MECHANICAL UTILITIES TEST REPORT

PREPARED BY: R. O'BRIEN  LIFE #: 34081  DATE: 8/1/16

TEST LOCATION: 4-BM XFM  APPLICABLE DRAWING(S): ATTACHMENT

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 X  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 X  FLUSH □  HYDROSTATIC PRESSURE TEST □  PNEUMATIC PRESSURE TEST □

OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION:

R. O'BRIEN 08/07/2015 REV A
MECHANICAL UTILITIES TEST REPORT – PAGE 3

PRESSURE TEST (CONTINUED):

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

CONDUCTED BY: [Signature]  DATE: 8/4/14

ENVIRONMENTAL FACTORS: TEMPERATURE _______ °F  RELATIVE HUMIDITY _______%

<table>
<thead>
<tr>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>75</td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td>85</td>
<td>85</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>95</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>135</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRESSURE TEST ACCEPTABLE  ☑  TECHNICIAN SIGNATURE/LIFE NUMBER: [Signature] 16567

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 _______%

<table>
<thead>
<tr>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. O'BRIEN 08/07/2015 REV A
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: [Signature]  DATE: 8/4/16
RECORD ACTUAL LEAK TEST DURATION HERE: 1 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  [X]  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

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

PREPARED BY: R. O'BRIEN LIFE #: 34081 DATE: 8/1/16

TEST LOCATION: 4-8M 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 X OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:


TEST GAUGE INFORMATION:

RANGE: 0-3000 PSIG UNIT OF MEASUREMENT: PSIG

SERIAL NUMBER: 8089 CALIBRATION DUE DATE: 2/14/2014

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

LEAK TEST X FLUSH □ HYDROSTATIC PRESSURE TEST □ PNEUMATIC PRESSURE TEST X

OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION:


R. O'BRIEN 08/07/2015 REV A
# MECHANICAL UTILITIES TEST REPORT - PAGE 3

## PRESSURE TEST (CONTINUED):

**THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN**

CONDUCTED BY: [Signature]

DATE: 8/4/14

ENVIRONMENTAL FACTORS: TEMPERATURE _______ °F  RELATIVE HUMIDITY _______ %

<table>
<thead>
<tr>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>75</td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td>85</td>
<td>85</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>95</td>
<td>95</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>105</td>
<td>105</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>115</td>
<td>115</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>125</td>
<td>125</td>
<td>175</td>
<td>175</td>
</tr>
</tbody>
</table>

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

WITNESS SIGNATURE/LIFE NUMBER: [Signature]

## 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: [Signature]

DATE: [Signature]

ENVIRONMENTAL FACTORS: TEMPERATURE _______ °F  RELATIVE HUMIDITY _______ %

<table>
<thead>
<tr>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. O’BRIEN 08/07/2015 REV A
LEAK TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TEST FLUID: AIR FLUID TEMPERATURE AMOUNT °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 Segr DATE: 8/4/16

RECORD ACTUAL LEAK TEST DURATION HERE: 1 HR.

NO LEAKAGE PRESENT ☐ SIGNATURE: M Segr

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 X TEST FLUID: AIR FLUID TEMPERATURE AMOUNT °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 #: 24081       DATE: 2/11/10

TEST LOCATION: 4-BM XFM       APPLICABLE DRAWING(S): ATTACHMENT

ATTACHMENT Y/N (CIRCLE ONE)

DESCRIPTION OF COMPONENT/SYSTEM:
HIGH CAPACITY COMPRRESSED 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 X   GASEOUS NITROGEN □   OTHER □

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

TEST GAUGE INFORMATION:

RANGE: 0-3,000         UNIT OF MEASUREMENT: PSIG

SERIAL NUMBER: 9171      CALIBRATION DUE DATE: 3/23/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

LEAK TEST X   FLUSH □   HYDROSTATIC PRESSURE TEST □   PNEUMATIC PRESSURE TEST X

OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION: ________________________________________________

R. O'BRIEN 08/07/2015 REV A
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/BUDDLES, 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: 

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 X    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 _____ %

<table>
<thead>
<tr>
<th>Specified Pressure</th>
<th>Actual Pressure</th>
<th>Specified Pressure</th>
<th>Actual Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>75</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>80</td>
<td>80</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>90</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pressure test acceptable:

Technician signature/life number: [Signature]

Witness signature/life number: [Signature]

## Other:

*This section to be completed by cognizant engineer*

Detailed description of operation (attachment Y/N):

[Blank line]

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 _____ %

<table>
<thead>
<tr>
<th>Specified</th>
<th>Actual</th>
<th>Specified</th>
<th>Actual</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. O'Brien 08/07/2015 Rev A
MECHANICAL UTILITIES TEST REPORT

PREPARED BY: R. O'BRIEN  LIFE #: 24021  DATE: 8/1/10

TEST LOCATION: 4-8M XFM  APPLICABLE DRAWING(S): ATTACHMENT

DESCRIPTION OF COMPONENT/SYSTEM: PCHW SYSTEM

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

75 PSI G

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

PRIMARY DI WATER □  SECONDARY DI WATER □  ALUMINUM DI WATER □

PROCESS CHILLED WATER X  COMPRESSED AIR □  GASEOUS NITROGEN □  OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE SYSTEM:

TEST GAUGE INFORMATION:

RANGE: 0-3000 AUTO  UNIT OF MEASUREMENT: PSI G

SERIAL NUMBER: 2089  CALIBRATION DUE DATE: 2/14/2017

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

LEAK TEST X  FLUSH X  HYDROSTATIC PRESSURE TEST X  PNEUMATIC PRESSURE TEST □

OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION:

R. O'BRIEN 08/07/2015 REV A
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. Sharp  DATE: 8-2-16
RECORD ACTUAL LEAK TEST DURATION HERE: 60 Min
NO LEAKAGE PRESENT ☐  SIGNATURE: M. Sharp

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. Sharp  DATE: 8-2-16
COMMENTS:

ACCEPTABLE ☐  SIGNATURE: M. Sharp

PRESSURE TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TYPE: HYDROSTATIC ☑  PNEUMATIC ☐  TEST FLUID: WATER  FLUID TEMPERATURE: AMBIENT
SPECIFIED STARTING PRESSURE: 50 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:** [Signature]  
**DATE:** 03-16

**ENVIRONMENTAL FACTORS:**  
TEMPERATURE ____________ °F  
RELATIVE HUMIDITY ____________ %

<table>
<thead>
<tr>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>75</td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td>85</td>
<td>85</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>95</td>
<td>95</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>105</td>
<td>105</td>
<td>155</td>
<td>155</td>
</tr>
<tr>
<td>115</td>
<td>115</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>125</td>
<td>125</td>
<td>175</td>
<td>175</td>
</tr>
</tbody>
</table>

**PRESSURE TEST ACCEPTABLE**

**TECHNICIAN SIGNATURE/LIFE NUMBER:** M.S. 16567

**WITNESS SIGNATURE/LIFE NUMBER:** [Signature] 29429

## 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 ____________ %

<table>
<thead>
<tr>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
OTHER (CONTINUED):

THIS SECTION TO BE COMPLETED BY QUALIFIED TECHNICIAN

NOTES:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

THIS SECTION TO BE COMPLETED BY CODUZANT ENGINEER

NOTES:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TEST ACCEPTABLE □  TECHNICIAN SIGNATURE/LIFE NUMBER: _______________________

WITNESS SIGNATURE/LIFE NUMBER: _______________________

R. O'BRIEN 08/07/2015 REV A
MECHANICAL UTILITIES TEST REPORT

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

TEST LOCATION: 4-BM XFM  APPLICABLE DRAWING(S): ATTACHMENT
ATTACHMENT ON (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  X  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: 8/16/2016

OPERATIONS CONDUCTED (SELECT ALL THAT APPLY):

LEAK TEST  X  FLUSH  □  HYDROSTATIC PRESSURE TEST  □  PNEUMATIC PRESSURE TEST  X

OTHER □

IF 'OTHER' IS SELECTED, DESCRIBE THE OPERATION:

R. O'BRIEN 08/07/2015 REV A
LEAK TEST:

THIS SECTION TO BE COMPLETED BY COGNIZANT ENGINEER

TEST FLUID: AIR       FLUID TEMPERATURE: AMBIENT      FLUID PRESSURE: < 500 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:       DATE: 8/2/16

RECORD ACTUAL LEAK TEST DURATION HERE: 5 HR

NO LEAKAGE PRESENT ☐      SIGNATURE: mDille

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

SPECIFIED STARTING PRESSURE: 35 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 _______

<table>
<thead>
<tr>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
<th>SPECIFIED PRESSURE</th>
<th>ACTUAL PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>75</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>80</td>
<td>80</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>90</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRESSURE TEST ACCEPTABLE ☐  TECHNICIAN SIGNATURE/LIFE NUMBER: 25331

WITNESS SIGNATURE/LIFE NUMBER: 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 _______

<table>
<thead>
<tr>
<th>SPECIFIED</th>
<th>ACTUAL</th>
<th>VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. O’BRIEN 08/07/2015 REV A