# APPENDIX D

# CMS Performance Evaluation Test Report

# Unit 2 CMSPETP Sheets

UNIT #2

(CMS Task IC4042)

| | ANNUAL INSTRUMENTATION COMPLIANCE CHECKS | TAG # | DATE | NAME |
|---|---|---|---|---|
| 1 | CALIBRATE PCC TEMP. TRANSMITTER | TT-200A/B | 8-21-13 | BA/CE |
| 2 | CALIBRATE SCC TEMP. TRANSMITTER | TT-219A/B | 8-21-13 | BA/CE |
| 3 | CALIBRATE SDA INLET TEMP. TRANSMITTER | TT-223 | 8-21-13 | BA/CE |
| 4 | CALIBRATE SDA OUTLET TEMP. TRANSMITTER | TT-270 | 8-21-13 | BA/CE |
| 5 | CALIBRATE STACK FLOW TRANSMITTER | FT-283 | 8-21-13 | BB |
| 6 | CALIBRATE HIGH BTU FLOW TRANSMITTER | FT-215 | 8-22-13 | BB/DO |
| 7 | CALIBRATE LOW BTU FLOW TRANSMITTER | FT-216 | 8-15-13 | BB/BA |
| 8 | CALIBRATE CONCENTRATED LIME FLOW TRANSMITTER | FT-288 | 8-20-13 | BB/BA |
| 9 | CALIBRATE DIRECT FEED FLOW TRANSMITTER (HI BTU) | FT-215DI | N/A | by DM |
| 10 | CALIBRATE DIRECT FEED FLOW TRANSMITTER (LO BTU) | FT-216DI | N/A | by DM |
| 11 | Replace SDA Outlet Thermocouple. | TE-270 | 8-30-13 | BB |

COMMENTS :

APPROVED : Heather Kim

ANNUAL.2

9/29/1997 JB

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : TT
LOOP : 200A
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : LOWER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 2032
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 500° |
| 2000° | 2000° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : B. Adams Date : 8-21-13 Time : 3:51 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : TT
LOOP : 200B
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : LOWER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 2032
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 500° |
| 2000° | 2000° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Bill Adams Date : 8-21-13 Time : 3:54 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 219A | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | UPPER CHAMBER | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 2033 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 501° |
| 2000° | ~~2000~~ 2005° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : Bill Adams Date : 8-21-13 Time : 3:56 AM PM

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : TT
LOOP : 219B
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : UPPER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 2033
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 500° |
| 2000° | 2000° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Bill Allen Date : 8-21-13 Time : 3:55 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 223 | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | SDA INLET | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 2033 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 504° |
| 2000° | 2000° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : Bill Adams Date : 8-21-13 Time : 3:57 AM PM

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #2
## ANNUAL

TAG : TT
LOOP : 270
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : SDA OUTLET
LOCATION : FILED
LP-SHT :
P&ID : 2034
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 508° |
| 2000° | 1995° |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Bill Adams Date : 8-21-13 Time : 3:55 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #2
## ANNUAL

TAG : FT
LOOP : 283
DESCRIPON : STACK FLOW TRANSMITTER
SERVICE : STACK
LOCATION : FILED
LP-SHT :
P&ID : 2035
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : Rosemount
MODEL :
SCALE : 0-20,000 ACFM
CLAIB-IN : 0 - 0.5" WC
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP : Set Damp/Pot to mid point
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH INCLINE MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 4.11 mA |
| .5" W.C. | 19.89 mA |
| *After Calibration* | |
| 0 | 4.0 mA |
| .5 | 20.0 mA |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : B. B. Date : 8-21-13 Time : 1:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : FT
LOOP : 215
DESCRIPON : FLOW TRANSMITTER
SERVICE : HIGH BTU
LOCATION : FILED
LP-SHT :
P&ID : 2031
REMARKS : Changed Range 11/12/96
INSTAL-RMKS : SENSITIVITY 5.58
SPEC-RMKS : SW 1,2,3,4, OFF
S/N : 97193

MANUFACT : MICRO MOTION
MODEL : D 40S-SS
SCALE : 0 - 3600 lb/hr
CLAIB-IN :
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 15 lbs. per minute | 15.19 lbs |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/DO Date : 8-22-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : FT
LOOP : 216
DESCRIPON : FLOW TRANSMITTER
SERVICE : LOW BTU
LOCATION : FILED
LP-SHT :
P&ID : 2031
REMARKS : Changed Range 11/12/96
INSTAL-RMKS : SENSITIVITY 5.16
SPEC-RMKS : SW 1,3,4, OFF
S/N : 32936

MANUFACT : MICRO MOTION
MODEL : D 40S-SS
SCALE : 0 - 3600 lb/hr
CLAIB-IN :
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 20 lbs. per minute | 19.81 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-15-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**ANNUAL**

TAG : FT
LOOP : 288
DESCRIPON : FLOW TRANSMITTER
SERVICE : LIME SLURRY TO HEAD TANK
LOCATION : FILED
LP-SHT :
P&ID : 2034
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : E-H
MODEL :
SCALE : 0 - 20 GPM
CLAIB-IN :
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 2 gallons per minute | 2.0 gallons |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-20-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**(O/S) ANNUAL**

TAG : FT
LOOP : 215DI
DESCRIPON : FLOW TRANSMITTER
SERVICE : HIGH BTU DIRECT INJECT
LOCATION : FILED
LP-SHT :
P&ID :
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : E+H
MODEL :
SCALE : 0 - 60 #/MIN
CLAIB-IN :
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| _____ | _____ |
| _____ | _____ |
| *After Calibration* | |
| _____ | _____ |
| _____ | _____ |

## CALIBRATION SOURCE REFERENCE

Comments : Scale is calibrated by Accurate Superior.

Performed by : _____ Date : _____ Time : _____ AM PM

JB
CALSHEET.WDB

Place : _____
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**(O/S) ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 216DI | | |
| DESCRIPON : | FLOW TRANSMITTER | MANUFACT : | E+H |
| SERVICE : | LOW BTU DIRECT INJECT | MODEL : | |
| LOCATION : | FILED | SCALE : | 0 - 60 #/MIN |
| LP-SHT : | | CLAIB-IN : | |
| P&ID : | | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| _____ | _____ |
| _____ | _____ |
| *After Calibration* | |
| _____ | _____ |
| _____ | _____ |

## CALIBRATION SOURCE REFERENCE

Comments : Scale is calibrated by Accurate Superior

Performed by : _____ Date : _____ Time : _____ AM PM

JB
CALSHEET.WDB

Place : _____
*(Field or Shop)*

UNIT #2 (IC4040)



| QUARTERLY INSTRUMENTATION COMPLIANCE CHECKS | TAG # | DATE | NAME |
|---|---|---|---|
| 1 Check calibration stack O2 analyzer. | AT-289 | 8-6-13 | BB |
| 2 Check calibration stack Model51C HC Analyzer. | AT-288B | 8-6-13 | BB |
| 3 Check calibration stack Altech CO Analyzer. | AT-288B | out of service | |
| 4 Check calibration stack Altech HCL Analyzer. | AT-288B | out of service | |
| 5 Check calibration stack Opacity Meter. | AT-288B | 8-6-13 | BB |
| 6 Check calibration Specialty feed scale. | WT-204 | 8-6-13 | BB |
| 7 Check calibration Solids feed scale. | WT-210 | 8-6-13 | BB |
| 8 Check calibration of Fabric filter D/P Cell. | DPT-250 | 8-5-13 | BB |
| 9 Check calibration of PCC pressure xmitters. | PT-200 | 8-5-13 | BB |
| 10 Check calibration of SCC pressure xmitters. | PT-219 | 8-5-13 | BB |
| 11 Check calibration of Tribo.dgd, Baghouse Leak Detector. | | 8-6-13 | BB |

| QUARTERLY INSTRUMENTATION MAINTENANCE CHECKS | | | |
|---|---|---|---|
| A Check calibration of LEL Meter on Process floor and pipe tray | AT-227/A/B/C | 8-6-13 | BB/DO |
| B Inspect Stack Flow Element & Clean as needed. | FE-283 | 8-6-13 | BB |
| C Check Batteries for UPS & fill with water as needed. | | N/A | |

COMMENTS : _____

APPROVED : Haeleen Hein

QUARTER.2

10/14/04 JB

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | AT | | |
| LOOP : | 289 | | |
| DESCRIPON : | OXYGEN | MANUFACT : | COSA |
| SERVICE : | STACK GAS ANALYZER | MODEL : | |
| LOCATION : | STACK | SCALE : | 0-25% |
| LP-SHT : | | CALIB-OUT : | 4-20 mADC |
| P&ID : | 2035 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Flow calibration gas at 2-3 psig and 3 scfh

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 3.0 | 2.8 |
| 21.0 | 20.9 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

ZERO GAS CYL # : CC88062
SPAN GAS CYL # : CC121485

Comments : No calibration needed.

Performed by : Brian Bunfill Date : 8-6-13 Time : 8:05 (AM) PM

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

TAG : AT
LOOP : 288B
DESCRIPON : HC
SERVICE : STACK GAS ANALYZER
LOCATION : STACK
LP-SHT : 556
P&ID :
REMARKS :
INSTAL-RMKS :
S/N : 630 On MCS 100

MANUFACT : Thermo Elec. Co.
MODEL : 51C
SCALE : 0-100 PPM
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

1) Open sample gas bottle valves
2) Press Menu Button
3) Press CALIBRATION
4) Press ZERO ADJUST
5) Press SPAN ADJUST after 4) finished
6) Press RUN after 5) finished
7) Close sample gas bottles.
See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | -.12 |
| 75.7 | 78.9 |
| *After Calibration* | |
| 0 | 0 |
| 75.7 | 75.7 |

## CALIBRATION SOURCE REFERENCE

GAS CYL # : CC253230

Comments :

Performed by : Brian Bunfill Date : 8-6-13 Time : 8:10 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

TAG : AT
LOOP : 288B
DESCRIPON : OPACITY
SERVICE : STACK GAS
LOCATION : STACK
LP-SHT : 556
P&ID :
REMARKS :
INSTAL-RMKS : 2.00 to 5.70ma
S/N :

MANUFACT : TELEDYNE INST.
MODEL : LightHawk 560DI
SCALE : 0-100 %
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Clean windows

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| | |
| | |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : Calibrated per manufacturers guidelines

Performed by : Brian Bunfill Date : 8-6-13 Time : 11:00 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | WT | | |
| LOOP : | 204 | | |
| DESCRIPON : | WEIGHT TRANSMITTER | MANUFACT : | TOLEDO |
| SERVICE : | SPECIALTY FEEDER | MODEL : | 8140 EXP |
| LOCATION : | | SCALE : | 0-4,000 # |
| LP-SHT : | | CALIB-OUT : | 4-20 mADC |
| P&ID : | | PROCESS - SP : | 0#=819 cts |
| REMARKS : | | INST - SP : | 200#=983 cts |
| INSTAL-RMKS : | | ACTION : | 1#=.819 cts |
| S/N : | | I/O NUMBER : | 30052 |

## CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instruction. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 150 lbs. | 153 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed.

Performed by : Brian Bunfill Date : 8-6-13 Time : 1:30 AM (PM)

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

TAG : WT
LOOP : 210
DESCRIPON : WEIGHT TRANSMITTER
SERVICE : SOLID CHARG CONV.
LOCATION :
LP-SHT :
P&ID : 3031
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : TOLEDO
MODEL : 8140
SCALE : 0-400 #
CALIB-OUT : 4-20 mADC
PROCESS - SP : 0#=819 cts
INST - SP : 200#=2457 cts
ACTION : 1#=8.19 cts
I/O NUMBER : 30070

## CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instruction. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 lbs. | 50.13 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed.

Performed by : B. Bl Date : 8-6-13 Time : 1:45 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | PDT | | |
| LOOP : | 250 | | |
| DESCRIPON : | PRESSURE DIFF. TRANSMITTER | MANUFACT : | YOKOGAWA |
| SERVICE : | BAGHOUSE INLET/OUTLET | MODEL : | 0-15 inH2O |
| LOCATION : | FIELD | SCALE : | |
| LP-SHT : | | CALIB-OUT : | 4-20 mADC |
| P&ID : | 2035 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0" W.C. | 3.99 mA |
| 15" W.C. | 20.0 mA |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed

Performed by : Brian Bunfill Date : 8-5-13 Time : 4:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

TAG : PT
LOOP : 200
DESCRIPON : PRESSURE TRANSMITTER
SERVICE : LOW CHAMBER
LOCATION : FIELD
LP-SHT :
P&ID : 2032
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT :
MODEL :
SCALE : -7.5 to +2.5 in wc
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Connect transmitter to be calibrated to pressure source and calibrated reference (Manometer), input appropriate pressure and verify with current meter.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| -7.5" W.C. | 4.09mA |
| 2.5" W.C. | 20.04mA |
| *After Calibration* | |
| -7.5 | 4.0mA |
| 2.5 | 20.0mA |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Brian Bunfill Date : 8-5-13 Time : 3:30 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | PT | | |
| LOOP : | 219 | | |
| DESCRIPON : | PRESSURE TRANSMITTER | MANUFACT : | |
| SERVICE : | UPPER CHAMBER | MODEL : | -7.5 to +2.5 in wc |
| LOCATION : | FIELD | SCALE : | |
| LP-SHT : | | CALIB-OUT : | 4-20 mADC |
| P&ID : | 2033 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Connect transmitter to be calibrated to pressure source and calibrated reference (Manometer), input appropriate pressure and verify with current meter.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| -7.5" W.C. | 3.91mA |
| 2.5" W.C. | 19.94mA |
| *After Calibration* | |
| -7.5" | 4.0mA |
| 2.5" | 20.0mA |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : Brian Bunfill Date : 8-5-13 Time : 3:50 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | | | |
| LOOP : | | | |
| DESCRIPON : | Tribo | MANUFACT : | Auburn |
| SERVICE : | Baghouse leak Detection | MODEL : | TRIBO.dgd |
| LOCATION : | FIELD | SCALE : | 0-1000pa |
| LP-SHT : | | CALIB-OUT : | 4-20mA |
| P&ID : | | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Disconnect the input cable at the BNC connector on the input card, and check for zero Use Auburn, Triboflow, filed test unit, model 2902, to input a Pico-Amp signal of 500pa and record these values.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 1.87pA |
| 500pA | 507.63pA |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed

Performed by : Brian Bunfill Date : 8-6-13 Time : 10:45 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

TAG : AT
LOOP : 227A
DESCRIPON : COMBUSTION GAS ANALYZER
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS : Ceiling
INSTAL-RMKS :
S/N : 86817

MANUFACT : RKI INSTRUMENTS
MODEL : Pioneer 4W
SCALE :
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 | 50 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed

Performed by : BG/DO Date : 8-6-13 Time : 3:10 AM (PM)

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | AT | | |
| LOOP : | 227B | | |
| DESCRIPON : | COMBUSTION GAS ANALYZER | MANUFACT : | RKI INSTRUMENTS |
| SERVICE : | LEL METER | MODEL : | Pioneer 4W |
| LOCATION : | PRODUCTION FLOOR | SCALE : | |
| LP-SHT : | | CALIB-OUT : | |
| P&ID : | 3022 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | 86817 | I/O NUMBER : | |

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 | 80 |
| *After Calibration* | |
| 0 | 0 |
| 50 | 50 |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/DO Date : 8-6-13 Time : 3:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #2**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | AT | | |
| LOOP : | 227C | | |
| DESCRIPON : | COMBUSTION GAS ANALYZER | MANUFACT : | RKI INSTRUMENTS |
| SERVICE : | LEL METER | MODEL : | Pioneer 4W |
| LOCATION : | PRODUCTION FLOOR | SCALE : | |
| LP-SHT : | | CALIB-OUT : | |
| P&ID : | 3022 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | 86817 | I/O NUMBER : | |

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 4 |
| 50 | 48 |
| *After Calibration* | |
| 0 | 0 |
| 50 | 50 |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/DO Date : 8-6-13 Time : 2:45 AM (PM)

JB
CALSHEET.WDB

Place : (Field) or Shop)

BIWEEKLY UNIT #2 (CMS Task IC4039) PAGE 1 OF 2
COMPLIANCE CHECK SHEET

| | | OPERATING PARAMETERS | PLC COIL | BW COIL | PASS | FAIL |
|---|---|---|---|---|---|---|
| 1 | OCL | TRV POSITION (OPEN) | 01602 | 00401 | ✓ | |
| 2 | OCL | UPPER CHAMBER TEMP. 1 min avg. | 01603 | 00402 | ✓ | |
| 3 | OCL | HI BTU lbs/hr Max | 01604 | 00403 | ✓ | |
| 4 | OCL | LOWER CHAMBER TEMP. 1 min avg. | 01605 | 00404 | ✓ | |
| 5 | OCL | LO BTU lbs/hr Max | 01606 | 00405 | ✓ | |
| 6 | OCL | FLUE GAS HCL, 1 hr. rolling avg. | 01607 | 00406 | ✓ | |
| 7 | OCL | FLUE GAS CO, 1 hr. rolling avg. | 01608 | 00407 | ✓ | |
| 8 | OCL | FLUE GAS OPACITY, high for 480 sec./hr. avg. | 01609 | 00408 | ✓ | |
| 9 | OCL | FLUE GAS OPACITY, high instantaneous | 01610 | 00409 | ✓ | |
| 10 | OCL | FLUE GAS FLOW RATE, high 1 min. avg | 01611 | 00410 | ✓ | |
| 11 | OCL | HEAT INPUT high mbtu/hr | 01613 | 00411 | ✓ | |
| 12 | OCL | CHLORINE INPUT, high lbs/hr | 01614 | 00412 | ✓ | |
| 13 | OCL | SOLID FEED, high lbs/hr Max. | 01526 | 00413 | ✓ | |
| 14 | OCL | UPPER CHAMBER TEMP. low 1 hr rolling avg. | 01538 | 00414 | ✓ | |
| 15 | OCL | SPECIALITY FEEDED high lbs/hr Max. | 01516 | 00415 | ✓ | |
| 17 | AWFC | SDA OUTLET TEMP. high1 min. avg. | 01591 | 00417 | ✓ | |
| 18 | AWFC | BAG HOUSE DIFF.PR. DROP. Low 1 min. avg. | 01593 | 00418 | ✓ | |
| 19 | AWFC | FLUE GAS CO, high 1 min. avg. | 01594 | 00419 | ✓ | |
| 20 | AWFC | FLUE GAS O2, low 1 min. avg. | 01596 | 00420 | ✓ | |
| 21 | AWFC | FLUE GAS HC, high 1 min. avg. | 01597 | 00421 | ✓ | |
| 22 | AWFC | FLUE GAS HCL, high 1 min. avg. | 01598 | 00422 | ✓ | |
| 23 | AWFC | FLUE GAS FLOW RATE, high inst. | 01599 | 00423 | ✓ | |
| 24 | AWFC | FLUE GAS OPACITY, high 1 min. avg. | 01601 | 00424 | ✓ | |
| 25 | AWFC | LOW CHAMBER TEMP., low 1 hr. avg. | 01586 | 00425 | ✓ | |
| 26 | AWFC | LOWER CHAMBER PRESS, high for 5 secs. | 01588 | 00426 | ✓ | |
| 27 | AWFC | UPPER CHAMBER PRESS, high for 5 secs. | 01589 | 00427 | ✓ | |
| 28 | AWFC | FAILER OF PROCESS MONITOR | 01527 | 00428 | ✓ | |
| 29 | AWFC | ID FAN FAILURE or high high vibration for 5 min. | 01625 | 00429 | ✓ | |
| 30 | AWFC | Upper or Lower Chamber Temp. high | 01600 | 00430 | ✓ | |
| 32 | MWFC | ALL WASTE FEED OFF FROM FIX (manually shut off) | 01740 | 00432 | ✓ | |
| 35 | MWFC | FLUE GAS HCL, high 1 min. avg. | 01592 | 00435 | ✓ | |
| 36 | MWFC | HEAT INPUT high anticipated | 01622 | 00436 | ✓ | |
| 37 | MWFC | CHLORINE INPUT, high lbs/hr | 01623 | 00437 | ✓ | |
| 38 | MWFC | E-STOPS or T/C MODULE inactive | 01615 | 00438 | ✓ | |
| 39 | MWFC | FLUE GAS CO, high 1 hr. avg. | 01595 | 00439 | ✓ | |
| 40 | MWFC | ATOMIZER high high vibration for 5 sec. | 01624 | 00440 | ✓ | |
| 41 | SWFC | SPEC. FEED lbs/hr high | 01576 | 00441 | ✓ | |

BIWEEKLY UNIT #2 (CMS Task IC4039) PAGE 2 OF 2

COMPLIANCE CHECK SHEET

| | | OPERATING PARAMETERS | PLC COIL | BW COIL | PASS | FAIL |
|---|---|---|---|---|---|---|
| 42 | SWFC | HIBTU lbs/hr high | 01578 | 00442 | ✓ | |
| 43 | SWFC | LOBTU lbs/hr high | 01580 | 00443 | ✓ | |
| 45 | SWFC | HIBTU loss of signal | 03019 | 00445 | ✓ | |
| 46 | SWFC | LOBTU loss of signal | 03020 | 00446 | ✓ | |
| 47 | SWFC | SPECIALITY FEED/COMPRESSED GAS FEED loss of signal | 03021 | 00447 | ✓ | |
| 48 | MWFC | NORTH & SOUTH IPS ALARMS FAILED | 05703 | 00448 | ✓ | |
| 49 | SWFC | UPPER CHAMBER SECONDARY FUEL loss of signal | 03022 | 00449 | ✓ | |
| 50 | MWFC | NORTH & SOUTH IPS SERVERSFAILED | 05705 | 00450 | ✓ | |
| 51 | SWFC | DIRECT INJECT (common alarm) | 03132 | 00451 | ✓ | |
| 52 | OPL | Bag Leak Detection System (Tribo) | | | ✓ | |
| 65 | OPL | Pumpable 1 Hour Rolling Total OPL | 08205 | 04113 | ✓ | |
| 66 | OPL | Non-Pumpable 1 Hour Rolling Total OPL | 08206 | 04114 | ✓ | |
| 67 | OPL | Total waste 1 Hour Rolling Total OPL | 08208 | 04115 | ✓ | |
| 68 | OPL | CL 12 Hour Rolling Total OPL | 08211 | 04116 | ✓ | |
| 69 | OPL | Low Volatile 12 Hour Rolling Total OPL | 08214 | 04117 | ✓ | |
| 70 | OPL | Semi Volatile 12 Hour Rolling Total OPL | 08216 | 04118 | ✓ | |
| 71 | OPL | Mercury 12 Hour Rolling Total OPL | 08218 | 04119 | ✓ | |
| 72 | OPL | Ash 12 Hour Rolling Total OPL | 08220 | 04120 | ✓ | |
| 73 | OPL | PCC Temperature 1 Hour Rolling Average Low OPL | 08222 | 04121 | ✓ | |
| 74 | OPL | SCC Temperature 1 Hour Rolling Average Low OPL | 08224 | 04122 | ✓ | |
| 75 | OPL | SDA Outlet Temperature 1 Hour Rolling Average High OPL | 08226 | 04123 | ✓ | |
| 76 | OPL | Baghouse Differential Pressure 1 Minute Average Low OPL | 08227 | 04124 | ✓ | |
| 77 | OPL | Baghouse Differential Pressure 1 Minute Average High OPL | 08228 | 04125 | ✓ | |
| 78 | OPL | Stack HCL Corrected 1 Hour Rolling Average High OPL | 08232 | 04126 | ✓ | |
| 79 | OPL | Stack CO Corrected 1 Hour Rolling Average High OPL | 08236 | 04127 | ✓ | |
| 80 | OPL | Stack Flow 1 Hour Rolling Average High OPL | 08244 | 04128 | ✓ | |
| 81 | OPL | BTU 1 Hour Total OPL | 08209 | 04129 | ✓ | |
| 82 | OPL | Hrt Cl/Hra Lime Flow 1 Minute Average High OPL | 08251 | 04130 | ✓ | |
| 83 | AWFC | Lime Slurry Density 1 Hour Rolling Average Low | 08156 | 04132 | ✓ | |
| 84 | | WILL NOT ACCEPT SOLID CHARGES >750 KBTU/CHARGE | | | ✓ | |
| 85 | | Hi/DI Atomizing Air Low pressure alarm (Manual Check) | | | ✓ | |
| 86 | | Lo/DI Atomizing Air Low pressure alarm (Manual Check) | | | ✓ | |
| 87 | | Specialty Feeder Atomizing Air Low Pressure alarm (Manual check) | | | ✓ | |

OCL =CONDITION LIMIT
AWFC =AUTOMATIC WASTE FEED CUTOFF
MWFC =MISC WASTE FEED CUTOFF
SWFC =SPECIFIC WASTE FEED CUTOFF

Comments _____

CHECKED BY : [signature] DATE : 10-2-13 TIME : 7:45 (AM) PM

APPROVED : [signature] PLACE : Control Room

BIWEEKLY_2
4/4/07 HK

8-14-13 UNIT 2 DI SCALE CALIBRATION

5404 Jedmed Ct. - St. Louis, MO 63129
Business: (314) 845-7778 - Fax: (314) 845-7779

ACCURATE SUPERIOR SCALE

ISO/IEC 17025:2005

## Scale Inspection Report

Dan Mate 8/14/13

Customer: VEOLIA ENVIRONMENTAL SERVICES
#7 MOBILE AVENUE
SAUGET, IL 62201

escription: Class III L
Serial No: 011150
Scale No: 2
Divisions: 5LB

Location: Direct Injection
MFG / Model: WI130

Scale Type: VEHICLE
Capacity: 60000LB

Scale was found in Tolerance: [X] yes [ ] no

| Shift Test Sides / Corners / Sections | Weights Applied | Scale Reading (As found) | Error (+/-) | Tolerance Maintenance | Scale Reading After Adjustment (As Left) | Accept / Reject |
|---|---|---|---|---|---|---|
| Section 1 | 21,000 lb | 21,020 lb | +20 lb | +/- 45 lb | | ACCEPT |
| ~~Section 2~~ | ~~21,000 lb~~ | ~~21,015 lb~~ | ~~+15 lb~~ | ~~+/- 45 lb~~ | | ~~ACCEPT~~ |
| Section 3 | 21,000 lb | 21,020 lb | +20 lb | +/- 45 lb | | ACCEPT |
| Section 4 | 21,000 lb | 21,020 lb | +20 lb | +/- 45 lb | | ACCEPT |
| Section 5 | 21,000 lb | 21,015 lb | +15 lb | +/- 45 lb | | ACCEPT |
| Section 6 | 21,000 lb | 21,020 lb | +20 lb | +/- 45 lb | | ACCEPT |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Buildup Weight | Weights Applied | Scale Reading (As found) | Error (+/-) | Tolerance Maintenance | Scale Reading After Adjustment (As Left) | Accept / Reject |
|---|---|---|---|---|---|---|
| Section 4 | 3,000 lb | 3,000 lb | +0 lb | +/- 10 lb | | ACCEPT |
| | 6,000 lb | 6,000 lb | +0 lb | +/- 15 lb | | ACCEPT |
| | 9,000 lb | 9,000 lb | +0 lb | +/- 20 lb | | ACCEPT |
| | 12,000 lb | 12,000 lb | +0 lb | +/- 25 lb | | ACCEPT |
| | 15,000 lb | 15,005 lb | +5 lb | +/- 30 lb | | ACCEPT |
| | 18,000 lb | 18,015 lb | +15 lb | +/- 40 lb | | ACCEPT |
| Section 4 | 21,000 lb | 21,020 lb | +20 lb | +/- 45 lb | | ACCEPT |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Test Procedure follows QSP-09-002

Traceable to SI through NIST #: MO: 822/259883-98 39598 822/274998-07
Rice Lake: 822/278785-10 681/280058-10

ORIGINAL → Records Room
Copy → M. ELBL
→ D. MATHESIUS
→ D KLARICH

Cal Date: 08/14/2013 Next Cal due: 10/31/2013

Calibration Dates: JAN APR JUL OCT

Service Technician Registration #: 0195IL/30026MO

Calibrated By Service Technician: Jim Koerkenmeier

Job Queue#: LT224713

Report ID: 68963385

Uncertainty of Measurement provided on request

FOR CUSTOMER USE ONLY

Reviewed By _____ Date Reviewed _____

# Unit 3 CMSPETP Sheets

UNIT #3 (CMS Task IC4042)

| | ANNUAL INSTRUMENTATION COMPLIANCE CHECKS | TAG # | DATE | NAME |
|---|---|---|---|---|
| 1 | CALIBRATE PCC TEMP. TRANSMITTER | TT-300A/B | 8-14-13 | BB/BA |
| 2 | CALIBRATE SCC TEMP. TRANSMITTER | TT-319A/B | 8-14-13 | BB/BA |
| 3 | CALIBRATE SDA INLET TEMP. TRANSMITTER | TT-323 | 8-14-13 | BB/BA |
| 4 | CALIBRATE SDA OUTLET TEMP. TRANSMITTER | TT-370 | 8-14-13 | BB/BA |
| 5 | CALIBRATE STACK FLOW TRANSMITTER | FT-383 | 8-21-13 | BB |
| 6 | CALIBRATE HIGH BTU FLOW TRANSMITTER | FT-315 | 8-14-13 | BB/BA/D |
| 7 | CALIBRATE LOW BTU FLOW TRANSMITTER | FT-316 | 8-14-13 | BB/BA/DO |
| 8 | CALIBRATE CONCENTRATED LIME FLOW TRANSMITTER | FT-388 | 8-14-13 | BB/BA |
| 9 | CALIBRATE DIRECT FEED FLOW TRANSMITTER (HI BTU) | FT-315DI | N/A | by DM |
| 10 | CALIBRATE DIRECT FEED FLOW TRANSMITTER (LO BTU) | FT-316DI | N/A | by DM |
| 11 | Replace SDA Outlet Thermocouple. | TE-370 | 9-2-13 | BB |

COMMENTS : _____

_____

APPROVED : _____

ANNUAL.2

9/29/1997 JB

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #3
## ANNUAL

TAG : TT
LOOP : 300A
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : LOWER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 3032
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° F | 519 |
| 2000° F | 2021 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

TAG : TT
LOOP : 300B
DESCRIPON : PLC THERMOCOUPLE INPUT
SERVICE : LOWER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 3032
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MODICON
MODEL : B883-200
SCALE : 0-2500 deg. F.
CLAIB-IN : TYPE K
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500°F | 518 |
| 2000°F | 2019 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 319A | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | UPPER CHAMBER | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 3033 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500°F | 512 |
| 2000°F | 2014 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 319B | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | UPPER CHAMBER | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 3033 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500°F | 514 |
| 2000°F | 2017 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 323 | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | SDA INLET | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 3033 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500°F | 513 |
| 2000°F | 2016 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 370 | | |
| DESCRIPON : | PLC THERMOCOUPLE INPUT | MANUFACT : | MODICON |
| SERVICE : | SDA OUTLET | MODEL : | B883-200 |
| LOCATION : | FILED | SCALE : | 0-2500 deg. F. |
| LP-SHT : | | CLAIB-IN : | TYPE K |
| P&ID : | 3034 | CALIB-OUT : | |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a type K temperature signal of 500 deg F. and 2,000 deg F. at input of PLC, then verify this single on the control panel CRT.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° F | 502 |
| 2000° F | 2001 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA Date : 8-14-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 383 | | |
| DESCRIPON : | STACK FLOW TRANSMITTER | MANUFACT : | Rosemount |
| SERVICE : | STACK | MODEL : | |
| LOCATION : | FILED | SCALE : | 0-20,000 ACFM |
| LP-SHT : | | CLAIB-IN : | 0 - 0.5" WC |
| P&ID : | 3035 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | Set Damp/Pot to mid point |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH INCLINE MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 3.93mA |
| .5" W.C. | 19.79mA |
| *After Calibration* | |
| 0 | 4.0mA |
| .5" W.C. | 20.0mA |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : B Bu Date : 8-21-13 Time : 1:15 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 315 | | |
| DESCRIPON : | FLOW TRANSMITTER | MANUFACT : | MICRO MOTION |
| SERVICE : | HIGH BTU | MODEL : | DS-040S119SU |
| LOCATION : | FILED | SCALE : | 0 - 3,600 LB/HR |
| LP-SHT : | | CLAIB-IN : | |
| P&ID : | 3031 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | Flow Cal. *11464128834.26 | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | 238615 | I/O NUMBER : | 30001 |

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 20 lbs. per minute | 20.22 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA/DO Date : 8-14-13 Time : 3:00 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 316 | | |
| DESCRIPON : | FLOW TRANSMITTER | MANUFACT : | MICRO MOTION |
| SERVICE : | LOW BTU | MODEL : | DS-040 |
| LOCATION : | FILED | SCALE : | 0 - 3,600 lb/hr |
| LP-SHT : | | CLAIB-IN : | |
| P&ID : | 3031 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | 30002 |

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 15 lbs. per minute | 15.15 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA/DO Date : 8-14-13 Time : 2:15 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 388 | | |
| DESCRIPON : | FLOW TRANSMITTER | MANUFACT : | E-H |
| SERVICE : | LIME SLURRY TO HEAD TANK | MODEL : | |
| LOCATION : | FILED | SCALE : | 0 - 20 GPM |
| LP-SHT : | | CLAIB-IN : | |
| P&ID : | 3034 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | | PROCESS - SP : | |
| INSTAL-RMKS : | | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

ESTABLISH UNIFORM FLOW INTO CONTAINER, READ TOTALIZER, FLOW FLUID INTO GRADUATED CONTAINER AND VERIFY WITH TOTALIZER

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 2.0 gallons per minute | 2.0 gallons |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/BA Date : 8-14-13 Time : 3:30 AM (PM)

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

UNIT #3 (IC4041)



| QUARTERLY INSTRUMENTATION COMPLIANCE CHECKS | TAG # | DATE | NAME |
|---|---|---|---|
| 1 Check calibration stack O2 analyzer. | AT-389 | 8-8-13 | BN |
| 2 Check calibration stack Model51C HC Analyzer. | AT-388B | 8-8-13 | BN |
| 3 Check calibration stack Altech CO Analyzer. | AT-388B | Out of Service | |
| 4 Check calibration stack Altech HCL Analyzer. | AT-388B | Out of Service | |
| 5 Check calibration stack Opacity Meter. | AT-388B | 8-8-13 | BB |
| 6 Check calibration Specialty feed scale. | WT-304 | 8-8-13 | BB |
| 7 Check calibration Solids feed scale. | WT-310 | 8-8-13 | BB |
| 8 Check calibration of Fabric filter D/P Cell. | DPT-350 | 8-6-13 | BB |
| 9 Check calibration of PCC pressure xmitters. | PT-300 | 8-6-13 | BB |
| 10 Check calibration of SCC pressure xmitters. | PT-319 | 8-6-13 | BB |
| 11 Check calibration of Tribo.dgd, Baghouse Leak Detector. | | 8-8-13 | BN |

| QUARTERLY INSTRUMENTATION MAINTENANCE CHECKS | | | |
|---|---|---|---|
| A Check calibration of LEL Meter on Process floor. | AT-327A/B/C | 8-8-13 | BB/BA |
| B Inspect Stack Flow Element & Clean as needed. | FE-383 | 8-8-13 | BN |

COMMENTS :

APPROVED : Hae Lee Kim

QUARTER.3

10/14/04 JB

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #3
## QUARTERLY

TAG : AT
LOOP : 389
DESCRIPON : OXYGEN
SERVICE : STACK GAS ANALYZER
LOCATION : STACK
LP-SHT :
P&ID : 3035
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : COSA
MODEL :
SCALE : 0-25%
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flow calibration gas at 2-3 psig and 3 scfh

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 3.0 | 2.9 |
| 21.0 | 20.9 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

ZERO GAS CYL # : CC99708
SPAN GAS CYL # : CC154816

Comments :

Performed by : Bill Adam Date : 8-8-13 Time : 8:30 (AM) PM

Place : (Field or Shop)

JB
CALSHEET.WDB

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #3
## QUARTERLY

TAG : AT
LOOP : 388B
DESCRIPON : HC
SERVICE : STACK GAS ANALYZER
LOCATION : STACK
LP-SHT : 556
P&ID :
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : Thermo Elec. Co.
MODEL : 51C
SCALE : 0-100 PPM
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

1) Open sample gas bottle valves
2) Press Menu Button
3) Press CALIBRATION
4) Press ZERO ADJUST
5) Press SPAN ADJUST after 4) finished
6) Press RUN after 5) finished
7) Close sample gas bottles.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 PPM | 0 PPM |
| ~~76.8~~ 76.2 wkk | 76.2 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

GAS CYL # : EB0047109

Comments :

Performed by : BM Ade Date : 8813 Time : 1015 ~~AM~~ PM

Place : (Field or Shop)

JB
CALSHEET.WDB

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : AT
LOOP : 388B
DESCRIPON : OPACITY
SERVICE : STACK GAS
LOCATION : STACK
LP-SHT : 556
P&ID :

MANUFACT : TELEDYNE INST.
MODEL : LightHawk 560DI
SCALE : 0-100 %
CALIB-OUT : 4-20 mADC
PROCESS - SP :

REMARKS :
INSTAL-RMKS : 2.00 to 5.72ma
S/N :

INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Clean windows

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0% | 0% |
| 100% | 100% |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : Calibration to Factory Spec

Performed by : Bala Date : 8-8-23 Time : 10AM AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : WT
LOOP : 304
DESCRIPON : WEIGHT TRANSMITTER
SERVICE : SPECIALTY FEEDER (HOODED)
LOCATION :
LP-SHT :
P&ID :
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : TOLEDO
MODEL : 8140 EXP
SCALE : 0-2,000 #
CALIB-OUT : 4-20 mADC
PROCESS - SP : 0#=819 cts
INST - SP : 200#=1147 cts
ACTION : 1#=1.638 cts
I/O NUMBER : 30012

## CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instruction. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 150 lbs. | 152 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed.

Performed by : Brian Bunfill Date : 8-8-13 Time : 11:40 AM PM

Place : (Field or Shop)

JB
CALSHEET.WDB

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : WT
LOOP : 310
DESCRIPON : WEIGHT TRANSMITTER
SERVICE : SOLID CHARG CONV.
LOCATION : FIELD
LP-SHT :
P&ID : 3031
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : TOLEDO
MODEL : 8140
SCALE : 0-400 #
CALIB-OUT : 4-20 mADC
PROCESS - SP : 0#=819 cts
INST - SP : 200#=2457 cts
ACTION : 1#=8.19 cts
I/O NUMBER : 30022

## CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instruction. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 lbs. | 49.31 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No calibration needed.

Performed by : [signature] Date : 8-8-13 Time : 11:15 (AM) PM

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : PDT
LOOP : 350
DESCRIPON : PRESSURE DIFF. TRANSMITTER
SERVICE : BAGHOUSE INLET/OUTLET
LOCATION : FIELD
LP-SHT :
P&ID : 3035
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : YOKOGAWA
MODEL : 0-15 inH2O
SCALE :
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 4.05mA |
| 15" W.C. | 20.13mA |
| *After Calibration* | |
| 0 | 4.0 mA |
| 15" W.C. | 20.0mA |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : [signature] Date : 8-6-13 Time : 4:20 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : PT
LOOP : 300
DESCRIPON : PRESSURE TRANSMITTER
SERVICE : LOW CHAMBER
LOCATION : FIELD
LP-SHT :
P&ID : 3032
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : Rosement
MODEL : 1151 DP
SCALE : -7.5 to +2.5 in wc
CALIB-OUT : 4-20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Connect transmitter to be calibrated to pressure source and calibrated reference (Manometer), input appropriate pressure and verify with current meter.

Complete and affix a properly filled-out calibration sticker.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| -7.5" W.C. | 4.06mA |
| 2.5" W.C. | 20.11mA |
| *After Calibration* | |
| -7.5" | 4.0 mA |
| 2.5" | 20.0 mA |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Brian Bunfill Date : 8-6-13 Time : 3:50 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

| | | | |
|---|---|---|---|
| TAG : | PT | | |
| LOOP : | 319 | | |
| DESCRIPON : | PRESSURE TRANSMITTER | MANUFACT : | |
| SERVICE : | UPPER CHAMBER | MODEL : | -7.5 to +2.5 in wc |
| LOCATION : | FIELD | SCALE : | |
| LP-SHT : | | CALIB-OUT : | 4-20 mADC |
| P&ID : | 3033 | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

Connect transmitter to be calibrated to pressure source and calibrated reference (Manometer), input appropriate pressure and verify with current meter.

Complete and affix a properly filled-out calibration sticker.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| -7.5" W.C. | 4.16mA |
| 2.5" W.C. | 20.08mA |
| *After Calibration* | |
| -7.5" | 4.0mA |
| 2.5" | 20.0mA |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : Brian Bunfill Date : 8-6-13 Time : 4:10 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**QUARTERLY**

TAG :
LOOP : 550A
DESCRIPON : Tribo
SERVICE : Baghouse leak Detection
LOCATION : FIELD
LP-SHT :
P&ID :

MANUFACT : Auburn
MODEL : TRIBO.dgd
SCALE : 0-1000pa
CALIB-IN : 0-1000pa
CALIB-OUT : 4-20mA

REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Disconnect the input cable at the BNC connector on the input card, and check for zero Use Auburn, Triboflow, filed test unit, model 2902, to input a Pico-Amp signal of 500pa and record these values.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 PA | 0 PA |
| 500 PA | 500 PA |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BM Aich Date : 8.8.13 Time : 9:30 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : AT
LOOP : 327A
DESCRIPON : COMBUSTION GAS ANALYZER
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS : CHARGE BOX
INSTAL-RMKS :
S/N : 88118

MANUFACT : RKI INSTRUMENTS
MODEL : Pioneer 4W
SCALE :
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 | 42 |
| *After Calibration* | |
| 0 | 0 |
| 50 | 50 |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-8-13 Time : 11:50 (AM) PM

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : AT
LOOP : 327B
DESCRIPON : COMBUSTION GAS ANALYZER
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS :
INSTAL-RMKS :
S/N : 88118

MANUFACT : RKI INSTRUMENTS
MODEL : Pioneer 4W
SCALE :
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 2 |
| 50 | 38 |
| *After Calibration* | |
| 0 | 0 |
| 50 | 50 |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-8-13 Time : 11:55 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #3**
**QUARTERLY**

TAG : AT
LOOP : 327C
DESCRIPON : COMBUSTION GAS ANALYZER
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS :
INSTAL-RMKS :
S/N : 88118

MANUFACT : RKI INSTRUMENTS
MODEL : Pioneer 4W
SCALE :
CALIB-OUT :
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. To equal value of span gas. Check to see that alarm set point is set to 10%.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 50 | 40 |
| *After Calibration* | |
| 0 | 0 |
| 50 | 50 |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/BA Date : 8-8-13 Time : 11:55 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

BIWEEKLY UNIT #3 (CMS Task IC4039) PAGE 1 OF 2

COMPLIANCE CHECK SHEET

| | | OPERATING PARAMETERS | | PLC COIL | BW COIL | PASS | FAIL |
|---|---|---|---|---|---|---|---|
| 1 | OCL | TRV POSITION | Cap Open | 00791 | 00401 | ✓ | |
| 2 | OCL | UPPER CHAMBER TEMP. | <1794 for 1MIN AVG | 00867 | 00402 | ✓ | |
| 3 | OCL | HI BTU #/HR MAX | =>828 #/HR | 00964 | 00403 | ✓ | |
| 4 | OCL | LOWER CHAMBER TEMP. | <1590 for 1MIN AVG | 00869 | 00404 | ✓ | |
| 5 | OCL | LO BTU #/HR MAX | =.1822 #/HR | 00966 | 00405 | ✓ | |
| 6 | OCL | FLUE GAS HCL | >100 PPM 1HR Rolling avg. | 00871 | 00406 | ✓ | |
| 7 | OCL | FLUE GAS CO | >100 PPM 1HR Rolling avg. | 00872 | 00407 | ✓ | |
| 8 | OCL | FLUE GAS OPACITY | =>30% for 480 Sec./Hr. | 00873 | 00408 | ✓ | |
| 9 | OCL | FLUE GAS OPACITY | =>60% instantaneous | 00874 | 00409 | ✓ | |
| 10 | OCL | FLUE GAS FLOW RATE | >17, 198 ACFM for >1 MIN. | 00875 | 00410 | ✓ | |
| 11 | OCL | HEAT INPUT | =>16 MBTU/HR | 00865 | 00411 | ✓ | |
| 12 | OCL | CHLORINE INPUT | >217 lbs/HR | 00866 | 00412 | ✓ | |
| 13 | OCL | SOLID FEED #/HR MAX | =>1041 #/HR | 00960 | 00413 | ✓ | |
| 14 | OCL | UPPER CHAMBER TEMP. | <1845 DEGF HR ROLLING AVG | 00883 | 00414 | ✓ | |
| 15 | OCL | SPECIALITY FEEDED #/HR MAX | =>508 #/HR | 00962 | 00415 | ✓ | |
| 17 | AWFC | SDA OUTLET TEMP. | >500 deg. F 1MIN avg. | 00887 | 00417 | ✓ | |
| 18 | AWFC | BAG HOUSE DIFF.PR. DROP. | =<2"WC OR =>10"WC 1MIN avg. | 00889 | 00418 | ✓ | |
| 19 | AWFC | FLUE GAS CO | =>500 PPM 1MIN avg. | 00890 | 00419 | ✓ | |
| 20 | AWFC | FLUE GAS O2 | =<3% 1MIN avg. | 00892 | 00420 | ✓ | |
| 21 | AWFC | FLUE GAS HC | =>10 PPM 1MIN avg. | 00893 | 00421 | ✓ | |
| 22 | AWFC | FLUE GAS HCL | =>500 PPM 1MIN avg. | 00894 | 00422 | ✓ | |
| 23 | AWFC | FLUE GAS FLOW RATE | =>, 720 ACFM inst. | 00895 | 00423 | ✓ | |
| 24 | AWFC | FLUE GAS OPACITY | =>10% 1MIN avg. | 00897 | 00424 | ✓ | |
| 25 | AWFC | LOW CHAMBER TEMP. | <1617 deg. F 1HR rolling avg. | 00882 | 00425 | ✓ | |
| 26 | AWFC | LOWER CHAMBER PRESS | =>-.1" wc for 5 secs | 00884 | 00426 | ✓ | |
| 27 | AWFC | UPPER CHAMBER PRESS | =>-.1" wc for 5 secs | 00885 | 00427 | ✓ | |
| 28 | AWFC | FAILER OF PROCESS MONITOR | LOSS OF SIGNAL | 00864 | 00428 | ✓ | |
| 29 | AWFC | ID FAN FAILURE | LOSS OF ID FAN M CONTACT OR VIB >5 MIN | 00863 | 00429 | ✓ | |
| 30 | AWFC | UC/LC TEMPS. | TEMPERATURE > 2400 DEG. F | 01600 | 00430 | ✓ | |
| 32 | MWFC | ALL WASTE FEED OFF FROM FIX | WF SHUTDOWN MANUALLY FROM FIX | 00680 | 00432 | ✓ | |
| 35 | MWFC | FLUE GAS HCL | =>50 PPM 1HR rolling avg. | 00878 | 00435 | ✓ | |
| 36 | MWFC | HEAT INPUT | =>15.5 MBTU/HR anticipated | 00880 | 00436 | ✓ | |
| 37 | MWFC | CHLORINE INPUT | =>233 lbs/HR | 00881 | 00437 | ✓ | |
| 38 | MWFC | E-STOPS or T/C MODULE | E-STOP & T/C MODULE inactive | 00899 | 00438 | ✓ | |
| 39 | MWFC | FLUE GAS CO | =>50 PPM 1HR rolling avg. | 00891 | 00439 | ✓ | |
| 40 | MWFC | ATOMIZER | HI-HI Vibration sw. >5 minutes | 00862 | 00440 | ✓ | |
| 41 | SWFC | SPEC. FEED | =>724#/HR EXCEEDED | 00963 | 00441 | ✓ | |

BIWEEKLY UNIT #3
COMPLIANCE CHECK SHEET

| | | OPERATING PARAMETERS | | PLC COIL | BW COIL | PASS | FAIL |
|---|---|---|---|---|---|---|---|
| 42 | SWFC | HIBTU | =>2012#/HR EXCEEDED | 00965 | 00442 | ✓ | |
| 43 | SWFC | LOBTU | =>1993#/HR EXCEEDED | 00967 | 00443 | ✓ | |
| 45 | SWFC | HIBTU (see note 1) | LOSS OF SIGNAL | 03019 | 00445 | ✓ | |
| 46 | SWFC | LOBTU (see note 1) | LOSS OF SIGNAL | 03020 | 00446 | ✓ | |
| 47 | SWFC | SPECIALITY FEED | LOSS OF SIGNAL | 03021 | 00447 | ✓ | |
| 48 | MWFC | NORTH & SOUTH IPS ALARMS FAILED | COMMUNICATION'S TIMED OUT FOR BOTH | 05703 | 00448 | ✓ | |
| 50 | MWFC | NORTH & SOUTH IPS SERVERS FAILED | COMMUNICATION'S TIMED OUT FOR BOTH | 05705 | 00450 | ✓ | |
| 51 | SWFC | DIRECT INJECT | COMMON ALARM | 03132 | 00451 | ✓ | |
| 52 | OPL | Bag Leak Detection System (Tribo) | | | | ✓ | |
| 65 | OPL | Pumpable 1 Hour Rolling Total OPL | | 08205 | 04113 | ✓ | |
| 66 | OPL | Non-Pumpable 1 Hour Rolling Total OPL | | 08206 | 04114 | ✓ | |
| 67 | OPL | Total waste 1 Hour Rolling Total OPL | | 08208 | 04115 | ✓ | |
| 68 | OPL | CL 12 Hour Rolling Total OPL | | 08211 | 04116 | ✓ | |
| 69 | OPL | Low Volatile 12 Hour Rolling Total OPL | | 08214 | 04117 | ✓ | |
| 70 | OPL | Semi Volatile 12 Hour Rolling Total OPL | | 08216 | 04118 | ✓ | |
| 71 | OPL | Mercury 12 Hour Rolling Total OPL | | 08218 | 04119 | ✓ | |
| 72 | OPL | Ash 12 Hour Rolling Total OPL | | 08220 | 04120 | ✓ | |
| 73 | OPL | PCC Temperature 1 Hour Rolling Average Low OPL | | 08222 | 04121 | ✓ | |
| 74 | OPL | SCC Temperature 1 Hour Rolling Average Low OPL | | 08224 | 04122 | ✓ | |
| 75 | OPL | SDA Outlet Temperature 1 Hour Rolling Average High OPL | | 08226 | 04123 | ✓ | |
| 76 | OPL | Baghouse Differential Pressure 1 Minute Average Low OPL | | 08227 | 04124 | ✓ | |
| 77 | OPL | Baghouse Differential Pressure 1 Minute Average High OPL | | 08228 | 04125 | ✓ | |
| 78 | OPL | Stack HCL Corrected 1 Hour Rolling Average High OPL | | 08232 | 04126 | ✓ | |
| 79 | OPL | Stack CO Corrected 1 Hour Rolling Average High OPL | | 08236 | 04127 | ✓ | |
| 80 | OPL | Stack Flow 1 Hour Rolling Average High OPL | | 08244 | 04128 | ✓ | |
| 81 | OPL | BTU 1 Hour Total OPL | | 08244 | 04129 | ✓ | |
| 82 | OPL | Hrt Cl/Hra Lime Flow 1 Minute Average High OPL | | 08251 | 04130 | ✓ | |
| 83 | AWFC | Lime Slurry Density 1 Hour Rolling Average Low | | 08156 | 04132 | ✓ | |
| 84 | | WILL NOT ACCEPT SOLID CHARGES >750 KBTU/LB | | | | ✓ | |
| 85 | | (DO NORTH TANK FARM, BIWEEKLY CHECKS) | | | | ✓ | |
| 86 | | Hi/DI Atomizing Air Low Pressure alarm (manual check) | | | | ✓ | |
| 87 | | Lo/DI Atomizing Air Low Pressure alarm (manual check) | | | | ✓ | |
| 88 | | Specialty Feeder Atomizing Air Low Pressure alarm (manual cheek) | | | | ✓ | |

OCL =CONDITION LIMIT
AWFC =AUTOMATIC WASTE FEED CUTOFF
MWFC =MISC WASTE FEED CUTOFF
SWFC =SPECIFIC WASTE FEED CUTOFF

Comments _____

CHECKED BY : Bill Adams DATE : 10-2-13 TIME : 8:04 (AM) PM

APPROVED : Hoelun Kim PLACE : Control Room

BIWEEKLY_3
4/4/07 HK

8-14-13 UNIT 3 DI SCALE CALIBRATION

5404 Jedmed Ct. - St. Louis, MO 63129
Business: (314) 845-7778 - Fax: (314) 845-7779

ACCURATE SUPERIOR SCALE

ISO/IEC 17025:2005

## Scale Inspection Report

Dan Mateo 8/14/13

Customer: VEOLIA ENVIRONMENTAL SERVICES
#7 MOBILE AVENUE
SAUGET, IL 62201

escription: Class III L
Serial No: 013121
Scale No: 3
Divisions: 5LB

Location: Direct Injection
MFG / Model: WI130

Scale Type: VEHICLE
Capacity: 60000LB

Scale was found in Tolerance: [X] yes [ ] no

| Shift Test Sides / Corners / Sections | Weights Applied | Scale Reading (As found) | Error (+/-) | Tolerance Maintenance | Scale Reading After Adjustment (As Left) | Accept / Reject |
|---|---|---|---|---|---|---|
| Section 1 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| Section 2 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| Section 3 | 21,000 lb | 20,985 lb | -15 lb | +/- 45 lb | | ACCEPT |
| Section 4 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| Section 5 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| Section 6 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Buildup Weight | Weights Applied | Scale Reading (As found) | Error (+/-) | Tolerance Maintenance | Scale Reading After Adjustment (As Left) | Accept / Reject |
|---|---|---|---|---|---|---|
| Section 6 | 3,000 lb | 3,000 lb | +0 lb | +/- 10 lb | | ACCEPT |
| | 6,000 lb | 6,000 lb | +0 lb | +/- 15 lb | | ACCEPT |
| | 9,000 lb | 9,000 lb | +0 lb | +/- 20 lb | | ACCEPT |
| | 12,000 lb | 12,000 lb | +0 lb | +/- 25 lb | | ACCEPT |
| | 15,000 lb | 14,995 lb | -5 lb | +/- 30 lb | | ACCEPT |
| | 18,000 lb | 17,990 lb | -10 lb | +/- 40 lb | | ACCEPT |
| Section 6 | 21,000 lb | 20,980 lb | -20 lb | +/- 45 lb | | ACCEPT |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Test Procedure follows QSP-09-002

Traceable to SI through NIST #: MO: 822/259883-98 39598 822/274998-07
Rice Lake: 822/278785-10 681/280058-10

ORIGINAL → Records Room
Copy → M. EADL
→ D. MATUESICH
→ D. KLARICH

**Cal Date:** 08/14/2013 **Next Cal due:** 10/31/2013

**Calibration Dates:** JAN APR JUL OCT

**Service Technician Registration #:** 0195IL/30026MO

**Calibrated By Service Technician:** Jim Koerkenmeier **Job Queue#:** LT224713 **Report ID:** 68961887

Uncertainty of Measurement provided on request

FOR CUSTOMER USE ONLY

Reviewed By _____ Date Reviewed _____




Form 030 , Rev 18, 06/14/13

# Unit 4 CMSPETP Sheets

UNIT #4

ANNUAL INSTRUMENTATION COMPLIANCE CHECKS

| | | TAG # | DATE | NAME |
|---|---|---|---|---|
| 1 | CALIBRATE KILN HIGH BTU LIQUID WASTE FLOWMETER X-10 (LOW GRADE) | FT-129 | 8-28-13 | CE/BB |
| 2 | CALIBRATE KILN HIGH BTU LIQUID WASTE FLOWMETER X-12 (SLUDGE) | FT-145 | 8-27-13 | CE/BB |
| 3 | CALIBRATE SCC HIGH BTU LIQUID WASTE FLOWMETER X-22 (SPECIAL) | FT-212 | 9-3-13 | BB/CE |
| 4 | CALIBRATE AQUEOUS LIQUID WASTE FLOWMETER X-11 | FT-138 | 8-28-13 | BB/CE |
| 5 | CALIBRATE PCC VIRGIN & WASTE DERIVED FUEL (No.2 FUEL OIL) | FT-109 | OUT OF SERVICE | |
| 6 | CALIBRATE X-14 VIRGIN & WASTE DERIVED FUEL (No.2 FUEL OIL) | FT-249 | OUT OF SERVICE | |
| 7 | CALIBRATE KILN NATURAL GAS FLOWMETER X-09 | FT-171 | 8-15-13 | CE |
| 8 | CALIBRATE SCC NATURAL GAS FLOWMETER X-14 | FT-286 | 8-15-13 | CE |
| 9 | CALIBRATE SCC OUTLET TEMP. TRANSMITTER | TT-317A | 8-28-13 | BB/CE |
| 10 | CALIBRATE SCC OUTLET TEMP. TRANSMITTER | TT-317B | 8-28-13 | BB/CE |
| 11 | CALIBRATE KILN OUTLET TEMP. TRANSMITTER (INSTALL FACTORY CALIBRATED PYROMETER) | TT-305A | 8-28-13 | CE |
| 12 | CALIBRATE KILN OUTLET TEMP. TRANSMITTER (INSTALL FACTORY CALIBRATED PYROMETER) | TT-305B | 8-28-13 | CE |
| 13 | CALIBRATE SDA INLET TEMP. TRANSMITTER TEMP. CHAMB. OUTLET | TT-404A/B | 8-28-13 | BB/CE |
| 14 | CALIBRATE COMBUSTION GAS (STACK FLOW) TRANSMITTER | FT-559A/B | 8-28-13 | CE |
| 15 | CALIBRATE CONCENTRATED LIME SLURRY FLOWMETER X-18 (DILUTE SLURRY) | FT-425 | 8-28-13 | CE |
| 16 | CALIBRATE CONCENTRATED LIME SLURRY FLOWMETER X-19 (DILUTE SLURRY) | FT-426 | 8-28-13 | CE |
| 17 | Install new Thermocouple in SDA Outlet | TT-417 A/B | 8-28-13 | CE |
| 18 | Install new Thermocouple in SDA Outlet | TT-418 A/B | 8-28-13 | CE |

COMMENTS :

APPROVED : Heather Kim

ANNUAL.4
2/27/1997 JB

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #4
## ANNUAL

TAG : FT
LOOP : 129
DESCRIPON : FLOW TRANS
SERVICE : PCC LOW GRADE WDF X-10
LOCATION : P-BMS
LP-SHT : 129
P&ID : F013
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N : 101499

MANUFACT : MICRO MOTION
MODEL : DS100S 128
SCALE :
CLAIB-IN : 0-7,000#/HR
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 2.5 per min | 25.1 per min |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : [signature] Date : 8-28-13 Time : 2:15 AM PM

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : FT
LOOP : 145
DESCRIPON : FLOW TRANS
SERVICE : PCC SLUDGE X-12
LOCATION : P-BMS
LP-SHT : 145
P&ID : F013
REMARKS : W/BMS
INSTAL-RMKS :
SPEC-RMKS :
S/N : 103056

MANUFACT : MICRO MOTION
MODEL : DL100S-SS
SCALE :
CLAIB-IN : 0-8,000#/HR
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N1:28

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 10 lbs. per minute | 9.9 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 8-27-13 Time : 2:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : FT
LOOP : 212
DESCRIPON : FLOW TRANS
SERVICE : WDF TO X-22
LOCATION : S-BMS
LP-SHT : 212
P&ID : F014
REMARKS : W/BMS
INSTAL-RMKS :
SPEC-RMKS :
S/N : 101775

MANUFACT : MICRO MOTION
MODEL : D1D00S-SS
SCALE :
CLAIB-IN : 0-7,000#/HR
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 10 lbs. per minute | 8.5 lbs |
| *After Calibration* | |
| 0 | 0 |
| 10 lbs. per minute | 9.6 lbs |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 9-3-13 Time : 11:15 (AM) PM

JB
CALSHEET.WDB

Place : (Field) or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : FT
LOOP : 138
DESCRIPON : FLOW TRANS
SERVICE : PCC AQ LIQ X-11
LOCATION : P-BMS
LP-SHT : 138
P&ID : F013
REMARKS : W/BMS
INSTAL-RMKS :
SPEC-RMKS :
S/N : 1155343

MANUFACT : MICRO MOTION
MODEL : D100S-HY
SCALE :
CLAIB-IN : 0-6,000#/HR
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER :

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 | 0 |
| 20 lbs. per minute | 20.3 lbs. |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 8-28-13 Time : 3:00 AM (PM)

JB
CALSHEET.WDB

Place : (Field or Shop)

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #4
## ANNUAL

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 171 | | |
| DESCRIPON : | FLOW TRANS | MANUFACT : | FOXBORO |
| SERVICE : | X-09 PCC BURNER GAS | MODEL : | Differential Press Cell |
| LOCATION : | FLD | SCALE : | 0-20" WC |
| LP-SHT : | | CLAIB-IN : | 0-25,000,000 BTU |
| P&ID : | | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | Gas Pressure 9.5 PSIG | PROCESS - SP : | |
| INSTAL-RMKS : | Orifice Plate FL 4705 | INST - SP : | |
| SPEC-RMKS : | 2.093 3" Pipe | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0" WC | 4 ma |
| 20" WC | 20 ma |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : JB

Date : 8-15-13 Time : 11:15 AM PM

Place : Field (Field or Shop)

CALSHEET.WDB

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #4
## ANNUAL

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 286 | | |
| DESCRIPON : | FLOW TRANS | MANUFACT : | FOXBORO |
| SERVICE : | X-14 SCC BURNER GAS | MODEL : | Differential Press Cell |
| LOCATION : | FLD | SCALE : | 0-20" WC |
| LP-SHT : | | CLAIB-IN : | 0-20,000,000 BTU |
| P&ID : | | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | Gas Pressure 9.5 PSIG | PROCESS - SP : | |
| INSTAL-RMKS : | Orifice Plate FL 4698 | INST - SP : | |
| SPEC-RMKS : | 1.944 3" Pipe | ACTION : | |
| S/N : | | I/O NUMBER : | |

## CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0" WC | 4 ma |
| 20" WC | 20 ma |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : [signature] Date : 8-15-13 Time : 11:30 (AM) ~~PM~~

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : TT
LOOP : 317A
DESCRIPON : TC ASSEMBLE
SERVICE : SCC OUTLET
LOCATION : FILED
LP-SHT : 317
P&ID : F015
REMARKS :
INSTAL-RMKS : TC WELL INCONEL 601 24"
SPEC-RMKS :
S/N :

MANUFACT : CHESSEL
MODEL : 3510
SCALE : TYPE R TC
CLAIB-IN : 0-3000 F
CALIB-OUT : 4 - 20 mAdc
PROCESS - SP : 24" INCONEL 601 WELL
INST - SP :
ACTION :
I/O NUMBER : N1:51

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a temperature signal of 500 deg F. and 2,000 deg. F. at input of transmitter, then verify this signal in control room.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° F | 502 |
| 2000°F | 2002 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 8-28-13 Time : 11:00 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 317B | | |
| DESCRIPON : | TC ASSEMBLE | MANUFACT : | CHESSEL |
| SERVICE : | SCC OUTLET | MODEL : | 3510 |
| LOCATION : | FILED | SCALE : | TYPE R TC |
| LP-SHT : | 317 | CLAIB-IN : | 0-3000 F |
| P&ID : | F015 | CALIB-OUT : | 4 - 20 mAdc |
| REMARKS : | | PROCESS - SP : | 24" INCONEL 601 WELL |
| INSTAL-RMKS : | TC WELL INCONEL 601 24" | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | N1:52 |

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a temperature signal of 500 deg F. and 2,000 deg. F. at input of transmitter, then verify this signal in control room.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 500° | 503 |
| 2000° | 2001 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : _____

Performed by : BB/CE Date : 8-28-13 Time : 10:48 (AM) PM

JB
CALSHEET.WDB

Place : _____ (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : TT
LOOP : 305A
DESCRIPON : PYROMETER
SERVICE : KILN OUTLET
LOCATION : FILED
LP-SHT : 305
P&ID : F015
REMARKS : 44-99-F-1-0-1
INSTAL-RMKS : 55" Target Tube
SPEC-RMKS :
S/N :

MANUFACT : IRCON
MODEL : MODLINE4
SCALE : Type R TC
CLAIB-IN : 0-3,000 deg F
CALIB-OUT : 4 - 20 mADC
PROCESS - SP : EMIS. 85%
INST - SP :
ACTION :
I/O NUMBER : N1:51

## CALIBRATION NOTES

Install factory calibrated Pyrometer.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| | |
| | |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : ~~X~~ Installed Factory Calibrated Electronics.

Performed by: [signature] Date : 8-28-13 Time : 8:00 AM ~~PM~~

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | TT | | |
| LOOP : | 305B | | |
| DESCRIPON : | PYROMETER | MANUFACT : | IRCON |
| SERVICE : | KILN OUTLET | MODEL : | MODLINE4 |
| LOCATION : | FILED | SCALE : | Type R TC |
| LP-SHT : | 305 | CLAIB-IN : | 0-3,000 deg F |
| P&ID : | F015 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | 44-99-F-1-0-1 | PROCESS - SP : | EMIS. 85% |
| INSTAL-RMKS : | 55" Target Tube | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | N1:52 |

## CALIBRATION NOTES

Install factory calibrated Pyrometer.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| | |
| | |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : Installed Factory Calibrated Electronics

Performed by : [signature] Date : 8-28-13 Time : 8:15 (AM) PM

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : TT
LOOP : 404A
DESCRIPON : TC TRANS
SERVICE : TC GAS OUTLET
LOCATION : WAPC
LP-SHT : 404
P&ID : F016
REMARKS : W/GAS CLEANING TRAIN
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MOORE
MODEL : TIY/K2-0-1-4-20mA
SCALE : 0-1500 deg F
CLAIB-IN : TYPE K TC
CALIB-OUT : 4 - 20 mAdc
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N1:114

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a temperature signal of 200 deg F. and 1,000 deg. F. at input of transmitter, then verify this signal in control room.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 200° F | 200 |
| 1000° F | 1000 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 8-28-13 Time : 10:35 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : TT
LOOP : 404B
DESCRIPON : TC TRANS
SERVICE : TC GAS OUTLET
LOCATION : WAPC
LP-SHT :
P&ID : F016
REMARKS : W/GAS CLEANING TRAIN
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MOORE
MODEL : TIY/K2-0-1-4-20mA
SCALE : 0-1500 deg F
CLAIB-IN : TYPE K TC
CALIB-OUT : 4 - 20 mAdc
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N1:115

## CALIBRATION NOTES

Use cold junction compensated thermocouple calibrator to input a temperature signal of 200 deg F. and 1,000 deg. F. at input of transmitter, then verify this signal in control room.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 200°F | 201 |
| 1000°F | 1004 |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by : BB/CE Date : 8-28-13 Time : 1014 (AM) PM

JB
CALSHEET.WDB

Place : (Field or Shop)

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #4
## ANNUAL

TAG : FT
LOOP : 559A
DESCRIPON : D/P TRANSMITTER
SERVICE : STACK FLOW
LOCATION : FILED
LP-SHT : 559
P&ID : F018
REMARKS : PSE averaging pitot tube
INSTAL-RMKS : East side of Stack
SPEC-RMKS :
S/N : 1222931

MANUFACT : Automation Service
MODEL : 11S1DR2F22B3
SCALE : 0-1.73"H2O
CLAIB-IN : 0-55,000 ACFM
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N001:0093

## CALIBRATION NOTES

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0" WC | 4 mA |
| 1.73" WC | 20 mA |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No Calibration Needed

Performed by : [signature] Date : 8-28-13 Time : 9:00 (AM) ~~PM~~

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : FT
LOOP : 559B
DESCRIPON : D/P TRANSMITTER
SERVICE : STACK FLOW
LOCATION : FILED
LP-SHT : 559
P&ID : F018
REMARKS : PSE averaging pitot tube
INSTAL-RMKS : North side of Stack
SPEC-RMKS :
S/N : 1222931

MANUFACT : Automation Service
MODEL : 11S1DR2F22B3
SCALE : 0-1.73"H2O
CLAIB-IN : 0-55,000 ACFM
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N001:0093

## CALIBRATION NOTES

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0" WC | 4 ma |
| 1.73" We | 20 ma |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments : No Calibration Needed

Performed by : [signature] Date : 8-28-13 Time : 8:45 AM PM

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

TAG : FT
LOOP : 425
DESCRIPON : MAG METER
SERVICE : X-18 DIL SLURRY
LOCATION : WAPC
LP-SHT : 425
P&ID : F016
REMARKS : W/GAS CLEANING TRAIN
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : Fischer & Porter
MODEL : 1475EN09PL29KD11CACL
SCALE : 0 - 20 GPM
CLAIB-IN : 0 - 20 GPM
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
I/O NUMBER : N1:112

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 ~~Hs~~ CE Gals | 0 Gals |
| 2 Gals | 2 Gals |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by [signature] Date : 8-28-13 Time : 6:30 (AM) ~~PM~~

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

**TWI INSTRUMENT CALIBRATION RECORD**
**UNIT #4**
**ANNUAL**

| | | | |
|---|---|---|---|
| TAG : | FT | | |
| LOOP : | 426 | | |
| DESCRIPON : | MAG METER | MANUFACT : | Fischer & Porter |
| SERVICE : | X-19 DIL SLURRY | MODEL : | 10D1475C |
| LOCATION : | WAPC | SCALE : | 0 - 20 GPM |
| LP-SHT : | 426 | CLAIB-IN : | 0 - 20 GPM |
| P&ID : | F016 | CALIB-OUT : | 4 - 20 mADC |
| REMARKS : | W/GAS CLEANING TRAIN | PROCESS - SP : | |
| INSTAL-RMKS : | Size 1: or 25mm | INST - SP : | |
| SPEC-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | N1:113 |

## CALIBRATION NOTES

Flush process piping, connect water hose to upstream side of flow meter. Set control system to appropriate rate control, and read totalizer, flow water into a container and compare the totalizer reading to the measured amount in container.

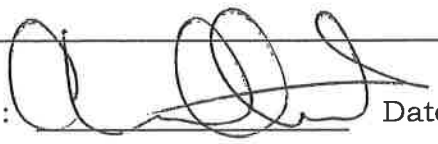
See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| *Before Calibration* | |
| 0 Gals per Min | 0 Gals per min |
| 2 Gals per Min | 2 Gals Per Min |
| *After Calibration* | |
| | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments :

Performed by :  Date : 8-28-13 Time : 6:45 AM PM

JB
CALSHEET.WDB

Place : Field
*(Field or Shop)*

RKU4 (IC4034)
QUARTERLY INSTRUMENTATION COMPLIANCE CHECKS

| | | TAG NUMBER | DATE | NAME |
|---|---|---|---|---|
| 1 | CHECK CALIBRATION OF KILN HOOD PRESS. XMITTER. | PDT 300 | 8-15-13 | CE |
| 2 | CHECK CALIBRATION OF SCC PRESS. XMITTER. | PDT 324 | 8-15-13 | CE |
| 3 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 439 | | BB BA |
| 4 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 440 | | ✓ |
| 5 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 441 | | ✓ |
| 6 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 442 | | ✓ |
| 7 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 443 | | ✓ |
| 8 | CHECK CALIBRATION OF BAG HOUSES PRESS. XMITTER. | PDT 444 | | ✓ |
| 9 | CALIBRATE SHREDDED SOLIDS WEIGHT SCALE | WIT-001 | 8-15-13 | RA/BE |
| 10 | CALIBRATE SCREENED SOLIDS WEIGHT SCALE | WIT-004 | OUT OF SRVC | |
| 11 | CALIBRATE DRUMMED SOLIDS WEIGHT SCALE | WIT-014A | 8-15-13 | BA |
| | CALIBRATE AUXILIARY SOLIDS WEIGHT SCALE | WIT-014B | 8-15-13 | BA |
| 12 | CALIBRATE TRIBO FLOW, BAGHOUSE LEAK DETECTION SYST | AIT-550A | 8-15-13 | CE |
| 13 | CALIBRATE CARBON INJECTION SYSTEM | | Monthly → 8-15-13 | ~~CE~~ DO |
| 14 | COMPLETE QUARTERLY CHECK SHEET FOR CARBON INJECTION SYSTEM. | | 8-15-13 | CE |
| 15 | OPERATOR TO MAKE VISUAL INSPECTION OF RIPCO INJECTORS (Check to see that Operator has completed Calibration Sheet) | | | |

**********

QUARTERLY INSTRUMENTATION MAINTENANCE CHECKS

| | | | | |
|---|---|---|---|---|
| A | CHECK CALIBRATION OF LEL METERS IN BULK STORAGE BLDG. SCREENED SOLIDS CONVEYOR (out of service) | | 8-15-13 | CE |
| B | CLEAN AND CHECK I.D. FAN dp SWITCH (ROD OUT TAPS) | PDSL-563 | 8-15-13 | CE |

COMMENTS: _____

APPROVED: Heather Klein

QUARTER.4
11/1/06 KF

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG:
LOOP:
DESCRIPON: Tribo
SERVICE: Baghouse Leak Detection
LOCATION: FLD
LP-SHT:
P&ID:
REMARKS:
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: Auburn
MODEL: TRIBO.dgd
SCALE: 0-1000pa
CALIB-IN: 0-1000pa
CALIB-OUT: 4-20ma
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

## CALIBRATION NOTES

Disconnect the input cable at the BNC connector on the input card, and check for zero. Use Auburn, Triboflow, filed test unit, model 2902, to input a Pico-Amp signal of 500pa and record these values.

## CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| – | 0 pA | 0 pA |
| | 500 pA | 500 pA |
| After Calibration | | |
| – | | |
| | | |

## CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 10:30 AM PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG:
LOOP:
DESCRIPON: INJECTOR
SERVICE: WASTE NOZZLE
LOCATION: FLD
LP-SHT:
P&ID:
REMARKS:
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: RIPCO
MODEL:
SCALE:
CALIB-IN:
CALIB-OUT:
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

## CALIBRATION NOTES

Operator to remove and inspect Nozzles or Injectors, record condition and initial below, then complete bottom of sheet (signature, date, time and place).

X-10 Condition OK Inspected By: LK
X-11 Condition OK Inspected By: LK
X-12 Condition OK Inspected By: LK
X-22 Condition OK Inspected By: LK

## CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| **Before Calibration** | |
| – | |
| | |
| **After Calibration** | |
| – | |
| | |

## CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 12:00 AM PM

Place: Field
(Field or Shop)

JB
CALSHEET.WDB

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: WIT
LOOP: 014B
DESCRIPON: WT TRANS
SERVICE: AUX. DRUM FEED
LOCATION: FTRNSP
LP-SHT:
P&ID:
REMARKS: NEW AUX DRUM FEED
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: TOLEDO
MODEL: 8140
SCALE: 0-200#
CALIB-IN: 0-200#
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

## CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instructions. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

## CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| – | 0 lbs | 0 lbs |
| | 50 lbs | 50 lbs |
| After Calibration | | |
| – | | |
| | | |

## CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: Bill Adams Date: 8-15-13 Time: 11:00 (AM) PM

Place: Field (Field or Shop)

JB
CALSHEET.WDB

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: WIT
LOOP: 014A
DESCRIPON: WT TRANS
SERVICE: DRUM FEED
LOCATION: FTRNSP
LP-SHT:
P&ID:
REMARKS: W/DRUM FEED NEMATRON
INSTL-RMKS:
SPEC-RMKS:
S/N: 42601574NS

MANUFACT: TOLEDO
MODEL: 8140
SCALE: 0-1,000 lb.
CALIB-IN: 0-1,000 lb.
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER: N1:35

CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instructions. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| - | 0 lbs | 0 lbs |
| | 501 lbs | 501 lbs |
| After Calibration | | |
| - | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: Bill Adam Date: 8-15-13 Time: 11:00 (AM) PM

Place: Field (Field or Shop)

JB
CALSHEET.WDB
1

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: WIT
LOOP: 001
DESCRIPON: WT TRANS
SERVICE: SHREDDED SOLIDS
LOCATION: FTRNSP
LP-SHT: 1
P&ID: F012
REMARKS: W/SOLIDS FEED SYSTEM
INSTL-RMKS:
SPEC-RMKS:
S/N: E12665900A

MANUFACT: TOLEDO
MODEL: 8140
SCALE: 0-3000#
CALIB-IN: 0-3000#
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER: N1:5

CALIBRATION NOTES

Check scale, digital Calibration per. Toledo instructions. Then with no weight on scale adjust analog zero. (NOTE: HMI will not display numbers less than zero). Next add weight = to 10% are more of scales range, then adjust analog span, to indicate weight on scale, as read on HMI screen.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | 0 lbs | 0 lbs |
| | 4901 lbs | 4901 lbs |
| After Calibration | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: Bill Adam Date: 8-15-13 Time: 11:15 AM, PM

Place: Field (Field or Shop)

JB
CALSHEET.WDB
R

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: PT
LOOP: 324
DESCRIPON: PRESS TRANSM
SERVICE: SCC OUTLET
LOCATION: FLD
LP-SHT: 324
P&ID: F015
REMARKS:
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: ROSEMONT
MODEL: 1151GP3E
SCALE:
CALIB-IN: -15" TO +5" WC
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | -15" WC | ~~-15" WC~~ CE 4ma |
| | +5" WC | ~~+5" WC~~ CE 20ma |
| After Calibration | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 9:15 (AM) ~~PM~~

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: PT
LOOP: 300
DESCRIPON: PRESS TRANSM
SERVICE: KILN HOOD
LOCATION: FTRNSP
LP-SHT: 300
P&ID: F015
REMARKS: Reranged 1/19/96
INSTL-RMKS: 1/2"x 29" SS PIPE inside Kiln
SPEC-RMKS:
S/N:

MANUFACT: ROSEMONT
MODEL: 1151DR2F
SCALE:
CALIB-IN: -9.0" TO 1.0" WC
CALIB-OUT: 4-20 ma
PROCESS-SP: Atmosphere = 18.40 ma
INST-SP: Set Dampening pot full CW
ACTION:
I/O NUMBER: N1:25

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | -9" WC | 4 ma |
| | +1" WC | 20 ma |
| After Calibration | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 9:00 AM PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: PDT
LOOP: 444
DESCRIPON: DP TRANS
SERVICE: BAGHOUSE PRESSUER
LOCATION: WAPC
LP-SHT: 437
P&ID: F017
REMARKS: W/GAS CLEANING TRAIN
INSTL-RMKS: SOUTH/WEST BAGHOUSE
SPEC-RMKS:
S/N:

MANUFACT: FOXBORO
MODEL: 823 DPI
SCALE:
CALIB-IN: 0-15" WC
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| - | 0" WC | 4 ma |
| | 15" WC | 20 ma |
| After Calibration | | |
| - | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 9:45 AM ~~PM~~

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | PDT | | |
| LOOP: | 443 | | |
| DESCRIPON: | DP TRANS | MANUFACT: | FOXBORO |
| SERVICE: | BAGHOUSE PRESSUER | MODEL: | 823 DPI |
| LOCATION: | WAPC | SCALE: | |
| LP-SHT: | 437 | CALIB-IN: | 0-15" WC |
| P&ID: | F017 | CALIB-OUT: | 4-20 MADC |
| REMARKS: | W/GAS CLEANING TRAIN | PROCESS-SP: | |
| INSTL-RMKS: | SOUTH/CENTRAL BAGHOUSE | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| – | 0" WC | 4 ma |
| | 15" WC | 20 ma |
| After Calibration | | |
| – | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: [signature] Date: 8-15-13 Time: 10:00 (AM) PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | PDT | | |
| LOOP: | 442 | | |
| DESCRIPON: | DP TRANS | MANUFACT: | FOXBORO |
| SERVICE: | BAGHOUSE PRESSUER | MODEL: | 823 DPI |
| LOCATION: | WAPC | SCALE: | |
| LP-SHT: | 437 | CALIB-IN: | 0-15" WC |
| P&ID: | F017 | CALIB-OUT: | 4-20 MADC |
| REMARKS: | W/GAS CLEANING TRAIN | PROCESS-SP: | |
| INSTL-RMKS: | SOUTH/EAST BAGHOUSE | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | | |
| – | 0" WC | 4 ma |
| | 15" WC | 20 ma |
| After Calibration | | |
| – | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ Date: 8-15-13 Time: 10:15 (AM) PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | PDT | | |
| LOOP: | 441 | | |
| DESCRIPON: | DP TRANS | MANUFACT: | FOXBORO |
| SERVICE: | BAGHOUSE PRESSUER | MODEL: | 823 DPI |
| LOCATION: | WAPC | SCALE: | |
| LP-SHT: | 437 | CALIB-IN: | 0-15" WC |
| P&ID: | F017 | CALIB-OUT: | 4-20 MADC |
| REMARKS: | W/GAS CLEANING TRAIN | PROCESS-SP: | |
| INSTL-RMKS: | NORTH/WEST BAGHOUSE | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| Before Calibration | |
| 0" WC | 4 ma |
| 15" WC | 20 ma |
| After Calibration | |
| | |
| | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: [signature] Date: 8-15-13 Time: 10:30 (AM) ~~PM~~

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG: PDT
LOOP: 440
DESCRIPON: DP TRANS
SERVICE: BAGHOUSE PRESSUER
LOCATION: WAPC
LP-SHT: 437
P&ID: F017
REMARKS: W/GAS CLEANING TRAIN
INSTL-RMKS: NORTH/CENTRAL BAGHOUSE
SPEC-RMKS:
S/N:

MANUFACT: FOXBORO
MODEL: 823 DPI
SCALE:
CALIB-IN: 0-15" WC
CALIB-OUT: 4-20 MADC
PROCESS-SP:
INST-SP:
ACTION:
I/O NUMBER:

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | 0" WC | 4 ma |
| | 15" WC | 20 ma |
| After Calibration | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments:

Performed by: [signature] Date: 8-15-13 Time: 10:45 (AM) ~~PM~~

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | PDT | | |
| LOOP: | 439 | | |
| DESCRIPON: | DP TRANS | MANUFACT: | FOXBORO |
| SERVICE: | BAGHOUSE PRESSURE | MODEL: | 823 DPI |
| LOCATION: | WAPC | SCALE: | |
| LP-SHT: | 437 | CALIB-IN: | 0-15" WC |
| P&ID: | F017 | CALIB-OUT: | 4-20 MADC |
| REMARKS: | W/GAS CLEANING TRAIN | PROCESS-SP: | |
| INSTL-RMKS: | NORTH/EAST BAGHOUSE | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

USE PNEUMATIC CALIBRATION BENCH WITH MANOMETER AND LOOP CALIBRATOR. INPUT PNEUMATIC SIGNAL AND READ OUTPUT WITH LOOP CALIBRATOR.

See Manufactures literature for detailed instructions.
Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| INPUT VALUE | | INSTRUMENT READING |
|---|---|---|
| | Before Calibration | |
| 0" WC | | 4ma |
| 15" WC | | 20ma |
| | After Calibration | |
| | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: [signature] Date: 8-15-13 Time: 11:00 (AM) ~~PM~~

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

RKU4 (IC4034) 

QUARTERLY CARBON INJECTION PREVENTIVE MAINTENANCE CHECK SHEET

| | | Pass | Fail |
|---|---|---|---|
| 1 | Disconnect AC Power to the Digi Drive. | ✓ | |
| 2 | Inspect AC & Motor drive screw terminal connections for signs of wear or corrosion and check that they are tight. | ✓ | |
| 3 | Replace the two Digi Drive fuses. | ✓ | |
| 4 | Verify any external safety switches or lockouts are still operational. | ✓ | |
| 5 | Remove Screw feeder cover & blow out carbon & dust. | ✓ | |
| 6 | Inspect Gears & Belts for wear or damage. | ✓ | |
| 7 | Check Operation of Motor & Gears for abnormal noise or movement. | ✓ | |
| 8 | Replace any needed parts, and list any parts used in comment | | |

Comments: _____

Name: _____ Date: 8-15-13 Time: 1:00 AM (PM)

QUARTER.4
11/1/06 KF

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | LEL | | |
| LOOP: | | | |
| DESCRIPON: | COMBINATION GAS ANALYZER | MANUFACT: | MSA |
| SERVICE: | LEL METER | MODEL: | |
| LOCATION: | BULK PIT, LOWER NORTH | SCALE: | 0-100% |
| LP-SHT: | | CALIB-IN: | |
| P&ID: | | CALIB-OUT: | |
| REMARKS: | | PROCESS-SP: | 20% LEL |
| INSTL-RMKS: | | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. to equal value of span gas. Check to see that alarm set point is set to 20%.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| INPUT VALUE | INSTRUMENT READING |
|---|---|
| Before Calibration | |
| 0% LEL | 0% LEL |
| 25% LEL | 25% LEL |
| After Calibration | |
| | |
| | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: [signature] Date: 8-15-13 Time: 1:15 AM (PM)

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | LEL | | |
| LOOP: | | | |
| DESCRIPON: | COMBINATION GAS ANALYZER | MANUFACT: | MSA |
| SERVICE: | LEL METER | MODEL: | |
| LOCATION: | BULK PIT, LOWER SOUTH | SCALE: | 0-100% |
| LP-SHT: | | CALIB-IN: | |
| P&ID: | | CALIB-OUT: | |
| REMARKS: | | PROCESS-SP: | 20% LEL |
| INSTL-RMKS: | | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. to equal value of span gas. Check to see that alarm set point is set to 20%.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| | INPUT VALUE | INSTRUMENT READING |
|---|---|---|
| Before Calibration | 0% LEL | 0% LEL |
| | 25% LEL | 25% LEL |
| After Calibration | | |
| | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ Date: 8-15-13 Time: 1:30 ~~AM~~ PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | LEL | | |
| LOOP: | | | |
| DESCRIPON: | COMBINATION GAS ANALYZER | MANUFACT: | MSA |
| SERVICE: | LEL METER | MODEL: | |
| LOCATION: | BULK PIT, UPPER NORTH | SCALE: | 0-100% |
| LP-SHT: | | CALIB-IN: | |
| P&ID: | | CALIB-OUT: | |
| REMARKS: | | PROCESS-SP: | 20% LEL |
| INSTL-RMKS: | | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. to equal value of span gas. Check to see that alarm set point is set to 20%.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| INPUT VALUE | | INSTRUMENT READING |
|---|---|---|
| | Before Calibration | |
| 0% LEL | | 0% LEL |
| 25% LEL | | 25% LEL |
| | After Calibration | |
| | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: [signature] Date: 8-15-13 Time: 1:45 ~~AM~~ PM

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

| | | | |
|---|---|---|---|
| TAG: | LEL | | |
| LOOP: | | | |
| DESCRIPON: | COMBINATION GAS ANALYZER | MANUFACT: | MSA |
| SERVICE: | LEL METER | MODEL: | |
| LOCATION: | BULK PIT, UPPER SOUTH | SCALE: | 0-100% |
| LP-SHT: | | CALIB-IN: | |
| P&ID: | | CALIB-OUT: | |
| REMARKS: | | PROCESS-SP: | 20% LEL |
| INSTL-RMKS: | | INST-SP: | |
| SPEC-RMKS: | | ACTION: | |
| S/N: | | I/O NUMBER: | |

CALIBRATION NOTES

Apply zero gas to sensor and adjust zero pot., then apply span gas and adjust span pot. to equal value of span gas. Check to see that alarm set point is set to 20%.

See Manufactures literature for detailed instructions. Fill out and affix a new calibration sticker.

CALIBRATION REPORT

| INPUT VALUE | | INSTRUMENT READING |
|---|---|---|
| 0% LEL | Before Calibration | 0% LEL |
| 25% LEL | | 25% LEL |
| | After Calibration | |
| | | |
| | | |

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ Date: 8-15-13 Time: 2:00 ~~AM~~ (PM)

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

BIWEEKLY UNIT #4
WASTE FEED CUT-OFF

(CMS Task IC4032)



| | | PASS | FAIL |
|---|---|---|---|
| 1 | TSHH-305 KILN HIGH HIGH | ✓ | |
| 2 | TSHH-317 SCC HIGH HIGH | ✓ | |
| 3 | PAHH-300 KILN HIGH PRESSURE | ✓ | |
| 4 | PAHH-324 SCC HIGH PRESSURE | ✓ | |
| 6 | TAHH-404 TEMPERING CHAMBER HIGH TEMP | ✓ | |
| 7 | VIOLATION OPACITY HIGH INSTANTATEOUS | ✓ | |
| 8 | PROCESS MONITOR FAILED | ✓ | |
| 9 | WASTE FEED MONITOR FAILED | ✓ | |
| 12 | VIOLATION STACK FLOW HIGH 1 MIN | ✓ | |
| 13 | VIOLATION ZAC-316 (TRV) OPEN | ✓ | |
| 14 | VIOLATION ZAC-026 SURGE VENT OPEN | ✓ | |
| 15 | UA-557 ANALYZER FAIL HCL | ✓ | |
| 16 | UA-558 ANALYZER FAIL CO | ✓ | |
| 17 | UA-560 ANALYZER FAIL O2 | ✓ | |
| 18 | UA-562 ANALYZER FAIL HC | ✓ | |
| 19 | PDAL-563 LOW DELTA P. (ID FAN FAILURE) | ✓ | |
| 20 | WFD-OFF CARBON INJECTION SYSTEM FAILED | ✓ | |
| 21 | PSL-100/PSL-200 SCC COMB. AIR FAN FAILED | ✓ | |
| 23 | PSL-209 X-14 PRIMARY FUEL LOW PRESS. (ONLY APPLICABLE FOR #2 FUEL OIL) | ✓ | |
| 25 | STACK FLOW HIGH INSTANTANEOUS | ✓ | |
| 35 | VIOLATION SCC TEMP. LOW 1 MIN AVERAGE | ✓ | |
| 36 | VIOLATION KILN TEMP. LOW 1 MIN AVERAGE | ✓ | |
| 37 | WFD-OFF HCL HIGH 1 MIN AVERAGE | ✓ | |
| 38 | WFD-OFF OPACITY HIGH 1 MIN AVERAGE | ✓ | |
| 39 | WFD-OFF CO HIGH 1 MIN AVERAGE | ✓ | |
| 40 | WFD-OFF HC (THC) HIGH 1 MIN AVERAGE | ✓ | |
| 41 | WFD-OFF BAGHOUSE DELTA P HIGH 1 MIN AVERAGE | ✓ | |

| | | PASS | FAIL |
|---|---|---|---|
| 42 | WFD-OFF SDA OUTLET HIGH TEMP. 1 MIN AVERAGE | ✓ | |
| 43 | WFD-OFF OXYGEN (O2) LOW 1 MIN AVERAGE | ✓ | |
| 44 | VIOLATION HCL HIGH 1 HOUR AVERAGE | ✓ | |
| 45 | VIOLATION CO HIGH 1 HOUR AVERAGE | ✓ | |
| 46 | VIOLATION SCC TEMP. LOW 1 HOUR AVERAGE | ✓ | |
| 47 | WFD-OFF KILN TEMP. LOW 1 ~~MIN~~ HOUR AVERAGE | ✓ | |
| 48 | VIOLATION OPACITY HIGH 480 SEC/HOUR | ✓ | |
| 49 | WFD-OFF BAGHOUSE DELTA P LOW 1 MIN AVERAGE | ✓ | |
| 52 | Bag Leak Detection System (Tribo) | ✓ | |
| 65 | Pumpable 1 Hour Rolling Total OPL | ✓ | |
| 66 | Non-Pumpable 1 Hour Rolling Total OPL | ✓ | |
| 67 | Total Waste 1 Hour Rolling Total OPL | ✓ | |
| 68 | BTU 1 Hour Total OPL | ✓ | |
| 69 | CL 12 Hour Rolling Total OPL | ✓ | |
| 70 | Low Violatile 12 Hour Rolling Total OPL | ✓ | |
| 71 | Semi Violatile 12 Hour Rolling Total OPL | ✓ | |
| 72 | Mercury 12 Hour Rolling Total OPL | ✓ | |
| 73 | Ash 12 Hour Rolling Total OPL | ✓ | |
| 74 | PCC Temperature 1 Hour Rolling Average Low OPL | ✓ | |
| 75 | SCC Temperature 1 Hour Rolling Average Low OPL | ✓ | |
| 76 | SDA Outlet Temperature 1 Hour Rolling Average High OPL | ✓ | |
| 77 | Baghouse Differential Pressure 1 Minute Average Low OPL | ✓ | |
| 78 | Baghouse Differential Pressure 1 Minute Average High OPL | ✓ | |
| 79 | Stack HCL Corrected 1 Hour Rolling Average High OPL | ✓ | |
| 80 | Stack CO Corrected 1 Hour Rolling Average High OPL | ✓ | |
| 81 | Stack Flow 1 Hour Rolling Average High OPL | ✓ | |
| 82 | Hrt Cl/Hra Lime Flow 1 Minute Average OPL | ✓ | |

50 WASTE FEED CUT-OFF TEST BY OPERATOR

UNIT #4 OPERATOR TO CLOSE MANUAL HAND VALVE AT LIQUID INJECTOR BEFORE FLEX LIME & AIR LINE TO SCREENED FEEDER XV-013 SLIDE GATE.

UNIT #4 OPERATOR TO VERIFY CUT-OFF BY PRESSING EACH START BUTTON.
(THEN INITIAL & SIGN SHEET)

SHREDDED ✓ SCREENED ✓ MAIN CONVEYOR ✓ AUX CONVEYOR ✓

X-10 ✓ X-11 ✓ X-12 ✓ X-22 ✓

VERIFY ATOMIZING AIR ALARM BY MANUALLY SHUTTING AIR TO PRESSURE SWITCH.
(NOZZEL MUST BE OPEN FOR ALARM TO FUNCTION)

X-10 ✓ X-11 ✓ X-12 ✓ X-22 ✓

ALSO CHECK OPERATION OF RAM COOLING WATER LOW FLOW ALARM (MSG# >278) ✓

CHECKED BY : Chuck Edwards

83 Lime Slurry Density Low 1 Hour Rolling Average Shoutdown

84 LOG CHECKS IN OPERATIONS BOOK.

85 ROD OUT KILN PRESSURE LINE (PT-300)

COMMENTS :

CHECKED BY : [signature] Date : 10-1-13 Time : 2:00 ~~AM~~ PM

APPROVED BY : Haelim Kim Place : Control Room

BIWEEKLY_4
9/10/07 HK

# TWI INSTRUMENT CALIBRATION RECORD
## UNIT #4
## MONTHLY

| | | | |
|---|---|---|---|
| TAG : | 483 | | |
| LOOP : | C-17 | | |
| DESCRIPON : | INJECTOR | MANUFACT : | K-TRON |
| SERVICE : | CARBON INJECTION | MODEL : | K2B-T35 |
| LOCATION : | FLD | SCALE : | |
| LP-SHT : | | CALIB-OUT : | |
| P&ID : | | PROCESS - SP : | |
| REMARKS : | | INST - SP : | |
| INSTAL-RMKS : | | ACTION : | |
| S/N : | | I/O NUMBER : | F26 : 127 |

## CALIBRATION NOTES

Set control system set point to an appropriate flow rate.
(Flow rate must be set equal to the value in the current NOC.)
Flow carbon into a container for 3 minute. Calculate a carbon flow rate by first subtracting the empty weight of the container from the gross weight of the container to obtain the net weight of carbon. Multiply the weight of carbon by 20 to get the actual hourly flow rate. Perform this procedure three times and take the average flow rate for the three runs. Flow should be within plus or minus 0.1 lb/hr.

## CALIBRATION REPORT

| INPUT VALUE | | INSTRUMENT READING | |
|---|---|---|---|
| | | *Before Calibration* | |
| 6.2 lb/hr | ( 0.310 lb/3min ) | 0.302 lb/3min | ( ± 0.05 lb/3min ) |
| | | 0.305 lb/3min ~ 0.315 lb/3min | |
| | | *After Calibration* | |
| 1 st | 6.2 lb/hr ( 0.310 lb/3min ) | 0.302 | Average |
| 2 nd | 6.2 lb/hr ( 0.310 lb/3min ) | 0.310 | 0.310 (lb/3min) 6.20 lb/hr |
| 3 rd | 6.2 lb/hr ( 0.310 lb/3min ) | 0.318 | |

## CALIBRATION SOURCE REFERENCE

Starting value of F26:127 11.78

Corrected Value of F26:127 11.78

Comments :

Performed by : Chuck Edwards Date : 9/5/13 Time : 8:00 (AM) PM

JB
CALSHEET.WDB

Place : *(Field or Shop)*