

# TEST REPORT

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Accepted for Use

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**RENDERED TO**

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 The AREVA logo features a stylized red letter 'A' above the word "AREVA" in red capital letters.	AREVA NP Inc.
	58-9223295-001

PRODUCTS EVALUATED: Unifrax Fiberfax® Durablanket® S, Dow Corning® 732 Multi-Purpose Sealant, Dow Corning® 790 Silicone Building Sealant and PCI-Promatec SF-150NH High Density Silicone Elastomer

EVALUATION PROPERTY: Pressure Resistance (Pressure Test 9)

**Report of Testing pressure resistance capabilities for compliance with the applicable requirements of AREVA NP Inc. Test Plan, Document No. 51-9207913-003**

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## 2 Introduction

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Intertek Testing Services NA (Intertek) has conducted testing for AREVA NP Inc., on the pressure resistance capabilities of Unifrax Fiberfax® Durablanket® S (Durablanket), Dow Corning® 732 Multi-Purpose Sealant (DC-732), Dow Corning® 790 Silicone Building Sealant (DC-790) and PCI-Promatec SF-150NH High Density Silicone Elastomer (SF-150NH) through a 12" thick concrete deck for compliance with the applicable requirements of and in accordance with AREVA NP Inc. Document No. 51-9207913-003, *Detailed Test Plan for Conducting MOX Pressure Test 9*. This evaluation took place on February 19, 2014.

This project was undertaken evaluate the pressure resistance capability of penetration seal designs for the sealing of HVAC penetrations that contain fire dampers at air pressure increments above atmospheric pressure and to evaluate the pressure resistance capability of high density silicone elastomer seals when installed around penetrating commodities at air pressure increments above atmospheric pressure.

## 3 Test Samples

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### 3.1. SAMPLE SELECTION

The sealant materials were not independently selected for testing; they were supplied by AREVA NP, Inc. and were received in several shipments from June 13, 2013 to January 9, 2014. The samples were received with Certificates of Conformance and are considered traceable. Basic information on sealant material(s) is presented in the table below.

Sealant Material	Lot /Batch#	Expiration Date
Durablanket® S	33274	NA
DC-732	0007251823	5/29/2015
DC-790	0007643997	11/29/2014
SF-150NH	NH014B01	7/31/2014
SF-150NH	NH083B05	2/28/2014

Information regarding receiving dates and origin of all the materials in the test assembly can be found in Appendix F: Quality Documents. All samples were received in good condition at the Evaluation Center.

### 3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The test deck was be used to simulate a confinement zone or HVAC boundary in which the penetration seal assemblies may be installed. The test deck was not considered an integral part of the penetration seal assembly being tested and therefore was not intended to replicate MOX-specific plant conditions and not considered integral in bounding the performance of the penetration seal assemblies (e.g., concrete blend, compressive strength, rebar size and spacing). The test deck was be comprised of normal weight reinforced concrete.

The openings cast into the test deck simulated certain features consistent with MOX penetrations (e.g., painted or coated interior finishes, beveled edges, etc.) as defined by the Test Plan drawings contained in Appendix A.

The test deck consisted of a 12" thick concrete slab measuring approximately 96" x 96" (8' x 8'). Within this slab there were two penetrations. The HVAC penetration was 36" x 19" with a 3/4" bevel on three sides of the opening on the top side of the barrier and a 3/4" bevel on all 4 sides of the opening on the bottom side of the barrier. The radiation shielding penetration was a 36" x 12" opening without beveled edges. Both of the penetrations were unlined (bare concrete). The test deck was horizontally oriented with a hemispherical 72" diameter steel pressure vessel mounted on each side of the precast openings in the slab.

Penetration P1 - Test penetration P1 was a 36" x 19" blockout containing a mechanical duct sealed at one end simulating a duct designed to resist the passage of fire. Specifically, this penetration contained one (1) galvanized steel 14" x 14" duct with a fitted cover plate installed on the bottom side simulating a duct designed to resist the passage of fire. The penetrating duct was located within the opening as shown in the Test Plan. This opening was sealed using a penetration closure design, as laid out in Drawing DCS01-BMF-DS-PLF-A-04509 [Test Plan Reference 12.1], consisting of steel track, steel studs, structo-crete concrete panel material, metal retainer angles, Dow Corning® 790 Silicone Building Sealant / Dow Corning® 732 Multi-Purpose Sealant and ceramic fiber blanket material as backing for the silicone sealants.

Penetration P2 - Test penetration P2 was a 36" x 12" blockout containing multiple penetrating items. All sides of the opening were unlined, bare concrete (i.e., no liners, coatings or sleeve materials). The tested conduits included one (1) 2" diameter Rigid Galvanized Steel (RGS) conduit and one (1) 2" diameter Stainless Steel (SS) conduit. The tested pipes included one (1) 2" diameter Schedule 40 Carbon Steel (CS) pipe and one (1) 2" diameter Schedule 10 Stainless Steel (SS) pipe. The conduits and pipes were capped on one side with rubber pipe caps secured in place with hose clamps. The caps were made air tight, so that any leakage during the test had to pass through the seal assembly and not internal to the pipe or conduit.

The opening was sealed using an eight (8) inch thick seal of Promatec SF-150NH High-Density Silicone Elastomer (SF-150NH) with no permanent damming installed around the various penetrating commodities.

The penetrating items were located within the openings as shown in Appendix A. The test was performed with the test deck oriented in the horizontal position and in accordance with Section 9.0 of the Test Plan (refer to Appendix D).

## 4 Testing and Evaluation Methods

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The Test Plan in Appendix D defines the test methods, acceptance criteria and test report documentation requirements for penetration seal Pressure Test 9. Additionally, the detailed Test Plan defines the roles and responsibilities of MOX Services, AREVA, the selected testing laboratory, and any other subcontracted entity engaged in support of pressure testing efforts.

The detailed Test Plan also describes the procurement plan for materials associated with penetration seal Pressure Test 9 and identifies the entities responsible for procuring the various components of the test assemblies based on the quality level assigned to each component.

The Test Plan also establishes minimum quality requirements for the penetration seal materials used in the test assemblies and links quality requirements in the AREVA QA program to customer/project quality requirements.

### 4.1. TEST APPARATUS

In the absence of any consensus codes or standards related to the pressure testing of penetration seal assemblies, the MOX Penetration Seal Program has developed a standardized method for conducting pressure testing of MOX penetration seal designs. In support of this effort, Intertek assisted in the design and construction of a pressure test apparatus to be use in the conduct of MOX penetration seal pressure tests.

The pressure chamber apparatus consists of two hemispherical 72" diameter steel pressure vessels, calibrated equipment and a data acquisition system. The apparatus accurately maintains the desired air pressure, using one of two sensitive, manually adjustable pressure regulators; a high (0-15 psi) and a low (0-2 psi) range. The sealed collection chamber feeds any leakage air back to the test device, where it is channeled through one of two calibrated flow meters, once again, a high (0-200 L/min) and a low (0-20 L/min) range. A calibrated electronic pressure transducer (0-5 psi) measures the differential pressure between the two chambers and the data acquisition software determines the net pressure drop across the test seal and the leakage through the seal. The chambers are interchangeable and the direction can be reversed very quickly so both can serve as the pressure or the collection chamber. The primary components described above include the following devices:

Pressure Chamber      2-piece hemispherical 72" diameter steel vessel  
3 connection ports per piece  
16 flange attachment points per piece  
Flange attachment via 3/8" diameter holes @ 22-1/2° spacing



Pressure Cart      Stainless steel rolling cart with control equipment and associated  
Data Acquisition System



Regulator (low)                      Control Air, Inc., Amherst, NH  
Type 700  
0-2 psi

Regulator (high)                    Control Air, Inc., Amherst, NH  
Type 700  
0-15 psi



Mass Flow Meter      Omega Engineering, Inc., Stamford, CT  
Model No. FMA-872A-V-NIST  
Serial No. 4270050001001  
0-20 lpm



Mass Flow Meter      Omega Engineering, Inc., Stamford, CT  
Model No. FMA-875A-V-NIST  
Serial No. 4270050003001  
0-200 lpm



Pressure Transducer      Omegadyne Inc., Sunbury, OH  
Model No. PX409-005 DWUV  
Serial No. 406707  
Pressure Range: 0-5 psi  
Input 0-100mVdc



Power Supply	Omega Engineering, Inc., Stamford, CT Model No. PSS-10 +10V @ 400 mA Input 115 VAC 50/60 Hz
Multifunction DAQ	National Instruments, Model No. NI USB-6210 16 Input, 16-bit, 250 kS/s, Multifunction I/O



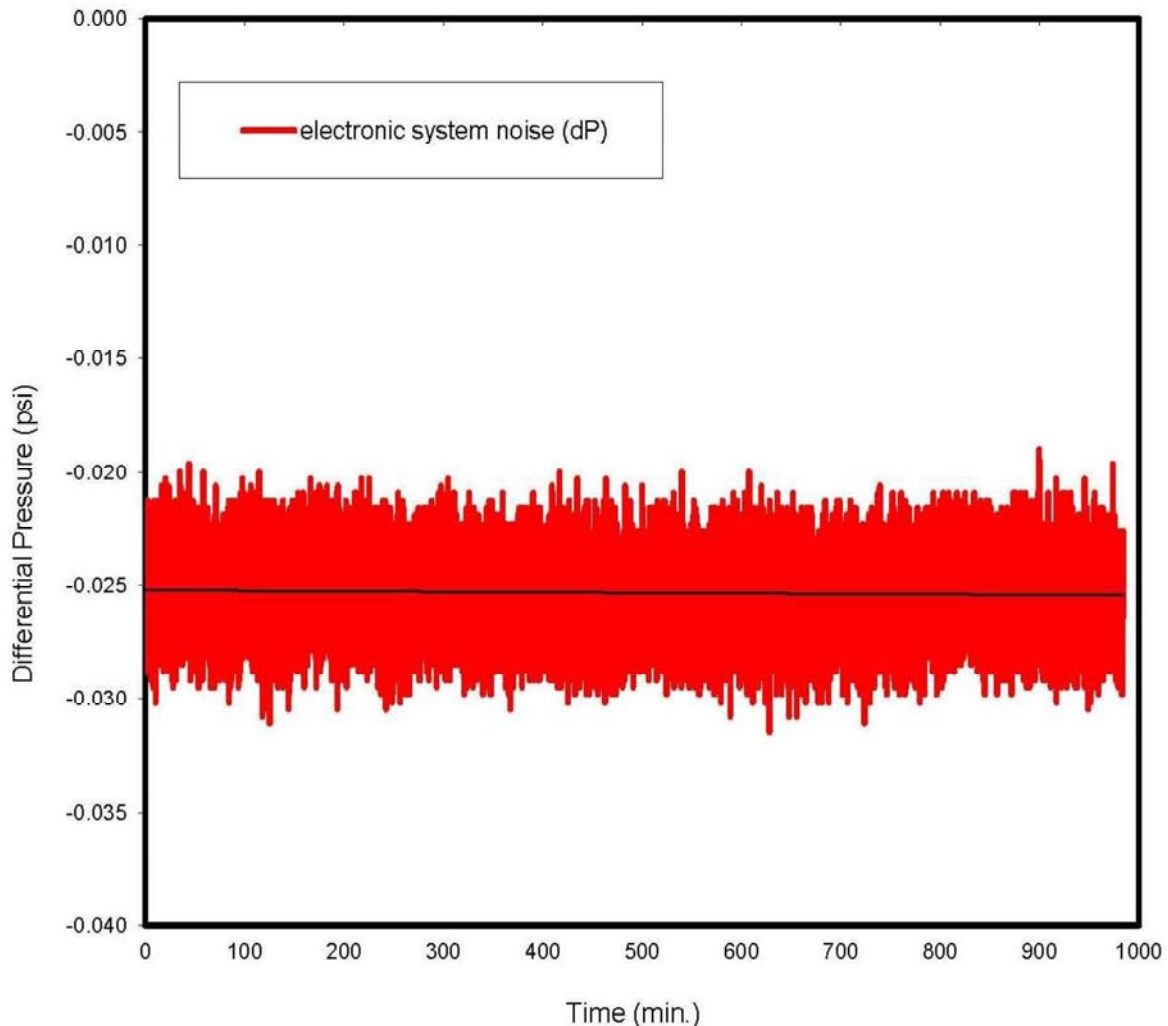
Dedicated CPU

HP Compaq Pro-6300 Microtower  
Serial No. MXL3090LN6  
OS Windows 7 Pro



Additionally, during initial system start-up testing and verification, it was discovered that the data acquisition system (DAQ) was so sensitive that “signal noise” resulted in data fluctuations for reported differential pressure even when the system was at equilibrium (i.e., both high side and low side pressure chambers were at atmospheric conditions). After collecting data for 16 hours overnight, the average fluctuation was -0.025 psi.

### 16-hr Average Electronic Noise (dP = -0.0253 psi)



Since the initial pressure stage prescribed by the AREVA NP Test Plan is 1.0 inches of water (0.0361 psi) and the average data fluctuation due to “signal noise” was almost 70% of this value (-0.025 psi), it was decided that an inclined-plane manometer would be used to ensure that the Stage 1 differential pressure was applied at precisely 1.0 inches of water.



For subsequent pressure stages (i.e., Stages 2-5), the Test Plan required pressure was applied and maintained using the DAQ reported differential pressure without consideration for any “signal noise”. Since the “signal noise” always reported some level of negative pressure at the beginning of the test, this method assured that the tests were conducted with additional margin, as the actual differential pressure that the test specimen was subjected to was equal to the DAQ reported differential pressure plus the additional pressure needed to overcome the negative “signal noise” reported at the beginning of the test when both pressure chambers were at atmospheric conditions.

## 4.2. TEST STANDARD

### AREVA NP Inc. Document No. 51-9207913-003

Pressure rated penetration seals at the MOX facility are required to remain “sufficiently leak-tight” at various pressure levels in order to support the functional goals of the various pressure rating requirements (i.e., confinement, suppression system clean agent concentration, fire induced pressure loads or HVAC pressure boundary loads). The term “sufficiently leak-tight” indicates that the penetration seal meets the predetermined acceptance criteria for the pressure level(s) being tested.

The acceptance criterion that constitutes “sufficiently leak-tight” varies based on the pressure requirement and the operating mode of the plant. For most pressure conditions and operating modes, “sufficiently leak-tight” means that the penetration seal assembly must remain in place but is allowed to leak (i.e., the penetration seal cannot become dislodged from the opening or otherwise catastrophically fail such that a substantial leakage path is created.)

Per MOX Services Calculation *Confinement Boundary Air Leakage Criteria* [Test Plan Reference 12.11], penetration seals that function as confinement zone 3b boundary components must maintain a leakage rate less than 0.01 cfm/sq. ft. of penetration area when tested at a pressure that bounds C3b to non-C3b zone pressures during normal operating conditions.

The table below identifies the differential pressure levels (stages) for conducting pressures tests, as well as, the acceptance criteria in order to be considered “sufficiently leak-tight”.

Differential Pressure Test Levels

Test Stage	Differential Pressure (inch w.g.)	Required Hold Time (minutes)	Acceptance Criteria	Basis for the Selected Differential Pressure
1	1.0	30	Leakage $\leq$ 0.01 cfm/sq. ft. of penetration area - Note <sup>1</sup>	Testing at this differential pressure bounds the 0.51 inches w.g. pressure for C3b to C2 areas during normal operation [Test Plan Reference 12.11].
2	5.0	30	Seal Remains In Place	Testing at this differential pressure bounds the 4.0 inches w.g. pressure anticipated as a result of clean agent suppression system discharge [Test Plan Reference 12.9].

Test Stage	Differential Pressure (inch w.g.)	Required Hold Time (minutes)	Acceptance Criteria	Basis for the Selected Differential Pressure
3	10.0	30	Seal Remains In Place	Testing at this differential pressure bounds the 7.0 inches w.g. pressure used as the screening pressure cutoff for fire induced pressures [Test Plan References 12.9 and 12.10] and some of the HVAC pressure boundaries [Test Plan Reference 12.11].
4	20.0	30	Seal Remains In Place	Testing at this differential pressure bounds all of the calculated fire induced pressures [Test Plan Reference 12.10] and many of the HVAC pressure boundaries [Test Plan Reference 12.11].
5	40.0	30	Seal Remains In Place	Testing at this differential pressure bounds all of the HVAC pressure boundaries [Test Plan Reference 12.11].

Note <sup>1</sup>: 19" x 36" HVAC seal area and 12" x 36" radiation seal area @ < 0.01 cfm/sq. ft. leakage = maximum leakage of 0.078 cfm.

Each test assembly shall be attached to the pressure test apparatus and subjected to the pressures identified in table above as described below.

The test assembly shall be attached to the pressure test apparatus and subjected to air pressure tests at the select pressure levels identified in the table, beginning with the Stage 1 pressure of 1.0 inches w.g. Once this pressure has been obtained, the pressure shall be maintained for the hold time specified. The maximum leakage rate observed during the hold time shall be recorded. If the leakage rate exceeds the acceptance criteria during Stage 1 testing, the time of failure shall be noted and the test shall be continued, since leakage alone does not constitute failure after Stage 1.

Once the designated hold time has been achieved, the pressure shall be increased to the next pressure level identified (Stage 2, then Stage 3, then Stage 4 and finally Stage 5) and held for the designated hold time. The maximum leakage rate observed during each hold time shall be recorded.

Following completion of Stage 5 pressure testing, the test may continue at the discretion of the AREVA test engineer and the testing laboratory manager in charge. Subsequent pressures, hold times and maximum leakage rates shall be recorded as directed by the AREVA test engineer.

If at any pressure level (or test stage) the penetration seal becomes dislodged from the opening or otherwise catastrophically fails, the pressure test shall be terminated and the time to failure and pressure at which the failure occurred shall be recorded.

## 5 Testing and Evaluation Results

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### 5.1. RESULTS AND OBSERVATIONS

The test deck was mounted horizontally between two 72" diameter hemispherical pressure vessels. The deck was fixed to the pressure chamber using (16) 5/16" x 2-1/2" long sleeve anchors (Red Head) through 16 pre-drilled holes. Silicone II caulk (GE) was used to create a pressure tight seal between the pressure chamber and the test deck.

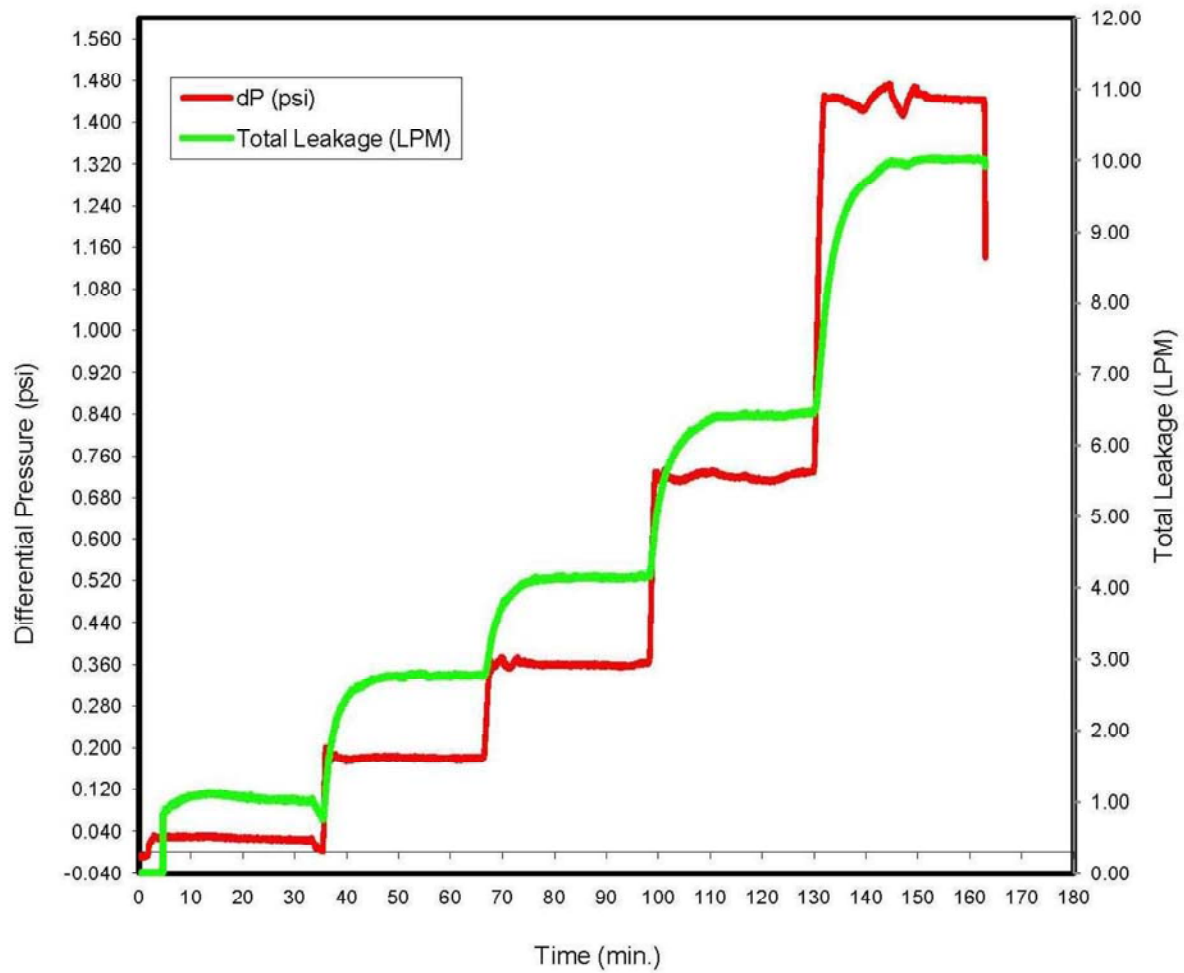
The test was initiated at 1:36 p.m. on February 19, 2014. Scott Groesbeck, representing AREVA NP Inc., was present to witness the test. The ambient temperature at the start of the test was 77°F, with a relative humidity of 66%.

The test procedure followed that presented in Section 9.0 of the Test Plan. The graph and table on the following page(s) provides a summary of results and observations for the five pressure stages, any observed leakage, and the maximum leakage rate. Additionally, the raw data for Pressure Test 9 is contained in Appendix B of this test report. The official start and stop times for each pressure stage were timed using a traceable, calibrated stopwatch. The approximate start and stop times for each pressure stage are recorded below. These start and stop times can be correlated to the data in Appendix B using the heading "Time (min)".

**Pressure Test 9 Start and Stop Times**

Stage	Start Time	Stop Time
1	2.8	32.8
2	35.9	65.9
3	67.7	97.7
4	99	129
5	132	162

**Chamber Differential Pressure and Seal Leakage  
Pressure Test 9**



### Test Results and Observations

Test Stage	Differential Pressure inch w.g. (psi)	Required Hold Time (minutes)	Acceptance Criteria	PASS/ FAIL	Max Leakage (Total LPM)	Max Leakage (Total cfm)
1	1.0 (0.036)	30	Leakage $\leq$ 0.01 cfm/sq. ft. of penetration area	PASS*	1.13	0.040
2	5.0 (0.181)	30	Seal Remains In Place	PASS	2.81	0.099
3	10.0 (0.361)	30	Seal Remains In Place	PASS	4.18	0.148
4	20.0 (0.722)	30	Seal Remains In Place	PASS	6.48	0.229
5	40.0 (1.44)	30	Seal Remains In Place	PASS	10.04	0.355

- \* For Stage 1 the allowable leakage per the Test Plan is 0.01 cfm per square foot of penetration opening. The test assembly was comprised of two openings; one that was 19" x 36" and one that was 12" x 36". This yielded a total penetration area of 7.75 ft<sup>2</sup>, which correlates to an allowable leakage rate of 0.078 cfm (or 2.209 LPM). Since the maximum Stage 1 leakage was 0.040 cfm (1.13 LPM), the test assembly passed the Stage 1 leak rate criteria.

## 5.2. POST TEST EXAMINATION

Following completion of the pressure test, visual and destructive (where necessary) post-test examinations were performed. The top pressure chamber was removed, soapy water was applied to the seal surface, and the bottom chamber was pressurized to determine leakage paths. These examinations included, but were not limited to, the following:

- Integrity of seal and conditions on the exposed side of the penetration
  - No visual changes were observed.
- Integrity of seal and conditions on the unexposed side of the penetration
  - No visual changes were observed.
- Location of any penetration seal degradation
  - No visual changes were observed.
- Condition of seal to barrier interface
  - P1: No visual changes were observed.
  - P2: leakage at the corners of the opening and along the vertical concrete curb
- Condition of seal to penetrating item interfaces
  - P1: leakage at the interface of the DC 732 where a closure angle was welded to the HVAC duct
  - P2: no leakage around the pipes

## 6 Conclusion

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Intertek Testing Services NA (Intertek) has conducted testing for AREVA NP Inc., on the pressure resistance capabilities of Unifrax Fiberfax® Durablanket® S (Durablanket), Dow Corning® 732 Multi-Purpose Sealant (DC-732), Dow Corning® 790 Silicone Building Sealant (DC-790) and PCI-Promatec SF-150NH High Density Silicone Elastomer (SF-150NH) through a 12" thick concrete deck for compliance with the applicable requirements of and in accordance with AREVA NP Inc. Document No. 51-9207913-003, *Detailed Test Plan for Conducting MOX Pressure Test 9*. This evaluation took place on February 19, 2014.

The seals in Pressure Test 9 met the acceptance criteria as defined in the Test Plan.

This project was undertaken evaluate the pressure resistance capability of penetration seal designs for the sealing of HVAC penetrations that contain fire dampers at air pressure increments above atmospheric pressure and to evaluate the pressure resistance capability of high density silicone elastomer seals when installed around penetrating commodities at air pressure increments above atmospheric pressure.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

### INTERTEK TESTING SERVICES NA

Reported by: \_\_\_\_\_

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Staff Engineer

Reviewed by: \_\_\_\_\_

Je  
Project Engineer, Fire Resistance

Reviewed by: \_\_\_\_\_

Michael A. Brown  
Quality Supervisor

## APPENDIX A

### Assembly Drawings

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Document No.: 51-9207913-003

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Detailed Test Plan for Conducting MOX Pressure Test 9

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**APPENDIX A: TEST DECK/TEST SLAB DRAWINGS**

The test deck (test slab) for Pressure Test 9 is depicted on page A-2.

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Page A-1

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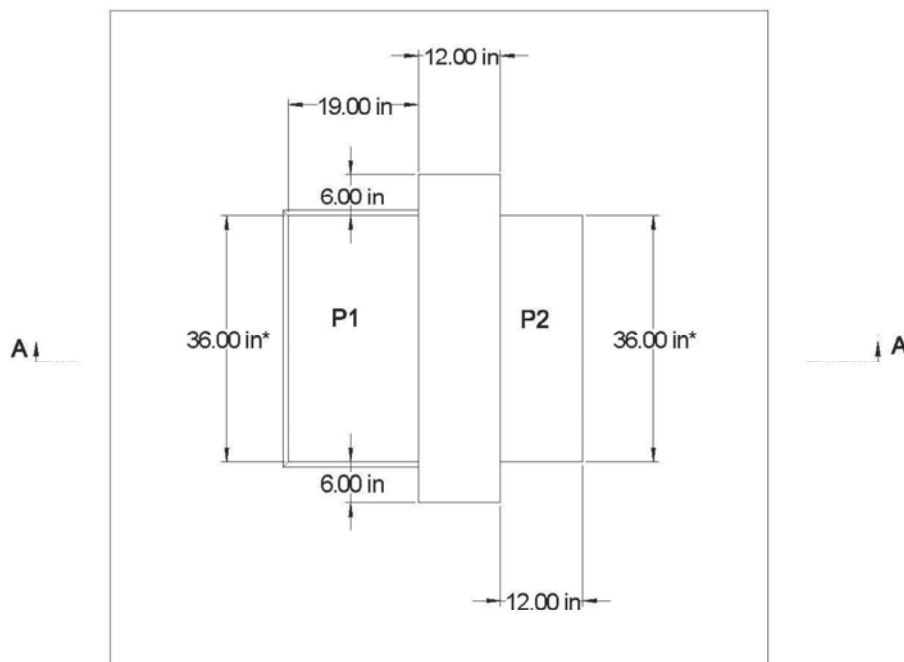


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Detailed Test Plan for Conducting MOX Pressure Test 9

**Pressure Test P9 Test Deck**

**Pressure Test 9**



**NOTES:**

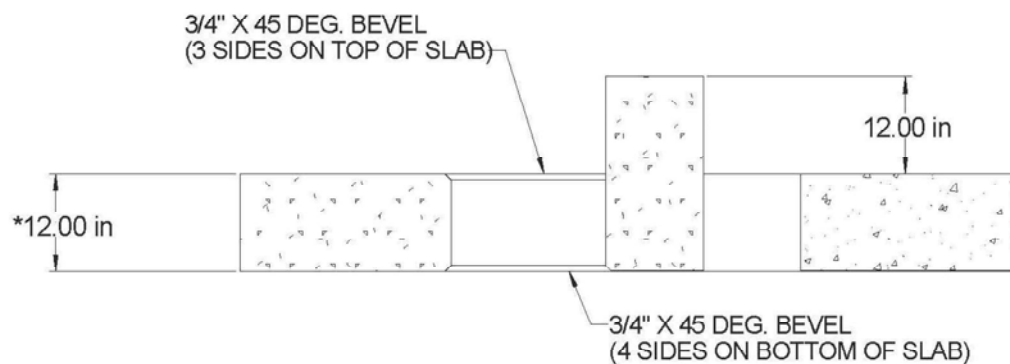
1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. SEE PAGE A-3 FOR SECTION A - A.

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Document No.: 51-9207913-003

Detailed Test Plan for Conducting MOX Pressure Test 9



**Section A - A**

NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS  $\pm 1/4$ "
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

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Document No.: 51-9207913-003

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Detailed Test Plan for Conducting MOX Pressure Test 9

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**APPENDIX B: TEST PENETRATION DRAWINGS**

This appendix contains Test Penetration drawings. These drawings identify penetrating item locations within the test penetration, as well as, the penetration seal design for each test penetration.

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Page B-1

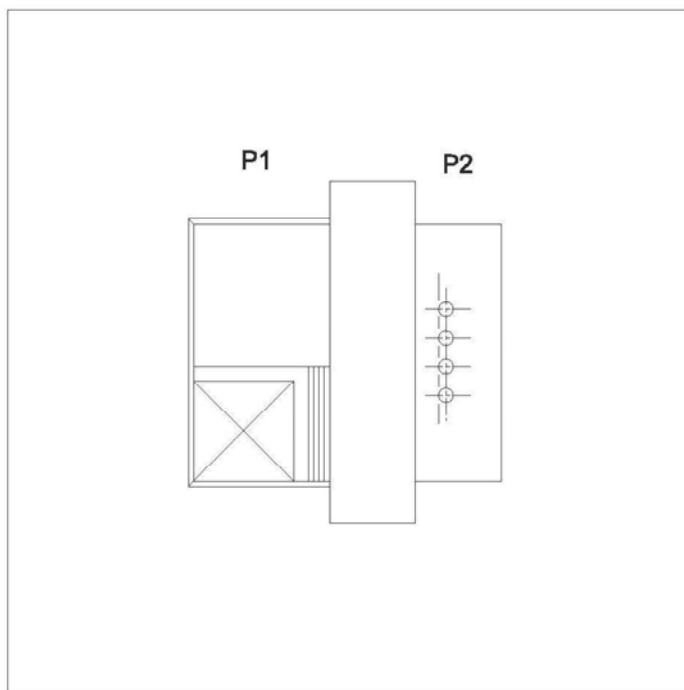
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Detailed Test Plan for Conducting MOX Pressure Test 9

**Pressure Test 9**



NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. SEE PAGE B-3, B-4, B-5 AND B-6 FOR DETAILS OF PENETRATION P1.
5. SEE PAGE B-7, AND B-8 FOR DETAILS OF PENETRATION P2.

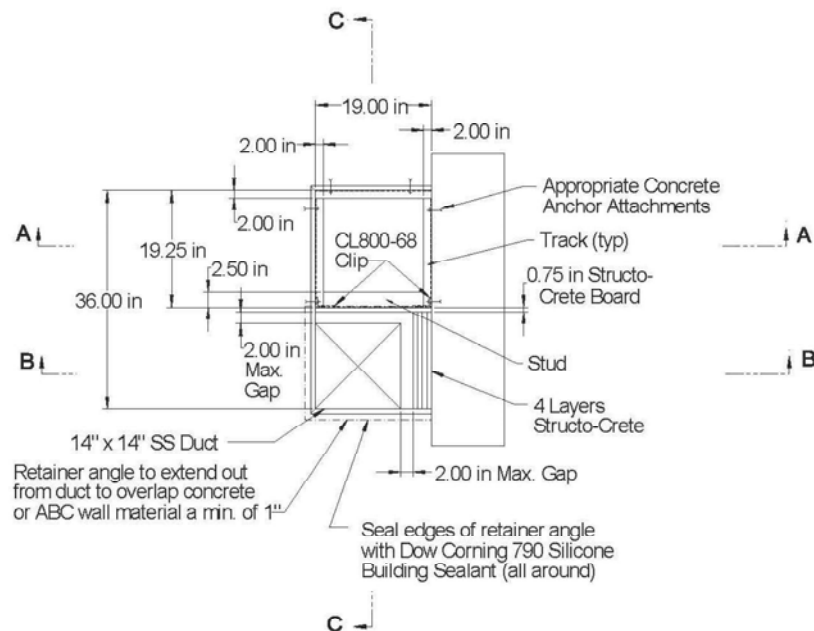
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Document No.: 51-9207913-003

## Detailed Test Plan for Conducting MOX Pressure Test 9

### Penetration P1



#### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS  $\pm 1/4"$
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. THE STEEL NETWORK STRUCTURAL FRAMING AND STRUCTO-CRETE INSTALLED TO REDUCE OPENING SIZE AROUND DUCT.  
SEE DRAWING DCS01-BMF-DS-PLF-A-04509 FOR DETAILS.
4. ALL CAST CONCRETE SURFACES THAT WILL INTERFACE WITH DOW CORNING 790 SILICONE BUILDING SEALANT SHALL BE PREPARED USING A GRINDER EQUIPPED WITH A HILTI DG-CVAP-SP DIAMOND CUP WHEEL (HILTI ITEM NO. 2066711). THIS INCLUDES THE BEVEL AREA OF THE CONCRETE OPENINGS, AS WELL AS, THE FACE OF THE CONCRETE SLAB ON BOTH SIDES OF THE BARRIER FOR A DISTANCE OF APPROXIMATELY 2" WIDE AROUND THE PERIMETER OF PENETRATION P1.

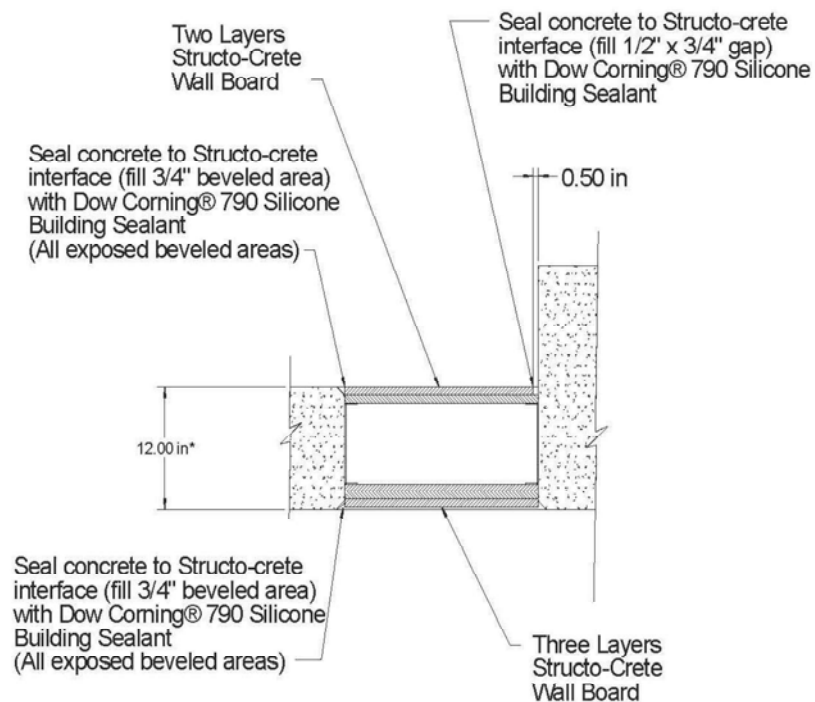
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Document No.: 51-9207913-003

Detailed Test Plan for Conducting MOX Pressure Test 9

## Penetration P1



## Section A-A

### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

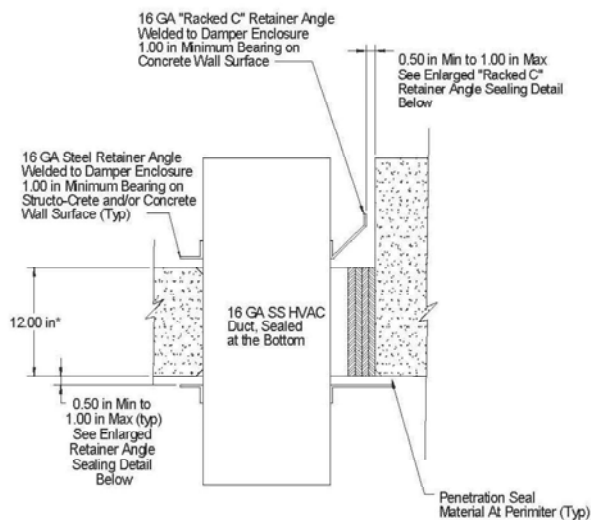
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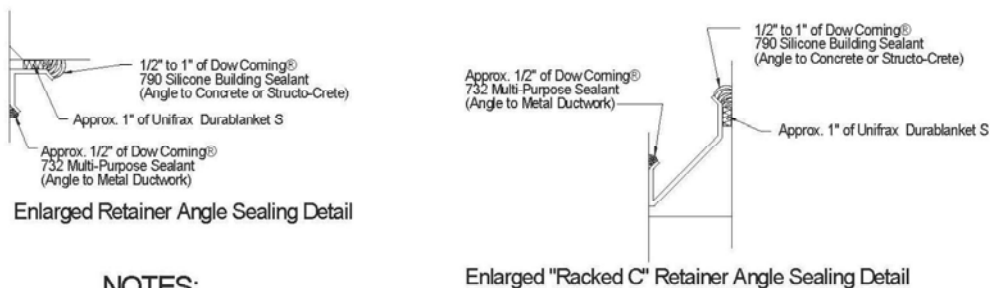
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Detailed Test Plan for Conducting MOX Pressure Test 9

## Penetration P1



## Section B - B



### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

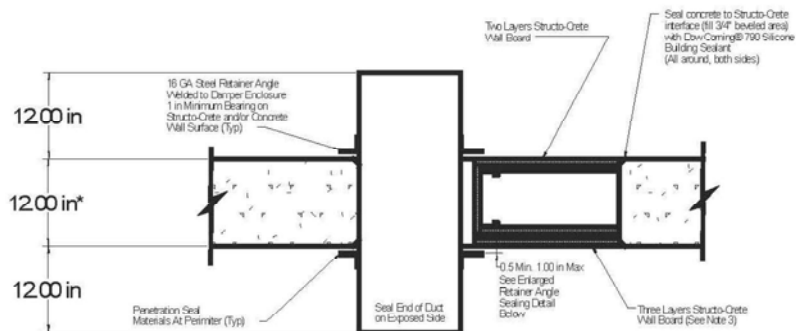
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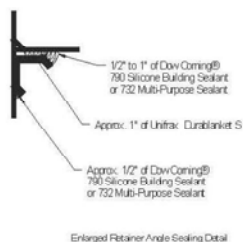
Document No.: 51-9207913-003

Detailed Test Plan for Conducting MOX Pressure Test 9

Penetration P1



Section C - C



NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. HILTI SELF-DRILLING SCREWS – 12-24 X 2-1/2" PFH #4 FIRST LAYER STRUCTO-CRETE TO METAL STUDS.

HILTI SELF-DRILLING SCREWS – S-MD 12-24 X 3 HWH #5 KWIK-COTE USED FOR SECOND LAYER STRUCTO-CRETE TO METAL STUDS MAY BE USED FOR THE 3RD LAYER STRUCTO-CRETE BY COUNTERSINKING THE 3RD LAYER OF STRUCTO-CRETE UP TO 3/8".

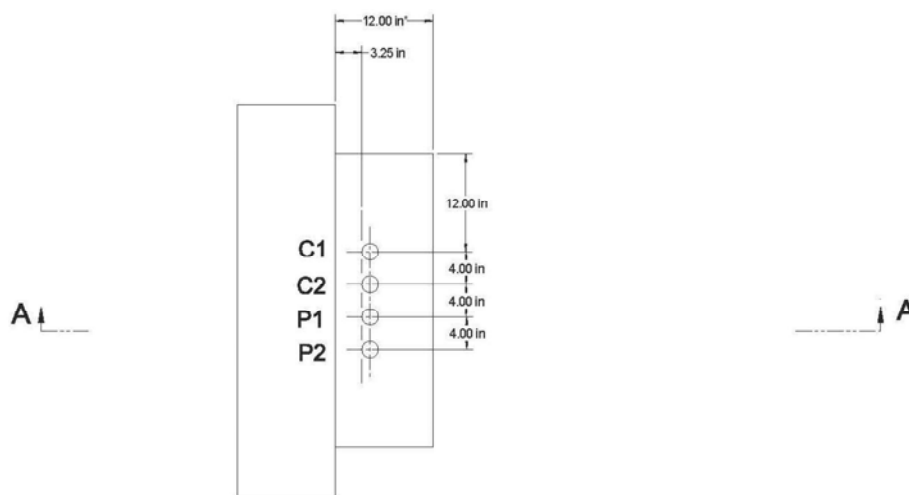
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Detailed Test Plan for Conducting MOX Pressure Test 9

PENETRATION P2



C1 = 2" SS Conduit  
C2 = 2" RGS Conduit  
P1 = 2" CS Pipe  
P2 = 2" SS Pipe

NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS  $\pm 1/4"$
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

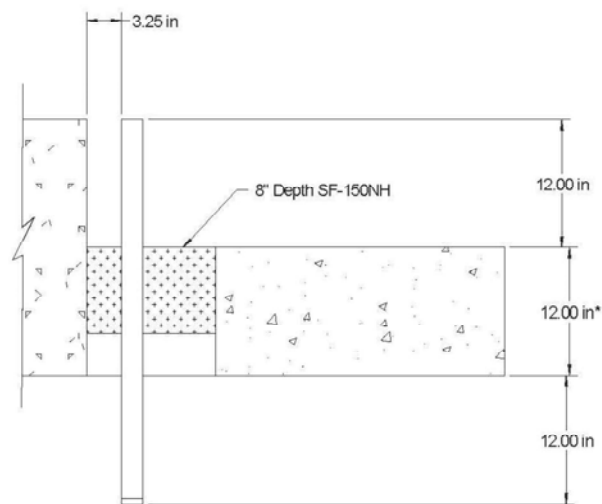
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Detailed Test Plan for Conducting MOX Pressure Test 9

## PENETRATION P2



### Section A - A

#### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

## APPENDIX B

### Test Data

Areva NP Inc.

Project No. G101276459SAT-018

February 19, 2014

Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
0	-0.0052	0.0039	0	0.0039
0.0333	-0.0088	0.0039	0.0015	0.0054
0.0667	-0.0075	0	0.0002	0.0002
0.1	-0.0082	0.0039	0.0015	0.0054
0.1333	-0.0095	0.0039	0	0.0039
0.1667	-0.0069	0.0039	0	0.0039
0.2	-0.0072	0.0039	0.0015	0.0054
0.2333	-0.0085	0	0.0015	0.0015
0.2667	-0.0085	0	0.0002	0.0002
0.3	-0.0069	0.0039	0.0002	0.0041
0.3333	-0.0055	0.0039	0.0002	0.0041
0.3667	-0.0059	0	0.0002	0.0002
0.4	-0.0075	0.0039	0.0002	0.0041
0.4333	-0.0049	0	0.0002	0.0002
0.4667	-0.0055	0	0.0002	0.0002
0.5	-0.0042	0.017	0	0.017
0.5333	-0.0055	0.017	0.0015	0.0185
0.5667	-0.0049	0.0039	0	0.0039
0.6	-0.0065	0	0.0015	0.0015
0.6333	-0.0062	0.0039	0	0.0039
0.6667	-0.0055	0.017	0	0.017
0.7	-0.0069	0.017	0.0002	0.0172
0.7333	-0.0072	0	0	0
0.7667	-0.0069	0.017	0	0.017
0.8	-0.0105	0	0.0002	0.0002
0.8333	-0.0062	0.0039	0.0002	0.0041
0.8667	-0.0069	0.0039	0	0.0039
0.9	-0.0055	0.0039	0.0002	0.0041
0.9333	-0.0072	0	0.0002	0.0002
0.9667	-0.0075	0.0039	0.0002	0.0041
1	-0.0078	0.0039	0	0.0039
1.0333	-0.0095	0.0039	0.0002	0.0041
1.0667	-0.0059	0	0.0002	0.0002
1.1	-0.0059	0.017	0	0.017
1.1333	-0.0069	0.017	0.0002	0.0172
1.1667	-0.0085	0.017	0.0015	0.0185
1.2	-0.0049	0.017	0	0.017
1.2333	-0.0039	0.0039	0.0002	0.0041
1.2667	-0.0059	0.0039	0.0002	0.0041
1.3	-0.0092	0.0039	0.0002	0.0041
1.3333	-0.0072	0	0.0002	0.0002
1.3667	-0.0065	0.0039	0	0.0039
1.4	-0.0042	0.0039	0	0.0039

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
1.4333	-0.0075	0	0.0002	0.0002
1.4667	-0.0069	0.017	0	0.017
1.5	-0.0032	0.017	0.0002	0.0172
1.5333	-0.0075	0.0039	0	0.0039
1.5667	-0.0072	0	0.0015	0.0015
1.6	-0.0075	0.0039	0.0015	0.0054
1.6333	-0.0042	0.017	0.0002	0.0172
1.6667	-0.0042	0	0.0002	0.0002
1.7	-0.0046	0.0039	0	0.0039
1.7333	-0.0039	0.0039	0.0015	0.0054
1.7667	-0.0032	0.017	0.0002	0.0172
1.8	-0.0029	0.0039	0.0002	0.0041
1.8333	-0.0006	0.0039	0.0002	0.0041
1.8667	0.004	0.0039	0.0015	0.0054
1.9	0.0109	0.0039	0.0002	0.0041
1.9333	0.0149	0.0039	0.0015	0.0054
1.9667	0.0165	0.017	0	0.017
2	0.0162	0.017	0	0.017
2.0333	0.0149	0	0	0
2.0667	0.0182	0.0039	0.0002	0.0041
2.1	0.0162	0.017	0.0002	0.0172
2.1333	0.0185	0.0039	0	0.0039
2.1667	0.0178	0	0.0002	0.0002
2.2	0.0201	0.017	0.0002	0.0172
2.2333	0.0182	0.0039	0.0015	0.0054
2.2667	0.0191	0.0039	0	0.0039
2.3	0.0241	0.0039	0.0002	0.0041
2.3333	0.0228	0	0.0002	0.0002
2.3667	0.0201	0.0039	0.0002	0.0041
2.4	0.0228	0	0.0002	0.0002
2.4333	0.0221	0.0039	0	0.0039
2.4667	0.0211	0.0039	0.0015	0.0054
2.5	0.0244	0.0039	0.0002	0.0041
2.5333	0.0224	0	0.0002	0.0002
2.5667	0.0264	0.0039	0	0.0039
2.6	0.0261	0.0039	0.0002	0.0041
2.6333	0.0261	0.0039	0	0.0039
2.6667	0.0267	0.0039	0.0002	0.0041
2.7	0.0267	0.0039	0	0.0039
2.7333	0.0254	0.0039	0	0.0039
2.7667	0.027	0.0039	0.0015	0.0054
2.8	0.028	0.0039	0.0002	0.0041
2.8333	0.029	0.0039	0.0002	0.0041

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
2.8667	0.0303	0	0.0015	0.0015
2.9	0.0326	0.0039	0.0002	0.0041
2.9333	0.0284	0.0039	0.0015	0.0054
2.9667	0.031	0.017	0.0015	0.0185
3	0.0297	0	0.0002	0.0002
3.0333	0.0317	0.0039	0.0015	0.0054
3.0667	0.032	0.0039	0	0.0039
3.1	0.0294	0.0039	0	0.0039
3.1333	0.0284	0.017	0.0002	0.0172
3.1667	0.0294	0.017	0.0015	0.0185
3.2	0.0284	0.017	0.0002	0.0172
3.2333	0.0287	0	0	0
3.2667	0.0313	0.0039	0.0002	0.0041
3.3	0.0287	0	0.0002	0.0002
3.3333	0.031	0	0.0002	0.0002
3.3667	0.0284	0.017	0	0.017
3.4	0.0294	0	0.0015	0.0015
3.4333	0.0277	0.0039	0.0002	0.0041
3.4667	0.0274	0.0039	0.0002	0.0041
3.5	0.029	0.017	0.0002	0.0172
3.5333	0.0284	0.0039	0	0.0039
3.5667	0.0267	0.0039	0.0002	0.0041
3.6	0.0267	0.017	0.0002	0.0172
3.6333	0.028	0.017	0.0015	0.0185
3.6667	0.0294	0.0039	0.0002	0.0041
3.7	0.028	0	0.0015	0.0015
3.7333	0.0277	0	0.0002	0.0002
3.7667	0.029	0	0	0
3.8	0.0251	0.0039	0.0002	0.0041
3.8333	0.0267	0.0039	0.0002	0.0041
3.8667	0.0294	0	0.0002	0.0002
3.9	0.028	0.0039	0	0.0039
3.9333	0.03	0	0.0002	0.0002
3.9667	0.0247	0.017	0	0.017
4	0.0307	0.0039	0.0002	0.0041
4.0333	0.0287	0	0.0002	0.0002
4.0667	0.0264	0.0039	0	0.0039
4.1	0.031	0.017	0.0015	0.0185
4.1333	0.027	0.0039	0	0.0039
4.1667	0.0277	0.0302	0	0.0302
4.2	0.0254	0	0.0002	0.0002
4.2333	0.0254	0.0039	0.0002	0.0041
4.2667	0.027	0	0.0015	0.0015

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
4.3	0.0284	0	0	0
4.3333	0.027	0.0039	0.0015	0.0054
4.3667	0.0274	0	0	0
4.4	0.0307	0.0039	0	0.0039
4.4333	0.0277	0.0039	0.0002	0.0041
4.4667	0.0277	0.017	0.0002	0.0172
4.5	0.0277	0	0.0002	0.0002
4.5333	0.029	0.0039	0.0015	0.0054
4.5667	0.031	0.0039	0.0002	0.0041
4.6	0.0313	0.0039	0.0002	0.0041
4.6333	0.0303	0.0039	0.8233	0.8272
4.6667	0.029	0.017	0.8233	0.8404
4.7	0.0294	0	0.8181	0.8181
4.7333	0.027	0	0.8194	0.8194
4.7667	0.029	0.0039	0.8273	0.8312
4.8	0.0277	0.017	0.826	0.843
4.8333	0.029	0.0039	0.8273	0.8312
4.8667	0.0303	0.0039	0.8339	0.8377
4.9	0.028	0.017	0.8378	0.8548
4.9333	0.028	0.0039	0.8496	0.8535
4.9667	0.0284	0	0.8562	0.8562
5	0.0294	0	0.8654	0.8654
5.0333	0.029	0.0039	0.8641	0.868
5.0667	0.028	0.0302	0.8746	0.9048
5.1	0.0297	0.0302	0.872	0.9022
5.1333	0.0303	0.0039	0.8746	0.8785
5.1667	0.0307	0	0.8865	0.8865
5.2	0.0294	0	0.8825	0.8825
5.2333	0.0313	0.0039	0.8838	0.8877
5.2667	0.0297	0.0039	0.8851	0.889
5.3	0.0297	0	0.8851	0.8851
5.3333	0.033	0.0039	0.8733	0.8772
5.3667	0.0277	0.0039	0.9009	0.9048
5.4	0.0294	0	0.8773	0.8773
5.4333	0.029	0	0.8891	0.8891
5.4667	0.029	0.0039	0.8838	0.8877
5.5	0.0313	0	0.8878	0.8878
5.5333	0.027	0.0039	0.8996	0.9035
5.5667	0.0297	0.0039	0.9128	0.9166
5.6	0.0287	0.0039	0.9049	0.9088
5.6333	0.0284	0.017	0.9101	0.9272
5.6667	0.0287	0.0039	0.9062	0.9101
5.7	0.0277	0.0039	0.9141	0.918

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
5.7333	0.0264	0	0.922	0.922
5.7667	0.0326	0	0.9114	0.9114
5.8	0.029	0.0039	0.9299	0.9337
5.8333	0.0294	0	0.9312	0.9312
5.8667	0.0254	0	0.9285	0.9285
5.9	0.028	0	0.9206	0.9206
5.9333	0.0274	0	0.9233	0.9233
5.9667	0.0297	0	0.9312	0.9312
6	0.0257	0.017	0.9351	0.9522
6.0333	0.0307	0	0.9338	0.9338
6.0667	0.029	0.0039	0.9338	0.9377
6.1	0.0274	0.0039	0.9233	0.9272
6.1333	0.0303	0.0039	0.9364	0.9403
6.1667	0.029	0.017	0.9351	0.9522
6.2	0.0274	0	0.9351	0.9351
6.2333	0.0294	0	0.943	0.943
6.2667	0.0257	0.0039	0.9469	0.9508
6.3	0.0277	0	0.9364	0.9364
6.3333	0.027	0	0.9391	0.9391
6.3667	0.029	0.0039	0.9509	0.9548
6.4	0.029	0	0.9509	0.9509
6.4333	0.0307	0.0039	0.9404	0.9443
6.4667	0.029	0.0039	0.9588	0.9627
6.5	0.0261	0.017	0.9654	0.9824
6.5333	0.0284	0	0.9535	0.9535
6.5667	0.029	0.0039	0.9522	0.9561
6.6	0.0264	0.0039	0.9548	0.9587
6.6333	0.0274	0.017	0.9456	0.9627
6.6667	0.0267	0	0.9522	0.9522
6.7	0.027	0	0.9509	0.9509
6.7333	0.028	0	0.9496	0.9496
6.7667	0.028	0.0039	0.9535	0.9574
6.8	0.0264	0.0039	0.9522	0.9561
6.8333	0.0284	0.0039	0.9496	0.9535
6.8667	0.0274	0.0039	0.968	0.9719
6.9	0.0303	0	0.9706	0.9706
6.9333	0.031	0.0039	0.9772	0.9811
6.9667	0.0294	0.0039	0.9601	0.964
7	0.028	0.0039	0.9706	0.9745
7.0333	0.0261	0.017	0.9838	1.0008
7.0667	0.0267	0	0.9864	0.9864
7.1	0.0317	0.017	0.9838	1.0008
7.1333	0.0274	0.017	0.9772	0.9942

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
7.1667	0.0264	0.0039	0.9654	0.9692
7.2	0.0277	0	0.968	0.968
7.2333	0.027	0.017	0.9811	0.9982
7.2667	0.029	0.0039	0.9838	0.9877
7.3	0.0254	0	0.9864	0.9864
7.3333	0.0284	0.017	0.9917	1.0087
7.3667	0.0287	0.0039	0.9903	0.9942
7.4	0.0264	0.017	0.9982	1.0153
7.4333	0.029	0.0039	0.993	0.9969
7.4667	0.027	0.0039	0.9825	0.9863
7.5	0.0307	0.0039	0.9825	0.9863
7.5333	0.0297	0.0039	0.9982	1.0021
7.5667	0.03	0	0.9798	0.9798
7.6	0.03	0	0.9825	0.9825
7.6333	0.0323	0	0.9917	0.9917
7.6667	0.0307	0.017	1.0061	1.0232
7.7	0.0303	0.0039	1.0035	1.0074
7.7333	0.0307	0.0039	0.9917	0.9955
7.7667	0.0284	0	0.9995	0.9995
7.8	0.0307	0.0039	1.0035	1.0074
7.8333	0.0274	0	1.0022	1.0022
7.8667	0.0313	0.0039	1.0009	1.0048
7.9	0.03	0.0039	1.0048	1.0087
7.9333	0.0274	0.0039	1.0153	1.0192
7.9667	0.0294	0	1.0206	1.0206
8	0.0287	0	1.0245	1.0245
8.0333	0.0284	0	1.0206	1.0206
8.0667	0.0303	0.0039	1.0219	1.0258
8.1	0.03	0.0039	1.0258	1.0297
8.1333	0.0313	0.0039	1.0206	1.0245
8.1667	0.0264	0.0039	1.0088	1.0126
8.2	0.0267	0.017	1.0245	1.0416
8.2333	0.03	0.0039	1.0206	1.0245
8.2667	0.0284	0	1.0298	1.0298
8.3	0.0287	0.017	1.0351	1.0521
8.3333	0.0294	0.0039	1.0298	1.0337
8.3667	0.0307	0.017	1.0245	1.0416
8.4	0.0307	0	1.0298	1.0298
8.4333	0.0297	0	1.0351	1.0351
8.4667	0.0267	0.0039	1.0311	1.035
8.5	0.0303	0	1.0403	1.0403
8.5333	0.033	0.0039	1.0324	1.0363
8.5667	0.0303	0.0039	1.0364	1.0403

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
8.6	0.0287	0.0039	1.0429	1.0468
8.6333	0.0284	0	1.0482	1.0482
8.6667	0.0313	0.017	1.0364	1.0534
8.7	0.0261	0	1.0311	1.0311
8.7333	0.03	0.017	1.0429	1.06
8.7667	0.0264	0.0039	1.0443	1.0481
8.8	0.0317	0.0039	1.0429	1.0468
8.8333	0.0333	0.0039	1.0364	1.0403
8.8667	0.028	0.0039	1.0521	1.056
8.9	0.0287	0.0039	1.0495	1.0534
8.9333	0.0294	0.0039	1.0429	1.0468
8.9667	0.0297	0	1.0482	1.0482
9	0.0333	0.0039	1.0469	1.0508
9.0333	0.028	0.0039	1.0495	1.0534
9.0667	0.0303	0	1.0469	1.0469
9.1	0.0307	0.0039	1.0482	1.0521
9.1333	0.0323	0	1.0429	1.0429
9.1667	0.0303	0.0039	1.0351	1.0389
9.2	0.0303	0.0039	1.0561	1.06
9.2333	0.0294	0.0039	1.06	1.0639
9.2667	0.0284	0	1.064	1.064
9.3	0.0303	0	1.0574	1.0574
9.3333	0.0317	0.0039	1.0627	1.0666
9.3667	0.029	0	1.0614	1.0614
9.4	0.0284	0	1.0627	1.0627
9.4333	0.0303	0.0039	1.064	1.0679
9.4667	0.0297	0.0039	1.0679	1.0718
9.5	0.0277	0.0039	1.0508	1.0547
9.5333	0.03	0	1.0706	1.0706
9.5667	0.032	0.0039	1.0692	1.0731
9.6	0.0303	0	1.0679	1.0679
9.6333	0.0313	0.017	1.0679	1.085
9.6667	0.029	0.0039	1.0706	1.0744
9.7	0.0274	0.017	1.0692	1.0863
9.7333	0.031	0	1.06	1.06
9.7667	0.029	0.0039	1.0587	1.0626
9.8	0.0294	0	1.0706	1.0706
9.8333	0.032	0.0039	1.0758	1.0797
9.8667	0.027	0	1.0706	1.0706
9.9	0.0297	0.017	1.0692	1.0863
9.9333	0.0294	0.0039	1.0653	1.0692
9.9667	0.0297	0.0039	1.0745	1.0784
10	0.0284	0.0039	1.0784	1.0823

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
10.0333	0.028	0.0039	1.0719	1.0758
10.0667	0.0297	0.0039	1.0666	1.0705
10.1	0.0294	0.0039	1.0692	1.0731
10.1333	0.0284	0	1.0627	1.0627
10.1667	0.0297	0.0039	1.0692	1.0731
10.2	0.029	0.0039	1.0653	1.0692
10.2333	0.027	0.017	1.06	1.0771
10.2667	0.0277	0	1.0732	1.0732
10.3	0.0297	0.017	1.0719	1.0889
10.3333	0.031	0.0039	1.0627	1.0666
10.3667	0.0297	0	1.0587	1.0587
10.4	0.0287	0	1.0627	1.0627
10.4333	0.029	0.017	1.0692	1.0863
10.4667	0.0294	0.0039	1.0758	1.0797
10.5	0.0303	0.0039	1.0732	1.0771
10.5333	0.0317	0	1.0732	1.0732
10.5667	0.03	0.0039	1.0771	1.081
10.6	0.0303	0	1.0745	1.0745
10.6333	0.0287	0	1.0903	1.0903
10.6667	0.031	0	1.0798	1.0798
10.7	0.0274	0.0039	1.0732	1.0771
10.7333	0.0303	0	1.0706	1.0706
10.7667	0.0297	0.0039	1.0784	1.0823
10.8	0.0284	0.0039	1.0811	1.085
10.8333	0.0313	0.017	1.0784	1.0955
10.8667	0.031	0	1.0758	1.0758
10.9	0.028	0.017	1.0811	1.0981
10.9333	0.03	0.0039	1.0771	1.081
10.9667	0.0313	0.0039	1.0798	1.0836
11	0.029	0	1.0784	1.0784
11.0333	0.03	0	1.0784	1.0784
11.0667	0.031	0	1.0732	1.0732
11.1	0.033	0.0039	1.0824	1.0863
11.1333	0.032	0.0039	1.0903	1.0942
11.1667	0.029	0	1.0876	1.0876
11.2	0.0284	0.0039	1.089	1.0929
11.2333	0.029	0.0039	1.085	1.0889
11.2667	0.0284	0.017	1.085	1.1021
11.3	0.03	0.0039	1.0824	1.0863
11.3333	0.03	0.0039	1.0784	1.0823
11.3667	0.0317	0	1.0771	1.0771
11.4	0.03	0.0039	1.0692	1.0731
11.4333	0.0303	0.0039	1.0719	1.0758

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
11.4667	0.03	0.017	1.0811	1.0981
11.5	0.0264	0.0039	1.0745	1.0784
11.5333	0.0287	0.0039	1.0837	1.0876
11.5667	0.0294	0.017	1.0837	1.1007
11.6	0.031	0.0039	1.0798	1.0836
11.6333	0.0317	0.017	1.0758	1.0929
11.6667	0.031	0	1.0837	1.0837
11.7	0.031	0	1.089	1.089
11.7333	0.0317	0	1.085	1.085
11.7667	0.0307	0	1.085	1.085
11.8	0.0323	0.017	1.0863	1.1034
11.8333	0.0303	0.0039	1.089	1.0929
11.8667	0.0277	0.0039	1.0903	1.0942
11.9	0.029	0.0039	1.0876	1.0915
11.9333	0.0317	0	1.089	1.089
11.9667	0.033	0.0039	1.0876	1.0915
12	0.028	0.017	1.089	1.106
12.0333	0.03	0.0039	1.0982	1.1021
12.0667	0.0297	0	1.0969	1.0969
12.1	0.031	0.0039	1.0916	1.0955
12.1333	0.0307	0	1.0876	1.0876
12.1667	0.0303	0.0039	1.0876	1.0915
12.2	0.03	0.0039	1.0942	1.0981
12.2333	0.0297	0.017	1.0942	1.1113
12.2667	0.031	0.017	1.0942	1.1113
12.3	0.0323	0.0039	1.0929	1.0968
12.3333	0.0297	0	1.0995	1.0995
12.3667	0.0267	0	1.0955	1.0955
12.4	0.0277	0.0039	1.0969	1.1007
12.4333	0.0317	0	1.1021	1.1021
12.4667	0.0303	0	1.0982	1.0982
12.5	0.03	0.0039	1.0969	1.1007
12.5333	0.0294	0	1.0982	1.0982
12.5667	0.0287	0.0039	1.1034	1.1073
12.6	0.028	0.0039	1.0995	1.1034
12.6333	0.0317	0	1.0995	1.0995
12.6667	0.0284	0.0039	1.1034	1.1073
12.7	0.0317	0	1.0955	1.0955
12.7333	0.0287	0.017	1.1047	1.1218
12.7667	0.029	0.0039	1.0982	1.1021
12.8	0.0297	0.0039	1.1034	1.1073
12.8333	0.03	0	1.1034	1.1034
12.8667	0.0303	0.0039	1.1061	1.1099

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
12.9	0.031	0	1.0942	1.0942
12.9333	0.031	0	1.0942	1.0942
12.9667	0.028	0.0039	1.0876	1.0915
13	0.0303	0.017	1.0955	1.1126
13.0333	0.03	0	1.1008	1.1008
13.0667	0.0323	0.0039	1.1008	1.1047
13.1	0.0294	0.017	1.1061	1.1231
13.1333	0.0284	0.0039	1.1008	1.1047
13.1667	0.0307	0.0039	1.1034	1.1073
13.2	0.029	0.0039	1.1074	1.1113
13.2333	0.029	0.0039	1.1008	1.1047
13.2667	0.0303	0	1.1047	1.1047
13.3	0.0277	0	1.1034	1.1034
13.3333	0.0317	0	1.11	1.11
13.3667	0.03	0.017	1.1153	1.1323
13.4	0.0297	0.0039	1.11	1.1139
13.4333	0.0277	0.0039	1.1166	1.1205
13.4667	0.03	0.0039	1.1153	1.1192
13.5	0.0307	0.0039	1.1087	1.1126
13.5333	0.031	0.0039	1.1179	1.1218
13.5667	0.028	0.0039	1.1153	1.1192
13.6	0.03	0	1.1139	1.1139
13.6333	0.0313	0.0039	1.1034	1.1073
13.6667	0.03	0	1.1074	1.1074
13.7	0.0287	0.0039	1.1205	1.1244
13.7333	0.0323	0.0039	1.1245	1.1284
13.7667	0.0303	0.0039	1.1034	1.1073
13.8	0.03	0	1.1021	1.1021
13.8333	0.0297	0.0039	1.0982	1.1021
13.8667	0.0313	0.0039	1.0969	1.1007
13.9	0.03	0	1.0969	1.0969
13.9333	0.029	0.017	1.1047	1.1218
13.9667	0.031	0	1.1034	1.1034
14	0.028	0.0039	1.0955	1.0994
14.0333	0.0287	0	1.1034	1.1034
14.0667	0.031	0.0039	1.1061	1.1099
14.1	0.0297	0.0039	1.1047	1.1086
14.1333	0.0294	0	1.1061	1.1061
14.1667	0.032	0.0039	1.1113	1.1152
14.2	0.0303	0	1.1087	1.1087
14.2333	0.0287	0.0039	1.11	1.1139
14.2667	0.027	0.017	1.1074	1.1244
14.3	0.0307	0.0039	1.1139	1.1178

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
14.3333	0.029	0.0039	1.1126	1.1165
14.3667	0.0313	0.0039	1.1139	1.1178
14.4	0.029	0.017	1.11	1.127
14.4333	0.0326	0	1.1074	1.1074
14.4667	0.0264	0	1.0995	1.0995
14.5	0.0277	0.0039	1.0995	1.1034
14.5333	0.0307	0.0039	1.0995	1.1034
14.5667	0.029	0.0039	1.1074	1.1113
14.6	0.027	0.0039	1.0995	1.1034
14.6333	0.029	0.0039	1.0903	1.0942
14.6667	0.0254	0.017	1.0942	1.1113
14.7	0.0277	0	1.1258	1.1258
14.7333	0.0323	0	1.1139	1.1139
14.7667	0.0313	0.0039	1.1139	1.1178
14.8	0.0326	0	1.1179	1.1179
14.8333	0.028	0.0039	1.1047	1.1086
14.8667	0.0294	0.0039	1.0995	1.1034
14.9	0.0294	0.0039	1.1074	1.1113
14.9333	0.0294	0.0039	1.1061	1.1099
14.9667	0.03	0.017	1.0955	1.1126
15	0.0294	0	1.1047	1.1047
15.0333	0.0277	0.0039	1.0955	1.0994
15.0667	0.0287	0	1.0916	1.0916
15.1	0.0277	0.017	1.0942	1.1113
15.1333	0.0287	0	1.089	1.089
15.1667	0.0303	0.0039	1.0863	1.0902
15.2	0.0284	0.0039	1.0982	1.1021
15.2333	0.0257	0.0039	1.0955	1.0994
15.2667	0.028	0.0039	1.0942	1.0981
15.3	0.027	0.0039	1.1021	1.106
15.3333	0.0264	0.017	1.089	1.106
15.3667	0.0287	0.017	1.0863	1.1034
15.4	0.0294	0	1.0876	1.0876
15.4333	0.0257	0.0039	1.0929	1.0968
15.4667	0.03	0.0039	1.0969	1.1007
15.5	0.0297	0.0039	1.0955	1.0994
15.5333	0.0257	0.0039	1.1034	1.1073
15.5667	0.0274	0.0302	1.1021	1.1323
15.6	0.0277	0.0039	1.0929	1.0968
15.6333	0.0313	0.0039	1.0929	1.0968
15.6667	0.0274	0.0039	1.0969	1.1007
15.7	0.0307	0.0039	1.1061	1.1099
15.7333	0.0294	0	1.0995	1.0995

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
15.7667	0.03	0	1.0955	1.0955
15.8	0.031	0.017	1.0929	1.1099
15.8333	0.0264	0.0039	1.1034	1.1073
15.8667	0.0267	0.017	1.1021	1.1192
15.9	0.0274	0.0039	1.0929	1.0968
15.9333	0.029	0.017	1.0942	1.1113
15.9667	0.032	0	1.0982	1.0982
16	0.0257	0.0039	1.0929	1.0968
16.0333	0.0297	0.0039	1.089	1.0929
16.0667	0.0294	0.0039	1.085	1.0889
16.1	0.0287	0.0039	1.0876	1.0915
16.1333	0.0264	0.0039	1.0916	1.0955
16.1667	0.03	0.0039	1.0969	1.1007
16.2	0.03	0	1.0942	1.0942
16.2333	0.0257	0	1.0876	1.0876
16.2667	0.0267	0.0039	1.0758	1.0797
16.3	0.028	0	1.0771	1.0771
16.3333	0.0277	0.0039	1.089	1.0929
16.3667	0.0313	0.017	1.085	1.1021
16.4	0.0294	0	1.0995	1.0995
16.4333	0.0287	0.017	1.1034	1.1205
16.4667	0.0274	0	1.1087	1.1087
16.5	0.0267	0.017	1.1061	1.1231
16.5333	0.027	0.0039	1.0903	1.0942
16.5667	0.0267	0	1.0969	1.0969
16.6	0.031	0.0039	1.0955	1.0994
16.6333	0.0313	0	1.085	1.085
16.6667	0.0251	0	1.0758	1.0758
16.7	0.0277	0.017	1.0811	1.0981
16.7333	0.0294	0.0039	1.0824	1.0863
16.7667	0.0277	0.0039	1.0863	1.0902
16.8	0.028	0.0039	1.0942	1.0981
16.8333	0.028	0.0039	1.0798	1.0836
16.8667	0.0274	0	1.0771	1.0771
16.9	0.029	0.0039	1.0798	1.0836
16.9333	0.0284	0.017	1.0916	1.1086
16.9667	0.0297	0.0039	1.0784	1.0823
17	0.0264	0	1.0798	1.0798
17.0333	0.0264	0	1.0903	1.0903
17.0667	0.029	0	1.0916	1.0916
17.1	0.0284	0.0039	1.0903	1.0942
17.1333	0.0294	0.0039	1.089	1.0929
17.1667	0.03	0.0039	1.0771	1.081

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
17.2	0.029	0.0039	1.0771	1.081
17.2333	0.0267	0.0039	1.0811	1.085
17.2667	0.031	0.0039	1.0784	1.0823
17.3	0.0264	0.0039	1.0692	1.0731
17.3333	0.027	0	1.0706	1.0706
17.3667	0.0267	0.017	1.0784	1.0955
17.4	0.0287	0.017	1.0758	1.0929
17.4333	0.0274	0	1.0811	1.0811
17.4667	0.028	0.0039	1.089	1.0929
17.5	0.0284	0.017	1.0837	1.1007
17.5333	0.027	0.017	1.0784	1.0955
17.5667	0.0267	0.0039	1.0903	1.0942
17.6	0.0277	0.0039	1.085	1.0889
17.6333	0.0244	0.017	1.0798	1.0968
17.6667	0.0277	0.0039	1.0798	1.0836
17.7	0.03	0.0039	1.0732	1.0771
17.7333	0.0307	0.0039	1.0771	1.081
17.7667	0.0264	0.0039	1.0771	1.081
17.8	0.029	0	1.0666	1.0666
17.8333	0.0277	0.017	1.0574	1.0744
17.8667	0.027	0.0039	1.0719	1.0758
17.9	0.029	0.0039	1.0811	1.085
17.9333	0.0274	0	1.0653	1.0653
17.9667	0.0284	0.0039	1.0653	1.0692
18	0.03	0.0039	1.0548	1.0587
18.0333	0.0287	0.017	1.0548	1.0718
18.0667	0.028	0.017	1.0666	1.0836
18.1	0.0261	0	1.0798	1.0798
18.1333	0.0287	0.017	1.0732	1.0902
18.1667	0.0267	0.0039	1.0784	1.0823
18.2	0.0264	0.0039	1.0811	1.085
18.2333	0.028	0	1.0903	1.0903
18.2667	0.0294	0	1.0811	1.0811
18.3	0.0264	0.017	1.0719	1.0889
18.3333	0.0284	0.017	1.0758	1.0929
18.3667	0.0277	0	1.0771	1.0771
18.4	0.0284	0.0039	1.0798	1.0836
18.4333	0.0264	0.0039	1.0771	1.081
18.4667	0.0303	0.017	1.0745	1.0915
18.5	0.0287	0	1.0719	1.0719
18.5333	0.0267	0	1.085	1.085
18.5667	0.0238	0.017	1.0771	1.0942
18.6	0.0254	0.0039	1.0784	1.0823

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
18.6333	0.0267	0.017	1.0692	1.0863
18.6667	0.0261	0.0039	1.0561	1.06
18.7	0.0274	0.0039	1.064	1.0679
18.7333	0.0267	0.017	1.064	1.081
18.7667	0.0274	0	1.0771	1.0771
18.8	0.0261	0	1.0719	1.0719
18.8333	0.0277	0.017	1.0719	1.0889
18.8667	0.027	0	1.0732	1.0732
18.9	0.0274	0.0039	1.0692	1.0731
18.9333	0.0264	0.017	1.0666	1.0836
18.9667	0.0274	0	1.0706	1.0706
19	0.0284	0.017	1.0706	1.0876
19.0333	0.0251	0.0039	1.0627	1.0666
19.0667	0.0257	0.0039	1.06	1.0639
19.1	0.0277	0.017	1.0561	1.0731
19.1333	0.0264	0.0302	1.0508	1.081
19.1667	0.0257	0.017	1.0469	1.0639
19.2	0.0267	0	1.0521	1.0521
19.2333	0.0277	0.0039	1.0587	1.0626
19.2667	0.028	0.0039	1.0561	1.06
19.3	0.027	0.017	1.0535	1.0705
19.3333	0.0257	0.017	1.0508	1.0679
19.3667	0.028	0.0039	1.0561	1.06
19.4	0.028	0.0039	1.0548	1.0587
19.4333	0.0264	0.0039	1.0482	1.0521
19.4667	0.0234	0.0039	1.0521	1.056
19.5	0.0241	0.0039	1.0548	1.0587
19.5333	0.0257	0.0302	1.0548	1.085
19.5667	0.0284	0.017	1.0574	1.0744
19.6	0.0254	0.0039	1.0561	1.06
19.6333	0.0264	0	1.0561	1.0561
19.6667	0.0251	0.0039	1.0482	1.0521
19.7	0.0274	0.0039	1.0495	1.0534
19.7333	0.028	0.0039	1.0535	1.0573
19.7667	0.0284	0.0039	1.0587	1.0626
19.8	0.0251	0.0039	1.0521	1.056
19.8333	0.0257	0.0039	1.0535	1.0573
19.8667	0.0261	0.017	1.0561	1.0731
19.9	0.0267	0.017	1.0535	1.0705
19.9333	0.0257	0.017	1.0508	1.0679
19.9667	0.0238	0.017	1.0482	1.0652
20	0.0287	0.0039	1.0469	1.0508
20.0333	0.0277	0.017	1.0535	1.0705

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
20.0667	0.0261	0.017	1.0548	1.0718
20.1	0.0244	0.0039	1.0548	1.0587
20.1333	0.0261	0.0039	1.0574	1.0613
20.1667	0.0264	0.017	1.0627	1.0797
20.2	0.028	0.0039	1.0666	1.0705
20.2333	0.0267	0.0039	1.064	1.0679
20.2667	0.0257	0.017	1.0666	1.0836
20.3	0.028	0	1.0548	1.0548
20.3333	0.029	0.0039	1.06	1.0639
20.3667	0.0274	0	1.0614	1.0614
20.4	0.0294	0.0302	1.0574	1.0876
20.4333	0.0267	0.0039	1.0548	1.0587
20.4667	0.0284	0.0039	1.0521	1.056
20.5	0.0284	0	1.0561	1.0561
20.5333	0.0267	0.0039	1.0535	1.0573
20.5667	0.027	0	1.0403	1.0403
20.6	0.0264	0.017	1.0377	1.0547
20.6333	0.0274	0.017	1.0469	1.0639
20.6667	0.0241	0.0039	1.0416	1.0455
20.7	0.027	0.017	1.0469	1.0639
20.7333	0.0247	0.0039	1.0429	1.0468
20.7667	0.0267	0	1.0456	1.0456
20.8	0.027	0	1.0456	1.0456
20.8333	0.0254	0.017	1.0337	1.0508
20.8667	0.0234	0	1.0258	1.0258
20.9	0.0257	0.0039	1.0429	1.0468
20.9333	0.0267	0.0039	1.0429	1.0468
20.9667	0.0257	0.0039	1.0403	1.0442
21	0.0267	0.0039	1.0377	1.0416
21.0333	0.0277	0.017	1.0377	1.0547
21.0667	0.0244	0.0039	1.0482	1.0521
21.1	0.0264	0.017	1.0416	1.0587
21.1333	0.0277	0.0039	1.039	1.0429
21.1667	0.0251	0.0039	1.0508	1.0547
21.2	0.0277	0.0039	1.0429	1.0468
21.2333	0.028	0.0039	1.0416	1.0455
21.2667	0.028	0.017	1.0337	1.0508
21.3	0.027	0.0039	1.0364	1.0403
21.3333	0.029	0	1.0364	1.0364
21.3667	0.028	0.017	1.0337	1.0508
21.4	0.027	0.0039	1.0416	1.0455
21.4333	0.028	0.0039	1.0521	1.056
21.4667	0.0274	0	1.0508	1.0508

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
21.5	0.029	0.0302	1.0614	1.0915
21.5333	0.0274	0	1.0535	1.0535
21.5667	0.028	0.0039	1.0429	1.0468
21.6	0.0254	0.0039	1.0403	1.0442
21.6333	0.0264	0.0039	1.0351	1.0389
21.6667	0.0251	0.017	1.0364	1.0534
21.7	0.0254	0.0039	1.0416	1.0455
21.7333	0.0254	0.017	1.0351	1.0521
21.7667	0.0284	0.017	1.0364	1.0534
21.8	0.0267	0.0039	1.0377	1.0416
21.8333	0.0267	0.0039	1.0364	1.0403
21.8667	0.0254	0.0039	1.0416	1.0455
21.9	0.0257	0.017	1.0403	1.0573
21.9333	0.0247	0.0039	1.039	1.0429
21.9667	0.0254	0	1.0456	1.0456
22	0.0274	0.0039	1.0443	1.0481
22.0333	0.0277	0.0039	1.0416	1.0455
22.0667	0.0261	0.0039	1.0416	1.0455
22.1	0.0254	0	1.0456	1.0456
22.1333	0.0254	0.0039	1.0456	1.0495
22.1667	0.0234	0.0039	1.0416	1.0455
22.2	0.0247	0.017	1.0377	1.0547
22.2333	0.0254	0.017	1.0364	1.0534
22.2667	0.0257	0.0039	1.0429	1.0468
22.3	0.0244	0	1.039	1.039
22.3333	0.0277	0	1.0337	1.0337
22.3667	0.0251	0.017	1.0364	1.0534
22.4	0.0267	0.0039	1.0337	1.0376
22.4333	0.0257	0.017	1.0403	1.0573
22.4667	0.0257	0	1.0364	1.0364
22.5	0.0264	0.017	1.0482	1.0652
22.5333	0.0267	0.017	1.0469	1.0639
22.5667	0.0261	0.0039	1.0469	1.0508
22.6	0.0267	0.017	1.0403	1.0573
22.6333	0.0257	0	1.0521	1.0521
22.6667	0.0277	0	1.0351	1.0351
22.7	0.0277	0	1.0272	1.0272
22.7333	0.0241	0.017	1.0232	1.0403
22.7667	0.0277	0	1.0245	1.0245
22.8	0.029	0	1.0219	1.0219
22.8333	0.0238	0	1.0324	1.0324
22.8667	0.0251	0	1.0416	1.0416
22.9	0.0251	0	1.0272	1.0272

Areva NP Inc.

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
22.9333	0.0251	0	1.0351	1.0351
22.9667	0.0247	0.017	1.0324	1.0495
23	0.0251	0.0039	1.0245	1.0284
23.0333	0.0244	0.0039	1.018	1.0218
23.0667	0.0244	0.017	1.0403	1.0573
23.1	0.0251	0	1.0245	1.0245
23.1333	0.0231	0.017	1.0074	1.0245
23.1667	0.0234	0	1.0074	1.0074
23.2	0.0264	0	1.0166	1.0166
23.2333	0.0254	0	1.0166	1.0166
23.2667	0.0254	0.0039	1.0127	1.0166
23.3	0.0241	0.0039	1.0114	1.0153
23.3333	0.0251	0.0039	1.0127	1.0166
23.3667	0.0241	0.0039	1.0272	1.0311
23.4	0.0241	0	1.0232	1.0232
23.4333	0.0241	0.0039	1.0377	1.0416
23.4667	0.0247	0.0039	1.0364	1.0403
23.5	0.0234	0.0302	1.0272	1.0573
23.5333	0.0261	0	1.0245	1.0245
23.5667	0.0257	0.0039	1.039	1.0429
23.6	0.0247	0.0039	1.0232	1.0271
23.6333	0.0261	0.0039	1.018	1.0218
23.6667	0.0274	0.017	1.0193	1.0363
23.7	0.0241	0.0039	1.0232	1.0271
23.7333	0.0241	0.017	1.0298	1.0468
23.7667	0.0238	0.0039	1.0324	1.0363
23.8	0.027	0.017	1.0324	1.0495
23.8333	0.0264	0.0039	1.0377	1.0416
23.8667	0.0244	0	1.0298	1.0298
23.9	0.0261	0.017	1.018	1.035
23.9333	0.0264	0.0039	1.0153	1.0192
23.9667	0.0251	0.017	1.0193	1.0363
24	0.0267	0.0039	1.0166	1.0205
24.0333	0.027	0.017	1.0193	1.0363
24.0667	0.0241	0.017	1.014	1.0311
24.1	0.0238	0.0039	1.018	1.0218
24.1333	0.0261	0.0039	1.0258	1.0297
24.1667	0.0251	0.0039	1.0232	1.0271
24.2	0.028	0	1.0258	1.0258
24.2333	0.0241	0.0039	1.0272	1.0311
24.2667	0.0264	0	1.0258	1.0258
24.3	0.0254	0.017	1.0324	1.0495
24.3333	0.0277	0	1.0285	1.0285

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February 19, 2014

Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
24.3667	0.0284	0	1.0206	1.0206
24.4	0.0251	0.0039	1.0193	1.0232
24.4333	0.0267	0	1.0193	1.0193
24.4667	0.0238	0.0039	1.0245	1.0284
24.5	0.0264	0.0039	1.0127	1.0166
24.5333	0.0234	0	1.018	1.018
24.5667	0.0277	0	1.0206	1.0206
24.6	0.0238	0.017	1.0193	1.0363
24.6333	0.0261	0.017	1.0088	1.0258
24.6667	0.0244	0.0039	1.0035	1.0074
24.7	0.0267	0.0039	1.0048	1.0087
24.7333	0.0261	0.0039	1.0048	1.0087
24.7667	0.0241	0.0039	1.014	1.0179
24.8	0.027	0.0039	1.014	1.0179
24.8333	0.0257	0	1.0114	1.0114
24.8667	0.0244	0.0039	1.0127	1.0166
24.9	0.0267	0.0039	1.0061	1.01
24.9333	0.027	0.0039	1.0193	1.0232
24.9667	0.0267	0.0039	1.0127	1.0166
25	0.0257	0.0039	1.0193	1.0232
25.0333	0.0251	0	1.0206	1.0206
25.0667	0.0221	0.0039	1.0258	1.0297
25.1	0.0241	0	1.0193	1.0193
25.1333	0.0261	0	1.0193	1.0193
25.1667	0.0254	0.017	1.0219	1.0389
25.2	0.0257	0	1.0219	1.0219
25.2333	0.0264	0.0039	1.0088	1.0126
25.2667	0.027	0	1.0074	1.0074
25.3	0.0267	0.017	1.0101	1.0271
25.3333	0.0264	0.0039	1.0088	1.0126
25.3667	0.0238	0.0039	1.0193	1.0232
25.4	0.0267	0.0039	1.0206	1.0245
25.4333	0.0257	0.0039	1.0324	1.0363
25.4667	0.0264	0.017	1.0219	1.0389
25.5	0.0267	0.0039	1.0153	1.0192
25.5333	0.0215	0.0039	1.0206	1.0245
25.5667	0.0251	0.0039	1.0166	1.0205
25.6	0.0254	0.0039	1.0219	1.0258
25.6333	0.0238	0.0039	1.0285	1.0324
25.6667	0.0264	0	1.0245	1.0245
25.7	0.0244	0	1.0219	1.0219
25.7333	0.028	0.0039	1.0258	1.0297
25.7667	0.0267	0	1.0311	1.0311

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
25.8	0.0264	0.0039	1.0219	1.0258
25.8333	0.0251	0.0039	1.0232	1.0271
25.8667	0.0257	0.0039	1.0272	1.0311
25.9	0.0241	0.0039	1.0272	1.0311
25.9333	0.0267	0.0039	1.0364	1.0403
25.9667	0.0264	0.0039	1.0337	1.0376
26	0.0224	0.0039	1.0324	1.0363
26.0333	0.0251	0.0039	1.0337	1.0376
26.0667	0.0264	0.0039	1.0219	1.0258
26.1	0.0264	0.0039	1.0232	1.0271
26.1333	0.0251	0.0039	1.0245	1.0284
26.1667	0.0241	0.0039	1.0206	1.0245
26.2	0.0257	0.0039	1.0114	1.0153
26.2333	0.0234	0.0039	1.0206	1.0245
26.2667	0.0241	0.0039	1.0193	1.0232
26.3	0.0224	0	1.018	1.018
26.3333	0.0218	0.017	1.0101	1.0271
26.3667	0.0254	0	1.0127	1.0127
26.4	0.0247	0.017	1.0206	1.0376
26.4333	0.0254	0	1.0245	1.0245
26.4667	0.0251	0.017	1.0193	1.0363
26.5	0.0244	0.0039	1.0153	1.0192
26.5333	0.028	0.0039	1.0219	1.0258
26.5667	0.0247	0.0039	1.0258	1.0297
26.6	0.0247	0.0039	1.0232	1.0271
26.6333	0.0244	0	1.0245	1.0245
26.6667	0.0231	0.0039	1.0298	1.0337
26.7	0.027	0.0039	1.0258	1.0297
26.7333	0.0267	0.0039	1.0337	1.0376
26.7667	0.0247	0.0039	1.0298	1.0337
26.8	0.0264	0	1.0311	1.0311
26.8333	0.0261	0.0039	1.0416	1.0455
26.8667	0.0231	0.017	1.0351	1.0521
26.9	0.0234	0.0039	1.0232	1.0271
26.9333	0.0247	0.0039	1.0285	1.0324
26.9667	0.0247	0.0039	1.0219	1.0258
27	0.0254	0.017	1.0272	1.0442
27.0333	0.0277	0.017	1.0206	1.0376
27.0667	0.0238	0.0039	1.0127	1.0166
27.1	0.0257	0	1.0074	1.0074
27.1333	0.0267	0.017	1.0101	1.0271
27.1667	0.0228	0.017	1.0245	1.0416
27.2	0.0241	0.017	1.0127	1.0297

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
27.2333	0.0261	0	1.0114	1.0114
27.2667	0.0261	0.017	1.0206	1.0376
27.3	0.0228	0.0039	1.014	1.0179
27.3333	0.0264	0.0039	1.014	1.0179
27.3667	0.0234	0.017	1.0114	1.0284
27.4	0.0247	0	1.0153	1.0153
27.4333	0.0208	0.017	1.0258	1.0429
27.4667	0.0261	0	1.0272	1.0272
27.5	0.0221	0.0039	1.0101	1.014
27.5333	0.0238	0.017	1.018	1.035
27.5667	0.0251	0.0039	1.014	1.0179
27.6	0.0244	0.0039	1.0298	1.0337
27.6333	0.0244	0.017	1.0311	1.0481
27.6667	0.0241	0.0039	1.0298	1.0337
27.7	0.0241	0.017	1.0298	1.0468
27.7333	0.0251	0	1.0206	1.0206
27.7667	0.0244	0.017	1.0219	1.0389
27.8	0.0247	0.017	1.018	1.035
27.8333	0.0247	0.017	1.0206	1.0376
27.8667	0.0234	0	1.0337	1.0337
27.9	0.0228	0.0039	1.0245	1.0284
27.9333	0.0254	0	1.0114	1.0114
27.9667	0.027	0	1.0009	1.0009
28	0.0228	0.017	1.0048	1.0218
28.0333	0.0247	0.017	1.0035	1.0205
28.0667	0.0238	0.0039	1.0088	1.0126
28.1	0.0224	0.0039	1.0088	1.0126
28.1333	0.0224	0	1.0153	1.0153
28.1667	0.0241	0.0039	1.0272	1.0311
28.2	0.0254	0.0039	1.0245	1.0284
28.2333	0.0247	0	1.0258	1.0258
28.2667	0.0244	0.017	1.0311	1.0481
28.3	0.0247	0.017	1.0245	1.0416
28.3333	0.0238	0.0039	1.014	1.0179
28.3667	0.0257	0.0039	1.0285	1.0324
28.4	0.0254	0.0039	1.0232	1.0271
28.4333	0.0244	0.0039	1.0009	1.0048
28.4667	0.0215	0.0039	1.0074	1.0113
28.5	0.0231	0	1.018	1.018
28.5333	0.0257	0.0039	1.0153	1.0192
28.5667	0.0254	0.017	1.0193	1.0363
28.6	0.0224	0.017	1.0206	1.0376
28.6333	0.0241	0	1.0127	1.0127

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
28.6667	0.0261	0.0039	1.0258	1.0297
28.7	0.0238	0.0039	1.0206	1.0245
28.7333	0.0215	0	1.0298	1.0298
28.7667	0.0215	0.0039	1.0403	1.0442
28.8	0.0234	0.0039	1.0351	1.0389
28.8333	0.0247	0.017	1.0258	1.0429
28.8667	0.0228	0.0039	1.0298	1.0337
28.9	0.0215	0	1.0245	1.0245
28.9333	0.0231	0	1.0245	1.0245
28.9667	0.0238	0.017	1.0193	1.0363
29	0.0228	0.0039	1.0166	1.0205
29.0333	0.0274	0	1.0219	1.0219
29.0667	0.0231	0.0039	1.0272	1.0311
29.1	0.0267	0.0039	1.014	1.0179
29.1333	0.0231	0	1.0088	1.0088
29.1667	0.0224	0.0039	1.0101	1.014
29.2	0.0231	0.0039	1.014	1.0179
29.2333	0.027	0.0039	1.0048	1.0087
29.2667	0.0218	0.017	1.0153	1.0324
29.3	0.0228	0.017	1.014	1.0311
29.3333	0.0257	0.0039	1.0088	1.0126
29.3667	0.0211	0.017	1.018	1.035
29.4	0.0228	0.017	1.0272	1.0442
29.4333	0.0221	0	1.0337	1.0337
29.4667	0.0251	0.0039	1.0377	1.0416
29.5	0.0234	0.017	1.0351	1.0521
29.5333	0.0238	0.0039	1.039	1.0429
29.5667	0.0244	0.0039	1.0324	1.0363
29.6	0.0211	0.0039	1.0219	1.0258
29.6333	0.0221	0.0039	1.0232	1.0271
29.6667	0.0254	0.0039	1.0245	1.0284
29.7	0.0218	0.0039	1.0285	1.0324
29.7333	0.0218	0.017	1.0206	1.0376
29.7667	0.0241	0.0039	1.0193	1.0232
29.8	0.0251	0.0039	1.0193	1.0232
29.8333	0.0244	0.017	1.0166	1.0337
29.8667	0.0261	0.017	1.0193	1.0363
29.9	0.0238	0.0039	1.0193	1.0232
29.9333	0.0247	0.0039	1.0219	1.0258
29.9667	0.0261	0.0039	1.018	1.0218
30	0.0251	0.017	1.0193	1.0363
30.0333	0.0251	0	1.0127	1.0127
30.0667	0.0267	0.0039	1.0153	1.0192

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
30.1	0.0264	0	1.018	1.018
30.1333	0.0257	0.0039	1.0258	1.0297
30.1667	0.0241	0	1.0443	1.0443
30.2	0.0247	0.0039	1.0298	1.0337
30.2333	0.0238	0.0039	1.0258	1.0297
30.2667	0.0231	0.017	1.0193	1.0363
30.3	0.0241	0.0039	1.0245	1.0284
30.3333	0.0264	0.0039	1.0272	1.0311
30.3667	0.0228	0.017	1.0298	1.0468
30.4	0.0228	0.0039	1.0166	1.0205
30.4333	0.0215	0.0039	1.0114	1.0153
30.4667	0.0224	0.017	1.0193	1.0363
30.5	0.0241	0.0039	1.0166	1.0205
30.5333	0.0241	0.0039	1.0114	1.0153
30.5667	0.0234	0	1.0114	1.0114
30.6	0.0247	0	1.014	1.014
30.6333	0.0261	0.017	1.0088	1.0258
30.6667	0.0247	0.0039	1.0048	1.0087
30.7	0.0234	0.0039	1.0009	1.0048
30.7333	0.0241	0	0.9956	0.9956
30.7667	0.0241	0.0039	1.0061	1.01
30.8	0.0247	0	1.0114	1.0114
30.8333	0.0238	0.0039	1.0022	1.0061
30.8667	0.0205	0.0039	1.0114	1.0153
30.9	0.0211	0.0039	0.993	0.9969
30.9333	0.0247	0.0039	0.9956	0.9995
30.9667	0.0257	0	1.0022	1.0022
31	0.0231	0	1.0035	1.0035
31.0333	0.0238	0.0039	0.9995	1.0034
31.0667	0.0238	0.0039	0.9798	0.9837
31.1	0.0238	0.0039	0.9785	0.9824
31.1333	0.0221	0.017	0.9877	1.0048
31.1667	0.0254	0	0.9943	0.9943
31.2	0.0221	0.0039	0.9995	1.0034
31.2333	0.0224	0.0039	0.9838	0.9877
31.2667	0.0228	0	0.9943	0.9943
31.3	0.0238	0.0039	0.989	0.9929
31.3333	0.0234	0.0039	1.0035	1.0074
31.3667	0.0241	0	0.9956	0.9956
31.4	0.0218	0.0039	0.9956	0.9995
31.4333	0.0215	0.0039	0.9917	0.9955
31.4667	0.0234	0.0039	1.0009	1.0048
31.5	0.0254	0.0039	1.0088	1.0126

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
31.5333	0.0251	0.0302	1.0074	1.0376
31.5667	0.0247	0.0039	1.0061	1.01
31.6	0.0241	0.0039	1.0022	1.0061
31.6333	0.0231	0.017	0.9995	1.0166
31.6667	0.0201	0.017	1.0009	1.0179
31.7	0.0215	0	1.0009	1.0009
31.7333	0.0224	0.017	0.9956	1.0126
31.7667	0.0244	0.0039	1.0035	1.0074
31.8	0.0257	0.0039	1.0022	1.0061
31.8333	0.0215	0.0039	0.993	0.9969
31.8667	0.0244	0.0039	0.993	0.9969
31.9	0.0234	0.017	0.9995	1.0166
31.9333	0.0198	0.0039	0.9995	1.0034
31.9667	0.0247	0	0.9969	0.9969
32	0.0221	0	0.9995	0.9995
32.0333	0.0241	0.0039	1.0022	1.0061
32.0667	0.0257	0	1.0009	1.0009
32.1	0.0215	0.0039	1.0035	1.0074
32.1333	0.0231	0.017	0.9995	1.0166
32.1667	0.0251	0.017	1.0048	1.0218
32.2	0.0244	0.0039	1.0048	1.0087
32.2333	0.0234	0.017	0.9995	1.0166
32.2667	0.0238	0	1.0035	1.0035
32.3	0.0238	0	0.9956	0.9956
32.3333	0.0238	0	0.9969	0.9969
32.3667	0.0224	0	0.9917	0.9917
32.4	0.0231	0.0039	0.9995	1.0034
32.4333	0.0224	0.0039	1.0061	1.01
32.4667	0.0211	0	1.0022	1.0022
32.5	0.0244	0	0.9995	0.9995
32.5333	0.0251	0	1.0035	1.0035
32.5667	0.0211	0.0039	1.0022	1.0061
32.6	0.0191	0.017	1.0022	1.0192
32.6333	0.0231	0.017	1.0074	1.0245
32.6667	0.0215	0.0039	1.0048	1.0087
32.7	0.0251	0	1.0022	1.0022
32.7333	0.0231	0	1.0022	1.0022
32.7667	0.0254	0.0039	1.0101	1.014
32.8	0.0211	0	0.9982	0.9982
32.8333	0.0231	0.0039	1.0035	1.0074
32.8667	0.0231	0.0039	1.0009	1.0048
32.9	0.0238	0.0039	0.9982	1.0021
32.9333	0.0224	0.017	0.9864	1.0034

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
32.9667	0.0231	0.0039	0.9903	0.9942
33	0.0211	0	0.9864	0.9864
33.0333	0.0221	0	0.9903	0.9903
33.0667	0.0228	0.0039	0.9903	0.9942
33.1	0.0221	0.017	1.0009	1.0179
33.1333	0.0238	0	1.0088	1.0088
33.1667	0.0257	0.0039	1.0061	1.01
33.2	0.0261	0.017	0.9969	1.014
33.2333	0.0277	0.0039	1.0061	1.01
33.2667	0.0264	0.017	1.0061	1.0232
33.3	0.0211	0	1.0088	1.0088
33.3333	0.0208	0.017	1.0088	1.0258
33.3667	0.0211	0.0302	1.0101	1.0403
33.4	0.0224	0	0.9969	0.9969
33.4333	0.0195	0.0039	0.9917	0.9955
33.4667	0.0185	0.0039	0.9877	0.9916
33.5	0.0215	0	0.9864	0.9864
33.5333	0.0201	0.0039	0.9785	0.9824
33.5667	0.0195	0.0039	0.9825	0.9863
33.6	0.0162	0.0039	0.9785	0.9824
33.6333	0.0188	0.0039	0.9772	0.9811
33.6667	0.0188	0.017	0.9746	0.9916
33.7	0.0159	0.017	0.968	0.985
33.7333	0.0175	0.0039	0.9614	0.9653
33.7667	0.0162	0.0039	0.964	0.9679
33.8	0.0165	0.0039	0.9614	0.9653
33.8333	0.0159	0	0.9509	0.9509
33.8667	0.0106	0.0039	0.9456	0.9495
33.9	0.0145	0.0039	0.9456	0.9495
33.9333	0.0106	0	0.9417	0.9417
33.9667	0.0122	0.017	0.9377	0.9548
34	0.0119	0	0.9325	0.9325
34.0333	0.0109	0.017	0.9312	0.9482
34.0667	0.0122	0.0039	0.9272	0.9311
34.1	0.007	0.0039	0.9233	0.9272
34.1333	0.0116	0.017	0.9167	0.9337
34.1667	0.0109	0.0039	0.9062	0.9101
34.2	0.0089	0	0.9036	0.9036
34.2333	0.0136	0.0039	0.9036	0.9074
34.2667	0.0096	0.0039	0.9101	0.914
34.3	0.0093	0.0039	0.8996	0.9035
34.3333	0.0109	0.0039	0.8983	0.9022
34.3667	0.0109	0.017	0.8851	0.9022

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
34.4	0.0099	0.017	0.8838	0.9009
34.4333	0.008	0.0039	0.8825	0.8864
34.4667	0.0066	0.0039	0.8694	0.8733
34.5	0.0096	0.0039	0.8707	0.8746
34.5333	0.0076	0.0039	0.8654	0.8693
34.5667	0.0093	0.017	0.8588	0.8759
34.6	0.0089	0	0.8562	0.8562
34.6333	0.0089	0.017	0.8523	0.8693
34.6667	0.0047	0.0039	0.8457	0.8496
34.7	0.0066	0	0.8417	0.8417
34.7333	0.004	0.0039	0.8339	0.8377
34.7667	0.0043	0.0039	0.8299	0.8338
34.8	0.008	0.0039	0.8194	0.8233
34.8333	0.007	0	0.8207	0.8207
34.8667	0.0076	0.017	0.826	0.843
34.9	0.0037	0.0039	0.8273	0.8312
34.9333	0.0066	0.0302	0.8128	0.843
34.9667	0.0086	0.0039	0.8089	0.8128
35	0.004	0.0039	0.8128	0.8167
35.0333	0.0063	0	0.7984	0.7984
35.0667	0.0066	0.0039	0.7918	0.7957
35.1	0.0047	0.0039	0.7918	0.7957
35.1333	0.0037	0.017	0.7813	0.7983
35.1667	0.0027	0.0039	0.7773	0.7812
35.2	0.0037	0.0039	0.7747	0.7786
35.2333	0.0053	0.0039	0.7734	0.7773
35.2667	0.0047	0.0039	0.7773	0.7812
35.3	0.0017	0	0.7642	0.7642
35.3333	0.0014	0.0039	0.751	0.7549
35.3667	0.0017	0.0039	0.7444	0.7483
35.4	0.004	0.0039	0.7405	0.7444
35.4333	0.0053	0.0039	0.7431	0.747
35.4667	0.0149	0.017	0.7431	0.7602
35.5	0.0224	0.0039	0.7563	0.7602
35.5333	0.0346	0.0039	0.7615	0.7654
35.5667	0.0461	0.0039	0.7721	0.7759
35.6	0.06	0.0039	0.7892	0.793
35.6333	0.0771	0.0039	0.8194	0.8233
35.6667	0.0962	0	0.8496	0.8496
35.7	0.1149	0.0039	0.8786	0.8825
35.7333	0.1297	0.017	0.9233	0.9403
35.7667	0.1459	0.0039	0.9654	0.9692
35.8	0.1627	0	0.9982	0.9982

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
35.8333	0.1735	0.0039	1.0285	1.0324
35.8667	0.1821	0.0039	1.0627	1.0666
35.9	0.1887	0	1.0955	1.0955
35.9333	0.1982	0	1.1297	1.1297
35.9667	0.1995	0.0039	1.1652	1.1691
36	0.2012	0.017	1.1889	1.2059
36.0333	0.1979	0.017	1.2376	1.2546
36.0667	0.1966	0.017	1.256	1.273
36.1	0.1903	0	1.2902	1.2902
36.1333	0.191	0.017	1.3112	1.3282
36.1667	0.1864	0.0039	1.3375	1.3414
36.2	0.1837	0	1.3638	1.3638
36.2333	0.1788	0.0039	1.3835	1.3874
36.2667	0.1831	0	1.4151	1.4151
36.3	0.1844	0.0039	1.4335	1.4374
36.3333	0.1824	0	1.4598	1.4598
36.3667	0.1864	0.0039	1.4716	1.4755
36.4	0.185	0	1.5032	1.5032
36.4333	0.1844	0.0039	1.5098	1.5136
36.4667	0.1827	0.017	1.5453	1.5623
36.5	0.1798	0.0039	1.561	1.5649
36.5333	0.1781	0.0302	1.5808	1.611
36.5667	0.1771	0	1.5913	1.5913
36.6	0.1758	0.017	1.6071	1.6241
36.6333	0.1748	0.017	1.6255	1.6425
36.6667	0.1775	0	1.6268	1.6268
36.7	0.1768	0.0039	1.6531	1.657
36.7333	0.1748	0.0039	1.6689	1.6728
36.7667	0.1775	0.0039	1.6912	1.6951
36.8	0.1755	0.017	1.7017	1.7188
36.8333	0.1778	0.017	1.7109	1.728
36.8667	0.1788	0.017	1.728	1.7451
36.9	0.1752	0.0039	1.7359	1.7398
36.9333	0.1795	0.017	1.7596	1.7766
36.9667	0.1798	0.0039	1.7767	1.7806
37	0.1775	0.0039	1.7925	1.7964
37.0333	0.1811	0.0039	1.803	1.8069
37.0667	0.1808	0.0039	1.8148	1.8187
37.1	0.1801	0.0039	1.8306	1.8345
37.1333	0.1798	0.0039	1.8398	1.8437
37.1667	0.1818	0	1.8556	1.8556
37.2	0.1795	0	1.8766	1.8766
37.2333	0.1811	0	1.8885	1.8885

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37.2667	0.1818	0.0039	1.8964	1.9002
37.3	0.1857	0.0039	1.9148	1.9187
37.3333	0.1831	0	1.9253	1.9253
37.3667	0.1811	0.017	1.9345	1.9515
37.4	0.1841	0.0039	1.9384	1.9423
37.4333	0.1854	0.0039	1.9463	1.9502
37.4667	0.1837	0.0039	1.97	1.9739
37.5	0.187	0.0039	1.9766	1.9805
37.5333	0.1874	0.0039	1.9805	1.9844
37.5667	0.1877	0.0039	1.9937	1.9976
37.6	0.189	0	2.0147	2.0147
37.6333	0.188	0	2.0292	2.0292
37.6667	0.187	0.017	2.0357	2.0528
37.7	0.1897	0.0039	2.0331	2.037
37.7333	0.189	0.0039	2.0502	2.0541
37.7667	0.187	0	2.066	2.066
37.8	0.1883	0.0039	2.0712	2.0751
37.8333	0.1814	0	2.0699	2.0699
37.8667	0.1844	0.0039	2.0752	2.0791
37.9	0.1834	0.0039	2.0831	2.087
37.9333	0.1821	0.0302	2.0975	2.1277
37.9667	0.1867	0.0039	2.1081	2.112
38	0.1841	0.0039	2.1199	2.1238
38.0333	0.185	0	2.1383	2.1383
38.0667	0.1811	0.017	2.1436	2.1606
38.1	0.1811	0.017	2.158	2.1751
38.1333	0.1837	0.0039	2.1686	2.1724
38.1667	0.1824	0.017	2.162	2.179
38.2	0.1841	0	2.1738	2.1738
38.2333	0.1821	0.0039	2.1791	2.183
38.2667	0.1824	0.017	2.183	2.2001
38.3	0.1801	0	2.1909	2.1909
38.3333	0.1818	0.0039	2.1962	2.2001
38.3667	0.1821	0.0039	2.2014	2.2053
38.4	0.1811	0.017	2.2146	2.2316
38.4333	0.1821	0	2.2212	2.2212
38.4667	0.1798	0.0039	2.2277	2.2316
38.5	0.1811	0	2.2383	2.2383
38.5333	0.1811	0.0039	2.2422	2.2461
38.5667	0.1811	0.0039	2.2461	2.25
38.6	0.1831	0.017	2.2396	2.2566
38.6333	0.1824	0.0039	2.2488	2.2527
38.6667	0.1801	0.0302	2.254	2.2842

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
38.7	0.1791	0.0039	2.2711	2.275
38.7333	0.1831	0.0039	2.2922	2.2961
38.7667	0.1811	0.017	2.2922	2.3092
38.8	0.1824	0.017	2.2895	2.3066
38.8333	0.1824	0	2.2922	2.2922
38.8667	0.1798	0.017	2.283	2.3
38.9	0.1788	0.0302	2.2869	2.3171
38.9333	0.1788	0.0039	2.3053	2.3092
38.9667	0.1821	0.0039	2.3053	2.3092
39	0.1808	0.0039	2.3027	2.3066
39.0333	0.1818	0.017	2.3185	2.3355
39.0667	0.1785	0.017	2.3185	2.3355
39.1	0.1801	0	2.3342	2.3342
39.1333	0.1778	0.0039	2.3421	2.346
39.1667	0.1785	0.0039	2.3369	2.3408
39.2	0.1768	0.017	2.3461	2.3631
39.2333	0.1791	0.0039	2.3408	2.3447
39.2667	0.1785	0.0039	2.35	2.3539
39.3	0.1781	0	2.3527	2.3527
39.3333	0.1788	0	2.3566	2.3566
39.3667	0.1821	0	2.3619	2.3619
39.4	0.1804	0.0039	2.3724	2.3763
39.4333	0.1785	0.0039	2.3763	2.3802
39.4667	0.1821	0.0039	2.375	2.3789
39.5	0.1785	0	2.379	2.379
39.5333	0.1791	0.017	2.3895	2.4065
39.5667	0.1775	0.0039	2.4079	2.4118
39.6	0.1791	0.0039	2.3947	2.3986
39.6333	0.1804	0	2.4026	2.4026
39.6667	0.1818	0.0302	2.3974	2.4276
39.7	0.1781	0.0039	2.4118	2.4157
39.7333	0.1785	0.0039	2.4118	2.4157
39.7667	0.1768	0.0039	2.4131	2.417
39.8	0.1755	0.0039	2.4158	2.4197
39.8333	0.1781	0.017	2.425	2.442
39.8667	0.1739	0.0039	2.421	2.4249
39.9	0.1788	0	2.4289	2.4289
39.9333	0.1791	0.0039	2.4355	2.4394
39.9667	0.1814	0.017	2.4421	2.4591
40	0.1781	0.0302	2.4394	2.4696
40.0333	0.1755	0	2.4539	2.4539
40.0667	0.1788	0	2.4552	2.4552
40.1	0.1785	0.0039	2.4552	2.4591

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
40.1333	0.1768	0	2.4565	2.4565
40.1667	0.1798	0.017	2.4592	2.4762
40.2	0.1795	0.0039	2.4579	2.4617
40.2333	0.1775	0	2.4644	2.4644
40.2667	0.1778	0.0039	2.4697	2.4736
40.3	0.1768	0.0039	2.4723	2.4762
40.3333	0.1778	0.0039	2.471	2.4749
40.3667	0.1771	0.017	2.4749	2.492
40.4	0.1758	0.017	2.4749	2.492
40.4333	0.1771	0.0039	2.4776	2.4815
40.4667	0.1752	0	2.4881	2.4881
40.5	0.1778	0.0039	2.4855	2.4894
40.5333	0.1775	0.0302	2.492	2.5222
40.5667	0.1785	0	2.492	2.492
40.6	0.1801	0.017	2.4999	2.517
40.6333	0.1762	0.0039	2.5039	2.5078
40.6667	0.1778	0.017	2.5078	2.5249
40.7	0.1765	0.017	2.5091	2.5262
40.7333	0.1795	0.0039	2.5052	2.5091
40.7667	0.1778	0.017	2.5105	2.5275
40.8	0.1765	0.017	2.517	2.5341
40.8333	0.1798	0.0039	2.5131	2.517
40.8667	0.1762	0.017	2.5144	2.5314
40.9	0.1781	0.0039	2.5249	2.5288
40.9333	0.1781	0	2.5394	2.5394
40.9667	0.1795	0.0039	2.5407	2.5446
41	0.1768	0.017	2.5512	2.5683
41.0333	0.1758	0.0039	2.5538	2.5577
41.0667	0.1778	0.0039	2.5486	2.5525
41.1	0.1804	0.0039	2.5525	2.5564
41.1333	0.1785	0.017	2.5486	2.5656
41.1667	0.1804	0.017	2.5512	2.5683
41.2	0.1795	0.0039	2.5525	2.5564
41.2333	0.1788	0.0039	2.5446	2.5485
41.2667	0.1788	0.0039	2.5565	2.5604
41.3	0.1791	0	2.5446	2.5446
41.3333	0.1814	0.0039	2.5473	2.5512
41.3667	0.1788	0	2.5538	2.5538
41.4	0.1824	0.0039	2.5565	2.5604
41.4333	0.1795	0.0039	2.563	2.5669
41.4667	0.1785	0.0039	2.5525	2.5564
41.5	0.1791	0.0039	2.5578	2.5617
41.5333	0.1781	0.0039	2.5552	2.559

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41.5667	0.1795	0.0039	2.5499	2.5538
41.6	0.1801	0.0039	2.5565	2.5604
41.6333	0.1798	0.017	2.5657	2.5827
41.6667	0.1814	0.0039	2.5683	2.5722
41.7	0.1771	0.0039	2.5696	2.5735
41.7333	0.1804	0	2.5723	2.5723
41.7667	0.1798	0.017	2.5617	2.5788
41.8	0.1795	0.0039	2.567	2.5709
41.8333	0.1808	0.0039	2.5723	2.5761
41.8667	0.1778	0	2.5683	2.5683
41.9	0.1785	0.017	2.5986	2.6156
41.9333	0.1821	0.017	2.5933	2.6103
41.9667	0.1818	0.0039	2.5893	2.5932
42	0.1785	0.0039	2.5709	2.5748
42.0333	0.1785	0.0302	2.5907	2.6209
42.0667	0.1785	0	2.5815	2.5815
42.1	0.1821	0.017	2.5867	2.6038
42.1333	0.1798	0.0039	2.5946	2.5985
42.1667	0.1781	0.017	2.5775	2.5946
42.2	0.1788	0.0039	2.5736	2.5775
42.2333	0.1811	0	2.5801	2.5801
42.2667	0.1808	0.0039	2.5893	2.5932
42.3	0.1814	0.0039	2.5972	2.6011
42.3333	0.1785	0.017	2.6038	2.6209
42.3667	0.1771	0.0039	2.6038	2.6077
42.4	0.1798	0.0039	2.6078	2.6116
42.4333	0.1795	0.0039	2.5933	2.5972
42.4667	0.1801	0.0039	2.5893	2.5932
42.5	0.1778	0.017	2.5828	2.5998
42.5333	0.1798	0	2.6012	2.6012
42.5667	0.1795	0	2.5986	2.5986
42.6	0.1798	0.0039	2.6091	2.613
42.6333	0.1781	0.0039	2.5959	2.5998
42.6667	0.1834	0.017	2.6078	2.6248
42.7	0.1808	0.017	2.6051	2.6222
42.7333	0.1804	0	2.6012	2.6012
42.7667	0.1798	0.017	2.6051	2.6222
42.8	0.1801	0.0039	2.6104	2.6143
42.8333	0.1818	0.017	2.6104	2.6274
42.8667	0.1785	0.017	2.6064	2.6235
42.9	0.1831	0.0039	2.6025	2.6064
42.9333	0.1795	0	2.5946	2.5946
42.9667	0.1801	0.017	2.613	2.6301

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43	0.1824	0.0039	2.6117	2.6156
43.0333	0.1821	0	2.6249	2.6249
43.0667	0.1804	0	2.6209	2.6209
43.1	0.1821	0	2.6196	2.6196
43.1333	0.1804	0	2.6196	2.6196
43.1667	0.1801	0.0039	2.6143	2.6182
43.2	0.1798	0.017	2.6249	2.6419
43.2333	0.1814	0.0039	2.6341	2.6379
43.2667	0.1834	0.0039	2.6393	2.6432
43.3	0.1808	0.0039	2.6393	2.6432
43.3333	0.1821	0.0039	2.6393	2.6432
43.3667	0.1801	0.017	2.6419	2.659
43.4	0.1827	0.0039	2.6327	2.6366
43.4333	0.1811	0.0039	2.6288	2.6327
43.4667	0.1804	0.0039	2.6301	2.634
43.5	0.1831	0.0039	2.6341	2.6379
43.5333	0.1821	0.017	2.6393	2.6564
43.5667	0.1788	0.0039	2.638	2.6419
43.6	0.1795	0	2.6419	2.6419
43.6333	0.1801	0.0039	2.6512	2.655
43.6667	0.1827	0.0039	2.6472	2.6511
43.7	0.1814	0.0039	2.6433	2.6472
43.7333	0.1831	0.0039	2.6459	2.6498
43.7667	0.1831	0	2.6512	2.6512
43.8	0.1814	0	2.6551	2.6551
43.8333	0.1801	0.017	2.6564	2.6735
43.8667	0.1821	0.017	2.6564	2.6735
43.9	0.1831	0.0039	2.6485	2.6524
43.9333	0.1811	0	2.6498	2.6498
43.9667	0.1834	0.0302	2.6617	2.6919
44	0.1824	0.0039	2.659	2.6629
44.0333	0.1821	0	2.6669	2.6669
44.0667	0.1841	0.017	2.663	2.68
44.1	0.1804	0.0039	2.6643	2.6682
44.1333	0.1791	0.017	2.6643	2.6813
44.1667	0.1814	0.0039	2.6656	2.6695
44.2	0.1811	0.0039	2.6656	2.6695
44.2333	0.1821	0.0039	2.6696	2.6735
44.2667	0.1841	0.017	2.6735	2.6905
44.3	0.1818	0.0039	2.6801	2.684
44.3333	0.1804	0.017	2.6788	2.6958
44.3667	0.1824	0.0302	2.6761	2.7063
44.4	0.1837	0	2.684	2.684

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
44.4333	0.1831	0	2.6853	2.6853
44.4667	0.1818	0.0039	2.6867	2.6905
44.5	0.1788	0.0039	2.6814	2.6853
44.5333	0.1821	0.0039	2.684	2.6879
44.5667	0.1804	0.0039	2.6919	2.6958
44.6	0.1831	0.017	2.6919	2.709
44.6333	0.1814	0.017	2.6959	2.7129
44.6667	0.1831	0	2.6867	2.6867
44.7	0.1844	0.0039	2.6972	2.7011
44.7333	0.1827	0.0039	2.6985	2.7024
44.7667	0.1834	0	2.6945	2.6945
44.8	0.1818	0.0039	2.6945	2.6984
44.8333	0.1818	0	2.7024	2.7024
44.8667	0.1841	0.0302	2.6998	2.73
44.9	0.1821	0.0039	2.6998	2.7037
44.9333	0.1824	0.017	2.7024	2.7195
44.9667	0.1827	0.017	2.7011	2.7182
45	0.1827	0.0039	2.7024	2.7063
45.0333	0.1801	0.017	2.6972	2.7142
45.0667	0.1821	0.0039	2.7011	2.705
45.1	0.1841	0.0039	2.6985	2.7024
45.1333	0.1831	0.0039	2.688	2.6919
45.1667	0.1824	0.0039	2.6919	2.6958
45.2	0.1824	0.0039	2.6945	2.6984
45.2333	0.1827	0.017	2.6906	2.7076
45.2667	0.1841	0.017	2.7011	2.7182
45.3	0.1857	0.0039	2.7024	2.7063
45.3333	0.1844	0.0039	2.7077	2.7116
45.3667	0.1811	0.0039	2.709	2.7129
45.4	0.1804	0.0039	2.709	2.7129
45.4333	0.1827	0.0039	2.7064	2.7103
45.4667	0.1834	0.017	2.713	2.73
45.5	0.1811	0	2.7077	2.7077
45.5333	0.1798	0.0039	2.7156	2.7195
45.5667	0.1824	0.0039	2.7103	2.7142
45.6	0.1831	0.0039	2.7064	2.7103
45.6333	0.1834	0.0039	2.7208	2.7247
45.6667	0.1824	0.0039	2.7156	2.7195
45.7	0.1795	0	2.7182	2.7182
45.7333	0.1847	0.017	2.7169	2.7339
45.7667	0.1834	0.0039	2.7195	2.7234
45.8	0.1837	0.017	2.7169	2.7339
45.8333	0.1827	0.0039	2.7169	2.7208

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
45.8667	0.185	0.0039	2.7182	2.7221
45.9	0.1798	0.0039	2.7222	2.7261
45.9333	0.1827	0.0039	2.7248	2.7287
45.9667	0.1811	0	2.7208	2.7208
46	0.1818	0.0039	2.7248	2.7287
46.0333	0.1824	0	2.7248	2.7248
46.0667	0.1795	0.0039	2.7248	2.7287
46.1	0.1821	0	2.7208	2.7208
46.1333	0.1811	0.017	2.7235	2.7405
46.1667	0.1811	0.0039	2.7222	2.7261
46.2	0.1827	0.0039	2.7182	2.7221
46.2333	0.1831	0	2.7103	2.7103
46.2667	0.1814	0.017	2.7156	2.7326
46.3	0.1847	0	2.7182	2.7182
46.3333	0.1847	0	2.7156	2.7156
46.3667	0.1834	0.0039	2.7195	2.7234
46.4	0.1834	0.0039	2.713	2.7168
46.4333	0.1821	0.017	2.7051	2.7221
46.4667	0.1841	0.017	2.7143	2.7313
46.5	0.1818	0.0039	2.7195	2.7234
46.5333	0.1837	0.0039	2.7274	2.7313
46.5667	0.1818	0.0039	2.7248	2.7287
46.6	0.1808	0.0039	2.7182	2.7221
46.6333	0.1808	0.0039	2.7156	2.7195
46.6667	0.1831	0.0039	2.7182	2.7221
46.7	0.1821	0.017	2.7301	2.7471
46.7333	0.1831	0.017	2.7353	2.7524
46.7667	0.1837	0.0039	2.7366	2.7405
46.8	0.1804	0.017	2.7314	2.7484
46.8333	0.1811	0.017	2.7353	2.7524
46.8667	0.1811	0.0039	2.7379	2.7418
46.9	0.1811	0	2.7235	2.7235
46.9333	0.1827	0	2.7287	2.7287
46.9667	0.1814	0.0039	2.7274	2.7313
47	0.1837	0.0039	2.7261	2.73
47.0333	0.185	0.017	2.7393	2.7563
47.0667	0.1831	0.017	2.734	2.751
47.1	0.1804	0.0039	2.7419	2.7458
47.1333	0.1827	0.0039	2.7419	2.7458
47.1667	0.1844	0	2.7301	2.7301
47.2	0.1821	0.017	2.7366	2.7537
47.2333	0.1844	0.0039	2.7379	2.7418
47.2667	0.1847	0.017	2.7393	2.7563

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
47.3	0.186	0.0039	2.7458	2.7497
47.3333	0.1844	0	2.7353	2.7353
47.3667	0.1857	0.0039	2.7301	2.7339
47.4	0.1834	0.0039	2.7301	2.7339
47.4333	0.1847	0.0039	2.7445	2.7484
47.4667	0.1847	0.017	2.7458	2.7629
47.5	0.1795	0.0039	2.7419	2.7458
47.5333	0.1841	0	2.7419	2.7419
47.5667	0.1824	0.0039	2.7419	2.7458
47.6	0.1827	0.017	2.7524	2.7694
47.6333	0.1824	0	2.7406	2.7406
47.6667	0.1818	0.0039	2.7432	2.7471
47.7	0.1827	0	2.7406	2.7406
47.7333	0.1798	0.0039	2.7274	2.7313
47.7667	0.1795	0	2.7379	2.7379
47.8	0.185	0.017	2.7393	2.7563
47.8333	0.1854	0.0039	2.734	2.7379
47.8667	0.1821	0.017	2.7419	2.7589
47.9	0.1834	0.0039	2.7419	2.7458
47.9333	0.1824	0	2.7379	2.7379
47.9667	0.1837	0.0302	2.7445	2.7747
48	0.1824	0	2.7445	2.7445
48.0333	0.1818	0.0039	2.7445	2.7484
48.0667	0.1824	0.017	2.7445	2.7616
48.1	0.1837	0.017	2.7419	2.7589
48.1333	0.1804	0.017	2.7379	2.755
48.1667	0.1837	0.0039	2.7445	2.7484
48.2	0.1818	0.017	2.7445	2.7616
48.2333	0.1837	0.017	2.7419	2.7589
48.2667	0.1831	0	2.7471	2.7471
48.3	0.1818	0.0039	2.7471	2.751
48.3333	0.1827	0.0039	2.7577	2.7616
48.3667	0.1791	0	2.7511	2.7511
48.4	0.1818	0.0039	2.7485	2.7524
48.4333	0.1837	0.017	2.7511	2.7681
48.4667	0.1831	0.0039	2.7458	2.7497
48.5	0.1818	0	2.7511	2.7511
48.5333	0.1814	0.017	2.7485	2.7655
48.5667	0.1827	0.0039	2.755	2.7589
48.6	0.1837	0.017	2.759	2.776
48.6333	0.1834	0.017	2.7445	2.7616
48.6667	0.1814	0.017	2.7458	2.7629
48.7	0.1814	0.017	2.7406	2.7576

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
48.7333	0.186	0.0039	2.7485	2.7524
48.7667	0.185	0.017	2.7445	2.7616
48.8	0.1804	0.017	2.7406	2.7576
48.8333	0.1811	0.0039	2.7379	2.7418
48.8667	0.1811	0.0039	2.7366	2.7405
48.9	0.1814	0.017	2.7379	2.755
48.9333	0.1831	0.017	2.7445	2.7616
48.9667	0.1837	0.0039	2.7445	2.7484
49	0.1804	0.017	2.7511	2.7681
49.0333	0.1837	0.017	2.7458	2.7629
49.0667	0.185	0.0039	2.7445	2.7484
49.1	0.1847	0.0039	2.7445	2.7484
49.1333	0.1818	0.0039	2.7471	2.751
49.1667	0.1811	0	2.7432	2.7432
49.2	0.1847	0.017	2.7471	2.7642
49.2333	0.1824	0	2.7537	2.7537
49.2667	0.1841	0.0039	2.7524	2.7563
49.3	0.185	0.017	2.7511	2.7681
49.3333	0.1804	0	2.7445	2.7445
49.3667	0.1824	0.017	2.7511	2.7681
49.4	0.1844	0.017	2.7537	2.7708
49.4333	0.1824	0.0302	2.7511	2.7813
49.4667	0.1791	0.0039	2.7603	2.7642
49.5	0.1801	0.0039	2.7524	2.7563
49.5333	0.1795	0.017	2.7537	2.7708
49.5667	0.1824	0	2.7524	2.7524
49.6	0.1854	0.017	2.7577	2.7747
49.6333	0.1808	0	2.7485	2.7485
49.6667	0.1814	0.0039	2.7485	2.7524
49.7	0.1808	0.0039	2.7603	2.7642
49.7333	0.1818	0	2.7564	2.7564
49.7667	0.1788	0.017	2.7498	2.7668
49.8	0.1841	0.0039	2.7471	2.751
49.8333	0.1864	0	2.7419	2.7419
49.8667	0.1827	0.017	2.7419	2.7589
49.9	0.1827	0	2.7432	2.7432
49.9333	0.1827	0.017	2.7366	2.7537
49.9667	0.1818	0.0039	2.7353	2.7392
50	0.1827	0.017	2.734	2.751
50.0333	0.1808	0.017	2.7327	2.7497
50.0667	0.1811	0.017	2.7458	2.7629
50.1	0.1831	0.0039	2.7419	2.7458
50.1333	0.1818	0.0039	2.7393	2.7431

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
50.1667	0.1821	0.0039	2.7366	2.7405
50.2	0.1804	0.0039	2.7419	2.7458
50.2333	0.1811	0.0039	2.7393	2.7431
50.2667	0.1827	0	2.734	2.734
50.3	0.1824	0.0039	2.7235	2.7274
50.3333	0.1811	0.017	2.734	2.751
50.3667	0.1837	0	2.7485	2.7485
50.4	0.1814	0.017	2.7564	2.7734
50.4333	0.1811	0.0039	2.7419	2.7458
50.4667	0.1814	0.0039	2.7471	2.751
50.5	0.1814	0	2.7458	2.7458
50.5333	0.1827	0.017	2.7379	2.755
50.5667	0.1818	0.0302	2.7379	2.7681
50.6	0.1834	0.017	2.7379	2.755
50.6333	0.1808	0	2.7366	2.7366
50.6667	0.1824	0.0039	2.7498	2.7537
50.7	0.1814	0.0039	2.7629	2.7668
50.7333	0.1801	0.0039	2.7498	2.7537
50.7667	0.1795	0.017	2.7222	2.7392
50.8	0.1841	0	2.7314	2.7314
50.8333	0.1791	0.0039	2.7379	2.7418
50.8667	0.1821	0.017	2.7287	2.7458
50.9	0.1818	0	2.7353	2.7353
50.9333	0.1831	0	2.7287	2.7287
50.9667	0.1811	0	2.7222	2.7222
51	0.1798	0.0039	2.7274	2.7313
51.0333	0.1814	0	2.7314	2.7314
51.0667	0.1795	0.0039	2.7379	2.7418
51.1	0.1804	0.0039	2.7379	2.7418
51.1333	0.1827	0.0039	2.7353	2.7392
51.1667	0.1791	0.0039	2.7287	2.7326
51.2	0.1831	0.0039	2.7393	2.7431
51.2333	0.1778	0.0039	2.7406	2.7445
51.2667	0.1831	0.0039	2.7458	2.7497
51.3	0.1814	0.0039	2.7458	2.7497
51.3333	0.1821	0.0302	2.7471	2.7773
51.3667	0.1821	0.017	2.7524	2.7694
51.4	0.1814	0	2.755	2.755
51.4333	0.1824	0.0039	2.7564	2.7602
51.4667	0.1841	0	2.7564	2.7564
51.5	0.1831	0.017	2.7616	2.7786
51.5333	0.1824	0.017	2.759	2.776
51.5667	0.1791	0.017	2.759	2.776

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
51.6	0.1814	0.0039	2.7629	2.7668
51.6333	0.1795	0.0039	2.7656	2.7694
51.6667	0.1804	0.017	2.7669	2.7839
51.7	0.1814	0.017	2.7642	2.7813
51.7333	0.1831	0.0039	2.7629	2.7668
51.7667	0.1824	0.0039	2.7721	2.776
51.8	0.1804	0.0039	2.7669	2.7708
51.8333	0.1818	0.0039	2.7695	2.7734
51.8667	0.1808	0.0039	2.7695	2.7734
51.9	0.1831	0.0039	2.7734	2.7773
51.9333	0.1808	0.0039	2.7708	2.7747
51.9667	0.1791	0.0039	2.7682	2.7721
52	0.1811	0.017	2.7695	2.7865
52.0333	0.1804	0.0039	2.7721	2.776
52.0667	0.1795	0.0039	2.7734	2.7773
52.1	0.1801	0.0039	2.7642	2.7681
52.1333	0.1827	0.0302	2.7669	2.7971
52.1667	0.1818	0.017	2.7669	2.7839
52.2	0.1801	0.0039	2.7656	2.7694
52.2333	0.1818	0.017	2.7669	2.7839
52.2667	0.1831	0.017	2.7682	2.7852
52.3	0.1831	0.0039	2.7721	2.776
52.3333	0.1844	0.0039	2.7669	2.7708
52.3667	0.1821	0	2.7642	2.7642
52.4	0.1785	0.017	2.7642	2.7813
52.4333	0.1831	0	2.7629	2.7629
52.4667	0.1827	0.0039	2.7616	2.7655
52.5	0.1804	0.0039	2.7708	2.7747
52.5333	0.1824	0.0302	2.7721	2.8023
52.5667	0.1831	0	2.7642	2.7642
52.6	0.1818	0.0039	2.7721	2.776
52.6333	0.1824	0.0039	2.7656	2.7694
52.6667	0.1818	0.017	2.7669	2.7839
52.7	0.1808	0	2.7708	2.7708
52.7333	0.1834	0.0039	2.7695	2.7734
52.7667	0.1837	0	2.7656	2.7656
52.8	0.1788	0.0039	2.7629	2.7668
52.8333	0.1821	0.0039	2.7642	2.7681
52.8667	0.1801	0	2.7734	2.7734
52.9	0.1811	0.0039	2.7761	2.78
52.9333	0.1811	0.0039	2.7721	2.776
52.9667	0.1811	0.0039	2.7656	2.7694
53	0.1771	0.0039	2.7656	2.7694

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
53.0333	0.1831	0.017	2.7734	2.7905
53.0667	0.1818	0	2.7734	2.7734
53.1	0.1788	0.0039	2.7761	2.78
53.1333	0.1801	0.0039	2.78	2.7839
53.1667	0.185	0.0039	2.7761	2.78
53.2	0.1788	0.017	2.7708	2.7879
53.2333	0.1824	0.0039	2.7748	2.7786
53.2667	0.1818	0.0039	2.7708	2.7747
53.3	0.1834	0.017	2.7695	2.7865
53.3333	0.1798	0.0039	2.7603	2.7642
53.3667	0.1811	0.0039	2.7656	2.7694
53.4	0.1821	0.0039	2.7695	2.7734
53.4333	0.1798	0.0039	2.7734	2.7773
53.4667	0.1808	0	2.7734	2.7734
53.5	0.1824	0.0039	2.7695	2.7734
53.5333	0.1808	0.0039	2.7721	2.776
53.5667	0.1818	0.0302	2.7734	2.8036
53.6	0.1798	0	2.7708	2.7708
53.6333	0.1818	0.0039	2.7708	2.7747
53.6667	0.1811	0.0039	2.7682	2.7721
53.7	0.1798	0.0039	2.7695	2.7734
53.7333	0.1788	0.0039	2.7748	2.7786
53.7667	0.1808	0.0039	2.7761	2.78
53.8	0.1801	0.0039	2.7774	2.7813
53.8333	0.1821	0.0039	2.784	2.7879
53.8667	0.1791	0.017	2.7827	2.7997
53.9	0.1795	0.0302	2.7787	2.8089
53.9333	0.1804	0.0039	2.7669	2.7708
53.9667	0.1808	0.017	2.7656	2.7826
54	0.1821	0.0039	2.7734	2.7773
54.0333	0.1808	0.0039	2.7708	2.7747
54.0667	0.1801	0.017	2.7879	2.8049
54.1	0.1827	0.017	2.7945	2.8115
54.1333	0.1811	0.017	2.7787	2.7957
54.1667	0.1824	0	2.78	2.78
54.2	0.1837	0.0039	2.7827	2.7865
54.2333	0.1801	0.017	2.784	2.801
54.2667	0.1834	0	2.7827	2.7827
54.3	0.1788	0.017	2.7866	2.8036
54.3333	0.1808	0.0039	2.7748	2.7786
54.3667	0.1804	0.0039	2.7827	2.7865
54.4	0.1824	0.0039	2.7892	2.7931
54.4333	0.1804	0.0039	2.7827	2.7865

Areva NP Inc.

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
54.4667	0.1804	0.017	2.7761	2.7931
54.5	0.1814	0.0302	2.7774	2.8076
54.5333	0.1801	0.0039	2.7748	2.7786
54.5667	0.1778	0.0039	2.7748	2.7786
54.6	0.1808	0.0039	2.7734	2.7773
54.6333	0.1844	0.017	2.7721	2.7892
54.6667	0.1837	0.0039	2.7695	2.7734
54.7	0.1791	0.0039	2.7721	2.776
54.7333	0.1811	0.017	2.7774	2.7944
54.7667	0.1824	0.0039	2.7787	2.7826
54.8	0.1821	0.0039	2.7827	2.7865
54.8333	0.1795	0	2.7787	2.7787
54.8667	0.1788	0.0039	2.7892	2.7931
54.9	0.1801	0	2.7827	2.7827
54.9333	0.1827	0	2.7879	2.7879
54.9667	0.1818	0.017	2.7787	2.7957
55	0.1821	0.017	2.7708	2.7879
55.0333	0.1768	0	2.7761	2.7761
55.0667	0.1808	0.0039	2.7827	2.7865
55.1	0.1824	0.017	2.7866	2.8036
55.1333	0.1824	0.017	2.7708	2.7879
55.1667	0.1795	0.0039	2.7524	2.7563
55.2	0.1788	0.0039	2.7616	2.7655
55.2333	0.1788	0.017	2.7642	2.7813
55.2667	0.1808	0.0039	2.7616	2.7655
55.3	0.1827	0	2.7616	2.7616
55.3333	0.1814	0.017	2.7511	2.7681
55.3667	0.1811	0.017	2.7458	2.7629
55.4	0.1795	0	2.7406	2.7406
55.4333	0.1785	0.0039	2.7379	2.7418
55.4667	0.1781	0.017	2.7485	2.7655
55.5	0.1808	0.0039	2.759	2.7629
55.5333	0.1778	0	2.7498	2.7498
55.5667	0.1834	0.0039	2.7616	2.7655
55.6	0.1824	0.0039	2.755	2.7589
55.6333	0.1795	0	2.755	2.755
55.6667	0.1795	0.0039	2.7511	2.755
55.7	0.1824	0	2.7564	2.7564
55.7333	0.1798	0.017	2.7445	2.7616
55.7667	0.1821	0.017	2.734	2.751
55.8	0.1831	0.0039	2.7432	2.7471
55.8333	0.1841	0.0039	2.7406	2.7445
55.8667	0.1831	0.0039	2.7498	2.7537

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
55.9	0.1801	0.017	2.7393	2.7563
55.9333	0.1804	0.017	2.7485	2.7655
55.9667	0.1814	0.0039	2.7458	2.7497
56	0.1811	0.0039	2.7471	2.751
56.0333	0.1778	0	2.734	2.734
56.0667	0.1824	0.017	2.7366	2.7537
56.1	0.1768	0.0039	2.734	2.7379
56.1333	0.1795	0.0039	2.7458	2.7497
56.1667	0.1811	0.0039	2.7406	2.7445
56.2	0.1808	0.0039	2.7445	2.7484
56.2333	0.1811	0.0039	2.7445	2.7484
56.2667	0.1781	0.0039	2.7445	2.7484
56.3	0.1778	0.0039	2.7353	2.7392
56.3333	0.1831	0	2.7445	2.7445
56.3667	0.1791	0	2.7445	2.7445
56.4	0.1801	0.017	2.7458	2.7629
56.4333	0.1821	0.017	2.7406	2.7576
56.4667	0.1811	0.017	2.7379	2.755
56.5	0.1775	0.017	2.7458	2.7629
56.5333	0.1778	0	2.7498	2.7498
56.5667	0.1814	0	2.7498	2.7498
56.6	0.1785	0	2.7471	2.7471
56.6333	0.1781	0.0039	2.7498	2.7537
56.6667	0.1821	0.0302	2.7458	2.776
56.7	0.1814	0.0039	2.755	2.7589
56.7333	0.1808	0.0039	2.7511	2.755
56.7667	0.1811	0.0039	2.7498	2.7537
56.8	0.1778	0.0039	2.755	2.7589
56.8333	0.1801	0.017	2.7577	2.7747
56.8667	0.1847	0	2.7524	2.7524
56.9	0.1804	0.0039	2.7577	2.7616
56.9333	0.1791	0.0039	2.7564	2.7602
56.9667	0.1808	0	2.755	2.755
57	0.1775	0.017	2.759	2.776
57.0333	0.1798	0.017	2.7669	2.7839
57.0667	0.1795	0.0039	2.7629	2.7668
57.1	0.1808	0	2.7564	2.7564
57.1333	0.1811	0.0302	2.7471	2.7773
57.1667	0.1781	0.0039	2.755	2.7589
57.2	0.1798	0.0039	2.7603	2.7642
57.2333	0.1781	0.0039	2.759	2.7629
57.2667	0.1798	0.017	2.7564	2.7734
57.3	0.1814	0.017	2.7669	2.7839

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
57.3333	0.1795	0.0039	2.7537	2.7576
57.3667	0.1808	0.0039	2.759	2.7629
57.4	0.1801	0.0302	2.7564	2.7865
57.4333	0.1778	0.0039	2.7471	2.751
57.4667	0.1781	0.017	2.7524	2.7694
57.5	0.1821	0.0039	2.7642	2.7681
57.5333	0.1811	0	2.7695	2.7695
57.5667	0.1795	0.0039	2.7656	2.7694
57.6	0.1785	0	2.7708	2.7708
57.6333	0.1808	0.0039	2.7616	2.7655
57.6667	0.1818	0	2.7603	2.7603
57.7	0.1811	0	2.7642	2.7642
57.7333	0.1781	0.0039	2.759	2.7629
57.7667	0.1785	0.017	2.7721	2.7892
57.8	0.1781	0.0302	2.7642	2.7944
57.8333	0.1771	0.017	2.7603	2.7773
57.8667	0.1795	0.0039	2.7629	2.7668
57.9	0.1811	0	2.7656	2.7656
57.9333	0.1791	0.0039	2.7734	2.7773
57.9667	0.1811	0.0039	2.7603	2.7642
58	0.1798	0.0039	2.7471	2.751
58.0333	0.1804	0.0039	2.7445	2.7484
58.0667	0.1798	0.0039	2.7524	2.7563
58.1	0.1811	0	2.7498	2.7498
58.1333	0.1818	0.017	2.7524	2.7694
58.1667	0.1788	0.017	2.7577	2.7747
58.2	0.1788	0.0039	2.7524	2.7563
58.2333	0.1795	0.0039	2.7577	2.7616
58.2667	0.1801	0.0039	2.7419	2.7458
58.3	0.1788	0.0039	2.7511	2.755
58.3333	0.1798	0.0039	2.7603	2.7642
58.3667	0.1801	0.017	2.7603	2.7773
58.4	0.1795	0.017	2.7616	2.7786
58.4333	0.1791	0.0039	2.7669	2.7708
58.4667	0.1808	0.0039	2.7669	2.7708
58.5	0.1808	0.0039	2.759	2.7629
58.5333	0.1801	0.0302	2.7485	2.7786
58.5667	0.1821	0.0039	2.7577	2.7616
58.6	0.1808	0.0039	2.7682	2.7721
58.6333	0.1818	0.0039	2.7629	2.7668
58.6667	0.1818	0.0039	2.7564	2.7602
58.7	0.1821	0.0039	2.7616	2.7655
58.7333	0.1798	0.0039	2.7669	2.7708

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
58.7667	0.1795	0.0039	2.7629	2.7668
58.8	0.1804	0.017	2.7485	2.7655
58.8333	0.1801	0.0039	2.7485	2.7524
58.8667	0.1818	0.0039	2.7537	2.7576
58.9	0.1785	0.017	2.7537	2.7708
58.9333	0.1801	0.017	2.7616	2.7786
58.9667	0.1798	0	2.7656	2.7656
59	0.1814	0.0039	2.7629	2.7668
59.0333	0.1798	0.0039	2.7577	2.7616
59.0667	0.1798	0	2.7669	2.7669
59.1	0.1821	0.017	2.7656	2.7826
59.1333	0.1808	0	2.7642	2.7642
59.1667	0.1821	0.0039	2.7642	2.7681
59.2	0.1824	0	2.7524	2.7524
59.2333	0.1811	0.017	2.755	2.7721
59.2667	0.1798	0.0302	2.7458	2.776
59.3	0.1814	0.017	2.7511	2.7681
59.3333	0.1801	0.0039	2.759	2.7629
59.3667	0.1785	0.0039	2.7564	2.7602
59.4	0.1798	0.0039	2.7471	2.751
59.4333	0.1808	0.0039	2.7485	2.7524
59.4667	0.1795	0	2.7564	2.7564
59.5	0.1781	0.0039	2.7577	2.7616
59.5333	0.1795	0	2.7511	2.7511
59.5667	0.1785	0.0039	2.755	2.7589
59.6	0.1781	0.017	2.7721	2.7892
59.6333	0.1795	0.0039	2.7774	2.7813
59.6667	0.1804	0.0039	2.7774	2.7813
59.7	0.1788	0.017	2.7748	2.7918
59.7333	0.1791	0	2.7603	2.7603
59.7667	0.1795	0.0039	2.7577	2.7616
59.8	0.1804	0.0039	2.7537	2.7576
59.8333	0.1814	0.017	2.7445	2.7616
59.8667	0.1785	0.0039	2.7353	2.7392
59.9	0.1827	0.0039	2.7419	2.7458
59.9333	0.1801	0.0039	2.7537	2.7576
59.9667	0.1801	0	2.7498	2.7498
60	0.1814	0	2.7419	2.7419
60.0333	0.1804	0.0039	2.7419	2.7458
60.0667	0.1795	0.017	2.7498	2.7668
60.1	0.1804	0	2.7485	2.7485
60.1333	0.1824	0.0039	2.7471	2.751
60.1667	0.1785	0.0039	2.7498	2.7537

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
60.2	0.1785	0.017	2.7511	2.7681
60.2333	0.1801	0.017	2.7537	2.7708
60.2667	0.1798	0.017	2.7524	2.7694
60.3	0.1778	0.017	2.7564	2.7734
60.3333	0.1804	0.0039	2.755	2.7589
60.3667	0.1808	0	2.7616	2.7616
60.4	0.1801	0	2.7485	2.7485
60.4333	0.1818	0.0039	2.7577	2.7616
60.4667	0.1821	0.0039	2.755	2.7589
60.5	0.1834	0.017	2.7603	2.7773
60.5333	0.1781	0.0039	2.7656	2.7694
60.5667	0.1791	0.0039	2.7603	2.7642
60.6	0.1795	0.0039	2.7669	2.7708
60.6333	0.1771	0	2.7642	2.7642
60.6667	0.1785	0.0039	2.7629	2.7668
60.7	0.1808	0	2.7721	2.7721
60.7333	0.1811	0.0039	2.7629	2.7668
60.7667	0.1775	0.0039	2.7629	2.7668
60.8	0.1798	0	2.7629	2.7629
60.8333	0.1811	0.017	2.7669	2.7839
60.8667	0.1808	0.0039	2.7669	2.7708
60.9	0.1831	0.0039	2.7695	2.7734
60.9333	0.1795	0.0433	2.7616	2.8049
60.9667	0.1808	0.017	2.7669	2.7839
61	0.1811	0.0039	2.7642	2.7681
61.0333	0.1808	0.0039	2.7577	2.7616
61.0667	0.1811	0.0039	2.7721	2.776
61.1	0.1818	0.0039	2.7616	2.7655
61.1333	0.1781	0.017	2.759	2.776
61.1667	0.1798	0.0039	2.7813	2.7852
61.2	0.1755	0	2.7721	2.7721
61.2333	0.1834	0.0039	2.7748	2.7786
61.2667	0.1811	0.0039	2.7564	2.7602
61.3	0.1821	0.0039	2.7642	2.7681
61.3333	0.1827	0	2.7682	2.7682
61.3667	0.1811	0	2.759	2.759
61.4	0.1798	0.017	2.7695	2.7865
61.4333	0.1801	0	2.7787	2.7787
61.4667	0.1785	0.017	2.7774	2.7944
61.5	0.1804	0	2.7721	2.7721
61.5333	0.1818	0.0039	2.7748	2.7786
61.5667	0.1785	0.0039	2.7787	2.7826
61.6	0.1808	0	2.7853	2.7853

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
61.6333	0.1834	0.0039	2.78	2.7839
61.6667	0.1791	0.017	2.7774	2.7944
61.7	0.1824	0.0039	2.7761	2.78
61.7333	0.1771	0.0039	2.7761	2.78
61.7667	0.1818	0.017	2.7656	2.7826
61.8	0.1808	0	2.7669	2.7669
61.8333	0.1788	0.0039	2.7603	2.7642
61.8667	0.1785	0.0039	2.7577	2.7616
61.9	0.1788	0	2.7656	2.7656
61.9333	0.1795	0.017	2.7642	2.7813
61.9667	0.1808	0.0039	2.7603	2.7642
62	0.1775	0	2.7498	2.7498
62.0333	0.1758	0	2.7616	2.7616
62.0667	0.1798	0.0039	2.7827	2.7865
62.1	0.1804	0	2.7761	2.7761
62.1333	0.1821	0.0039	2.7642	2.7681
62.1667	0.1804	0.0039	2.7748	2.7786
62.2	0.1762	0	2.7708	2.7708
62.2333	0.1795	0.0039	2.7669	2.7708
62.2667	0.1808	0.0039	2.7656	2.7694
62.3	0.1795	0.017	2.7761	2.7931
62.3333	0.1788	0.0039	2.7761	2.78
62.3667	0.1804	0.0039	2.7708	2.7747
62.4	0.1781	0.0039	2.7721	2.776
62.4333	0.1785	0.017	2.7734	2.7905
62.4667	0.1808	0.0039	2.7748	2.7786
62.5	0.1831	0.0039	2.7734	2.7773
62.5333	0.1811	0	2.7656	2.7656
62.5667	0.1798	0.0039	2.7682	2.7721
62.6	0.1811	0.0039	2.7708	2.7747
62.6333	0.1814	0.0039	2.7761	2.78
62.6667	0.1834	0.0039	2.7616	2.7655
62.7	0.1778	0	2.7603	2.7603
62.7333	0.1775	0	2.7748	2.7748
62.7667	0.1795	0.0039	2.7721	2.776
62.8	0.1808	0.0039	2.7813	2.7852
62.8333	0.1788	0	2.7787	2.7787
62.8667	0.1808	0.017	2.7695	2.7865
62.9	0.1808	0.0039	2.7734	2.7773
62.9333	0.1818	0.017	2.7748	2.7918
62.9667	0.1821	0.0039	2.755	2.7589
63	0.1814	0.0039	2.7616	2.7655
63.0333	0.1768	0.0039	2.7603	2.7642

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
63.0667	0.1798	0.0039	2.7603	2.7642
63.1	0.1814	0	2.7642	2.7642
63.1333	0.1811	0.0039	2.755	2.7589
63.1667	0.1791	0.0039	2.7471	2.751
63.2	0.1804	0.017	2.7471	2.7642
63.2333	0.1801	0.0039	2.7498	2.7537
63.2667	0.1824	0	2.7485	2.7485
63.3	0.1831	0.017	2.7511	2.7681
63.3333	0.1801	0.0039	2.7458	2.7497
63.3667	0.1821	0.0039	2.759	2.7629
63.4	0.1781	0.017	2.7577	2.7747
63.4333	0.1818	0.0039	2.7485	2.7524
63.4667	0.1818	0	2.7524	2.7524
63.5	0.1824	0	2.7498	2.7498
63.5333	0.1824	0.0039	2.7577	2.7616
63.5667	0.1788	0.017	2.7656	2.7826
63.6	0.1771	0.0039	2.7629	2.7668
63.6333	0.1795	0.017	2.7669	2.7839
63.6667	0.1811	0.0039	2.7616	2.7655
63.7	0.1795	0.0039	2.7537	2.7576
63.7333	0.1818	0	2.7577	2.7577
63.7667	0.1804	0	2.7511	2.7511
63.8	0.1827	0.0039	2.7511	2.755
63.8333	0.1788	0.0039	2.7471	2.751
63.8667	0.1791	0.0039	2.755	2.7589
63.9	0.1798	0.017	2.7564	2.7734
63.9333	0.1788	0.0039	2.7524	2.7563
63.9667	0.1834	0.017	2.7669	2.7839
64	0.1795	0	2.7695	2.7695
64.0333	0.1834	0.0039	2.7682	2.7721
64.0667	0.1795	0.0039	2.7682	2.7721
64.1	0.1795	0.0039	2.7761	2.78
64.1333	0.1824	0	2.7708	2.7708
64.1667	0.1804	0.0039	2.7682	2.7721
64.2	0.1824	0.0039	2.7669	2.7708
64.2333	0.1804	0.0039	2.7616	2.7655
64.2667	0.1775	0.017	2.7511	2.7681
64.3	0.1768	0.0039	2.7695	2.7734
64.3333	0.1821	0.0039	2.7748	2.7786
64.3667	0.1804	0.0039	2.7656	2.7694
64.4	0.1791	0	2.7787	2.7787
64.4333	0.1811	0.0039	2.7748	2.7786
64.4667	0.1834	0.0039	2.7774	2.7813

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
64.5	0.1821	0.0039	2.7708	2.7747
64.5333	0.1804	0.017	2.7642	2.7813
64.5667	0.1827	0.0039	2.7695	2.7734
64.6	0.1808	0	2.7656	2.7656
64.6333	0.1795	0.017	2.7656	2.7826
64.6667	0.1821	0.0039	2.7603	2.7642
64.7	0.1801	0.017	2.7603	2.7773
64.7333	0.1818	0.0039	2.7682	2.7721
64.7667	0.1821	0.017	2.7748	2.7918
64.8	0.1798	0.017	2.7616	2.7786
64.8333	0.1841	0.017	2.755	2.7721
64.8667	0.1791	0.0039	2.7669	2.7708
64.9	0.1808	0.017	2.7721	2.7892
64.9333	0.1808	0.017	2.7577	2.7747
64.9667	0.1821	0.017	2.7603	2.7773
65	0.1771	0.017	2.7642	2.7813
65.0333	0.1808	0.0039	2.7734	2.7773
65.0667	0.1798	0.017	2.7669	2.7839
65.1	0.1798	0.0039	2.7642	2.7681
65.1333	0.1818	0	2.7721	2.7721
65.1667	0.1788	0.0039	2.7564	2.7602
65.2	0.1834	0.0039	2.7616	2.7655
65.2333	0.1788	0.017	2.7616	2.7786
65.2667	0.1814	0	2.7656	2.7656
65.3	0.1831	0	2.7748	2.7748
65.3333	0.1814	0.017	2.7656	2.7826
65.3667	0.1818	0.017	2.7708	2.7879
65.4	0.1808	0.0039	2.7603	2.7642
65.4333	0.1821	0	2.7577	2.7577
65.4667	0.1781	0.017	2.7537	2.7708
65.5	0.1791	0.017	2.7629	2.78
65.5333	0.1801	0.0039	2.7564	2.7602
65.5667	0.1804	0.017	2.7629	2.78
65.6	0.1831	0.017	2.7656	2.7826
65.6333	0.1798	0.0039	2.7524	2.7563
65.6667	0.1818	0.0039	2.7564	2.7602
65.7	0.1841	0.0039	2.759	2.7629
65.7333	0.1801	0.017	2.7629	2.78
65.7667	0.1804	0.0039	2.7656	2.7694
65.8	0.1804	0.0039	2.7616	2.7655
65.8333	0.1818	0.017	2.7577	2.7747
65.8667	0.1824	0.0302	2.7603	2.7905
65.9	0.1831	0.017	2.759	2.776

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65.9333	0.1818	0.0039	2.755	2.7589
65.9667	0.1775	0.017	2.7537	2.7708
66	0.1844	0.017	2.7524	2.7694
66.0333	0.1837	0.017	2.7485	2.7655
66.0667	0.1834	0	2.7471	2.7471
66.1	0.1824	0	2.7485	2.7485
66.1333	0.1818	0.017	2.7445	2.7616
66.1667	0.1814	0.017	2.7419	2.7589
66.2	0.1831	0.017	2.7379	2.755
66.2333	0.1814	0.0039	2.7524	2.7563
66.2667	0.1837	0.0039	2.7642	2.7681
66.3	0.1818	0.0039	2.7511	2.755
66.3333	0.1821	0	2.7616	2.7616
66.3667	0.1821	0.017	2.7524	2.7694
66.4	0.1824	0.017	2.755	2.7721
66.4333	0.1818	0.0039	2.7629	2.7668
66.4667	0.1827	0.0039	2.7616	2.7655
66.5	0.1867	0.0039	2.759	2.7629
66.5333	0.192	0.017	2.7656	2.7826
66.5667	0.1976	0	2.7748	2.7748
66.6	0.2032	0.0039	2.784	2.7879
66.6333	0.2061	0.017	2.7984	2.8155
66.6667	0.213	0.0039	2.8024	2.8063
66.7	0.2173	0.0039	2.7997	2.8036
66.7333	0.2232	0.0039	2.8024	2.8063
66.7667	0.2308	0.0039	2.8037	2.8076
66.8	0.2348	0.0039	2.8024	2.8063
66.8333	0.241	0.017	2.8155	2.8326
66.8667	0.2479	0	2.8247	2.8247
66.9	0.2558	0.017	2.8366	2.8536
66.9333	0.2585	0.017	2.851	2.8681
66.9667	0.268	0	2.8576	2.8576
67	0.2723	0	2.8681	2.8681
67.0333	0.2812	0.0039	2.8931	2.897
67.0667	0.2861	0.0039	2.8984	2.9023
67.1	0.2947	0.0039	2.9168	2.9207
67.1333	0.2986	0	2.9391	2.9391
67.1667	0.3052	0.017	2.951	2.968
67.2	0.3118	0.0039	2.9733	2.9772
67.2333	0.3157	0.0039	2.9838	2.9877
67.2667	0.3213	0	2.9917	2.9917
67.3	0.3263	0.0039	3.0154	3.0193
67.3333	0.3319	0.017	3.0312	3.0482

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67.3667	0.3345	0	3.0456	3.0456
67.4	0.3394	0.0039	3.0627	3.0666
67.4333	0.3473	0.0039	3.0746	3.0785
67.4667	0.3516	0	3.0864	3.0864
67.5	0.3539	0.017	3.1088	3.1258
67.5333	0.3552	0.0039	3.1232	3.1271
67.5667	0.3641	0.0039	3.1377	3.1416
67.6	0.3674	0.0302	3.16	3.1902
67.6333	0.3687	0	3.1719	3.1719
67.6667	0.3681	0.0039	3.1942	3.1981
67.7	0.3585	0	3.1982	3.1982
67.7333	0.3496	0.017	3.2113	3.2284
67.7667	0.346	0.017	3.2166	3.2336
67.8	0.3526	0.0039	3.2363	3.2402
67.8333	0.3559	0.0039	3.2455	3.2494
67.8667	0.3569	0.0302	3.2587	3.2889
67.9	0.3612	0.0302	3.2771	3.3073
67.9333	0.3644	0.017	3.2942	3.3112
67.9667	0.3608	0	3.31	3.31
68	0.3588	0.0039	3.3192	3.323
68.0333	0.3569	0.0039	3.3244	3.3283
68.0667	0.3585	0.0039	3.3336	3.3375
68.1	0.3592	0.0039	3.3507	3.3546
68.1333	0.3585	0	3.3586	3.3586
68.1667	0.3565	0	3.3665	3.3665
68.2	0.3592	0.017	3.3731	3.3901
68.2333	0.3585	0	3.3757	3.3757
68.2667	0.3569	0.0039	3.3862	3.3901
68.3	0.3582	0.017	3.3941	3.4112
68.3333	0.3572	0.017	3.4046	3.4217
68.3667	0.3542	0.0039	3.4112	3.4151
68.4	0.3539	0.0039	3.4112	3.4151
68.4333	0.3562	0.017	3.4217	3.4388
68.4667	0.3565	0.0039	3.4375	3.4414
68.5	0.3549	0.0039	3.4441	3.448
68.5333	0.3569	0	3.4507	3.4507
68.5667	0.3575	0.0039	3.4664	3.4703
68.6	0.3585	0.017	3.477	3.494
68.6333	0.3546	0.0039	3.4888	3.4927
68.6667	0.3575	0.0039	3.498	3.5019
68.7	0.3588	0.0039	3.5006	3.5045
68.7333	0.3569	0.0039	3.5151	3.519
68.7667	0.3588	0.0039	3.5204	3.5242

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68.8	0.3605	0	3.5217	3.5217
68.8333	0.3598	0.0039	3.5151	3.519
68.8667	0.3605	0	3.5282	3.5282
68.9	0.3654	0	3.5361	3.5361
68.9333	0.3618	0.0039	3.5427	3.5466
68.9667	0.3608	0.0039	3.5493	3.5532
69	0.3625	0.0039	3.5572	3.5611
69.0333	0.3625	0.017	3.5651	3.5821
69.0667	0.3635	0.0039	3.5651	3.5689
69.1	0.3641	0.017	3.5756	3.5926
69.1333	0.3644	0	3.5769	3.5769
69.1667	0.3648	0.017	3.5861	3.6031
69.2	0.3658	0.017	3.5966	3.6137
69.2333	0.3661	0.017	3.6006	3.6176
69.2667	0.3644	0.017	3.6124	3.6294
69.3	0.3667	0	3.619	3.619
69.3333	0.3658	0.0039	3.6334	3.6373
69.3667	0.3651	0.0039	3.6321	3.636
69.4	0.3681	0.0039	3.6492	3.6531
69.4333	0.3677	0.0039	3.6492	3.6531
69.4667	0.3674	0.0039	3.6545	3.6584
69.5	0.3687	0.017	3.6545	3.6715
69.5333	0.37	0.017	3.6611	3.6781
69.5667	0.3684	0.0302	3.6729	3.7031
69.6	0.3687	0.017	3.6716	3.6886
69.6333	0.3687	0.0039	3.6847	3.6886
69.6667	0.3717	0.017	3.69	3.707
69.7	0.3714	0	3.6966	3.6966
69.7333	0.3714	0	3.7018	3.7018
69.7667	0.37	0.0039	3.7176	3.7215
69.8	0.374	0.0039	3.7123	3.7162
69.8333	0.3697	0.0039	3.7229	3.7267
69.8667	0.3694	0.0039	3.7321	3.736
69.9	0.374	0.0039	3.7413	3.7452
69.9333	0.3697	0	3.7465	3.7465
69.9667	0.3707	0.0039	3.7452	3.7491
70	0.3717	0.0039	3.7715	3.7754
70.0333	0.3723	0.017	3.7584	3.7754
70.0667	0.3723	0.0039	3.7597	3.7636
70.1	0.37	0	3.7768	3.7768
70.1333	0.3707	0	3.7886	3.7886
70.1667	0.3677	0.0039	3.782	3.7859
70.2	0.3681	0	3.7833	3.7833

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70.2333	0.3697	0.0302	3.786	3.8162
70.2667	0.3625	0.017	3.7768	3.7938
70.3	0.3615	0.017	3.7702	3.7872
70.3333	0.3651	0	3.7676	3.7676
70.3667	0.3572	0.0039	3.782	3.7859
70.4	0.3625	0.0039	3.7807	3.7846
70.4333	0.3608	0.017	3.7755	3.7925
70.4667	0.3582	0	3.782	3.782
70.5	0.3602	0.0302	3.7978	3.828
70.5333	0.3598	0.017	3.7886	3.8056
70.5667	0.3595	0.0039	3.7886	3.7925
70.6	0.3608	0.017	3.7965	3.8135
70.6333	0.3552	0.0039	3.8175	3.8214
70.6667	0.3621	0.017	3.8188	3.8359
70.7	0.3598	0.0039	3.8083	3.8122
70.7333	0.3546	0.017	3.7978	3.8148
70.7667	0.3575	0.0039	3.8044	3.8083
70.8	0.3592	0.017	3.8044	3.8214
70.8333	0.3572	0	3.8254	3.8254
70.8667	0.3546	0.0039	3.8346	3.8385
70.9	0.3546	0.0039	3.8438	3.8477
70.9333	0.3549	0	3.8241	3.8241
70.9667	0.3556	0.0302	3.832	3.8622
71	0.3523	0.0039	3.8346	3.8385
71.0333	0.3559	0.0039	3.8438	3.8477
71.0667	0.3533	0.017	3.8478	3.8648
71.1	0.3533	0.0039	3.8504	3.8543
71.1333	0.3569	0.0039	3.8491	3.853
71.1667	0.3523	0	3.8504	3.8504
71.2	0.3542	0.017	3.8451	3.8622
71.2333	0.3529	0.0039	3.8609	3.8648
71.2667	0.3523	0.0039	3.8517	3.8556
71.3	0.3552	0.0039	3.8662	3.8701
71.3333	0.3549	0	3.857	3.857
71.3667	0.3513	0.017	3.8609	3.878
71.4	0.3559	0.0039	3.8675	3.8714
71.4333	0.3519	0.017	3.878	3.8951
71.4667	0.3523	0.0039	3.8793	3.8832
71.5	0.3539	0.0039	3.8688	3.8727
71.5333	0.3519	0.017	3.8754	3.8924
71.5667	0.3523	0	3.878	3.878
71.6	0.3542	0.0039	3.8859	3.8898
71.6333	0.3546	0.0039	3.8859	3.8898

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71.6667	0.3559	0.0039	3.8807	3.8845
71.7	0.3552	0.0039	3.8833	3.8872
71.7333	0.3556	0.0039	3.8977	3.9016
71.7667	0.3569	0.017	3.9043	3.9214
71.8	0.3572	0	3.9083	3.9083
71.8333	0.3559	0.0039	3.907	3.9108
71.8667	0.3585	0.017	3.903	3.92
71.9	0.3592	0.0039	3.9096	3.9135
71.9333	0.3579	0.0039	3.9175	3.9214
71.9667	0.3579	0.017	3.9227	3.9398
72	0.3585	0.0302	3.9122	3.9424
72.0333	0.3575	0.0039	3.9227	3.9266
72.0667	0.3598	0.0039	3.9267	3.9306
72.1	0.3648	0.0039	3.9359	3.9398
72.1333	0.3625	0.0039	3.9254	3.9293
72.1667	0.3615	0.0039	3.9319	3.9358
72.2	0.3615	0.0039	3.9333	3.9371
72.2333	0.3644	0.0039	3.9385	3.9424
72.2667	0.3651	0.0039	3.9359	3.9398
72.3	0.3654	0.017	3.9398	3.9569
72.3333	0.3674	0.0039	3.9477	3.9516
72.3667	0.3691	0.0039	3.9411	3.945
72.4	0.3671	0.0039	3.9556	3.9595
72.4333	0.3661	0	3.9517	3.9517
72.4667	0.3674	0.0039	3.9556	3.9595
72.5	0.3697	0.0039	3.9582	3.9621
72.5333	0.3677	0.0039	3.9556	3.9595
72.5667	0.3704	0.017	3.9609	3.9779
72.6	0.3674	0.017	3.9622	3.9792
72.6333	0.3674	0.017	3.9674	3.9845
72.6667	0.37	0.0039	3.9701	3.974
72.7	0.3707	0.017	3.9714	3.9884
72.7333	0.3697	0.0039	3.9701	3.974
72.7667	0.37	0	3.9819	3.9819
72.8	0.3717	0.0039	3.9859	3.9897
72.8333	0.3697	0.0039	3.9832	3.9871
72.8667	0.371	0.0039	3.9766	3.9805
72.9	0.374	0.0039	3.9885	3.9924
72.9333	0.372	0.0039	3.9819	3.9858
72.9667	0.3658	0.0039	3.9951	3.9989
73	0.3628	0	3.9885	3.9885
73.0333	0.3648	0.0039	3.9845	3.9884
73.0667	0.3625	0.0039	3.9964	4.0003

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
73.1	0.3615	0.017	3.9911	4.0082
73.1333	0.3618	0.017	3.9924	4.0095
73.1667	0.3661	0.0039	3.9924	3.9963
73.2	0.3631	0	3.999	3.999
73.2333	0.3654	0.0039	4.0016	4.0055
73.2667	0.3651	0.017	4.0029	4.02
73.3	0.3658	0.017	4.0016	4.0187
73.3333	0.3618	0.017	4.0029	4.02
73.3667	0.3651	0.0039	4.0082	4.0121
73.4	0.3684	0	4.0161	4.0161
73.4333	0.3681	0	4.0174	4.0174
73.4667	0.3628	0.017	4.0082	4.0252
73.5	0.3635	0.0039	4.0135	4.0174
73.5333	0.3598	0.0039	4.0174	4.0213
73.5667	0.3648	0.017	4.024	4.041
73.6	0.3638	0	4.02	4.02
73.6333	0.3638	0	4.0253	4.0253
73.6667	0.3628	0.017	4.0319	4.0489
73.7	0.3625	0.0039	4.0292	4.0331
73.7333	0.3631	0.0302	4.0279	4.0581
73.7667	0.3638	0.0039	4.0319	4.0358
73.8	0.3651	0.0302	4.0345	4.0647
73.8333	0.3651	0.017	4.024	4.041
73.8667	0.3628	0.017	4.0227	4.0397
73.9	0.3654	0.0039	4.0319	4.0358
73.9333	0.3628	0.017	4.0332	4.0502
73.9667	0.3605	0.0039	4.0437	4.0476
74	0.3651	0.0039	4.0385	4.0423
74.0333	0.3621	0.0039	4.0398	4.0437
74.0667	0.3628	0.0039	4.0253	4.0292
74.1	0.3635	0.017	4.0371	4.0542
74.1333	0.3628	0.017	4.0332	4.0502
74.1667	0.3615	0	4.0424	4.0424
74.2	0.3681	0.017	4.0424	4.0594
74.2333	0.3625	0.0039	4.0437	4.0476
74.2667	0.3635	0.0039	4.0503	4.0542
74.3	0.3638	0.017	4.0503	4.0673
74.3333	0.3635	0.017	4.0555	4.0726
74.3667	0.3602	0.0039	4.0529	4.0568
74.4	0.3635	0.0039	4.049	4.0529
74.4333	0.3612	0.0039	4.0542	4.0581
74.4667	0.3635	0.0039	4.0542	4.0581
74.5	0.3615	0	4.0516	4.0516

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74.5333	0.3631	0.0039	4.0516	4.0555
74.5667	0.3635	0	4.0555	4.0555
74.6	0.3612	0.017	4.0647	4.0818
74.6333	0.3618	0.017	4.0661	4.0831
74.6667	0.3608	0.0039	4.0516	4.0555
74.7	0.3595	0.0039	4.0674	4.0713
74.7333	0.3628	0	4.0647	4.0647
74.7667	0.3621	0	4.0634	4.0634
74.8	0.3582	0	4.0595	4.0595
74.8333	0.3631	0.0039	4.0634	4.0673
74.8667	0.3638	0.0039	4.0713	4.0752
74.9	0.3612	0	4.0621	4.0621
74.9333	0.3605	0.0039	4.0647	4.0686
74.9667	0.3618	0.017	4.0661	4.0831
75	0.3651	0	4.0726	4.0726
75.0333	0.3618	0.0039	4.07	4.0739
75.0667	0.3618	0.0039	4.0687	4.0726
75.1	0.3625	0	4.0621	4.0621
75.1333	0.3615	0.017	4.0608	4.0778
75.1667	0.3641	0.017	4.07	4.087
75.2	0.3605	0.0039	4.0661	4.07
75.2333	0.3631	0.017	4.0621	4.0792
75.2667	0.3595	0.0039	4.0726	4.0765
75.3	0.3618	0.0039	4.074	4.0778
75.3333	0.3625	0.017	4.0779	4.0949
75.3667	0.3638	0.0039	4.0753	4.0792
75.4	0.3612	0.017	4.0766	4.0936
75.4333	0.3598	0.0039	4.0818	4.0857
75.4667	0.3605	0.0039	4.0858	4.0897
75.5	0.3628	0.017	4.0832	4.1002
75.5333	0.3644	0.0039	4.091	4.0949
75.5667	0.3635	0.0039	4.0845	4.0884
75.6	0.3635	0	4.07	4.07
75.6333	0.3595	0	4.0845	4.0845
75.6667	0.3602	0	4.0871	4.0871
75.7	0.3598	0.017	4.0818	4.0989
75.7333	0.3605	0.017	4.0924	4.1094
75.7667	0.3628	0.017	4.1016	4.1186
75.8	0.3648	0.0039	4.0845	4.0884
75.8333	0.3612	0.017	4.0989	4.116
75.8667	0.3595	0.0039	4.0924	4.0963
75.9	0.3618	0.017	4.0884	4.1055
75.9333	0.3621	0.017	4.0937	4.1107

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
75.9667	0.3615	0	4.0897	4.0897
76	0.3635	0.0039	4.0858	4.0897
76.0333	0.3628	0.017	4.0937	4.1107
76.0667	0.3595	0.0039	4.091	4.0949
76.1	0.3605	0.0039	4.0976	4.1015
76.1333	0.3579	0.017	4.1081	4.1252
76.1667	0.3595	0.0302	4.0976	4.1278
76.2	0.3615	0.0039	4.1003	4.1041
76.2333	0.3588	0	4.1121	4.1121
76.2667	0.3615	0	4.1095	4.1095
76.3	0.3618	0.017	4.1055	4.1226
76.3333	0.3621	0	4.1029	4.1029
76.3667	0.3618	0.0039	4.1003	4.1041
76.4	0.3618	0.017	4.1081	4.1252
76.4333	0.3602	0.0302	4.1173	4.1475
76.4667	0.3618	0.0039	4.1266	4.1304
76.5	0.3612	0	4.1187	4.1187
76.5333	0.3615	0.0039	4.1068	4.1107
76.5667	0.3588	0	4.1016	4.1016
76.6	0.3608	0.017	4.0963	4.1133
76.6333	0.3615	0.0039	4.1003	4.1041
76.6667	0.3608	0	4.0858	4.0858
76.7	0.3582	0.017	4.0871	4.1041
76.7333	0.3608	0	4.0963	4.0963
76.7667	0.3625	0.017	4.0989	4.116
76.8	0.3615	0.0039	4.0989	4.1028
76.8333	0.3595	0.0039	4.0924	4.0963
76.8667	0.3608	0.0302	4.0897	4.1199
76.9	0.3608	0.0039	4.1029	4.1068
76.9333	0.3575	0.0039	4.1042	4.1081
76.9667	0.3618	0.0039	4.0963	4.1002
77	0.3592	0	4.0963	4.0963
77.0333	0.3592	0.0039	4.0963	4.1002
77.0667	0.3615	0.017	4.1003	4.1173
77.1	0.3612	0	4.1016	4.1016
77.1333	0.3598	0.017	4.1068	4.1239
77.1667	0.3615	0.0039	4.0989	4.1028
77.2	0.3602	0.0039	4.1029	4.1068
77.2333	0.3582	0.017	4.1081	4.1252
77.2667	0.3598	0	4.1081	4.1081
77.3	0.3588	0	4.1029	4.1029
77.3333	0.3585	0.0039	4.0989	4.1028
77.3667	0.3615	0	4.1055	4.1055

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
77.4	0.3612	0.0039	4.1108	4.1147
77.4333	0.3602	0	4.12	4.12
77.4667	0.3605	0	4.1134	4.1134
77.5	0.3598	0.0039	4.116	4.1199
77.5333	0.3582	0.0039	4.1095	4.1133
77.5667	0.3618	0.0039	4.1029	4.1068
77.6	0.3592	0.017	4.1029	4.1199
77.6333	0.3605	0.0302	4.0976	4.1278
77.6667	0.3602	0.017	4.1068	4.1239
77.7	0.3595	0.017	4.1134	4.1304
77.7333	0.3618	0.0039	4.1108	4.1147
77.7667	0.3595	0.0039	4.1016	4.1055
77.8	0.3556	0.0039	4.1003	4.1041
77.8333	0.3598	0.017	4.1029	4.1199
77.8667	0.3565	0.017	4.1095	4.1265
77.9	0.3565	0.0039	4.1042	4.1081
77.9333	0.3595	0	4.1042	4.1042
77.9667	0.3602	0	4.1016	4.1016
78	0.3595	0.0039	4.095	4.0989
78.0333	0.3592	0	4.1121	4.1121
78.0667	0.3605	0.0302	4.1042	4.1344
78.1	0.3621	0.0039	4.1108	4.1147
78.1333	0.3575	0	4.1055	4.1055
78.1667	0.3602	0	4.1121	4.1121
78.2	0.3592	0.0039	4.1095	4.1133
78.2333	0.3585	0.0039	4.1134	4.1173
78.2667	0.3579	0.0039	4.1147	4.1186
78.3	0.3612	0	4.1108	4.1108
78.3333	0.3621	0.017	4.1121	4.1291
78.3667	0.3602	0.017	4.1121	4.1291
78.4	0.3628	0.0039	4.1187	4.1226
78.4333	0.3585	0.0039	4.1187	4.1226
78.4667	0.3585	0	4.1252	4.1252
78.5	0.3592	0.0039	4.1068	4.1107
78.5333	0.3608	0.0039	4.1081	4.112
78.5667	0.3602	0.017	4.1095	4.1265
78.6	0.3592	0.0039	4.1108	4.1147
78.6333	0.3579	0	4.1068	4.1068
78.6667	0.3598	0.0039	4.1213	4.1252
78.7	0.3615	0.017	4.1173	4.1344
78.7333	0.3608	0	4.1187	4.1187
78.7667	0.3588	0	4.1134	4.1134
78.8	0.3618	0	4.1068	4.1068

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
78.8333	0.3602	0.017	4.1134	4.1304
78.8667	0.3595	0.0039	4.1095	4.1133
78.9	0.3595	0.0039	4.1016	4.1055
78.9333	0.3582	0.017	4.1068	4.1239
78.9667	0.3592	0	4.1147	4.1147
79	0.3585	0	4.1108	4.1108
79.0333	0.3575	0.0039	4.1068	4.1107
79.0667	0.3612	0.0039	4.1068	4.1107
79.1	0.3575	0.0039	4.1029	4.1068
79.1333	0.3602	0.0039	4.1095	4.1133
79.1667	0.3598	0.0039	4.1095	4.1133
79.2	0.3598	0	4.1055	4.1055
79.2333	0.3575	0.0039	4.1095	4.1133
79.2667	0.3595	0	4.1134	4.1134
79.3	0.3615	0.0039	4.1003	4.1041
79.3333	0.3602	0.017	4.1147	4.1318
79.3667	0.3579	0.0039	4.1081	4.112
79.4	0.3595	0.0039	4.1121	4.116
79.4333	0.3572	0.017	4.1108	4.1278
79.4667	0.3565	0.017	4.1081	4.1252
79.5	0.3595	0.0039	4.1016	4.1055
79.5333	0.3592	0.017	4.1095	4.1265
79.5667	0.3602	0.017	4.1147	4.1318
79.6	0.3602	0.0039	4.1226	4.1265
79.6333	0.3572	0.0039	4.12	4.1239
79.6667	0.3605	0	4.116	4.116
79.7	0.3575	0.0039	4.116	4.1199
79.7333	0.3608	0	4.1239	4.1239
79.7667	0.3621	0.0039	4.12	4.1239
79.8	0.3615	0.0039	4.1239	4.1278
79.8333	0.3598	0.0039	4.1252	4.1291
79.8667	0.3608	0	4.1252	4.1252
79.9	0.3605	0.0039	4.1331	4.137
79.9333	0.3598	0.0039	4.1279	4.1318
79.9667	0.3588	0.0039	4.1226	4.1265
80	0.3579	0.017	4.1226	4.1396
80.0333	0.3605	0.0039	4.1239	4.1278
80.0667	0.3575	0.0039	4.1239	4.1278
80.1	0.3602	0.0039	4.1266	4.1304
80.1333	0.3615	0.0039	4.1358	4.1396
80.1667	0.3572	0.017	4.1384	4.1554
80.2	0.3592	0	4.1305	4.1305
80.2333	0.3588	0.017	4.1318	4.1489

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
80.2667	0.3598	0.017	4.1344	4.1515
80.3	0.3615	0.017	4.1279	4.1449
80.3333	0.3585	0.0039	4.1292	4.1331
80.3667	0.3612	0.0039	4.1252	4.1291
80.4	0.3572	0.0039	4.1252	4.1291
80.4333	0.3588	0.0039	4.1371	4.141
80.4667	0.3575	0.0039	4.12	4.1239
80.5	0.3575	0	4.1239	4.1239
80.5333	0.3592	0.0039	4.1252	4.1291
80.5667	0.3598	0.0039	4.116	4.1199
80.6	0.3602	0	4.1226	4.1226
80.6333	0.3608	0	4.1292	4.1292
80.6667	0.3592	0	4.1384	4.1384
80.7	0.3608	0	4.1318	4.1318
80.7333	0.3631	0.017	4.1305	4.1475
80.7667	0.3605	0	4.1279	4.1279
80.8	0.3569	0.017	4.1305	4.1475
80.8333	0.3575	0.0039	4.1318	4.1357
80.8667	0.3582	0.017	4.1292	4.1462
80.9	0.3602	0.0039	4.1344	4.1383
80.9333	0.3602	0	4.1344	4.1344
80.9667	0.3612	0.0039	4.1384	4.1423
81	0.3608	0.0302	4.1358	4.1659
81.0333	0.3598	0.017	4.1344	4.1515
81.0667	0.3621	0.017	4.1358	4.1528
81.1	0.3579	0.0039	4.1344	4.1383
81.1333	0.3618	0	4.1344	4.1344
81.1667	0.3572	0	4.1318	4.1318
81.2	0.3598	0	4.1318	4.1318
81.2333	0.3572	0.0039	4.1266	4.1304
81.2667	0.3621	0.0039	4.1358	4.1396
81.3	0.3592	0.0039	4.1279	4.1318
81.3333	0.3612	0	4.116	4.116
81.3667	0.3588	0.0039	4.1266	4.1304
81.4	0.3612	0.017	4.1266	4.1436
81.4333	0.3592	0.017	4.1318	4.1489
81.4667	0.3621	0	4.1318	4.1318
81.5	0.3582	0.0039	4.1266	4.1304
81.5333	0.3621	0	4.1344	4.1344
81.5667	0.3579	0.0039	4.1397	4.1436
81.6	0.3598	0.0039	4.1226	4.1265
81.6333	0.3612	0.0039	4.145	4.1489
81.6667	0.3595	0.017	4.1502	4.1673

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
81.7	0.3605	0	4.1344	4.1344
81.7333	0.3615	0.0039	4.1384	4.1423
81.7667	0.3598	0.0039	4.1292	4.1331
81.8	0.3565	0	4.141	4.141
81.8333	0.3605	0.0039	4.1305	4.1344
81.8667	0.3592	0.0039	4.1384	4.1423
81.9	0.3621	0.0039	4.1292	4.1331
81.9333	0.3582	0	4.1226	4.1226
81.9667	0.3615	0.017	4.1252	4.1423
82	0.3598	0	4.1252	4.1252
82.0333	0.3585	0.0039	4.1239	4.1278
82.0667	0.3608	0	4.1305	4.1305
82.1	0.3592	0.0039	4.1318	4.1357
82.1333	0.3569	0.017	4.1252	4.1423
82.1667	0.3608	0.0039	4.1252	4.1291
82.2	0.3598	0.017	4.1252	4.1423
82.2333	0.3612	0	4.1226	4.1226
82.2667	0.3588	0	4.12	4.12
82.3	0.3579	0.0039	4.1305	4.1344
82.3333	0.3585	0.0039	4.1279	4.1318
82.3667	0.3588	0.0039	4.1226	4.1265
82.4	0.3615	0.0039	4.1292	4.1331
82.4333	0.3579	0	4.1213	4.1213
82.4667	0.3615	0	4.1239	4.1239
82.5	0.3615	0.0039	4.12	4.1239
82.5333	0.3592	0.0039	4.1239	4.1278
82.5667	0.3595	0	4.1147	4.1147
82.6	0.3569	0.0039	4.1147	4.1186
82.6333	0.3588	0.0039	4.1226	4.1265
82.6667	0.3608	0.0039	4.1252	4.1291
82.7	0.3605	0.0039	4.1187	4.1226
82.7333	0.3595	0.0039	4.1081	4.112
82.7667	0.3612	0	4.1173	4.1173
82.8	0.3579	0.017	4.1213	4.1383
82.8333	0.3572	0.0039	4.1187	4.1226
82.8667	0.3592	0.0039	4.1252	4.1291
82.9	0.3608	0	4.12	4.12
82.9333	0.3592	0.0039	4.1147	4.1186
82.9667	0.3575	0.0039	4.1187	4.1226
83	0.3592	0.017	4.1213	4.1383
83.0333	0.3598	0.017	4.12	4.137
83.0667	0.3592	0	4.1187	4.1187
83.1	0.3585	0.0039	4.1213	4.1252

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
83.1333	0.3552	0	4.1279	4.1279
83.1667	0.3608	0.0039	4.1213	4.1252
83.2	0.3582	0.0039	4.12	4.1239
83.2333	0.3582	0.0039	4.1252	4.1291
83.2667	0.3588	0.0039	4.1239	4.1278
83.3	0.3572	0.0039	4.1239	4.1278
83.3333	0.3579	0.017	4.1173	4.1344
83.3667	0.3575	0	4.1187	4.1187
83.4	0.3615	0.0039	4.1279	4.1318
83.4333	0.3595	0.0039	4.1213	4.1252
83.4667	0.3585	0.017	4.12	4.137
83.5	0.3608	0	4.1187	4.1187
83.5333	0.3612	0.017	4.1344	4.1515
83.5667	0.3605	0.0039	4.1318	4.1357
83.6	0.3595	0	4.1279	4.1279
83.6333	0.3588	0	4.1318	4.1318
83.6667	0.3612	0.017	4.1358	4.1528
83.7	0.3575	0	4.1279	4.1279
83.7333	0.3585	0	4.1371	4.1371
83.7667	0.3598	0.017	4.1371	4.1541
83.8	0.3595	0	4.1384	4.1384
83.8333	0.3621	0.0039	4.1344	4.1383
83.8667	0.3595	0.0039	4.1397	4.1436
83.9	0.3579	0.0039	4.1331	4.137
83.9333	0.3608	0.0039	4.1331	4.137
83.9667	0.3588	0.0039	4.1331	4.137
84	0.3585	0.0039	4.1358	4.1396
84.0333	0.3582	0.0039	4.1384	4.1423
84.0667	0.3585	0.0039	4.1358	4.1396
84.1	0.3608	0.0302	4.1371	4.1673
84.1333	0.3575	0	4.1397	4.1397
84.1667	0.3615	0.017	4.1397	4.1567
84.2	0.3582	0.0039	4.1436	4.1475
84.2333	0.3605	0.017	4.145	4.162
84.2667	0.3595	0.0039	4.141	4.1449
84.3	0.3608	0.0039	4.1384	4.1423
84.3333	0.3602	0	4.145	4.145
84.3667	0.3598	0.0039	4.1384	4.1423
84.4	0.3602	0.0039	4.1423	4.1462
84.4333	0.3621	0	4.1331	4.1331
84.4667	0.3598	0.0039	4.1292	4.1331
84.5	0.3588	0.017	4.1384	4.1554
84.5333	0.3582	0.0039	4.1331	4.137

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
84.5667	0.3608	0.0039	4.1239	4.1278
84.6	0.3595	0	4.1292	4.1292
84.6333	0.3575	0.017	4.1331	4.1502
84.6667	0.3618	0.0302	4.1266	4.1567
84.7	0.3598	0.0039	4.1305	4.1344
84.7333	0.3602	0.0039	4.1358	4.1396
84.7667	0.3582	0	4.1292	4.1292
84.8	0.3595	0.0039	4.1305	4.1344
84.8333	0.3582	0.017	4.1371	4.1541
84.8667	0.3598	0	4.1252	4.1252
84.9	0.3585	0.0039	4.1344	4.1383
84.9333	0.3588	0.0039	4.1279	4.1318
84.9667	0.3582	0.0039	4.1358	4.1396
85	0.3588	0.017	4.1266	4.1436
85.0333	0.3595	0.0039	4.1371	4.141
85.0667	0.3562	0.0039	4.1292	4.1331
85.1	0.3605	0.0039	4.1318	4.1357
85.1333	0.3588	0.017	4.1279	4.1449
85.1667	0.3592	0.0039	4.1305	4.1344
85.2	0.3598	0.0039	4.1305	4.1344
85.2333	0.3602	0.017	4.1266	4.1436
85.2667	0.3615	0.0039	4.1371	4.141
85.3	0.3608	0.0039	4.1305	4.1344
85.3333	0.3582	0	4.1292	4.1292
85.3667	0.3625	0.0039	4.1331	4.137
85.4	0.3598	0.017	4.1344	4.1515
85.4333	0.3585	0	4.1344	4.1344
85.4667	0.3625	0.0039	4.1371	4.141
85.5	0.3582	0.0039	4.1358	4.1396
85.5333	0.3582	0.017	4.1331	4.1502
85.5667	0.3605	0.0039	4.1358	4.1396
85.6	0.3595	0	4.1331	4.1331
85.6333	0.3595	0.0039	4.141	4.1449
85.6667	0.3605	0	4.141	4.141
85.7	0.3585	0	4.1279	4.1279
85.7333	0.3588	0.017	4.1397	4.1567
85.7667	0.3602	0.017	4.1384	4.1554
85.8	0.3602	0.017	4.1371	4.1541
85.8333	0.3588	0.017	4.1371	4.1541
85.8667	0.3615	0	4.1397	4.1397
85.9	0.3575	0.0039	4.1344	4.1383
85.9333	0.3579	0.0039	4.1358	4.1396
85.9667	0.3598	0.0039	4.1371	4.141

Areva NP Inc.

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
86	0.3592	0.017	4.1423	4.1594
86.0333	0.3602	0.0039	4.1436	4.1475
86.0667	0.3605	0.017	4.1344	4.1515
86.1	0.3582	0.0039	4.1252	4.1291
86.1333	0.3592	0.017	4.1358	4.1528
86.1667	0.3588	0.0039	4.1305	4.1344
86.2	0.3592	0.0039	4.1331	4.137
86.2333	0.3598	0.0039	4.1384	4.1423
86.2667	0.3585	0.0039	4.145	4.1489
86.3	0.3625	0.0039	4.1358	4.1396
86.3333	0.3575	0	4.1252	4.1252
86.3667	0.3572	0.017	4.1318	4.1489
86.4	0.3579	0.0039	4.1423	4.1462
86.4333	0.3605	0.0039	4.141	4.1449
86.4667	0.3582	0.017	4.141	4.1581
86.5	0.3549	0.0039	4.1358	4.1396
86.5333	0.3579	0.0039	4.1463	4.1502
86.5667	0.3595	0.0039	4.1502	4.1541
86.6	0.3602	0	4.1489	4.1489
86.6333	0.3572	0.0039	4.145	4.1489
86.6667	0.3602	0.017	4.1384	4.1554
86.7	0.3572	0.0039	4.1331	4.137
86.7333	0.3605	0.0039	4.1331	4.137
86.7667	0.3585	0	4.1252	4.1252
86.8	0.3598	0	4.1384	4.1384
86.8333	0.3588	0	4.1384	4.1384
86.8667	0.3582	0.017	4.1397	4.1567
86.9	0.3598	0.0039	4.145	4.1489
86.9333	0.3615	0.0039	4.1436	4.1475
86.9667	0.3592	0.017	4.1397	4.1567
87	0.3602	0.0039	4.1358	4.1396
87.0333	0.3602	0.017	4.1371	4.1541
87.0667	0.3582	0.0039	4.1305	4.1344
87.1	0.3582	0.017	4.1436	4.1607
87.1333	0.3579	0.0039	4.1476	4.1515
87.1667	0.3575	0	4.1358	4.1358
87.2	0.3575	0.0039	4.1397	4.1436
87.2333	0.3595	0.017	4.1476	4.1646
87.2667	0.3595	0	4.1476	4.1476
87.3	0.3588	0.0039	4.1397	4.1436
87.3333	0.3602	0.0039	4.1344	4.1383
87.3667	0.3575	0.017	4.1384	4.1554
87.4	0.3588	0	4.1476	4.1476

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
87.4333	0.3592	0.0039	4.141	4.1449
87.4667	0.3615	0.0039	4.1279	4.1318
87.5	0.3585	0.0302	4.1397	4.1699
87.5333	0.3575	0	4.1371	4.1371
87.5667	0.3598	0.0302	4.1305	4.1607
87.6	0.3608	0	4.1331	4.1331
87.6333	0.3582	0.017	4.1384	4.1554
87.6667	0.3552	0.017	4.1358	4.1528
87.7	0.3585	0.017	4.1252	4.1423
87.7333	0.3592	0.0039	4.1331	4.137
87.7667	0.3585	0.0039	4.1397	4.1436
87.8	0.3595	0.0039	4.1292	4.1331
87.8333	0.3585	0.0039	4.145	4.1489
87.8667	0.3595	0.017	4.1436	4.1607
87.9	0.3582	0.017	4.1476	4.1646
87.9333	0.3628	0.017	4.1226	4.1396
87.9667	0.3595	0.017	4.1331	4.1502
88	0.3588	0	4.1331	4.1331
88.0333	0.3605	0.0039	4.1358	4.1396
88.0667	0.3625	0.017	4.1463	4.1633
88.1	0.3602	0.017	4.1502	4.1673
88.1333	0.3621	0.0039	4.1384	4.1423
88.1667	0.3598	0.0039	4.1239	4.1278
88.2	0.3585	0	4.1344	4.1344
88.2333	0.3592	0.0039	4.1292	4.1331
88.2667	0.3588	0.0039	4.1344	4.1383
88.3	0.3595	0	4.1331	4.1331
88.3333	0.3588	0.0039	4.1279	4.1318
88.3667	0.3595	0.0039	4.1331	4.137
88.4	0.3592	0.0039	4.1371	4.141
88.4333	0.3588	0	4.141	4.141
88.4667	0.3575	0.0302	4.1358	4.1659
88.5	0.3588	0.0039	4.1305	4.1344
88.5333	0.3588	0	4.1305	4.1305
88.5667	0.3582	0.0039	4.1292	4.1331
88.6	0.3588	0.017	4.1213	4.1383
88.6333	0.3602	0	4.1292	4.1292
88.6667	0.3605	0	4.1292	4.1292
88.7	0.3575	0.0039	4.1331	4.137
88.7333	0.3582	0.0039	4.1318	4.1357
88.7667	0.3588	0.017	4.1279	4.1449
88.8	0.3592	0	4.1318	4.1318
88.8333	0.3605	0.0039	4.1358	4.1396

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
88.8667	0.3559	0	4.1371	4.1371
88.9	0.3602	0.0039	4.1318	4.1357
88.9333	0.3598	0.0039	4.1121	4.116
88.9667	0.3585	0.0039	4.1239	4.1278
89	0.3588	0.0039	4.1384	4.1423
89.0333	0.3588	0.0039	4.1463	4.1502
89.0667	0.3565	0.0039	4.1358	4.1396
89.1	0.3602	0.0039	4.1423	4.1462
89.1333	0.3588	0	4.1331	4.1331
89.1667	0.3598	0	4.1318	4.1318
89.2	0.3588	0.0039	4.1252	4.1291
89.2333	0.3621	0.0039	4.1292	4.1331
89.2667	0.3579	0.0039	4.12	4.1239
89.3	0.3588	0	4.1226	4.1226
89.3333	0.3595	0.0039	4.1252	4.1291
89.3667	0.3595	0.0039	4.12	4.1239
89.4	0.3592	0.0039	4.1331	4.137
89.4333	0.3585	0.0039	4.1213	4.1252
89.4667	0.3588	0.017	4.1397	4.1567
89.5	0.3572	0.0039	4.1226	4.1265
89.5333	0.3546	0.0039	4.1266	4.1304
89.5667	0.3595	0.0039	4.1331	4.137
89.6	0.3592	0.0302	4.1292	4.1594
89.6333	0.3582	0.0039	4.1252	4.1291
89.6667	0.3565	0	4.1331	4.1331
89.7	0.3595	0	4.1226	4.1226
89.7333	0.3569	0.0039	4.1305	4.1344
89.7667	0.3556	0.0039	4.1226	4.1265
89.8	0.3588	0	4.1279	4.1279
89.8333	0.3546	0.0039	4.1239	4.1278
89.8667	0.3625	0.0039	4.1213	4.1252
89.9	0.3582	0	4.1305	4.1305
89.9333	0.3595	0	4.1384	4.1384
89.9667	0.3585	0	4.1331	4.1331
90	0.3565	0.0039	4.1331	4.137
90.0333	0.3592	0.0039	4.1397	4.1436
90.0667	0.3585	0.0039	4.1371	4.141
90.1	0.3575	0.0039	4.1358	4.1396
90.1333	0.3621	0.0039	4.1344	4.1383
90.1667	0.3585	0.017	4.1331	4.1502
90.2	0.3621	0.0039	4.1358	4.1396
90.2333	0.3579	0.017	4.1358	4.1528
90.2667	0.3588	0	4.1344	4.1344

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
90.3	0.3575	0	4.1279	4.1279
90.3333	0.3582	0.0039	4.1305	4.1344
90.3667	0.3585	0	4.1266	4.1266
90.4	0.3585	0.0039	4.1266	4.1304
90.4333	0.3585	0.0039	4.1252	4.1291
90.4667	0.3575	0.0302	4.1292	4.1594
90.5	0.3572	0.0039	4.12	4.1239
90.5333	0.3572	0.017	4.1344	4.1515
90.5667	0.3565	0	4.1371	4.1371
90.6	0.3572	0.017	4.1318	4.1489
90.6333	0.3592	0	4.1305	4.1305
90.6667	0.3595	0.017	4.1239	4.141
90.7	0.3579	0.0039	4.1331	4.137
90.7333	0.3575	0.0039	4.1384	4.1423
90.7667	0.3585	0.017	4.1423	4.1594
90.8	0.3602	0.017	4.1397	4.1567
90.8333	0.3572	0.017	4.1331	4.1502
90.8667	0.3592	0.0039	4.1331	4.137
90.9	0.3559	0.0039	4.1397	4.1436
90.9333	0.3592	0.0039	4.1344	4.1383
90.9667	0.3582	0.0039	4.1331	4.137
91	0.3565	0.0039	4.1305	4.1344
91.0333	0.3592	0.0039	4.1331	4.137
91.0667	0.3572	0.0039	4.1371	4.141
91.1	0.3608	0.0039	4.1331	4.137
91.1333	0.3588	0.017	4.1344	4.1515
91.1667	0.3562	0.017	4.1305	4.1475
91.2	0.3562	0.017	4.1331	4.1502
91.2333	0.3562	0.0039	4.1318	4.1357
91.2667	0.3602	0	4.1226	4.1226
91.3	0.3592	0	4.1252	4.1252
91.3333	0.3572	0.0039	4.1292	4.1331
91.3667	0.3559	0.0039	4.1252	4.1291
91.4	0.3602	0	4.1292	4.1292
91.4333	0.3549	0.0039	4.1292	4.1331
91.4667	0.3585	0	4.1292	4.1292
91.5	0.3572	0.0039	4.1384	4.1423
91.5333	0.3598	0.0302	4.1331	4.1633
91.5667	0.3605	0	4.1305	4.1305
91.6	0.3562	0.0039	4.1331	4.137
91.6333	0.3588	0	4.1279	4.1279
91.6667	0.3588	0.0039	4.1252	4.1291
91.7	0.3575	0.0039	4.1226	4.1265

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
91.7333	0.3575	0.0039	4.1252	4.1291
91.7667	0.3579	0.0039	4.1305	4.1344
91.8	0.3585	0.0039	4.1279	4.1318
91.8333	0.3598	0.0039	4.1279	4.1318
91.8667	0.3556	0.0039	4.1358	4.1396
91.9	0.3585	0	4.1397	4.1397
91.9333	0.3605	0.0039	4.1252	4.1291
91.9667	0.3579	0.017	4.1305	4.1475
92	0.3595	0.017	4.1292	4.1462
92.0333	0.3595	0	4.1318	4.1318
92.0667	0.3579	0	4.1173	4.1173
92.1	0.3572	0.0039	4.1213	4.1252
92.1333	0.3556	0.0039	4.1213	4.1252
92.1667	0.3575	0.0039	4.1187	4.1226
92.2	0.3562	0.0039	4.12	4.1239
92.2333	0.3542	0.0039	4.1252	4.1291
92.2667	0.3565	0.0039	4.116	4.1199
92.3	0.3585	0.0039	4.1147	4.1186
92.3333	0.3608	0.017	4.1226	4.1396
92.3667	0.3579	0.017	4.1187	4.1357
92.4	0.3569	0.0039	4.1134	4.1173
92.4333	0.3542	0.017	4.1252	4.1423
92.4667	0.3572	0.0039	4.1292	4.1331
92.5	0.3569	0.0039	4.1173	4.1212
92.5333	0.3579	0.0039	4.1252	4.1291
92.5667	0.3579	0.0039	4.1213	4.1252
92.6	0.3562	0.0302	4.1147	4.1449
92.6333	0.3549	0.0039	4.1134	4.1173
92.6667	0.3585	0.017	4.1173	4.1344
92.7	0.3569	0.017	4.12	4.137
92.7333	0.3598	0.017	4.1252	4.1423
92.7667	0.3565	0.0039	4.1187	4.1226
92.8	0.3605	0.017	4.1187	4.1357
92.8333	0.3542	0	4.1147	4.1147
92.8667	0.3588	0	4.116	4.116
92.9	0.3562	0.0039	4.1213	4.1252
92.9333	0.3556	0.017	4.1318	4.1489
92.9667	0.3588	0.0039	4.1292	4.1331
93	0.3539	0.017	4.1213	4.1383
93.0333	0.3592	0.0039	4.1095	4.1133
93.0667	0.3569	0.017	4.12	4.137
93.1	0.3552	0	4.1239	4.1239
93.1333	0.3582	0.0039	4.1266	4.1304

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
93.1667	0.3582	0.017	4.1213	4.1383
93.2	0.3592	0	4.1252	4.1252
93.2333	0.3569	0.017	4.1226	4.1396
93.2667	0.3565	0.0039	4.1187	4.1226
93.3	0.3575	0.0039	4.1134	4.1173
93.3333	0.3556	0.017	4.1213	4.1383
93.3667	0.3559	0	4.1279	4.1279
93.4	0.3579	0.017	4.1279	4.1449
93.4333	0.3572	0.017	4.1331	4.1502
93.4667	0.3549	0.0039	4.1266	4.1304
93.5	0.3572	0.0039	4.1279	4.1318
93.5333	0.3569	0.017	4.1279	4.1449
93.5667	0.3572	0	4.1213	4.1213
93.6	0.3608	0	4.1279	4.1279
93.6333	0.3549	0.0039	4.1292	4.1331
93.6667	0.3572	0.0039	4.1344	4.1383
93.7	0.3562	0.0039	4.1331	4.137
93.7333	0.3585	0	4.1331	4.1331
93.7667	0.3585	0.0039	4.1358	4.1396
93.8	0.3569	0.0039	4.1292	4.1331
93.8333	0.3585	0.0039	4.1292	4.1331
93.8667	0.3556	0.0039	4.1344	4.1383
93.9	0.3565	0.0039	4.1292	4.1331
93.9333	0.3588	0.0039	4.1344	4.1383
93.9667	0.3588	0.0039	4.1397	4.1436
94	0.3569	0.0039	4.1292	4.1331
94.0333	0.3588	0.017	4.1331	4.1502
94.0667	0.3582	0.0039	4.1292	4.1331
94.1	0.3556	0.017	4.1279	4.1449
94.1333	0.3575	0.0039	4.1331	4.137
94.1667	0.3588	0.0039	4.1239	4.1278
94.2	0.3572	0.0039	4.1266	4.1304
94.2333	0.3559	0.0039	4.1358	4.1396
94.2667	0.3579	0.0039	4.1305	4.1344
94.3	0.3562	0.0039	4.1358	4.1396
94.3333	0.3585	0	4.1292	4.1292
94.3667	0.3582	0.0039	4.1292	4.1331
94.4	0.3575	0.017	4.1252	4.1423
94.4333	0.3588	0	4.1279	4.1279
94.4667	0.3592	0.0039	4.1226	4.1265
94.5	0.3575	0	4.1371	4.1371
94.5333	0.3575	0.0039	4.1292	4.1331
94.5667	0.3569	0.017	4.1292	4.1462

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
94.6	0.3582	0.0039	4.1358	4.1396
94.6333	0.3585	0.0302	4.1344	4.1646
94.6667	0.3569	0.0039	4.1344	4.1383
94.7	0.3565	0	4.1423	4.1423
94.7333	0.3598	0.017	4.1397	4.1567
94.7667	0.3572	0.0039	4.1384	4.1423
94.8	0.3582	0.017	4.1344	4.1515
94.8333	0.3572	0.017	4.1371	4.1541
94.8667	0.3559	0.0039	4.1358	4.1396
94.9	0.3579	0.0039	4.1344	4.1383
94.9333	0.3579	0.0039	4.1279	4.1318
94.9667	0.3572	0	4.1358	4.1358
95	0.3562	0	4.141	4.141
95.0333	0.3549	0.017	4.1331	4.1502
95.0667	0.3598	0.017	4.1371	4.1541
95.1	0.3588	0.017	4.1397	4.1567
95.1333	0.3598	0	4.1397	4.1397
95.1667	0.3598	0.017	4.1384	4.1554
95.2	0.3588	0.0039	4.145	4.1489
95.2333	0.3608	0.0039	4.1463	4.1502
95.2667	0.3565	0	4.1331	4.1331
95.3	0.3602	0.017	4.1266	4.1436
95.3333	0.3605	0.0039	4.1292	4.1331
95.3667	0.3595	0	4.1239	4.1239
95.4	0.3588	0.0039	4.1239	4.1278
95.4333	0.3585	0.017	4.1279	4.1449
95.4667	0.3605	0.0039	4.1318	4.1357
95.5	0.3608	0	4.1213	4.1213
95.5333	0.3588	0.017	4.1239	4.141
95.5667	0.3615	0	4.1239	4.1239
95.6	0.3582	0.0039	4.1239	4.1278
95.6333	0.3595	0.0039	4.1239	4.1278
95.6667	0.3582	0.0039	4.1279	4.1318
95.7	0.3615	0.017	4.1279	4.1449
95.7333	0.3621	0.0039	4.1239	4.1278
95.7667	0.3615	0.0039	4.1226	4.1265
95.8	0.3602	0	4.1344	4.1344
95.8333	0.3585	0.0039	4.1358	4.1396
95.8667	0.3598	0.0039	4.1358	4.1396
95.9	0.3595	0.0039	4.1344	4.1383
95.9333	0.3598	0.0039	4.1358	4.1396
95.9667	0.3612	0.0039	4.141	4.1449
96	0.3628	0.0039	4.1423	4.1462

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
96.0333	0.3621	0.017	4.1463	4.1633
96.0667	0.3608	0.017	4.141	4.1581
96.1	0.3631	0.017	4.1515	4.1686
96.1333	0.3595	0.017	4.1502	4.1673
96.1667	0.3608	0.0039	4.1489	4.1528
96.2	0.3592	0.0039	4.1436	4.1475
96.2333	0.3585	0.017	4.1515	4.1686
96.2667	0.3588	0.0039	4.1489	4.1528
96.3	0.3602	0	4.1476	4.1476
96.3333	0.3644	0.0039	4.1476	4.1515
96.3667	0.3612	0	4.1489	4.1489
96.4	0.3608	0.0039	4.1463	4.1502
96.4333	0.3608	0.0302	4.1502	4.1804
96.4667	0.3635	0.0302	4.1476	4.1778
96.5	0.3608	0.017	4.1555	4.1725
96.5333	0.3625	0.0039	4.1515	4.1554
96.5667	0.3651	0.017	4.1634	4.1804
96.6	0.3628	0.0039	4.1647	4.1686
96.6333	0.3605	0.0039	4.1581	4.162
96.6667	0.3621	0.0039	4.1555	4.1594
96.7	0.3608	0.017	4.1515	4.1686
96.7333	0.3592	0	4.1463	4.1463
96.7667	0.3602	0	4.1502	4.1502
96.8	0.3608	0.017	4.1515	4.1686
96.8333	0.3592	0.0039	4.1502	4.1541
96.8667	0.3621	0.0039	4.1542	4.1581
96.9	0.3648	0.017	4.1621	4.1791
96.9333	0.3595	0.0302	4.1542	4.1844
96.9667	0.3625	0.017	4.1542	4.1712
97	0.3628	0	4.1555	4.1555
97.0333	0.3615	0.0039	4.1515	4.1554
97.0667	0.3605	0.017	4.1529	4.1699
97.1	0.3598	0.0039	4.1568	4.1607
97.1333	0.3615	0.0039	4.1515	4.1554
97.1667	0.3631	0.0039	4.1476	4.1515
97.2	0.3625	0.0039	4.1502	4.1541
97.2333	0.3618	0.017	4.1489	4.1659
97.2667	0.3654	0	4.1423	4.1423
97.3	0.3641	0.017	4.1397	4.1567
97.3333	0.3638	0.017	4.1502	4.1673
97.3667	0.3628	0.0039	4.1423	4.1462
97.4	0.3644	0	4.1371	4.1371
97.4333	0.3641	0.0039	4.1384	4.1423

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97.4667	0.3615	0.017	4.1489	4.1659
97.5	0.3618	0.017	4.141	4.1581
97.5333	0.3651	0.017	4.1384	4.1554
97.5667	0.3625	0	4.141	4.141
97.6	0.3625	0.0039	4.1476	4.1515
97.6333	0.3641	0.0302	4.1476	4.1778
97.6667	0.3635	0.0039	4.1568	4.1607
97.7	0.3621	0.017	4.1529	4.1699
97.7333	0.3621	0	4.1515	4.1515
97.7667	0.3635	0.0039	4.1555	4.1594
97.8	0.3635	0.0039	4.1515	4.1554
97.8333	0.3644	0	4.1502	4.1502
97.8667	0.3615	0.0039	4.1476	4.1515
97.9	0.3641	0.0039	4.1502	4.1541
97.9333	0.3635	0.017	4.1594	4.1765
97.9667	0.3651	0.0039	4.1568	4.1607
98	0.3608	0.0039	4.1568	4.1607
98.0333	0.3638	0.017	4.1607	4.1778
98.0667	0.3628	0.0039	4.1568	4.1607
98.1	0.3658	0.017	4.1581	4.1752
98.1333	0.3648	0	4.1621	4.1621
98.1667	0.3635	0.017	4.1594	4.1765
98.2	0.3648	0.017	4.1542	4.1712
98.2333	0.3658	0.0039	4.1502	4.1541
98.2667	0.3644	0.0302	4.1673	4.1975
98.3	0.37	0.0039	4.1581	4.162
98.3333	0.373	0.0039	4.1515	4.1554
98.3667	0.3819	0.0039	4.1581	4.162
98.4	0.3928	0.017	4.1686	4.1857
98.4333	0.4033	0	4.1778	4.1778
98.4667	0.4155	0.0039	4.1923	4.1962
98.5	0.4267	0.017	4.212	4.2291
98.5333	0.4425	0.017	4.2528	4.2698
98.5667	0.4569	0.0039	4.2594	4.2633
98.6	0.4727	0.0039	4.2725	4.2764
98.6333	0.4902	0.0039	4.2909	4.2948
98.6667	0.5057	0.0039	4.3014	4.3053
98.7	0.5188	0.0039	4.3383	4.3422
98.7333	0.5251	0.0039	4.4632	4.4671
98.7667	0.5448	0.0039	4.4684	4.4723
98.8	0.556	0.0039	4.4671	4.471
98.8333	0.5682	0.017	4.4855	4.5026
98.8667	0.586	0.017	4.5013	4.5184

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
98.9	0.5975	0.017	4.5092	4.5262
98.9333	0.6093	0.017	4.5342	4.5512
98.9667	0.6228	0.0039	4.5671	4.571
99	0.633	0	4.5934	4.5934
99.0333	0.6406	0.0039	4.5986	4.6025
99.0667	0.6551	0.017	4.6262	4.6433
99.1	0.6656	0.0039	4.646	4.6499
99.1333	0.6735	0.0039	4.6946	4.6985
99.1667	0.6847	0.0039	4.7209	4.7248
99.2	0.6943	0.0039	4.7354	4.7393
99.2333	0.7015	0.0039	4.7669	4.7708
99.2667	0.7124	0.017	4.784	4.8011
99.3	0.719	0.0039	4.8051	4.809
99.3333	0.7223	0.0039	4.8327	4.8366
99.3667	0.7236	0.0039	4.8432	4.8471
99.4	0.7262	0.0039	4.8656	4.8695
99.4333	0.7282	0.017	4.8892	4.9063
99.4667	0.7295	0	4.9011	4.9011
99.5	0.7236	0.0039	4.9129	4.9168
99.5333	0.7209	0.0039	4.9326	4.9365
99.5667	0.7242	0.0039	4.9576	4.9615
99.6	0.7216	0	4.9708	4.9708
99.6333	0.7272	0.017	4.9918	5.0088
99.6667	0.7282	0.017	5.0036	5.0207
99.7	0.7282	0.0039	5.0286	5.0325
99.7333	0.7295	0.017	5.047	5.0641
99.7667	0.7269	0	5.0694	5.0694
99.8	0.7278	0.0039	5.0641	5.068
99.8333	0.7272	0.017	5.0878	5.1048
99.8667	0.7252	0	5.1062	5.1062
99.9	0.718	0.017	5.1102	5.1272
99.9333	0.7117	0	5.1351	5.1351
99.9667	0.7147	0.017	5.1391	5.1561
100	0.712	0.0039	5.1575	5.1614
100.0333	0.7153	0.0039	5.1785	5.1824
100.0667	0.7137	0	5.193	5.193
100.1	0.7147	0.0039	5.2035	5.2074
100.1333	0.715	0	5.2246	5.2246
100.1667	0.7117	0.017	5.2377	5.2547
100.2	0.713	0	5.2417	5.2417
100.2333	0.7134	0.0039	5.2495	5.2534
100.2667	0.717	0.0039	5.2522	5.2561
100.3	0.713	0.017	5.2706	5.2876

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100.3333	0.7127	0	5.2785	5.2785
100.3667	0.7134	0.0039	5.2903	5.2942
100.4	0.7157	0.0039	5.3061	5.31
100.4333	0.7157	0	5.3153	5.3153
100.4667	0.7163	0.0039	5.3284	5.3323
100.5	0.7134	0.0039	5.3324	5.3363
100.5333	0.7193	0.0039	5.3482	5.3521
100.5667	0.7186	0.0039	5.3468	5.3507
100.6	0.716	0.0039	5.3613	5.3652
100.6333	0.7193	0	5.3692	5.3692
100.6667	0.7209	0.0039	5.385	5.3889
100.7	0.7216	0.017	5.3981	5.4152
100.7333	0.7196	0.0039	5.4034	5.4073
100.7667	0.7223	0.017	5.4087	5.4257
100.8	0.7219	0.0039	5.4218	5.4257
100.8333	0.7216	0.0039	5.4284	5.4323
100.8667	0.7229	0.0302	5.4428	5.473
100.9	0.7242	0.0039	5.4613	5.4651
100.9333	0.7255	0.017	5.4757	5.4928
100.9667	0.7275	0.0039	5.4718	5.4757
101	0.7265	0	5.4849	5.4849
101.0333	0.7259	0.017	5.5007	5.5177
101.0667	0.7255	0.0039	5.4968	5.5006
101.1	0.7288	0.017	5.5073	5.5243
101.1333	0.7298	0.0039	5.5191	5.523
101.1667	0.7292	0.0039	5.5283	5.5322
101.2	0.7334	0.0039	5.5388	5.5427
101.2333	0.716	0.0039	5.5375	5.5414
101.2667	0.716	0.0039	5.5533	5.5572
101.3	0.7209	0.0039	5.5572	5.5611
101.3333	0.7183	0.0039	5.5717	5.5756
101.3667	0.7206	0	5.5743	5.5743
101.4	0.7246	0.0039	5.5835	5.5874
101.4333	0.7232	0	5.602	5.602
101.4667	0.7223	0.017	5.6072	5.6243
101.5	0.7219	0.0039	5.6217	5.6256
101.5333	0.7203	0.0039	5.6269	5.6308
101.5667	0.7229	0.017	5.6283	5.6453
101.6	0.7229	0.0039	5.6414	5.6453
101.6333	0.7209	0.0039	5.6375	5.6413
101.6667	0.7236	0.0039	5.6322	5.6361
101.7	0.7223	0.0039	5.6427	5.6466
101.7333	0.7213	0.017	5.644	5.6611

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101.7667	0.7216	0	5.6677	5.6677
101.8	0.7213	0.017	5.669	5.6861
101.8333	0.7236	0.0039	5.6651	5.669
101.8667	0.7183	0	5.6874	5.6874
101.9	0.7199	0	5.6966	5.6966
101.9333	0.719	0.0039	5.6848	5.6887
101.9667	0.7186	0.017	5.7006	5.7176
102	0.7183	0.017	5.7006	5.7176
102.0333	0.7216	0	5.7111	5.7111
102.0667	0.718	0	5.715	5.715
102.1	0.7176	0	5.7203	5.7203
102.1333	0.7199	0.0039	5.7335	5.7373
102.1667	0.7209	0.0039	5.744	5.7479
102.2	0.7157	0.0302	5.7427	5.7728
102.2333	0.719	0.0039	5.7611	5.765
102.2667	0.7196	0.0039	5.7558	5.7597
102.3	0.7163	0.0039	5.7624	5.7663
102.3333	0.7163	0.017	5.7624	5.7794
102.3667	0.7196	0.017	5.7676	5.7847
102.4	0.7186	0	5.765	5.765
102.4333	0.7196	0.017	5.7703	5.7873
102.4667	0.7157	0.0039	5.7887	5.7926
102.5	0.7157	0	5.7953	5.7953
102.5333	0.7167	0	5.7887	5.7887
102.5667	0.7167	0.0039	5.7979	5.8018
102.6	0.7153	0.0039	5.8071	5.811
102.6333	0.7157	0	5.8071	5.8071
102.6667	0.7163	0.017	5.8058	5.8228
102.7	0.7157	0	5.8137	5.8137
102.7333	0.713	0.0039	5.8281	5.832
102.7667	0.7176	0.0039	5.8308	5.8346
102.8	0.7127	0.0039	5.8386	5.8425
102.8333	0.7127	0.017	5.8479	5.8649
102.8667	0.713	0.017	5.8439	5.8609
102.9	0.7137	0.0039	5.8544	5.8583
102.9333	0.718	0.0039	5.8649	5.8688
102.9667	0.7176	0.0039	5.8557	5.8596
103	0.7167	0.0039	5.8649	5.8688
103.0333	0.7144	0	5.8689	5.8689
103.0667	0.7117	0.017	5.8755	5.8925
103.1	0.715	0.0039	5.8873	5.8912
103.1333	0.7144	0.0039	5.8873	5.8912
103.1667	0.7153	0.0039	5.9018	5.9057

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103.2	0.715	0.017	5.886	5.903
103.2333	0.715	0.017	5.8899	5.907
103.2667	0.7104	0	5.8899	5.8899
103.3	0.7147	0.0039	5.9057	5.9096
103.3333	0.713	0.0039	5.911	5.9149
103.3667	0.7127	0.017	5.9044	5.9214
103.4	0.7127	0.0039	5.911	5.9149
103.4333	0.7144	0.017	5.9123	5.9293
103.4667	0.7153	0.0302	5.932	5.9622
103.5	0.7147	0.017	5.9333	5.9504
103.5333	0.7147	0.0039	5.9241	5.928
103.5667	0.713	0.0039	5.9373	5.9412
103.6	0.7114	0.0039	5.9452	5.9491
103.6333	0.712	0.0039	5.9438	5.9477
103.6667	0.7167	0.017	5.9386	5.9556
103.7	0.713	0.0039	5.9491	5.953
103.7333	0.714	0.017	5.9517	5.9688
103.7667	0.7134	0.0039	5.9531	5.9569
103.8	0.7124	0	5.9531	5.9531
103.8333	0.7114	0	5.9596	5.9596
103.8667	0.7137	0	5.9741	5.9741
103.9	0.7134	0.0039	5.9688	5.9727
103.9333	0.7124	0.0039	5.9794	5.9832
103.9667	0.712	0.017	5.9846	6.0017
104	0.7097	0.017	5.978	5.9951
104.0333	0.7114	0.0039	5.9899	5.9938
104.0667	0.7137	0	5.9991	5.9991
104.1	0.713	0.017	5.9964	6.0135
104.1333	0.716	0.017	5.9899	6.0069
104.1667	0.7153	0.0039	6.0043	6.0082
104.2	0.7097	0	6.0057	6.0057
104.2333	0.7124	0.0039	6.0057	6.0095
104.2667	0.7127	0	5.9978	5.9978
104.3	0.7127	0.017	6.0162	6.0332
104.3333	0.7137	0.0039	6.0214	6.0253
104.3667	0.7104	0	6.0214	6.0214
104.4	0.7114	0.0039	6.0227	6.0266
104.4333	0.7157	0.017	6.0188	6.0358
104.4667	0.7114	0.0039	6.0385	6.0424
104.5	0.7163	0.0039	6.0504	6.0542
104.5333	0.7137	0.0039	6.0464	6.0503
104.5667	0.713	0.017	6.0425	6.0595
104.6	0.7144	0	6.049	6.049

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104.6333	0.7124	0.017	6.0464	6.0635
104.6667	0.7137	0	6.0438	6.0438
104.7	0.7117	0	6.0398	6.0398
104.7333	0.7153	0.017	6.0517	6.0687
104.7667	0.7144	0.017	6.0556	6.0727
104.8	0.7127	0.0039	6.053	6.0569
104.8333	0.7153	0.0039	6.0583	6.0621
104.8667	0.714	0.0039	6.074	6.0779
104.9	0.7157	0.017	6.0701	6.0871
104.9333	0.7153	0.0039	6.074	6.0779
104.9667	0.717	0	6.078	6.078
105	0.7144	0	6.0701	6.0701
105.0333	0.7153	0.017	6.0819	6.099
105.0667	0.7144	0.0039	6.0845	6.0884
105.1	0.7114	0.0302	6.0872	6.1174
105.1333	0.7167	0.017	6.0845	6.1016
105.1667	0.714	0.0039	6.099	6.1029
105.2	0.7183	0.0039	6.0872	6.0911
105.2333	0.714	0.0039	6.0951	6.099
105.2667	0.7199	0.0039	6.0938	6.0976
105.3	0.7147	0.017	6.1016	6.1187
105.3333	0.7163	0	6.0951	6.0951
105.3667	0.7144	0.0039	6.1108	6.1147
105.4	0.7176	0.017	6.1135	6.1305
105.4333	0.7163	0	6.1122	6.1122
105.4667	0.7153	0.0039	6.1108	6.1147
105.5	0.7137	0.017	6.1161	6.1331
105.5333	0.715	0.017	6.124	6.141
105.5667	0.7157	0.0039	6.1187	6.1226
105.6	0.715	0.0039	6.1201	6.1239
105.6333	0.7163	0	6.1345	6.1345
105.6667	0.7193	0.0039	6.145	6.1489
105.7	0.7203	0.0039	6.1293	6.1331
105.7333	0.719	0	6.1358	6.1358
105.7667	0.7209	0.017	6.149	6.166
105.8	0.719	0.0039	6.1411	6.145
105.8333	0.7203	0	6.1424	6.1424
105.8667	0.7196	0.0039	6.1437	6.1476
105.9	0.7196	0.017	6.1516	6.1687
105.9333	0.7173	0.0039	6.1477	6.1516
105.9667	0.7196	0.0039	6.1529	6.1568
106	0.7193	0.017	6.1503	6.1673
106.0333	0.719	0.0039	6.1464	6.1502

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106.0667	0.7167	0.017	6.1582	6.1752
106.1	0.7199	0.0039	6.1608	6.1647
106.1333	0.7193	0.0039	6.1661	6.17
106.1667	0.7193	0.017	6.1727	6.1897
106.2	0.7206	0.0433	6.174	6.2173
106.2333	0.7173	0.017	6.1687	6.1857
106.2667	0.7206	0.0039	6.17	6.1739
106.3	0.7183	0.017	6.1727	6.1897
106.3333	0.7219	0.017	6.1753	6.1923
106.3667	0.7186	0.0039	6.1661	6.17
106.4	0.7236	0	6.1648	6.1648
106.4333	0.7216	0.0039	6.174	6.1779
106.4667	0.7219	0.0039	6.1674	6.1713
106.5	0.719	0.017	6.1897	6.2068
106.5333	0.718	0.0039	6.1766	6.1805
106.5667	0.7226	0.0039	6.1871	6.191
106.6	0.7206	0.017	6.1753	6.1923
106.6333	0.7196	0.0039	6.1753	6.1792
106.6667	0.7209	0.0039	6.1884	6.1923
106.7	0.7209	0.017	6.1897	6.2068
106.7333	0.7246	0.0039	6.195	6.1989
106.7667	0.7229	0.0039	6.1963	6.2002
106.8	0.7236	0.0039	6.195	6.1989
106.8333	0.7232	0.0039	6.1924	6.1963
106.8667	0.7239	0.017	6.1911	6.2081
106.9	0.7226	0.017	6.2003	6.2173
106.9333	0.7249	0.0039	6.2055	6.2094
106.9667	0.7209	0.017	6.199	6.216
107	0.7239	0	6.2003	6.2003
107.0333	0.7229	0.0039	6.2055	6.2094
107.0667	0.7249	0.017	6.22	6.237
107.1	0.7236	0.0039	6.2147	6.2186
107.1333	0.7246	0.0039	6.2055	6.2094
107.1667	0.7236	0.0039	6.2174	6.2213
107.2	0.7236	0	6.2226	6.2226
107.2333	0.7249	0.017	6.2213	6.2383
107.2667	0.7249	0.0039	6.216	6.2199
107.3	0.7226	0.0039	6.2095	6.2134
107.3333	0.7252	0.017	6.2305	6.2476
107.3667	0.7232	0.0039	6.2371	6.241
107.4	0.7282	0.0039	6.2345	6.2383
107.4333	0.7269	0	6.2279	6.2279
107.4667	0.7209	0.0039	6.2345	6.2383

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
107.5	0.7262	0	6.2371	6.2371
107.5333	0.7269	0	6.2371	6.2371
107.5667	0.7269	0	6.2358	6.2358
107.6	0.7259	0.0039	6.2371	6.241
107.6333	0.7229	0	6.2384	6.2384
107.6667	0.7278	0.0039	6.241	6.2449
107.7	0.7242	0.0039	6.2516	6.2554
107.7333	0.7259	0.0039	6.2437	6.2476
107.7667	0.7259	0.0039	6.2476	6.2515
107.8	0.7252	0.017	6.2423	6.2594
107.8333	0.7246	0.0039	6.2463	6.2502
107.8667	0.7298	0.0039	6.2516	6.2554
107.9	0.7275	0	6.2581	6.2581
107.9333	0.7269	0.0039	6.2489	6.2528
107.9667	0.7255	0.0039	6.2529	6.2568
108	0.7275	0.017	6.2476	6.2646
108.0333	0.7285	0.0039	6.2476	6.2515
108.0667	0.7272	0.017	6.2581	6.2752
108.1	0.7288	0.017	6.2647	6.2817
108.1333	0.7275	0.0039	6.2713	6.2752
108.1667	0.7269	0.017	6.266	6.2831
108.2	0.7285	0.0039	6.2673	6.2712
108.2333	0.7285	0.0039	6.27	6.2739
108.2667	0.7272	0.0039	6.2673	6.2712
108.3	0.7282	0.017	6.266	6.2831
108.3333	0.7259	0	6.2673	6.2673
108.3667	0.7259	0.017	6.2792	6.2962
108.4	0.7305	0	6.2792	6.2792
108.4333	0.7292	0.017	6.2792	6.2962
108.4667	0.7249	0.017	6.2792	6.2962
108.5	0.7252	0.017	6.2923	6.3094
108.5333	0.7288	0.0039	6.291	6.2949
108.5667	0.7282	0.0039	6.2871	6.2909
108.6	0.7288	0.0302	6.2844	6.3146
108.6333	0.7272	0.017	6.2897	6.3067
108.6667	0.7295	0.0039	6.2976	6.3015
108.7	0.7282	0	6.2936	6.2936
108.7333	0.7295	0	6.2963	6.2963
108.7667	0.7302	0	6.2963	6.2963
108.8	0.7308	0.0039	6.2949	6.2988
108.8333	0.7272	0.017	6.2963	6.3133
108.8667	0.7305	0.017	6.2989	6.3159
108.9	0.7308	0.017	6.2949	6.312

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
108.9333	0.7295	0.0039	6.3055	6.3094
108.9667	0.7311	0.017	6.3081	6.3251
109	0.7305	0.0039	6.312	6.3159
109.0333	0.7272	0.017	6.312	6.3291
109.0667	0.7269	0.0039	6.3134	6.3172
109.1	0.7255	0.0039	6.316	6.3199
109.1333	0.7232	0.0039	6.316	6.3199
109.1667	0.7265	0.017	6.316	6.333
109.2	0.7272	0.0039	6.3199	6.3238
109.2333	0.7278	0.0039	6.3107	6.3146
109.2667	0.7288	0	6.3186	6.3186
109.3	0.7259	0.0039	6.3344	6.3383
109.3333	0.7288	0.0039	6.3212	6.3251
109.3667	0.7272	0.0039	6.3318	6.3357
109.4	0.7272	0.017	6.3318	6.3488
109.4333	0.7295	0.017	6.3357	6.3527
109.4667	0.7275	0	6.3318	6.3318
109.5	0.7272	0	6.3344	6.3344
109.5333	0.7272	0.0302	6.3357	6.3659
109.5667	0.7282	0.0039	6.3278	6.3317
109.6	0.7269	0.0039	6.3423	6.3462
109.6333	0.7282	0.0302	6.3383	6.3685
109.6667	0.7288	0.0039	6.3383	6.3422
109.7	0.7255	0.0039	6.3436	6.3475
109.7333	0.7255	0.017	6.3423	6.3593
109.7667	0.7242	0.017	6.3475	6.3646
109.8	0.7269	0.0039	6.3449	6.3488
109.8333	0.7295	0	6.3423	6.3423
109.8667	0.7295	0	6.3489	6.3489
109.9	0.7282	0.017	6.3475	6.3646
109.9333	0.7288	0	6.3502	6.3502
109.9667	0.7285	0.017	6.3515	6.3685
110	0.7282	0.017	6.3489	6.3659
110.0333	0.7278	0	6.3475	6.3475
110.0667	0.7259	0.0039	6.3462	6.3501
110.1	0.7321	0.0039	6.3528	6.3567
110.1333	0.7282	0.0039	6.3541	6.358
110.1667	0.7259	0.0039	6.3567	6.3606
110.2	0.7262	0.0039	6.3581	6.362
110.2333	0.7292	0.0039	6.3541	6.358
110.2667	0.7288	0.0039	6.3581	6.362
110.3	0.7265	0	6.3725	6.3725
110.3333	0.7282	0.017	6.3752	6.3922

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
110.3667	0.7265	0.017	6.3686	6.3856
110.4	0.7302	0.017	6.3646	6.3817
110.4333	0.7282	0.0039	6.3673	6.3712
110.4667	0.7285	0.0039	6.3633	6.3672
110.5	0.7272	0.017	6.3633	6.3804
110.5333	0.7275	0	6.3712	6.3712
110.5667	0.7275	0	6.3686	6.3686
110.6	0.7321	0	6.3673	6.3673
110.6333	0.7272	0.0302	6.3725	6.4027
110.6667	0.7282	0.0039	6.3712	6.3751
110.7	0.7272	0.0039	6.3804	6.3843
110.7333	0.7269	0.0039	6.3752	6.379
110.7667	0.7265	0.017	6.387	6.404
110.8	0.7272	0	6.3752	6.3752
110.8333	0.7311	0.017	6.3765	6.3935
110.8667	0.7269	0.0039	6.3844	6.3883
110.9	0.7262	0	6.3896	6.3896
110.9333	0.7285	0.0039	6.387	6.3909
110.9667	0.7275	0	6.387	6.387
111	0.7295	0.017	6.387	6.404
111.0333	0.7295	0.017	6.3962	6.4132
111.0667	0.7275	0.0039	6.3896	6.3935
111.1	0.7302	0.0039	6.3949	6.3988
111.1333	0.7275	0.017	6.3804	6.3975
111.1667	0.7288	0.017	6.3883	6.4053
111.2	0.7305	0.017	6.387	6.404
111.2333	0.7292	0.017	6.3896	6.4067
111.2667	0.7295	0.0039	6.3883	6.3922
111.3	0.7246	0.0039	6.3988	6.4027
111.3333	0.7236	0	6.3844	6.3844
111.3667	0.7252	0	6.3883	6.3883
111.4	0.7236	0.0039	6.3896	6.3935
111.4333	0.7239	0.017	6.3896	6.4067
111.4667	0.7252	0	6.3896	6.3896
111.5	0.7272	0.0039	6.3923	6.3961
111.5333	0.7226	0.0039	6.3844	6.3883
111.5667	0.7239	0	6.3896	6.3896
111.6	0.7232	0	6.3923	6.3923
111.6333	0.7262	0	6.3975	6.3975
111.6667	0.7219	0	6.4001	6.4001
111.7	0.7259	0.0039	6.4054	6.4093
111.7333	0.7223	0.0039	6.4015	6.4053
111.7667	0.7232	0	6.4028	6.4028

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
111.8	0.7226	0.0039	6.4041	6.408
111.8333	0.7232	0.017	6.4001	6.4172
111.8667	0.7203	0	6.4054	6.4054
111.9	0.7232	0.017	6.4028	6.4198
111.9333	0.7206	0.017	6.3975	6.4146
111.9667	0.7255	0.0039	6.4015	6.4053
112	0.7242	0.0039	6.4067	6.4106
112.0333	0.7249	0.017	6.4054	6.4224
112.0667	0.7209	0.0039	6.4001	6.404
112.1	0.7259	0.0039	6.4015	6.4053
112.1333	0.7223	0	6.3949	6.3949
112.1667	0.7219	0.017	6.3923	6.4093
112.2	0.7206	0.0039	6.3857	6.3896
112.2333	0.7203	0.0039	6.3909	6.3948
112.2667	0.7242	0.0039	6.387	6.3909
112.3	0.7206	0.0039	6.3923	6.3961
112.3333	0.7203	0	6.3857	6.3857
112.3667	0.7229	0.0039	6.3857	6.3896
112.4	0.7226	0.0039	6.3975	6.4014
112.4333	0.7216	0.017	6.3857	6.4027
112.4667	0.7232	0.0039	6.3975	6.4014
112.5	0.7232	0.0039	6.3962	6.4001
112.5333	0.7206	0.0039	6.4001	6.404
112.5667	0.7239	0.0039	6.387	6.3909
112.6	0.7219	0	6.387	6.387
112.6333	0.7193	0.0039	6.3844	6.3883
112.6667	0.7213	0	6.3923	6.3923
112.7	0.7229	0.017	6.4001	6.4172
112.7333	0.7239	0.017	6.3909	6.408
112.7667	0.7199	0.0039	6.3936	6.3975
112.8	0.7213	0.0039	6.3909	6.3948
112.8333	0.7223	0	6.4107	6.4107
112.8667	0.7199	0.0039	6.4067	6.4106
112.9	0.7223	0	6.4054	6.4054
112.9333	0.7219	0.0039	6.3949	6.3988
112.9667	0.7213	0.0039	6.383	6.3869
113	0.7219	0.0039	6.3975	6.4014
113.0333	0.7223	0.0039	6.3975	6.4014
113.0667	0.7216	0.0039	6.3949	6.3988
113.1	0.7193	0.017	6.4015	6.4185
113.1333	0.7209	0.0039	6.3896	6.3935
113.1667	0.7229	0.0039	6.387	6.3909
113.2	0.7219	0.0039	6.3923	6.3961

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
113.2333	0.7206	0.0039	6.4015	6.4053
113.2667	0.7186	0.017	6.3949	6.4119
113.3	0.7203	0.017	6.3909	6.408
113.3333	0.7199	0.0039	6.3883	6.3922
113.3667	0.7213	0.0039	6.3844	6.3883
113.4	0.7223	0.017	6.3738	6.3909
113.4333	0.7216	0.0039	6.3791	6.383
113.4667	0.7203	0.017	6.3936	6.4106
113.5	0.7219	0.0039	6.3817	6.3856
113.5333	0.7216	0.0039	6.3909	6.3948
113.5667	0.7199	0	6.4015	6.4015
113.6	0.7203	0.0039	6.3936	6.3975
113.6333	0.7186	0.0039	6.3896	6.3935
113.6667	0.7219	0.017	6.3962	6.4132
113.7	0.7203	0.017	6.3883	6.4053
113.7333	0.7176	0.0039	6.3817	6.3856
113.7667	0.7206	0.017	6.3949	6.4119
113.8	0.7199	0.0039	6.3962	6.4001
113.8333	0.719	0.0039	6.3896	6.3935
113.8667	0.7199	0.017	6.3923	6.4093
113.9	0.7219	0.0039	6.3883	6.3922
113.9333	0.7203	0.0039	6.3896	6.3935
113.9667	0.719	0	6.3949	6.3949
114	0.7213	0	6.3896	6.3896
114.0333	0.7183	0.0039	6.4015	6.4053
114.0667	0.7199	0.0039	6.3923	6.3961
114.1	0.7186	0.0039	6.3988	6.4027
114.1333	0.7203	0.0039	6.4001	6.404
114.1667	0.718	0.0039	6.4054	6.4093
114.2	0.719	0.0039	6.3975	6.4014
114.2333	0.7213	0.0039	6.3988	6.4027
114.2667	0.7193	0	6.4015	6.4015
114.3	0.7196	0	6.3949	6.3949
114.3333	0.717	0	6.3949	6.3949
114.3667	0.7167	0.0039	6.387	6.3909
114.4	0.7186	0	6.3883	6.3883
114.4333	0.719	0.017	6.3962	6.4132
114.4667	0.7186	0.0039	6.4067	6.4106
114.5	0.7176	0.0039	6.408	6.4119
114.5333	0.7209	0.017	6.4067	6.4238
114.5667	0.7186	0	6.3923	6.3923
114.6	0.7193	0.017	6.4028	6.4198
114.6333	0.7196	0.0039	6.3975	6.4014

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
114.6667	0.7176	0.0039	6.3975	6.4014
114.7	0.7186	0.0039	6.4001	6.404
114.7333	0.7163	0.0039	6.3949	6.3988
114.7667	0.7183	0.017	6.3909	6.408
114.8	0.7163	0.0039	6.3923	6.3961
114.8333	0.7183	0.0039	6.3975	6.4014
114.8667	0.7199	0.0039	6.4054	6.4093
114.9	0.7199	0.017	6.4001	6.4172
114.9333	0.7193	0.0039	6.3949	6.3988
114.9667	0.719	0.0039	6.3936	6.3975
115	0.7167	0.017	6.3962	6.4132
115.0333	0.7209	0.0039	6.3988	6.4027
115.0667	0.7193	0.0039	6.4054	6.4093
115.1	0.7199	0.0039	6.4015	6.4053
115.1333	0.719	0.0039	6.3949	6.3988
115.1667	0.7186	0	6.4015	6.4015
115.2	0.717	0	6.4041	6.4041
115.2333	0.719	0.0039	6.3975	6.4014
115.2667	0.717	0.0039	6.3975	6.4014
115.3	0.7196	0.0039	6.4028	6.4067
115.3333	0.719	0.0039	6.3949	6.3988
115.3667	0.718	0.017	6.4028	6.4198
115.4	0.7206	0.017	6.4028	6.4198
115.4333	0.7186	0.0039	6.4133	6.4172
115.4667	0.719	0.017	6.3962	6.4132
115.5	0.7186	0.0039	6.3975	6.4014
115.5333	0.7193	0.017	6.4001	6.4172
115.5667	0.7183	0.0039	6.4054	6.4093
115.6	0.7163	0.017	6.4015	6.4185
115.6333	0.7199	0.0039	6.4054	6.4093
115.6667	0.7176	0	6.3975	6.3975
115.7	0.7167	0.0039	6.4107	6.4146
115.7333	0.7186	0.017	6.3988	6.4159
115.7667	0.7193	0.017	6.4067	6.4238
115.8	0.717	0.017	6.408	6.4251
115.8333	0.7196	0.017	6.4093	6.4264
115.8667	0.7216	0.0039	6.4133	6.4172
115.9	0.7186	0.0039	6.4159	6.4198
115.9333	0.7173	0.0039	6.4028	6.4067
115.9667	0.7186	0	6.4107	6.4107
116	0.719	0.0039	6.4133	6.4172
116.0333	0.7193	0.0039	6.4067	6.4106
116.0667	0.7216	0.017	6.4054	6.4224

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
116.1	0.7183	0	6.4107	6.4107
116.1333	0.7203	0.0039	6.408	6.4119
116.1667	0.7203	0.0039	6.4093	6.4132
116.2	0.7226	0.0302	6.4159	6.4461
116.2333	0.7206	0.017	6.4159	6.433
116.2667	0.7173	0.0039	6.4054	6.4093
116.3	0.7183	0.0039	6.4133	6.4172
116.3333	0.7183	0.0039	6.4093	6.4132
116.3667	0.717	0	6.4028	6.4028
116.4	0.7206	0.0039	6.4067	6.4106
116.4333	0.718	0.017	6.408	6.4251
116.4667	0.7213	0.0039	6.4028	6.4067
116.5	0.7229	0.017	6.412	6.429
116.5333	0.7216	0.0039	6.4107	6.4146
116.5667	0.7216	0.017	6.4054	6.4224
116.6	0.7206	0.0302	6.4001	6.4303
116.6333	0.7186	0.0039	6.4107	6.4146
116.6667	0.7246	0	6.4093	6.4093
116.7	0.7196	0.0039	6.412	6.4159
116.7333	0.7203	0.0039	6.4186	6.4224
116.7667	0.7193	0.0039	6.4199	6.4238
116.8	0.7219	0.0302	6.4278	6.4579
116.8333	0.7199	0.0039	6.4172	6.4211
116.8667	0.719	0.017	6.4212	6.4382
116.9	0.7176	0	6.4264	6.4264
116.9333	0.7213	0.0039	6.4225	6.4264
116.9667	0.7209	0.0039	6.4186	6.4224
117	0.719	0.0039	6.4278	6.4316
117.0333	0.718	0.0039	6.4212	6.4251
117.0667	0.7206	0.0039	6.4199	6.4238
117.1	0.7209	0.017	6.4133	6.4303
117.1333	0.7186	0	6.4172	6.4172
117.1667	0.7167	0.017	6.4093	6.4264
117.2	0.7196	0.0039	6.4028	6.4067
117.2333	0.7206	0.0039	6.4172	6.4211
117.2667	0.7216	0	6.4107	6.4107
117.3	0.7199	0.0039	6.4172	6.4211
117.3333	0.717	0.0039	6.4133	6.4172
117.3667	0.717	0	6.4186	6.4186
117.4	0.7183	0.017	6.408	6.4251
117.4333	0.7176	0.017	6.4146	6.4316
117.4667	0.7157	0.017	6.4133	6.4303
117.5	0.717	0.017	6.4015	6.4185

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
117.5333	0.7173	0	6.4067	6.4067
117.5667	0.7183	0.017	6.4054	6.4224
117.6	0.7176	0.0039	6.4028	6.4067
117.6333	0.716	0	6.4041	6.4041
117.6667	0.719	0.0039	6.4107	6.4146
117.7	0.7153	0	6.4054	6.4054
117.7333	0.7176	0.0039	6.4172	6.4211
117.7667	0.713	0.017	6.4186	6.4356
117.8	0.718	0.017	6.4028	6.4198
117.8333	0.717	0.017	6.4093	6.4264
117.8667	0.7157	0.0039	6.4054	6.4093
117.9	0.7147	0.017	6.3949	6.4119
117.9333	0.716	0.0039	6.4028	6.4067
117.9667	0.7176	0.0039	6.3936	6.3975
118	0.7144	0	6.4054	6.4054
118.0333	0.7157	0.0039	6.4028	6.4067
118.0667	0.7173	0.0039	6.3988	6.4027
118.1	0.7163	0.0039	6.3962	6.4001
118.1333	0.717	0.0039	6.4028	6.4067
118.1667	0.715	0.0039	6.3962	6.4001
118.2	0.718	0.017	6.3975	6.4146
118.2333	0.713	0.0039	6.4054	6.4093
118.2667	0.7173	0.0039	6.3975	6.4014
118.3	0.716	0	6.4054	6.4054
118.3333	0.7137	0.0039	6.4015	6.4053
118.3667	0.7127	0.017	6.4015	6.4185
118.4	0.718	0.0039	6.3975	6.4014
118.4333	0.715	0.0039	6.4028	6.4067
118.4667	0.7147	0.0039	6.3949	6.3988
118.5	0.7137	0.0039	6.387	6.3909
118.5333	0.713	0.0039	6.3988	6.4027
118.5667	0.7167	0.0302	6.3923	6.4224
118.6	0.7147	0.017	6.4054	6.4224
118.6333	0.715	0	6.4067	6.4067
118.6667	0.715	0	6.4054	6.4054
118.7	0.717	0.0039	6.4028	6.4067
118.7333	0.7163	0.017	6.4054	6.4224
118.7667	0.714	0.0039	6.4054	6.4093
118.8	0.7127	0.0039	6.4028	6.4067
118.8333	0.7157	0	6.4054	6.4054
118.8667	0.715	0.0039	6.4133	6.4172
118.9	0.7157	0.0039	6.3988	6.4027
118.9333	0.7111	0.017	6.4054	6.4224

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
118.9667	0.7157	0.0039	6.4067	6.4106
119	0.7147	0	6.4054	6.4054
119.0333	0.7144	0.017	6.4133	6.4303
119.0667	0.7124	0.0039	6.4107	6.4146
119.1	0.715	0	6.4015	6.4015
119.1333	0.714	0	6.4093	6.4093
119.1667	0.7127	0.0433	6.4067	6.4501
119.2	0.7127	0	6.4054	6.4054
119.2333	0.713	0.017	6.3949	6.4119
119.2667	0.714	0.0039	6.4054	6.4093
119.3	0.714	0.0039	6.412	6.4159
119.3333	0.7183	0.017	6.4054	6.4224
119.3667	0.714	0.017	6.4054	6.4224
119.4	0.7157	0.0039	6.4054	6.4093
119.4333	0.7124	0.0039	6.4028	6.4067
119.4667	0.713	0.0039	6.412	6.4159
119.5	0.7144	0.017	6.4107	6.4277
119.5333	0.7163	0.0039	6.408	6.4119
119.5667	0.7147	0.017	6.4028	6.4198
119.6	0.7117	0.0039	6.4172	6.4211
119.6333	0.7144	0	6.412	6.412
119.6667	0.714	0.017	6.4067	6.4238
119.7	0.714	0	6.3988	6.3988
119.7333	0.7117	0.0039	6.4133	6.4172
119.7667	0.7111	0.0039	6.4107	6.4146
119.8	0.7144	0.0039	6.4054	6.4093
119.8333	0.7134	0.0039	6.3988	6.4027
119.8667	0.7124	0	6.3962	6.3962
119.9	0.7111	0.0039	6.4067	6.4106
119.9333	0.7124	0.0039	6.4028	6.4067
119.9667	0.713	0.0039	6.4107	6.4146
120	0.7127	0	6.3936	6.3936
120.0333	0.7124	0.017	6.4028	6.4198
120.0667	0.713	0.017	6.4067	6.4238
120.1	0.7111	0.017	6.4054	6.4224
120.1333	0.712	0	6.4041	6.4041
120.1667	0.7114	0.0039	6.4054	6.4093
120.2	0.715	0	6.4028	6.4028
120.2333	0.713	0.0039	6.4146	6.4185
120.2667	0.714	0.0039	6.4159	6.4198
120.3	0.713	0.017	6.408	6.4251
120.3333	0.7101	0.0039	6.4093	6.4132
120.3667	0.7137	0.017	6.4054	6.4224

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
120.4	0.7157	0.0039	6.3988	6.4027
120.4333	0.7124	0.0039	6.3975	6.4014
120.4667	0.7117	0.017	6.4015	6.4185
120.5	0.7124	0	6.4001	6.4001
120.5333	0.713	0.0039	6.3962	6.4001
120.5667	0.7153	0.017	6.4054	6.4224
120.6	0.7111	0.0039	6.4015	6.4053
120.6333	0.713	0.0302	6.4001	6.4303
120.6667	0.7124	0.017	6.4028	6.4198
120.7	0.7124	0.0039	6.4028	6.4067
120.7333	0.7157	0.0039	6.3962	6.4001
120.7667	0.7144	0.0039	6.3949	6.3988
120.8	0.7127	0.017	6.3936	6.4106
120.8333	0.715	0.0302	6.4001	6.4303
120.8667	0.7127	0.017	6.408	6.4251
120.9	0.713	0.0039	6.4001	6.404
120.9333	0.713	0.0039	6.4001	6.404
120.9667	0.7127	0.0039	6.4054	6.4093
121	0.7124	0	6.3949	6.3949
121.0333	0.7127	0.017	6.4028	6.4198
121.0667	0.7137	0.0302	6.4067	6.4369
121.1	0.7104	0.0039	6.3988	6.4027
121.1333	0.7117	0.017	6.3923	6.4093
121.1667	0.7114	0.0039	6.4001	6.404
121.2	0.7147	0.017	6.4015	6.4185
121.2333	0.7127	0.0039	6.3949	6.3988
121.2667	0.7117	0.0039	6.3936	6.3975
121.3	0.713	0.0302	6.3936	6.4238
121.3333	0.7137	0.0039	6.3923	6.3961
121.3667	0.7137	0.0039	6.4054	6.4093
121.4	0.7124	0.0039	6.3936	6.3975
121.4333	0.7137	0.0039	6.4054	6.4093
121.4667	0.7114	0.0039	6.3962	6.4001
121.5	0.7094	0.0039	6.3988	6.4027
121.5333	0.7114	0.0039	6.4015	6.4053
121.5667	0.714	0.0039	6.4028	6.4067
121.6	0.7127	0.017	6.4028	6.4198
121.6333	0.7117	0.0039	6.4015	6.4053
121.6667	0.7127	0.0039	6.4028	6.4067
121.7	0.7107	0.017	6.4028	6.4198
121.7333	0.7111	0.017	6.4093	6.4264
121.7667	0.7107	0	6.4015	6.4015
121.8	0.712	0.017	6.408	6.4251

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
121.8333	0.7124	0	6.3949	6.3949
121.8667	0.713	0	6.4054	6.4054
121.9	0.7107	0.0302	6.412	6.4422
121.9333	0.7127	0.0302	6.4028	6.433
121.9667	0.715	0.0039	6.4028	6.4067
122	0.7134	0.0039	6.4028	6.4067
122.0333	0.7127	0.017	6.3975	6.4146
122.0667	0.7117	0.0039	6.3962	6.4001
122.1	0.7137	0	6.4054	6.4054
122.1333	0.713	0.0302	6.3962	6.4264
122.1667	0.7107	0	6.3975	6.3975
122.2	0.7111	0.017	6.3988	6.4159
122.2333	0.7137	0.0039	6.3962	6.4001
122.2667	0.7097	0.0039	6.3896	6.3935
122.3	0.7147	0.0039	6.3975	6.4014
122.3333	0.7134	0	6.387	6.387
122.3667	0.7117	0.0039	6.3962	6.4001
122.4	0.712	0.0039	6.3962	6.4001
122.4333	0.7124	0.017	6.3936	6.4106
122.4667	0.7147	0.017	6.3817	6.3988
122.5	0.7127	0.0039	6.3883	6.3922
122.5333	0.7124	0.017	6.387	6.404
122.5667	0.7124	0.0039	6.3949	6.3988
122.6	0.7117	0.017	6.4015	6.4185
122.6333	0.713	0.0039	6.3949	6.3988
122.6667	0.7127	0.0039	6.387	6.3909
122.7	0.714	0.0039	6.387	6.3909
122.7333	0.714	0.0039	6.4001	6.404
122.7667	0.712	0.0039	6.3949	6.3988
122.8	0.7134	0.0039	6.3883	6.3922
122.8333	0.7127	0.0039	6.3949	6.3988
122.8667	0.715	0.017	6.3949	6.4119
122.9	0.715	0.0039	6.3923	6.3961
122.9333	0.7137	0.0039	6.3962	6.4001
122.9667	0.7163	0	6.3936	6.3936
123	0.713	0	6.3883	6.3883
123.0333	0.7147	0.0302	6.3896	6.4198
123.0667	0.7144	0.0039	6.3844	6.3883
123.1	0.715	0.0302	6.4028	6.433
123.1333	0.717	0.017	6.4001	6.4172
123.1667	0.7153	0.017	6.3896	6.4067
123.2	0.7144	0.017	6.3962	6.4132
123.2333	0.713	0	6.4028	6.4028

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
123.2667	0.717	0.017	6.3896	6.4067
123.3	0.715	0.017	6.3896	6.4067
123.3333	0.7173	0.0039	6.408	6.4119
123.3667	0.715	0.017	6.408	6.4251
123.4	0.7144	0.0039	6.4028	6.4067
123.4333	0.717	0	6.4015	6.4015
123.4667	0.7144	0.017	6.3962	6.4132
123.5	0.716	0	6.4028	6.4028
123.5333	0.7173	0.017	6.4133	6.4303
123.5667	0.7183	0.0039	6.4067	6.4106
123.6	0.7137	0	6.3988	6.3988
123.6333	0.719	0.017	6.3949	6.4119
123.6667	0.716	0.0039	6.3949	6.3988
123.7	0.7199	0.017	6.3975	6.4146
123.7333	0.717	0.017	6.3988	6.4159
123.7667	0.7186	0	6.3962	6.3962
123.8	0.7163	0.0039	6.3975	6.4014
123.8333	0.716	0.0039	6.4028	6.4067
123.8667	0.7176	0.0039	6.3844	6.3883
123.9	0.7186	0.0039	6.3844	6.3883
123.9333	0.7173	0	6.4015	6.4015
123.9667	0.7216	0.017	6.3949	6.4119
124	0.7209	0.0039	6.3857	6.3896
124.0333	0.7206	0.0039	6.3778	6.3817
124.0667	0.719	0.0039	6.3936	6.3975
124.1	0.7183	0.0039	6.387	6.3909
124.1333	0.7163	0.0039	6.3949	6.3988
124.1667	0.718	0.0039	6.3909	6.3948
124.2	0.7199	0.0039	6.387	6.3909
124.2333	0.7206	0	6.3949	6.3949
124.2667	0.7206	0.0039	6.4001	6.404
124.3	0.7219	0.0039	6.4001	6.404
124.3333	0.7199	0.017	6.3962	6.4132
124.3667	0.7199	0.0039	6.4015	6.4053
124.4	0.7199	0	6.3936	6.3936
124.4333	0.7226	0.0039	6.4001	6.404
124.4667	0.7216	0	6.4015	6.4015
124.5	0.7216	0.0039	6.3988	6.4027
124.5333	0.7236	0.017	6.4054	6.4224
124.5667	0.7209	0.0039	6.4001	6.404
124.6	0.718	0.0039	6.3988	6.4027
124.6333	0.7223	0.0039	6.4133	6.4172
124.6667	0.7219	0.0039	6.4054	6.4093

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
124.7	0.7209	0.0039	6.3988	6.4027
124.7333	0.7242	0.0039	6.3949	6.3988
124.7667	0.7219	0.017	6.408	6.4251
124.8	0.7229	0	6.4133	6.4133
124.8333	0.7226	0.0039	6.4028	6.4067
124.8667	0.7226	0.017	6.4146	6.4316
124.9	0.7216	0.017	6.4067	6.4238
124.9333	0.7199	0.017	6.4028	6.4198
124.9667	0.7216	0.0039	6.4028	6.4067
125	0.7226	0.0039	6.4028	6.4067
125.0333	0.7236	0	6.408	6.408
125.0667	0.7236	0.0039	6.4133	6.4172
125.1	0.7209	0.017	6.408	6.4251
125.1333	0.7236	0.0039	6.408	6.4119
125.1667	0.7223	0	6.4172	6.4172
125.2	0.7229	0.0039	6.4067	6.4106
125.2333	0.7246	0.0039	6.4133	6.4172
125.2667	0.7242	0.0039	6.4212	6.4251
125.3	0.7232	0	6.4133	6.4133
125.3333	0.7223	0.0302	6.4186	6.4487
125.3667	0.7249	0	6.4186	6.4186
125.4	0.7246	0	6.4186	6.4186
125.4333	0.7223	0.0039	6.4172	6.4211
125.4667	0.7239	0.0039	6.4133	6.4172
125.5	0.7229	0.0039	6.4199	6.4238
125.5333	0.7223	0.0039	6.4225	6.4264
125.5667	0.7246	0.0039	6.4146	6.4185
125.6	0.7239	0.017	6.4093	6.4264
125.6333	0.7242	0.0039	6.4212	6.4251
125.6667	0.7223	0.017	6.4054	6.4224
125.7	0.7246	0	6.4133	6.4133
125.7333	0.7236	0.0039	6.4186	6.4224
125.7667	0.7229	0.0039	6.4186	6.4224
125.8	0.7242	0.0039	6.4251	6.429
125.8333	0.7252	0.0302	6.4238	6.454
125.8667	0.7229	0.017	6.4264	6.4435
125.9	0.7275	0	6.4212	6.4212
125.9333	0.7262	0.0039	6.4317	6.4356
125.9667	0.7242	0.0039	6.4291	6.433
126	0.7252	0	6.4291	6.4291
126.0333	0.7255	0.0039	6.4238	6.4277
126.0667	0.7265	0	6.4159	6.4159
126.1	0.7246	0	6.4186	6.4186

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
126.1333	0.7262	0.0039	6.4225	6.4264
126.1667	0.7265	0.0039	6.4238	6.4277
126.2	0.7262	0.0039	6.4199	6.4238
126.2333	0.7255	0.0039	6.4225	6.4264
126.2667	0.7236	0.017	6.4278	6.4448
126.3	0.7278	0.0039	6.433	6.4369
126.3333	0.7255	0.0039	6.4291	6.433
126.3667	0.7246	0	6.433	6.433
126.4	0.7275	0.0039	6.433	6.4369
126.4333	0.7232	0.017	6.4317	6.4487
126.4667	0.7255	0.017	6.4225	6.4395
126.5	0.7236	0.0039	6.4317	6.4356
126.5333	0.7259	0.0039	6.4396	6.4435
126.5667	0.7275	0.0039	6.4264	6.4303
126.6	0.7275	0	6.4251	6.4251
126.6333	0.7295	0.0039	6.4317	6.4356
126.6667	0.7252	0.0039	6.4317	6.4356
126.7	0.7278	0.0039	6.4343	6.4382
126.7333	0.7272	0.017	6.4396	6.4566
126.7667	0.7265	0.0039	6.4278	6.4316
126.8	0.7242	0.0039	6.4383	6.4422
126.8333	0.7285	0.0039	6.4514	6.4553
126.8667	0.7262	0.0039	6.4422	6.4461
126.9	0.7265	0	6.4343	6.4343
126.9333	0.7285	0.0039	6.4317	6.4356
126.9667	0.7252	0.0039	6.433	6.4369
127	0.7262	0.0039	6.437	6.4409
127.0333	0.7232	0.0039	6.4383	6.4422
127.0667	0.7298	0.017	6.4383	6.4553
127.1	0.7262	0.0039	6.4462	6.4501
127.1333	0.7272	0.0039	6.437	6.4409
127.1667	0.7311	0.0039	6.4356	6.4395
127.2	0.7275	0.017	6.4383	6.4553
127.2333	0.7272	0	6.4356	6.4356
127.2667	0.7311	0.0039	6.4435	6.4474
127.3	0.7255	0.0039	6.4475	6.4514
127.3333	0.7282	0.0039	6.437	6.4409
127.3667	0.7255	0.0039	6.4304	6.4343
127.4	0.7262	0.017	6.4435	6.4606
127.4333	0.7262	0	6.4567	6.4567
127.4667	0.7295	0.0039	6.4422	6.4461
127.5	0.7288	0.017	6.4475	6.4645
127.5333	0.7288	0.0039	6.4435	6.4474

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
127.5667	0.7288	0.017	6.4435	6.4606
127.6	0.7295	0.017	6.4475	6.4645
127.6333	0.7285	0.0039	6.4409	6.4448
127.6667	0.7305	0.0039	6.4501	6.454
127.7	0.7255	0.0039	6.4304	6.4343
127.7333	0.7298	0.0039	6.4501	6.454
127.7667	0.7275	0	6.437	6.437
127.8	0.7321	0.0039	6.437	6.4409
127.8333	0.7269	0	6.4449	6.4449
127.8667	0.7295	0.0039	6.4278	6.4316
127.9	0.7262	0.0039	6.4225	6.4264
127.9333	0.7295	0.0039	6.4238	6.4277
127.9667	0.7252	0.017	6.4343	6.4514
128	0.7255	0.0039	6.4212	6.4251
128.0333	0.7259	0.0039	6.4343	6.4382
128.0667	0.7272	0	6.4251	6.4251
128.1	0.7269	0.017	6.437	6.454
128.1333	0.7269	0.0039	6.4541	6.4579
128.1667	0.7288	0.0039	6.4501	6.454
128.2	0.7282	0.017	6.4475	6.4645
128.2333	0.7295	0.017	6.4383	6.4553
128.2667	0.7288	0.017	6.4409	6.4579
128.3	0.7252	0.0039	6.4449	6.4487
128.3333	0.7288	0.0039	6.4396	6.4435
128.3667	0.7282	0.0039	6.4356	6.4395
128.4	0.7265	0.017	6.4278	6.4448
128.4333	0.7265	0.0039	6.4356	6.4395
128.4667	0.7311	0	6.4383	6.4383
128.5	0.7305	0.017	6.4501	6.4672
128.5333	0.7275	0.0039	6.4422	6.4461
128.5667	0.7288	0	6.4449	6.4449
128.6	0.7295	0.0039	6.4475	6.4514
128.6333	0.7278	0.017	6.437	6.454
128.6667	0.7275	0	6.4409	6.4409
128.7	0.7308	0	6.4475	6.4475
128.7333	0.7305	0	6.4527	6.4527
128.7667	0.7295	0.0039	6.4396	6.4435
128.8	0.7295	0.0039	6.4304	6.4343
128.8333	0.7259	0.0039	6.433	6.4369
128.8667	0.7302	0.0039	6.4409	6.4448
128.9	0.7278	0.0039	6.458	6.4619
128.9333	0.7315	0.0039	6.4488	6.4527
128.9667	0.7282	0.0039	6.4291	6.433

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
129	0.7311	0.0039	6.4449	6.4487
129.0333	0.7272	0.017	6.458	6.475
129.0667	0.7288	0.0039	6.4633	6.4672
129.1	0.7269	0.0039	6.4554	6.4593
129.1333	0.7302	0.0039	6.4541	6.4579
129.1667	0.7282	0	6.4435	6.4435
129.2	0.7288	0.0039	6.4343	6.4382
129.2333	0.7282	0.0039	6.4606	6.4645
129.2667	0.7295	0.017	6.4488	6.4658
129.3	0.7302	0.017	6.4409	6.4579
129.3333	0.7282	0	6.4409	6.4409
129.3667	0.7278	0.0039	6.4383	6.4422
129.4	0.7282	0.0039	6.4449	6.4487
129.4333	0.7308	0.0039	6.4449	6.4487
129.4667	0.7288	0	6.4501	6.4501
129.5	0.7302	0.0039	6.4488	6.4527
129.5333	0.7292	0.0039	6.4462	6.4501
129.5667	0.7292	0.0039	6.4475	6.4514
129.6	0.7278	0.017	6.4514	6.4685
129.6333	0.7285	0.0039	6.4422	6.4461
129.6667	0.7288	0	6.4488	6.4488
129.7	0.7305	0.017	6.458	6.475
129.7333	0.7318	0.0039	6.4527	6.4566
129.7667	0.7311	0.0039	6.4383	6.4422
129.8	0.7308	0.0039	6.4567	6.4606
129.8333	0.7272	0	6.4606	6.4606
129.8667	0.7302	0.0039	6.4527	6.4566
129.9	0.7282	0.0039	6.4383	6.4422
129.9333	0.7325	0.0039	6.4396	6.4435
129.9667	0.7311	0.0039	6.4488	6.4527
130	0.7328	0.0039	6.4541	6.4579
130.0333	0.7357	0.017	6.4501	6.4672
130.0667	0.7407	0	6.4619	6.4619
130.1	0.7479	0	6.4698	6.4698
130.1333	0.7575	0.0039	6.4659	6.4698
130.1667	0.7687	0.0039	6.4909	6.4948
130.2	0.7789	0.0039	6.4948	6.4987
130.2333	0.795	0.017	6.5014	6.5184
130.2667	0.8088	0	6.5067	6.5067
130.3	0.825	0.0039	6.5106	6.5145
130.3333	0.8394	0.017	6.5172	6.5342
130.3667	0.8608	0	6.529	6.529
130.4	0.8826	0.0039	6.5448	6.5487

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
130.4333	0.9049	0.0039	6.5579	6.5618
130.4667	0.9237	0	6.5698	6.5698
130.5	0.9458	0.017	6.5921	6.6092
130.5333	0.9695	0.0302	6.6211	6.6512
130.5667	0.9889	0.0039	6.646	6.6499
130.6	1.0113	0.0039	6.671	6.6749
130.6333	1.0257	0.0039	6.7	6.7038
130.6667	1.0478	0.0039	6.7118	6.7157
130.7	1.0626	0.017	6.7512	6.7683
130.7333	1.082	0.0039	6.7578	6.7617
130.7667	1.0988	0.0039	6.7946	6.7985
130.8	1.1149	0.017	6.8025	6.8196
130.8333	1.1311	0.0039	6.8354	6.8393
130.8667	1.1472	0.0039	6.8591	6.863
130.9	1.1617	0.017	6.8946	6.9116
130.9333	1.1729	0	6.9104	6.9104
130.9667	1.189	0.0039	6.9419	6.9458
131	1.2018	0.017	6.9722	6.9892
131.0333	1.2176	0.0039	7.005	7.0089
131.0667	1.2302	0.017	7.034	7.051
131.1	1.2413	0.0039	7.0524	7.0563
131.1333	1.2509	0.0302	7.0971	7.1273
131.1667	1.265	0.0039	7.1063	7.1102
131.2	1.2766	0.0039	7.1418	7.1457
131.2333	1.2904	0.017	7.1799	7.197
131.2667	1.2963	0.0039	7.1891	7.193
131.3	1.3095	0.017	7.222	7.239
131.3333	1.3151	0	7.2522	7.2522
131.3667	1.3253	0.017	7.2917	7.3087
131.4	1.3391	0.0039	7.3062	7.31
131.4333	1.3464	0	7.3311	7.3311
131.4667	1.3533	0.0039	7.3666	7.3705
131.5	1.3635	0.0039	7.3785	7.3824
131.5333	1.3737	0.0039	7.414	7.4179
131.5667	1.3799	0.017	7.4469	7.4639
131.6	1.3868	0.0039	7.4811	7.4849
131.6333	1.3961	0.0039	7.4811	7.4849
131.6667	1.4079	0.017	7.5271	7.5441
131.7	1.4102	0.017	7.5665	7.5836
131.7333	1.4217	0.017	7.5915	7.6085
131.7667	1.43	0.017	7.6047	7.6217
131.8	1.4352	0.0039	7.6375	7.6414
131.8333	1.4379	0.0039	7.6599	7.6638

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
131.8667	1.4398	0.0039	7.6954	7.6993
131.9	1.4418	0.0039	7.7164	7.7203
131.9333	1.4467	0.017	7.7467	7.7637
131.9667	1.4517	0.0039	7.7598	7.7637
132	1.4504	0.0039	7.7874	7.7913
132.0333	1.4494	0.017	7.819	7.836
132.0667	1.4507	0.0039	7.8282	7.8321
132.1	1.4497	0.017	7.869	7.886
132.1333	1.4484	0.0039	7.8847	7.8886
132.1667	1.4444	0.017	7.9032	7.9202
132.2	1.4481	0	7.9255	7.9255
132.2333	1.4458	0.0039	7.9584	7.9623
132.2667	1.4461	0.017	7.9821	7.9991
132.3	1.4471	0.017	7.9952	8.0122
132.3333	1.4448	0	8.0031	8.0031
132.3667	1.4461	0	8.0412	8.0412
132.4	1.4451	0.017	8.057	8.0741
132.4333	1.4461	0.0039	8.0754	8.0793
132.4667	1.4435	0.017	8.0965	8.1135
132.5	1.4425	0.0302	8.1214	8.1516
132.5333	1.4441	0.0039	8.1346	8.1385
132.5667	1.4421	0.0039	8.1438	8.1477
132.6	1.4421	0.0039	8.174	8.1779
132.6333	1.4461	0.0302	8.1859	8.2161
132.6667	1.4421	0	8.2082	8.2082
132.7	1.4467	0.0039	8.2293	8.2332
132.7333	1.4435	0.017	8.2201	8.2371
132.7667	1.4461	0.017	8.2503	8.2674
132.8	1.4474	0.017	8.2608	8.2779
132.8333	1.4458	0.017	8.2845	8.3015
132.8667	1.4448	0.0039	8.3016	8.3055
132.9	1.4431	0.0039	8.3187	8.3226
132.9333	1.4444	0.0039	8.3437	8.3476
132.9667	1.4458	0.0039	8.3555	8.3594
133	1.4438	0.0039	8.3621	8.366
133.0333	1.4481	0.0039	8.3884	8.3923
133.0667	1.4471	0.017	8.3936	8.4107
133.1	1.4458	0.0039	8.4094	8.4133
133.1333	1.4458	0	8.4291	8.4291
133.1667	1.4428	0.0039	8.4449	8.4488
133.2	1.4441	0.0039	8.4633	8.4672
133.2333	1.4444	0	8.4817	8.4817
133.2667	1.4451	0.0039	8.4857	8.4896

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
133.3	1.4444	0.0039	8.5133	8.5172
133.3333	1.4484	0.0039	8.5094	8.5133
133.3667	1.4458	0	8.5278	8.5278
133.4	1.4458	0.0039	8.5422	8.5461
133.4333	1.4461	0.0039	8.562	8.5659
133.4667	1.4448	0	8.5843	8.5843
133.5	1.4461	0	8.5896	8.5896
133.5333	1.4477	0.0039	8.6014	8.6053
133.5667	1.4471	0.0039	8.6172	8.6211
133.6	1.4471	0	8.6317	8.6317
133.6333	1.4454	0.017	8.6395	8.6566
133.6667	1.4458	0.017	8.6593	8.6763
133.7	1.4467	0.0302	8.6672	8.6973
133.7333	1.4464	0.0039	8.675	8.6789
133.7667	1.4471	0.0039	8.6948	8.6987
133.8	1.4504	0.0039	8.7	8.7039
133.8333	1.4467	0.0039	8.7066	8.7105
133.8667	1.4481	0.017	8.7171	8.7342
133.9	1.4448	0.0039	8.7355	8.7394
133.9333	1.4458	0.0039	8.7447	8.7486
133.9667	1.4428	0.0039	8.7579	8.7618
134	1.4481	0.0039	8.7684	8.7723
134.0333	1.4481	0	8.7829	8.7829
134.0667	1.4464	0.0039	8.7934	8.7973
134.1	1.4448	0.017	8.8026	8.8196
134.1333	1.4471	0.0302	8.8171	8.8473
134.1667	1.4464	0.0039	8.8315	8.8354
134.2	1.4487	0.0039	8.8434	8.8473
134.2333	1.4491	0.0039	8.8421	8.8459
134.2667	1.4461	0.0039	8.8499	8.8538
134.3	1.4458	0.0039	8.8631	8.867
134.3333	1.4464	0.017	8.8749	8.892
134.3667	1.4464	0.0039	8.8854	8.8893
134.4	1.4444	0.0039	8.8881	8.892
134.4333	1.4474	0	8.8933	8.8933
134.4667	1.4484	0.0039	8.9275	8.9314
134.5	1.4464	0.0039	8.9183	8.9222
134.5333	1.4444	0.0039	8.9236	8.9275
134.5667	1.4458	0	8.9196	8.9196
134.6	1.4438	0.0039	8.9486	8.9525
134.6333	1.4484	0.017	8.9591	8.9761
134.6667	1.4464	0.0039	8.9643	8.9682
134.7	1.4481	0.017	8.9735	8.9906

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
134.7333	1.4438	0	8.988	8.988
134.7667	1.4454	0.017	8.9893	9.0064
134.8	1.4431	0.017	9.0156	9.0327
134.8333	1.4441	0.017	9.0064	9.0235
134.8667	1.4438	0.0039	9.0261	9.03
134.9	1.4454	0.017	9.0419	9.059
134.9333	1.4464	0.0039	9.0354	9.0392
134.9667	1.4454	0.017	9.0354	9.0524
135	1.4458	0.017	9.0538	9.0708
135.0333	1.4421	0.017	9.0643	9.0813
135.0667	1.4425	0	9.0722	9.0722
135.1	1.4454	0.017	9.0866	9.1037
135.1333	1.4454	0.0039	9.0774	9.0813
135.1667	1.4444	0.0039	9.0866	9.0905
135.2	1.4428	0.017	9.0945	9.1116
135.2333	1.4421	0.0039	9.1129	9.1168
135.2667	1.4435	0	9.109	9.109
135.3	1.4451	0.0039	9.1195	9.1234
135.3333	1.4441	0.017	9.1261	9.1431
135.3667	1.4448	0.0039	9.1366	9.1405
135.4	1.4474	0.0039	9.1419	9.1458
135.4333	1.4408	0	9.1406	9.1406
135.4667	1.4428	0.0039	9.159	9.1628
135.5	1.4412	0.017	9.1761	9.1931
135.5333	1.4428	0.0039	9.18	9.1839
135.5667	1.4415	0.017	9.1813	9.1984
135.6	1.4392	0.0039	9.1826	9.1865
135.6333	1.4405	0.0039	9.1997	9.2036
135.6667	1.4418	0.0039	9.205	9.2089
135.7	1.4415	0.0039	9.2063	9.2102
135.7333	1.4415	0.0039	9.2155	9.2194
135.7667	1.4421	0.0039	9.2181	9.222
135.8	1.4425	0.017	9.2168	9.2339
135.8333	1.4402	0.0039	9.2247	9.2286
135.8667	1.4425	0.017	9.2379	9.2549
135.9	1.4412	0.017	9.2352	9.2523
135.9333	1.4431	0.017	9.2444	9.2615
135.9667	1.4402	0.0039	9.2668	9.2707
136	1.4431	0.0039	9.2681	9.272
136.0333	1.4398	0	9.2813	9.2813
136.0667	1.4412	0.017	9.2773	9.2943
136.1	1.4428	0.0039	9.2957	9.2996
136.1333	1.4379	0	9.2983	9.2983

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
136.1667	1.4359	0	9.2931	9.2931
136.2	1.4402	0	9.3076	9.3076
136.2333	1.4379	0	9.3115	9.3115
136.2667	1.4402	0.0039	9.3168	9.3206
136.3	1.4365	0	9.3273	9.3273
136.3333	1.4385	0.017	9.3325	9.3496
136.3667	1.4398	0	9.3312	9.3312
136.4	1.4402	0.017	9.3352	9.3522
136.4333	1.4379	0.0039	9.3365	9.3404
136.4667	1.4388	0	9.3391	9.3391
136.5	1.4418	0.0039	9.3575	9.3614
136.5333	1.4385	0.0039	9.3509	9.3548
136.5667	1.4359	0	9.3786	9.3786
136.6	1.4395	0.0039	9.3733	9.3772
136.6333	1.4382	0.0039	9.3943	9.3982
136.6667	1.4382	0.017	9.393	9.4101
136.7	1.4365	0.0039	9.3917	9.3956
136.7333	1.4392	0.017	9.3943	9.4114
136.7667	1.4392	0.0039	9.3983	9.4022
136.8	1.4379	0.0302	9.3943	9.4245
136.8333	1.4398	0	9.4022	9.4022
136.8667	1.4369	0	9.4167	9.4167
136.9	1.4365	0.017	9.4246	9.4416
136.9333	1.4365	0	9.4233	9.4233
136.9667	1.4385	0.017	9.4298	9.4469
137	1.4356	0.0039	9.4377	9.4416
137.0333	1.4352	0	9.4377	9.4377
137.0667	1.4362	0	9.4351	9.4351
137.1	1.4342	0.0039	9.4404	9.4443
137.1333	1.4342	0	9.4509	9.4509
137.1667	1.4359	0.0039	9.4588	9.4627
137.2	1.4329	0.0039	9.4575	9.4613
137.2333	1.4349	0	9.4667	9.4667
137.2667	1.4385	0.0039	9.4798	9.4837
137.3	1.4329	0	9.4719	9.4719
137.3333	1.4352	0.0039	9.4732	9.4771
137.3667	1.4369	0	9.4824	9.4824
137.4	1.4356	0.0039	9.4877	9.4916
137.4333	1.4352	0.017	9.5009	9.5179
137.4667	1.4352	0.017	9.4995	9.5166
137.5	1.4352	0.0039	9.4903	9.4942
137.5333	1.4342	0.0039	9.5022	9.5061
137.5667	1.4309	0	9.4982	9.4982

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
137.6	1.4342	0	9.5127	9.5127
137.6333	1.4326	0	9.5048	9.5048
137.6667	1.4365	0	9.5127	9.5127
137.7	1.4326	0.0039	9.5153	9.5192
137.7333	1.4309	0.0039	9.5101	9.5139
137.7667	1.4293	0.0039	9.5285	9.5324
137.8	1.4352	0.0039	9.5272	9.531
137.8333	1.4326	0	9.5324	9.5324
137.8667	1.4309	0	9.5245	9.5245
137.9	1.4339	0	9.5429	9.5429
137.9333	1.4293	0.0039	9.5364	9.5402
137.9667	1.4329	0.017	9.5469	9.5639
138	1.4309	0.0039	9.5653	9.5692
138.0333	1.43	0.0039	9.5535	9.5573
138.0667	1.4303	0.017	9.5535	9.5705
138.1	1.4323	0	9.564	9.564
138.1333	1.4309	0	9.5719	9.5719
138.1667	1.4339	0	9.5745	9.5745
138.2	1.429	0	9.5666	9.5666
138.2333	1.4286	0.0039	9.5732	9.5771
138.2667	1.4283	0.0039	9.5745	9.5784
138.3	1.428	0.0039	9.5824	9.5863
138.3333	1.4339	0.0039	9.5692	9.5731
138.3667	1.4283	0.017	9.5824	9.5994
138.4	1.4273	0	9.5942	9.5942
138.4333	1.429	0.0039	9.5955	9.5994
138.4667	1.4273	0	9.5968	9.5968
138.5	1.4273	0.0039	9.5968	9.6007
138.5333	1.4263	0.0039	9.5995	9.6034
138.5667	1.4306	0.0039	9.5955	9.5994
138.6	1.4267	0	9.6061	9.6061
138.6333	1.4277	0	9.5995	9.5995
138.6667	1.4263	0.0039	9.6008	9.6047
138.7	1.4257	0	9.6179	9.6179
138.7333	1.43	0	9.6258	9.6258
138.7667	1.4263	0	9.6074	9.6074
138.8	1.426	0.0039	9.6258	9.6297
138.8333	1.4221	0.0039	9.6245	9.6284
138.8667	1.4277	0	9.6061	9.6061
138.9	1.4273	0.0039	9.6179	9.6218
138.9333	1.426	0.0039	9.631	9.6349
138.9667	1.4273	0.0039	9.6297	9.6336
139	1.4273	0.0039	9.6258	9.6297

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139.0333	1.4244	0.0039	9.6297	9.6336
139.0667	1.4234	0.0039	9.6455	9.6494
139.1	1.426	0	9.6494	9.6494
139.1333	1.4227	0.017	9.6468	9.6639
139.1667	1.4234	0.0039	9.6455	9.6494
139.2	1.4227	0.0039	9.6455	9.6494
139.2333	1.4254	0.0039	9.6521	9.656
139.2667	1.4234	0.0039	9.6626	9.6665
139.3	1.424	0.0039	9.6547	9.6586
139.3333	1.4204	0.0039	9.6547	9.6586
139.3667	1.423	0	9.6626	9.6626
139.4	1.4221	0.0039	9.6547	9.6586
139.4333	1.4217	0.017	9.656	9.6731
139.4667	1.4237	0	9.6573	9.6573
139.5	1.4224	0.0039	9.6718	9.6757
139.5333	1.4234	0.0039	9.6639	9.6678
139.5667	1.423	0.017	9.6639	9.6809
139.6	1.4254	0.0039	9.6705	9.6744
139.6333	1.4234	0.017	9.6665	9.6836
139.6667	1.423	0	9.6665	9.6665
139.7	1.4221	0	9.6876	9.6876
139.7333	1.4257	0	9.6823	9.6823
139.7667	1.427	0.017	9.681	9.698
139.8	1.4237	0.0039	9.6797	9.6836
139.8333	1.4263	0.017	9.6915	9.7086
139.8667	1.4254	0.0039	9.6955	9.6994
139.9	1.4267	0.0039	9.6994	9.7033
139.9333	1.4273	0	9.6968	9.6968
139.9667	1.4257	0	9.6942	9.6942
140	1.4267	0.017	9.6876	9.7046
140.0333	1.4273	0.017	9.6955	9.7125
140.0667	1.4286	0.0039	9.6876	9.6915
140.1	1.429	0	9.6876	9.6876
140.1333	1.4293	0.0039	9.6876	9.6915
140.1667	1.4303	0.017	9.6955	9.7125
140.2	1.4313	0.0039	9.7047	9.7086
140.2333	1.4296	0	9.7126	9.7126
140.2667	1.4293	0.0039	9.6955	9.6994
140.3	1.4323	0.0039	9.7034	9.7072
140.3333	1.4326	0.017	9.7086	9.7257
140.3667	1.4333	0.017	9.7034	9.7204
140.4	1.4349	0.0039	9.7073	9.7112
140.4333	1.4336	0	9.706	9.706

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140.4667	1.4333	0.0039	9.7139	9.7178
140.5	1.4349	0.0039	9.7165	9.7204
140.5333	1.4362	0.017	9.7218	9.7388
140.5667	1.4369	0.017	9.7178	9.7349
140.6	1.4365	0.017	9.7205	9.7375
140.6333	1.4418	0.017	9.7231	9.7401
140.6667	1.4379	0.0039	9.7231	9.727
140.7	1.4369	0.017	9.7297	9.7467
140.7333	1.4385	0.0039	9.7257	9.7296
140.7667	1.4405	0.0039	9.7375	9.7414
140.8	1.4388	0.0039	9.7402	9.7441
140.8333	1.4418	0.0039	9.7389	9.7428
140.8667	1.4421	0.0039	9.7428	9.7467
140.9	1.4451	0.0039	9.7375	9.7414
140.9333	1.4428	0	9.7494	9.7494
140.9667	1.4421	0.0039	9.7415	9.7454
141	1.4435	0.0039	9.7494	9.7533
141.0333	1.4454	0.0039	9.7533	9.7572
141.0667	1.4444	0.0039	9.752	9.7559
141.1	1.4474	0.017	9.7546	9.7717
141.1333	1.4441	0.0039	9.7599	9.7638
141.1667	1.4461	0.0039	9.7546	9.7585
141.2	1.4461	0.0039	9.7599	9.7638
141.2333	1.4458	0.0039	9.7468	9.7506
141.2667	1.4471	0	9.7586	9.7586
141.3	1.4474	0.017	9.7691	9.7861
141.3333	1.4484	0.0039	9.7731	9.7769
141.3667	1.4471	0.0039	9.7638	9.7677
141.4	1.4491	0	9.7757	9.7757
141.4333	1.4481	0.0039	9.7744	9.7783
141.4667	1.451	0.0039	9.7823	9.7861
141.5	1.4477	0.0039	9.7796	9.7835
141.5333	1.4507	0.0039	9.7849	9.7888
141.5667	1.451	0.0039	9.7836	9.7875
141.6	1.4507	0.017	9.7849	9.8019
141.6333	1.454	0.017	9.7954	9.8124
141.6667	1.4514	0	9.8033	9.8033
141.7	1.4537	0.0039	9.7954	9.7993
141.7333	1.455	0	9.7994	9.7994
141.7667	1.453	0	9.7941	9.7941
141.8	1.454	0.017	9.7954	9.8124
141.8333	1.454	0.0039	9.7928	9.7967
141.8667	1.4523	0.0039	9.8072	9.8111

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141.9	1.4537	0	9.8072	9.8072
141.9333	1.4556	0.017	9.8112	9.8282
141.9667	1.453	0.017	9.8204	9.8374
142	1.452	0.0039	9.8178	9.8217
142.0333	1.4546	0.017	9.8164	9.8335
142.0667	1.454	0.0039	9.823	9.8269
142.1	1.454	0.0039	9.8257	9.8295
142.1333	1.4573	0	9.8283	9.8283
142.1667	1.4579	0.0039	9.8296	9.8335
142.2	1.4566	0.017	9.827	9.844
142.2333	1.4576	0.0039	9.8296	9.8335
142.2667	1.4579	0	9.8296	9.8296
142.3	1.4576	0.0039	9.8493	9.8532
142.3333	1.4576	0.0039	9.8467	9.8506
142.3667	1.4593	0	9.8427	9.8427
142.4	1.4573	0.017	9.8559	9.8729
142.4333	1.4622	0.017	9.8506	9.8677
142.4667	1.4579	0.0039	9.8467	9.8506
142.5	1.4589	0.0039	9.8546	9.8585
142.5333	1.4609	0.0039	9.8546	9.8585
142.5667	1.457	0	9.8638	9.8638
142.6	1.4579	0.0039	9.8638	9.8677
142.6333	1.4609	0.0039	9.8559	9.8598
142.6667	1.4606	0.0039	9.8638	9.8677
142.7	1.4619	0	9.8783	9.8783
142.7333	1.4619	0.0039	9.873	9.8769
142.7667	1.4606	0.0039	9.8796	9.8835
142.8	1.4619	0.0039	9.8717	9.8756
142.8333	1.4616	0	9.8598	9.8598
142.8667	1.4645	0.0039	9.8717	9.8756
142.9	1.4622	0.0039	9.8783	9.8821
142.9333	1.4622	0	9.8796	9.8796
142.9667	1.4619	0.0039	9.8875	9.8913
143	1.4616	0.017	9.8901	9.9071
143.0333	1.4622	0	9.8927	9.8927
143.0667	1.4632	0.0039	9.9032	9.9071
143.1	1.4612	0.0039	9.8914	9.8953
143.1333	1.4629	0	9.9032	9.9032
143.1667	1.4639	0.0039	9.898	9.9019
143.2	1.4655	0.0039	9.9046	9.9084
143.2333	1.4642	0	9.9046	9.9046
143.2667	1.4649	0.0039	9.9019	9.9058
143.3	1.4665	0	9.9138	9.9138

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143.3333	1.4639	0	9.9138	9.9138
143.3667	1.4635	0.0039	9.9256	9.9295
143.4	1.4672	0	9.9138	9.9138
143.4333	1.4652	0	9.9072	9.9072
143.4667	1.4622	0	9.9177	9.9177
143.5	1.4678	0.0039	9.9322	9.9361
143.5333	1.4668	0.0039	9.9348	9.9387
143.5667	1.4681	0.017	9.9216	9.9387
143.6	1.4665	0.0039	9.9111	9.915
143.6333	1.4704	0.0039	9.9098	9.9137
143.6667	1.4655	0.017	9.9138	9.9308
143.7	1.4668	0	9.9151	9.9151
143.7333	1.4658	0.017	9.9269	9.9439
143.7667	1.4701	0	9.9256	9.9256
143.8	1.4672	0.0039	9.923	9.9268
143.8333	1.4691	0.017	9.9243	9.9413
143.8667	1.4691	0	9.9295	9.9295
143.9	1.4681	0.0039	9.9361	9.94
143.9333	1.4681	0.0039	9.9322	9.9361
143.9667	1.4685	0.017	9.9243	9.9413
144	1.4658	0.017	9.9309	9.9479
144.0333	1.4678	0.0039	9.9493	9.9531
144.0667	1.4688	0	9.9427	9.9427
144.1	1.4668	0.0302	9.9401	9.9702
144.1333	1.4678	0.0039	9.9361	9.94
144.1667	1.4708	0.0039	9.9361	9.94
144.2	1.4708	0.0039	9.9387	9.9426
144.2333	1.4701	0	9.9466	9.9466
144.2667	1.4711	0	9.944	9.944
144.3	1.4691	0.0039	9.9466	9.9505
144.3333	1.4688	0	9.9453	9.9453
144.3667	1.4728	0.0039	9.9374	9.9413
144.4	1.4708	0	9.9506	9.9506
144.4333	1.4724	0.0039	9.9545	9.9584
144.4667	1.4701	0	9.9611	9.9611
144.5	1.4734	0.0039	9.9637	9.9676
144.5333	1.4731	0	9.9532	9.9532
144.5667	1.4724	0.0039	9.9611	9.965
144.6	1.4711	0.0039	9.9664	9.9702
144.6333	1.4721	0.0039	9.9519	9.9558
144.6667	1.4721	0.017	9.9558	9.9729
144.7	1.4731	0.0039	9.9664	9.9702
144.7333	1.4599	0.0039	9.9677	9.9716

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144.7667	1.4602	0.0039	9.965	9.9689
144.8	1.4596	0	9.9611	9.9611
144.8333	1.4602	0	9.9756	9.9756
144.8667	1.4583	0	9.9558	9.9558
144.9	1.4596	0.017	9.9795	9.9965
144.9333	1.455	0.0039	9.9677	9.9716
144.9667	1.4507	0	9.9637	9.9637
145	1.4523	0.0039	9.9677	9.9716
145.0333	1.4514	0.017	9.9585	9.9755
145.0667	1.4527	0.0039	9.9677	9.9716
145.1	1.4497	0.0039	9.9598	9.9637
145.1333	1.4467	0	9.965	9.965
145.1667	1.4461	0	9.9571	9.9571
145.2	1.4474	0.0039	9.9637	9.9676
145.2333	1.4491	0.017	9.9571	9.9742
145.2667	1.4435	0	9.9519	9.9519
145.3	1.4454	0	9.9571	9.9571
145.3333	1.4441	0.017	9.969	9.986
145.3667	1.4444	0.0039	9.9571	9.961
145.4	1.4444	0	9.965	9.965
145.4333	1.4428	0.017	9.9756	9.9926
145.4667	1.4412	0.0039	9.9611	9.965
145.5	1.4415	0.0039	9.9493	9.9531
145.5333	1.4388	0	9.9558	9.9558
145.5667	1.4395	0.0039	9.965	9.9689
145.6	1.4372	0.0039	9.9756	9.9794
145.6333	1.4385	0.0039	9.9742	9.9781
145.6667	1.4375	0	9.969	9.969
145.7	1.4395	0.0039	9.9611	9.965
145.7333	1.4379	0.0039	9.9769	9.9808
145.7667	1.4339	0.0039	9.9624	9.9663
145.8	1.4336	0.017	9.9558	9.9729
145.8333	1.4342	0.0039	9.9571	9.961
145.8667	1.4349	0.0039	9.9624	9.9663
145.9	1.4326	0.017	9.9585	9.9755
145.9333	1.4296	0.017	9.9558	9.9729
145.9667	1.4316	0	9.9571	9.9571
146	1.4306	0	9.9532	9.9532
146.0333	1.43	0.0039	9.9519	9.9558
146.0667	1.4303	0.0039	9.9545	9.9584
146.1	1.4293	0	9.9532	9.9532
146.1333	1.43	0.0039	9.9571	9.961
146.1667	1.429	0.0039	9.9558	9.9597

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146.2	1.4296	0	9.9558	9.9558
146.2333	1.426	0.0039	9.9493	9.9531
146.2667	1.426	0.017	9.9585	9.9755
146.3	1.425	0.017	9.9558	9.9729
146.3333	1.4277	0.0039	9.9493	9.9531
146.3667	1.4267	0.0039	9.9414	9.9453
146.4	1.4207	0.0039	9.9532	9.9571
146.4333	1.423	0.0039	9.9558	9.9597
146.4667	1.4211	0.0039	9.9545	9.9584
146.5	1.4234	0	9.9414	9.9414
146.5333	1.4214	0.0039	9.9545	9.9584
146.5667	1.424	0.0039	9.9493	9.9531
146.6	1.4198	0.0039	9.9466	9.9505
146.6333	1.4178	0.017	9.9466	9.9637
146.6667	1.4188	0.017	9.9532	9.9702
146.7	1.4191	0	9.9598	9.9598
146.7333	1.4165	0.0039	9.9545	9.9584
146.7667	1.4161	0.0039	9.9571	9.961
146.8	1.4194	0	9.9558	9.9558
146.8333	1.4148	0.017	9.9545	9.9716
146.8667	1.4188	0.0039	9.9466	9.9505
146.9	1.4161	0.017	9.9585	9.9755
146.9333	1.4145	0.0302	9.9545	9.9847
146.9667	1.4168	0.0039	9.9427	9.9466
147	1.4148	0	9.9453	9.9453
147.0333	1.4151	0.0039	9.9493	9.9531
147.0667	1.4148	0.0039	9.9348	9.9387
147.1	1.4161	0	9.9335	9.9335
147.1333	1.4115	0.0039	9.9295	9.9334
147.1667	1.4135	0.0039	9.9335	9.9374
147.2	1.4168	0	9.9309	9.9309
147.2333	1.4151	0	9.9335	9.9335
147.2667	1.4145	0.017	9.9322	9.9492
147.3	1.4155	0.0039	9.9414	9.9453
147.3333	1.4181	0.017	9.9348	9.9518
147.3667	1.4194	0	9.9322	9.9322
147.4	1.4221	0.0039	9.9361	9.94
147.4333	1.4224	0.0039	9.9309	9.9347
147.4667	1.4194	0	9.9295	9.9295
147.5	1.4217	0.017	9.9282	9.9453
147.5333	1.4244	0	9.9203	9.9203
147.5667	1.4227	0	9.9282	9.9282
147.6	1.4207	0.017	9.9466	9.9637

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147.6333	1.4267	0	9.9164	9.9164
147.6667	1.4247	0.017	9.9295	9.9466
147.7	1.4293	0.017	9.9309	9.9479
147.7333	1.4296	0.0039	9.9295	9.9334
147.7667	1.4286	0.0039	9.9282	9.9321
147.8	1.4323	0.0039	9.9138	9.9176
147.8333	1.4339	0.0039	9.9124	9.9163
147.8667	1.4319	0.0039	9.9309	9.9347
147.9	1.4352	0.0039	9.944	9.9479
147.9333	1.4375	0	9.9401	9.9401
147.9667	1.4405	0	9.9216	9.9216
148	1.4365	0.0039	9.9374	9.9413
148.0333	1.4375	0.0039	9.9269	9.9308
148.0667	1.4365	0.0039	9.9335	9.9374
148.1	1.4395	0	9.9335	9.9335
148.1333	1.4441	0.0039	9.9414	9.9453
148.1667	1.4428	0.0039	9.9453	9.9492
148.2	1.4441	0.0039	9.9479	9.9518
148.2333	1.4451	0.0039	9.9309	9.9347
148.2667	1.4438	0	9.9361	9.9361
148.3	1.4464	0.0039	9.9348	9.9387
148.3333	1.4464	0.0039	9.9414	9.9453
148.3667	1.4467	0.017	9.9401	9.9571
148.4	1.451	0.017	9.9479	9.965
148.4333	1.4523	0.017	9.9427	9.9597
148.4667	1.4507	0.0039	9.9479	9.9518
148.5	1.4504	0.017	9.9466	9.9637
148.5333	1.453	0.0039	9.9532	9.9571
148.5667	1.4543	0.017	9.9558	9.9729
148.6	1.4491	0.0039	9.9611	9.965
148.6333	1.454	0.017	9.9532	9.9702
148.6667	1.454	0.0039	9.9598	9.9637
148.7	1.453	0	9.9598	9.9598
148.7333	1.4566	0.0039	9.9611	9.965
148.7667	1.4563	0	9.9664	9.9664
148.8	1.455	0	9.9729	9.9729
148.8333	1.4563	0.0039	9.969	9.9729
148.8667	1.4609	0.0039	9.9637	9.9676
148.9	1.4602	0.0039	9.9716	9.9755
148.9333	1.4616	0	9.9677	9.9677
148.9667	1.4596	0.0039	9.9716	9.9755
149	1.4602	0.0039	9.9821	9.986
149.0333	1.4649	0.0039	9.9664	9.9702

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149.0667	1.4629	0.0039	9.99	9.9939
149.1	1.4609	0	9.9742	9.9742
149.1333	1.4645	0	9.9756	9.9756
149.1667	1.4649	0.0039	9.9861	9.99
149.2	1.4652	0.017	9.9848	10.0018
149.2333	1.4635	0.0039	9.9992	10.0031
149.2667	1.4691	0.0039	9.994	9.9979
149.3	1.4668	0.0039	9.99	9.9939
149.3333	1.4649	0.0039	9.9979	10.0018
149.3667	1.4566	0.0039	9.9913	9.9952
149.4	1.4576	0	10.0019	10.0019
149.4333	1.4579	0.0039	9.994	9.9979
149.4667	1.4579	0	9.9887	9.9887
149.5	1.4583	0.0039	9.99	9.9939
149.5333	1.4593	0.0039	9.9979	10.0018
149.5667	1.4583	0.0039	9.9953	9.9992
149.6	1.4619	0.017	9.9927	10.0097
149.6333	1.4583	0.0039	10.0032	10.0071
149.6667	1.4596	0.0039	9.9769	9.9808
149.7	1.4619	0.0039	9.9992	10.0031
149.7333	1.4632	0.0039	9.99	9.9939
149.7667	1.4642	0.0039	9.9913	9.9952
149.8	1.4672	0.0039	9.99	9.9939
149.8333	1.4514	0.0039	9.9966	10.0005
149.8667	1.4533	0.0039	10.0032	10.0071
149.9	1.4546	0.017	9.9992	10.0163
149.9333	1.457	0.0039	10.0084	10.0123
149.9667	1.4533	0.017	9.9927	10.0097
150	1.4546	0.0039	10.0005	10.0044
150.0333	1.457	0.0039	10.0032	10.0071
150.0667	1.455	0.0039	10.0045	10.0084
150.1	1.4566	0.0039	10.0176	10.0215
150.1333	1.4543	0.0039	10.0124	10.0163
150.1667	1.4556	0.0039	10.0084	10.0123
150.2	1.4563	0.0039	9.9887	9.9926
150.2333	1.4573	0.0039	9.9966	10.0005
150.2667	1.454	0.0039	9.9887	9.9926
150.3	1.4556	0.017	9.9927	10.0097
150.3333	1.4527	0.0039	9.9966	10.0005
150.3667	1.4514	0.0039	10.0032	10.0071
150.4	1.455	0.0039	9.9953	9.9992
150.4333	1.456	0.0039	9.9953	9.9992
150.4667	1.454	0.0039	9.9979	10.0018

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
150.5	1.4553	0	10.0019	10.0019
150.5333	1.4537	0.017	10.0045	10.0215
150.5667	1.4546	0.0039	10.0137	10.0176
150.6	1.4556	0	10.0019	10.0019
150.6333	1.4514	0.0039	10.0084	10.0123
150.6667	1.4527	0	10.0045	10.0045
150.7	1.4543	0.0039	10.0019	10.0057
150.7333	1.453	0.0039	10.0084	10.0123
150.7667	1.4517	0.0039	10.0111	10.015
150.8	1.4537	0	10.0137	10.0137
150.8333	1.452	0.0039	10.0137	10.0176
150.8667	1.452	0.0039	10.0097	10.0136
150.9	1.4527	0	10.015	10.015
150.9333	1.4543	0.0039	10.0124	10.0163
150.9667	1.455	0.0039	10.0216	10.0255
151	1.452	0.0039	10.0071	10.011
151.0333	1.4507	0	10.0216	10.0216
151.0667	1.4527	0.0039	10.0032	10.0071
151.1	1.4523	0.0039	10.0163	10.0202
151.1333	1.454	0.017	10.0124	10.0294
151.1667	1.4527	0.0039	10.015	10.0189
151.2	1.451	0.0039	10.0111	10.015
151.2333	1.4514	0.0039	10.0071	10.011
151.2667	1.453	0.0039	10.0058	10.0097
151.3	1.4487	0	10.015	10.015
151.3333	1.4514	0.017	10.0032	10.0202
151.3667	1.4537	0.0039	10.0137	10.0176
151.4	1.453	0	10.0111	10.0111
151.4333	1.4527	0.0039	10.0163	10.0202
151.4667	1.4497	0.0039	10.0058	10.0097
151.5	1.4484	0.0039	10.0137	10.0176
151.5333	1.4537	0.0039	10.0124	10.0163
151.5667	1.45	0	10.0268	10.0268
151.6	1.453	0.0039	10.0097	10.0136
151.6333	1.4444	0	10.0124	10.0124
151.6667	1.4454	0.0039	10.0242	10.0281
151.7	1.4491	0	10.0176	10.0176
151.7333	1.4458	0.0039	10.0242	10.0281
151.7667	1.4487	0.0039	10.0176	10.0215
151.8	1.4497	0.0039	10.0097	10.0136
151.8333	1.4458	0.0039	10.0242	10.0281
151.8667	1.4471	0.0039	10.0111	10.015
151.9	1.4471	0	10.0137	10.0137

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
151.9333	1.4484	0.017	10.0045	10.0215
151.9667	1.4464	0.017	10.019	10.036
152	1.4461	0	10.0137	10.0137
152.0333	1.4461	0.0039	10.0137	10.0176
152.0667	1.4458	0.0039	10.0137	10.0176
152.1	1.4474	0.0039	10.015	10.0189
152.1333	1.4448	0.0039	10.0111	10.015
152.1667	1.4458	0	10.0216	10.0216
152.2	1.4464	0.017	10.0176	10.0347
152.2333	1.4464	0.017	10.019	10.036
152.2667	1.4458	0.0039	10.015	10.0189
152.3	1.4487	0	10.0097	10.0097
152.3333	1.4467	0.0039	10.0163	10.0202
152.3667	1.4438	0.017	10.0176	10.0347
152.4	1.4477	0	10.0124	10.0124
152.4333	1.4448	0	10.0097	10.0097
152.4667	1.4444	0.017	10.0242	10.0413
152.5	1.4444	0.0039	10.0137	10.0176
152.5333	1.4451	0.0039	10.0137	10.0176
152.5667	1.4474	0	10.0124	10.0124
152.6	1.4477	0.017	10.0084	10.0255
152.6333	1.4477	0	10.0058	10.0058
152.6667	1.4458	0.017	10.0176	10.0347
152.7	1.4461	0.0039	10.019	10.0228
152.7333	1.4481	0.017	10.0124	10.0294
152.7667	1.4444	0.0039	10.0058	10.0097
152.8	1.4464	0.0039	10.0045	10.0084
152.8333	1.4464	0.0039	10.0163	10.0202
152.8667	1.4474	0.017	10.0058	10.0228
152.9	1.4467	0.0039	10.015	10.0189
152.9333	1.4458	0.0039	10.015	10.0189
152.9667	1.4425	0.0039	10.0137	10.0176
153	1.4444	0	10.0176	10.0176
153.0333	1.4458	0.017	10.0058	10.0228
153.0667	1.4448	0	10.0111	10.0111
153.1	1.4458	0.017	10.0097	10.0268
153.1333	1.4428	0.0039	10.0163	10.0202
153.1667	1.4471	0.0039	10.0176	10.0215
153.2	1.4454	0.017	10.0203	10.0373
153.2333	1.4454	0.0039	10.0282	10.032
153.2667	1.4471	0	10.019	10.019
153.3	1.4444	0.0039	10.0242	10.0281
153.3333	1.4454	0	10.0203	10.0203

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
153.3667	1.4467	0.0039	10.0216	10.0255
153.4	1.4448	0	10.0203	10.0203
153.4333	1.4438	0.0039	10.0229	10.0268
153.4667	1.4431	0.0039	10.0137	10.0176
153.5	1.4444	0.017	10.019	10.036
153.5333	1.4451	0.0039	10.0242	10.0281
153.5667	1.4458	0	10.0111	10.0111
153.6	1.4487	0.0039	10.0268	10.0307
153.6333	1.4441	0	10.0229	10.0229
153.6667	1.4438	0.017	10.0216	10.0386
153.7	1.4464	0.017	10.0229	10.0399
153.7333	1.4461	0.0039	10.0242	10.0281
153.7667	1.4451	0.0039	10.0124	10.0163
153.8	1.4461	0.0039	10.0216	10.0255
153.8333	1.4421	0	10.0111	10.0111
153.8667	1.4464	0.017	10.0163	10.0334
153.9	1.4451	0.0039	10.0203	10.0242
153.9333	1.4425	0	10.0255	10.0255
153.9667	1.4474	0.0039	10.019	10.0228
154	1.4484	0.017	10.0176	10.0347
154.0333	1.4471	0.0039	10.0176	10.0215
154.0667	1.4425	0.017	10.0137	10.0307
154.1	1.4428	0.0039	10.0137	10.0176
154.1333	1.4441	0.0039	10.0216	10.0255
154.1667	1.4448	0.0039	10.0058	10.0097
154.2	1.4458	0.017	10.019	10.036
154.2333	1.4451	0	10.0163	10.0163
154.2667	1.4461	0.017	10.0242	10.0413
154.3	1.4448	0.0039	10.0216	10.0255
154.3333	1.4467	0	10.015	10.015
154.3667	1.4448	0.017	10.0058	10.0228
154.4	1.4431	0	10.0097	10.0097
154.4333	1.4451	0	10.0203	10.0203
154.4667	1.4451	0.0039	10.0137	10.0176
154.5	1.4464	0	10.0216	10.0216
154.5333	1.4444	0.017	10.0124	10.0294
154.5667	1.4451	0.0039	10.0137	10.0176
154.6	1.4458	0	10.019	10.019
154.6333	1.4454	0	10.0084	10.0084
154.6667	1.4438	0.0039	10.0255	10.0294
154.7	1.4458	0.0039	10.0032	10.0071
154.7333	1.4444	0.0039	10.0045	10.0084
154.7667	1.4428	0.0039	10.0019	10.0057

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
154.8	1.4458	0	10.0058	10.0058
154.8333	1.4438	0.0039	9.9913	9.9952
154.8667	1.4425	0.0039	10.0032	10.0071
154.9	1.4431	0.0039	10.0137	10.0176
154.9333	1.4425	0	10.0032	10.0032
154.9667	1.4461	0.0039	10.0071	10.011
155	1.4425	0.0039	10.0045	10.0084
155.0333	1.4444	0.0039	10.0058	10.0097
155.0667	1.4418	0.0039	10.0084	10.0123
155.1	1.4441	0	10.0045	10.0045
155.1333	1.4448	0	10.0058	10.0058
155.1667	1.4454	0	10.0137	10.0137
155.2	1.4438	0.0039	10.0019	10.0057
155.2333	1.4477	0.0039	10.0111	10.015
155.2667	1.4428	0.0039	10.0084	10.0123
155.3	1.4438	0	10.0071	10.0071
155.3333	1.4467	0	10.0111	10.0111
155.3667	1.4461	0.017	10.0045	10.0215
155.4	1.4451	0.0039	9.9887	9.9926
155.4333	1.4451	0.017	10.0019	10.0189
155.4667	1.4444	0.017	10.0176	10.0347
155.5	1.4464	0.0039	10.0084	10.0123
155.5333	1.4458	0.017	10.0097	10.0268
155.5667	1.4454	0.0039	10.0137	10.0176
155.6	1.4428	0.0039	10.0111	10.015
155.6333	1.4448	0.017	10.0097	10.0268
155.6667	1.4438	0.0039	10.0071	10.011
155.7	1.4438	0.0039	10.0111	10.015
155.7333	1.4448	0.0039	10.0071	10.011
155.7667	1.4428	0.0039	10.0045	10.0084
155.8	1.4458	0.017	10.0084	10.0255
155.8333	1.4471	0	10.0111	10.0111
155.8667	1.4441	0	10.0124	10.0124
155.9	1.4441	0	10.0084	10.0084
155.9333	1.4454	0.0039	10.0163	10.0202
155.9667	1.4451	0.0039	10.0124	10.0163
156	1.4438	0.0039	10.0111	10.015
156.0333	1.4438	0	10.0084	10.0084
156.0667	1.4441	0.0039	10.015	10.0189
156.1	1.4418	0	10.0111	10.0111
156.1333	1.4425	0	10.0124	10.0124
156.1667	1.4448	0.0039	10.015	10.0189
156.2	1.4444	0.0039	10.0229	10.0268

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
156.2333	1.4464	0	10.0282	10.0282
156.2667	1.4441	0.0039	10.0203	10.0242
156.3	1.4425	0.0039	10.0097	10.0136
156.3333	1.4461	0.0039	10.0124	10.0163
156.3667	1.4421	0.017	10.0124	10.0294
156.4	1.4464	0.017	10.0137	10.0307
156.4333	1.4441	0.0039	10.0084	10.0123
156.4667	1.4444	0.0039	10.0124	10.0163
156.5	1.4421	0	10.0071	10.0071
156.5333	1.4451	0	10.0058	10.0058
156.5667	1.4454	0.0039	10.0111	10.015
156.6	1.4444	0.0302	10.0084	10.0386
156.6333	1.4431	0	10.0097	10.0097
156.6667	1.4461	0.0039	10.0045	10.0084
156.7	1.4415	0.0039	10.015	10.0189
156.7333	1.4454	0	10.0032	10.0032
156.7667	1.4431	0	10.015	10.015
156.8	1.4438	0	10.0058	10.0058
156.8333	1.4402	0	10.0045	10.0045
156.8667	1.4408	0	10.0242	10.0242
156.9	1.4405	0.017	10.0163	10.0334
156.9333	1.4441	0	10.0137	10.0137
156.9667	1.4458	0.0039	10.0163	10.0202
157	1.4451	0	10.0163	10.0163
157.0333	1.4438	0	10.0111	10.0111
157.0667	1.4425	0	10.0242	10.0242
157.1	1.4454	0.0039	10.0084	10.0123
157.1333	1.4431	0	10.019	10.019
157.1667	1.4458	0.0039	10.0216	10.0255
157.2	1.4444	0	10.0111	10.0111
157.2333	1.4458	0.017	10.0137	10.0307
157.2667	1.4444	0	10.0137	10.0137
157.3	1.4421	0.0039	10.0124	10.0163
157.3333	1.4464	0.0039	10.0163	10.0202
157.3667	1.4451	0	10.0084	10.0084
157.4	1.4435	0.0039	10.0137	10.0176
157.4333	1.4425	0.0039	10.0058	10.0097
157.4667	1.4428	0	10.0071	10.0071
157.5	1.4458	0.0039	10.0084	10.0123
157.5333	1.4415	0	10.0097	10.0097
157.5667	1.4431	0.0039	10.0005	10.0044
157.6	1.4431	0.0039	10.0097	10.0136
157.6333	1.4448	0.0039	10.0137	10.0176

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
157.6667	1.4415	0.0039	10.0176	10.0215
157.7	1.4425	0	10.0203	10.0203
157.7333	1.4438	0.0039	10.0084	10.0123
157.7667	1.4461	0	10.0137	10.0137
157.8	1.4451	0.0039	10.0005	10.0044
157.8333	1.4405	0.0039	10.0097	10.0136
157.8667	1.4412	0.0039	10.0032	10.0071
157.9	1.4451	0.017	10.015	10.032
157.9333	1.4431	0.017	10.0071	10.0242
157.9667	1.4431	0.0039	10.0071	10.011
158	1.4448	0	10.0045	10.0045
158.0333	1.4435	0	10.0111	10.0111
158.0667	1.4448	0.0039	10.0058	10.0097
158.1	1.4425	0.017	10.0111	10.0281
158.1333	1.4435	0.017	10.0176	10.0347
158.1667	1.4448	0.0039	10.0163	10.0202
158.2	1.4444	0	10.0203	10.0203
158.2333	1.4421	0	10.019	10.019
158.2667	1.4385	0	10.0176	10.0176
158.3	1.4428	0.017	10.0176	10.0347
158.3333	1.4428	0.0039	10.0137	10.0176
158.3667	1.4438	0	10.0111	10.0111
158.4	1.4441	0.0039	10.0163	10.0202
158.4333	1.4444	0.017	10.015	10.032
158.4667	1.4431	0.0039	10.0071	10.011
158.5	1.4428	0.0039	10.0216	10.0255
158.5333	1.4425	0.0039	10.015	10.0189
158.5667	1.4418	0	10.0111	10.0111
158.6	1.4428	0	10.0203	10.0203
158.6333	1.4425	0.0039	10.0137	10.0176
158.6667	1.4412	0.0039	10.019	10.0228
158.7	1.4438	0	10.0084	10.0084
158.7333	1.4408	0.0039	10.0203	10.0242
158.7667	1.4415	0	10.0071	10.0071
158.8	1.4448	0.0039	10.0216	10.0255
158.8333	1.4438	0.0039	10.0111	10.015
158.8667	1.4454	0.017	10.019	10.036
158.9	1.4418	0.0039	10.0137	10.0176
158.9333	1.4425	0.0039	10.0216	10.0255
158.9667	1.4415	0.017	10.0084	10.0255
159	1.4441	0.0039	10.0203	10.0242
159.0333	1.4431	0	10.0111	10.0111
159.0667	1.4435	0	10.0268	10.0268

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
159.1	1.4412	0	10.0242	10.0242
159.1333	1.4421	0	10.0163	10.0163
159.1667	1.4435	0.0039	10.019	10.0228
159.2	1.4431	0	10.0242	10.0242
159.2333	1.4438	0.0039	10.0242	10.0281
159.2667	1.4431	0.0039	10.015	10.0189
159.3	1.4441	0	10.0203	10.0203
159.3333	1.4435	0	10.019	10.019
159.3667	1.4408	0.0039	10.0163	10.0202
159.4	1.4428	0	10.0295	10.0295
159.4333	1.4415	0	10.0203	10.0203
159.4667	1.4415	0.0039	10.0282	10.032
159.5	1.4405	0.0039	10.0334	10.0373
159.5333	1.4451	0.0039	10.0216	10.0255
159.5667	1.4412	0.0039	10.0163	10.0202
159.6	1.4421	0	10.015	10.015
159.6333	1.4454	0.0039	10.0268	10.0307
159.6667	1.4418	0.0039	10.0203	10.0242
159.7	1.4428	0.0039	10.0137	10.0176
159.7333	1.4425	0	10.0097	10.0097
159.7667	1.4395	0.017	10.0216	10.0386
159.8	1.4412	0.0039	10.0137	10.0176
159.8333	1.4441	0	10.0137	10.0137
159.8667	1.4418	0	10.015	10.015
159.9	1.4395	0.0039	10.0071	10.011
159.9333	1.4431	0	10.0058	10.0058
159.9667	1.4408	0	10.0124	10.0124
160	1.4418	0	10.0124	10.0124
160.0333	1.4454	0.0039	10.0137	10.0176
160.0667	1.4428	0.017	10.0058	10.0228
160.1	1.4408	0.0039	10.019	10.0228
160.1333	1.4421	0.017	10.0242	10.0413
160.1667	1.4421	0.0039	10.0163	10.0202
160.2	1.4425	0.0039	10.0124	10.0163
160.2333	1.4415	0.0039	10.0097	10.0136
160.2667	1.4408	0	10.0071	10.0071
160.3	1.4444	0	10.0163	10.0163
160.3333	1.4418	0.0039	10.0111	10.015
160.3667	1.4415	0.017	10.0084	10.0255
160.4	1.4405	0.017	10.0019	10.0189
160.4333	1.4415	0.0039	10.0084	10.0123
160.4667	1.4438	0.017	10.019	10.036
160.5	1.4435	0	10.0097	10.0097

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Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
160.5333	1.4421	0.0039	10.0137	10.0176
160.5667	1.4421	0	10.0111	10.0111
160.6	1.4418	0.0039	10.015	10.0189
160.6333	1.4438	0.017	10.0084	10.0255
160.6667	1.4428	0.0039	10.0163	10.0202
160.7	1.4415	0	9.9927	9.9927
160.7333	1.4421	0.0039	9.9966	10.0005
160.7667	1.4418	0.017	9.994	10.011
160.8	1.4412	0.0039	10.0097	10.0136
160.8333	1.4425	0	10.0111	10.0111
160.8667	1.4425	0	10.0071	10.0071
160.9	1.4398	0	10.0111	10.0111
160.9333	1.4435	0.0039	10.0111	10.015
160.9667	1.4428	0.017	10.015	10.032
161	1.4425	0	10.019	10.019
161.0333	1.4448	0	10.0216	10.0216
161.0667	1.4395	0	10.0216	10.0216
161.1	1.4405	0	10.0255	10.0255
161.1333	1.4421	0.0039	10.0203	10.0242
161.1667	1.4438	0	10.0268	10.0268
161.2	1.4418	0.0039	10.0137	10.0176
161.2333	1.4431	0.0039	10.0203	10.0242
161.2667	1.4418	0.0039	10.0282	10.032
161.3	1.4441	0.0039	10.0268	10.0307
161.3333	1.4418	0.017	10.0176	10.0347
161.3667	1.4435	0	10.0176	10.0176
161.4	1.4398	0.0039	10.0203	10.0242
161.4333	1.4428	0	10.0176	10.0176
161.4667	1.4402	0.017	10.0216	10.0386
161.5	1.4415	0	10.0282	10.0282
161.5333	1.4418	0.0039	10.0176	10.0215
161.5667	1.4412	0.0039	10.0097	10.0136
161.6	1.4444	0.0039	10.0229	10.0268
161.6333	1.4412	0.017	10.0268	10.0439
161.6667	1.4418	0.0039	10.0084	10.0123
161.7	1.4392	0	10.019	10.019
161.7333	1.4425	0	10.0163	10.0163
161.7667	1.4435	0	10.015	10.015
161.8	1.4418	0.0039	10.0163	10.0202
161.8333	1.4392	0.0039	10.019	10.0228
161.8667	1.4425	0	10.0111	10.0111
161.9	1.4408	0.0039	10.0137	10.0176
161.9333	1.4425	0	10.0163	10.0163

Areva NP Inc.

Project No. G101276459SAT-018

February 19, 2014

Time (min)	Ch 1 dP (psi)	Ch 2 High Flow (LPM)	Ch 3 Low Flow (LPM)	Total Flow (LPM)
161.9667	1.4421	0	10.0163	10.0163
162	1.4421	0.0039	10.0111	10.015
162.0333	1.4425	0.0039	10.0032	10.0071
162.0667	1.4398	0.0039	9.9992	10.0031
162.1	1.4415	0.0039	10.0058	10.0097
162.1333	1.4412	0.017	10.0058	10.0228
162.1667	1.4428	0.0039	10.0097	10.0136
162.2	1.4395	0	9.994	9.994
162.2333	1.4435	0.0039	9.9979	10.0018
162.2667	1.4421	0.0039	10.0045	10.0084
162.3	1.4408	0.0039	10.0005	10.0044
162.3333	1.4428	0	10.0019	10.0019
162.3667	1.4408	0.0039	10.0097	10.0136
162.4	1.4438	0.0039	9.9953	9.9992
162.4333	1.4435	0	10.019	10.019
162.4667	1.4418	0.0039	10.0084	10.0123
162.5	1.4408	0.0039	10.0097	10.0136
162.5333	1.4415	0.017	10.0032	10.0202
162.5667	1.4425	0.0039	10.0058	10.0097
162.6	1.4412	0	10.0111	10.0111
162.6333	1.4431	0.017	10.0097	10.0268
162.6667	1.4428	0	10.0032	10.0032
162.7	1.4428	0	10.0058	10.0058
162.7333	1.4438	0	10.0005	10.0005
162.7667	1.4408	0	10.0058	10.0058
162.8	1.4379	0	9.9966	9.9966
162.8333	1.4267	0.0039	10.0097	10.0136
162.8667	1.3799	0	9.9979	9.9979
162.9	1.3164	0.0039	9.9887	9.9926
162.9333	1.2552	0	9.9532	9.9532
162.9667	1.1972	0.0039	9.9309	9.9347
163	1.1403	0.0039	9.9164	9.9203

## APPENDIX C

### Photographs















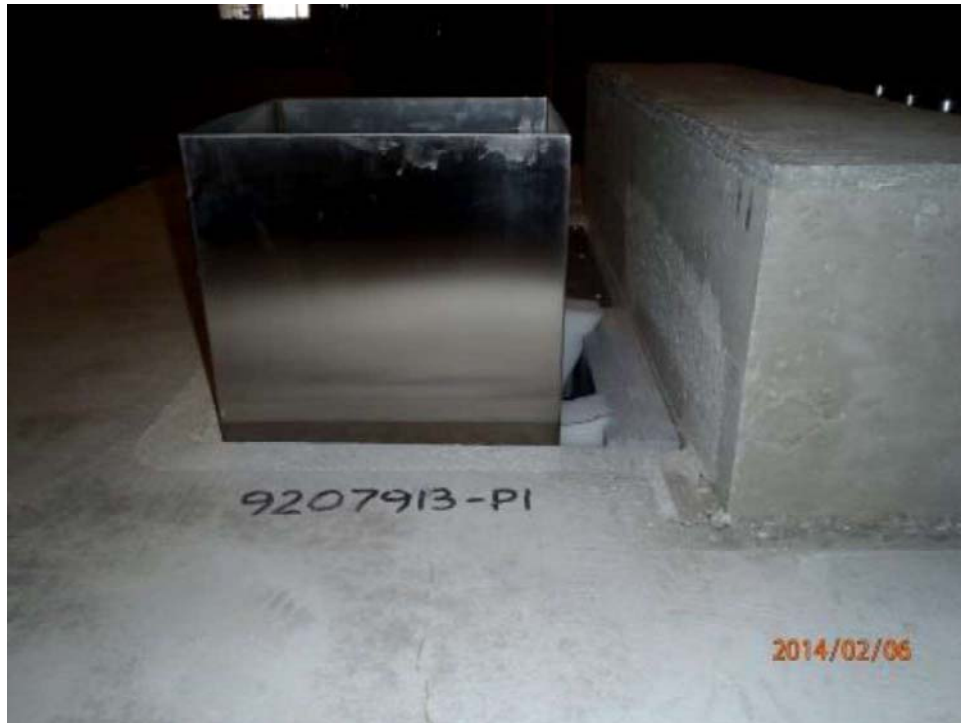




































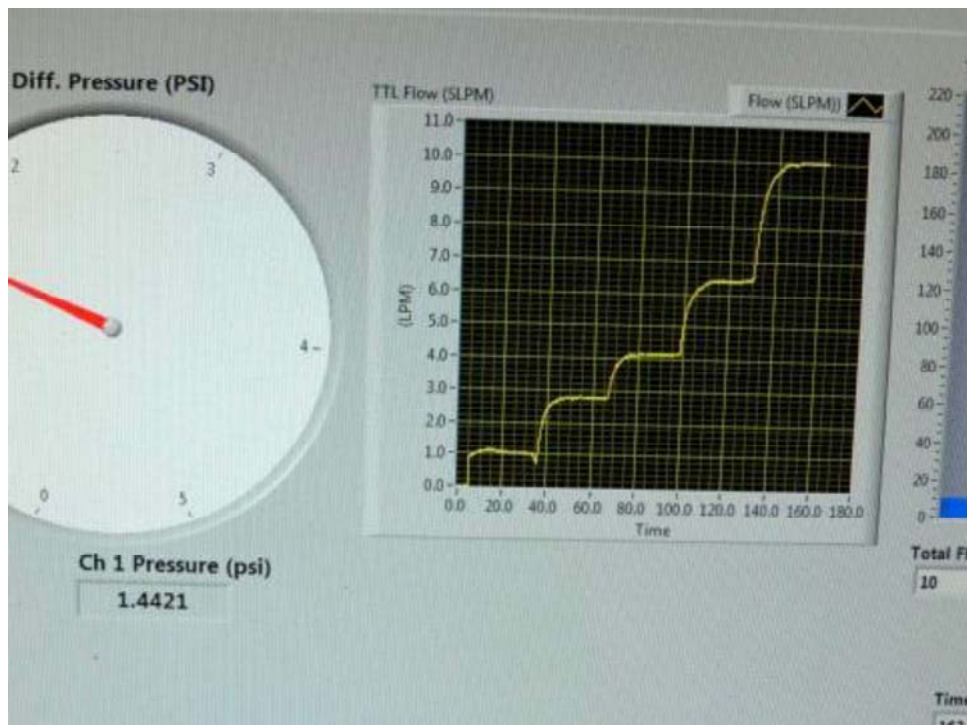


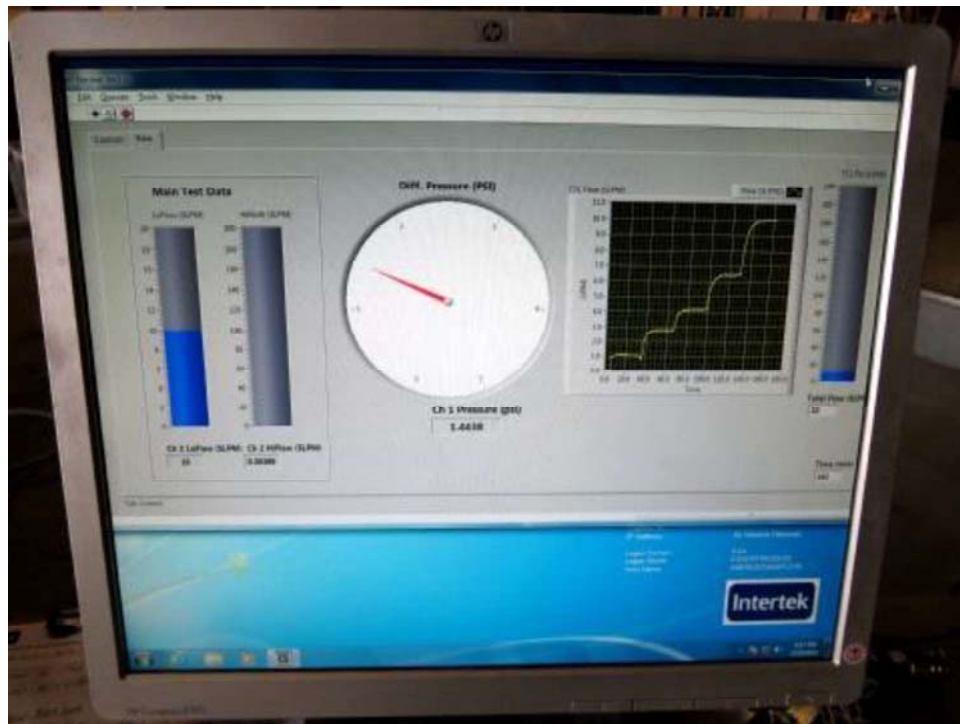




























## APPENDIX D

### Test Plan

Controlled Document

20004-020 (10/21/2013)



AREVA NP Inc.

Engineering Information Record

Document No.: 51 - 9207913 - 003

Detailed Test Plan for Conducting MOX Pressure Test 9

Mike Dey  
Staff Engineer, Intertek

Michael A. Brown  
Quality Supervisor, Intertek

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20004-020 (10/21/2013)  
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Detailed Test Plan for Conducting MOX Pressure Test 9

Safety Related? ☒ YES ☐ NO

Does this document establish design or technical requirements? ☐ YES ☒ NO

Does this document contain assumptions requiring verification? ☐ YES ☒ NO

Does this document contain Customer Required Format? ☐ YES ☒ NO

Signature Block

Name and Title/Discipline	Signature	P/LP, R/LR, A-CRF, A	Date	Pages/Sections Prepared/Reviewed/ Approved or Comments
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R/LR designates Reviewer (R), Lead Reviewer (LR)  
A-CRF designates Project Manager Approver of Customer Required Format (A-CRF)  
A. designates Approver/RTM - Verification of Reviewer Independence

Project Manager Approval of Customer References (N/A if not applicable)

Name (printed or typed)	Title (printed or typed)	Signature	Date
Perry Calos	Project Manager / IBL-A	[Redacted]	2/17/14

MOX Services concurrence: [Redacted]	17Feb14
Name / Title	Date

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20004-020 (10/21/2013)  
Document No.: 51-9207913-003

### Detailed Test Plan for Conducting MOX Pressure Test 9

#### Record of Revision

Revision No.	Pages/Sections/ Paragraphs Changed	Brief Description / Change Authorization
000	All	Initial Issue. This document contains the main body of the report (pages 1-19), Appendix A (3 pages), Appendix B (8 pages), Appendix C (5 pages), Appendix D (2 pages), for a total of 37 pages.
001	Page 2	Changed Reviewer.
001	Page 7	Added CS – Carbon Steel acronym.
001	Section 2.2	Changed penetrating commodities to material available on site.
001	Appendix B	Changed penetrating commodities to material available on site.
001	Appendix B, Page B-3	Changed track size to material available on site.
001	Appendix B, Page B-6	Added Note 3 for Screw installation.
001	Section 3.0	Changed title of Section 3.0. Added Section 3.1 on Assumptions and placed heading 3.2 Acceptance Criteria in front of text. All of this was done to comply with the latest revision of AREVA procedure 0412-59.
001	Section 12.0	Moved “retrieval of references” statement to the beginning of Section 12.0.
001	Appendix C, Page C-1	Corrected typo.
001	Appendix C, Page C-4	Changed pipe, conduit and track sizes to material available on site.
001	Appendix C, Page C-5	Corrected screw description and added double asterisk note.
001	General	This document contains the main body of the report (pages 1-19), Appendix A (3 pages), Appendix B (8 pages), Appendix C (5 pages), Appendix D (2 pages), for a total of 37 pages.
002	Appendix B, Page B-3	Added Note 4 concerning required concrete surface preparation prior to DC-790 application.
002	General	This document contains the main body of the report (pages 1-19), Appendix A (3 pages), Appendix B (8 pages), Appendix C (5 pages), Appendix D (2 pages), for a total of 37 pages.
003	Appendix B, Page B-6	Corrected Note 3 for Screw installation.
003	Appendix C, Page C-5	Corrected screw description and double asterisk note.

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#### ACRONYMS

CGD	Commercial Grade Dedication
CGI	Commercial Grade Item
CS	Carbon Steel
HVAC	Heating Ventilation and Air Conditioning
IROFS	Items Relied On For Safety
MOX	Mixed Oxide
MFFF	Mixed Oxide Fuel Fabrication Facility
QL	Quality Level
RGS	Rigid Galvanized Steel
SS	Stainless Steel
SSC	Structures, Systems and Components
UL	Underwriters Laboratories, Inc.
w.g.	Water Gauge

#### Penetration Seal Materials

SF-150NH	Promatec SF-150NH High-Density Silicone Elastomer
DC-732	Dow Corning® 732 Multi-Purpose Sealant
DC-790	Dow Corning® 790 Silicone Building Sealant

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### Detailed Test Plan for Conducting MOX Pressure Test 9

#### BACKGROUND

AREVA NP (AREVA) is assisting Shaw AREVA MOX Services (MOX Services) in the development and implementation of a penetration seal program for the Mixed Oxide Fuel Fabrication Facility (MFFF). One aspect of the MOX penetration seal program includes conducting various types of qualification tests of penetration seal assemblies to substantiate the performance capabilities of specific penetration seal designs. Pressure testing is one type of qualification testing that needs to be performed in order to demonstrate the pressure retaining capability of MOX penetration seal designs. The data collected during pressure testing is needed to determine acceptable levels of leakage to maintain the necessary pressure differentials between confinement zones within the MFFF under various conditions, such as normal operation or inadvertent clean agent discharge. Other types of qualification testing, such as fire testing and testing for seismic qualification of penetration seal assemblies, are addressed by other test plans.

#### 1.0 PURPOSE

The purpose of this test plan is to define the test assembly, test methods and acceptance criteria for conducting pressure test in support of the MOX penetration seal program.

This test plan defines the test methods, acceptance criteria and test report documentation requirements for penetration seal Pressure Test 9. Additionally, this detailed test plan defines the roles and responsibilities of MOX Services, AREVA, the selected testing laboratory, and any other subcontracted entity engaged in support of pressure testing efforts.

This detailed test plan also describes the procurement plan for materials associated with penetration seal Pressure Test 9 and identifies the entities responsible for procuring the various components of the test assemblies based on the quality level assigned to each component.

This test plan also establishes minimum quality requirements for the penetration seal materials used in the test assemblies and links quality requirements in the AREVA QA program to customer/project quality requirements.

#### 2.0 OBJECTIVE

The two objectives of this test plan are:

- 1) Evaluate the pressure resistance capability of penetration seal designs for the sealing of HVAC penetrations that contain fire dampers at air pressure increments above atmospheric pressure provided in Section 9.2.
- 2) Evaluate the pressure resistance capability of high density silicone elastomer seals when installed around penetrating commodities at air pressure increments above atmospheric pressure provided in Section 9.2.

Penetrations for HVAC commodities have been formed oversized and need to be sealed for fire and/or pressure considerations. However, where fire dampers are installed in three hour fire barriers, a gap is required between the duct/damper and the concrete barrier to allow for thermal expansion to ensure the operability of the damper. Thus, in order to reduce the size of the penetration opening, maintain a gap for thermal expansion, and seal the penetration for fire and pressure considerations, a penetration closure and retaining angle design has been developed. MOX specific designs are provided on Drawing DCS01-BMF-DS-PLF-A-04509 Sheets 1-3 [Reference 12.1] and Drawing DCS01-BMF-DS-PLS-B-01692 [Reference 12.2].

The specific configurations to be tested are described below. Critical characteristics and the associated limiting parameters that will be substantiated by a successful test are also provided.

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## 2.1 Test Deck Description

The test deck will consist of a 12" thick concrete slab measuring approximately 96" x 96" (8' x 8') [Note: Final test slab size to be determined by Intertek and documented in the final test report]. Within this slab there will be two penetrations. The HVAC penetration will be 36" x 19" with a 3/4" bevel on three sides of the opening on the top side of the barrier and a 3/4" bevel on all 4 sides of the opening on the bottom side of the barrier. The radiation shielding penetration will be a 36" x 12" opening without beveled edges. Details for the two penetrations are provided in Section 2.2. All of the penetrations will be unlined (bare concrete). The test deck will be horizontally oriented with a hemispherical 72" diameter steel pressure vessel mounted on each side of the precast opening in the slab.

Additionally, most of the openings (penetrations) in the MOX facility have been cast with a 3/4" bevel on both sides of the opening. For testing and qualification purposes, this feature is considered aesthetic, and it has no adverse effect on the functional performance of the penetration seal installation. In fact for some applications, such as in the case of pressure seals, the bevel may provide a benefit over non-beveled openings. Therefore, for the purposes of the penetration seal test program, the bevel feature will only be included on penetrations where it is deemed to have a potential negative impact on the penetration seal performance.

For the HVAC penetrations being evaluated in this test, the seal configurations result in penetration closure/seal materials abutting and overlapping the 3/4" bevel such that the bevel could impact the closure/seal performance. As a result, for the HVAC penetration in this test plan, the 3/4" bevel feature will be utilized.

Drawings showing the general layout of the test deck (test slab) for this pressure test can be found in Appendix A.

## 2.2 Test Description

There are two openings to be sealed and tested in Pressure Test 9.

Penetration P1 - Test penetration P1 is a 36" x 19" blockout containing a mechanical duct sealed at one end simulating a duct designed to resist the passage of fire. Specifically, this penetration will contain one (1) galvanized steel 14" x 14" duct with a fitted cover plate installed on the bottom side simulating a duct designed to resist the passage of fire. The penetrating duct will be located within the opening as shown in Appendix B. This opening will be sealed using a penetration closure design, as laid out in Drawing DCS01-BMF-DS-PLF-A-04509 [Reference 12.1], consisting of steel track, steel studs, structo-crete concrete panel material, metal retainer angles, Dow Corning® 790 Silicone Building Sealant / Dow Corning® 732 Multi-Purpose Sealant and ceramic fiber blanket material as backing for the silicone sealants.

Penetration P2 - Test penetration P2 is a 36" x 12" blockout containing multiple penetrating items. All sides of the opening will be unlined, bare concrete (i.e., no liners, coatings or sleeve materials). The tested conduits will include one (1) 2" diameter Rigid Galvanized Steel (RGS) conduit and one (1) 2" diameter Stainless Steel (SS) conduit. The tested pipes will include one (1) 2" diameter Schedule 40 Carbon Steel (CS) pipe and one (1) 2" diameter Schedule 10 Stainless Steel (SS) pipe. The conduits and pipes will be capped on at least one side or fitted with a welded cover plate (Note: caps and/or cover plates are construction aids only and are not being qualified by this pressure test). The cap/welded cover plate shall be made air tight, so that any leakage during the test must pass through the seal assembly and not internal to the pipe or conduit (this may be assisted by the installation of an internal elastomer seal inside the conduit/pipe or with a rubber pipe cap).

The opening will be sealed using an eight (8) inch thick seal of Promatec SF-150NH High-Density Silicone Elastomer (SF-150NH) with no permanent damming installed

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around the various penetrating commodities. The penetration seal material will be located within the opening as shown in Appendix B.

The penetrating items will be located within the openings as shown in Appendix B. The test will be performed with the test deck oriented in the horizontal position and in accordance with Section 9.0.

#### 2.3 Critical Characteristics and Limiting Parameters Being Tested

The specific critical characteristics and associated limiting parameters being tested for Pressure Test 9 are as follows.

This test will evaluate pressure resistance capabilities of penetration closure designs installed to reduce opening size around ducts with the use of steel studs, steel track, and/or layers of Structo-Crete panels with several designs of sheet metal retainer angle. Joints sealed using Dow Corning® 790 Silicone Building Sealant and Dow Corning® 732 Multi-Purpose Sealant. A successful test will substantiate the acceptability of this seal configuration to function as a pressure seal when installed in and around HVAC commodities, regardless of commodity size and orientation. Specifically, the pressure resistance of:

- Track, stud and Structo-Crete panel construction.
- Stacked layers of Structo-Crete panels installed through the penetration using HILTI fasteners (and threaded rod with coupler).
- Joint between sheet metal retainer angles and concrete wall or Structo-Crete panel sealed using Dow Corning® 790 Silicone Building Sealant and ceramic fiber blanket material as backing for the silicone sealant.
- Joint between sheet metal retainer angle and metal ductwork sealed using Dow Corning® 732 Multi-Purpose Sealant.
- Sheet metal retainer angle spanning a maximum 2" gap from duct to Structo-Crete panel closure.
- Sheet metal retainer angle spanning a maximum 5" gap from duct to parallel concrete barrier resulting in a "Racked C" retainer angle design.
- Sheet metal retainer angle at a Structo-Crete interface maximum 1" gap sealed with Dow Corning® 790 Silicone Building Sealant and ceramic fiber blanket material as backing for the silicone sealant.
- Galvanized sheet metal retainer angle at a concrete interface maximum 1" gap sealed with Dow Corning® 790 Silicone Building Sealant and ceramic fiber blanket material as backing for the silicone sealant.
- Structo-Crete to concrete interface (beveled area and gaps) sealed with Dow Corning® 790 Silicone Building Sealant.

Additionally, this test will evaluate pressure resistance capabilities of an eight (8) inch thick Promatec SF-150NH High-Density Silicone Elastomer (SF-150NH) seal with no permanent damming installed in an unlined (bare concrete) penetration. SF-150NH will be used in this test around RGS and SS conduits, and Carbon Steel (CS) and Stainless Steel (SS) pipe. A successful test will substantiate the acceptability of this seal configuration to function as a pressure seal when installed in and around the following types of commodities, regardless of commodity size:

- RGS conduits
- SS conduits
- CS pipe
- SS pipe

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#### 3.0 ASSUMPTIONS AND ACCEPTANCE CRITERIA

##### 3.1 Assumptions

No assumptions were used.

##### 3.2 Acceptance Criteria

Pressure rated penetration seals at the MOX facility are required to remain "sufficiently leak-tight" at various pressure levels in order to support the functional goals of the various pressure rating requirements (i.e., confinement, suppression system clean agent concentration, fire induced pressure loads or HVAC pressure boundary loads). The term "sufficiently leak-tight" indicates that the penetration seal meets the predetermined acceptance criteria for the pressure level(s) being tested.

The acceptance criterion that constitutes "sufficiently leak-tight" varies based on the pressure requirement and the operating mode of the plant. For most pressure conditions and operating modes, "sufficiently leak-tight" means that the penetration seal assembly must remain in place but is allowed to leak (i.e., the penetration seal cannot become dislodged from the opening or otherwise catastrophically fail such that a substantial leakage path is created.)

Per MOX Services Calculation *Confinement Boundary Air Leakage Criteria* [Reference 12.11], penetration seals that function as confinement zone 3b boundary components must maintain a leakage rate less than 0.01 cfm/sq. ft. of penetration area when tested at a pressure that bounds C3b to non-C3b zone pressures during normal operating conditions.

Table 9-1 identifies the differential pressure levels (stages) for conducting pressure tests, as well as, the acceptance criteria in order to be considered "sufficiently leak-tight".

#### 4.0 RESPONSIBILITIES

The following roles and responsibilities apply to this test plan.

##### 4.1 MOX Services

- 4.1.1 Provide review and concurrence of this detailed pressure test plan.
- 4.1.2 Provide concurrence for any revisions made to this test plan during test specimen construction activities.
- 4.1.3 Provide some of the materials for test assembly construction from MOX Services surplus or scrap (if available).
- 4.1.4 Witness pressure tests if desired.

##### 4.2 AREVA

- 4.2.1 Develop and revise (if necessary) this detailed pressure test plan.
- 4.2.2 Provide management and oversight of all aspects of the MOX penetration seal test program.
- 4.2.3 Select the pressure testing facility and establish sub-contract agreements. The testing laboratory selected for performance of this pressure test is Intertek Testing Services NA, Inc., Elmendorf, TX.
- 4.2.4 Provide engineering instructions to the testing laboratory for performance of the test including test parameters, acceptance criteria, requirements for documenting the test results in a final test report, etc.

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- 4.2.5 Procure all primary penetration seal materials, devices and components (i.e., any materials, devices and components intended to replicate future Safety Related (QL-1) designs to be installed in the MOX facility) as designated in the procurement plan section (Section 5.0) of this test plan.
- 4.2.6 Notify MOX Services at least 10 days prior to test date to facilitate MOX Services decision to witness the pressure test.
- 4.2.7 Witness pressure test.
- 4.2.8 Perform post-test examinations.
- 4.2.9 Review, approve and issue final test reports.

#### 4.3 Testing Laboratory (Intertek Testing Services NA, Inc.)

- 4.3.1 Notify AREVA at least 5 days prior to the start of test assembly construction activities.
- 4.3.2 Construct test decks in accordance with this test plan and AREVA direction.
- 4.3.3 Procure test deck materials and any other test assembly components identified under the Testing Laboratory scope in the procurement plan section (Section 5.0) of this test plan.
- 4.3.4 Procure testing equipment necessary for pressure testing services in accordance with this test plan and verify that the testing equipment is properly calibrated.
- 4.3.5 Provide pressure testing services in accordance with this test plan.
- 4.3.6 Assist AREVA, as necessary, in conducting detailed post-test destructive examinations of the test assemblies.
- 4.3.7 Dispose of test assemblies upon completion of the pressure tests.
- 4.3.8 Generate final test reports in accordance with test plan requirements (Section 11.0).

#### 4.4 Other Subcontracted Entities

There are no other Subcontractors for this pressure test plan.

### 5.0 PROCUREMENT PLAN

This penetration seal pressure test plan involves many elements beyond the penetration seal material being qualified. Some of these elements include the test deck or test slab, various fasteners for securing laboratory instrumentation to the test assembly, etc. Not all elements of the test assembly are required to be procured to the same quality level as the penetration seal material, which must be capable of satisfying the quality requirements of the end product (i.e., QL-1 qualified penetration seal assemblies for plant applications). The following procurement plan takes into consideration the required quality level of the various materials required for these penetration seal pressure tests and prescribes an approach for material procurement which considers cost, schedule and quality requirements.

#### 5.1 Penetration Seal Materials

The vast majority of penetration seals that will be installed throughout the MFFF are designated QL-1. MOX Services defines QL-1 in PP9-1, *SSC Quality Levels & Marking Design Documents* [Reference 12.3] as follows:

*QL-1 SSCs are typically IROFS (all IROFS are QL-1 and may be either SSCs or Administrative Controls) credited in the Integrated Safety Analysis with a required function to prevent or mitigate design basis events such that high-consequence events are made highly unlikely; intermediate-*

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*consequence events are made unlikely; or to prevent criticality. For example, the failure of an IROFS item could cause:*

- 1. Loss of a primary confinement feature leading to release of material resulting in exceeding 10CFR70.61 performance requirements;*
- 2. Failure to satisfy the double contingency principle for the prevention of a criticality accident; or*
- 3. Loss of other safety function required to meet 10CFR70.61 performance requirements.*

This definition correlates with the following definition of "Nuclear Safety Related" in AREVA Administrative Procedure (AP) 1702-25, *Assignment of Nuclear Safety Classification to Products and Services* [Reference 12.4]:

#### *Definition of "Nuclear Safety Related"*

*Company products and services are considered to be nuclear safety related if they involve the evaluation, specification, design or change in design, operation, or performance of structures, systems, and components which must function directly, or must support other systems which function, to ensure any of the following:*

- The integrity of the reactor coolant pressure boundary*
- The capability to shut down the reactor and maintain it in a safe shutdown condition*
- The capability to prevent or mitigate the consequences of accidents which could result in potential offsite radiation exposures greater than accepted limits.*

On this basis, permanent penetration seal materials used in this test program shall be procured by AREVA or supplied by MOX Services and suitably base-lined so that future procurements of the same commercial materials can undergo the commercial grade dedication process in support of Nuclear Safety Related (i.e., MOX QL-1) plant installations. Only the primary seal materials specified as a part of the final seal design and which are left in place during testing become an integral part of the seal assembly and need to be base-lined for future dedication of similarly procured materials.

The quality level of the penetration seal materials procured for this test plan is **Non-Safety**.

Note: Commercial Grade Dedication (CGD) must be performed for Commercial Grade Items (CGIs) used in Safety Related applications when procured from suppliers where specific quality controls for nuclear applications cannot be imposed in a practical manner in accordance with 56-9141754-001, *AREVA NP Inc. Quality Assurance Program* [Reference 12.5]. However, none of the seal materials to be procured and used in the test program are intended or approved for installation in the MOX facility. Therefore, CGD of penetration seal materials used for test purposes is not required.

MOX will be performing the commercial grade dedication process for the steel track, steel studs, Hilti fasteners, Structo-crete and any other fasteners/hardware used to close the penetrations in this test plan.

For this pressure test, the following materials shall be procured by AREVA and base-lined for future dedication activities.

1. Dow Corning® 790 Silicone Building Sealant.
2. Dow Corning® 732 Multi-Purpose Sealant.
3. Unifrax Fiberfrax® Durablanket® S – 6 pcf density
4. Promatec SF-150NH High-Density Silicone Elastomer

## 5.2 Test Deck/Test Slab

The test deck will be used to simulate a confinement zone or HVAC boundary in which the penetration seal assemblies may be installed. The test deck is not considered an integral part of the penetration seal assembly being tested and therefore is not intended to replicate MOX-specific plant conditions and not

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considered integral in bounding the performance of the penetration seal assemblies (e.g., concrete blend, compressive strength, rebar size and spacing). The test deck will be comprised of normal weight reinforced concrete.

The openings cast into the test deck will simulate certain features consistent with MOX penetrations (e.g., painted or coated interior finishes, beveled edges, etc.) as defined by the test plan drawings contained in Appendix A.

The testing laboratory shall be responsible for procuring all materials and components associated with the construction of the test deck, unless otherwise specified below. The test deck shall comply with the requirements of the approved test plan drawings contained in Appendix A, and in accordance with the testing facility's Quality Assurance Program.

The quality level of the test deck is **Non-safety**.

#### 5.3 Penetrating Items

Penetrating items (e.g., pipes, conduits and HVAC) will be used in this pressure test to simulate MOX-specific plant commodities during the pressure test but are not considered an integral part of the penetration seal assemblies being tested. Therefore, the quality level of the penetrating items is **Non-safety**.

Penetrating items for this pressure test will come from one of two sources: MOX Services or the testing laboratory. MOX Services supplied items are identified on the MOX Services Bill of Materials in Section C.2 of Appendix C. Items provided by the testing laboratory are identified on the Testing Laboratory Bill of Materials in Section C.3 of Appendix C.

#### 6.0 SPECIAL PRECAUTIONS

##### 6.1 Precautions for Construction of Test Assemblies

Observe testing facilities safe work practices for construction, lifting, and moving of test assemblies.

##### 6.2 Precautions for Installation of Seal Assemblies

Observe specific precautions recommended by seal material manufacturers as noted on product literature and material safety data sheets contained in AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6].

##### 6.3 Precautions for Conducting Pressure Tests

Proper safety precautions shall be exercised to preclude personnel from direct exposure to loss of pressure events, unexpected disengaging of testing equipment from the test deck, and all other related hazards.

#### 7.0 PREREQUISITES

##### 7.1 General Test Configuration Requirements

The test assembly, including slab layout and penetration seal configurations shall be as specified by AREVA and in accordance with the drawings and information contained in Appendix A of this test plan, and AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6].

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**7.2 Safety Related Materials**

Penetration seal materials that are purchased **Non-Safety** for this test program but are to be base-lined for future Nuclear Safety Related via the Commercial Grade Dedication process are indicated on the AREVA Bill of Materials (Appendix C.1).

**7.3 Dimensioned Drawings**

All test articles shall conform to the dimensioned drawings supplied by AREVA and contained in Appendix A & Appendix B of this test plan. Any differences between designed and constructed/tested assemblies shall be noted in final drawings contained within the test report.

**7.4 Test Configuration**

All test articles shall be securely fastened to the test apparatus by the laboratory. All openings shall be sealed in accordance with test plan instructions, drawings (Appendix A & Appendix B) and AREVA Document 01-9198306 [Reference 12.6].

**8.0 TEST ASSEMBLY CONSTRUCTION**

**8.1 Test Slab Construction**

The Testing Laboratory shall construct the test slab, including location and size of openings and placement of penetrating items, in accordance with the drawings contained in Appendix A of this Test Plan.

AREVA QC (or approved designee) shall conduct an inspection of the test slab for compliance with the approved Test Plan drawings prior to installation of individual penetration seal test assemblies. Any differences between the approved Test Plan drawings and the as-built test slab configuration shall be corrected (if deemed necessary by the AREVA Test Engineer) or noted by the QC Inspector (if correction is not required). Completion of this verification shall be documented as required by AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6].

**8.2 Penetration Seal Installation**

AREVA (or approved designee) shall install the penetration seal test assemblies in accordance with the drawings contained in Appendix A of this Test Plan and in accordance with AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6].

QA/QC verification of penetration seal installations shall be documented as required by AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6]. For the purposes of this test plan, the "seal assemblies" requiring QA/QC verification under 01-9198306 are limited to the installations of Dow Corning® 790 and 732 sealants and Durablanket S installed as a backing material in conjunction with these sealants, and the SF-150NH elastomer.

**8.3 Pre-Test Verifications**

Prior to conducting the pressure test for each test assembly, the AREVA Test Engineer shall sign-off indicating that the test article (test penetration) is complete and ready for testing as required by AREVA NP Inc. Document 01-9198306, *Installation Instruction Manual for MOX Penetration Seal Test Program* [Reference 12.6].

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## 9.0 PROCEDURE

### 9.1 Pressure Test Apparatus

The pressure test apparatus to be used for these pressure tests shall be constructed and maintained by the testing laboratory. Two hemispherical 72" diameter steel pressure vessels shall be used to construct the assembly. One side shall be used to induce the testing pressures above atmospheric pressure based on Table 9-1, while the other side shall measure the pressure increase or "leakage" through the penetration. The test apparatus shall be "leak-tight" and substantial enough to withstand the pressures created for test purposes. Attachment shall be sufficient to withstand the forces imposed on the pressure vessels during the test.

### 9.2 Process

The anticipated differential pressures, as they apply to MFFF penetration seal designs, are discussed in DCS01-BRA-DS-TRD-B-01365-0 [Reference 12.7]. Depending upon its location in the plant, a penetration seal may be subjected to differential pressures from one or more of the following sources:

- Clean agent suppression system discharge (inadvertent or in response to a fire)
- Normal HVAC operation in support of facility confinement zone separation
- Fire induced pressure
- HVAC pressure boundary

The full range of differential pressures under various conditions is identified in Calculations DCS01-XGA-DS-CAL-B-01105-0 [Reference 12.8], DCS01-ASI-DS-CAL-R-10552-0 [Reference 12.9], and DCS01-QJJ-DS-CAL-V-10421-0 [Reference 12.10].

The pressure levels specified in Table 9-1 are to be used in the pressure tests. These pressures are intended to bound a range of calculated differential pressures anticipated based on the various pressure conditions described above and detailed in the referenced calculations, with additional margin. The bounding differential pressures to be used for each penetration seal pressure test, the test hold time at each pressure, the acceptance criteria to be considered "sufficiently leak-tight", and the basis for each pressure, are identified in Table 9-1.

A hold time of 30 minutes has been established for each pressure level to ensure that sufficient time at pressure is maintained to; 1) confirm that no leakage occurs at that pressure, or 2) stabilize make up air and attain reasonably accurate leakage rate information for those configurations where leakage is detected.

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**Table 9-1: Differential Pressure Test Levels**

Test Stage	Differential Pressure (inch w.g.)	Required Hold Time (minutes)	Acceptance Criteria	Basis for the Selected Differential Pressure
1	1.0	30	Leakage $\leq$ 0.01 cfm/sq. ft. of penetration area - Note <sup>1</sup>	Testing at this differential pressure bounds the 0.51 inches w.g. pressure for C3b to C2 areas during normal operation [Reference 12.11].
2	5.0	30	Seal Remains In Place	Testing at this differential pressure bounds the 4.0 inches w.g. pressure anticipated as a result of clean agent suppression system discharge [Reference 12.9].
3	10.0	30	Seal Remains In Place	Testing at this differential pressure bounds the 7.0 inches w.g. pressure used as the screening pressure cutoff for fire induced pressures [References 12.9 and 12.10] and some of the HVAC pressure boundaries [Reference 12.11].
4	20.0	30	Seal Remains In Place	Testing at this differential pressure bounds all of the calculated fire induced pressures [Reference 12.10] and many of the HVAC pressure boundaries [Reference 12.11].
5	40.0	30	Seal Remains In Place	Testing at this differential pressure bounds all of the HVAC pressure boundaries [Reference 12.11].

Note <sup>1</sup>: 19" x 36" HVAC seal area and 12" x 36" radiation seal area @  $<$  0.01 cfm/sq. ft. leakage = maximum leakage of 0.078 cfm.

Each test assembly shall be attached to the pressure test apparatus and subjected to the pressures identified in Table 9-1 as described below.

- 9.2.1 The test assembly shall be attached to the pressure test apparatus and subjected to air pressure tests at the select pressure levels identified in Table 9-1, beginning with the Stage 1 pressure of 1.0 inches w.g. Once this pressure has been obtained, the pressure shall be maintained for the hold time specified in Table 9-1. The maximum leakage rate observed during the hold time shall be recorded. If the leakage rate exceeds the acceptance criteria during Stage 1 testing, the time of failure shall be noted and the test shall be continued, since leakage alone does not constitute failure after Stage 1.
- 9.2.2 Once the designated hold time has been achieved, the pressure shall be increased to the next pressure level identified in Table 9-1 (Stage 2, then Stage 3, then Stage 4 and finally Stage 5) and held for the designated hold time. The maximum leakage rate observed during each hold time shall be recorded.
- 9.2.3 Following completion of Stage 5 pressure testing, the test may continue at the discretion of the AREVA test engineer and the testing laboratory manager in charge. Subsequent pressures, hold times and maximum leakage rates shall be recorded as directed by the AREVA test engineer.
- 9.2.4 If at any pressure level (or test stage) the penetration seal becomes dislodged from the opening or otherwise catastrophically fails, the pressure test shall be terminated and the time to failure and pressure at which the failure occurred shall be recorded.

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#### 9.3 Post Test Examination

Following completion of the pressure test, visual and destructive (if deemed necessary) post-test examinations shall be performed. These examinations shall include, but not necessarily be limited to, the following:

Visual observations of penetration seal condition including:

- Integrity of seal and conditions on the exposed side of the penetration
- Integrity of seal and conditions on the unexposed side of the penetration
- Location of any penetration seal degradation
- Condition of seal to barrier interface
- Condition of seal to penetrating item interfaces

Once visual observations are complete, destructive examinations may be used to obtain additional information or gain extra insights into penetration seal performance during the pressure tests.

#### 10.0 DATA SYSTEMS

During the pressure tests, the various data systems connected to the test apparatus (blowers, anemometers, manometers, etc.) shall be controlled and monitored by the testing laboratory. Data recorded for these components shall be compiled and contained in the pressure test report.

#### 11.0 TEST REPORT

The testing laboratory shall submit a report on the results of the test. The test report shall contain the collected data and required quality control documentation. The final test report shall be prepared in sufficient detail to summarize the total testing activity. The final report shall include as a minimum:

- Date of test
- Location of test
- Description of test apparatus and test articles
- Calibration documentation for all data systems connected to the test apparatus
- Test procedures used
- Acceptance criteria
- Provide quality control records
- Results of the pressure test
- Color digital photographs of the test project

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#### 12.0 REFERENCES

References identified with an (\*) are maintained within the MOX Records System and are not retrievable from AREVA Records Management. These are acceptable references per AREVA Administrative Procedure 0402-01, Attachment 8. See page 2 for Project Manager Approval of customer references.

- 12.1 \*Shaw AREVA MOX Services Drawing DCS01-BMF-DS-PLF-A-04509, Sheet 1, Revision 0; Sheet 2, Revision 0; and Sheet 3, Revision 2
- 12.2 \*Shaw AREVA MOX Services Drawing DCS01-BMF-DS-PLS-B-01692, Sheet 1, Revision 1
- 12.3 \*Shaw AREVA MOX Services Procedure PP9-1, Revision 14, SSC Quality Levels & Marking Design Documents
- 12.4 AREVA NP Inc. Procedure 1702-25, Revision 018, *Assignment of Nuclear Safety Classification to Products and Services*
- 12.5 AREVA NP Inc. Document 56-9141754-001, *AREVA NP Inc. Quality Assurance Program*
- 12.6 AREVA NP Inc. Document 01-9198306 (latest revision), *Installation Instruction Manual for MOX Penetration Seal Test Program*
- 12.7 \*Shaw AREVA MOX Services Document DCS01-BRA-DS-TRD-B-01365-0, *Technical Requirements Document for MFFF Penetration Seals*
- 12.8 \*Shaw AREVA MOX Services Calculation DCS01-XGA-DS-CAL-B-01105-0, *BMF HVAC and Fire Induced Pressure Loads*
- 12.9 \*Shaw AREVA MOX Services Calculation DCS01-ASI-DS-CAL-R-10552-0, *Fire Induced Room Pressure Analysis*
- 12.10 \*Shaw AREVA MOX Services Calculation DCS01-QJJ-DS-CAL-V-10421-0, *Pressure Differentials Across Internal Barriers within the MOX Facility*
- 12.11 \*Shaw AREVA MOX Services Calculation DCS01-QJJ-DS-CAL-V-13312-0, *Confinement Boundary Air Leakage Criteria*

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**APPENDIX A: TEST DECK/TEST SLAB DRAWINGS**

The test deck (test slab) for Pressure Test 9 is depicted on page A-2.

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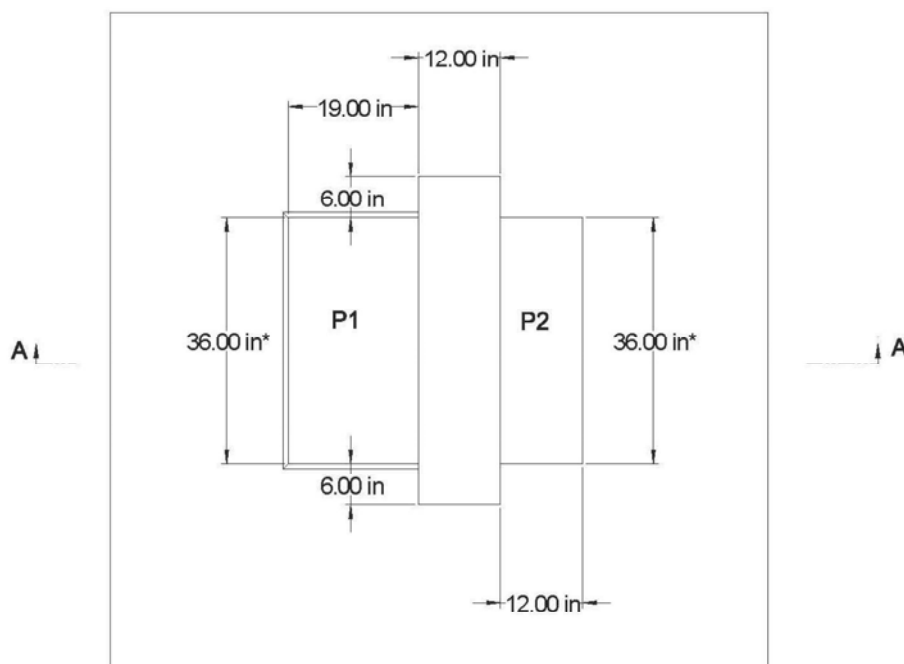


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**Pressure Test P9 Test Deck**

**Pressure Test 9**



**NOTES:**

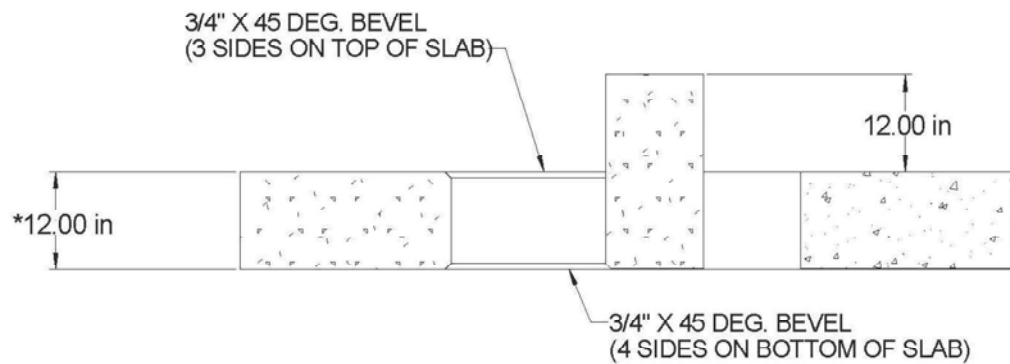
1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. SEE PAGE A-3 FOR SECTION A - A.

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**Section A - A**

NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

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#### **APPENDIX B: TEST PENETRATION DRAWINGS**

This appendix contains Test Penetration drawings. These drawings identify penetrating item locations within the test penetration, as well as, the penetration seal design for each test penetration.

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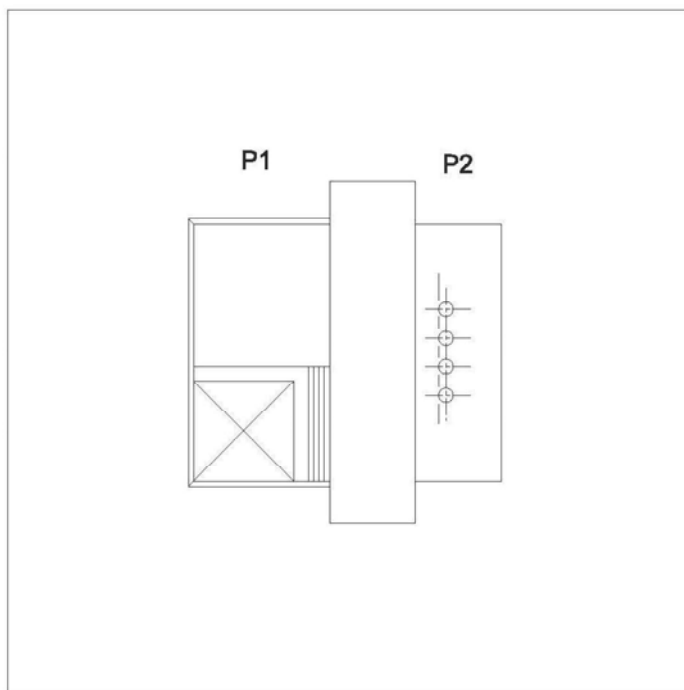
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**Pressure Test 9**



NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. SEE PAGE B-3, B-4, B-5 AND B-6 FOR DETAILS OF PENETRATION P1.
5. SEE PAGE B-7, AND B-8 FOR DETAILS OF PENETRATION P2.



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1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"

3. THE STEEL NETWORK STRUCTURAL FRAMING AND STRUCO-CRETE INSTALLED TO REDUCE OPENING SIZE AROUND DUCT.

SEE DRAWING DCS01-BMF-DS-PLF-A-04509 FOR DETAILS

4. ALL CAST CONCRETE SURFACES THAT WILL INTERFACE WITH DOW CORNING 790 SILICONE BUILDING SEALANT SHALL BE PREPARED USING A GRINDER EQUIPPED WITH A HILTI DG-CW/AP-SP DIAMOND CUP WHEEL (HILTI ITEM NO. 2068711). THIS INCLUDES THE BEVEL AREA OF THE CONCRETE OPENINGS, AS WELL AS, THE FACE OF THE CONCRETE SLAB ON BOTH SIDES OF THE BARRIER FOR A DISTANCE OF APPROXIMATELY 2" WIDE AROUND THE PERIMETER OF PENETRATION P1.



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Two Layers Structo-Crete Wall Board

Seal concrete to Structo-crete interface (fill 3/4" beveled area) with Dow Corning® 790 Silicone Building Sealant (All exposed beveled areas)

Seal concrete to Structo-crete interface (fill 1/2" x 3/4" gap) with Dow Corning® 790 Silicone Building Sealant

0.50 in

12.00 in\*

Seal concrete to Structo-crete interface (fill 3/4" beveled area) with Dow Corning® 790 Silicone Building Sealant (All exposed beveled areas)

Three Layers Structo-Crete Wall Board

The diagram is a cross-sectional view of a concrete wall assembly. It shows two vertical concrete sections, each 12.00 inches thick, separated by a horizontal gap. The wall boards are labeled as 'Two Layers Structo-Crete Wall Board' on the left and 'Three Layers Structo-Crete Wall Board' on the right. The interfaces between the concrete and the wall boards are sealed with Dow Corning® 790 Silicone Building Sealant. The sealant is applied to the 3/4 inch beveled areas of the concrete and the 1/2 inch x 3/4 inch gap between the wall boards. A dimension of 0.50 inches is shown for the sealant application.

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"

2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

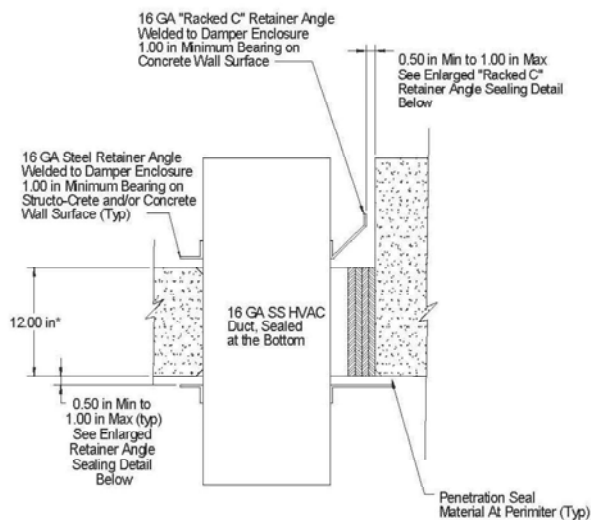
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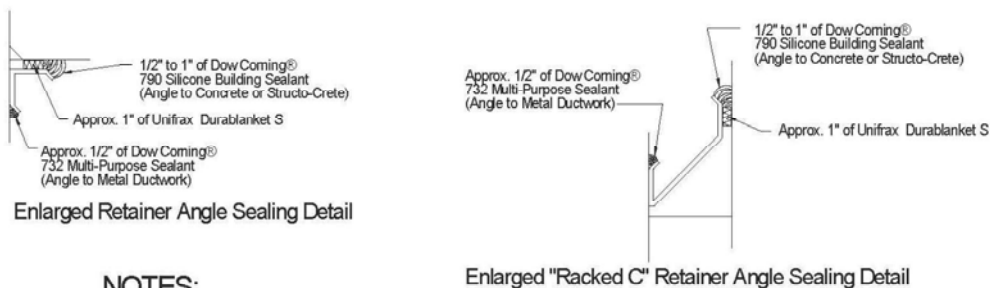
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## Penetration P1



## Section B - B



### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

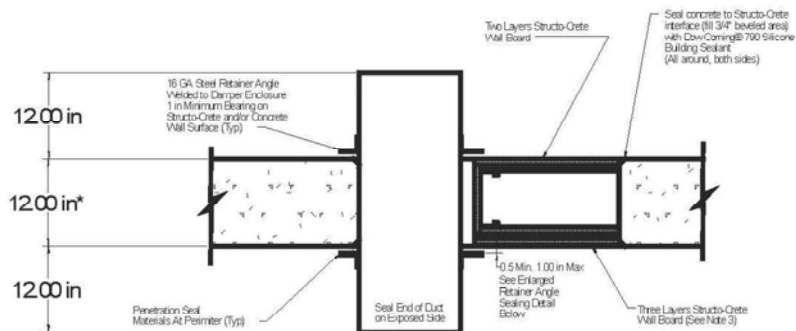
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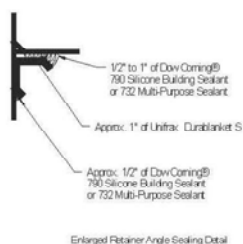
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## Detailed Test Plan for Conducting MOX Pressure Test 9

### Penetration P1



### Section C - C



#### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.
3. HILTI SELF-DRILLING SCREWS – 12-24 X 2-1/2" PFH #4 FIRST LAYER STRUCTO-CRETE TO METAL STUDS.

HILTI SELF-DRILLING SCREWS – S-MD 12-24 X 3 HWH #5 KWIK-COTE USED FOR SECOND LAYER STRUCTO-CRETE TO METAL STUDS MAY BE USED FOR THE 3RD LAYER STRUCTO-CRETE BY COUNTERSINKING THE 3RD LAYER OF STRUCTO-CRETE UP TO 3/8".

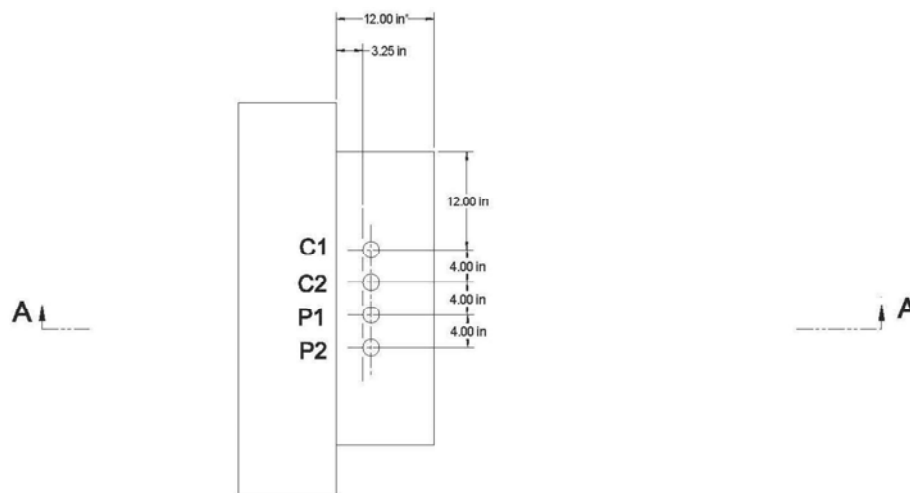
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PENETRATION P2



C1 = 2" SS Conduit  
C2 = 2" RGS Conduit  
P1 = 2" CS Pipe  
P2 = 2" SS Pipe

NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

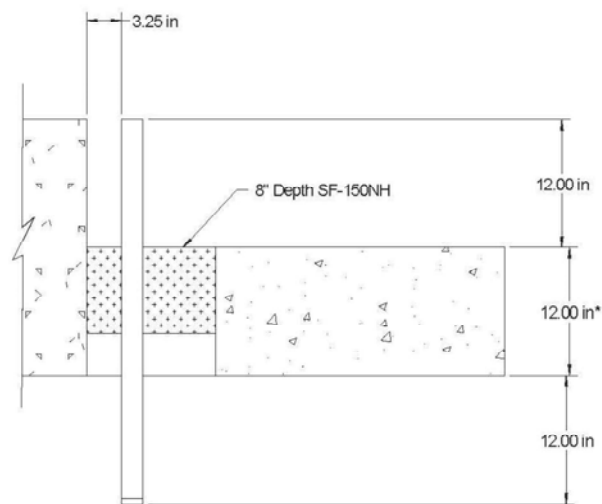
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## PENETRATION P2



### Section A - A

#### NOTES:

1. TOLERANCE ON ALL SLAB DIMENSIONS IS +/- 1/4"
2. \* INDICATES DIMENSIONS TO BE VERIFIED BY AREVA QC.

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**APPENDIX C: BILL OF MATERIALS**

This appendix contains the Bill of Materials for this pressure test. The Bill of Materials in Section C.1 identifies materials to be provided by AREVA. The Bill of Materials in Section C.2 identifies materials to be provided by MOX Services. The Bill of Materials in Section C.3 identifies materials to be provided by Intertek.

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C.1 Table Bill of Materials for AREVA Supplied Items

Bill of Material for AREVA Supplied Items					
Item	Description	Part Number	Quantity	Units	Total
1	Dow Corning® 790 Silicone Building Sealant	N/A	1	Case	1 Case
2	Dow Corning® 732 Silicone Building Sealant	N/A	1	Case	1 Case
3	Promatec SF-150NH High-Density Silicone Elastomer (50lb part A, 50lb part B, 100lb set)	N/A	2	Set	2 Set
4	Unifrax Fiberfrax® Durablanket® S – 6 lbs/cu. ft., 1" thick, 48" wide, 25 linear feet	764522000	1	Roll	1 Roll
5*	Hilti Self-Drilling Screws – 12-24 x 2-1/2" PFH #4 (Structocrete to Metal Studs)	311637	1	Box (1500 Screws)	1 Box
6*	Threaded Coupler, M8-1.25, 38 mm Long (Need 2)	N/A	10	Couplers	10 Couplers
7*	Threaded Rod, M8-1.25 (1 @ 1 meter length each, field cut to lengths needed – need 2 @ 6 in.)	N/A	1	Rod	1 Rod

\*Use surplus from previous MOX testing at Intertek Lab.

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C.2 Bill of Materials for MOX Services Supplied Items

Bill of Material for MOX Services Supplied Items					
Item	Description	Part Number	Quantity	Units	Total
1*	Hilti HSL-3-G M8/20 Heavy Duty Expansion Anchor for anchoring steel stud systems to the concrete test deck (Need 8 anchors)	HSL-3-G M 8/20	1	Box	1 Box

\*Use surplus from previous MOX testing at Intertek Lab.

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**C.3 Bill of Materials for Intertek Supplied Items**

Bill of Material for Intertek Supplied Items*					
Item	Description	Part Number	Quantity	Units	Total
1*	Structo-Crete Structural Concrete Panel (Need approximately 1 full sheet)	N/A	1	Pallet (20 Sheets)	1 Pallet
2**	2" Diameter Galvanized Conduit – Calconduit or Equal with Cap (Need 1 @ 3 LF w/Cap)	N/A	10	Ft.	10 Ft.
3**	2" Diameter Schedule 40 Carbon Steel Pipe with Caps (Need 1 @ 3 LF w/Cap)	N/A	10	Ft.	10 Ft.
4**	2" Diameter Stainless Steel Conduit – Calbrite Stainless Steel Conduit Systems, Type 304, or Equal with Cap (Need 1 @ 3 LF w/Cap)	N/A	10	Ft.	10 Ft.
5**	2" Diameter Schedule 40 Stainless Steel Pipe with Cap (Need 1 @ 3 LF w/Cap)	N/A	10	Ft.	10 Ft.
6*	The Steel Network, 8" Steel Stud (Need approximately 2 feet)	800C/STW250-97	10	Feet	10 Feet
7*	The Steel Network, 8" Track (Need approximately 6 feet)	800T200-97	20	Feet	20 Feet
8*	The Steel Network, Stiff Clip CL (Need 2)	CL800-68	1	Box	1 Box
9*	16 Gauge 14" x 14" Stainless Sheet Metal Duct with End Welded Closed using 16 Gage Stainless Sheet Steel	N/A	3	Ft.	3 Ft.
10	Retainer Angle Iron 2-1/2" x 1-3/4". 2' Long	N/A	4	Pcs.	4 Pieces

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Bill of Material for Intertek Supplied Items*					
Item	Description	Part Number	Quantity	Units	Total
11	Retainer Angle Iron 2-1/2" x 3". 2' Long	N/A	2	Pcs.	4 Pieces
12	Retainer Angle Iron 2-1/2" x 6". 2' Long	N/A	1	Pc.	1 Piece
13	Racked "C" Retainer Angle Iron 2-1/2" x r=4" @ 45 deg.	N/A	1	Pc.	1 piece
14*	Hilti Self-Drilling Screws – Heavy Gauge Metal (2-1/4" Thread Depth) (Second Layer Structo-Crete to Metal Studs – may be used for the 3 <sup>rd</sup> layer Structo-Crete by countersinking the 3 <sup>rd</sup> layer of Structo-Crete up to 3/8")	S-MD 12-24x3 HWH #5 Kwik-Cote	1	Box (1000 Screws)	1 Box
15*	Hilti Self-Drilling Screws – Light-Medium Gauge Metal (1/2" thread length) (Metal Clips)	S-MD 12-14 x 3/4" HWH #3	1	Box (5000 Screws)	1 Box

\*Use surplus from previous MOX testing at Intertek Lab.

\*\* Reclaim from MOX Seismic Pressure Test 7.

*Note: This BOM applies to Intertek Supplied Items other than materials required to construct the test slab. Construction of the test slab, including procurement of any materials required for the test slab, is the responsibility of Intertek.*

# Controlled Document



Document No.: 51-9207913-003

## Detailed Test Plan for Conducting MOX Pressure Test 9

### APPENDIX D: DESIGN VERIFICATION CHECKLIST

22410-8 (02/25/2013) Page 1 of 2

AREVA		DESIGN VERIFICATION CHECKLIST			
Document Identifier 51 - 9207913 - 003					
Title Detailed Test Plan for Conducting MOX Pressure Test 9					
1.	Were the inputs correctly selected and incorporated into design or analysis?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
2.	Are assumptions necessary to perform the design or analysis activity adequately described and reasonable? Where necessary, are the assumptions identified for subsequent re-verifications when the detailed design activities are completed? <small>Note: If there are no assumptions (of any type), then N/A shall be checked.</small>	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
3.	Are the appropriate quality and quality assurance requirements specified? Or, for documents prepared per AREVA NP Inc. procedures, have the procedural requirements been met?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
4.	If the design or analysis cites or is required to cite requirements or criteria based upon applicable codes, standards, specific regulatory requirements, including issue and addenda, are these properly identified, and are the requirements/criteria for design or analysis met?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
5.	Have applicable construction and operating experience been considered?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
6.	Have the design interface requirements been satisfied?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
7.	Was an appropriate design or analytical method used?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
8.	Is the output reasonable compared to inputs?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
9.	Are the specified parts, equipment and processes suitable for the required application?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
10.	Are the specified materials compatible with each other and the design environmental conditions to which the material will be exposed?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
11.	Have adequate maintenance features and requirements been specified?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
12.	Are accessibility and other design provisions adequate for performance of needed maintenance and repair?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
13.	Has adequate accessibility been provided to perform the in-service inspection expected to be required during the plant life?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
14.	Has the design properly considered radiation exposure to the public and plant personnel?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
15.	Are the acceptance criteria incorporated in the design documents sufficient to allow verification that design requirements have been satisfactorily accomplished?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
16.	Have adequate preoperational and subsequent periodic test requirements been appropriately specified?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input checked="" type="checkbox"/> N/A	
17.	Are adequate handling, storage, cleaning and shipping requirements specified?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
18.	Are adequate identification requirements specified?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	
19.	Is the document prepared and being released under the AREVA NP Inc. Quality Assurance Program? If not, are requirements for record preparation review, approval, retention, etc. adequately specified?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A	



## Detailed Test Plan for Conducting MOX Pressure Test 9

22410-8 (02/25/2013) Page 2 of 2



**AREVA**

## DESIGN VERIFICATION CHECKLIST

---

Document Identifier 51      •    9207913      •    003

---

Comments on the preceding responses:

---

Verified By: Derrick V Risner

(First MI, Last)    Printed / Typed Name



Signature

2/11/2014

Date

## APPENDIX E

### Commercial Grade Dedication-Related Documents

The vast majority of penetration seals that will be installed throughout the MFFF will be designated as quality level QL-1. For this reason, permanent penetration seal materials used in this test program were procured by AREVA or supplied by MOX Services and suitably base-lined so that future procurements of the same commercial materials can undergo the Commercial Grade Dedication process in support Nuclear Safety Related (i.e., MOX QL-1) plant installations.

Only the primary seal material(s) that were specified as a part of the final penetration seal design and left in place during the test needed to be base-lined for future dedication of similarly procured materials. For this test, the following AREVA documents contain information associated with materials that underwent the base-lining process. These documents establish material critical characteristics as a baseline for future Commercial Grade Dedication.

- AREVA Document 51-9212666-000, "Dow Corning 732 Multi-Purpose Sealant Critical Characteristics"
- AREVA Document 51-9212668-000, "Dow Corning 790 Silicone Building Sealant Critical Characteristics"
- AREVA Document 51-9212670-000, "Unifrax Durablanket S Critical Characteristics"

These documents are available from the AREVA Records Management System or the MOX Records Management System.

The SF-150NH High Density Silicone Elastomer seal material used in this test was not base-lined to establish critical characteristics because this material is proprietary to PCI Promatec; is only available from PCI Promatec; and can be procured Nuclear Safety Related (i.e., MOX QL-1) from PCI Promatec. Therefore, future procurements of this product can be handled such that no Commercial Grade Dedication is required.

The Structo-Crete (procured by Intertek) and metal studs/tracks (provided by MOX Services) used in this test were not base-lined by AREVA because MOX Services is responsible for determining critical characteristics of Structo-Crete and metal studs/tracks, as well as, any associated Commercial Grade Dedication of similar components.

## APPENDIX F

### Quality Documents









Document No.: 01-9198306-004

Installation Instruction Manual for MOX Penetration Seal Test Program

A.2 Quality Verification for Installation of Caulk and Fiber Seals

Page 1 of 1

01-9198306-F02 (QC-F02)

<u>Attribute</u>	<u>Requirement</u>	<u>Initial / Date</u>
9.1.2	Record the test penetration's unique identification number Test Penetration Number <u>9207913 - P1</u>	 <u>2-4-14</u>
QC	Verify critical attributes of the test slab and the applicable penetration are correct. Critical attributes are identified in the test plan (i.e., dimensions marked with an asterisk).	 <u>2-4-14</u>
9.1.5	Record the lot number for the Durablanket® S damming material Lot Number: <u>764521000</u> <del>32034</del> <u>33274</u>	 <u>2-12-14</u>
QC	Verify the dam depth is as specified in the test plan and confirm that the penetration is clean and free of dirt, oil, and any other foreign materials.	 <u>2-12-14</u>
9.2.1	Record the material type, lot number and expiration date for the sealant Material Type: <u>DC732</u> <u>DC790</u> Lot Number: <u>0007251823</u> <u>0007643997</u> Expiration Date: <u>25MAY15</u> <u>29NOV14</u>	 <u>2-12-14</u>
QC	Verify that the completed seal assembly is in accordance with the test plan design (i.e., temporary damming has been removed, and the installed seal configuration(s) and depth(s) are per the test plan. Any approved deviations from the test plan shall be clearly noted below	 <u>2-12-14</u>

Comments (can be continued on back):

DC 732 AT METAL TO METAL INTERFACES  
DC 790 AT CONCRETE / STRUCTURE - CONCRETE INTERFACES.  
DC 732 APPLIED OVER ALL WELDS TO ENHANCE AIR TIGHTNESS

Penetration Seal Assembly Complete:

2-12-14  
Date

Penetration Ready for Testing:

AREVA Test Engineer

2/18/14  
Date

Page A-4









Document No.: 01-9198306-004

Installation Instruction Manual for MOX Penetration Seal Test Program

A.1 Quality Verification for Installation of Silicone Elastomer Penetration Seals

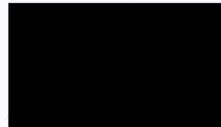
Page 1 of 2

01-9198306-F01 (QC-F01)

Attribute	Requirement	Initial / Date
7.1.2	Test Penetration Number <u>9207913-PTP2</u>	 2-4-14
QC	Verify critical attributes of the test slab and the applicable penetration are correct. Critical attributes are identified in the test plan (i.e., dimensions marked with an asterisk).	 2-4-14
QC	Verify the dam depth is as specified in the test plan and confirm that the penetration is clean and free of dirt, oil, and any other foreign materials.	 2-4-14
7.2.1.1	Record material type, lot number and shelf life for batch on Form QC-F01, Table A-1	Attached
7.2.1.3	Record the batch number on Form QC-F01, Table A-1	Attached
7.2.1.2	Record sample weight and sample density on Form QC-F01, Table A-1	Attached
QC	Verify the total sample weight recorded on the cup label, the sample weight recorded on the cup label and Form QC-F01, Table A-1, and sample density recorded on the cup label and Form QC-F01, Table A-1. Record acceptance on Form QC-F01, Table A-1.	Attached
7.3.2	Remove all temporary damming per Section 6.3	 2-10-14  2-10-14 Rev 2-10-14
QC	Verify that the completed seal assembly is in accordance with the test plan design (i.e., temporary damming has been removed, and the installed seal configuration(s) and depth(s) are per the test plan. Any approved deviations from the test plan shall be clearly noted below.	 2-10-14


Comments (can be continued on back):

Penetration Seal Assembly Complete:

 AREVA Quality Control

2-10-14  
Date

Penetration Ready for Testing:

 AREVA Test Engineer

2/18/14  
Date

Page A-2



Document No.: 01-9198306-004

Installation Instruction Manual for MOX Penetration Seal Test Program

Test Penetration Number 9207913 - P2

Page 2 of 2

Form QC-F01, Table A-1: Silicone Elastomer Batch Sample Quality Control

[illegible]

Page A-3



PO Box 710290, Houston, TX 77271-0290  
11707 S Sam Houston Parkway W, Ste K, Houston, TX 77031  
Phone: 281-933-7222 Fax: 281-933-7774  
info@promatec.com  
www.promatec.com

### CERTIFICATE OF CONFORMANCE

CERTIFICATION 45550/14-116  
NUMBER:

CERT DATE: NOVEMBER 7, 2013

JOB NUMBER: 2933

SHIP DATE: NOVEMBER 5, 2013

CUSTOMER: AREVA NP INC.  
c/o INTERTEK TESTING SERVICES NA, INC.  
16015 SHADY FALLS ROAD  
ELMENDORF, TX 78112-9784

PRODUCT: DURABLANKET S  
Unifrax Fiberfrax Durablanket S  
6-lb Density, 1"x24"x25'  
50SF/Roll

CUSTOMER P.O. No. 1013037393, Rev. 3  
ORDER NUMBER: ITEM 3

VENDOR: PCI PROMATEC

CUSTOMER  
SPECIFICATION  
NUMBER: N/A

QUANTITY: 1 BOX @ 50 SF Per Box  
1" x 24" X 25 Feet Per Roll  
50 SQUARE FEET TOTAL

IDENTIFICATION  
NUMBER: 33274

EXPIRATION  
DATE: N/A

#### **CERTIFICATION REQUIREMENTS:**

We hereby certify that all items furnished herein meet the requirements of the applicable product specifications, the above referenced customer order number, and supporting specifications. Vendor material certification on file and available upon written request.

Shelf Life - Not Applicable for This Item.

This material is provided in accordance with Promatec Quality Assurance Program QAM20188, Issue F, dated 06/20/03.

QUALITY ASSURANCE DEPT.  
DORCAS SMITHWICK COMBS  
QUALITY ASSURANCE MANAGER

Form QC-8  
Rev. 5 - 11/01/88

WORLD-CLASS CONSTRUCTION®



PO Box 710290, Houston, TX 77271-0290  
11707 S Sam Houston Parkway W, Ste K, Houston, TX 77031  
Phone: 281-933-7222 Fax: 281-933-7774  
info@promatec.com  
www.promatec.com

### CERTIFICATE OF CONFORMANCE

CERTIFICATION 45550/13-579  
NUMBER:

CERT DATE: JUNE 12, 2013

JOB NUMBER: 2860

SHIP DATE: JUNE 12, 2013

CUSTOMER: AREVA NP INC.  
c/o INTERTEK TESTING SERVICES NA, INC.  
16015 SHADY FALLS ROAD  
ELMENDORF, TX 78112-9784

PRODUCT: DC-732-BLACK, 10.1oz  
Dow Corning 732 Multi-Purpose  
Sealant; 10.1oz Tubes  
BLACK in color

CUSTOMER P.O. No. 1013021586, REV. 1  
ORDER NUMBER: ITEM 2

VENDOR: PCI PROMATEC

CUSTOMER  
SPECIFICATION  
NUMBER: N/A

QUANTITY: 4 CASES @ 12 EA 10.1oz Tubes  
48 TUBES TOTAL

IDENTIFICATION 0007251823  
NUMBER:


EXPIRATION  
DATE: 29 MAY 2015

#### **CERTIFICATION REQUIREMENTS:**

We hereby certify that all items furnished herein meet the requirements of the applicable product specifications, the above referenced customer order number, and supporting specifications. Vendor material certification on file and available upon written request.

Shelf Life - Thirty (30) months from date of manufacture, December, 2012. Note - Dow Corning calendar year based on 360-day cycle.

This material is provided in accordance with Promatec Quality Assurance Program QAM20188, Issue F, dated 06/20/03.

  
QUALITY ASSURANCE DEPT.  
DORCAS SMITHWICK COMBS  
QUALITY ASSURANCE MANAGER



PO Box 710290, Houston, TX 77271-0290  
1707 S Sam Houston Parkway W, Ste K, Houston, TX 77031  
Phone 281-933-7222 Fax 281-933-7174  
info@promatec.com  
www.promatec.com

**CERTIFICATE OF CONFORMANCE**

REC- 1/7/2014

CERTIFICATION 45550/14-246  
NUMBER:

CERT DATE: JANUARY 6, 2014

JOB NUMBER: 2933

SHIP DATE: JANUARY 6, 2014

CUSTOMER: AREVA NP INC.  
c/o INTERTEK TESTING SERVICES NA, INC.  
16015 SHADY FALLS ROAD  
ELMENDORF, TX 78112-9784

PRODUCT: DC-790-GREY, 10.3oz  
Dow Corning 790 Building  
Sealant; 10.3oz Tubes  
GREY in color

CUSTOMER P.O. No. 1013037393, REV. 7  
ORDER NUMBER: ITEM 80  
[MAT'L #D027563]

VENDOR: PCI PROMATEC

CUSTOMER  
SPECIFICATION  
NUMBER: N/A

QUANTITY: 4 CASES @ 12 EA 10.3oz Tubes  
48 TUBES TOTAL

IDENTIFICATION 0007643997  
NUMBER:

EXPIRATION  
DATE: 29 NOVEMBER 2014

**CERTIFICATION REQUIREMENTS:**

We hereby certify that all items furnished herein meet the requirements of the applicable product specifications, the above referenced customer order number, and supporting specifications. Vendor material certification on file and available upon written request.

Shelf Life - Twelve (12) months from date of manufacture December, 2013. Note - Dow Corning calendar year based on 360-day cycle.

This material is provided in accordance with Promatec Quality Assurance Program QAM20188, Issue F, dated 06/20/03.

[REDACTED]  
DORCAS SMITHWICK COMBS  
QUALITY ASSURANCE MANAGER



P.O. Box 710290, Houston, TX 77271-0290  
11707 S Sam Houston Parkway W, Ste K, Houston, TX 77031  
Phone: 281-933-7222 Fax: 281-933-7774  
info@promatec.com  
www.promatec.com

### CERTIFICATE OF CONFORMANCE


<u>CERTIFICATION</u> <u>NUMBER:</u> 45550/14-245	<u>CERT DATE:</u> JANUARY 6, 2014
<u>JOB NUMBER:</u> 2933	<u>SHIP DATE:</u> JANUARY 6, 2014
<u>CUSTOMER:</u> AREVA NP INC. c/o INTERTEK TESTING SERVICES NA, INC. 16015 SHADY FALLS ROAD ELMENDORF, TX 78112-9784	<u>PRODUCT:</u> SF-150NH™ Promatec® SF-150NH™ High Density Elastomer Part A and Part B
<u>CUSTOMER</u> <u>ORDER NUMBER:</u> P.O. No. 1013037393, REV. 7 ITEM 80 [MAT'L #D027563]	<u>VENDOR:</u> PCI PROMATEC
<u>CUSTOMER</u> <u>SPECIFICATION</u> <u>NUMBER:</u> N/A	<u>QUANTITY:</u> 9 SETS @ 100 LBS PER SET (Consisting of 2 Each 6 Gallon Pail Per Set)
<u>IDENTIFICATION</u> <u>NUMBER:</u> NH014B01 A&B	<u>EXPIRATION</u> <u>DATE:</u> 31 JULY 2014

#### CERTIFICATION REQUIREMENTS:

We hereby certify that all items furnished herein meet the requirements of the applicable product specifications, the above referenced customer order number, and supporting specifications. Vendor material certification on file and available upon written request.

Shelf Life – Six (6) months from date of certification, last day of the month.

This material is provided in accordance with Promatec Quality Assurance Program QAM20188, Issue F, dated 06/20/03.

  
DORCAS SMITHWICK COMBS  
QUALITY ASSURANCE MANAGER



PO Box 710290, Houston, TX 77271-0290  
11707 S Sam Houston Parkway W, Ste K, Houston, TX 77031  
Phone: 281-933-7222 Fax: 281-933-7774  
info@promatec.com  
www.promatec.com

### CERTIFICATE OF CONFORMANCE

CERTIFICATION 45550/13-775  
NUMBER:

CERT DATE: AUGUST 21, 2013

JOB NUMBER: 2860

SHIP DATE: AUGUST 21, 2013

CUSTOMER: AREVA NP INC.  
c/o INTERTEK TESTING SERVICES NA, INC.  
16015 SHADY FALLS ROAD  
ELMENDORF, TX 78112-9784

PRODUCT: SF-150NH™  
Promatec® SF-150NH™ High  
Density Elastomer  
Part A and Part B

CUSTOMER P.O. No. 1013037393, Rev. 2  
ORDER NUMBER: ITEM 30

VENDOR: PCI PROMATEC

CUSTOMER  
SPECIFICATION  
NUMBER: N/A

QUANTITY: 15 KITS @ 100 LBS PER KIT  
(Consisting of 2 Each 5 Gallon  
Pail Per Kit)

IDENTIFICATION  
NUMBER: NH083B05 A&B

EXPIRATION  
DATE: 28 FEBRUARY 2014

#### **CERTIFICATION REQUIREMENTS:**

We hereby certify that all items furnished herein meet the requirements of the applicable product specifications, the above referenced customer order number, and supporting specifications. Vendor material certification on file and available upon written request.

Shelf Life – Six (6) months from date of certification, last day of the month.

This material is provided in accordance with Promatec Quality Assurance Program QAM20188, Issue F, dated 06/20/03.

QUALITY ASSURANCE DEPT.  
DORCAS SMITHWICK COMBS  
QUALITY ASSURANCE MANAGER

## Q/A RECEIVING REPORT



Client/Project Name:	AREVA NP	Report No:	03-G101266224SAT-003A
Client or Project No.:	G101266224SAT-003A	Date Received:	11/06/2013
Received From:	c/o PCI-Promatec	Date Inspected:	11/18/2013
Project Location:	INTERTEK -Elmendorf, TX	Inspected By:	MA Brown

[illegible]











## Q/A RECEIVING REPORT



Client/Project Name:	AREVA NP	Report No:	03-G101276459SAT-018
Client or Project No.:	G101276459SAT-018 Pressure Test 9	Date Received:	1/21/2014
Received From:	Areva VP c/o Texas Specialty Steel	Date Inspected:	1/22/2014
Project Location:	INTERTEK -Elmendorf, TX	Inspected By:	MABrown

[illegible]

9/12-NQAP-005.7.1

## LIST OF CALIBRATED EQUIPMENT

Description	Serial No.	Calibration Due Date
Thermo-Hygrometer	130548237	9/19/2015
Data Acquisition System	18041FE	8/11/2014
Pressure Transducer	406707	1/30/15
Mass Flowmeter	4270050001001	1/30/2015
Mass Flowmeter	4270050003001	1/30/2015
Stop watch	130176939	3/20/15



Calibration  
Certificate No. 1750.01

Calibration complies with ISO/IEC  
17025, ANSI/NCSL Z540-1, and 9001

Build B  
Horizontal



Cert. No.: 4096-5373559

**Traceable® Certificate of Calibration for Digital Humidity/Temp. Meter**

Manufactured for and distributed by: Fisher Scientific, 300 Industry Drive, Pittsburgh, PA 15275-1001

**Instrument Identification:**

Model Numbers: 11-661-13, FB61254, 245C5 S/N: 130548237 Manufacturer: Control Company

**Standards/Equipment:**

Description	Serial Number	Due Date	NIST Traceable Reference
Chilled Mirror Hygrometer	31874/H2048MCR	6/14/15	11081
Digital Thermometer	41334977/41335007	9/26/13	4000-4643062

**Certificate Information:**

Technician: 104 Procedure: CAL-17 Cal Date: 9/19/13 Cal Due: 9/19/15  
Test Conditions: 23.0°C 51.0 %RH 1013 mBar

**Calibration Data: (New Instrument)**

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±U	TUR
%RH		N.A.		42.95	42	Y	39	47	1.30	3.1:1
°C		N.A.		24.218	24	Y	23	25	0.590	1.7:1

This instrument was calibrated in compliance with ISO/IEC 17025:2005 and ANSI/NCSL Z540-1-1994 Part 1.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable to NIST and through NIST to the International System of Units (SI).

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=(Max-Min)/2; Min = As Left Nominal(Rounded) - Tolerance; Max = As Left Nominal(Rounded) + Tolerance; Date=MM/DD/YY

Nicol Rodriguez, Quality Manager

Asish Jindia, Technical Manager

**Maintaining Accuracy:**

In our opinion once calibrated your Digital Humidity/Temp. Meter should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Humidity/Temp. Meters change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

**Recalibration:**

This device was calibrated using a single test point. Should additional test points be required, please contact Control Company for factory calibration and re-certification traceable to National Institute of Standards and Technology.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA  
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.  
Control Company is ISO 9001:2008 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-2008-AQ-HOU-RVA.  
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

**Intertek**

**16015 Shady Falls Road  
Elmendorf, TX 78112  
210-635-8100 210-635-8101 fax**

**Certificate of Verification**

<b>Verification Date:</b>	02/11/2014
<b>Re-verification Date:</b>	08/11/2014
<b>Manufacturer:</b>	National Instruments
<b>Model No.:</b>	USB-6210 (Only use 3 channels)
<b>Serial No.:</b>	18041FE
<b>Equipment Description:</b>	Data Acquisition System
<b>Calibration Sources:</b>	Ronan SN: 11380 due 4/6/2014
<b>Performance:</b>	See the attached sheet

**Verification Performed By:**

  
\_\_\_\_\_  
**Staff Engineer**

**Verification Approved By:**

  
\_\_\_\_\_  
**Jen Patterson  
Test Engineer**

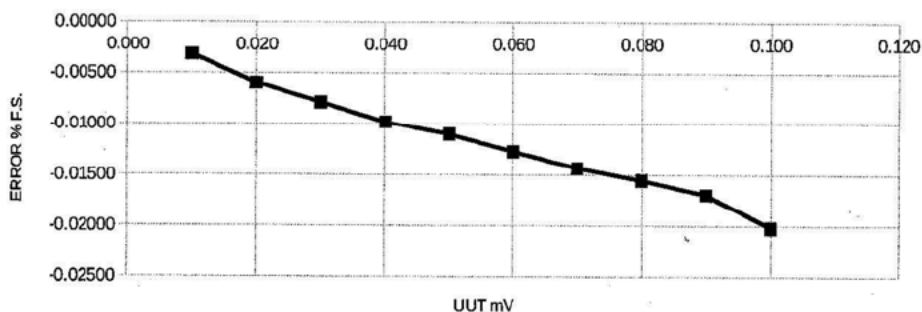
This Data Acquisition System was verified following the Draft "Work Instruction for Verifying Yokogawa Darwin Data Acquisition Systems" dated 8/28/2013

## CERTIFICATE OF CALIBRATION

**CUSTOMER:** INTERTEK ELMENDORF TX  
**PO NUMBER:** REF.# 01292014  
**INST. MANUFACTURER:** OMEGADYNE  
**INST. DESCRIPTION:** PRESSURE TRANSDUCER  
**MODEL NUMBER:** PX409-005DWUV  
**SERIAL NUMBER:** 406707  
**RATED UNCERTAINTY:** +/- 0.05 % FS  
**UNCERTAINTY GIVEN:** FLOW measurement uncertainty: +/- .011 % F.S. K=2  
**NOTES:** AS RECEIVED/ AS LEFT WITHIN SPECS. NO ADJUSTMENTS MADE. REFERENCE CONDITIONS ARE: 760 mm HGA 70 F

**CALIBRATION DATE:** 01/30/14  
**CALIBRATION DUE:** 01/30/15  
**PROCEDURE:** NAVAIR17-20MG-20  
**CALIBRATION FLUID:** 70 F  
**STANDARD(S) USED:** A49A, A24, A321 DUE 8-14  
**NIST TRACE #'S:** 1361209184, 1360575741, 1360586185, 1239080968  
**AMBIENT CONDITIONS:** 759 mm HGA 55 % RH 70 F  
**CERTIFICATE FILE #:** 456353.14

TEST POINT	UUT	DM.STD.	ERROR
NUMBER	INDICATED	ACTUAL	%
	mV OUT	PSID	F.S.
1	0.010	0.49984	-0.00318
2	0.020	0.99970	-0.00602
3	0.030	1.49960	-0.00792
4	0.040	1.99951	-0.00984
5	0.050	2.49945	-0.01105
6	0.060	2.99936	-0.01272
7	0.070	3.49928	-0.01435
8	0.080	3.99922	-0.01552
9	0.090	4.49915	-0.01692
10	0.100	4.99899	-0.02020



All instruments used in the performance of the shown calibration have traceability to the National Institute of Standards and Technology (NIST). The uncertainty ratio between the calibration standards (DM.STD.) used and the unit under test (UUT) is a minimum of 4:1, unless otherwise noted. Calibration has been performed per the shown procedure number, in accordance with ISO 10012:2003, ISO 17025:2005, ANSI/NCSS-Z-540.3, and/or MIL-STD-45662A. Test methods: API2530-92 & ASME MFC-3M-1989.

Dick Munns Company • 10572 Calle Lee #138 • Los Alamitos, CA 90720  
Phone (714) 827-0823 • Fax (714) 827-0823

This Calibration Certificate

APPLIES TO THE INSTRUMENT BEING CALIBRATED AND UNDER THE STATED CONDITIONS OF CALIBRATION.

Date:

Calibration Technician:

1/30/2014

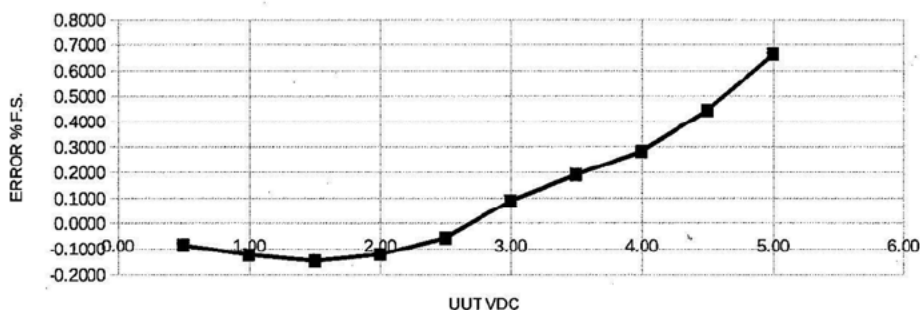
Page 1 of 1

## CERTIFICATE OF CALIBRATION

**CUSTOMER:** INTERTEK ELMENDORF TX  
**PO NUMBER:** REF.# 01292014  
**INST. MANUFACTURER:** OMEGA  
**INST. DESCRIPTION:** MASS FLOWMETER  
**MODEL NUMBER:** FMA-872A-V-NIST  
**SERIAL NUMBER:** 4270050001001  
**RATED UNCERTAINTY:** +/- 1 % FS  
**UNCERTAINTY GIVEN:** FLOW measurement uncertainty: +/- .204 % F.S. K=2  
**NOTES:** AS RECEIVED/ AS LEFT WITHIN SPECS. NO ADJUSTMENTS MADE . REFERENCE CONDITIONS ARE: 760 mm HGA 70 F

**CALIBRATION DATE:** 01/30/14  
**CALIBRATION DUE:** 01/30/15  
**PROCEDURE:** NAVAIR17-20MG-20  
**CALIBRATION FLUID:** GN2 @ 70 F  
**STANDARD(S) USED:** A1-A4, A24, A321 DUE 8-14  
1361269184, 1360578741, 1360585185  
**NIST TRACE #'S:**  
**AMBIENT CONDITIONS:** 759 mm HGA 55 % RH 70 F  
**CERTIFICATE FILE #:** 456355.14

TEST POINT NUMBER	UUT INDICATED VDC OUT	DM.STD. ACTUAL SLPM	ERROR % F.S.
1	0.50	1.983	-0.0855
2	1.00	3.975	-0.1231
3	1.50	5.971	-0.1460
4	2.00	7.976	-0.1217
5	2.50	9.988	-0.0579
6	3.00	12.018	0.0889
7	3.50	14.038	0.1908
8	4.00	16.056	0.2817
9	4.50	18.089	0.4444
10	5.00	20.133	0.6634



All instruments used in the performance of the shown calibration have traceability to the National Institute of Standards and Technology (NIST). The uncertainty ratio between the calibration standards (DM.STD.) used and the unit under test (UUT) is a minimum of 4:1, unless otherwise noted. Calibration has been performed per the shown procedure number, in accordance with ISO 10012:2003, ISO 17025:2005, ANSI/NCISL-Z-540.3, and/or MIL-STD-45662A. Test methods: API2530-92 & ASME MFC-3M-1989.

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5 • Fax (714) 827-0823

This Calibration Certificate is the property of Dick Munns Company. The data shown applies only to the instrument being calibrated and under the stated conditions of calibration.

Date:

1/30/2014

Calibration Technician:

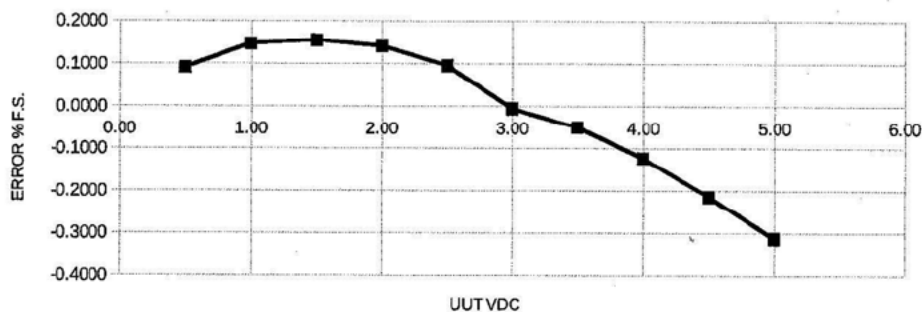
Page 1 of 1

## CERTIFICATE OF CALIBRATION

**CUSTOMER:** INTERTEK ELMENDORF TX  
**PO NUMBER:** REF.# 01292014  
**INST. MANUFACTURER:** OMEGA  
**INST. DESCRIPTION:** MASS FLOWMETER  
**MODEL NUMBER:** FMA-875A-V-NIST  
**SERIAL NUMBER:** 4270050003001  
**RATED UNCERTAINTY:** +/- 1 % FS  
**UNCERTAINTY GIVEN:** FLOW measurement uncertainty: +/- .204 % F.S. K=2  
**NOTES:** AS RECEIVED/ AS LEFT WITHIN SPECS. NO ADJUSTMENTS MADE . REFERENCE CONDITIONS ARE: 760 mm HGA 70 F

**CALIBRATION DATE:** 01/30/14  
**CALIBRATION DUE:** 01/30/15  
**PROCEDURE:** NAVAIR17-20MG-20  
**CALIBRATION FLUID:** GN2 @ 70 F  
**STANDARD(S) USED:** A1-A4, A24, A321 DUE 8-14  
1361269184, 1360578741, 1360586185  
**NIST TRACE # S:**  
**AMBIENT CONDITIONS:** 759 mm HGA 55 % RH 70 F  
**CERTIFICATE FILE #:** 456354.14

TEST POINT NUMBER	UUT INDICATED VDC OUT	DM.STD. ACTUAL SLPM	ERROR %
1	0.50	20.183	0.0913
2	1.00	40.294	0.1471
3	1.50	60.311	0.1553
4	2.00	80.282	0.1411
5	2.50	100.191	0.0957
6	3.00	119.988	-0.0059
7	3.50	139.899	-0.0505
8	4.00	159.754	-0.1230
9	4.50	179.573	-0.2138
10	5.00	199.373	-0.3133



All instruments used in the performance of the shown calibration have traceability to the National Institute of Standards and Technology (NIST). The uncertainty ratio between the calibration standards (DM.STD.) used and the unit under test (UUT) is a minimum of 4:1, unless otherwise noted. Calibration has been performed per the shown procedure number, in accordance with ISO 10012:2003, ISO 17025:2005, ANSI/NCSL-Z-540.3, and/or MIL-STD-45662A. Test methods: API2530-92 & ASME MFC-3M-1989.

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Date:

1/30/2014

Calibration Technician:

Page 1 of 1



Calibration  
Certificate No. 1750.01

Calibration complies with ISO 9001  
ISO/IEC 17025 AND ANSI/NCSL Z540-1



Cert. No.: 1045-5005294

**Traceable® Certificate of Calibration for Watr/Shock Res Stpwch**

Manufactured for and distributed by: Fisher Scientific, P.O. Box 1768, Pittsburgh, PA 15230

**Instrument Identification:**

Model: S40799-7 S/N: 130176939 Manufacturer: Control Company

**Standards/Equipment:**

Description	Serial Number	Due Date	NIST Traceable Reference
Non-Contact Frequency Counter	26.66879	7/02/13	1000320243

**Certificate Information:**

Technician: 150 Procedure: CAL-01 Cal Date: 3/29/13 Cal Due: 3/29/15  
Test Conditions: 22.5°C 42.0 %RH 1020 mBar

**Calibration Data: (New Instrument)**

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±U	TUR
Sec/24hr		N.A.		0.000	-0.300	Y	-8.640	8.640	0.130	>4:1

**This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.**

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor  $k=2$  to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Min = Nominal(Rounded) - Tolerance; Max = Nominal(Rounded) + Tolerance; Date=MM/DD/YY

Ricco Rodriguez, Quality Manager

Aaron Justice, Technical Manager

**Maintaining Accuracy:**

In our opinion once calibrated your Watr/Shock Res Stpwch should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Watr/Shock Res Stpwchs change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

**Recalibration:**

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA  
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com







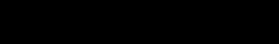
Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.  
Control Company is ISO 9001:2008 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01895-2008-AQ-HOU-ANAB.  
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

## TEST ARTICLE ATTRIBUTE CHECKLIST

PROJECT NO: G101276459-018

CLIENT: AREVA

Project Description: PRESSURE #9

	SAT	UNSAT
<b>I. ASSEMBLY</b>		
Proper materials used .....		
Material documentation complete .....		
Configuration/dimensions in accordance w/ approved drawings .....		
Description of assembly: <u>MOX AREVA PRESSURE #9</u>		
<b>II. ELECTRICAL CABLE</b>		
Correct material used .....	<u>N/A</u> 	
Material documentation complete .....		
Correct cable lay-in and fill requirements .....		
Description of electrical cable: .....		
<b>III. THERMOCOUPLES</b>		
Correct thermocouple type, certs received .....	<u>N/A</u>	
Thermocouples positioned in accordance with test plan .....		
Adequately labeled and secured .....		
Quality Assurance verification done .....		
Description of thermocouples: .....		
<b>IV. FIRE BARRIER</b>		
Name or type of material: <u>SF 150NM + DC 790, DC 732, STRUCTURE</u>		
INTERTEK received material documentation provided by Client .....		
Materials provided by INTERTEK properly documented .....		
Materials installed by INTERTEK in accordance with test plan .....		
INTERTEK Quality Assurance responsibilities determined .....		
QA responsibilities of Client installation determined .....		
Moisture check required .....		
Special requirements .....		
<b>V. FINAL PREBURN VERIFICATION</b>		
Final visual inspection & approval (initials)	INTERTEK 	Client 
CALIBRATION DOCUMENTATION (S/N and calibration due date)		
Data Acquisition Equipment: <u>SEE TEST DATA PACKAGE</u>		
Other Measurement Devices: <u>SEE TEST DATA PACKAGE</u>		
Temperature <u>77</u> Humidity <u>66</u> Date <u>2-19-14</u> Time of Test start <u>1:36 P</u>		
INTERTEK pre-burn checklist performed by 		
Client representative present to witness test 		
Note: Verification to be made using initials by INTERTEK Quality Assurance or test personnel.		

9/12 NQAP-007.7.3

Certificate of Conformance

Client Name: AREVA NP Inc.

Date: 7/31/2014

Project No: G101276459SAT-018

Intertek Testing Services NA (Intertek) has conducted testing for AREVA NP Inc., on the pressure resistance capabilities of Unifrax Fiberfax® Durablanket® S (Durablanket), Dow Corning® 732 Multi-Purpose Sealant (DC-732), Dow Corning® 790 Silicone Building Sealant (DC-790) and PCI-Promatec SF-150NH High Density Silicone Elastomer (SF-150NH) through a 12" thick concrete deck for compliance with the applicable requirements of and in accordance with AREVA NP Inc. Document No. 51-9207913-003, *Detailed Test Plan for Conducting MOX Pressure Test 9*. This evaluation took place on February 19, 2014.

The materials, processes), and deliverable(s) in this project were managed under and conform to the test laboratory's 10CFR50 Appendix B Quality Assurance Program.

Michael A Brown  
Quality Supervisor

7/31/2014

Date

Intertek Testing Laboratory  
16015 Shady Falls Road, Elmendorf, TX 78112  
210-635-8100

### **Quality Assurance Statement**

Intertek is devoted to engineering, inspection, quality assurance and testing of building materials, products and assemblies. Intertek has developed and implemented a Quality Assurance Program designed to provide its clients with a planned procedure of order and document processing for inspection and testing services it provides to assure conformity to requirements, codes, standards and specifications. The Program is designed to meet the intent of ANSI 45.2 Quality Assurance Program Requirements for Nuclear Power Plants, and complies with the requirements of the ASME Code, SPPE, Military Standards and other less stringent programs. It is the Laboratory's intention to adhere strictly to this Program, to assure that the services offered to its clients remains of the highest quality and accuracy possible.

All QA Surveillance documents remain on file at the Laboratory, and are available for inspection by authorized personnel in the performance of an on-site QA Audit. All materials, services and supplies used herein were obtained with appropriate QA Certifications of Compliance.

## APPENDIX G

### Supplemental Test Information

The following supplemental information has been included to provide clarity with respect to certain aspects of MOX Pressure Test 9.

Metal Studs and Tracks:

The test plan Bill of Materials (BOM) for Intertek identifies that the metal tracks and studs were to be supplied by Intertek. Contrary to this, MOX Services provided the metal tracks and studs used in MOX Pressure Test 9.

The supplemental information contained in this appendix was provided by Scott Groesbeck, the AREVA Test Engineer responsible for the MOX Penetration Seal Test Program.

## REVISION SUMMARY

DATE	SUMMARY
July 31, 2014	Original Issue Date
September 10, 2014	Corrections to made to Commercial Grade Dedication-Related Documents in Appendix E. Deletion of unreferenced Elastomer, addition of Unifrax Durablanket S. Updated Certificate of Conformance to original issue date.