

### MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 8/1/16

TEST LOCATION: 4-BM XFM APPLICABLE DRAWING(S): ATTACHMENT  
ATTACHMENT  Y /  N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:  
GASEOUS NITROGEN

MAXIMUM ALLOWABLE WORKING PRESSURE (PSIG) OF COMPONENT/SYSTEM:  
100 PSIG

MECHANICAL UTILITY SYSTEM (MARK AN "X" ON ALL THAT APPLY):

- PRIMARY DI WATER  SECONDARY DI WATER  ALUMINUM DI WATER
- PROCESS CHILLED WATER  COMPRESSED AIR  GASEOUS NITROGEN  OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:  
\_\_\_\_\_  
\_\_\_\_\_

TEST GAUGE INFORMATION:

RANGE: 0-3000 AUTO UNIT OF MEASUREMENT: PSIG  
SERIAL NUMBER: 8089 CALIBRATION DUE DATE: 2/14/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

- LEAK TEST  FLUSH  HYDROSTATIC PRESSURE TEST  PNEUMATIC PRESSURE TEST
- OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION:  
\_\_\_\_\_  
\_\_\_\_\_

**MECHANICAL UTILITIES TEST REPORT - PAGE 3**

**PRESSURE TEST (CONTINUED):**

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: M. S. [Signature]

DATE: 8/4/14

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

**PRESSURE TEST DATA TO BE COMPLETED DURING TEST**

SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	145	145
85	85	150	150
95	95		
105	105		
115	115		
125	125		
135	135		

PRESSURE TEST ACCEPTABLE

TECHNICIAN SIGNATURE/LIFE NUMBER: M. S. [Signature] 16569

WITNESS SIGNATURE/LIFE NUMBER: [Signature] 22429

**OTHER:**

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

DETAILED DESCRIPTION OF OPERATION (ATTACHMENT Y / N):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TEST FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

SPECIFIED		ACTUAL		%
SPECIFIED	ACTUAL	SPECIFIED	ACTUAL	VARIANCE

### MECHANICAL UTILITIES TEST REPORT - PAGE 2

#### LEAK TEST:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F FLUID PRESSURE: ≤50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL/BUBBLES ETC.

\*\*\*TEST DURATION SHALL BE AS LONG AS REQUIRED TO EVALUATE POTENTIAL LEAK POINTS\*\*\*

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: M. Sog DATE: 8/4/16

RECORD ACTUAL LEAK TEST DURATION HERE: 1 HR.

NO LEAKAGE PRESENT  SIGNATURE: M. Sog

#### FLUSH:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

FLUSH FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

FLUSH DURATION: \_\_\_\_\_ MINUTES/HOURS (CIRCLE ONE)

FLUSH PARAMETERS: \_\_\_\_\_ (WRITE "N/A" IF NONE APPLY)

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_

ACCEPTABLE  SIGNATURE: \_\_\_\_\_

#### PRESSURE TEST:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

TYPE: HYDROSTATIC  PNEUMATIC  TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F

SPECIFIED STARTING PRESSURE: 75 PSIG SPECIFIED MAXIMUM TEST PRESSURE: 150 PSIG

SPECIFIED PRESSURE AND TIME INCREMENTS: 10/10 PSIG/MINUTES

SPECIFIED MAXIMUM TEST PRESSURE DURATION: 10 MINUTES (10 MINUTES MINIMUM)



### MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 8/1/16

TEST LOCATION: 4-BM XFM APPLICABLE DRAWING(S): ATTACHMENT  
ATTACHMENT  Y /  N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:  
GASEOUS NITROGEN

MAXIMUM ALLOWABLE WORKING PRESSURE (PSIG) OF COMPONENT/SYSTEM:  
100 PSIG

MECHANICAL UTILITY SYSTEM (MARK AN "X" ON ALL THAT APPLY):

- PRIMARY DI WATER  SECONDARY DI WATER  ALUMINUM DI WATER
- PROCESS CHILLED WATER  COMPRESSED AIR  GASEOUS NITROGEN  OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:  
\_\_\_\_\_  
\_\_\_\_\_

TEST GAUGE INFORMATION:

RANGE: 0-3000 AUTO UNIT OF MEASUREMENT: PSIG  
SERIAL NUMBER: 8089 CALIBRATION DUE DATE: 2/14/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

- LEAK TEST  FLUSH  HYDROSTATIC PRESSURE TEST  PNEUMATIC PRESSURE TEST
- OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION: \_\_\_\_\_  
\_\_\_\_\_

**MECHANICAL UTILITIES TEST REPORT - PAGE 3**

**PRESSURE TEST (CONTINUED):**

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: M. S. [Signature] DATE: 8/4/14

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

PRESSURE TEST DATA TO BE COMPLETED DURING TEST			
SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	145	145
85	85	150	150
95	95		
105	105		
115	115		
125	125		
135	135		

PRESSURE TEST ACCEPTABLE  TECHNICIAN SIGNATURE/LIFE NUMBER: M. S. [Signature] 16569  
 WITNESS SIGNATURE/LIFE NUMBER: [Signature] 22429

**OTHER:**

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

DETAILED DESCRIPTION OF OPERATION (ATTACHMENT Y / N):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TEST FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

SPECIFIED		ACTUAL		%
SPECIFIED	ACTUAL	SPECIFIED	ACTUAL	VARIANCE

MECHANICAL UTILITIES TEST REPORT - PAGE 2

**LEAK TEST:**

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F FLUID PRESSURE: ≤50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL/BUBBLES ETC.

\*\*\*TEST DURATION SHALL BE AS LONG AS REQUIRED TO EVALUATE POTENTIAL LEAK POINTS\*\*\*

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: M. Sog DATE: 8/4/16

RECORD ACTUAL LEAK TEST DURATION HERE: 1 HR.

NO LEAKAGE PRESENT  SIGNATURE: M. Sog

**FLUSH:**

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

FLUSH FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

FLUSH DURATION: \_\_\_\_\_ MINUTES/HOURS (CIRCLE ONE)

FLUSH PARAMETERS: \_\_\_\_\_ (WRITE "N/A" IF NONE APPLY)

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

ACCEPTABLE  SIGNATURE: \_\_\_\_\_

**PRESSURE TEST:**

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

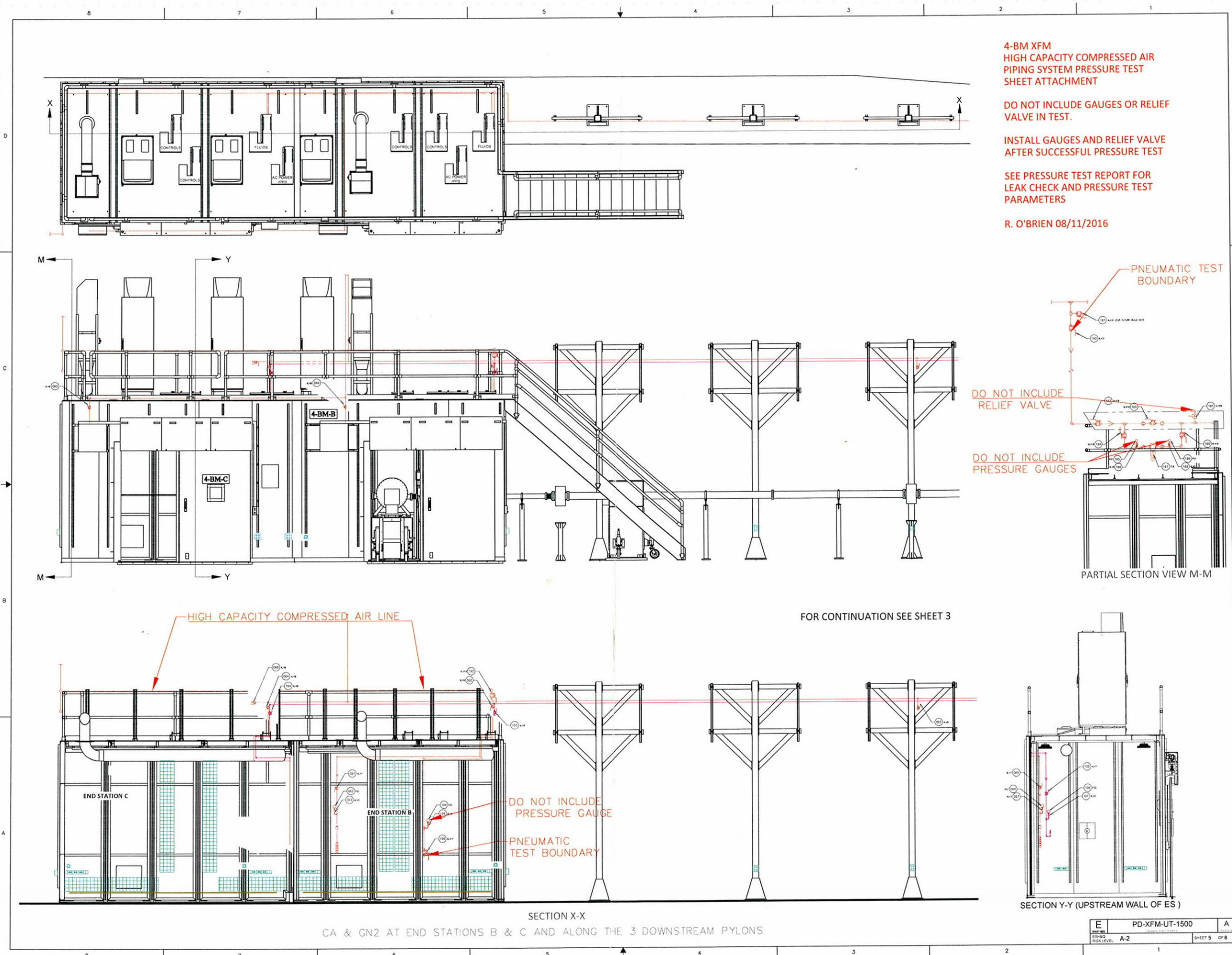
TYPE: HYDROSTATIC  PNEUMATIC  TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F

SPECIFIED STARTING PRESSURE: 75 PSIG SPECIFIED MAXIMUM TEST PRESSURE: 150 PSIG

SPECIFIED PRESSURE AND TIME INCREMENTS: 10/10 PSIG/MINUTES

SPECIFIED MAXIMUM TEST PRESSURE DURATION: 10 MINUTES (10 MINUTES MINIMUM)





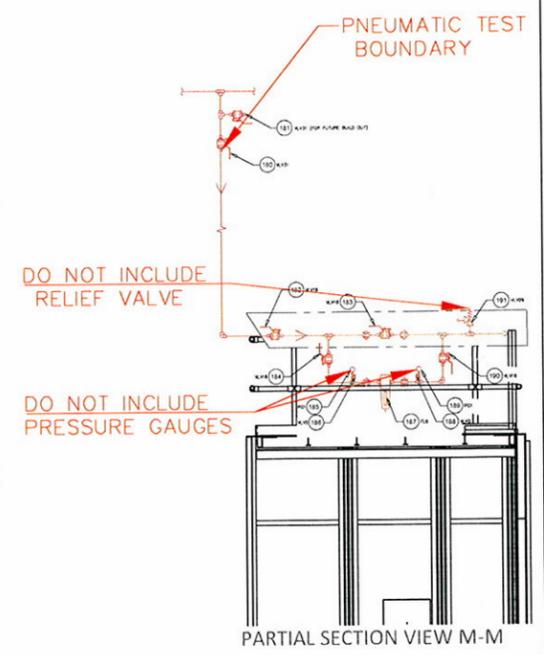
4-BM XFM  
 HIGH CAPACITY COMPRESSED AIR  
 PIPING SYSTEM PRESSURE TEST  
 SHEET ATTACHMENT

DO NOT INCLUDE GAUGES OR RELIEF  
 VALVE IN TEST.

INSTALL GAUGES AND RELIEF VALVE  
 AFTER SUCCESSFUL PRESSURE TEST

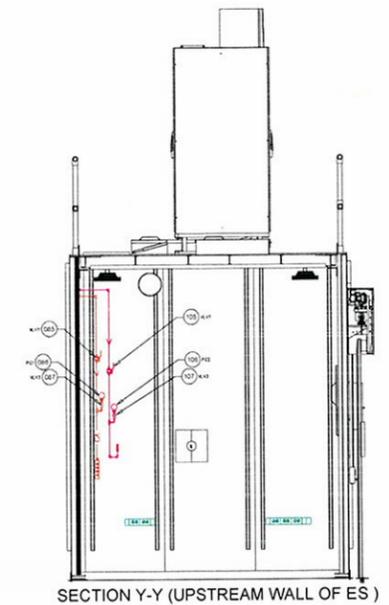
SEE PRESSURE TEST REPORT FOR  
 LEAK CHECK AND PRESSURE TEST  
 PARAMETERS

R. O'BRIEN 08/11/2016



PARTIAL SECTION VIEW M-M

FOR CONTINUATION SEE SHEET 3



SECTION Y-Y (UPSTREAM WALL OF ES)

SECTION X-X  
 CA & GN2 AT END STATIONS B & C AND ALONG THE 3 DOWNSTREAM PYLONS

E	PD-XFM-UT-1500	A
EQ-80		
RISK LEVEL	A-2	SHEET 5 OF 8

### MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 2/11/16

TEST LOCATION: 4-BM XFM APPLICABLE DRAWING(S): ATTACHMENT  
ATTACHMENT  Y  N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:  
HIGH CAPACITY COMPRESSED AIR SYSTEM PIPING

MAXIMUM ALLOWABLE WORKING PRESSURE (PSIG) OF COMPONENT/SYSTEM:  
125 PSIG

MECHANICAL UTILITY SYSTEM (MARK AN "X" ON ALL THAT APPLY):

- PRIMARY DI WATER  SECONDARY DI WATER  ALUMINUM DI WATER
- PROCESS CHILLED WATER  COMPRESSED AIR  GASEOUS NITROGEN  OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:  
HIGH CAP PIPING TO XFM

TEST GAUGE INFORMATION:

RANGE: 0-300 AUTOMATIC UNIT OF MEASUREMENT: PSIG  
SERIAL NUMBER: 9181 CALIBRATION DUE DATE: 3/23/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

- LEAK TEST  FLUSH  HYDROSTATIC PRESSURE TEST  PNEUMATIC PRESSURE TEST
- OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION: \_\_\_\_\_

### MECHANICAL UTILITIES TEST REPORT - PAGE 2

#### LEAK TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F FLUID PRESSURE: < 50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL, BUBBLES, ETC.

\*\*\*TEST DURATION SHALL BE AS LONG AS REQUIRED TO EVALUATE POTENTIAL LEAK POINTS\*\*\*

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: A.R.

DATE: 8/12/16

RECORD ACTUAL LEAK TEST DURATION HERE: 4 hrs

NO LEAKAGE PRESENT

SIGNATURE: [Signature]

#### FLUSH:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

FLUSH FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

FLUSH DURATION: \_\_\_\_\_ MINUTES/HOURS (CIRCLE ONE)

FLUSH PARAMETERS: \_\_\_\_\_ (WRITE "N/A" IF NONE APPLY)

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

ACCEPTABLE  SIGNATURE: [Signature]

#### PRESSURE TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TYPE: HYDROSTATIC  PNEUMATIC  TEST FLUID: AIR FLUID TEMPERATURE: AMBIENT

SPECIFIED STARTING PRESSURE: 75 PSIG SPECIFIED MAXIMUM TEST PRESSURE: 150 PSIG

SPECIFIED PRESSURE AND TIME INCREMENTS: 10/10 PSIG/MINUTES

SPECIFIED MAXIMUM TEST PRESSURE DURATION: 10 MINUTES (10 MINUTES MINIMUM)

**MECHANICAL UTILITIES TEST REPORT - PAGE 3**

**PRESSURE TEST (CONTINUED):**

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: AR

DATE: 8/12/16

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

PRESSURE TEST DATA TO BE COMPLETED DURING TEST			
SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	140	140
80	80	150	150
90	90		
100	100		
110	100		
120	120		
130	12		

PRESSURE TEST ACCEPTABLE

TECHNICIAN SIGNATURE/LIFE NUMBER: \_\_\_\_\_

WITNESS SIGNATURE/LIFE NUMBER: \_\_\_\_\_

*[Handwritten Signature]* 25775  
*[Handwritten Signature]* 22895

**OTHER:**

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

DETAILED DESCRIPTION OF OPERATION (ATTACHMENT Y / N):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TEST FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F RELATIVE HUMIDITY \_\_\_\_\_ %

SPECIFIED	ACTUAL	SPECIFIED	ACTUAL	% VARIANCE



### MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R.O'BRIEN LIFE #: 24021 DATE: 8/1/16

TEST LOCATION: 4-BM XFM APPLICABLE DRAWING(S): ATTACHMENT  
ATTACHMENT  Y  N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:  
PCHW SYSTEM

MAXIMUM ALLOWABLE WORKING PRESSURE (PSIG) OF COMPONENT/SYSTEM:  
75 PSIG

MECHANICAL UTILITY SYSTEM (MARK AN "X" ON ALL THAT APPLY):

- PRIMARY DI WATER  SECONDARY DI WATER  ALUMINUM DI WATER
- PROCESS CHILLED WATER  COMPRESSED AIR  GASEOUS NITROGEN  OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:  
\_\_\_\_\_  
\_\_\_\_\_

TEST GAUGE INFORMATION:

RANGE: 0-3000 AUTO UNIT OF MEASUREMENT: PSIG  
SERIAL NUMBER: 8089 CALIBRATION DUE DATE: 2/14/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

- LEAK TEST  FLUSH  HYDROSTATIC PRESSURE TEST  PNEUMATIC PRESSURE TEST
- OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION: \_\_\_\_\_  
\_\_\_\_\_

### MECHANICAL UTILITIES TEST REPORT - PAGE 2

#### LEAK TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F FLUID PRESSURE: ≤ 50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL / BUBBLES, ETC.

\*\*\*TEST DURATION SHALL BE AS LONG AS REQUIRED TO EVALUATE POTENTIAL LEAK POINTS\*\*\*

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: M Schwarz DATE: 8-2-16

RECORD ACTUAL LEAK TEST DURATION HERE: 50 Min

NO LEAKAGE PRESENT

SIGNATURE: M Schwarz

#### FLUSH:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

FLUSH FLUID: WATER FLUID TEMPERATURE AMBIENT °F FLUID PRESSURE: HOUSE PSIG

FLUSH DURATION: 20 MINUTES/HOURS (CIRCLE ONE)

FLUSH PARAMETERS: N/A

(WRITE "N/A" IF NONE APPLY)

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: M Schwarz DATE: 8-2-16

COMMENTS:

ACCEPTABLE

SIGNATURE: M Schwarz

#### PRESSURE TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TYPE: HYDROSTATIC  PNEUMATIC  TEST FLUID: WATER FLUID TEMPERATURE AMBIENT °F

SPECIFIED STARTING PRESSURE: 75 PSIG SPECIFIED MAXIMUM TEST PRESSURE: 150 PSIG

SPECIFIED PRESSURE AND TIME INCREMENTS: 10/10 PSIG/MINUTES

SPECIFIED MAXIMUM TEST PRESSURE DURATION: 10 MINUTES (10 MINUTES MINIMUM)

**MECHANICAL UTILITIES TEST REPORT - PAGE 3**

**PRESSURE TEST (CONTINUED):**

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: M. Schwarz      DATE: 8-3-16

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F      RELATIVE HUMIDITY \_\_\_\_\_ %

PRESSURE TEST DATA TO BE COMPLETED DURING TEST			
SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	145	145
85	85	150	150
95	95		
105	105		
115	115		
125	125		
135	135		

PRESSURE TEST ACCEPTABLE       TECHNICIAN SIGNATURE/LIFE NUMBER: M. Schwarz 16569  
 WITNESS SIGNATURE/LIFE NUMBER: [Signature] 22429

**OTHER:**

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

DETAILED DESCRIPTION OF OPERATION (ATTACHMENT Y / N):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TEST FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F      FLUID PRESSURE: \_\_\_\_\_ PSIG

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_      DATE: \_\_\_\_\_

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F      RELATIVE HUMIDITY \_\_\_\_\_ %

				%
SPECIFIED	ACTUAL	SPECIFIED	ACTUAL	VARIANCE



### MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 8/1/2016

TEST LOCATION: 4-BM XFM APPLICABLE DRAWING(S): ATTACHMENT  
ATTACHMENT  Y  N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:  
1/2" PROCESS AIR

MAXIMUM ALLOWABLE WORKING PRESSURE (PSIG) OF COMPONENT/SYSTEM:  
90 PSIG

MECHANICAL UTILITY SYSTEM (MARK AN "X" ON ALL THAT APPLY):

- PRIMARY DI WATER  SECONDARY DI WATER  ALUMINUM DI WATER   
PROCESS CHILLED WATER  COMPRESSED AIR  GASEOUS NITROGEN  OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:  
\_\_\_\_\_  
\_\_\_\_\_

TEST GAUGE INFORMATION:

RANGE: 0-300 PSIG UNIT OF MEASUREMENT: PSIG  
SERIAL NUMBER: M014073 CALIBRATION DUE DATE: 8/6/2016

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

- LEAK TEST  FLUSH  HYDROSTATIC PRESSURE TEST  PNEUMATIC PRESSURE TEST   
OTHER

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION: \_\_\_\_\_  
\_\_\_\_\_

### MECHANICAL UTILITIES TEST REPORT - PAGE 2

#### LEAK TEST:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

TEST FLUID: AIR FLUID TEMPERATURE AMBIENT FLUID PRESSURE: < 50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL/BUBBLES

\*\*\*TEST DURATION SHALL BE AS LONG AS REQUIRED TO EVALUATE POTENTIAL LEAK POINTS\*\*\*

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: ND DATE: 8/2/16

RECORD ACTUAL LEAK TEST DURATION HERE: 5 HR

NO LEAKAGE PRESENT  SIGNATURE: [Signature]

#### FLUSH:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

FLUSH FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

FLUSH DURATION: \_\_\_\_\_ MINUTES/HOURS (CIRCLE ONE)

FLUSH PARAMETERS: \_\_\_\_\_  
\_\_\_\_\_  
(WRITE "N/A" IF NONE APPLY)

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_

ACCEPTABLE  SIGNATURE: \_\_\_\_\_

#### PRESSURE TEST:

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

TYPE: HYDROSTATIC  PNEUMATIC  TEST FLUID: AIR FLUID TEMPERATURE AMBIENT °F

SPECIFIED STARTING PRESSURE: 75 PSIG SPECIFIED MAXIMUM TEST PRESSURE: 150 PSIG

SPECIFIED PRESSURE AND TIME INCREMENTS: 10/10 PSIG/MINUTES

SPECIFIED MAXIMUM TEST PRESSURE DURATION: 10 MINUTES (10 MINUTES MINIMUM)

**MECHANICAL UTILITIES TEST REPORT - PAGE 3**

**PRESSURE TEST (CONTINUED):**

*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: MD/AR      DATE: 8/2/16

ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F      RELATIVE HUMIDITY \_\_\_\_\_ %

PRESSURE TEST DATA TO BE COMPLETED DURING TEST			
SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	140	140
80	80	150	150
90	90		
100	101		
110	110		
120	121		
<del>130</del> 130	130		

PRESSURE TEST ACCEPTABLE

TECHNICIAN SIGNATURE/LIFE NUMBER: [Signature] 25531

WITNESS SIGNATURE/LIFE NUMBER: [Signature] 14475

**OTHER:**

*THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER*

DETAILED DESCRIPTION OF OPERATION (ATTACHMENT Y / N):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TEST FLUID: \_\_\_\_\_ FLUID TEMPERATURE \_\_\_\_\_ °F FLUID PRESSURE: \_\_\_\_\_ PSIG

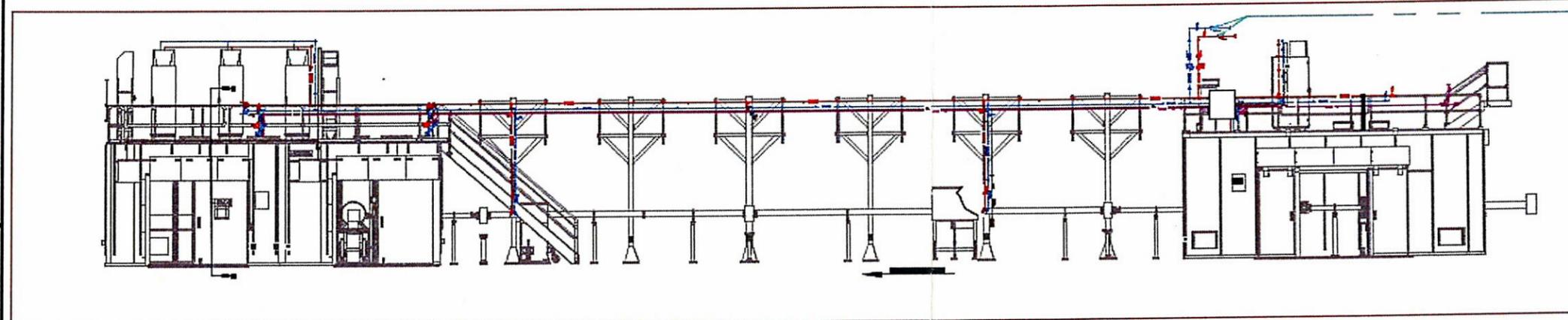
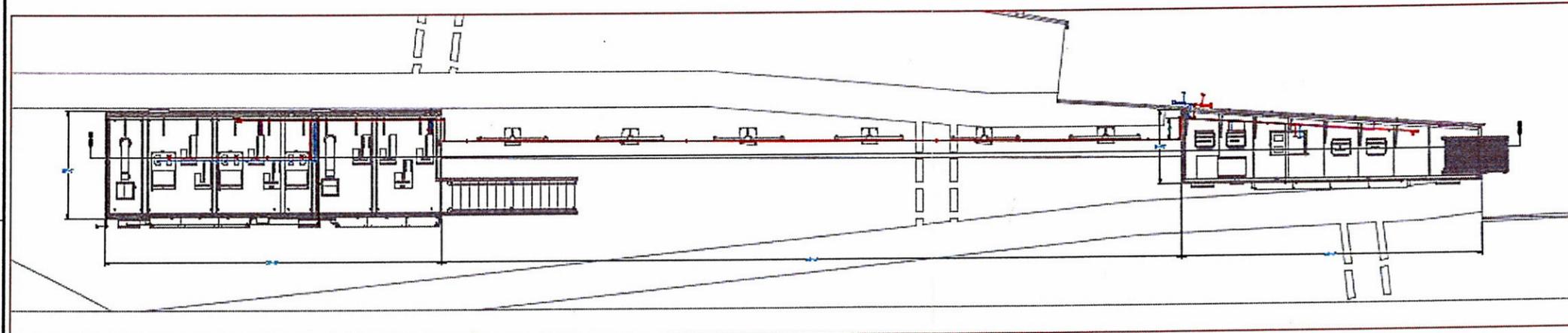
*THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN*

CONDUCTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

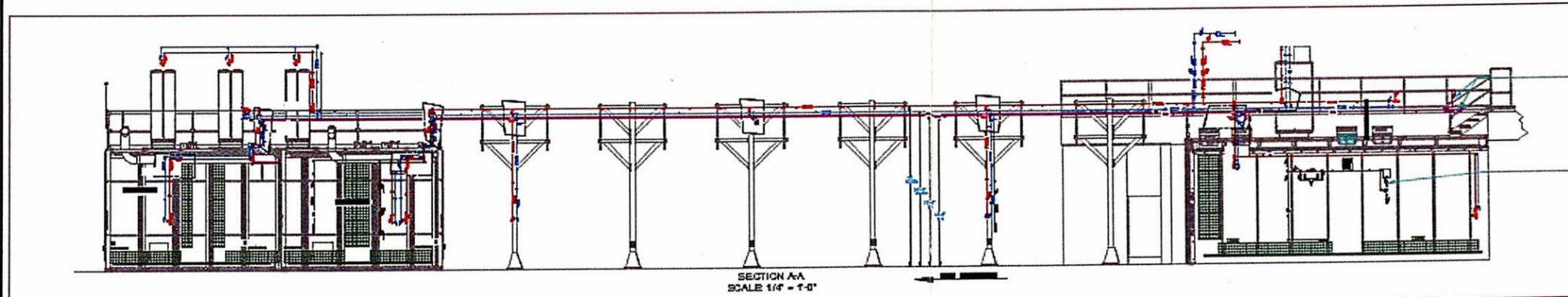
ENVIRONMENTAL FACTORS: TEMPERATURE \_\_\_\_\_ °F      RELATIVE HUMIDITY \_\_\_\_\_ %

SPECIFIED		ACTUAL		%
SPECIFIED	ACTUAL	SPECIFIED	ACTUAL	VARIANCE





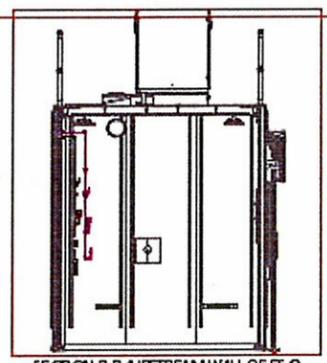
PCHW TEST BOUNDARY



GASEOUS NITROGEN TEST BOUNDARY

COMPRESSED AIR TEST BOUNDARY

SECTION A-A  
SCALE 1/4" = 1'-0"



SECTION B-B (UPSTREAM WALL OF ES Q)  
SCALE 3/8" = 1'-0"

04-BM XFM  
PRESSURE TEST REPORT ATTACHMENT  
08/01/2016  
R. O'BRIEN

SEE PRESSURE TEST SHEET FOR TEST  
PARAMETERS

DO NOT INCLUDE PRESSURE GAUGES OR  
RELIEF VALVES IN PRESSURE TEST