



NISTM 5th Annual Missouri Storage Tank Conference

October 29, 2014

simmons
The Leader in Tank Management Solutions

106 East Main Street
Richardson, Texas 75081
800.848.8378
972.497.9002

www.simmons-corp.com



Thank You to NISTM and You

NISTM 5th Annual Missouri Storage Tank Conference



See what other systems miss...



With ClearView from **SIMMONS**

Simmons Introduction

- Pioneering leaders in the field of Petroleum Inventory Management
- 23 year-old global company providing environmental and fuel inventory management solutions
- Trade area currently includes North America, South America, Australia, South Africa and Europe
- 24/7 service center and headquarters based in Richardson, Texas
- Currently provides daily environmental reconciliation and continuous fuel monitoring services for over 30,000 tanks

The Last 20 years – Quick Review



Phones

1990



2014



Prices

1991

- Stamps @ \$0.25
- Eggs @ \$1.01
- Milk @ \$2.80
- Gas @ \$1.14

2014

- Stamps @ \$0.49
- Eggs @ \$2.00
- Milk @ \$3.55
- Gas @ \$3.48

Other Changes

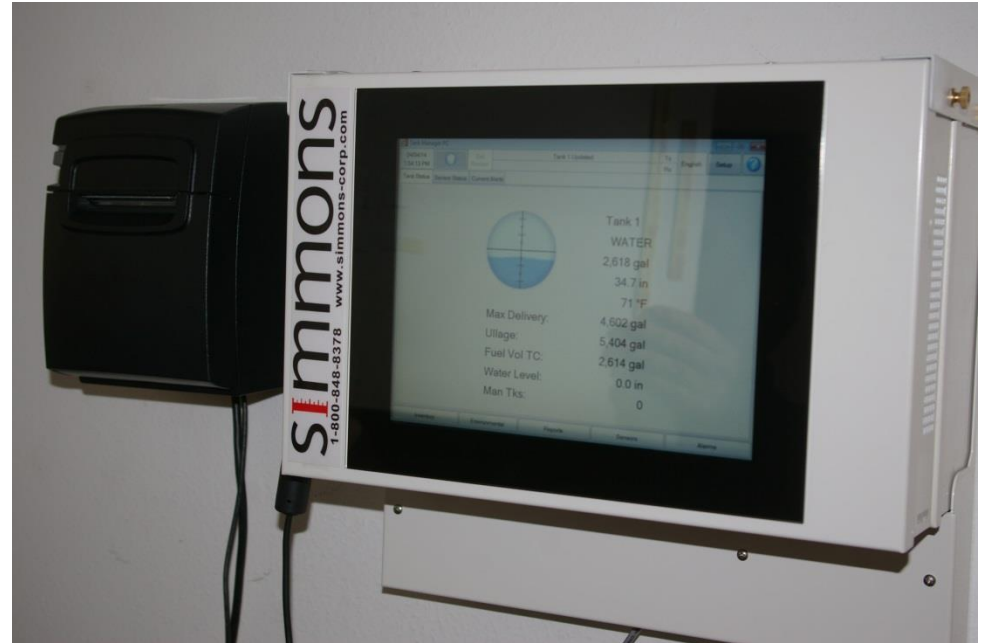
- Grocers and Big Box
- Loyalty and Pay-At-The-Pump

Inventory Monitoring/Management

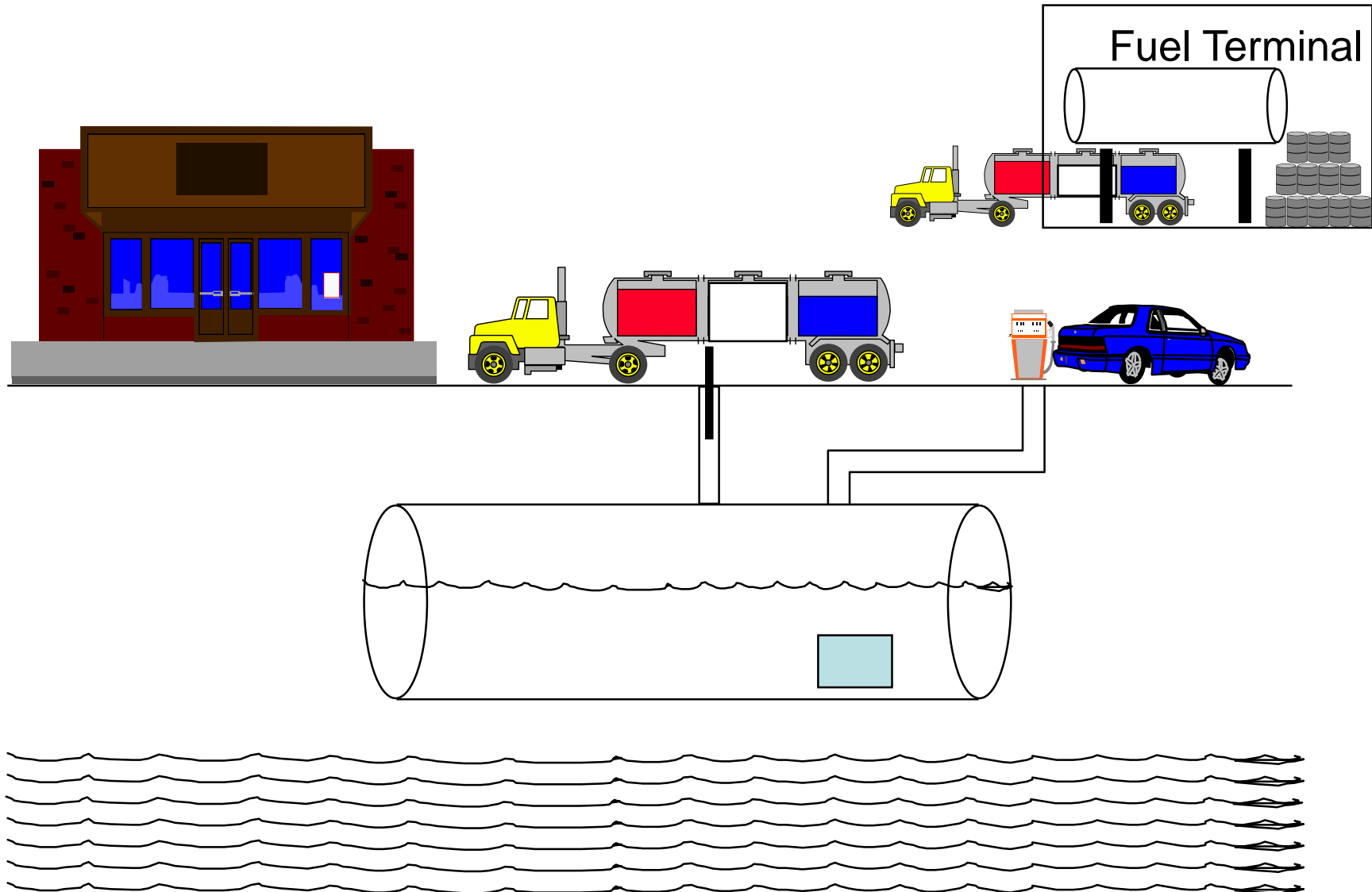
1991



2014



The UST System



“Vision is the art of seeing what is invisible to others” – Jonathan Swift

See what other systems miss...



With ClearView from **S**immons

Simmons

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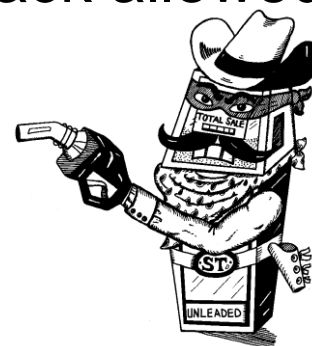
800.848.8378

See What Other Systems Miss...



The Silent Thief

- There are 231 cubic inches in any 1 gallon of liquid
- There are 1,155 cubic inches in any 5 gallons of liquid
 - (231 cu. in. x 5 gallons = 1,155 cu. in.)
- Federal guidelines allow for meters/totalizers to be “off” by as much as + or – 6 cubic inches per 5 gallons of product dispensed
- So, as a rule of thumb, the amount of slack allowed in a meter is ½%:
 - $6 \text{ cu. in.} / 1,155 \text{ cu. in.} = 0.0052$
 - $0.0052 \times 100 = 0.52\%$ or ½%



For a 150,000 gallon a month location with 12 fueling positions and one single hose that is off an average of 6 cubic inches, this represents an annual loss of approximately \$2,500.00

Fuel Inventory Management

- Fuel inventory losses can occur in many places

Category of Loss	% of BOL Gross Deliveries
Short deliveries	.5
Meter drift	.4
Theft	.1
Other (Vapor, Temperature)	.1
Total	1.1

- Only with ClearView can fuel inventory loss be detected in hard to identify places



For every 100,000,000 gallons of throughput, it is expected that ClearView will eliminate 500,000 gallons or approximately \$1,500,000* of lost fuel

*Assumes fuel at \$3 per gallon

Common Fuel Management Objectives			
Fuel Loss (Shrink) Detection	Dispatching Management	Maintenance Management	Tank and Line Compliance
<ul style="list-style-type: none">• Delivery Shortage• Meter Drift• Theft	<ul style="list-style-type: none">• Delivery Confirming• JIT Dispatching	<ul style="list-style-type: none">• Meter/Filter Schedules• Equipment Monitoring	<ul style="list-style-type: none">• ATG Tank Compliance• MIR Requirements• SIR Tank/Line Compliance

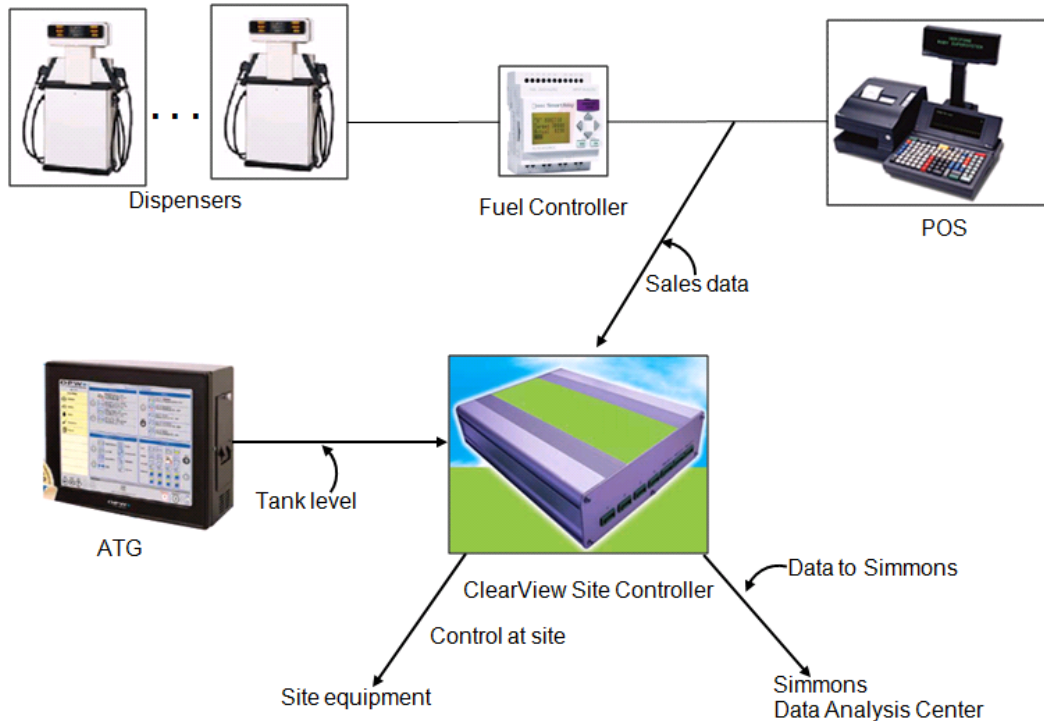
➤ The 3 Rs of ClearView

- Resolution
- Reaction
- Responsibility

Site Connectivity



ClearView Site Controller (CSC)



➤ Continuously captures data

- From ATG
 - Date and Time
 - Fuel levels
 - Fuel temperature
 - Water levels
- From POS
 - Date and Time
 - Dispensing meter ID
 - Sale volume or totalizer value

Precision Fuel Monitoring

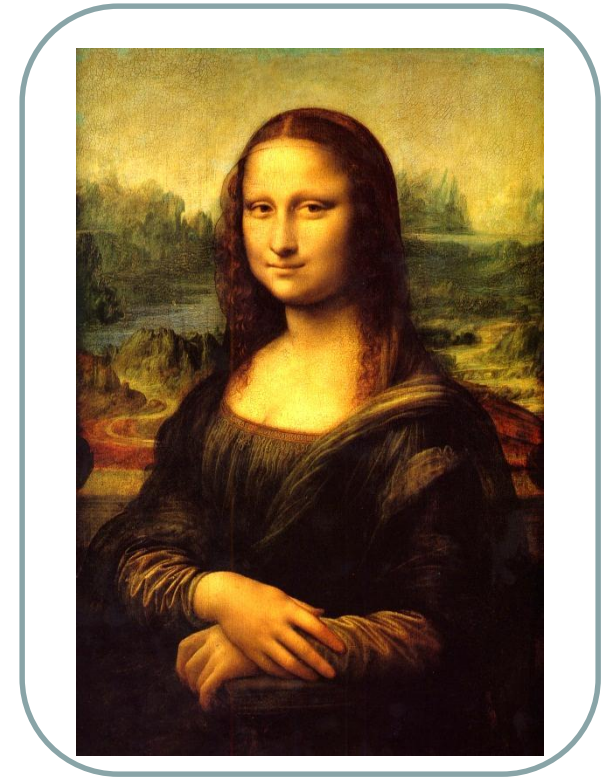
- Precision Tank Chart
 - Accuracy to 1/1000th of an inch
- Precision Sales
 - Dynamic versus Transactional
- Precision Temperature Monitoring
 - Just the facts

Precision Tank Chart

50 Points and Interpolation

Versus

1/1000th of an Inch Accuracy

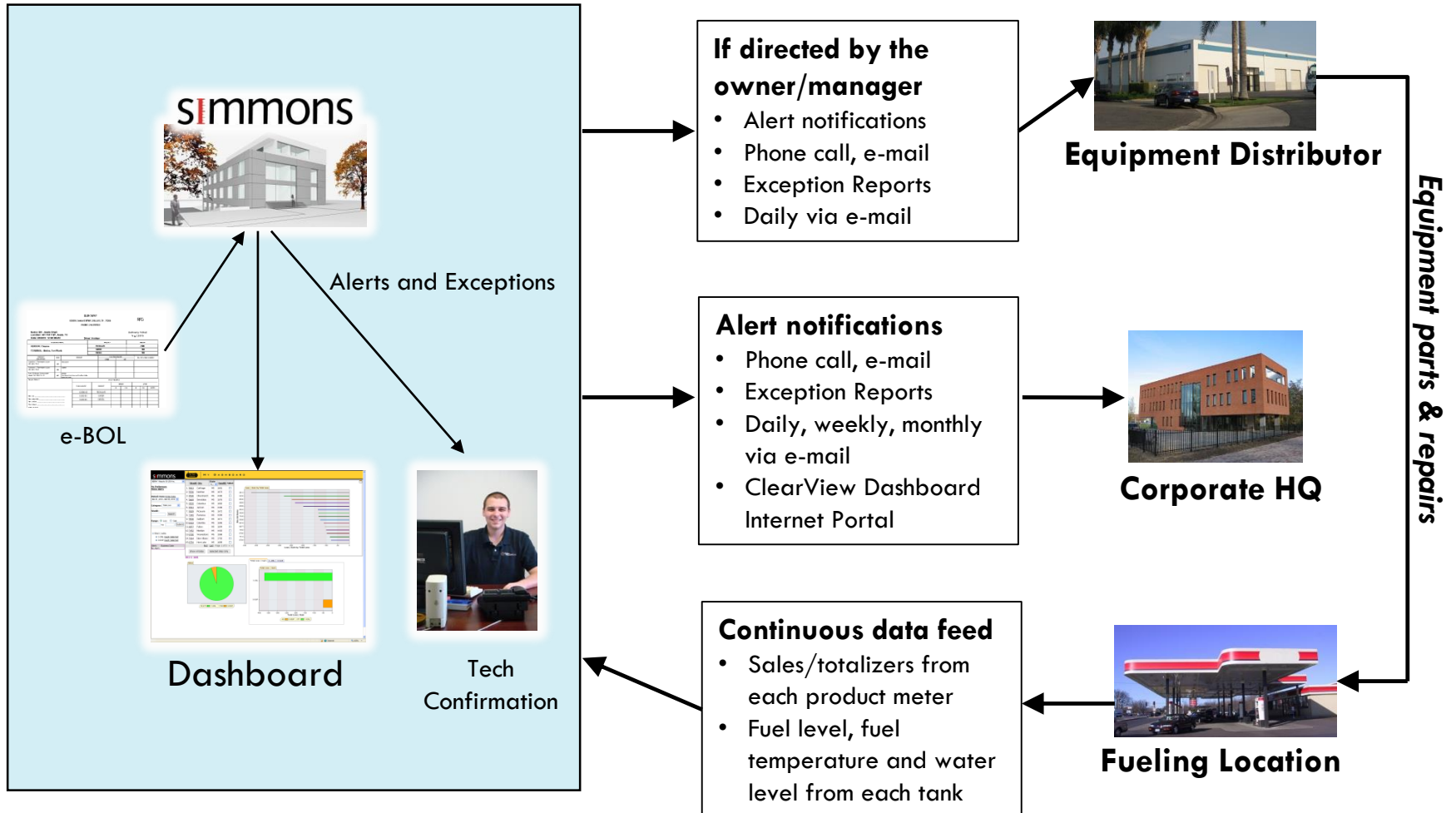


Typical Probe and 96 Inch Tank

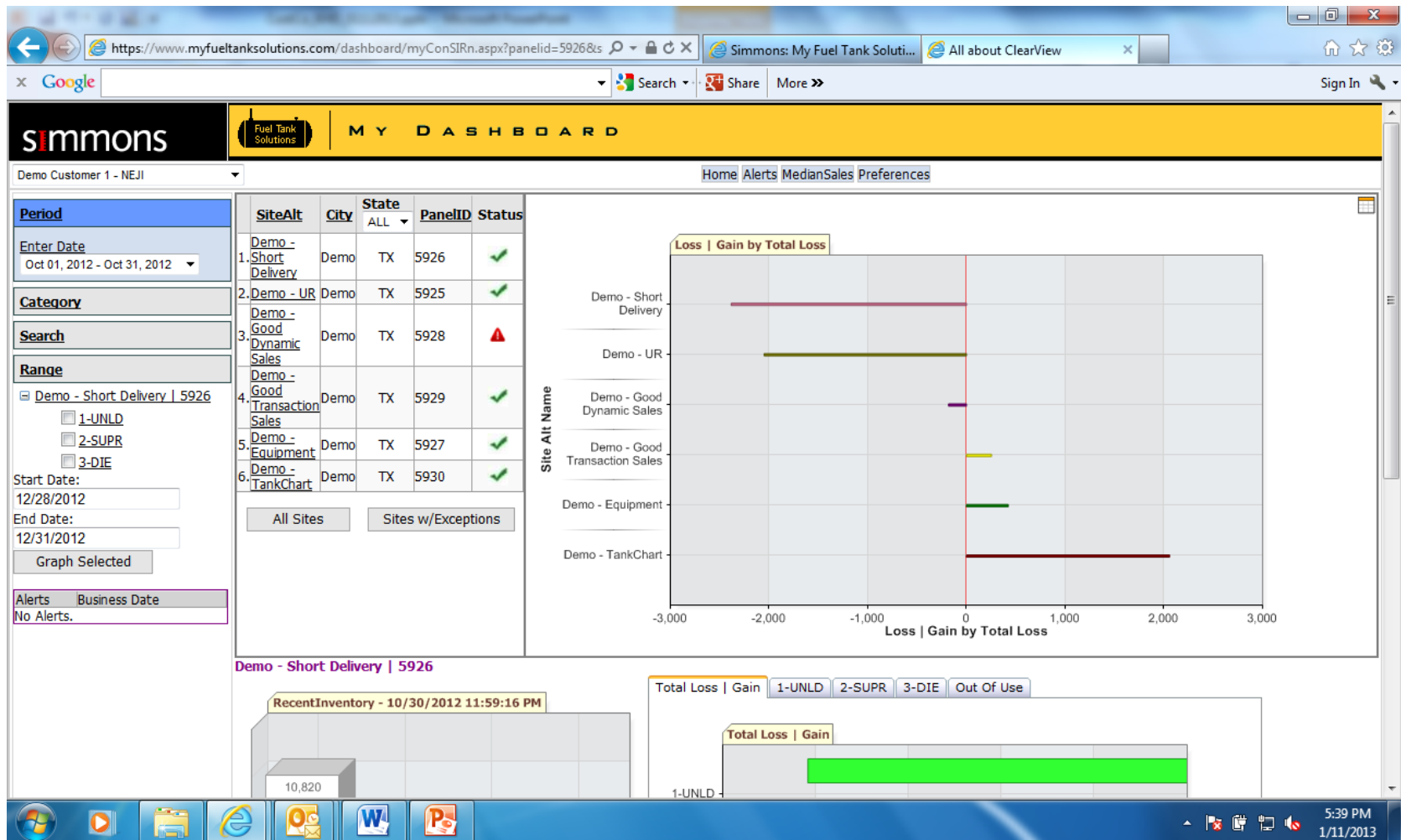
Typical Probe and 96 Inch Tank

Preparation Meeting Opportunity

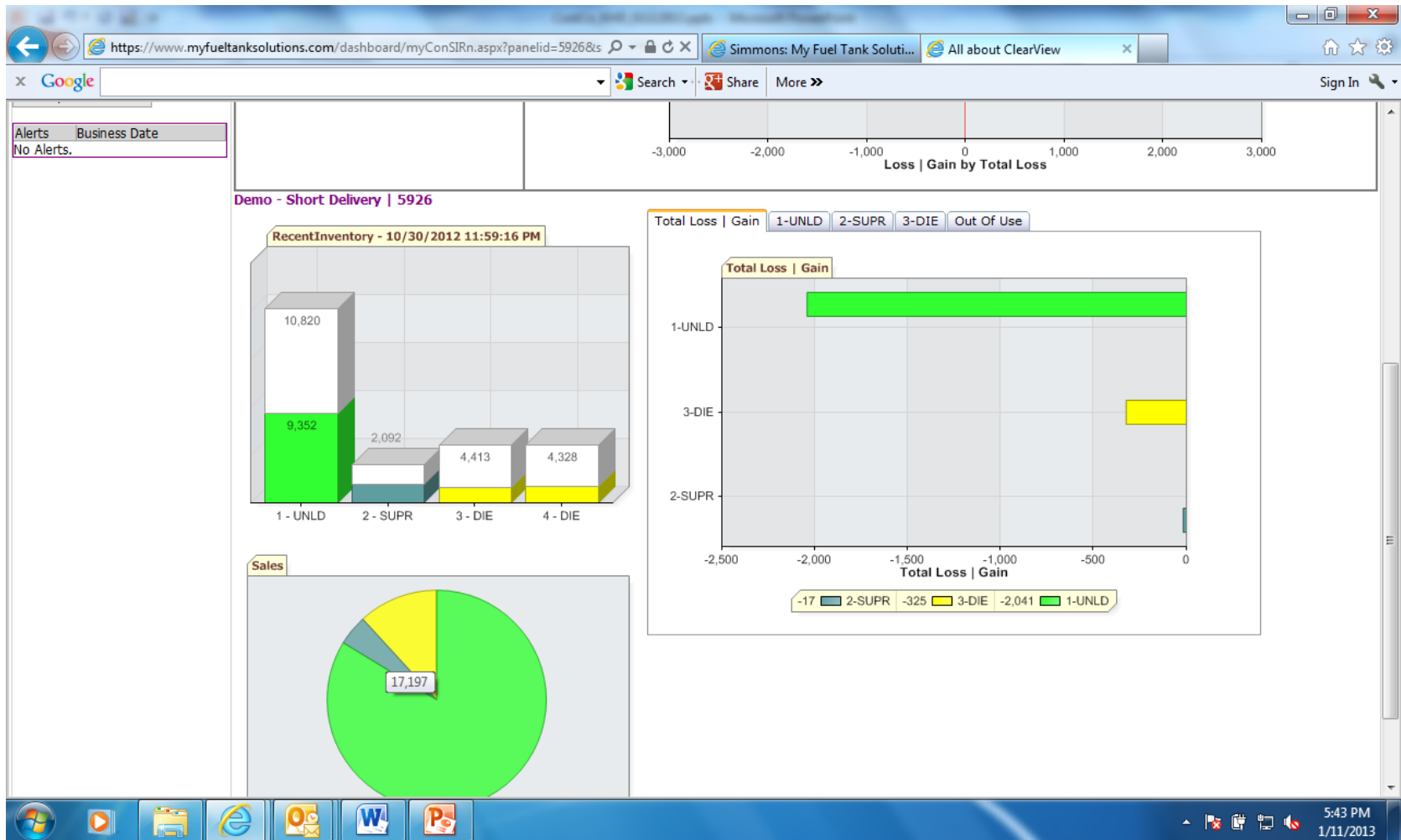
➤ ClearView information flow, alerts and notifications



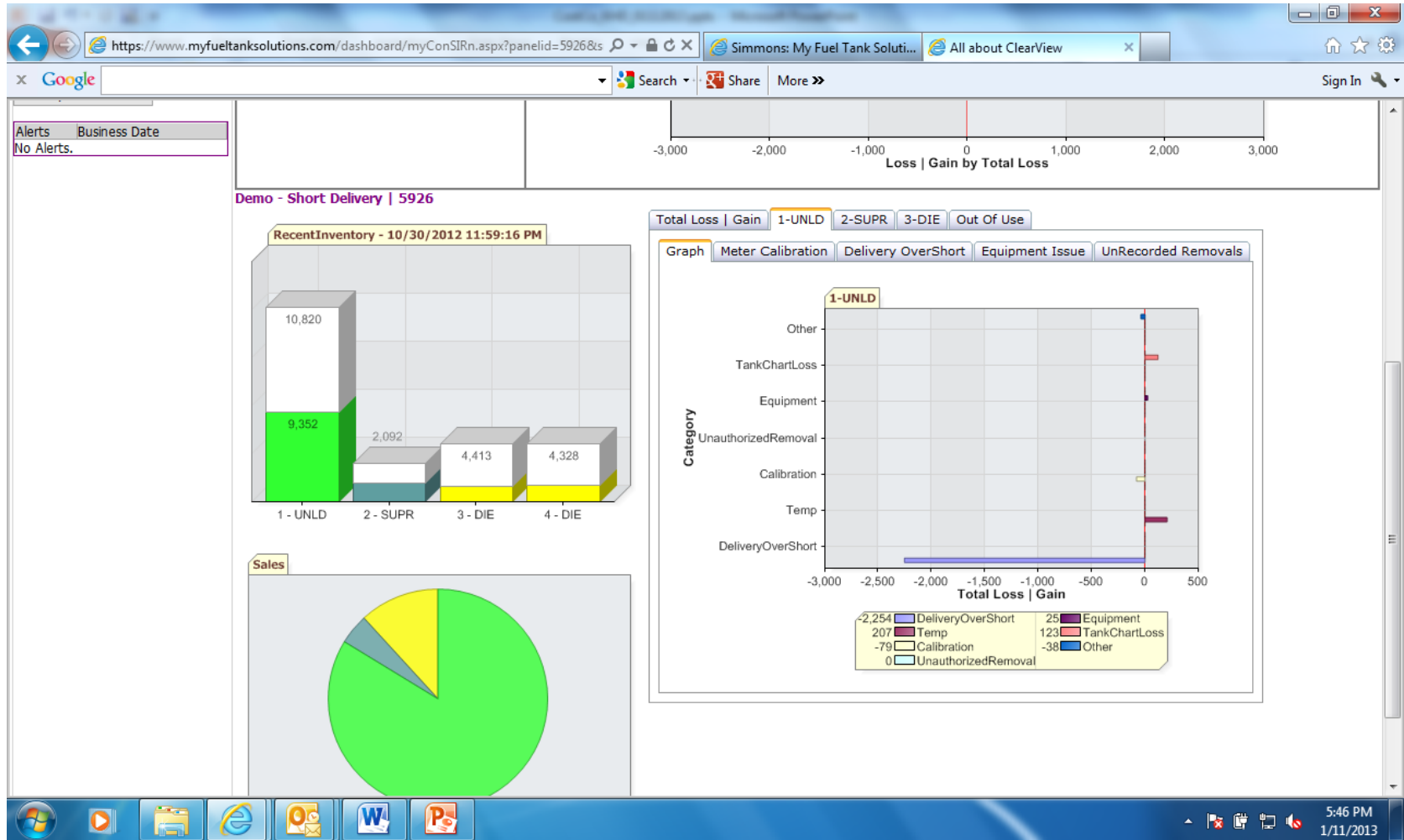
simmons CFM Dashboard



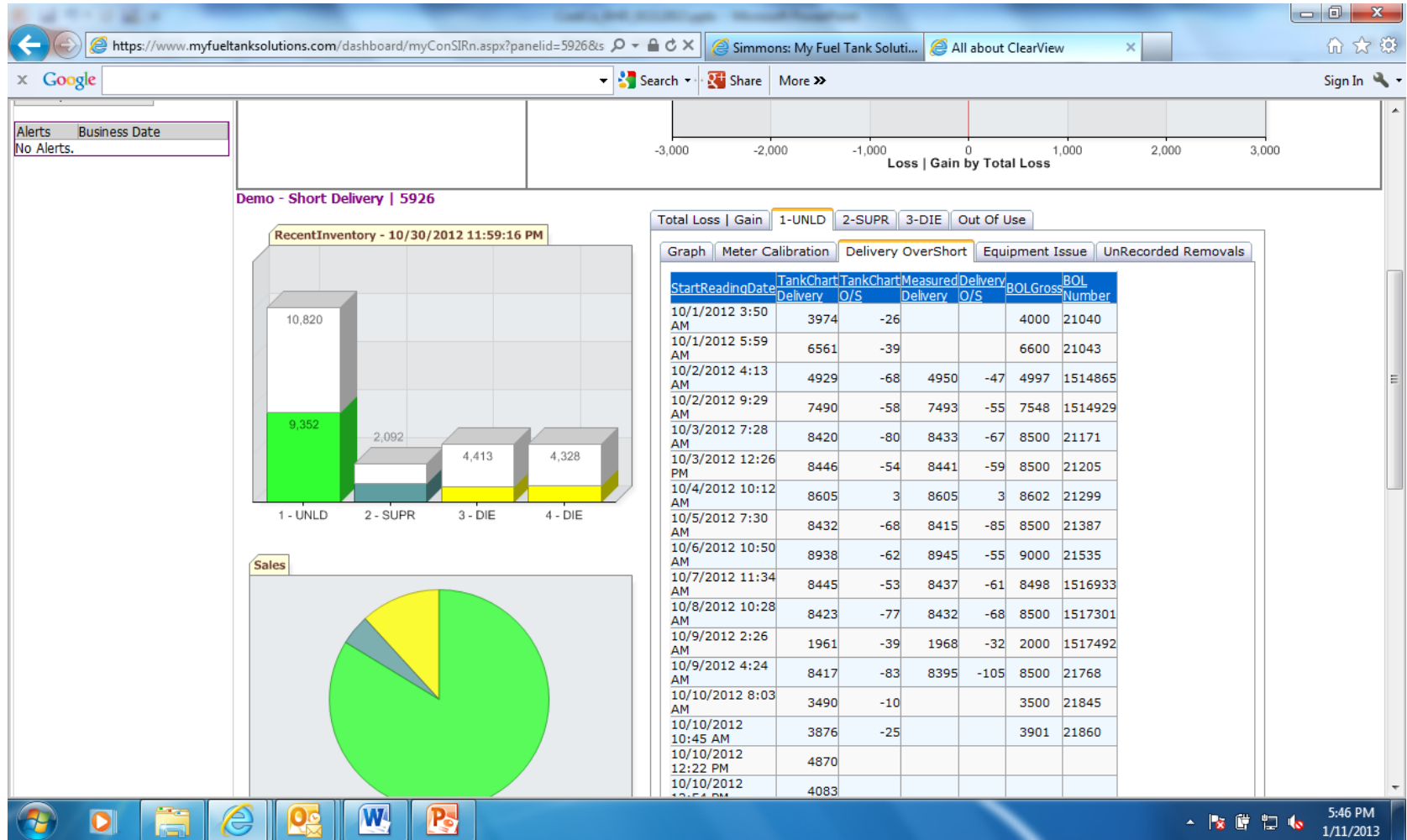
Simmons CFM Dashboard – Loss/Tank



Simmons CFM Dashboard – Category



Simmons CFM Dashboard – BOLs



Delivery Shortage Notification



June 15, 2014

Re: Bill of Lading#: 2213167
Sante Fe Springs - 00906
12250 Clark Street
Sante Fe Springs, CA 90670

To Whom It May Concern,

This letter is to inform you that we have reviewed the Bill of Lading referenced above against our tank monitoring system and have discovered a discrepancy. Below is a summary of what was found:

Start Delivery Date	6/12/2014 12:17:57 PM
End Delivery Date	6/12/2014 12:59:16 PM
Description	ATG# 1 - Diesel
Beginning Temperature	75.5F
Beginning Volume	1564
Ending Temperature	77.9F
Ending Volume	8402
Gallons Dispensed During Delivery	0.00

Gross Measured Delivery Variance	
Bill of Lading Gross Gallons	7015
Delivered Gross Gallons	6838
Gross Measured Delivery Variance	-177 gallons
Net Measured Delivery Variance	
Bill of Lading Net Gallons	6970
Delivered Net Gallons	6781
Net Measured Delivery Variance	-189 gallons

We will be adjusting the delivered quantity on the corresponding invoice. Please update your records to reflect this change. Your assistance in ensuring proper billing would be greatly appreciated. Please feel free to contact me with any questions or concerns at 586-939-7000, extension 2743.

Sincerely,

Braden Burgess
Senior Analyst

Delivery Shortages



Panel:	35427	6295	Short Delivery Opportunity	Dec. 2013
Start Date	BOL Gross Del.	Del. Diff.	Other	50g Threshold
12/01 09:31	6000		-7	0
12/03 03:16	7601		-16	0
12/04 05:26	8900		15	0
12/05 04:32	3875		24	0
12/11 02:07	7400		5	0
12/12 04:31	7400		-190	140
12/12 18:31	7701		-22	0
12/13 03:49	7300		-114	64
12/13 07:07	5101		-14	0
12/15 05:01	7601		-7	0
12/16 17:27	7700		-15	0
12/17 09:02	6501		-70	20
12/19 04:29	3900		-29	0
12/19 09:06	6600		-150	100
12/21 10:33				0
12/22 01:19	6550		-15	0
12/24 16:18	8502		-19	0
12/27 04:07	4300		-22	0
12/28 16:17	6900		-31	0
12/31 06:05	6300		-26	0
			Total Opportunity	323
			Savings at \$3/Gallon	\$970

Example Customer Before

simmons

Customer:
Site:
Tank Sys: 1

CustID:
Panel:
Prod: UNL

Delivery History Report

B4 TS# 1_UNL

Start Date	End Date	Begin Temp.	End Temp.	Meas. Del. Temp.	Meas. Gross Del.	Meas. Net Del.	BOL Del. Temp.	BOL Gross Del.	Bol Net Del.	M Meas. Del. Variance	Del Diff. Temp.	Del. Diff. Other	BOL Number	Del. Amt. Source	
09/30 18:22	09/30 18:54	81.83	82.43	82.64	8571	8454	90.93	8704	8544	-133	-43	-90	1601346	M	
10/01 07:14	10/01 07:41	82.46	81.06	79.28	7343	7258	87.79	7501	7377	-158	-38	-119	1601573	M	
10/02 06:23	10/02 06:51	81.20	79.82	78.20	7180	7101	86.43	7503	7385	-323	-37	-286	1602006	M	
10/02 18:11	10/02 18:37	79.85	81.22	83.00	7111	7013	90.92	7401	7265	-290	-35	-255	1602256	M	
10/03 18:54	10/03 19:23	81.59	82.45	83.51	6075	5989	92.32	6302	6181	-227	-33	-194	1602626	M	
10/04 12:12	10/04 12:47	82.35	81.99	81.59	8323	8215	88.28	8502	8359	-179	-34	-145	1602927	M	
10/05 09:19	10/05 09:42	82.00	80.52	78.24	6297	6228	88.97	6502	6390	-205	-42	-163	1603247	M	
10/05 12:41	10/05 13:15	80.56	79.29	76.36	5869	5811	86.04	6002	5909	-133	-35	-99	1603325	M	
10/07 09:52	10/07 10:23	79.92	78.00	76.67	8076	7995	84.70	8500	8375	-424	-41	-383	1603969	M	
10/07 19:11	10/07 19:37	77.76	78.45	79.40	6275	6202	87.71	6430	6324	-155	-32	-123	1604129	M	
10/08 18:31	10/08 18:57	78.94	79.33	79.75	7027	6944	87.50	7151	7034	-124	-33	-91	1604506	M	
10/09 15:12	10/09 15:39	79.45	79.90	80.41	7484	7393	87.72	7703	7576	-219	-35	-183	1604864	M	
10/10 12:11	10/10 12:36	80.11	79.91	79.62	6533	6456	88.61	6701	6587	-168	-38	-130	217753652	M	
10/10 18:50	10/10 19:05	80.07	80.06	80.04	3615	3572	87.26	3700	3640	-85	-17	-68	1605316	M	
10/11 11:45	10/11 12:10	80.21	80.06	79.79	6463	6387	88.71	6501	6390	-38	-37	-1	1605540	M	
10/12 12:36	10/12 13:13	80.12	81.66	83.02	8323	8208	91.48	8501	8342	-178	-45	-132	1605888	M	
10/13 17:16	10/13 17:51	81.42	79.72	78.47	8878	8780	86.46	8954	8813	-76	-45	-30	1606213	M	
10/14 16:51	10/14 17:19	79.94	78.25	76.37	7870	7792	85.09	7900	7782	-30	-43	13	1606583	M	
10/15 14:11	10/15 14:36	78.76	77.13	74.61	6451	6394	84.54	6501	6406	-50	-41	-9	1606919	M	
10/16 13:15	10/16 13:35	77.67	76.18	74.06	5967	5916	80.97	6001	5926	-34	-26	-8	1607288	M	
10/17 13:01	10/17 13:34	76.84	74.71	73.00	8811	8742	78.75	8853	8754	-42	-32	-10	1607648	M	
10/18 13:33	10/18 13:58	75.79	74.21	72.44	6967	6915	78.92	7000	6921	-33	-29	-4	1608026	M	
10/19 09:13	10/19 09:36	75.08	71.82	66.96	6418	6391	75.98	6500	6438	-82	-37	-45	1608327	M	
10/20 12:49	10/20 13:36	73.67	72.80	72.08	8518	8457	77.52	8703	8612	-185	-30	-155	1608646	M	
10/21 10:24	10/21 10:51	73.84	72.79	71.08	5378	5342	78.00	5400	5342	-22	-24	2	1608959	M	
10/21 20:41	10/21 21:29	72.96	72.48	71.76	5956	5914	79.56	6002	5932	-46	-30	-17	1609162	M	
10/23 11:27	10/23 11:55	74.08	73.77	73.57	8389	8321	79.52	8504	8405	-115	-32	-83	1609855	M	
10/24 07:19	10/24 07:39	74.40	72.85	70.98	6378	6336	79.34	6502	6427	-124	-34	-90	1610144	M	
10/24 14:10	10/24 14:38	72.93	73.51	74.40	7080	7019	80.07	7103	7018	-23	-25	2	1610287	M	
10/26 15:02	10/26 15:03	72.89	72.89	72.88											
10/29 06:50	10/29 07:17	74.25	73.41	72.99	6971	6917	80.85	7000	6913	-29	-35	6	1611880	M	
10/29 18:09	10/29 18:37	73.82	72.04	71.09	8414	8358	79.33	8502	8404	-88	-44	-44	27838	M	
10/30 10:56	10/30 11:18	72.75	73.20	74.00	4979	4937	82.15	5000	4934	-21	-26	5	1612193	M	
10/31 06:25	10/31 06:55	73.69	72.96	72.23	8463	8401	80.32	8503	8400	-40	-43	3	1612457	M	
											-4079	-1152	-2927		

Example Customer After

Customer: AFTER Transport Change
 Site: All UNL Deliveries
 Tank Sys: 1

CustID:
 Panel:
 Prod: UNL

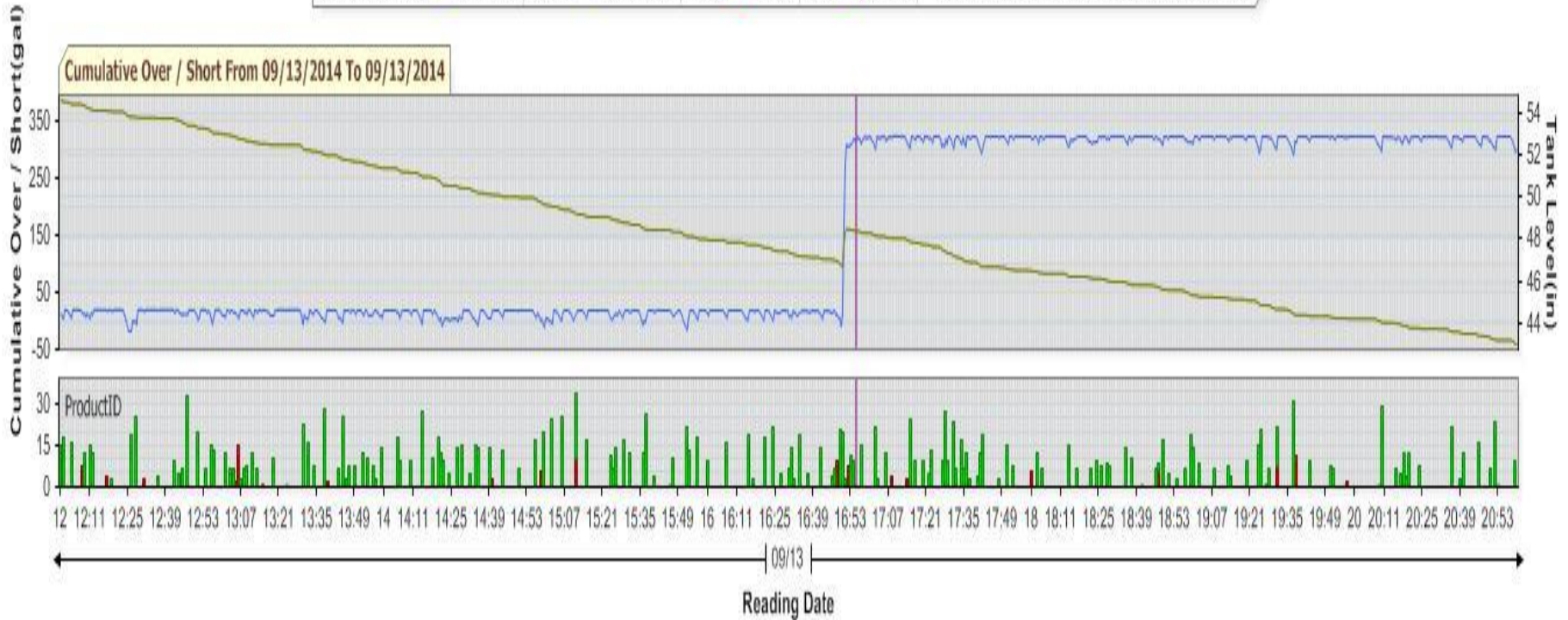
Delivery History Report

TS# 1_UNL

Start Date	End Date	Begin Temp.	End Temp.	Meas. Del. Temp.	Meas. Gross Del.	Meas. Net Del.	BOL Del. Temp.	BOL Gross Del.	Bol Net Del.	M Meas. Del. Variance	Del Diff. Temp.	Del. Diff. Other	BOL Number	Del. Amt. Source
02/24 08:16	02/24 08:33	62.59	60.06	58.24	5982	5989	62.91	6004	5993	-22	-18	-4	1651142	M
02/25 07:04	02/25 07:34	60.87	57.83	56.58	8475	8493	61.68	8502	8493	-27	-27	0	1651462	M
02/25 16:33	02/25 16:54	58.41	58.13	57.83	6454	6463	62.44	6502	6492	-48	-19	-29	1651672	M
02/26 14:51	02/26 15:16	59.21	56.84	55.13	6986	7007	58.87	7004	7009	-18	-16	-2	1651998	M
02/27 09:35	02/27 10:05	58.15	56.29	54.84	8467	8495	58.32	8502	8511	-35	-19	-16	1652294	M
02/27 16:48	02/27 17:08	56.67	56.99	57.61	5990	5999	60.27	6001	6000	-11	-10	-1	1652402	M
02/28 18:26	02/28 18:47	58.07	60.11	62.38	6497	6487	64.40	6500	6482	-3	-8	5	1652769	M
03/01 17:52	03/01 18:20	60.49	60.60	60.68	8486	8482	63.37	8502	8484	-16	-14	-2	1653046	M
03/02 23:42	03/03 00:06	61.01	55.08	48.57	6957	7007	52.31	7002	7036	-45	-16	-29	1653350	M
03/03 14:09	03/03 14:27	55.58	55.09	54.02	5476	5497	56.25	5500	5513	-24	-8	-16	1653475	M
03/04 17:53	03/04 18:11	56.48	56.06	55.43	5490	5506	58.27	5503	5509	-13	-10	-3	1653898	M
03/05 17:34	03/05 17:55	57.30	56.07	54.83	6485	6507	56.34	6500	6515	-15	-6	-8	1654292	M
03/06 11:57	03/06 12:22	57.13	55.86	54.54	7481	7507	57.67	7503	7514	-22	-15	-7	1654584	M
03/07 10:12	03/07 10:38	57.14	56.34	55.53	7002	7021	59.09	7003	7007	-1	-16	14	1654959	M
03/07 21:56	03/07 22:14	56.97	56.73	56.41	5485	5497	60.00	5502	5502	-17	-12	-5	1655196	M
03/08 18:23	03/08 18:45	57.67	56.41	55.05	6475	6495	60.24	6503	6502	-28	-21	-6	1655549	M
03/09 17:46	03/09 18:14	57.38	58.52	59.62	8482	8484	62.62	8503	8489	-21	-16	-5	1655819	M
03/10 17:56	03/10 18:20	59.08	60.66	62.77	6997	6985	64.32	7001	6982	-4	-7	3	1656188	M
03/11 21:11	03/11 21:35	60.67	61.89	63.44	6487	6472	67.10	6503	6474	-16	-15	-1	1656693	M
03/12 17:34	03/12 17:59	61.95	61.83	61.67	7485	7477	64.03	7502	7483	-17	-11	-6	1657045	M
03/13 18:04	03/13 18:24	61.84	62.41	63.23	6503	6489	65.86	6512	6488	-9	-11	2	1657457	M
03/14 17:35	03/14 17:56	62.26	63.12	64.14	7463	7443	66.58	7501	7470	-38	-11	-27	1657781	M
03/15 18:44	03/15 19:06	62.98	61.45	59.19	6473	6476	63.43	6492	6478	-19	-17	-2	1658079	M
03/16 22:04	03/16 22:31	61.65	59.13	56.42	8467	8486	60.56	8504	8501	-37	-22	-15	1658303	M
03/18 08:38	03/18 09:02	59.96	59.17	58.04	5482	5489	61.44	5500	5495	-18	-12	-6	1658768	M
03/18 20:54	03/18 21:16	59.53	61.14	62.40	6473	6463	65.88	6490	6466	-17	-14	-3	1658978	M
03/19 16:26	03/19 16:48	61.52	61.91	62.24	7484	7473	65.09	7504	7480	-20	-13	-7	1659295	M
03/20 12:50	03/20 13:11	61.95	61.95	61.95	6990	6982	64.54	7001	6981	-11	-11	1	1659611	M
03/20 20:30	03/20 20:44	62.03	62.45	63.34	4981	4970	67.00	5000	4978	-19	-12	-8	1659715	M
03/21 20:19	03/21 20:52	62.47	63.50	64.37	8448	8425	67.86	8503	8461	-55	-19	-36	1660038	M
03/23 06:28	03/23 06:59	63.33	60.90	58.44	6967	6973	62.50	7004	6993	-37	-18	-20	1660358	M
03/24 09:48	03/24 10:12	61.35	59.01	57.24	6977	6989								
03/24 16:37	03/24 17:00	59.46	60.10	60.99										
										-684	-446	-238		

Retain and Lost Load

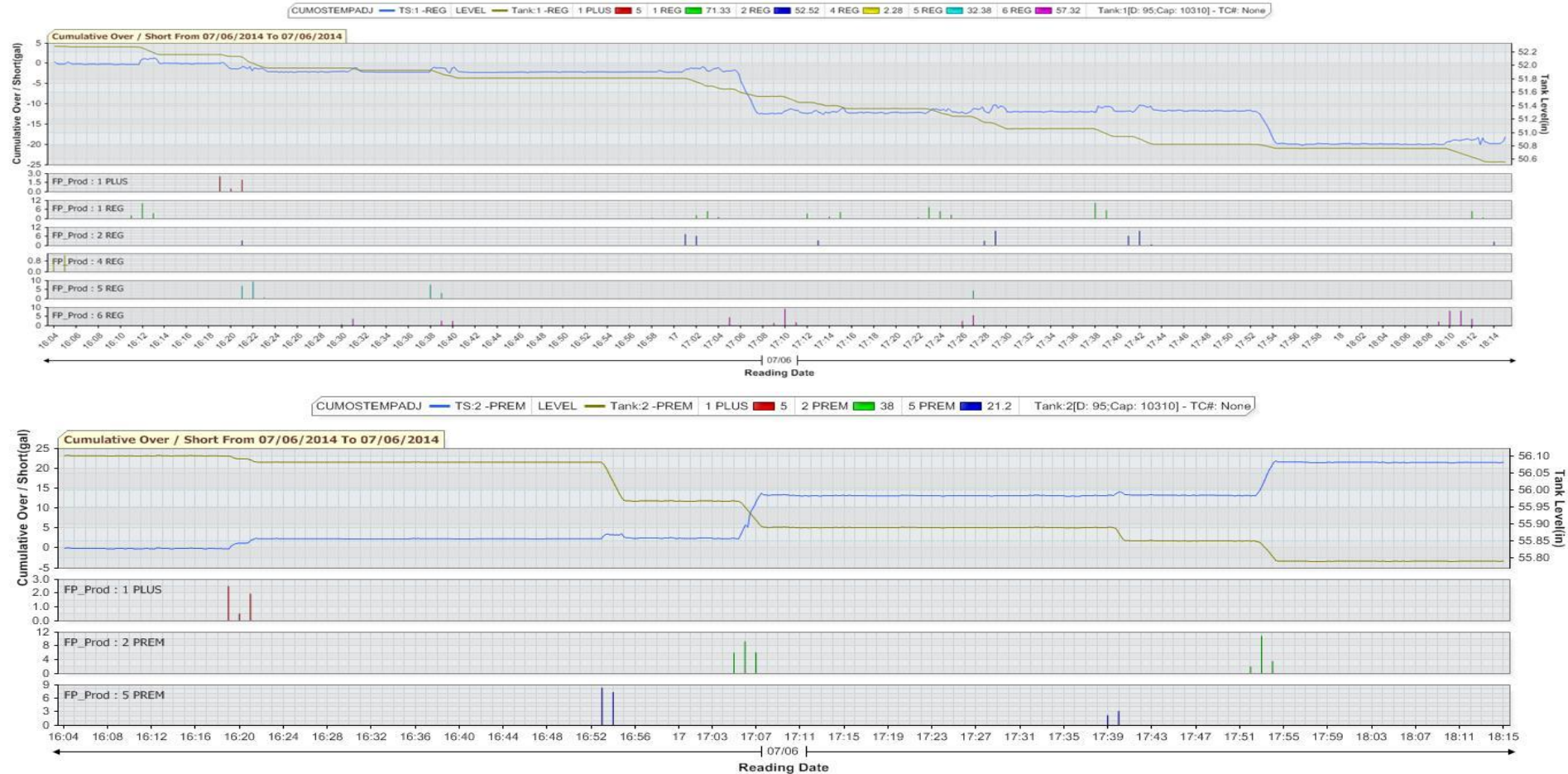
CUMOSTEMPADJ TS:1 -UNL LEVEL Tank:1 -UNL PLUS 111.67 UNL 2038.23 Tank:1[D: 96;Cap: 12013.3] - TC#: 5926 - Date: 8/01/2014



SUMMARY AND RESOLUTION –

Customer stated it was a retain from another site. “Wondered where that went.”

Blending



SUMMARY AND RESOLUTION –

The customer sent a technician to the site and they found one dispenser set to blend incorrectly. The problem was corrected.

Theft



SUMMARY AND RESOLUTION –

Three individuals were arrested on October 1, 2014 at approximately 12:45 am while they were still at the pump. Simmons provided the customer a summary of the dates and gallons lost, and the police ultimately used this data.



Questions and Answers