
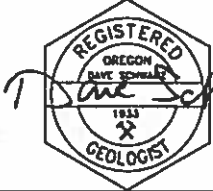




Hydrocarbon Processing Facility Inspection Form

Section 1: General Information	
Operation Data	Inspection Data
Operator Name: Northwest Gas Processing	Inspector Name: Dave Schwarz
Location Name: Highway 30 Plant	Address: 4201 US Highway 30, New Plymouth, ID
Authorized Contact: Wade Moore (832)248-9390	Inspection Date: 28 March 2019
County: Payette	Report Date: 28 March 2019
Inspector's Signature:  	Inspection Summary: <input checked="" type="checkbox"/> Operation appeared to be in compliance at the time of the inspection. <input type="checkbox"/> Issues of concern identified at the time of the inspection. Summarize in Section 8.

Description of Facility: Processes Rich Gas and Well Condensate, both delivered by separate pipelines, into Residue Gas, Plant Condensate, and Y-grade mixed Natural Gas Plant Liquids.

Section 2: Operations	IDAPA 20.07.02.430
1. Does the operator have a flaring permit from the IDEQ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Do the staff have knowledge of all operations and locations of:	
A. Emergency shut off equipment?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Fluid Flow in Lines: Directions Marked?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Have all meter systems been calibrated within the past calendar year and are records of calibration maintained for the past five years?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Are all meter systems accessible and viewable?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Is there a system in place to continually monitor the liquids and gases in the facility?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Section 4: Location Operations	IDAPA 20.07.02.301
1. Is the site fenced? If yes, then does the fence help to:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
a. Maintain safe working conditions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Secure the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c. Prevent access by wildlife and livestock?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Are materials stored and maintained appropriately?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Do all vehicles or materials on the site appear to be in use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Is there less than 5% vegetation on site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Is the site free from all trash and debris?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Section 5: Accidents and Fires

IDAPA 20.07.02.302

- 1. Is the emergency response plan available for review? Yes No
- 2. Is the spill prevention and countermeasures plan available for review? Yes No

Section 6: Submitted Documentation

IDAPA 20.07.02.302

- 1. Has the operator submitted an as-built facility design plan that contains the minimum as required in rules? Submitted 2016 Yes No

Section 7: Tank Batteries

IDAPA 20.07.02.420

- 1. Are all tank batteries located at least 300 feet from any existing:
 - A. Occupied structures? Yes No
 - B. Water wells? Yes No
 - C. Natural or ordinary high water mark of surface waters? *NA built prior to new Rule* Yes No
- 2. Is location at least 50 feet from highways when measured from outermost portion of the tank dike? Yes No
- 3. Are all tanks surrounded by tank dikes? Yes No
 - A. If yes;
 - i. Do the dikes have a capacity of at least 1 1/2 times the volume of the largest tank? Yes No
 - ii. Is all piping and manmade improvements that perforate the dike wall or tank battery floor sealed to a minimum radius of 12" from outside edge of the piping or improvement? Yes No
 - iii. Are valves and quick-connect couplers at least 18" from inside wall of tank dike? Yes No
 - iv. Is vegetation on top and outside surface properly maintained? Yes No
 - v. Is a ladder or other permanent device installed over the tank dike to access the containment reservoir? Yes No
 - vi. Is containment reservoir free of vegetation, storm water, produced fluids, other oil and gas field related debris, trash or flammable material? Yes No
minor standing water puddles from heavy rain. No sheen.
- 5. Do drain lines have a valve installed, closed and capped off if not in use? Yes No

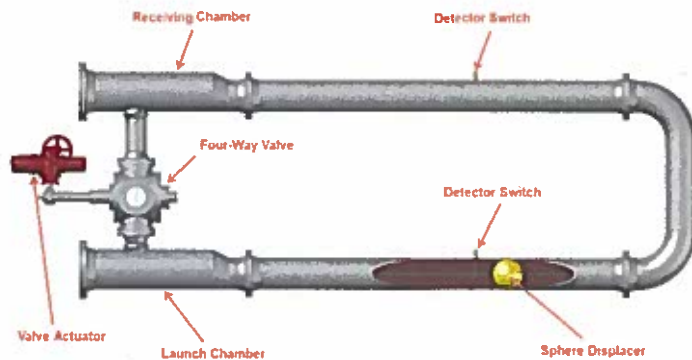
Section 8: Inspection Comments

See attached page. Volumetrics was on site with prover.
TJLS

28March2019. Hwy 30 Inspection. Watched Volumetrics Field Measurement Specialists, Evanston, WY using their trailer-mounted bi-directional sphere prover device to determine the meter factor of the Lease Automatic Custody Transfer (LACT) meter devices, using the calibrated volume of the prover. Meter Factor = Prover Actual Volume/ Meter Indicated Volume.

The following diagrams from: https://www.readyflo.com/assets/files/Bi-Directional-Provers_ISHM2015-Presentation.pdf

BI-DIRECTIONAL PROVER



SPHERE DISPLACER VELOCITY

$$\text{Max. } V = \frac{\text{BPH} \times 0.286}{(\text{I.D. [in]})^2} = \leq 5.0 \text{ fps}$$

Note: Minimum Velocity to be no less than 0.5 fps



$$\text{Max. } V = \frac{3,960 \times 0.286}{(16)^2} = 4.42 \text{ fps}$$

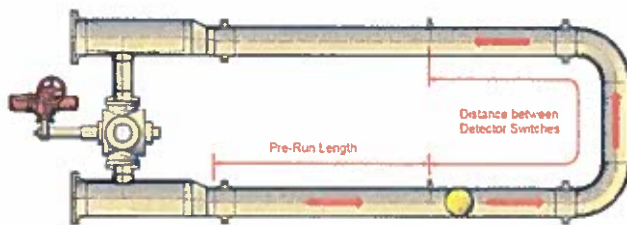
Example:

Max. Flow Rate = 3,960 BPH

Pipe Diameter = 16"

PROVER VOLUME

- Pre-run length
- Distance (volume) between detector switches



I only watched one prover event on NGPL LACT meter. . Volumetrics Prover is over 20 years old. It is identical to what I witnessed 20+ years ago used in Nevada. *Dave Schwarz*

