VERMONT FORENSIC LABORATORY

PO BOX 47
WATERBURY, VERMONT 05676-0047
TEL: 802-244-8788
FAX: 802-241-5557
http://vfl.vermont.gov

DATAMASTER TECHNICAL SUPPORT INQUIRY

Agency/Site: Ludlow PD **DataMaster Serial #:** 104509

Date: 11/5/2013 Requestor: Robert Driscoll

Instrument Supervisor: Richard King Phone #: (802) 228-4411

Taken By: Robert Driscoll

Problem: Detector Voltage at filter one was 0.602V during the October RPC

Laboratory Response: Alcohol program staff will bring instrument back to lab for preventative detector voltage adjustment.

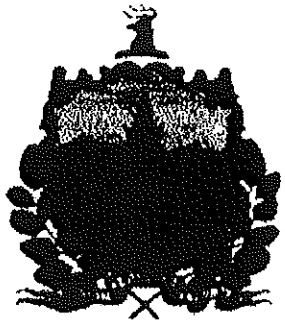
Work Performed: Detector was replaced and voltage optimized. An adjustable flow rate valve was installed and the volume set to 1.5L. The instrument was then recalibrated, certified, and is ready for installation at the agency.

☐ On Site ☒ In-house Attachments: 7 pages

Performed By: Robert Driscoll RCD Date: 11/6/2013

Final Review: [signature] Date: 11/7/2013

DIAGNOSTIC RESULT



DataMaster DMT: 104509
Location: Ludlow PD
Calibration Date: 06/29/2012
Certification Date: 06/29/2012
Installation Date: 06/29/2012
Test Date: 10/31/2013
Test Time: 18:34:47

VERSIONS
DMT: 1.01
PIC: 2.05
Modem: 2.4
Questions: 2.1

TEMPERATURES

Sample Chamber = 49.1°C
Breath Tube = 48.1°C
Digital Sim = 33.9°C

SETTINGS
Lamp Voltage = 1.71 V
Cooler Voltage = 1.73 V
Bias Voltage = 80 V
Chopper Freq = 541 Hz

PUMP INFO
Flow Rate = 6.009 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.6037	0.6057
MIN(V)	0.6022	0.6043

FILTER INFO
Filter 1 0.604 Zero = true
Filter 2 1.129 Zero = true
Filter 3 0.758 Zero = true

CALIBRATION CHECK
Xq = 0.086 1.12%

CALIBRATION REPORT

DataMaster DMT: 104509
Calibration Date: 11/06/2013
Calibrated by: ROBERT DRISCOLL
Lot: 13-02-100

Ca	= 0.098		
CAL	= 0.980380	0.800	<= CAL < 1.200
b1	= 0.000	0.000	<= b1 < 0.004
b2	= 0.005	0.002	<= b2 < 0.010
b3	= 0.000	0.000	<= b3 < 0.004
Xq	= 0.104	0.050	<= Xq < 0.200
a21	= 1.221698	1.050	<= a21 < 1.300
a31	= 0.536040	0.300	<= a31 < 0.800

Performed by _____ Date 11/06/2013

Cal Check

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104509

Date: 11/06/2013
Time: 08:20:58

SUPERVISOR NAME:
ROBERT DRISCOLL

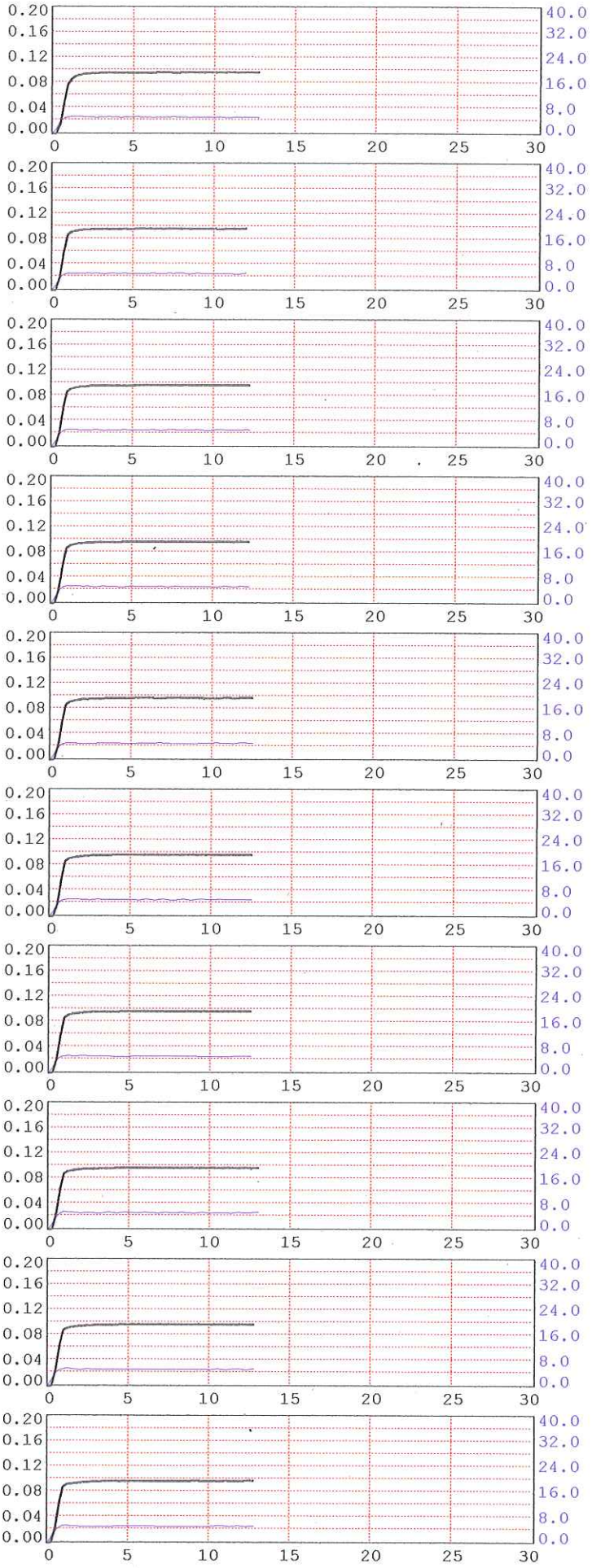
SOLUTION LOT #: GUTH 13100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	08:21
CALIBRATION CHECK	PASSED	08:21
SIMULATOR VAPOR 34.0°C	0.097	08:22
SIMULATOR VAPOR 34.0°C	0.096	08:23
SIMULATOR VAPOR 34.0°C	0.097	08:24
SIMULATOR VAPOR 34.0°C	0.096	08:25
SIMULATOR VAPOR 34.0°C	0.097	08:26
SIMULATOR VAPOR 34.0°C	0.097	08:27
SIMULATOR VAPOR 34.0°C	0.097	08:28
SIMULATOR VAPOR 34.0°C	0.097	08:29
SIMULATOR VAPOR 33.9°C	0.097	08:30
SIMULATOR VAPOR 34.0°C	0.097	08:31
BLANK TEST	0.000	08:32

Average = 0.096
Std Dev = 0.000

RCD 11/6/13

Solution out of range, replaced solution.



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104509

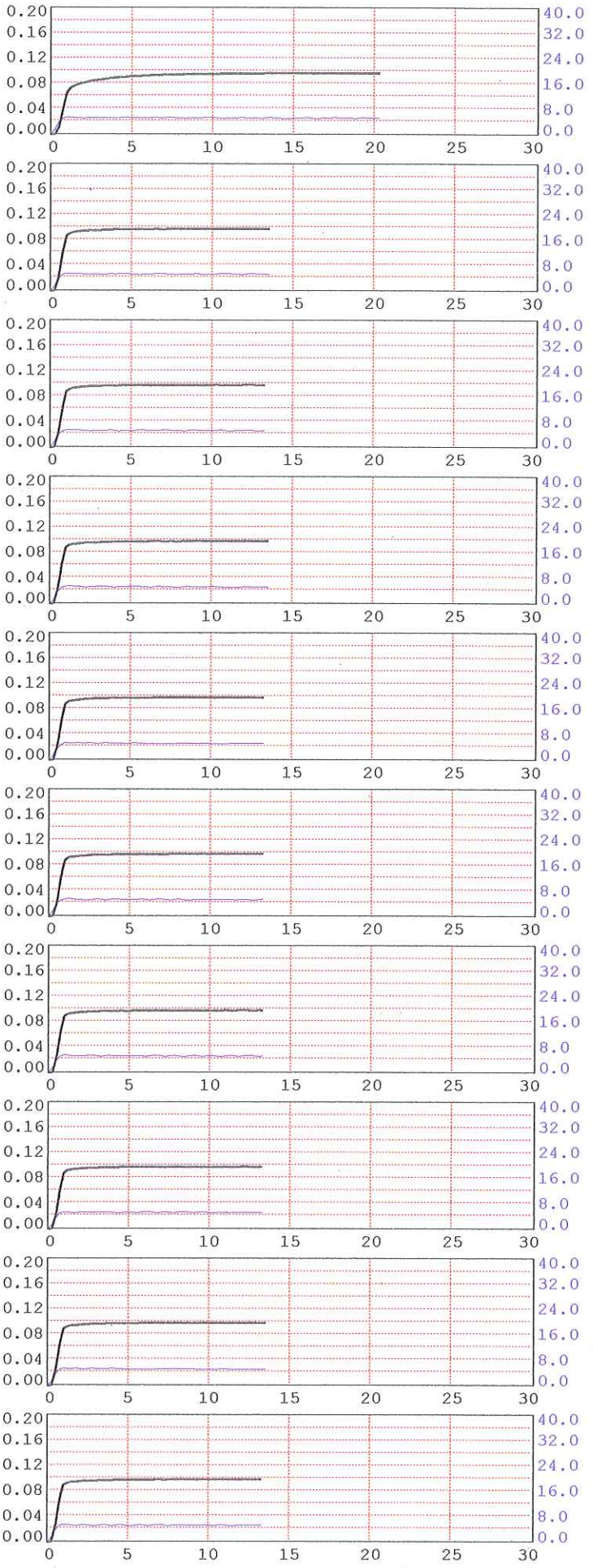
Date: 11/06/2013
Time: 09:47:51

SUPERVISOR NAME:
RCD CAL CHECK

SOLUTION LOT #: GUTH 13100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	09:48
CALIBRATION CHECK	PASSED	09:48
SIMULATOR VAPOR 34.0°C	0.097	09:49
SIMULATOR VAPOR 33.9°C	0.098	09:50
SIMULATOR VAPOR 34.0°C	0.098	09:51
SIMULATOR VAPOR 33.9°C	0.098	09:52
SIMULATOR VAPOR 34.0°C	0.098	09:53
SIMULATOR VAPOR 33.9°C	0.098	09:54
SIMULATOR VAPOR 33.9°C	0.098	09:55
SIMULATOR VAPOR 34.0°C	0.098	09:56
SIMULATOR VAPOR 33.9°C	0.098	09:57
SIMULATOR VAPOR 34.0°C	0.098	09:58
BLANK TEST	0.000	09:59

Average = 0.097
Std Dev = 0.000



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CERTIFICATION REPORT

DataMaster DMT: 104509
Calibration Date: 11/06/2013
Certification Date: 11/06/2013
Certified by: ROBERT DRISCOLL

Diagnostic Results

```
VERSIONS
DMT: 1.01
PIC: 2.05
Modem: 2.4
Questions: 2.1

TEMPERATURES

Sample Chamber = 49.0°C
Breath Tube    = 48.1°C
Digital Sim    = 33.9°C

SETTINGS
Lamp Voltage   = 1.71 V
Cooler Voltage = 1.70 V
Bias Voltage   = 80 V
Chopper Freq   = 538 Hz

PUMP INFO
Flow Rate = 6.209 L/M

DETECTOR INFO
PUMP     ON         OFF
MAX(V)   -0.0264    -0.0240
MIN(V)   -0.0278    -0.0254

FILTER INFO
Filter 1  -0.025  Zero = true
Filter 2   0.553  Zero = true
Filter 3   0.181  Zero = true

CALIBRATION CHECK
Xq  = 0.104  0.08%
```

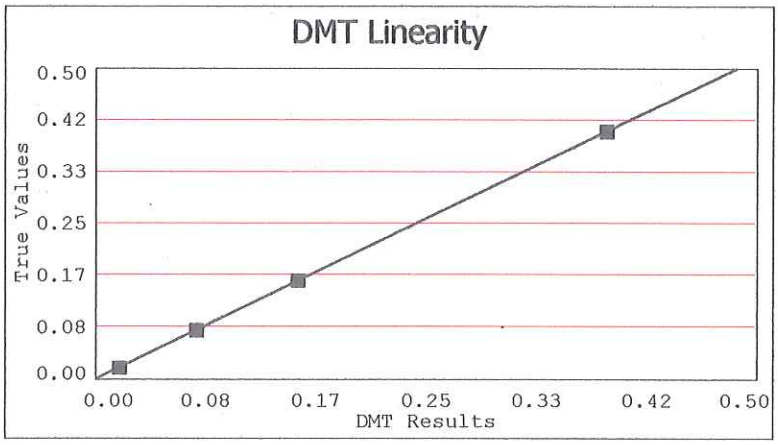
Options

```
OPTIONS
Units
   Alcohol.................. g/210L
Simulator
   Tolerance Check.......... yes
   Standard Type............ wet
   Nominal.................. 0.100
   Digital Simulator........ Guth34CNP
Subject
   Ask Questions............ yes
   Number of Tests.......... 2
   Alcohol Display.......... yes
   Volume Display........... yes
   Query Refusal............ yes
   Copies................... 3
   Simulator Before......... yes
   Simulator Between........ yes
   Simulator After.......... no
   Observation Time......... 0
Supervisor
   Number of Tests.......... 10
Calibration
   Standard Type............ wet
   Nominal.................. 0.100
   Nominal(Dry Gas)......... 0.100
   Number of Tests.......... 1
Printer
   Printer On............... yes
Software Configuration
   Data Collection.......... yes
```

Linearity Check Results

True Value	Reported Average	Std Dev
0.020 g/210L Lot # 13-07-020	0.018 g/210L	0.0000
0.080 g/210L Lot # 13-05-080	0.076 g/210L	0.0000
0.160 g/210L Lot # 13-11-160	0.153 g/210L	0.0000
0.399 g/210L Lot # 13-14-400	0.386 g/210L	0.0000

$R^2 = 1$



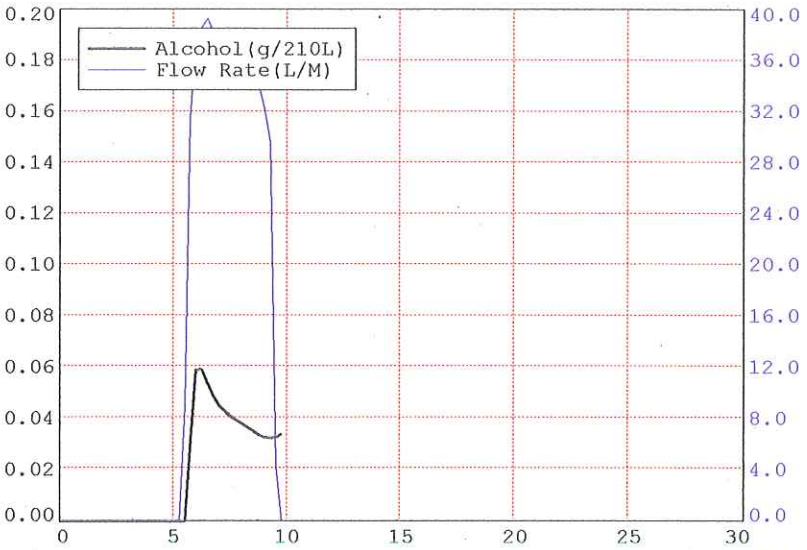
Acetone Interference Test

Lot # 13-05-08A1

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

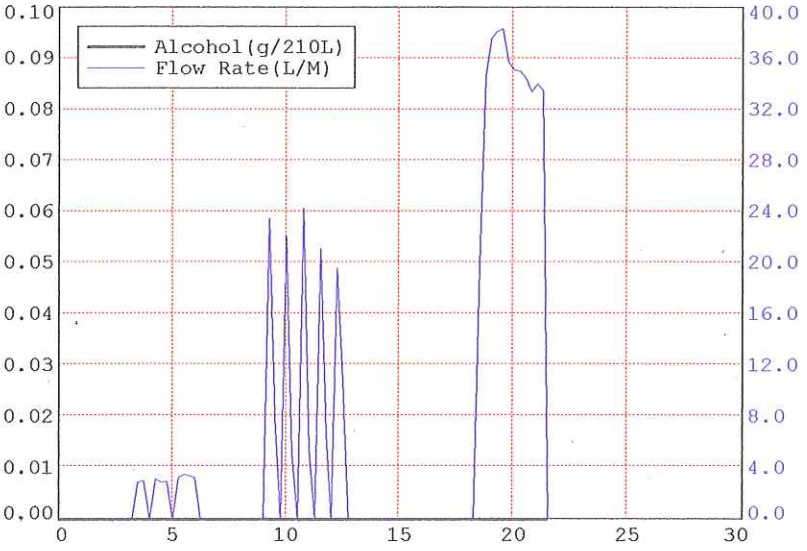


RF Detection Test

Passed

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by _____ **Date** 11/06/2013

Reviewed by _____ **Date** 11/7/2013

DIAGNOSTIC RESULT

DataMaster DMT: 104509
Location:
Calibration Date: 11/06/2013
Certification Date: 11/06/2013
Installation Date:
Test Date: 11/06/2013
Test Time: 11:37:55

VERSIONS
DMT: 1.01
PIC: 2.05
Modem: 2.4
Questions: 2.1

TEMPERATURES

Sample Chamber = 49.2°C
Breath Tube = 41.0°C
Digital Sim = 33.9°C

SETTINGS
Lamp Voltage = 1.71 V
Cooler Voltage = 1.70 V
Bias Voltage = 80 V
Chopper Freq = 522 Hz

PUMP INFO
Flow Rate = 4.777 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0756	0.0791
MIN(V)	0.0738	0.0772

FILTER INFO
Filter 1 0.077 Zero = true
Filter 2 0.652 Zero = true
Filter 3 0.256 Zero = true

CALIBRATION CHECK
Xq = 0.104 0.51%

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