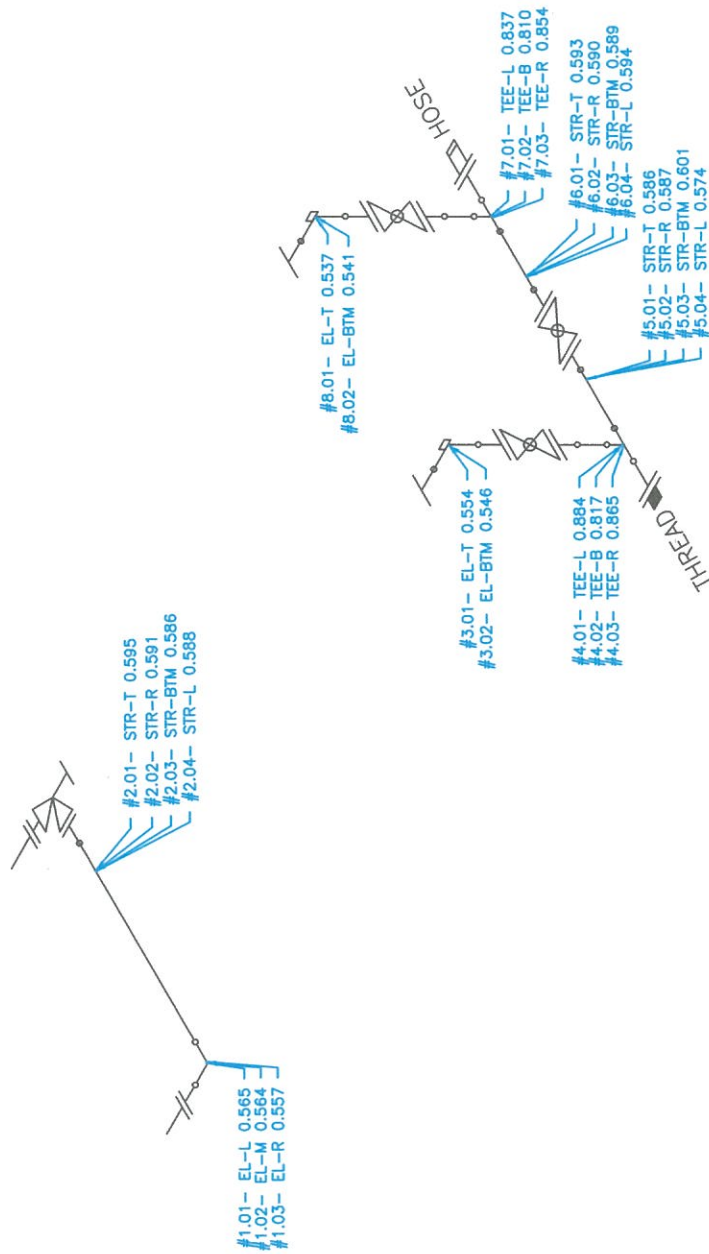


EQUIP RETIREMENT DATE: 3/23/4011
NEXT INSPECTION IS DUE: 3/7/2012



LH0011-P

DESC: ASSOCIATED PIPING ON LINE HEATER
DWG#: LH0011-P-1.01-8.02

DM-401

UltraPIPE Inspection Data Management
Hawkeye Inspection, LLC
1595 So. Hwy 150, Suite F
Evanston, WY 82930 307-789-3540

Report Date: 04/22/2011

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011
Eq/Circ ID: LH0011-P
Eq Type: PIPING
Class:
CM RBI:
Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: ASSOCIATED PIPING ON LINE HEATER

Summary: Group Name: Insp. Due Date = 03/01/2012
Pred. Ret. Date = 03/23/4011

Group Description:
RCR = 0.1 MPY

Rem. Life (from last survey 03/08/2011) = 2000.0 yrs

0 C.A. Status: No
Total Caution TMLs = 0

TMl No	Location	Ctn TML	First Survey Thick	First Date	Previous Survey Thick	Previous Date	Last Survey Thick	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TMl Retirement Date	TMl Inspection Date
1.01	EL-L	N *		N/A		N/A	0.565	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
1.02	EL-M	N *		N/A		N/A	0.564	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
1.03	EL-R	N *		N/A		N/A	0.557	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
2.01	STR-T	N *		N/A		N/A	0.545	03/08/2011	N/A	N/A	N/A	2.2	0.260	0.1	03/23/4011	03/07/2012
2.02	STR-R	N *		N/A		N/A	0.591	03/09/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
2.03	STR-BTM	N *		N/A		N/A	0.586	03/08/2011	N/A	N/A	N/A	10.5	0.260	0.1	03/23/4011	03/07/2012
2.04	STR-L	N *		N/A		N/A	0.588	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
3.01	EL-T	N *		N/A		N/A	0.554	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
3.02	EL-BTM	N *		N/A		N/A	0.546	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
4.01	TEE-L	N *		N/A		N/A	0.824	02/06/2011	N/A	N/A	N/A	6.0	0.260	0.1	03/23/4011	03/07/2012
4.02	TEE-B	N *		N/A		N/A	0.817	03/08/2011	N/A	N/A	N/A	10.5	0.260	0.1	03/23/4011	03/07/2012
4.03	TEE-R	N *		N/A		N/A	0.865	03/08/2011	N/A	N/A	N/A	5.2	0.260	0.1	03/23/4011	03/07/2012
5.01	STR-T	N *		N/A		N/A	0.586	03/08/2011	N/A	N/A	N/A	10.3	0.260	0.1	03/23/4011	03/07/2012
5.02	STR-R	N *		N/A		N/A	0.587	03/08/2011	N/A	N/A	N/A	2.2	0.260	0.1	03/23/4011	03/07/2012
5.03	STR-BTM	N *		N/A		N/A	0.601	03/09/2011	N/A	N/A	N/A	0.7	0.260	0.1	03/23/4011	03/07/2012
5.04	STR-L	N *		N/A		N/A	0.574	03/09/2011	N/A	N/A	N/A	1.5	0.260	0.1	03/23/4011	03/07/2012
6.01	STR-T	N *		N/A		N/A	0.593	03/09/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
6.02	STR-R	N *		N/A		N/A	0.590	03/09/2011	N/A	N/A	N/A	3.0	0.260	0.1	03/23/4011	03/07/2012
6.03	STR-BTM	N *		N/A		N/A	0.589	03/09/2011	N/A	N/A	N/A	3.7	0.260	0.1	03/23/4011	03/07/2012
6.04	STR-L	N *		N/A		N/A	0.594	03/09/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012

UltraPIPE Inspection Data Management
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Report Date: 04/22/2011

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011
Eq/Circ ID: LH0011-P
Eq Type: PIPING
Class:
CM RBI:
Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: ASSOCIATED PIPING ON LINE HEATER

Summary: Group Name: Group Description: 0 C.A. Status: NO
Insp. Due Date = 03/07/2012 RCR = 0.1 MPY Total Caution TMLs = 0
Pred. Ret. Date = 03/23/4011 Rem. Life (from last survey 03/08/2011) = 2000.0 yrs

TM L No	Location	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TM L Retirement Date	TM L Inspection Date
7.01	TEE-L	N *		N/A		N/A	0.837	03/08/2011	N/A	N/A	N/A	3.7	0.260	0.1	03/23/4011	03/07/2012
7.02	TEE-B	N *		N/A		N/A	0.810	03/08/2011	N/A	N/A	N/A	3.7	0.260	0.1	03/23/4011	03/07/2012
7.03	TEE-R	N *		N/A		N/A	0.854	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	03/07/2012
8.01	EL-T	N *		N/A		N/A	0.537	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	02/07/2012
8.02	EL-BTM	N *		N/A		N/A	0.541	03/08/2011	N/A	N/A	N/A	0	0.260	0.1	03/23/4011	02/07/2012

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Report Date: 04/22/2011

(Report in Inches, Corrosion Rates in MPY)
 Analysis: Straight Line

Unit: LH-0011
 Eq/Circ ID: LH0011-P
 Design Code: B31.3
 Eq Type: PIPING
 Class:
 CM RBI:

Description: ASSOCIATED PIPING ON LINE HEATER

TML Corrosion Rates are each the Maximum of:

(A) -- Calculated Corrosion Rates x 1.00 : Varies
 (B) -- Default Corrosion Rate : 0.1 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.00 : 0.1 MPY
 (B) -- Average Max 25.0% of TMLs, Min of 2 : 0.1 MPY
 (C) -- Formula Corrosion Rate (Sigma = 1.28) : 0.1 MPY
 (D) -- Default Corrosion Rate : 0.1 MPY

Representative Corrosion Rate = 0.1 MPY

TML thickness readings have not been compensated for high Temperatures.
 TML thickness readings have 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) -- Minimum(TML Life / 2.00, 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 = 2000.0 years from the most recent survey date.

(Estimated Life based on the ave of the earliest 0% (Min 6) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 03/23/4011

Recommended Eq/Circ UT/RT Inspection Date is 03/07/2012

UT/RT Inspection Interval is the minimum(Remaining life / 2.0, 1.00 years).

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining life < 1.00 Years.
 There are 0 Caution TMLs in this Eq/Circ ID.