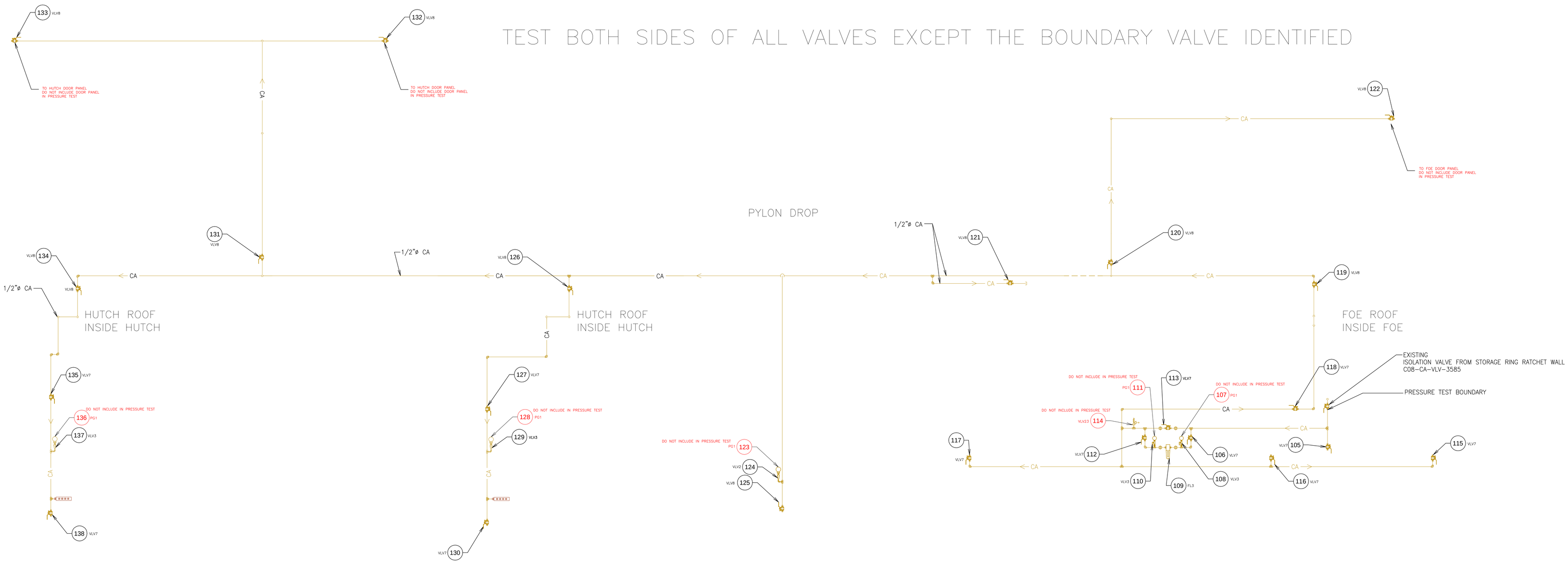
7-BM QAS COMPRESSED AIR
PRESSURE TEST SHEET ATTACHMENT
6/30/2016 – R. O'BRIEN
SEE PRESSURE TEST SHEET FOR PARAMETERS

TEST BOTH SIDES OF ALL VALVES EXCEPT THE BOUNDARY VALVE IDENTIFIED



MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 6/30/16

TEST LOCATION: 7-BM QAS APPLICABLE DRAWING(S): PD-QAS-UT-1500

ATTACHMENT Y / N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:
COMPRESSED AIR PIPING

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 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 °F FLUID PRESSURE: <50 PSIG

METHOD USED (VISUAL, SOAP BUBBLES, VACUUM, ETC.): VISUAL, SOAP 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: MD DATE: 7/1/16

RECORD ACTUAL LEAK TEST DURATION HERE: 4 HOURS

NO LEAKAGE PRESENT ☑ SIGNATURE: MD

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: [illegible] DATE: 7/1/16

ENVIRONMENTAL FACTORS: TEMPERATURE _____ °F RELATIVE HUMIDITY _____ %

PRESSURE TEST DATA TO BE COMPLETED DURING TEST			
SPECIFIED PRESSURE	ACTUAL PRESSURE	SPECIFIED PRESSURE	ACTUAL PRESSURE
75	75	146	145
85	85	150	150
95	95		
105	105		
115	115		
125	125		
135	135		

PRESSURE TEST ACCEPTABLE ☑ TECHNICIAN SIGNATURE/LIFE NUMBER: [illegible] 25557

WITNESS SIGNATURE/LIFE NUMBER: [illegible] 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 – PAGE 4

OTHER (CONTINUED):

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

NOTES:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

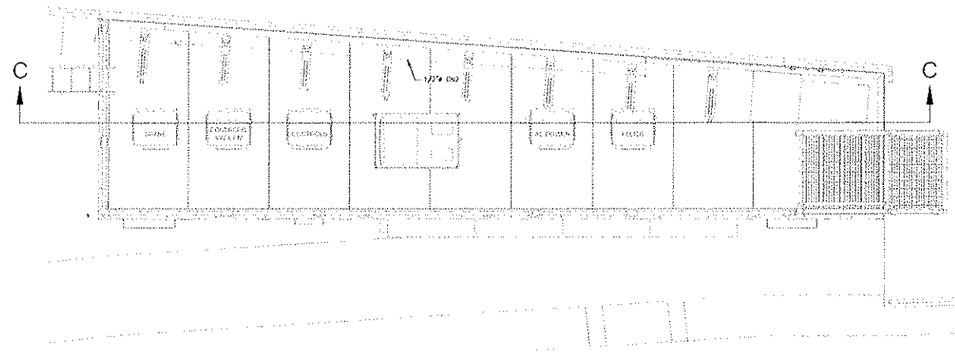
NOTES:

TEST ACCEPTABLE ☐

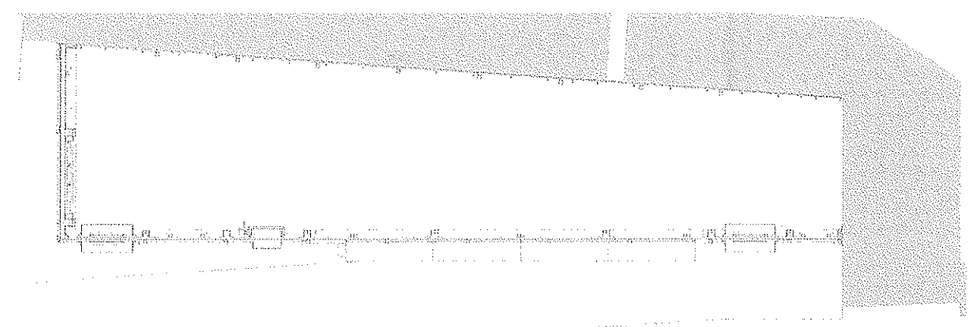
TECHNICIAN SIGNATURE/LIFE NUMBER: _____

WITNESS SIGNATURE/LIFE NUMBER: _____

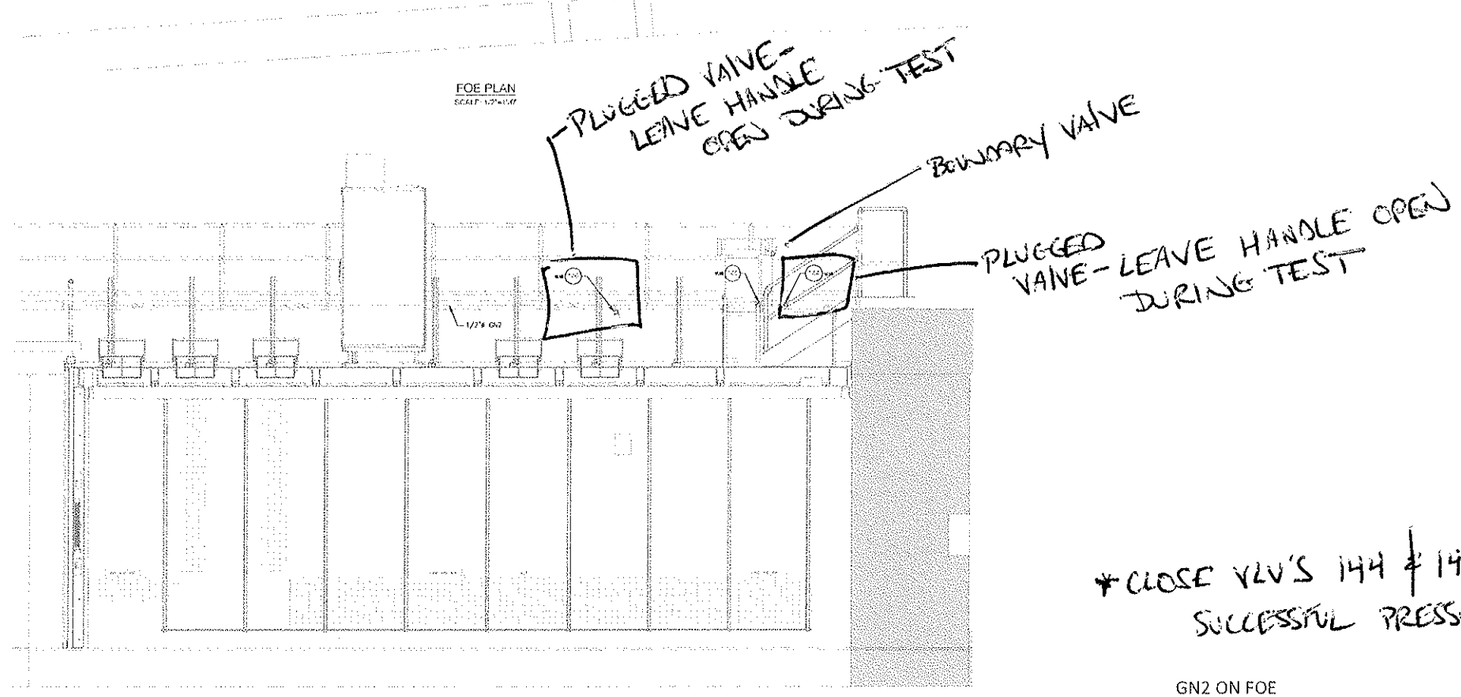
7-BM QAS
GN2 PRESSURE TEST
ATTACHMENT
6/28/16
SHEET 1 OF 3



FOE ROOF PLAN
SCALE 1/2"=1'-0"



FOE PLAN
SCALE 1/2"=1'-0"



SECTION C-C
1/2" = 1'-0"

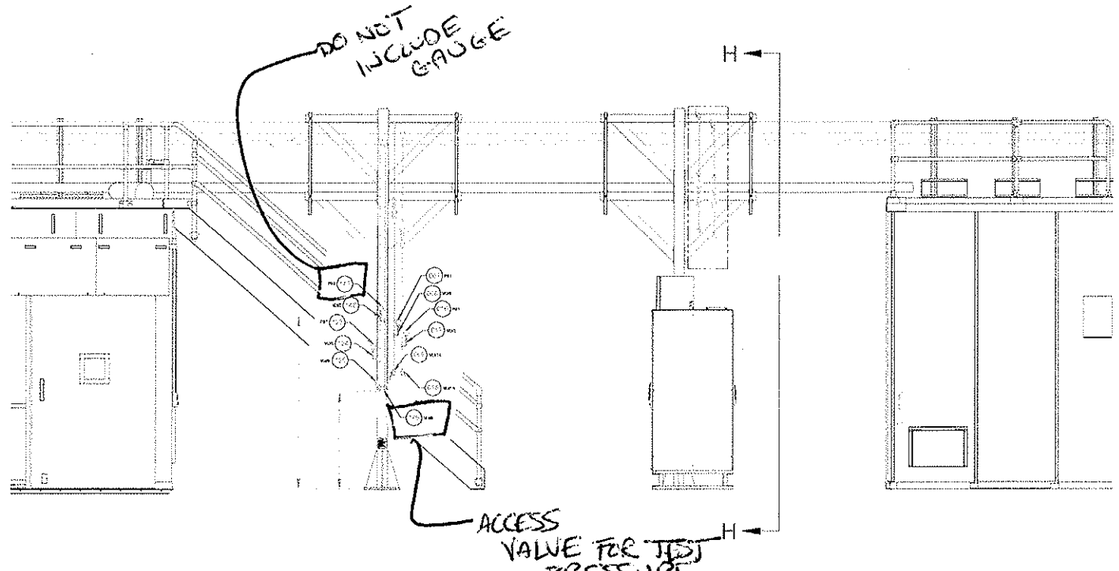
*CLOSE VLV'S 144 & 146 AFTER
SUCCESSFUL PRESSURE TEST

GN2 ON FOE

E	PD-QAS-UT-1500	A

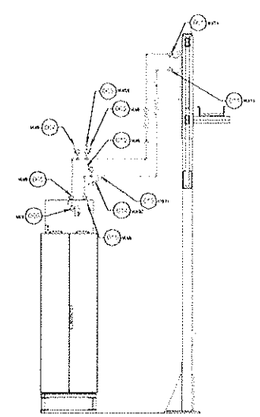
7-BM QAS
GN2 PRESSURE TEST
ATTACHMENT
6/28/16

SHEET 2 OF 3



ELEVATION LOOKING AT PYLONS
SCALE: 1/2"=1'-0"

* RE-INSTALL GAUGE AFTER SUCCESSFUL PRESSURE TEST



SECTION H-H
1/2" = 1'-0"

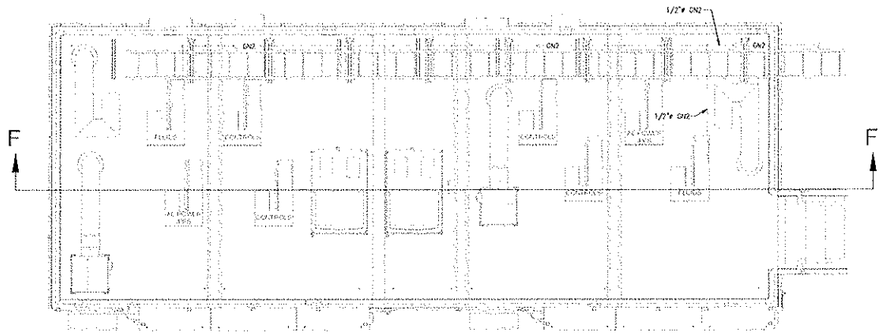
ALL UTILITIES ON PYLONS
SEE NOTE 5 ON SHEET 1

E	PD-QAS-UT-1500	A

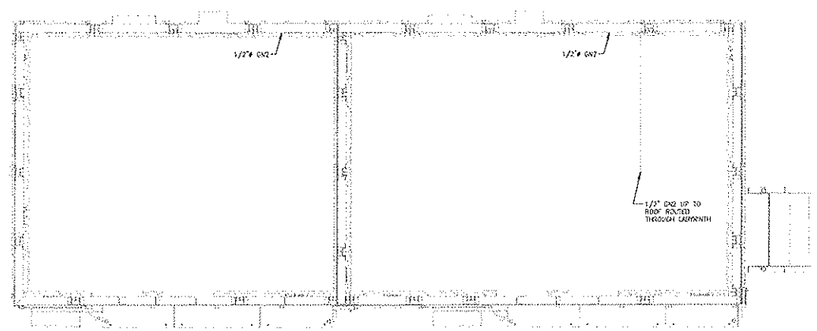
7-BM QAS
GN2 PRESSURE TEST
ATTACHMENT

6/28/16

SHEET 3 OF 3



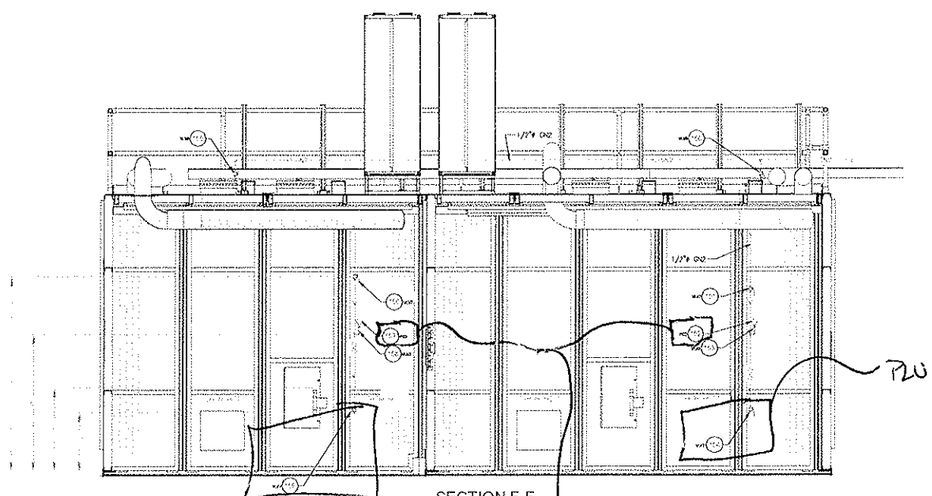
END STATION B & C ROOF PLANS
SCALE: 1/2"=1'-0"



END STATION B & C PLANS
SCALE: 1/2"=1'-0"

* REINSTALL PRESSURE GAUGES AFTER SUCCESSFUL PRESSURE TEST

* CLOSE VLV'S 154 & 159 AFTER SUCCESSFUL PRESSURE TEST



PLUGGED VALVE - LEAVE HANDLE OPEN DURING TEST

SECTION F-F
1/2" = 1'-0"

DO NOT INCLUDE GAUGE

PLUGGED VALVE - LEAVE HANDLE OPEN DURING TEST

GN2 IN AND ON END STATIONS B AND C,
SEE NOTE 7 ON SHEET 1.

E	PD-QAS-UT-1500	A

MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 6/28/16

TEST LOCATION: 7-BM QAS APPLICABLE DRAWING(S): PD-QAS-UT-1500

ATTACHMENT Y N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:
GN2 PIPING

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 AUTORANGING UNIT OF MEASUREMENT: PSIG

SERIAL NUMBER: 80889 CALIBRATION DUE DATE: 2/15/17

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: ? 250 PSIG

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

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

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: 25743 DATE: 7/1/16

RECORD ACTUAL LEAK TEST DURATION HERE: 1 1/2 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: _____

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: S. B. DATE: 7-1-16

ENVIRONMENTAL FACTORS: TEMPERATURE _____ °F RELATIVE HUMIDITY _____ %

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

PRESSURE TEST ACCEPTABLE ☑ TECHNICIAN SIGNATURE/LIFE NUMBER: 25743

WITNESS SIGNATURE/LIFE NUMBER: 22896 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 – PAGE 4

OTHER (CONTINUED):

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

NOTES:

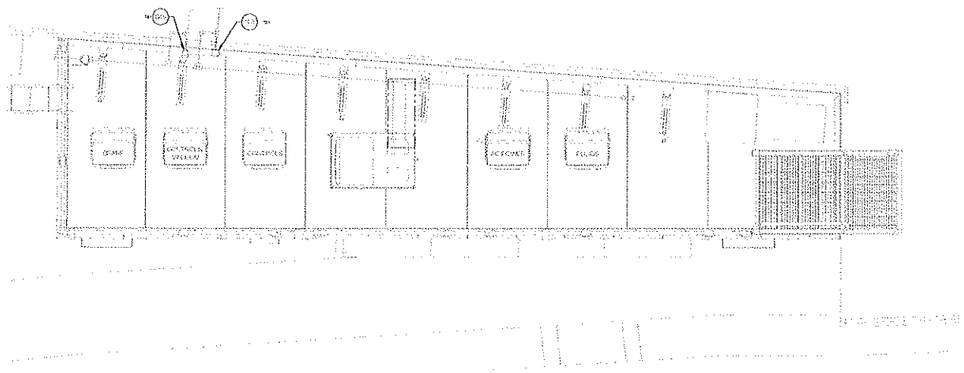
THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

NOTES:

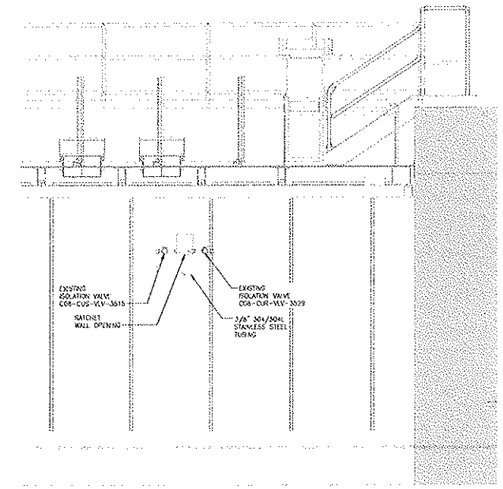
TEST ACCEPTABLE ☐

TECHNICIAN SIGNATURE/LIFE NUMBER: _____

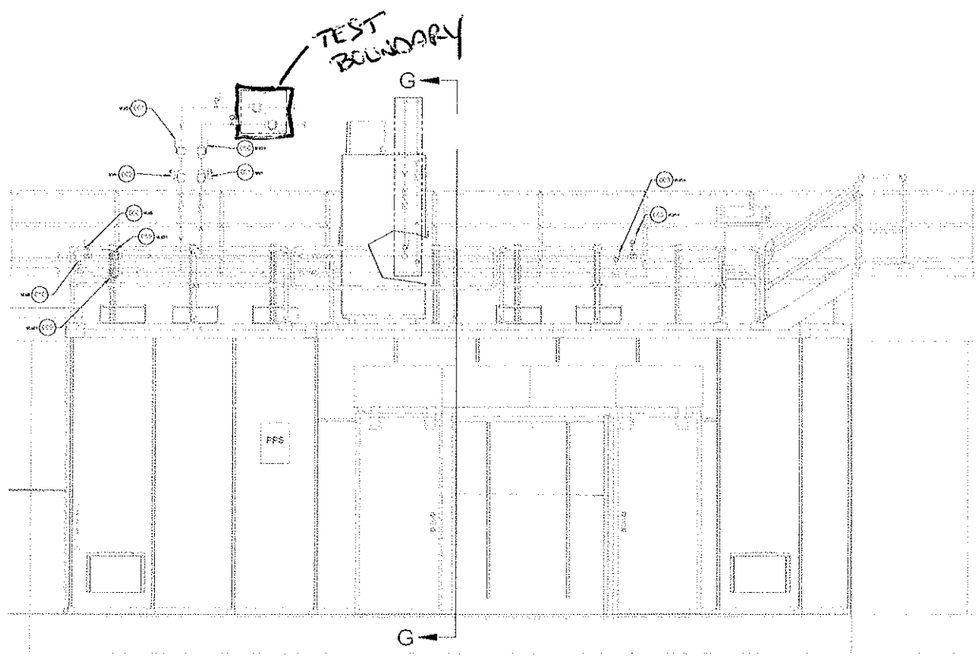
WITNESS SIGNATURE/LIFE NUMBER: _____



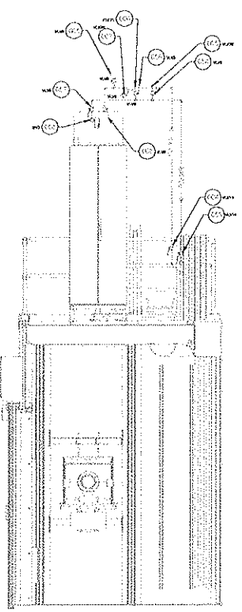
FOE ROOF PLAN
SCALE: 1/2"=1'-0"



DI WATER BYPASS LOOP INSIDE FOE
SCALE: 1/2"=1'-0"



FOE ELEVATION
SCALE: 1/2"=1'-0"



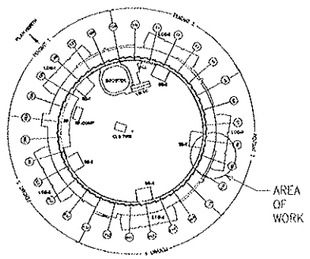
SECTION G-G
1/2" = 1'-0"

7-BM QAS
PRESSURE TEST SHEET ATTACHMENT
6/28/16
SHEET 1 OF 3

*TEST BOTH SIDES OF ALL VALVES USING JUMPERS OR PLUGS

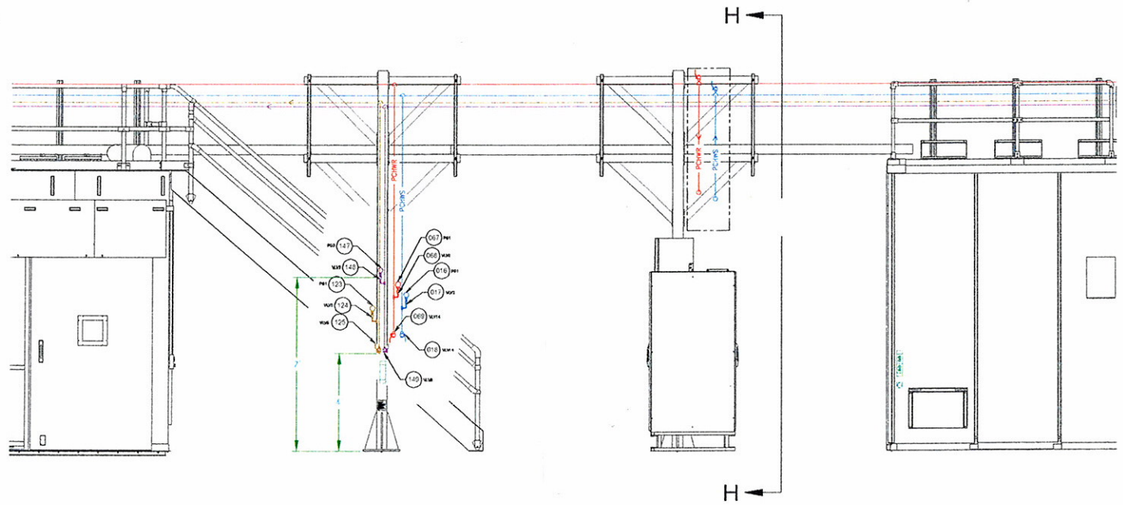
*DO NOT INCLUDE PRESSURE GAUGES IN F

PCWH ON FOE AND DI BYPASS LOOP
SEE NOTE 5 ON SHEET 1



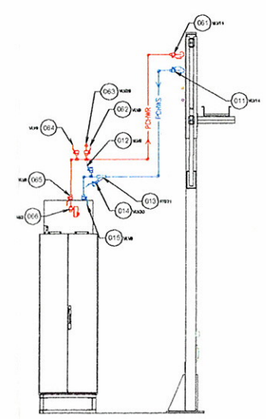
KEY PLAN AREA OF WORK

E	PD-QAS-UT-1500	A
A2	SHEET 2 OF 10	



ELEVATION LOOKING AT PYLONS
SCALE: 1/2"=1'-0"

7-BM QAS
PRESSURE TEST
SHEET ATTACHMENT
6/28/16
SHEET 2 OF 3



SECTION H-H
1/2" = 1'-0"

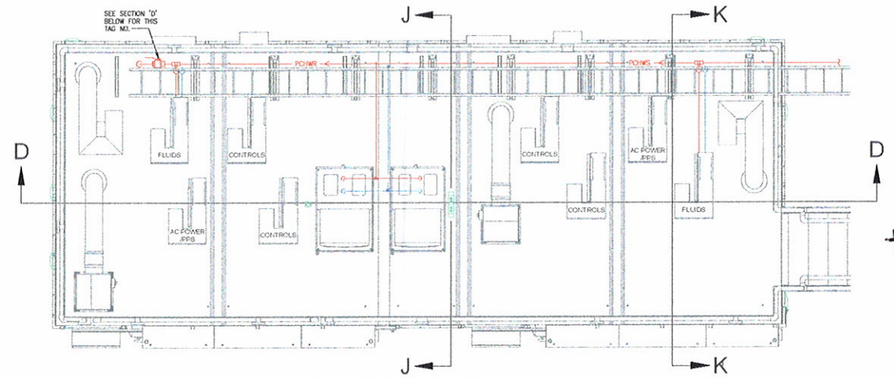
* SEE SHEET 1 OF ATTACHMENT FOR NOTES

ALL UTILITIES ON PYLONS
SEE NOTE 5 ON SHEET 1

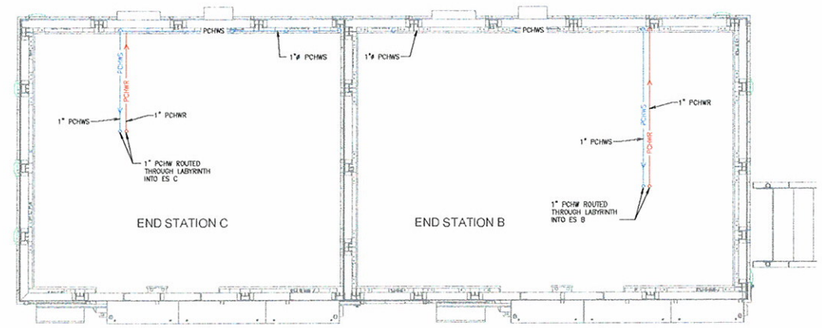
E	PD-QAS-UT-1500	A

7-BM QAS
PRESSURE TEST SHEET ATTACHMENT
6/28/16
SHEET 3 OF 3

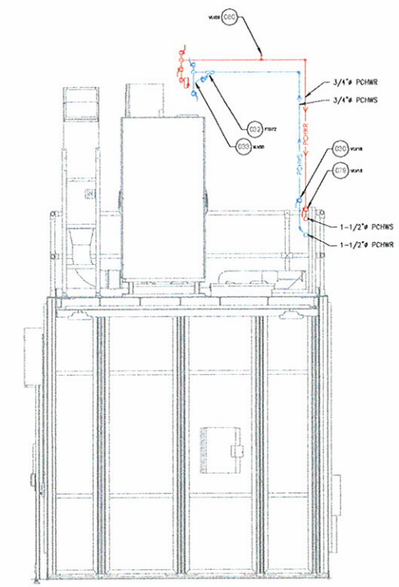
*SEE SHEET 1 OF ATTACHMENT FOR N



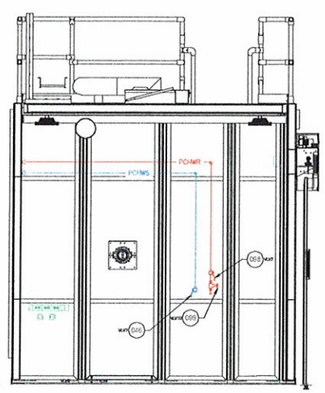
END STATION B & C ROOF PLAN VIEW
SCALE: 1/2"=1'-0"



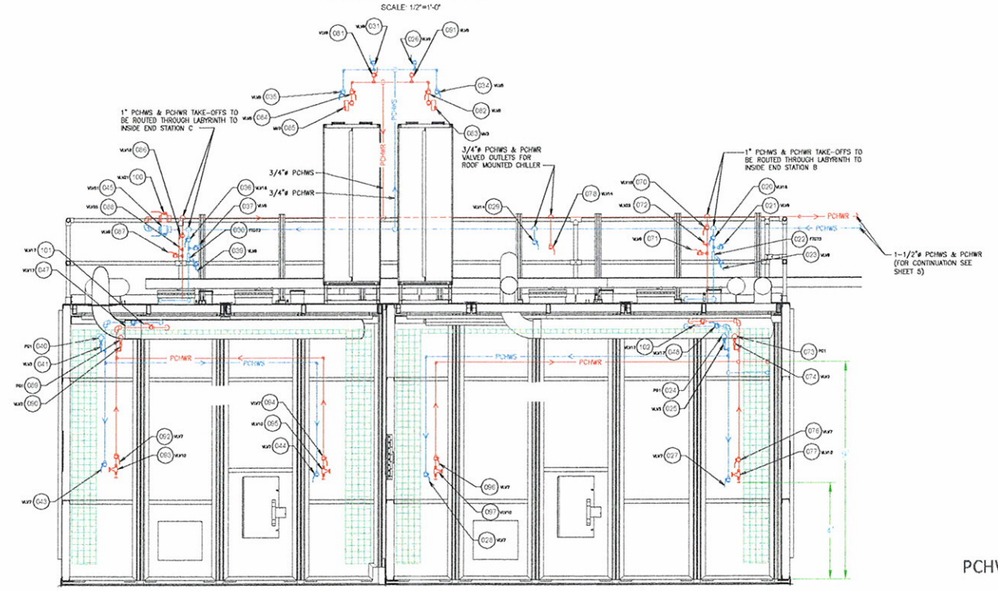
END STATION B & C PLAN VIEW
SCALE: 1/2"=1'-0"



SECTION J-J (ROTATED FOR CLARITY)
1/2" = 1'-0"



SECTION K-K
(ROTATED FOR CLARITY)



SECTION D-D
1/2" = 1'-0"

PCHW ON AND IN END STATIONS B AND C
SEE NOTES 5 AND 7 ON SHEET 1

E	PD-QAS-UT-1500	A

MECHANICAL UTILITIES TEST REPORT

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 24021 DATE: 6/28/16

TEST LOCATION: 7-BM QAS APPLICABLE DRAWING(S): PD-QAS-UT-1500

ATTACHMENT (Y) N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:
PCHW PIPING

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 AUTORANGING UNIT OF MEASUREMENT: PSIG

SERIAL NUMBER: 8089 CALIBRATION DUE DATE: 2/15/17

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 & SOAP, ETC.

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

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: MS & SB DATE: 6/28/16

RECORD ACTUAL LEAK TEST DURATION HERE: 4 HRS.

NO LEAKAGE PRESENT ☑ SIGNATURE: MM Sally

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: MS & SB DATE: 6/28/16

COMMENTS:

ACCEPTABLE ☒ SIGNATURE:

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: MS + SB DATE: 6/30/16

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 Eg 16569

WITNESS SIGNATURE/LIFE NUMBER: ~~25743~~ 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 – PAGE 4

OTHER (CONTINUED):

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

NOTES:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

NOTES:

TEST ACCEPTABLE ☐

TECHNICIAN SIGNATURE/LIFE NUMBER: _____

WITNESS SIGNATURE/LIFE NUMBER: _____