



HAWKEYE INSPECTION, LLC
Consulting and Services - Evanston, Wyoming

Pure Energy Services (USA)
380 Jamison Drive
Evanston, WY 82930

Report Date – 01/12/2011

Inspection Report for: LH-0010 Fuel Gas Scrubber

Manufacturer: Bluestar Welding

Mfg. Serial Number: BSFGS230

Year Built: 2004

National Board Number: None

CRN Number: OH6510.2



PRESSURE VESSEL INVENTORY FORM

☒ Code ☐ Code-invalidated ☐ Non-Code ☐ Unknown ☐ Code-Exempt

☐ High Consequence (HCO) ☐ Medium Consequence (MCO) ☐ Low Consequence (LCO)

VESSEL ID INFORMATION

Company Name : Pure Energy
Facility/Location Name :
Field Name :
Equipment Number : LH-0010
Eq/Circ. ID : LH0010-FGS-2
Equipment Name/Service : Fuel Gas Scrubber
Physical Location : Evanston Yard
GPS Coordinates :

VESSEL DESCRIPTION AND SERVICE CONDITIONS

Type of Vessel: Fuel Gas Scrubber

Vessel Size:

Operating Pressure Range (psig):

Operating Temperature Range (°F):

Does the vessel have Internal Access? ☐ Yes ☒ No

Specify type of internal access, if available:

Vessel is located: ☐ Inside ☒ Outside ☐ Under Roof

MISCELLANEOUS VESSEL INFORMATION

BLUESTAR WELDING



GRANDE PRAIRIE, AB.

1-780-532-1160

® YR MANU 2004

A-NUMBER

SERIAL NO.

DESIGN PRESSURE

DESIGN TEMP.

SHELL THICKNESS

HEAD THICKNESS

REG. DESIGN NO.

STRESS RELIEVED

X-RAY

DERATED

HYDRO TEST

INSPECTOR

CRN NO.

BSFGS 230

150 PSI

-20°F / 100°F

NO

NO

NO

196 PSI

C.F.

OH 6510.2

API 510 PRESSURE VESSEL EXTERNAL INSPECTION REPORT

Company Name: Pure Energy Services (U.S.A.) Inc.	
Facility/Location Name: Pure Yard – Evanston, WY	
Equipment Number: LH-0010	Eq/Circ. ID: LH0010-FGS-2
Equipment Name/Service: Fuel Gas Scrubber	
Physical Location: On LH-0010 Skid	
Manufacturer: Blue Star Welding	Manufacturer Serial Number: BSFGS230
Year Built: 2004	National Board Number: None Canadian Reg. Number: OH6510.2

Reason for Inspection: Scheduled API-510 External Inspection.

Condition of Nameplate and/or Bracket: Nameplate is intact and legible. The nameplate bracket is securely attached.

Internal Access: No

Corrosion Monitoring Locations (CMLs) and baseline thickness data established: Yes

Grounding Device in Place and Secure? N/A. The unit was not in service at the time of this inspection and was not grounded.

Condition of Foundation and Anchor Bolts: Anchor bolts are in place and secure. The base plate is anchored to a support base plate which is welded to the skid deck/frame.

Condition of Steel Supports, Saddles, and Bolting: The base plate has no corrosion or distortion.

Condition of Paint and/or Insulation: The paint is in good condition with no chipping or peeling.

Condition of Nozzles, Flanges, Repads, and Weepholes: All threaded couplings. There is no evidence of leaks at any of the threaded connections.

Condition of Welds; Head and Shell Metal Surfaces: All (exposed) metal surfaces are painted. There is no distortion or indication of corrosion beneath the paint coating. The pressure boundary welds have no visual weld defects.

Condition of Ladders, Stairways, and Brackets: N/A

If Equipment has Anomalous Data, did the Inspector check it? N/A

Is There a PSV on the Vessel?: Yes

If yes, is it set at or below the MAWP?: Yes

Date PSV last tested (if there is a tag on the valve): PSV is set at 150 psi (original tag)

Comments: None

Recommendations: None

Repairs Needed: None

API 510 Inspector Signature
Robert W. Menke

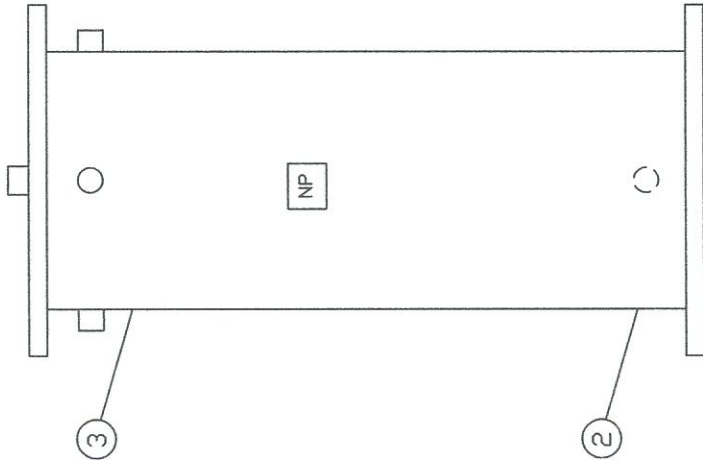
API 510 Inspector Number
0131

Date
01/12/2011

EQUIP RETIREMENT DATE: 10/21/2014
NEXT INSPECTION IS DUE: 1/12/2012

N1	N13
N2	N14
N3	N15
N4	N16
N5	N17
N6	N18
N7	N19
N8	N20
N9	N21
N10	N22
N11	N23
N12	N24

TC-560



- #2. 01- SH-FRONT 0. 314 TC
- #2. 02- SH-LEFT 0. 310 TC
- #2. 03- SH-BACK 0. 318 TC
- #2. 04- SH-RIGHT 0. 301 IC
- #3. 01- SH-FRONT 0. 311 IC
- #3. 02- SH-LEFT 0. 323 TC
- #3. 03- SH-BACK 0. 314 TC
- #3. 04- SH-RIGHT 0. 320 TC

NAMEPLATE INFO	
MFG	BLUESTAR WELDING
SERIAL NUMBER	BSFGS230
NATIONAL BOARD #	NONE
DATE BUILT	2004
DESIGN P & T	150 PSI @ 100°F
NOTE	NO "U" STAMP CRN DH-6510. 2

BUSINESS UNIT	PURE ENERGY
EQ/CIRC ID #	LH0010-FGS-2
EQUIP NAME	FUEL GAS SCRUBBER
LOCATION	ON LINE HEATER LH-0010
DWG #	LH0010-FGS-2

DESC: FUEL GAS SCRUBBER ON LH-0010
DWG#: LH0010-FGS-2-2.01-3.04

Hawkeye Inspection, LLC
1595 So. Hwy 150, Suite F
Evanston, WY 82930
(307)-789-3540

Report Date: 01/22/2011

(Report in Inches, Corrosion Rates in MPY)

Analysis: Straight Line

Unit: LH-0010

Eq/Circ ID: LH0010-FGS-2

Eq Type: VESSEL

Class:

CM RBI:

Design Code: S8/D1

Flange Rating: 285 lb/in²
Design Pressure: 150 lb/in²
Design Temperature: 100 °F

Description: FUEL GAS SCRUBBER ON LH0010, SN:BSFGS230
(8.625" PIPE)-FLAT HEADS, SHELL UT ONLY

Summary: Group Name:

Insp. Due Date = 01/12/2012

Pred. Ret. Date = 10/21/2014

Group Description:

RCR = 0.1 MPY

Rem. Life (from last survey 01/12/2011) = 3.8 yrs

0 C.A. Status: NO

Total Caution TMLs = 2

TML No	Location	Ctn	First Survey Thick	First Survey Nt	First Date	Previous Survey Thick	Previous Survey Nt	Previous Date	Last Survey Thick	Last Survey Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	Retirement Date	Next Inspection Date
2.01	SH-FRONT	N *	0.322 NM		06/01/2004	0.324 TC		09/11/2009	0.314 TC		01/12/2011	7.5	1.2	0.4	7.5	0.282 U	7.5	04/19/2015	01/12/2012
2.02	SH-LEFT	N *	0.322 NM		06/01/2004	0.320 TC		09/11/2009	0.310 TC		01/12/2011	7.5	1.2	1.4	7.5	0.282 U	7.5	10/07/2014	01/12/2012
2.03	SH-BACK	N *	0.322 NM		06/01/2004	0.328 TC		09/11/2009	0.318 TC		01/12/2011	7.5	0.6	0.1	7.5	0.282 U	7.5	10/31/2015	01/12/2012
2.04	SH-RIGHT	Y *	0.322 NM		06/01/2004	0.319 TC		09/11/2009	0.301 TC		01/12/2011	13.5	3.2	2.4	13.5	0.282 U	13.5	06/09/2012	01/12/2012
3.01	SH-FRONT	Y *	0.322 NM		06/01/2004	0.325 TC		09/11/2009	0.311 TC		01/12/2011	10.5	1.7	1.0	10.5	0.282 U	10.5	10/17/2013	01/12/2012
3.02	SH-LEFT	N	0.322 NM		06/01/2004	0.331 TC		09/11/2009	0.323 TC		01/12/2011	6.0	0	0	6.0	0.282 U	6.0	11/12/2017	01/12/2012
3.03	SH-BACK	N	0.322 NM		06/01/2004	0.321 TC		09/11/2009	0.314 TC		01/12/2011	5.2	1.2	0.9	5.2	0.282 U	5.2	03/09/2017	01/12/2012
3.04	SH-RIGHT	N *	0.322 NM		06/01/2004	0.329 TC		09/11/2009	0.320 TC		01/12/2011	6.7	0.3	0	6.7	0.282 U	6.7	09/14/2016	01/12/2012

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(Report in Inches, Corrosion Rates in MPY)
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Unit: LH-0010
Eq/Circ ID: LH0010-FGS-2
Design Code: S8/D1
Eq Type: VESSEL
Class:
CM RBI:

Flange Rating: 285 lb/in²
Design Pressure: 150 lb/in²
Design Temperature: 100 °F

Description: FUEL GAS SCRUBBER ON LH0010, SN:BSFGS230
(8.625" PIPE)-FLAT HEADS, SHELL UT ONLY

TML Corrosion Rates are each the Maximum of:
(A) -- Calculated Corrosion Rates x 1.00
(B) -- Default Corrosion Rate

Representative Corrosion Rate is the Maximum of:
(A) -- Average Corrosion Rate x 1.10
(B) -- Average Max 25.0% of TMLs, Min of 2
(C) -- Formula Corrosion Rate (Sigma = 1.28)
(D) -- Default Corrosion Rate
Representative Corrosion Rate = 0.1 MPY

:	Varies
:	2.0 MPY
:	Not Used.
:	Not Used.
:	Not Used.
:	0.1 MPY

TML thickness readings have not been compensated for high Temperatures.
TML thickness readings have not been compensated for growths.

TML Life calculations are based on the Representative TML Corrosion Rate using Short Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 3 months.

TML Inspection Interval is:
(A) -- 1.00 years.

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

Eq/Circ ID Estimated life = 3.8 years from the most recent survey date.
(Estimated Life based on the ave of the earliest 25% (Min 6) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 10/21/2014

Recommended Eq/Circ UT/RT Inspection Date is 01/12/2012
UT/RT Inspection Interval is 1.00 years.

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 3.00 Years.
There are 2 Caution TMLs in this Eq/Circ ID.