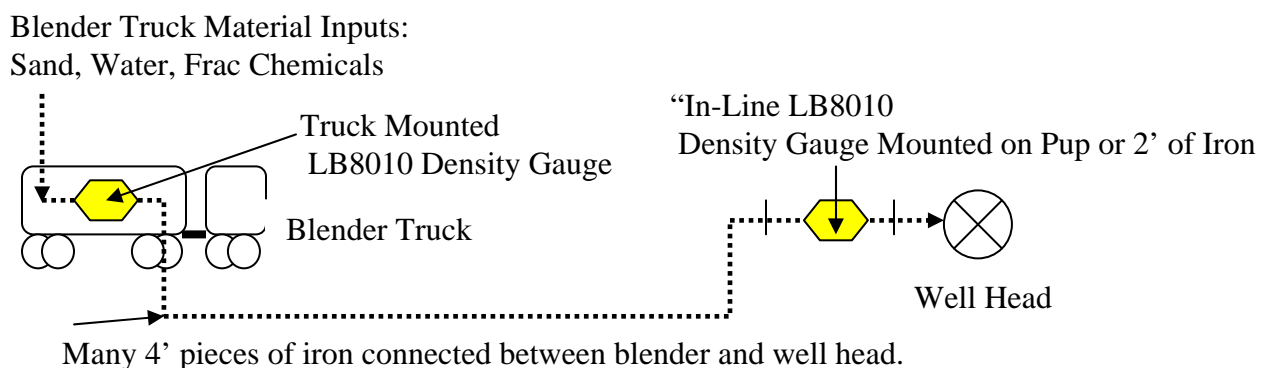


Information Needed to Support Applicant's Request to Include "In-Line" Density Gauge in License

Universal Well Services, Inc. (UWS) wishes to include an additional Berthold LB8010 density gauge in its application for materials license. The application currently under review is for one LB8010 that is installed on a truck (specifically a blender truck). Per the request of Sattar Lodhi, NRC, this document serves to supply the NRC with details on the use, transportation and security measures of a density gauge used in "in-line" services, rather than mounted on a truck.

Sketch of typical layout of density gauge locations



Use of an "In-Line" Density Gauge

The gauges are designed to measure a slurry of material flowing through pipe (commonly termed "iron"). The slurry consists of water, sand and a small percentage of frac chemicals (e.g. friction reducer). UWS customers require knowledge of how much sand is used. The measurement can be performed by monitoring sand auger speed but many customers require an additional measurement. This additional measurement is completed by using a Berthold LB8010 density gauge that is mounted on a blender truck. For further accuracy, many of UWS customers require the use of the same type of gauge "in-line" (mounted on a 3 or 4-inch piece of iron) just prior to entering the well.

Transportation and Security of an "In-Line" Density Gauge

The density gauge that is mounted on the blender truck is more or less permanently mounted on the truck. When a job is finished, the truck returns to the Buckhannon District facility where it is stored until required for the next job. The "in-line" gauge, however, is mounted on a joint (commonly termed "pup") of iron that is typically 4" in diameter and 2 feet long. This pup joint with the density gauge mounted on it is transported to and from jobs in a metal box (e.g. Jobox) secured in the rear of a pick-up truck. The first layer of security during transportation is the Jobox lid is locked and the second that the box itself is

chained and locked to the bed of a pick-up truck. At the job site, the pup/gauge combo is removed from the box and placed in-line where necessary. While in storage at the District, the transportation box is removed from the pick-up and stored in an area of the maintenance building, away from where employees frequently work. The security measures are that the Jobox itself is chained to a permanent structure of the building and the box lid is also locked.

Maximum Activity Request of Density Gauges

For purposes of this application, the activity of the “in-line” Berthold LB 8010 density gauge is 10 mCi (this gauge is currently being used under reciprocity – Reference Location Number 000503). UWS requests that our license allow the use of up to 50 mCi, total, in order to be able to quickly accommodate potential future customer requests for the use of additional “in-line” gauges. (50 mCi = one 20 mCi blender gauge + one 10 mCi “in-line” gauge + one (future) 20 mCi “in-line” gauge).

Date Updated: August 15, 2013

Filename: WVa NRC SL Application Attachments - In-Line Gauge Addition
Directory: \\File-storage\home\mmy01\My Documents
Template: C:\Documents and Settings\mmy01\Application
Data\Microsoft\Templates\Normal.dotm
Title: Table D
Subject:
Author: Arizona Chemical
Keywords:
Comments:
Creation Date: 8/8/2013 4:17:00 PM
Change Number: 12
Last Saved On: 8/16/2013 12:04:00 PM
Last Saved By: mmy01
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Number of Words: 461 (approx.)
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