

XXXXXXXXXX

From: ~~XXXXXXXXXX~~
Sent: November-16-11 3:45 PM
To: ~~XXXXXXXXXX~~
Subject: FGB Leak Test September 28th - 2010

PEMBINA

EDMONTON CONTROL CENTRE - LEAK DETECTION SIMULATION RECORD

DATE	Sept 28th, 2010	FOREMAN	XXXXXXXXXX		
SYSTEM	Swan Hills	OPERATOR	XXXXXXXXXX		
SEGMENT	FGB	ANNOUNCED / UNANNOUNCED	Unannounced		
PHYSICAL / SIMULATED / ACTUAL		Physical			
LEAK VOLUME	4.8m3	LEAK RATE	5.0m3/hr	LEAK %	5.2%
LEAK DETECTED BY WHAT DATA		O6.3 SCADA Pipeline Monitoring Application - PLM			

LEAK DETECTION ALARM PERFORMANCE:

TIMES:		WINDOW DURATION	THRESHOLD EXCEEDED?	TIME OF ALARM / DID NOT ALARM
FIELD START	08:40am	5 min	No	
ECC LEAK ID	09:37am	60 min	Yes	09:36am
ECC ACTION	09:38am	24 hour	No	
END OF TEST	09:40 am			

LEAK DESCRIPTION: Physical removal of oil at Swan Hills Terminal.

OPERATOR COMMENTS:

1 hour alarm came up for FGB. Investigated and observed it was running a steady

shortage. Informed my shift foreman and we decided to shut-in the segment. He asked me to call the Swan Hills area foreman and I was informed it was a leak test.

FOREMAN COMMENTS: At 09:37am, ~~Monty~~ informed me of a shortage on FGB. Took a look at the 1 hour trend and we agreed to shut in the segment. Good job by ~~Monty~~

SUPERVISOR COMMENTS: Excellent job by the operator in acknowledging, responding to, and involving the shift foreman when the integrity violation occurred. Good job by both in discussing the violation and making the correct

call in shutting down the segment.

The leak detection system was operating normally and did detect the leak.

Pembina Segment Imbalance Response Protocol procedure was implemented.



Test start.jpg



1 hour end.jpg



1 hour start.jpg



5 min end.jpg



5 min start.jpg



SCADA.jpg



Test end.jpg

Kevin Joyce
Control Centre Supervisor
Pembina Pipeline Corporation
Bus: 780-417-8661
Cell: 780-940-9651
E-mail: kjoyce@pembina.com

PLM Detail

Window in alarm



24 Hr. Trends

Term Trends

Summaries

Cmd

Dismiss

Name: SG_0409_0924

Description: SG FGB07 - Apache 04-09 to Swan Hills 09-24

Status: ALARM

Calculating: yes

Last Calculation: 09/28/10 09:35:56.000

Units: m3

Auto Inhibit: no

Inhibit: no

DDA Inhibit: no

Curr. Day Balance: -5.5
 Prev. Day Balance: -24.9
 Delta Deviation (Inst.): -0.5
 Delta Linepack (Inst.): 0.0
 Current Linepack: 0.0

Period	Meter Out (DEL)	Meter In (REC)	Delta Flow (DEL-REC)	Delta Linepack	Delta Tank	Dynamic Volume Limits OVER	Dynamic Volume Limits SHORT	% Deviation of Meter In	Period in Transient	Period in Alarm
ST1	5	6.01	-0.85	0.00	0.00	-0.85	1.37	-12.40	no	no
ST2	30	35.46	-3.52	0.00	0.00	-3.52	0.00	-9.04	no	no
ST3	60	74.21	-4.19	0.00	0.00	-4.19	3.92	-5.35	yes	yes
LT1	6	465.06	0.50	0.00	0.00	0.50	0.00	0.11	no	no
LT2	12	973.03	1.12	0.00	0.00	1.12	0.00	0.12	no	no
LT3	24	1462.88	-26.49	0.00	0.00	-26.49	7.45	-1.78	yes	yes

Day	174.8	180.3	-5.5
Week	9683.8	9700.6	-16.8
Month	35946.1	35957.5	-11.4

Configuration Data

Alarm Type	% Flow Over	Volume Limits Short	Volume Limits Over	Transient Volume Limits Incr.	Dynamic Vol. Limits %Over	Dynamic Vol. Limits %Under
ST1 Percent flow	20.00	-20.00	1.10	0.40	0	16.02
ST2 Volume	0.00	0.00	0.00	0.00	0	0.00
ST3 Percent flow	5.00	-5.00	2.10	8.10	0	2.68
LT1 Volume	0.00	0.00	0.00	0.00	0	0.00
LT2 Volume	0.00	0.00	0.00	0.00	0	0.00
LT3 Percent flow	0.50	-0.50	8.60	1.00	0	0.58

Bal Tuning Factor: 1.0000

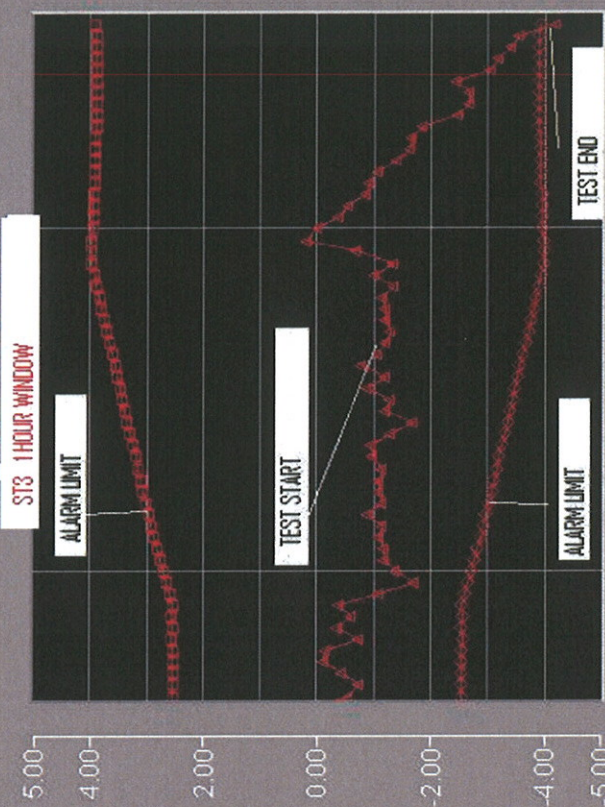
Dev Filter Constant: 1.0000

Diagnostics Vol Factor: 5.0000

Suspension Alarm

Timer Delay (mins): 0

Stale Timeout (secs.): 0



08:00 09:00
 2010-09-28 07:37 << Primary >> 2010-09-28 09:37

Time Stamp

Message



PLM Detail



24 Hr. Trends

Term Trends

Summaries

Cmd

Dismiss

Name: SG_0409_0924

Description: SG FGB07 - Apache 04-09 to Swan Hills 09-24

Status: **ALARM**Calculating: **yes**Last Calculation: **09/28/10 08:37:55.000**Units: **m3**Auto Inhibit: **no**Inhibit: **no**DDA Inhibit: **no**

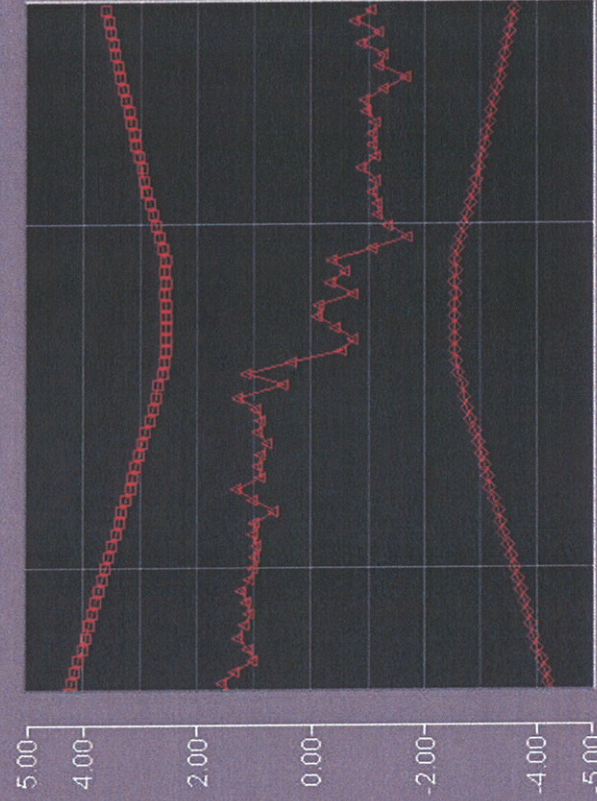
Curr. Day Balance: **-1.3**
 Prev. Day Balance: **-24.9**
 Delta Deviation (Inst.): **0.0**
 Delta Linepk (Inst.): **0.0**
 Current Linepack: **0.0**

Period	Meter Out (DEL)	Meter In (REC)	Delta Flow (DEL-REC)	Delta Linepack	Delta Tank	Deviation Over/Short	Volume Limits Over	Dynamic Limits Short	% Deviation of Meter In	Period in Transient	Period in Alarm
ST1	5	6.54	6.47	0.07	0.00	0.07	1.29	-1.29	1.12	no	no
ST2	30	39.16	39.26	-0.10	0.00	-0.10	0.00	0.00	-0.24	no	no
ST3	60	71.16	72.21	-1.05	0.00	-1.05	3.61	-3.61	-1.45	no	no
LT1	6	472.75	472.13	0.63	0.00	0.63	0.00	0.00	0.13	no	no
LT2	12	968.20	967.02	1.18	0.00	1.18	0.00	0.00	0.12	no	no
LT3	24	1457.03	1483.35	-26.32	0.00	-26.32	7.42	-7.42	-1.77	no	yes

Day	103.2	104.5	-1.3	0.0	0.0	-1.3
Week	9683.8	9700.6	-16.8	0.0	0.0	-16.8
Month	35946.1	35957.5	-11.4	0.0	0.0	-11.4

Configuration Data

Alarm Type	% Flow Limits Over	Steady Volume Limits Over	Volume Limits Short	Transient Volume Limits Incr.	Transient Limits Mins	Dynamic Vol. Limits %Over	%Under of Meter In
ST1 Percent flow	20.00	-20.00	1.10	-1.10	0.40	17.00	-17.00
ST2 Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST3 Percent flow	5.00	-5.00	2.10	-2.10	8.10	2.91	-2.91
LT1 Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT2 Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT3 Percent flow	0.50	-0.50	8.60	-8.60	1.00	0.58	-0.58

Bal Tuning Factor: **1.0000**Suspension Alarm Timer Delay (mins): **0**Dev Filter Constant: **1.0000**Stale Timeout (secs.): **0**Diagnostics Vol Factor: **5.0000**

P

07:00 08:00

<< Primary >>

2010-09-28 06:39 2010-09-28 08:39

Time Stamp

Message



View Areas

System Displays

Silence Alarms

Dynamic Pan/Zoom

Excel

Database Config

XIS Edit

XOS Logout

Systems

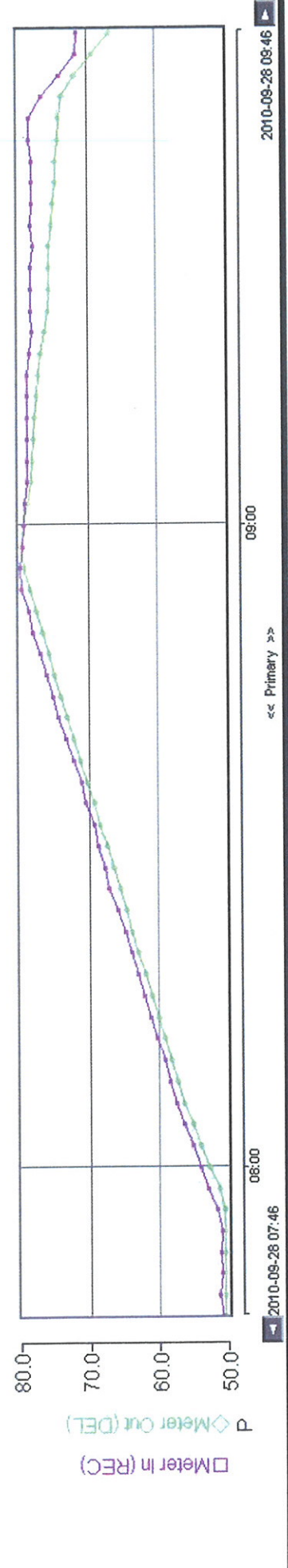
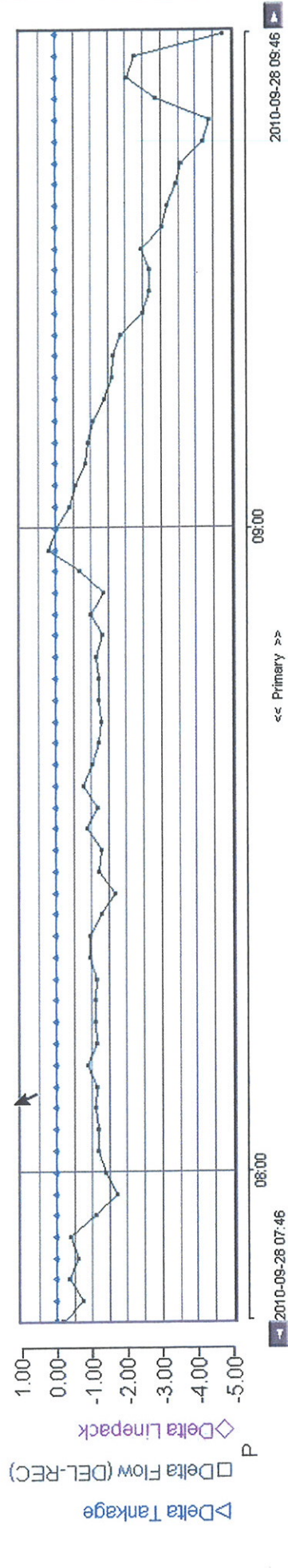
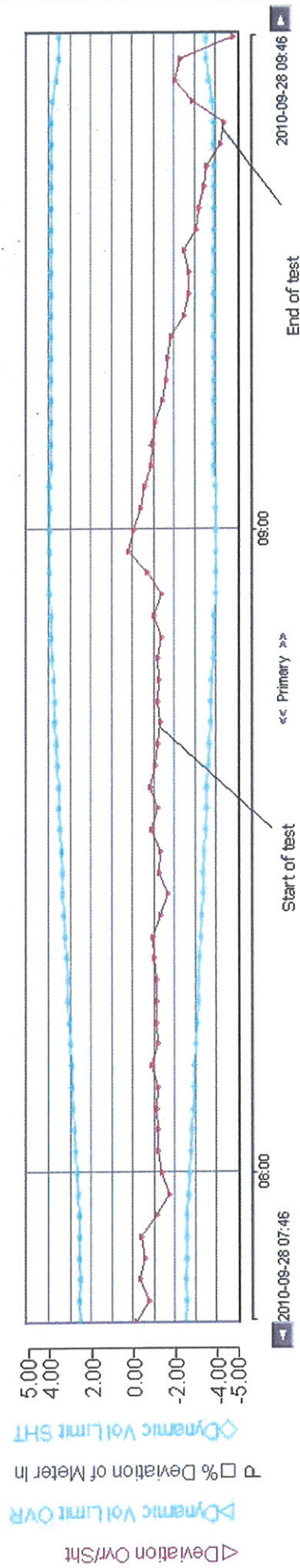
Trend Hours: 1 2 4 6 8 12 24

Start: Now-2

End: Now

Submit

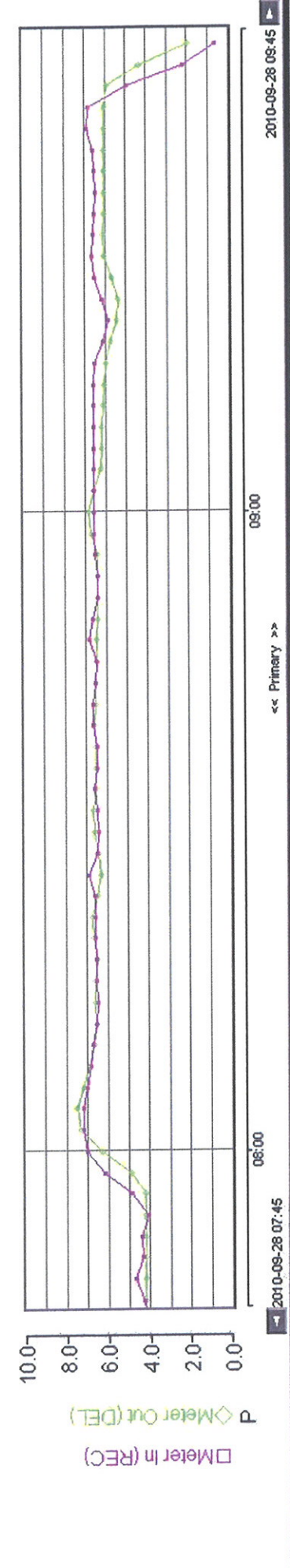
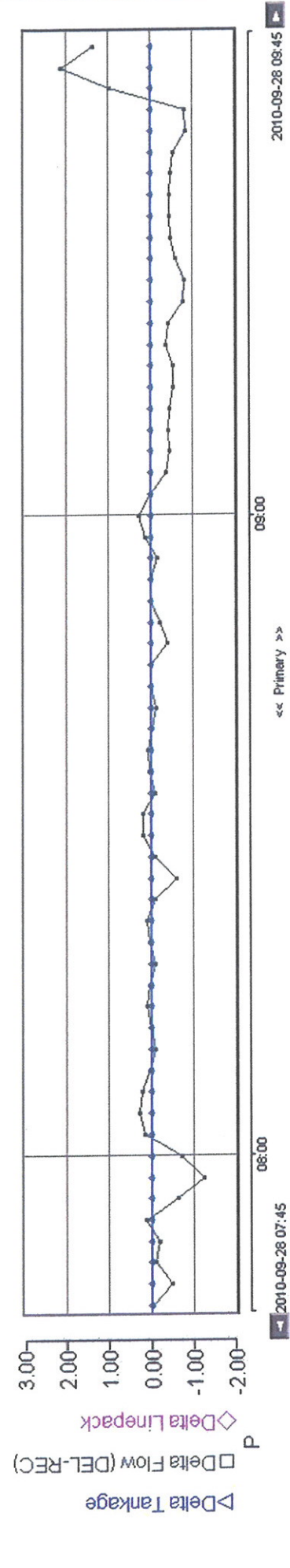
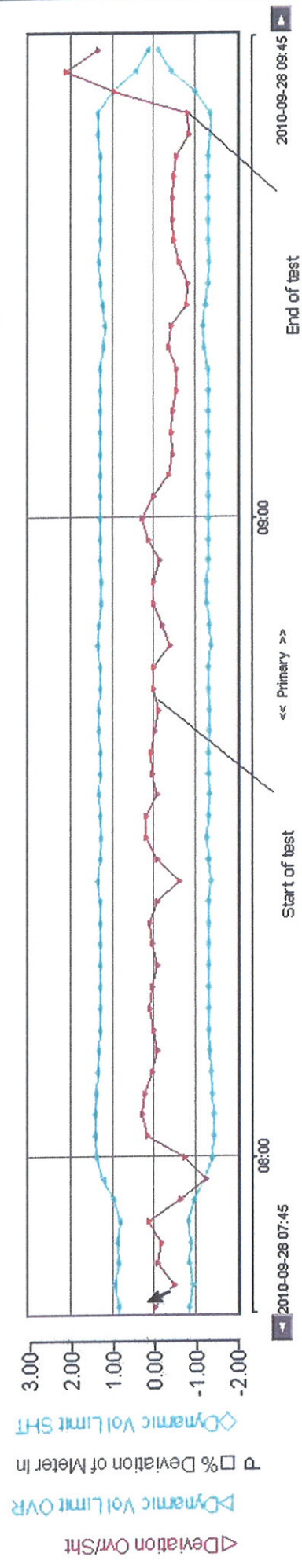
Edit Attributes



Trend Hours: 1 3 4 6 8 12 24

Start: Now -2
End: Now

Submit Edit Attributes



Trend Hours:

1 2 4 6 8 12 24

Start:

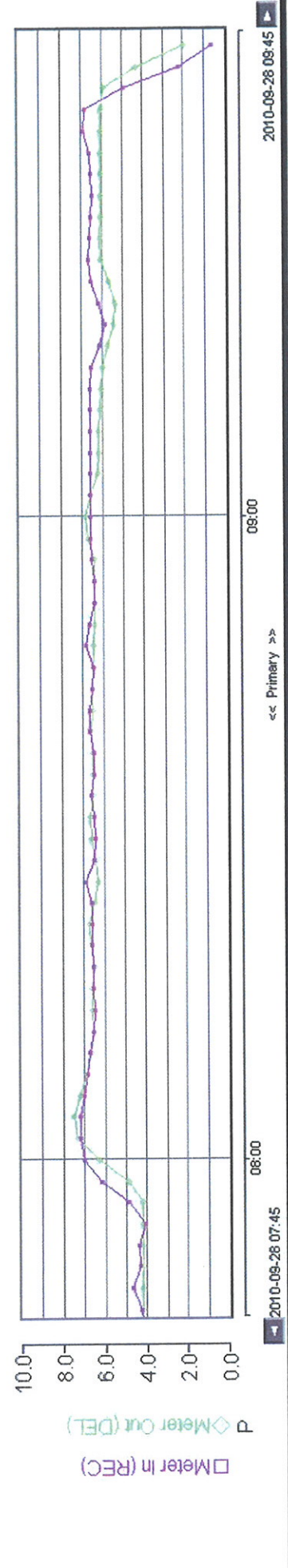
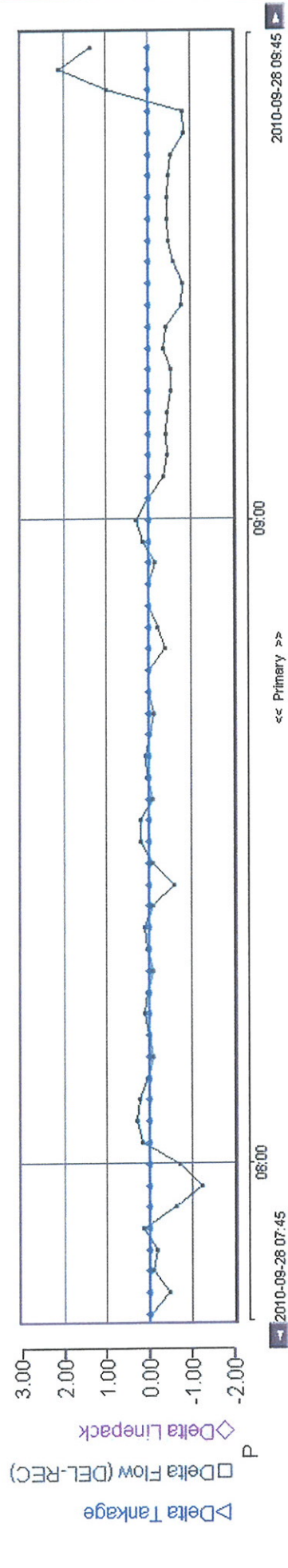
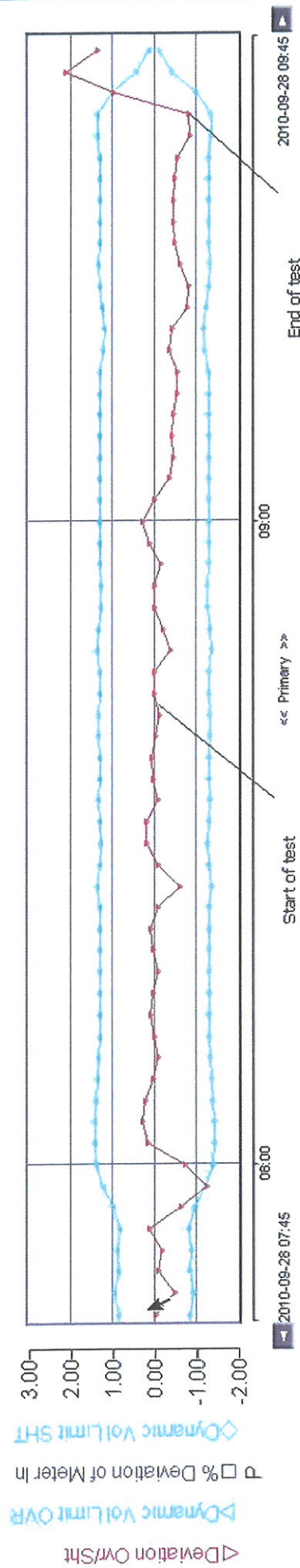
Now -2

End:

Now

Submit

Edit Attributes



Schematic

Alarms

Metering

Analog

Status

Event

Meter Data

