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 : Hueline 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	MANUFACT :	MODICON
SERVICE :	LOWER CHAMBER	MODEL :	B883-200
LOCATION :	FILED	SCALE :	0-2500 deg. F.
LP-SHT :		CLAIB-IN :	TYPE K
P&ID :	2032	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°	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
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°	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	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°	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 : BM 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	MANUFACT :	MODICON
SERVICE :	SDA OUTLET	MODEL :	B883-200
LOCATION :	FILED	SCALE :	0-2500 deg. F.
LP-SHT :		CLAIB-IN :	TYPE K
P&ID :	2034	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°	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	MANUFACT :	Rosemount
SERVICE :	STACK	MODEL :	
LOCATION :	FILED	SCALE :	0-20,000 ACFM
LP-SHT :		CLAIB-IN :	0 - 0.5" WC
P&ID :	2035	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	4.11mA
.5" W.C.	19.89mA
After Calibration	
0	4.0mA
.5	20.0mA

CALIBRATION SOURCE REFERENCE

Comments :

Performed by : B. B. [illegible] 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	MANUFACT :	MICRO MOTION
SERVICE :	HIGH BTU	MODEL :	D 40S-SS
LOCATION :	FILED	SCALE :	0 - 3600 lb/hr
LP-SHT :		CLAIB-IN :	
P&ID :	2031	CALIB-OUT :	4 - 20 mADC
REMARKS :	Changed Range 11/12/96	PROCESS - SP :	
INSTAL-RMKS :	SENSITIVITY 5.58	INST - SP :	
SPEC-RMKS :	SW 1,2,3,4, OFF	ACTION :	
S/N :	97193	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	MANUFACT :	MICRO MOTION
SERVICE :	LOW BTU	MODEL :	D 40S-SS
LOCATION :	FILED	SCALE :	0 - 3600 lb/hr
LP-SHT :		CLAIB-IN :	
P&ID :	2031	CALIB-OUT :	4 - 20 mADC
REMARKS :	Changed Range 11/12/96	PROCESS - SP :	
INSTAL-RMKS :	SENSITIVITY 5.16	INST - SP :	
SPEC-RMKS :	SW 1,3,4, OFF	ACTION :	
S/N :	32936	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	MANUFACT :	E-H
SERVICE :	LIME SLURRY TO HEAD TANK	MODEL :	
LOCATION :	FILED	SCALE :	0 - 20 GPM
LP-SHT :		CLAIB-IN :	
P&ID :	2034	CALIB-OUT :	4 - 20 mADC
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	
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	MANUFACT :	E+H
SERVICE :	HIGH 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)

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 : Haeline Kim

QUARTER.2

10/14/04 JB

TWI INSTRUMENT CALIBRATION RECORD
UNIT #2
QUARTERLY

TAG : AT
LOOP : 289
DESCRIPON : OXYGEN
SERVICE : STACK GAS ANALYZER
LOCATION : STACK
LP-SHT :
P&ID : 2035
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	2.8
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
SERVICE : SPECIALTY FEEDER
LOCATION :
LP-SHT :
P&ID :
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT : TOLEDO
MODEL : 8140 EXP
SCALE : 0-4,000 #
CALIB-OUT : 4-20 mADC
PROCESS - SP : 0#=819 cts
INST - SP : 200#=983 cts
ACTION : 1#=.819 cts
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	MANUFACT :	TOLEDO
SERVICE :	SOLID CHARG CONV.	MODEL :	8140
LOCATION :		SCALE :	0-400 #
LP-SHT :		CALIB-OUT :	4-20 mADC
P&ID :	3031	PROCESS - SP :	0#=819 cts
REMARKS :		INST - SP :	200#=2457 cts
INSTAL-RMKS :		ACTION :	1#=8.19 cts
S/N :		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 : [illegible] Date : 8-6-13 Time : 1:45 AM PM

JB

Place : (Field or Shop)

CALSHEET.WDB

TWI INSTRUMENT CALIBRATION RECORD
UNIT #2
QUARTERLY

TAG : PDT
LOOP : 250
DESCRIPON : PRESSURE DIFF. TRANSMITTER
SERVICE : BAGHOUSE INLET/OUTLET
LOCATION : FIELD
LP-SHT :
P&ID : 2035
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" 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	MANUFACT :	
SERVICE :	LOW CHAMBER	MODEL :	
LOCATION :	FIELD	SCALE :	-7.5 to +2.5 in wc
LP-SHT :		CALIB-OUT :	4-20 mADC
P&ID :	2032	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.	4.09 mA
2.5" W.C.	20.04 mA
After Calibration	
-7.5	4.0 mA
2.5	20.0 mA

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" ~~mA~~ 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
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS :
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	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
SERVICE : LEL METER
LOCATION : PRODUCTION FLOOR
LP-SHT :
P&ID : 3022
REMARKS :
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	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

Scale Inspection Report

ISO/IEC 17025:2005

David Matteson 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. MATDESIAN
→ 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 _____

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Form 030 , Rev 18, 06/14/13

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 : [illegible]

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	MANUFACT :	MODICON
SERVICE :	LOWER CHAMBER	MODEL :	B883-200
LOCATION :	FILED	SCALE :	0-2500 deg. F.
LP-SHT :		CLAIB-IN :	TYPE K
P&ID :	3032	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	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
SERVICE : UPPER CHAMBER
LOCATION : FILED
LP-SHT :
P&ID : 3033
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	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
SERVICE : SDA OUTLET
LOCATION : FILED
LP-SHT :
P&ID : 3034
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	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[illegible] 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
SERVICE : LOW BTU
LOCATION : FILED
LP-SHT :
P&ID : 3031
REMARKS :
INSTAL-RMKS :
SPEC-RMKS :
S/N :

MANUFACT : MICRO MOTION
MODEL : DS-040
SCALE : 0 - 3,600 lb/hr
CLAIB-IN :
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
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
SERVICE : LIME SLURRY TO HEAD TANK
LOCATION : FILED
LP-SHT :
P&ID : 3034
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

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) PAGE 1 OF 1

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	BP
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 : Haedan 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

JB
CALSHEET.WDB

Place : (Field or Shop)

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 wkr	76.2
After Calibration	

CALIBRATION SOURCE REFERENCE

GAS CYL # : EB0047109

Comments :

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

JB
CALSHEET.WDB

Place : (Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #3
QUARTERLY

TAG : AT
LOOP : 388B
DESCRIPON : OPACITY
SERVICE : STACK GAS
LOCATION : STACK
LP-SHT : 556
P&ID :
REMARKS :
INSTAL-RMKS : 2.00 to 5.72ma
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	
0%	0%
100%	100%
After Calibration	

CALIBRATION SOURCE REFERENCE

Comments : Calibration to Factory Spec

Performed by : B Alan Date : 8-8-13 Time : 10:44 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

JB
CALSHEET.WDB

Place : (Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #3
QUARTERLY

TAG :	WT		
LOOP :	310		
DESCRIPON :	WEIGHT TRANSMITTER	MANUFACT :	TOLEDO
SERVICE :	SOLID CHARG CONV.	MODEL :	8140
LOCATION :	FIELD	SCALE :	0-400 #
LP-SHT :		CALIB-OUT :	4-20 mADC
P&ID :	3031	PROCESS - SP :	0#=819 cts
REMARKS :		INST - SP :	200#=2457 cts
INSTAL-RMKS :		ACTION :	1#=8.19 cts
S/N :		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	MANUFACT :	YOKOGAWA
SERVICE :	BAGHOUSE INLET/OUTLET	MODEL :	0-15 inH2O
LOCATION :	FIELD	SCALE :	
LP-SHT :		CALIB-OUT :	4-20 mADC
P&ID :	3035	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	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
SERVICE : UPPER CHAMBER
LOCATION : FIELD
LP-SHT :
P&ID : 3033
REMARKS :
INSTAL-RMKS :
S/N :

MANUFACT :
MODEL : -7.5 to +2.5 in wc
SCALE :
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.	4.16mA
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 :
REMARKS :
INSTAL-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.

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 : [signature] 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 (CMS Task IC4039) PAGE 2 OF 2
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: Heather 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

Scale Inspection Report

ISO/IEC 17025:2005

David Matoesian 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. ELDL
→ D. MATOESIAN
→ 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 _____

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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	MANUFACT :	MICRO MOTION
SERVICE :	PCC LOW GRADE WDF X-10	MODEL :	DS100S 128
LOCATION :	P-BMS	SCALE :	
LP-SHT :	129	CLAIB-IN :	0-7,000#/HR
P&ID :	F013	CALIB-OUT :	4 - 20 mADC
REMARKS :		PROCESS - SP :	
INSTAL-RMKS :		INST - SP :	
SPEC-RMKS :		ACTION :	
S/N :	101499	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
25 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 : Date : 8-15-13 Time : 11:15 AM PM

JB
CALSHEET.WDB

Place : Field
(Field or Shop)

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 : 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
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 : N1:52

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 : 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
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 : N1:52

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 0 AM PM

JB
CALSHEET.WDB

Place : (Field or Shop)

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
ANNUAL

TAG :	FT		
LOOP :	559A		
DESCRIPON :	D/P TRANSMITTER	MANUFACT :	Automation Service
SERVICE :	STACK FLOW	MODEL :	11S1DR2F22B3
LOCATION :	FILED	SCALE :	0-1.73"H2O
LP-SHT :	559	CLAIB-IN :	0-55,000 ACFM
P&ID :	F018	CALIB-OUT :	4 - 20 mADC
REMARKS :	PSE averaging pitot tube	PROCESS - SP :	
INSTAL-RMKS :	East side of Stack	INST - SP :	
SPEC-RMKS :		ACTION :	
S/N :	1222931	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	MANUFACT :	Automation Service
SERVICE :	STACK FLOW	MODEL :	11S1DR2F22B3
LOCATION :	FILED	SCALE :	0-1.73"H2O
LP-SHT :	559	CLAIB-IN :	0-55,000 ACFM
P&ID :	F018	CALIB-OUT :	4 - 20 mADC
REMARKS :	PSE averaging pitot tube	PROCESS - SP :	
INSTAL-RMKS :	North side of Stack	INST - SP :	
SPEC-RMKS :		ACTION :	
S/N :	1222931	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
SERVICE : X-19 DIL SLURRY
LOCATION : WAPC
LP-SHT : 426
P&ID : F016
REMARKS : W/GAS CLEANING TRAIN
INSTAL-RMKS : Size 1: or 25mm
SPEC-RMKS :
S/N :

MANUFACT : Fischer & Porter
MODEL : 10D1475C
SCALE : 0 - 20 GPM
CLAIB-IN : 0 - 20 GPM
CALIB-OUT : 4 - 20 mADC
PROCESS - SP :
INST - SP :
ACTION :
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		BBBA
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	BA/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	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 Klim

QUARTER.4
11/1/06 KF

TWI INSTRUMENT CALIBRATION RECORD
UNIT #4
QUARTERLY

TAG:			
LOOP:			
DESCRIPON:	Tribo	MANUFACT:	Auburn
SERVICE:	Baghouse Leak Detection	MODEL:	TRIBO.dgd
LOCATION:	FLD	SCALE:	0-1000pa
LP-SHT:		CALIB-IN:	0-1000pa
P&ID:		CALIB-OUT:	4-20ma
REMARKS:		PROCESS-SP:	
INSTL-RMKS:		INST-SP:	
SPEC-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.

CALIBRATION REPORT

INPUT VALUE	INSTRUMENT READING
Before Calibration	
0 pa	0 pa
500 pa	500 pa
After Calibration	

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ 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

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

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

JB
CALSHEET.WDB

Place: Field
(Field or Shop)

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
50 lbs		50 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	MANUFACT:	TOLEDO
SERVICE:	SHREDDED SOLIDS	MODEL:	8140
LOCATION:	FTRNSP	SCALE:	0-3000#
LP-SHT:	1	CALIB-IN:	0-3000#
P&ID:	F012	CALIB-OUT:	4-20 MADC
REMARKS:	W/SOLIDS FEED SYSTEM	PROCESS-SP:	
INSTL-RMKS:		INST-SP:	
SPEC-RMKS:		ACTION:	
S/N:	E12665900A	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
490 lbs	490 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	MANUFACT:	ROSEMONT
SERVICE:	SCC OUTLET	MODEL:	1151GP3E
LOCATION:	FLD	SCALE:	
LP-SHT:	324	CALIB-IN:	-15" TO +5" WC
P&ID:	F015	CALIB-OUT:	4-20 MADC
REMARKS:		PROCESS-SP:	
INSTL-RMKS:		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	
-15" WC		~~-15" WC~~ CE 4ma
+5" WC		~~+5" WC~~ CE 20ma
	After Calibration	

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ 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	MANUFACT:	ROSEMONT
SERVICE:	KILN HOOD	MODEL:	1151DR2F
LOCATION:	FTRNSP	SCALE:	
LP-SHT:	300	CALIB-IN:	-9.0" TO 1.0" WC
P&ID:	F015	CALIB-OUT:	4-20 ma
REMARKS:	Reranged 1/19/96	PROCESS-SP:	Atmosphere = 18.40 ma
INSTL-RMKS:	1/2"x 29" SS PIPE inside Kiln	INST-SP:	Set Dampening pot full CW
SPEC-RMKS:		ACTION:	
S/N:		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
-9" WC	Before Calibration	4 ma
+1" WC		20 ma
	After Calibration	

CALIBRATION SOURCE REFERENCE

Comments: _____

Performed by: _____ 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	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/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: 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: [signature] 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
SERVICE: BAGHOUSE PRESSUER
LOCATION: WAPC
LP-SHT: 437
P&ID: F017
REMARKS: W/GAS CLEANING TRAIN
INSTL-RMKS: NORTH/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: 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	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/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: 10:45 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) Page 1 o

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
SERVICE: LEL METER
LOCATION: BULK PIT, LOWER NORTH
LP-SHT:
P&ID:
REMARKS:
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: MSA
MODEL:
SCALE: 0-100%
CALIB-IN:
CALIB-OUT:
PROCESS-SP: 20% LEL
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 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
SERVICE: LEL METER
LOCATION: BULK PIT, LOWER SOUTH
LP-SHT:
P&ID:
REMARKS:
INSTL-RMKS:
SPEC-RMKS:
S/N:

MANUFACT: MSA
MODEL:
SCALE: 0-100%
CALIB-IN:
CALIB-OUT:
PROCESS-SP: 20% LEL
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 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 (CMS Task IC4032) PAGE 1 OF 3

WASTE FEED CUT-OFF

		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	✓	

WEEKLY UNIT #4 (CMS Task IC4032) PAGE 2 OF 3
WASTE FEED CUT-OFF

		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	✓	

WEEKLY UNIT #4 CHECK SHEET PAGE 3 OF 3
WASTE FEED CUT-OFF

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 : Hueline 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)*