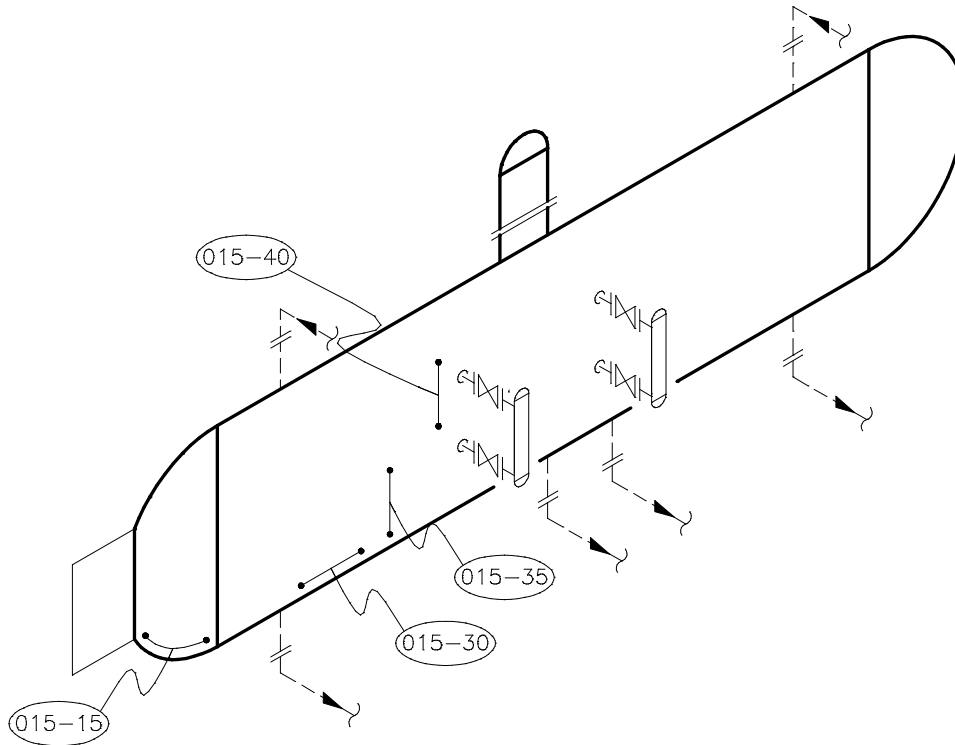


P&ID. # _____
REF. # _____



VESSEL DATA

P.E. No. N/S Serial No. L-8-340 Prov. Reg. No. A2781543 C.R.N. K6455.2
MFR. N/S Code/Div. ASME VIII DIV.1 Para N/S Code Stamp U
Yr. Bit. 1992 Manway YES Vessel Size N/S Service SOUR PWHT YES
PSV# N/S SAP# N/S RT 1 Insulated NO

Nominal Thickness & Material

Head: 18.7mm Mat'l: SA-516-70N C.A.: 3.2mm Natnl.Board# N/S
Head: 15.6mm Repairs _____
Shell: 12.7mm N/S 3.2mm Reason _____

Chan Hd: _____
Chan Sh: _____
Boot Hd: _____
Boot Sh: _____

MAWP Shell Side 75PSI @ Temp. 250°F

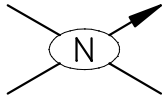
MAWP Tube Side _____ @ Temp. _____

COMMENTS: _____

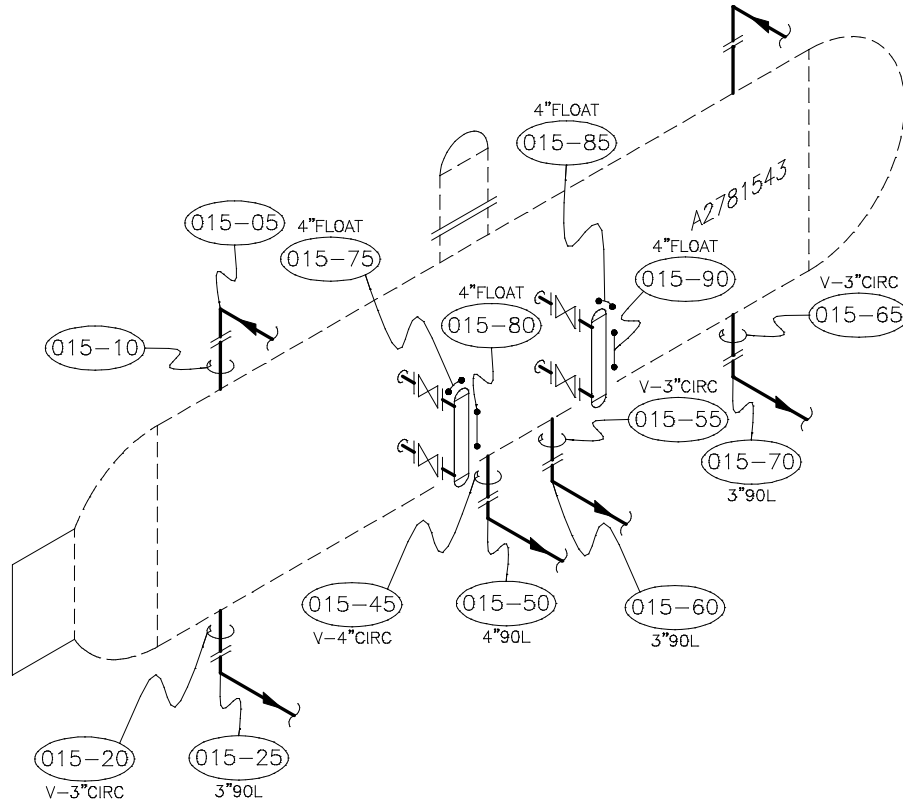
APACHE CORPORATION
ZAMA FIELD
LSD 09-28-117-04W6M

OIL TREATER

TECH.: <u>G.Y.</u>	REV.DATE: _____	DWG DATE: <u>2013/02</u>
CAD: <u>Z.M.</u>	REVISION: _____	DRAWING: <u>015</u>



P&ID # _____
REF. # _____



PIPING DATA

THICKNESS MEASUREMENT LOCATION:	SIZE	PROC.	LINE #	SPEC.	SCH.	NOM.THK.	CORR. ALLW.	MIN.THK.	CAL.THK.	FLG. RATING
015-05										
015-10										
015-20/55/65	3"				160	11.1mm	3.2mm	7.9mm		150#
015-25/60/70	3"				STD	5.5mm	ASTM	4.8mm		150#
015-45	4"				120	11.1mm	3.2mm	7.9mm		150#
015-50	4"				XH	8.6mm	ASTM	7.5mm		150#
015-75/80/85/90	4"				STD	6.0mm	ASTM	5.3mm		

COMMENTS: _____

APACHE CORPORATION
ZAMA FIELD
LSD 09-28-117-04W6M

OIL TREATER PIPING

TECH.: G.Y.	REV.DATE:	DWG.DATE: 2013/02
CAD: Z.M.	REVISION:	DRAWING: 015A

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER	Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----
		Ser. No.: L-8-340

015

MINIMUM THICKNESS / CORROSION RATE SUMMARY

Date	TML	Description:	Nom. Thk.	C.A. as per	C.A.	<i>t</i>	Lowest Recorded Reading	Indv.	Short	Long	Mths.
					Calc.	<i>Min.</i>		Term	Term	Term	Rem.
					C.A. LFL	LFL		Corr. Rate	Corr. Rate	Corr. Rate	To LFL
2013-02-2	25	3"90L T-B (150#)	5.500	ASTM	-- 0.688	-- 4.812	4.200				
2013-02-2	50	4"90L T-B (150#)	8.600	ASTM	-- 1.075	-- 7.525	7.000				
2013-02-2	70	3"90L T-B (150#)	5.500	ASTM	-- 0.688	-- 4.812	5.800				
2013-02-2	80	4"FLOAT SHELL T-B	6.000	ASTM	-- 0.750	-- 5.250	5.300				
2013-02-2	90	4"FLOAT SHELL T-B	6.000	ASTM	-- 0.750	-- 5.250	5.300				

COMMENTS:

05 2013/02 - NO RDGS TAKEN, NO SAFE ACCESS TO UPPER VESSEL GAS BOOT & PIPING

10 2013/02 - NO RDGS TAKEN, NO ACCESS

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER	Lsd:	09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.:	-----
SKID No.		PSV No.:	
		Ser. No.:	L-8-340
		Last VE Date:	

Description: PIPING 90L

TML: 015-05

	<u>C.A. as per</u>		
Nominal:		C.A. L.F.L.:	Con't Service:
t Min.:		L.F.L.:	Insp. Intv. 0
C.A. Calc.:		Mths.To L.F.L.:	Add'l Assm't:
<u>Survey Dates:</u>			

Data Evaluation:

Lowest Reading
Average - Low 3
Thk.Rem. Above LFL
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Comments:

2013/02 - NO RDGS TAKEN, NO SAFE ACCESS TO UPPER VESSEL GAS BOOT & PIPING

Description: PIPING CIRC

TML: 015-10

	<u>C.A. as per</u>		
Nominal:		C.A. L.F.L.:	Con't Service:
t Min.:		L.F.L.:	Insp. Intv. 0
C.A. Calc.:		Mths.To L.F.L.:	Add'l Assm't:
<u>Survey Dates:</u>			

Data Evaluation:

Lowest Reading
Average - Low 3
Thk.Rem. Above LFL
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Comments:

2013/02 - NO RDGS TAKEN, NO ACCESS

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: SOUTH BTM HEAD T-B

TML: 015-15

Nominal:	18.700	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	15.500	Design	L.F.L.:	15.500	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 19.500
Reading 02: 19.700
Reading 03: 19.600
Reading 04: 19.200
Reading 05: 19.300
Reading 06: 19.200

Data Evaluation:

Lowest Reading 19.200
Average - Low 3 19.233
Thk.Rem. Above LFL 3.700
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: VESSEL 3"CIRC N-E-S-W (150#)

TML: 015-20

Nominal:	11.100	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	7.900	Design	L.F.L.:	7.900	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 11.400
Reading 02: 11.400
Reading 03: 11.300
Reading 04: 11.000

Data Evaluation:

Lowest Reading 11.000
Average - Low 3 11.233
Thk.Rem. Above LFL 3.100
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 3"90L T-B (150#)

TML: 015-25***

PID #:

Nominal:	5.500	<u>C.A. as per</u>	C.A. L.F.L.:	0.688	Con't Service:	NO
t Min.:	--	ASTM	L.F.L.:	4.812	Insp. Intv.	0
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2013-02-28

Reading 01: 5.800
Reading 02: 4.500
Reading 03: 4.300
Reading 04: 4.200
Reading 05: 4.500

Data Evaluation:

Lowest Reading 4.200
Average - Low 3 4.333
Thk.Rem. Above LFL ***-0.612
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: BTM SHELL S-N

TML: 015-30

Nominal:	12.700	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service:	YES
t Min.:	9.500	Design	L.F.L.:	9.500	Insp. Intv.	12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2013-02-28

Reading 01: 13.300
Reading 02: 13.400
Reading 03: 13.400
Reading 04: 13.500
Reading 05: 13.400
Reading 06: 13.500

Data Evaluation:

Lowest Reading 13.300
Average - Low 3 13.367
Thk.Rem. Above LFL 3.800
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER	Lsd:	09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.:	-----
SKID No.		PSV No.:	
		Ser. No.:	L-8-340
		Last VE Date:	

Description: LOWER SHELL T-B

TML: 015-35

Nominal:	12.700	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service:	YES
t Min.:	9.500	Design	L.F.L.:	9.500	Insp. Intv.	12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2013-02-28

Reading 01:	13.900
Reading 02:	13.900
Reading 03:	13.900
Reading 04:	13.800
Reading 05:	13.800
Reading 06:	13.800
Reading 07:	13.700
Reading 08:	13.700
Reading 09:	13.700
Reading 10:	13.700
Reading 11:	13.700
Reading 12:	13.700

Data Evaluation:

Lowest Reading	13.700
Average - Low 3	13.700
Thk.Rem. Above LFL	4.200
Indv. Short Term Rate (mm/yr)	
Short Term Rate (mm/yr)	
LongTerm Rate (mm/yr)	

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: MID SHELL T-B

TML: 015-40

Nominal:	12.700	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	9.500	Design	L.F.L.:	9.500	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 13.800
Reading 02: 13.900
Reading 03: 14.000
Reading 04: 13.900
Reading 05: 14.000
Reading 06: 14.000
Reading 07: 14.000
Reading 08: 14.000
Reading 09: 14.000
Reading 10: 14.000
Reading 11: 14.000
Reading 12: 14.000

Data Evaluation:

Lowest Reading 13.800
Average - Low 3 13.867
Thk.Rem. Above LFL 4.300
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: VESSEL 4"CIRC N-E-S-W (150#)

TML: 015-45

Nominal:	11.100	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	7.900	Design	L.F.L.:	7.900	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 11.700
Reading 02: 11.000
Reading 03: 11.300
Reading 04: 11.200

Data Evaluation:

Lowest Reading 11.000
Average - Low 3 11.167
Thk.Rem. Above LFL 3.100
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 4"90L T-B (150#)

TML: 015-50***

PID #:

Nominal:	8.600	<u>C.A. as per</u>	C.A. L.F.L.:	1.075	Con't Service: NO
t Min.:	--	ASTM	L.F.L.:	7.525	Insp. Intv. 0
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 7.200
Reading 02: 7.300
Reading 03: 7.400
Reading 04: 7.100
Reading 05: 7.100
Reading 06: 7.000

Data Evaluation:

Lowest Reading 7.000
Average - Low 3 7.067
Thk.Rem. Above LFL ***-0.525
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: VESSEL 3"CIRC N-E-S-W (150#)

TML: 015-55

Nominal:	11.100	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	7.900	Design	L.F.L.:	7.900	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 11.300
Reading 02: 11.300
Reading 03: 11.600
Reading 04: 11.700

Data Evaluation:

Lowest Reading 11.300
Average - Low 3 11.400
Thk.Rem. Above LFL 3.400
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 3"90L T-B (150#)

TML: 015-60

PID #:

Nominal:	5.500	<u>C.A. as per</u>	C.A. L.F.L.:	0.688	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	4.812	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 5.700
Reading 02: 5.600
Reading 03: 5.400
Reading 04: 5.400
Reading 05: 5.400

Data Evaluation:

Lowest Reading 5.400
Average - Low 3 5.400
Thk.Rem. Above LFL 0.588
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: VESSEL 3"CIRC N-E-S-W (150#)

TML: 015-65

Nominal:	11.100	<u>C.A. as per</u>	C.A. L.F.L.:	3.200	Con't Service: YES
t Min.:	7.900	Design	L.F.L.:	7.900	Insp. Intv. 12
C.A. Calc.:	3.200		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 11.200
Reading 02: 11.500
Reading 03: 11.100
Reading 04: 11.100

Data Evaluation:

Lowest Reading 11.100
Average - Low 3 11.133
Thk.Rem. Above LFL 3.200
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 3"90L T-B (150#)

TML: 015-70*

PID #:

Nominal:	5.500	<u>C.A. as per</u>	C.A. L.F.L.:	0.688	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	4.812	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 6.300
Reading 02: 5.800
Reading 03: 6.000
Reading 04: 6.100
Reading 05: 6.200

Data Evaluation:

Lowest Reading 5.800
Average - Low 3 5.967
Thk.Rem. Above LFL 0.988
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: 4"FLOAT HEAD T-B

TML: 015-75

Nominal:	6.000	<u>C.A. as per</u>	C.A. L.F.L.:	0.750	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	5.250	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 6.400
Reading 02: 6.500
Reading 03: 6.500
Reading 04: 6.400
Reading 05: 6.500
Reading 06: 6.500

Data Evaluation:

Lowest Reading 6.400
Average - Low 3 6.433
Thk.Rem. Above LFL 1.150
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 4"FLOAT SHELL T-B

TML: 015-80**

Nominal:	6.000	<u>C.A. as per</u>	C.A. L.F.L.:	0.750	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	5.250	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 5.900
Reading 02: 5.300
Reading 03: 5.500
Reading 04: 5.500
Reading 05: 5.300

Data Evaluation:

Lowest Reading 5.300
Average - Low 3 5.367
Thk.Rem. Above LFL **0.050
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

Description: 4"FLOAT HEAD T-B

TML: 015-85

Nominal:	6.000	<u>C.A. as per</u>	C.A. L.F.L.:	0.750	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	5.250	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01: 6.100
Reading 02: 6.100
Reading 03: 6.100
Reading 04: 6.100
Reading 05: 6.100
Reading 06: 5.900

Data Evaluation:

Lowest Reading 5.900
Average - Low 3 6.033
Thk.Rem. Above LFL 0.650
Indv. Short Term Rate (mm/yr)
Short Term Rate (mm/yr)
LongTerm Rate (mm/yr)

APACHE CORPORATION
ZAMA FIELD - (242)
UNIT #2 - (02)

TEAM Industrial Services

Item Desc.:	OIL TREATER		Lsd: 09-28-117-04W6M
Prov. Reg.:	A2781543	Equip. No.: -----	Ser. No.: L-8-340
SKID No.		PSV No.:	Last VE Date:

Description: 4"FLOAT SHELL T-B

TML: 015-90**

Nominal:	6.000	C.A. as per	C.A. L.F.L.:	0.750	Con't Service: YES
t Min.:	--	ASTM	L.F.L.:	5.250	Insp. Intv. 12
C.A. Calc.:	--		Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2013-02-28

Reading 01:	5.900
Reading 02:	5.300
Reading 03:	5.500
Reading 04:	5.700
Reading 05:	6.100

Data Evaluation:

Lowest Reading	5.300
Average - Low 3	5.500
Thk.Rem. Above LFL	**0.050
Indv. Short Term Rate (mm/yr)	
Short Term Rate (mm/yr)	
LongTerm Rate (mm/yr)	