 12/15/2012

<b>Time (EST)</b>	<b>Pressure (psig)</b>	<b>Bonnet Temp. (deg. F)</b>	<b>Body Temp. (deg. F)</b>	<b>Leakage (PPMv)</b>
8:39:07 AM	600	71	73	0.2
8:39:08 AM	600	72	73	0.2
8:39:09 AM	600	72	73	0.2
8:39:10 AM	600	71	73	0.2
8:39:11 AM	600	71	73	0.2
8:39:12 AM	600	72	73	0.2
8:39:13 AM	600	72	73	0.2
8:39:14 AM	600	72	73	0.2
8:39:15 AM	600	71	163	0.2
8:39:16 AM	600	71	73	0.2
8:39:17 AM	600	71	73	0.2
8:39:18 AM	600	71	73	0.2
8:39:19 AM	600	71	73	0.2
8:39:20 AM	600	71	73	0.2
8:39:21 AM	600	72	73	0.2
8:39:22 AM	600	71	73	0.2
8:39:23 AM	600	71	73	0.2
8:39:24 AM	600	71	73	0.2
8:39:25 AM	600	71	73	0.2
8:39:26 AM	600	71	73	0.2
8:39:27 AM	600	71	73	0.2
8:39:28 AM	600	71	73	0.2
8:39:29 AM	600	72	73	0.2
8:39:30 AM	600	71	73	0.2
8:39:31 AM	600	71	73	0.2
8:39:32 AM	600	71	73	0.2
8:39:33 AM	600	71	73	0.2
8:39:34 AM	600	72	73	0.2
8:39:35 AM	600	72	73	0.2
8:39:36 AM	600	71	73	0.2
8:39:36 AM	600	72	73	0.2
8:39:37 AM	600	72	73	0.2
8:39:38 AM	600	71	73	0.2
8:39:39 AM	600	72	73	0.2
8:39:40 AM	600	72	73	0.2
8:39:41 AM	600	71	73	0.3
8:39:42 AM	600	72	73	0.3
8:39:43 AM	600	72	73	0.3
8:39:44 AM	600	72	73	0.3
8:39:45 AM	600	71	73	0.3
8:39:46 AM	600	71	73	0.2
8:39:47 AM	600	72	73	0.2
8:39:48 AM	600	71	73	0.2
8:39:49 AM	600	72	73	0.2
8:39:50 AM	600	71	73	0.3
8:39:51 AM	600	71	73	0.3
8:39:52 AM	600	72	73	0.3
8:39:53 AM	600	71	73	0.3
8:39:54 AM	600	71	73	0.2
8:39:55 AM	600	71	73	0.2
8:39:56 AM	600	71	73	0.2
8:39:57 AM	600	71	73	0.2
8:39:58 AM	600	72	73	0.2
8:39:59 AM	600	71	73	0.2
8:40:00 AM	600	72	73	0.2
8:40:01 AM	600	72	73	0.2
8:40:02 AM	600	72	73	0.2
8:40:03 AM	600	71	73	0.2
8:40:04 AM	600	71	73	0.2
8:40:05 AM	600	72	73	0.2
<b>Averages -&gt;</b>	<b>600</b>	<b>71</b>	<b>75</b>	<b>0.2</b>
			<b>Maximum -&gt;</b>	<b>0.3</b>