

# EnviroNics 6100 Calibration Worksheet

0 to 100 cc Mass Flow Controller

Calibrator S/N 4115

Flow Std: BIOS ML-800

10/27/2010

SESD Project #: 11-0068

Calibration unit details in "Calibration Standard" Tab

## Pre-Calibration Verification

Flow in cc	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
80	80.508	80.403	80.38	80.292	80.291	80.375	-0.47
50	50.432	50.495	50.503	50.497	50.54	50.493	-0.98
30	30.273	30.389	30.384	30.356	30.334	30.347	-1.14

## Calibration

Flow in cc	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
100	102.61	102.57	102.57	102.58	102.6	102.586	-2.52
90	92.54	92.536	92.618	92.614	92.525	92.567	-2.77
80	82.391	82.368	82.251	82.317	82.248	82.315	-2.81
70	72.038	72.127	72.09	72.134	72.088	72.095	-2.91
60	61.894	61.873	61.899	61.868	61.842	61.875	-3.03
50	51.69	51.707	51.708	51.726	51.793	51.725	-3.33
40	41.469	41.468	41.475	41.484	41.454	41.470	-3.54
30	31.064	31.091	31.056	31.065	31.042	31.064	-3.42
20	20.662	20.663	20.675	20.655	20.655	20.662	-3.20
10	10.158	10.155	10.166	10.203	10.245	10.185	-1.82
5	4.9369	4.8844	4.856	4.8871	4.8829	4.8895	2.26

## Post-Calibration Verification

Flow in cc	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
80	80.109	80.068	80.002	80.1	80.089	80.074	-0.09
50	49.926	49.968	49.945	49.932	49.959	49.946	0.11
30	30.001	30.013	30.048	29.997	30.077	30.027	-0.09

Operator

Mike Crowe

Signature

[Signature]

Date

10/27/10

# EnviroNics 6100 Calibration Worksheet

0 to 20 LPM Mass Flow Controller

Calibrator S/N 4115

Flow Std: BIOS ML-800

10/27/2010

SESD Project 11-0068

Calibration unit details in "Calibration Standard" Tab

## Pre-Calibration Verification

Flow in LPM	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
16	16.337	16.34	16.339	16.34	16.34	16.339	-2.08
10	10.187	10.188	10.189	10.188	10.189	10.188	-1.85
4	4.045	4.048	4.047	4.048	4.048	4.047	-1.17

All points must be within    1.00%

## Calibration

Flow in LPM	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
20	20.5	20.498	20.498	20.498	20.498	20.498	-2.43
18	18.426	18.428	18.428	18.427	18.426	18.427	-2.32
16	16.364	16.367	16.367	16.366	16.365	16.366	-2.24
14	14.303	14.303	14.305	14.305	14.303	14.304	-2.12
12	12.262	12.261	12.26	12.262	12.262	12.261	-2.13
10	10.204	10.204	10.206	10.206	10.207	10.205	-2.01
8	8.1719	8.1703	8.1695	8.1692	8.1692	8.170	-2.08
6	6.1131	6.1145	6.114	6.1145	6.1135	6.114	-1.86
4	4.061	4.0591	4.0581	4.0586	4.0576	4.059	-1.45
2	1.9864	1.9858	1.9896	1.9839	1.9828	1.986	0.72
1	0.94801	0.94907	0.95071	0.94649	0.95013	0.9489	5.39

## Post-Calibration Verification

Flow in LPM	Run 1	Run 2	Run 3	Run 4	Run 5	Average	PD
16	15.961	15.965	15.968	15.972	15.975	15.968	0.20
10	10.005	10.003	10.002	10.003	10.005	10.004	-0.04
4	3.9896	3.9896	3.9882	3.9922	3.9921	3.990	0.24

All points must be within    1.00%

Operator Mike Crowe

Signature [Signature]

Date 10/27/10

**Mechanical Flow Controller Flow Check  
SESD Project 11-0068 Yellow Bluff**

11/9/2010 by Mike Crowe

**Flow Verification**

Flow Controller Number	scc/min
3	3.63
30	3.55
32	3.55
31	3.63
34	3.55

Flow standard: Teledyne HFM-200 S/N 5616200001  
Range 10 SCCM/AIR  
STP 25C / 760 Torr  
Cal Date 09/14/10 By JWC

Operator

Mike Crowe

Signature

Mike Crowe

Date

11/9/10

11-0068 REQUEST

Enforcement Confidential?  
Criminal: Other:

Date Printed: 10/29/2010 14:13:30

Project Type: Air

Facility: Yellow Bluff Air Study

City: Yellow Bluff

County: Wilcox

State: AL

Acct. No.: 101A59C

Initiative:

Program: AIR

Activity: FI

EPA ID:

NPDES Permit:

Field Contractor: H

Lab Contractor: H

Requestor:

Requestor Org:

Project Leader: Crowe, Michael

Project Leader Org: SESD/EIB/SAS

Performing Contact:

Performing Org:

Case No.:

SAS No.:

Start Date: 11/28/2010

Due Date: 02/06/2011

Projected Complete Date: 01/07/2011

Complete Date:

Category: 2 Feedback:

File Complete:

Request Date: 10/29/2010 14:07:00

Scheduled Receipt Date: 12/03/2010

Turn Around Time: 35

RCRA listed dioxin waste contamination? No

QAPP: QAPP will be approved prior to sampling

D.A.R.T. Site/Waterbody:

D.A.R.T. Program/Activity:

D.A.R.T. Sampling Cmpny:

Send Data to DART?

Multiple Sites/Waterbodies for this Project No.?

D.A.R.T. Project ID: 11-0068

Project Comments:

Lab Analyses Requested: ( May not correspond to final collection and/or analysis )

2

Sample Type

Service

Qty Code Description

6 - air

10 7000 Scan, Volatiles

VOLATILES

RN

11-0068 ACTIVE

Enforcement Confidential?  
Criminal: Other:

Date Printed: 2/2/2011 08:56:52

Project Type: Air

Facility: Yellow Bluff Air Study

City: Yellow Bluff

County: Wilcox

State: AL

Acct. No.: 101A59C

Initiative:

Program: AIR

Activity: FI

EPA ID:

NPDES Permit:

Field Contractor: H

Lab Contractor: H

Requestor:

Requestor Org:

Project Leader: Crowe, Michael

Project Leader Org: SESD/EIB/SAS

Performing Contact:

Performing Org:

Case No.:

SAS No.:

Start Date: 01/24/2011

Due Date: 03/30/2011

Projected Complete Date: 02/28/2011

Complete Date:

Category: 2 Feedback:

File Complete:

Request Date: 10/29/2010 14:07:00

Scheduled Receipt Date: 01/24/2011

Turn Around Time: 35

RCRA listed dioxin waste contamination? No

QAPP: QAPP will be approved prior to sampling

D.A.R.T. Site/Waterbody: Weyerhaeuser - Pine Hill Mill (110000822986)

D.A.R.T. Program/Activity: Air (Air Toxics: Toxicity investigation)

D.A.R.T. Sampling Cmpny: PL-SESD (EPA Region 4 SESD)

Send Data to DART? Yes Multiple Sites/Waterbodies for this Project No.?

D.A.R.T. Project ID: 11-0068

Project Comments:

Lab Analyses Requested: ( May not correspond to final collection and/or analysis )

2

Sample Type

Service

Qty Code Description

6 - air

10 7000 Scan, Volatiles

VOLATILES

RN ASB Routine

11-0068

**Bios ML-800 Calibrator**

**Bios ML-800 Calibrator**

**Description    SESD ID:    Calibration Date**

Base                    ML112139

0-100cc cell        ML112058

1-30 LPM            ML112547

*Aug 10, 2010*