From: Gary Dye <garyldye@hotmail.com>
Sent: Saturday, July 10, 2021 8:44 PM
To: Chmay@pm.me
Subject: FW: LOW BLEND BTU SP

From: Dye, Gary
Sent: Thursday, January 5, 2012 10:45 AM
To: garyldye@hotmail.com
Subject: FW: LOW BLEND BTU SP

Gary Dye Senior Gas Measurement/Quality Engineer; OPS/2SW; x4603

From: Friedman, Randy
Sent: Thursday, July 14, 2005 8:41 AM
To: Dye, Gary; Tilgner, Doug
Cc: Henderson, Denny; Muehleck, Chuck; Stinson, Charlie; Potts, Nick; Walker, Larry; Ohlmann, Jean-Marc
Subject: RE: LOW BLEND BTU SP

Gary, Doug - I'd like this particular e-mail chain to end here. I think you need to be more circumspect with language that could be taken out of context by a casual reader. For example, phrases like "I'd hate to think that we could get caught…" or "…one or more of our customers might discover this heating value error, and complain to us or the OPUC…" could lead someone to think we're not doing all we should to be accurate in our bills, when the reality is that with Btu zones, elevation factors, etc., we are ahead of most other LDCs in our efforts to make each customer's individual bill as accurate as possible. We simply have a new situation here with Apatosaur gas coming on and have to figure out the best way to adapt our systems to account for it.

Randy

-----Original Message-----
From: Dye, Gary
Sent: Wednesday, July 13, 2005 10:39 AM
To: Friedman, Randy; Henderson, Denny; Muehleck, Chuck; Stinson, Charlie; Potts, Nick; Tilgner, Doug; Walker, Larry; Ohlmann, Jean-Marc
Subject: FW: LOW BLEND BTU SP

As was mentioned in our meeting a few weeks ago regarding periodic review of the BTU Zone spreadsheet, we're going to have some some trouble maintaining the credibility of billing heating values in West Portland. This will start happening pretty soon when we put Apatosaur on the line, as Doug mentions below. With blended BTU values running at 975 and pipeline gas running at 1025, there could be an error up to 5 percent on some bills.

The affected customers would lie mostly in Zone 3, which is west Portland. Since the BTU Zone spreadsheet isn't designed (and probably can't practically be designed) to handle flexible boundaries of BTU fronts, the best we can do is to:

1. Perform some kind of averaging function. The mechanism we have in place for Zone 3 now performs a flow weight-average on Mist withdrawal and Sauvie Island Gate of the BTU values coming off Rock Creek (Mist) and

Sauvie Island chromatographs. Using the full Sauvie Island flow in this way has its errors, in addition to errors created by other non-Sauvie Island flows that enter this zone which aren't accounted for in the weight averaging. At best, even with a perfect weight-average, all customers would have a minimum error of 2.5 percent -- some getting a price break (closer to the pipeline) and some paying too much (closer to SMPE). When the flow weighting is grossly mismatched, error for some customers could amount to the difference between the two gas sources, or about 5 percent.

2. We could also attempt to divide up Zone 3 into two or more "concentric" zones, and install triggering mechanisms based on the percentage of the gas flowing into the zone to mimic a BTU front within Zone 3. Again, however, the boundaries of these zones would be rigid, and it would only serve to reduce the problem to fewer customers.

I think the long-term solution to situations like the above is a Stoner-based system where each plat BTU value is calculated at least daily. However, I don't think we could have such a system in place before we start operating the blending operation mentioned below. Therefore, we should probably anticipate that one or more of our customers might discover this heating value error, and complain to us or the OPUC about it. We can add more complexity to our BTU Zone spreadsheet as mentioned above, but I think we will still be at risk of having an embarrassment for quite a few of our bills, let alone the problem of exceeding the industry standard maximum error of 2 percent.

One other technique could be to control our operation such that the weighted average of the flows remain constant, which would tend to stabilize the position of the BTU front. We could design a weighted average that would form a BTU front along logical piping zones, and draw our new BTU zone boundaries there.

I will shortly call a meeting to see what we can do to improve the BTU zone spreadsheet. However, I think whatever improvements we come up with will still leave a lot to be desired. Perhaps if we could show efforts at migrating to a Stoner-based system, it would at least show some kind of effort at addressing some of the problems produced by the creation of storage capacity.

Any other ideas out there on how this situation could be handled?

Gary Dye

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-----Original Message-----
From: Tilgner, Doug
Sent: Wednesday, July 06, 2005 3:51 PM
To: Duwadi, Kishore; Pigott, John; Potts, Nick
Cc: Dye, Gary
Subject: RE: LOW BLEND BTU SP

Thanks for the heads up Kishore ....

Nick, Do you really want to put 975 BTU gas into storage pools ??
Having it that low really is going to cut down your future options from whatever pools you inject this stuff into.
Kinda like turning a "good" pool into a low btu pool (aka Busch).

Or are we talking only withdrawal mode here ??

Do you/we have some sort of a plan for where all this really low BTU gas is going to go for the next few years ??
It has some serious operational (Intel), metering, and billing implications that we'd better get a handle on.
I'd hate to think that we could get caught charging customers for 1040 BTU gas and be giving them 975 BTU (6% billing error).

Doug

-----Original Message-----
From: Duwadi, Kishore
Sent: Wednesday, July 06, 2005 2:14 PM
To: Pigott, John
Cc: Tilgner, Doug
Subject: FW: LOW BLEND BTU SP

fyi

-----Original Message-----
From: Potts, Nick
Sent: Wednesday, July 06, 2005 1:29 PM
To: Duwadi, Kishore
Subject: RE: LOW BLEND BTU SP

KKD-

Spoke to Charlie and we have agreed to this setup:

Alarm set point	975 BTU
Enerfin Valve Close	970 BTU
NWN Valve Close	965 BTU

I realize this is a bit tight. Lets see how the system works and responds. May have to loosen things up a bit. Perhaps an earlier stage of alarm will be necessary.

Remember that the tariff allows 945 BTU as a minimum.

Also, we should probably have the Enerfin Valve Close when we ESD both during injection and withdrawal. I think we can manually close the Enerfin valve when we have planned shutdowns....????

I think we will come up with some other operational situations that can be best handled by minor programming.

Let me know what you think.

Nick.

-----Original Message-----
From: Duwadi, Kishore
Sent: Wednesday, July 06, 2005 11:41 AM
To: Potts, Nick
Subject: FW: LOW BLEND BTU SP

Gas supply says min is 975 BTU

The programmer dude needs to know the alarm and shutdown points for the production blend valve (Valves)