U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

APR 13 2016

Mr. Phillip Archer
Senior Midstream Manager
Whiting Oil & Gas Corporation
1700 Broadway, Suite 2300
Denver, CO 80290-2300

Dear Mr. Archer:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) dated November 16, 2015, you requested an interpretation of 49 CFR Part 195. You asked if the requirements of Part 195 apply to an 8-inch natural gas liquids pipeline that Whiting Oil and Gas Corporation operates in Weld County, Colorado.

You stated that Whiting Oil and Gas Corporation processes raw oil associated produced natural gas gathered from the Redtail Production Field. The natural gas liquids recovered from the gas is stored in four 90,000 gallon storage tanks. From the tanks, natural gas liquids can be transported away from the plant by truck or by pipeline, and no natural gas liquids is received from truck or pipeline at the plant.

You stated that prior to transportation from the tanks to a PHMSA regulated pipeline, the product enters charge pumps. The charge pumps have a maximum head of 19.5 pound per square inch gauge (psig) with 5 horsepower motors. Next, the natural gas liquids reach shipping pumps that have a maximum head of 1848 psig, where the product is metered. Between the charge pumps and shipping pumps, there are pressure relief devices that are set at 285 psig. Also, after the shipping pumps and metering station, the pressure is set at 2220 psig. Downstream of the metering station is a pressure control valve 9660A that is designed primarily to control the volume from the shipping pumps. Downstream of the pressure control valve 9660A there is a pressure relief device emergency shutdown valve XV 9663 set at 2200 psig. Valve 9660A is the last point of modulated pressure control, while the emergency shutdown valve XV 9663 is the last point of full open-closed automated pressure control and isolation prior to the pipeline going underground.

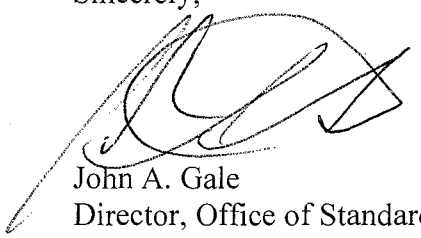
You stated that the Redtail natural gas liquids line is an 8-inch API 5L X52 ERW FBE steel coated pipeline with a wall thickness of 0.500-inches. The line was installed and pressure tested in 2015 and has a maximum operating pressure of 2220 psig. The line is buried approximately 8-feet below grade and is approximately 0.12 miles in length (647 feet). The pipeline ends at the custody transfer with Tallgrass Energy NGL Pipeline which has a maximum operating pressure of 2200 psig.

You stated that Whiting Oil and Gas Corporation has initially designated the inlet of the shipping pumps as the start of transportation and the beginning of PHMSA jurisdiction on hazardous liquid assets or the last point of pressure control depending on the configuration of the hazardous liquid asset. The shipping pumps' inlet jurisdictional point is being initially used by Whiting Oil and Gas Corporation because the shipping pumps are devices that can affect the pressure on the pipeline and Whiting Oil and Gas Corporation is using its most conservative interpretation while awaiting a determination from PHMSA. You further clarified that the charge pumps alone cannot send the natural gas liquids down the pipeline. Also, the shipping pumps have a maximum head pressure of 1848 psig which is less than the 2220 psig maximum operating pressure of the pipeline. Accordingly, the shipping pumps cannot overpressure the pipeline as described in § 195.406(b). Whiting Oil and Gas Corporation proposes to use emergency shutdown valve (ESD) XV 9663 as the jurisdictional point because ESD XV 9663 is the last point of pressure control by automated isolation upstream of the pipeline. Therefore, you asked if the ESD XV 9663 is where the PHMSA regulations start.

PHMSA agrees with the Whiting Oil and Gas Corporation initial assessment that the inlet (suction) of the shipping pumps is the starting point of transportation and regulated under Part 195. Also, this point is the beginning of PHMSA regulated pipeline because the shipping pumps are the closest devices to the storage tanks that can affect the safety of the pipeline. Therefore, the pipeline is regulated under 49 CFR Part 195 beginning at the shipping pumps.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,



John A. Gale
Director, Office of Standards
and Rulemaking

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Delivered via email to David Gale, Director of Standards and Rulemaking
Delivered via email to Ken Lee, Director of Engineering and Research
Delivered via email to David Murk, Director of Field Operations

November 16, 2015

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
East Building, 2nd Floor
Mail Stop: E24-455
1200 New Jersey Ave., SE
Washington, DC 20590
Attn: Interpretations

Re: Request for Written Interpretation for Start of DOT Jurisdiction on NGL Pipeline

Whiting Oil & Gas Corporation (Whiting) is requesting an interpretation of 49 CFR 195 as it applies to a short 8-inch natural gas liquid (NGL) line that Whiting operates in Weld County, Colorado in order to access a series of third party operated NGL pipelines

Whiting operates the Redtail Gas Plant (plant) in Weld County, Colorado which processes raw oil associated produced natural gas gathered from the Redtail Production Field. The NGL recovered from the gas is stored in four 90,000-gallon storage tanks. From the tanks, NGL can be transported away from the plant by truck via the truck sales rack or shipped via pipeline. See the attached plant Process Flow Diagram for reference. No NGL is received from truck or pipeline at the plant.

From the tanks, prior to shipment via Pipeline, NGL enters the charge pumps. The charge pumps have a maximum head of 19.5 psig with 5 horsepower motors. Next the NGL reaches the Shipping Pumps which have a maximum head of 1848 psig and then the NGL is metered. There are pressure relief devices between the charge pumps and Shipping Pumps set at 285 psig, between the Shipping Pumps and metering set at 2220 psig and after metering set at 2220 psig. Downstream of the metering is a pressure control valve PCV 9660A that is designed primarily to control the volume from the Shipping Pumps. Downstream of PCV 9660A is the last pressure relief device set at 2200 psig and the ESD XV 9663. The PCV 9660A is the last point of modulated pressure control, while the ESD XV 9663 valve is the last point of full open-closed automated pressure control and isolation prior to the pipeline going underground.

The Redtail NGL line is an 8-inch API 5L X52 ERW FBE steel coated pipeline with wall thickness of 0.500”. The line was installed and pressure tested in 2015 and has a MOP of 2220 psig. The line is buried approximately 8’ below grade and is approximately 0.12 miles

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in length (647 feet). The subject line ends at the custody transfer with Tallgrass Energy NGL Pipeline. The Tallgrass Energy NGL Pipeline has a MOP of 2200 psig.

Whiting has initially designated the inlet of the Shipping pumps as the start of transportation and the beginning of DOT jurisdiction on hazardous liquid assets or the last point of pressure control depending on the configuration of the hazardous liquid asset [49 CFR 195.1(b)(9)(ii)]. The Shipping Pumps inlet jurisdictional point is being initially used by Whiting because the Shipping Pumps are devices that can affect the pressure on the pipeline and Whiting is using its most conservative interpretation while awaiting a determination from PHMSA.

As a point of clarification, the Charge Pumps alone cannot send the NGL down the pipeline. Also, the Shipping Pumps have a maximum head pressure of 1848 psig which is less than the 2220 psig MOP of the pipeline (see attached Shipping Pump curve). Accordingly, the Shipping Pumps cannot overpressure the pipeline as described in 195.406(b).

Whiting proposes to use ESD XV 9663 as the jurisdictional point because ESD XV 9663 is the last point of pressure control via automated isolation upstream of the Pipeline. Whiting is requesting an interpretation from PHMSA to determine if the proposed jurisdictional point is acceptable.

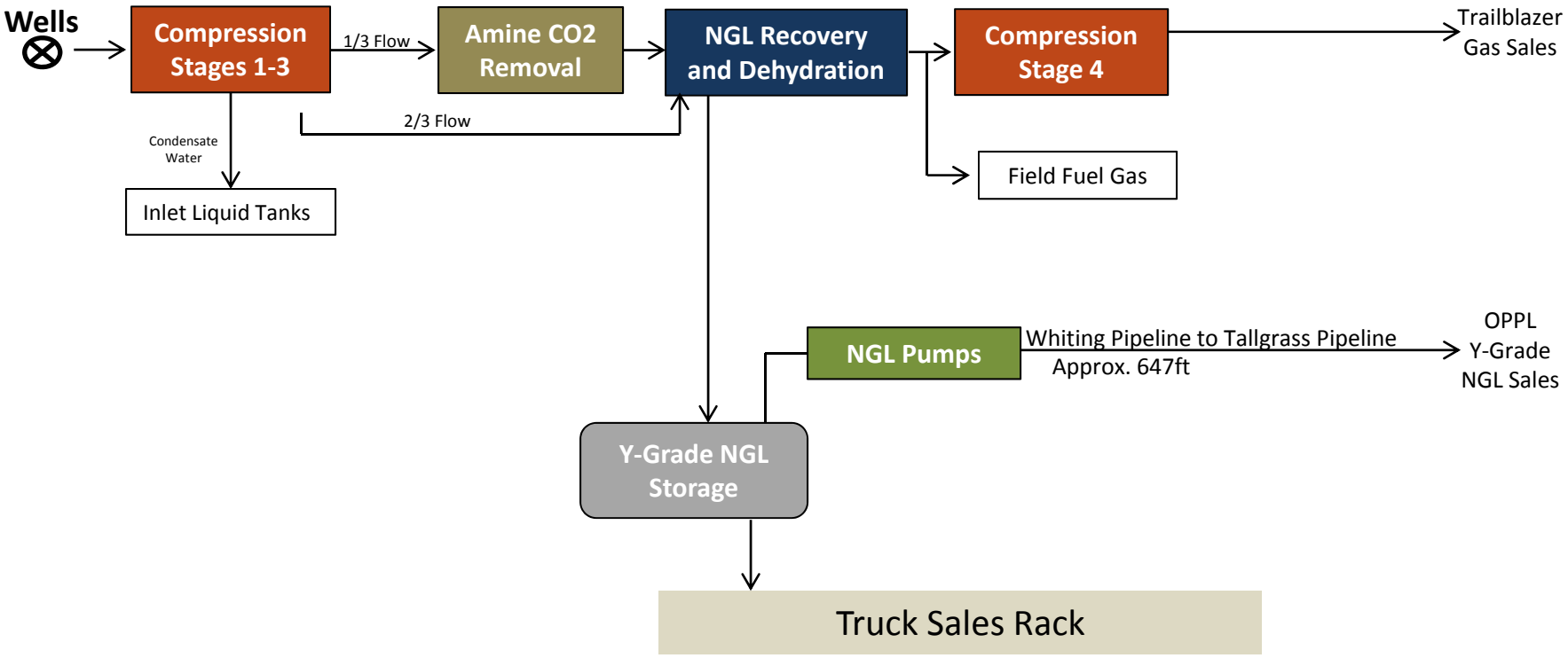
We look forward to your interpretation and response. If you have any questions, please contact me at 303-390-4055 or Phil.Archer@whiting.com.

Regards,

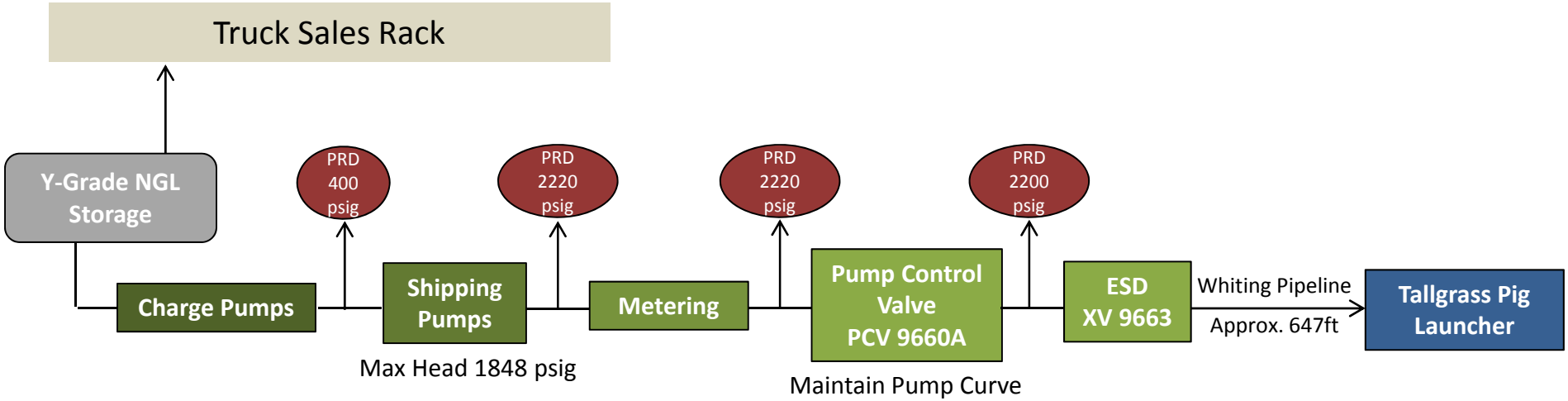
Phillip Archer
Senior Midstream Manager

Attachments:
Redtail Gas Plant Process Flow Diagram
Redtail NGL Pipeline Process Flow Diagram
Shipping Pump Curve

Redtail Gas Plant



Redtail NGL Pipeline



Whiting MOP is 2220 psig
Tallgrass MOP is 2200 psig

Pump Performance Datasheet

Customer	: GWD ENGINEERING, INC	Quote number	: 410438 - Rev 3
Customer reference	: Redtail Pipeline	Size	: SE0230
Item number	: retro with less stages	Stages	: 118
Service	: NGL - Pipeline	Based on curve number	: SE0230
Quantity	: 2	Date last saved	: 05 Oct 2015 11:12 AM

Operating Conditions

Flow, rated	: 225.0 USgpm
Differential head / pressure, rated (requested)	: 1,317.0 psi
Differential head / pressure, rated (actual)	: 1,317.9 psi
Discharge pressure (actual)	: 1,393.2 psi
Suction pressure, rated / max	: 90.00 / 110.0 psi.a
NPSH available, rated	: Ample
Frequency	: 60 Hz

Performance

Speed, rated	: 3570 rpm
Impeller diameter, rated	: 4.36 in
Impeller diameter, maximum	: 4.36 in
Impeller diameter, minimum	: 4.36 in
Efficiency	: 70.09 %
NPSH required / margin required	: 25.16 / 3.00 ft
Ns (imp. eye flow) / Nss (imp. eye flow)	: 3,132 / 4,490 US Units
MCSF	: 67.82 USgpm
Head, maximum, rated diameter	: 1,848.1 psi
Head rise to shutoff	: 39.55 %
Flow, best eff. point (BEP)	: 235.6 USgpm
Flow ratio (rated / BEP)	: 95.50 %
Diameter ratio (rated / max)	: 100.00 %
Head ratio (rated dia / max dia)	: 100.00 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Liquid

Liquid type	: User Defined
Additional liquid description	: NGL
Solids diameter, max	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 120.0 deg F
Fluid density, rated / max	: 0.550 / 0.550 SG
Viscosity, rated	: 0.18 cP
Vapor pressure, rated	: 37.30 psi.a

Material

Material selected	: Standard

Pressure Data

Maximum working pressure	: 1,943.4 psi.g
Maximum allowable working pressure	: N/A
Maximum allowable suction pressure	: N/A
Hydrostatic test pressure	: 2,915.0 psi.g

Driver & Power Data

Driver sizing specification	: Maximum power
Margin over specification	: 0.00 %
Service factor	: 1.00
Power, hydraulic	: 173 hp
Power, rated	: 247 hp
Power, maximum, rated diameter	: 260 hp
Minimum recommended motor rating	: 300 hp / 224 kW