To: J.E. Nickerson

From: D. Doherty
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Subject: VCM Railcar Weight Comparison

Incoming VCM railcar weights have been monitered and their weights were compared using volumetric calculations, reported scale weights, temperatures, and tank car gauge measurements. The results are listed in Tables 1-3 and graphical representations of data follow each table.
Table I contains information about railcars which were also gauged for comparison to the Lake Charles VCM shipment reports as well as to the KCS scale weight. The average weight difference between the Aberdeen calculated volumetric weight and the KCSscale weight was found to be -1242 pounds(short) while the weight difference between the Aberdeen calculated volumetric weight and the Lake Charles calculated volumetric was found to be -457 pounds.
Table IA list comparative measurement data for railcars checked at both the Aberdeen plant and the Lake Charles VCM plant. The difference int the gauge measurements can be attributed to ambient temperature variations but this would cause no change in overall weights of the railcars unless the railcars are leaking.
There are two graphs which follow Tables I and IA the first of which shows the railcar weights for the given railcar numbers. The Lake Charles calculated volumetric weight and the Aberdeen calculated volumetric weight show a similar track while the KCS scale weight does not track either one. The second graph shows more evidence of non-tracking when comparing the weight differences between Aberdeen, KCS, and Lake Charles.
Table II gives data for many of the railcars which have been shipped to the Aberdeen plant from the Lake Charles VCM plant. A graph based on Table II compares the KCS scale weight(Frt. Wt.) and the volumetric weight calculated using outage and temperature measurements provided by the Lake Charles plant. Again it can be seen that there is no real tracking pattern between the two graphs.
Table III contains information based on a two week period during the month of January 1988 when the incoming VCM railcars from Lake Charles were also weighed at the Aberdeen plant before unloading. Also included in this table are the differences between the measured weights at Aberdeen, Lake Charles, and the KCS scale weight. Average difference per railcar is also shown in this table.
The graph which follows shows all three weights for twenty-five railcars. No specific patterns of tracking emerge on this graph but if some out of range data points are

ignored then some tracking between the Aberdeen and Lake Charles volumetric methods can be observed.
This is all of the data which has been compiled up to this point. More data for Table I and Table IA would have been collected but the Lake Charles measurements were not included on the shipping logs between the dates of March 11 and March 20, 1988. If more measurements are needed to prove the indicated trends the equipment needed to take these measurements is in hand and ready. Any questions or comments about this data are welcomed at any time.

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