Centurion Pipeline L.P.

December 15, 2014

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By

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Mr. R.M. Seeley, Director
U.S. Department of Transportation
Pipeline & Hazardous Materials Safety Administration
Southwest Region
8701 South Gessner, Suite 1110
Houston, TX 77074

RE: CPF 4-2014-5029M

Dear Mr. Seeley:

Centurion Pipeline Company L.P. ("Centurion") acknowledges receipt of and hereby timely responds to the Notice of Amendment dated November 10, 2014, in the above-referenced matter (the "NOA").

In the NOA, the Pipeline & Hazardous Materials Safety Administration ("PHMSA") alleges that "Centurion's Liquid Operations Manual Procedure P-195.432: Inspection of In-Service Breakout Tanks is inadequate as it does not consider the corrosion rate for calculating external inspection intervals for the breakout tanks," citing API 653, Section 6.3.2.1. PHMSA proposes that "Centurion must amend their procedure to consider the corrosion rate to calculate the external inspection interval as per [API 653, Section 6.3.2.1]."

Without waiving its rights to contest any alleged violation in any other enforcement matter pending before PHMSA, Centurion does not contest the NOA. Accordingly, Centurion has revised "Liquid Operations Manual Procedure P-195.432: Inspection of In-Service Breakout Tanks" to include reference to the RCA/4N corrosion rate calculation for external inspection intervals contained in API 653, Section 6.3.2.1.

A copy of Centurion's revised procedure is attached hereto as Attachment A. Centurion also has attached hereto as Attachment B an example of a breakout tank corrosion rate calculation pursuant to the revised procedure.

Centurion believes that the attached revised procedure addresses the issues in the NOA and provides a basis for expedited resolution of this matter. Please feel free to contact the undersigned at 713.215.7019 if there are any questions or concerns regarding the attached procedural revision.

Sincerely,

Melissa G. Freeman

Melissa G. Freeman
Senior Counsel

Attachments

cc: Bill Boyer
Shawn McGovern
Gregory Romero

ATTACHMENT A

LIQUID OPERATIONS MANUAL
PROCEDURE P-195.432: INSPECTION OF IN-SERVICE BREAKOUT TANKS

REVISED AS OF DECEMBER 2014

P-195.432: Inspection of In-Service Breakout Tanks

Description This procedure gives the steps required for periodic in-service tank inspection.

Regulatory Applicability DOT regulated atmospheric breakout tanks.

Frequency The interval between inspections of a tank (both internal and external) should be determined by its service history unless special reasons indicate that an earlier inspection must be made. A history of the service of a given tank or a tank in similar service (preferably at the same site) should be available so that complete inspections can be scheduled with a frequency commensurate with the corrosion rate of the tank.

- Routine In-service Inspection – Monthly
- External Inspection – Every 5 years or *RCA/4N* years (where *RCA* is the difference between the measured shell thickness and the minimum required thickness in mils, and *N* is the shell corrosion rate in mils per year), whichever is less.
- Ultrasonic Thickness Inspection
  - Corrosion Rate Unknown – Every 5 years
  - Corrosion Rate Known – ~~(remaining corrosion allowance/(2 *shell corrosion rate in mils per year))~~ *RCA/2N* years (where *RCA* is the difference between the measured shell thickness and the minimum required thickness in mils, and *N* is the shell corrosion rate in mils per year) or 15 years whichever is smaller.
- Internal Inspection – Set to ensure that the bottom plate minimum thickness at the next inspection is not less than the values in Table 1 at the end of this procedure, or 20 years whichever is sooner. If corrosion rates are not known and similar service experience is not available, the actual bottom thickness shall be determined by inspection within the next 10 years of tank operation to establish corrosion rates.

Reference	49 CFR 195.432	Inspection of In-Service Breakout Tanks
	New Mexico 18.60.2.8(A)(4)	Adoption of Portions of the Code of Federal Regulations: Adoption by Reference
	Texas TAC 8.1	General Applicability and Standards
Forms	F-195.432 or Equivalent Maximo Form	Breakout Tank Inspections
Related Specifications	API Standard 653	Tank Inspection, Repair, Alteration, and Reconstruction
OQ Covered Task List	CT18	Inspection of Breakout Tanks

(In order to perform the tasks listed above, personnel must be qualified in accordance with the company's Operator Qualification program or directly supervised by a qualified individual.)

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ATTACHMENT B

EXAMPLE OF CORROSION RATE CALCULATION UNDER REVISED PROCEDURE P-195.432

CALCULATON FOR BREAKOUT TANK 2722 AS OF DECEMBER 2014

4.3.2 SHELL THICKNESS CALCULATIONS

The minimum acceptable shell plate thickness for tanks with a diameter equal to or less than two hundred (200) feet is calculated as follows (ref. API 653, Para. 4.3.3.1):

$$t_{min} = \frac{2.6(H-1)DG}{SE}$$

Where:

S =	See Table	=	Allowable Stress (psi)
D =	120.00	=	Nominal Diameter of Tank (ft.)
G =	1.00	=	Highest Specific Gravity of Contents
H =	See Table	=	Product Height (ft.)
E =	See Table	=	Joint Efficiency

Course	Course Height (in.)	Product Height (ft.)	Allowable Stress (psi)	Joint Efficiency	Average Thickness (in.)	Required Thickness (in.)
1	95	42.58	23,600	0.85	0.851	0.647
2	73	34.66	23,600	0.85	0.609	0.524
3	73	28.58	26,000	0.85	0.519	0.389
4	67	22.50	26,000	0.85	0.478	0.303
5	67	16.91	26,000	0.85	0.417	0.225
6	68	11.33	26,000	0.85	0.294	0.146
7	68	5.66	26,000	0.85	0.252	0.100

Shell thickness calculations indicate the hydrostatic test height of 42.58 feet can be utilized with product specific gravities up to 1.0. For products with a specific gravity over 1.0, additional calculations should be performed (ref. API 653, Para. 4.3.3.1). These calculations do not take into account operational restrictions from such items as high-level alarms or owner / operator-imposed safe fill restrictions. There are no shell-mounted overflow vents on this tank.

Centurion Pipeline LLC
Midland Station

API 653 In Service Inspection
Shell Thickness Measurements,
RCA/2N Calculations & RCA/4N Calculations
as of December 2014

Tank 2722

1st Course Readings taken in 4 Quadrants

2722	North	East	South	West
Top	0.860	0.854	0.824	0.828
Center	0.864	0.862	0.840	0.836
Bottom	0.852	0.858	0.838	0.858
Average	0.859	0.858	0.834	0.841

1st Course Shell Average **0.848**

2nd Course

Top	0.600
Middle	0.596
Bottom	0.596

0.597

3rd Course

Top	0.508
Middle	0.502
Bottom	0.508

Readings taken along stairway

4th Course

Top	0.456
Middle	0.468
Bottom	0.460

Readings taken along stairway

5th Course

Top	0.396
Middle	0.412
Bottom	0.396

Readings taken along stairway

6th Course

Top	0.284
Middle	0.288
Bottom	0.284

Readings taken along stairway

7th Course

Top	0.252
Middle	0.256
Bottom	0.232

Centurion Pipeline LLC
Midland Station

API 653 In Service Inspection
Shell Thickness Measurements,
RCA/2N Calculations & RCA/4N Calculations
as of December 2014

Tank 2722

J/E	0.85						
Stress	21000						
Diameter	120						
Height	42.5	37	31	26	20	14	8
Gravity H2O	1						
Gravity Oil	0.8						

Required *t* Min thickness 1st Course			Lowest UT Reading	*t* Min Acceptable for Continued Service		
0.524	S.G-1.0	Water	0.824	Water	☒ Yes	☐ No
0.419	S.G.-0.80	Crude		Crude	☒ Yes	☐ No
Required *t* Min thickness 2nd Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.455	S.G-1.0	Water	0.596	Water	☐ Yes	☐ No
0.364	S.G.-0.80	Crude		Crude	☐ Yes	☐ No
Required *t* Min thickness 3rd Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.379	S.G-1.0	Water	0.502	Water	☒ Yes	☐ No
0.303	S.G.-0.80	Crude		Crude	☒ Yes	☐ No
Required *t* Min thickness 4th Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.309	S.G-1.0	Water	0.456	Water	☒ Yes	☐ No
0.248	S.G.-0.80	Crude		Crude	☒ Yes	☐ No
Required *t* Min thickness 5th Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.240	S.G-1.0	Water	0.396	Water	☒ Yes	☐ No
0.192	S.G.-0.80	Crude		Crude	☒ Yes	☐ No
Required *t* Min thickness 6th Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.164	S.G-1.0	Water	0.264	Water	☒ Yes	☐ No
0.131	S.G.-0.80	Crude		Crude	☒ Yes	☐ No
Required *t* Min thickness 7th Course			**Lowest UT Reading**	***t* Min Acceptable for Continued Service**		
0.087	S.G-1.0	Water	0.232	Water	☒ Yes	☐ No
0.070	S.G.-0.80	Crude		Crude	☒ Yes	☐ No

RCA/2N	10/01/2007	06/01/2013	Corrosion	Years	Corrosion Rate	Remaining Min/2	Next UT Years
1st Course	0.851	0.848	0.003	5.7	0.0005	0.214	407.29
2nd Course	0.609	0.597	0.012	5.7	0.0021	0.117	55.41

Based on UT readings taken and calculated with available data, the remaining shell thickness will be greater than the calculated RCA/2N. The shell UT inspection interval by Centurion Pipeline of 5 years conducted in conjunction with the 5 year API In-Service inspection interval and API 653 6.3.3.2(b) interval of 15 years is less than the calculated RCA/2N.

RCA/4N	10/01/07	06/01/13	Corrosion	Years	Corrosion Rate	Remaining Min/4	Next API 653 Years
1st Course	0.851	0.848	0.003	5.7	0.0005	0.1041	197.73
2nd Course	0.609	0.597	0.012	5.7	0.0021	0.0583	27.70

Based on the calculation of RCA/4N for the next required inspection interval, the calculated next inspection exceeds API 653 6.3.2.1 not to exceed 5 years.

UT Gauge	Cygnus 3	Serial # 751
Transducer	Dual Echo	2.25 MHz
Gauge Block	4340 CS	S.N.02-6674

Curtis Stewart
J D King Corp.
API 653 #0973