



SUBJECT Montgomery County RRF

SHEET NO. 1 OF         
 PROJECT NO. 200454  
 DATE 3-12-15  
 BY S. Boyko  
 CHK'D       

30 Day Sample Volumes

Sampler ID	Preval flow	Post cal flow	Average flow	Total run Time/min	Total Volume Liters @ STP
PS-1	204.7	203	20385	42328.8	8,628,563
*1 PS-2	185	183.8	184.4	42328.5	7,676,427
	165@24	164@24			
*2 PS-3	208.4	205.8	207.1	42328.8	8,563,249
	176.5@22	175@22			
PS-4	211.4	206.5	208.95	42328.8	8,844,603
PS-5	207.8	203.5	205.65	42340.3	8,707,283
PS-6	203.5	199	201.25	42340.4	8,521,001

\*1 PS2 magnetelic reading went to 24" during the period of 2/11/15 through 2/20/15. Adjusted Volumes

\*2 PS3 magnetelic reading went to 22" during the period of 2/11/15 through 2/20/15. Adjusted Volume

- Sample ID
- PS-1 = Buille-Dioxin-PS-1-Collocate
  - PS-2 = Buille-Dioxin-PS-2-backup A
  - PS-3 = Buille-Dioxin-PS-3-backup B
  - PS-4 = Buille-Dioxin-PS-4-Primary
  - PS-5 = Lucketts-Dioxin-PS-5-Primary
  - PS-6 = Lucketts-Dioxin-PS-6-Backup
  - Buille Blank
  - Lucketts Blank

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

DATE \_\_\_\_\_

BY \_\_\_\_\_

CHK'D \_\_\_\_\_



SUBJECT \_\_\_\_\_

# Volumes for Montgomery County RRF

B'ville - Dioxins PS-4 - Primary	8,844.603 m <sup>3</sup> STP
B'ville - Dioxins PS-1 - Collocate	8,628.563 m <sup>3</sup> STP
Lucketts - Dioxins - PS-5 - Primary	8,707.283 m <sup>3</sup> STP



ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5040A

Date - Jan 07, 2015 Rootmeter S/N 0438320 Ta (K) - 292  
Operator Jim Tisch Orifice I.D. - 1233 Pa (mm) - 763.27

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	6.7290	3.6	2.00
2	NA	NA	1.00	4.0900	10.0	5.50
3	NA	NA	1.00	3.2540	15.4	8.50
4	NA	NA	1.00	2.7840	20.8	11.50
5	NA	NA	1.00	2.4660	26.3	14.50
6	NA	NA	1.00	2.2940	30.0	16.50

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0200	0.1515	1.4317	0.9952	0.1479	0.8747
1.0115	0.2473	2.3743	0.9869	0.2412	1.4506
1.0042	0.3086	2.9516	0.9798	0.3011	1.8033
0.9969	0.3581	3.4332	0.9727	0.3493	2.0975
0.9895	0.4012	3.8551	0.9654	0.3915	2.3552
0.9846	0.4292	4.1124	0.9607	0.4187	2.5124
Qstd slope (m) =		9.65651	Qa slope (m) =		6.04674
intercept (b) =		-0.02535	intercept (b) =		-0.01549
coefficient (r) =		0.99995	coefficient (r) =		0.99995

y axis =  $\text{SQRT}[\text{H2O}(\text{Pa}/760)(298/\text{Ta})]$

y axis =  $\text{SQRT}[\text{H2O}(\text{Ta}/\text{Pa})]$

CALCULATIONS

$V_{std} = \text{Diff. Vol} [(\text{Pa} - \text{Diff. Hg}) / 760] (298 / \text{Ta})$   
 $Q_{std} = V_{std} / \text{Time}$

$V_a = \text{Diff Vol} [(\text{Pa} - \text{Diff Hg}) / \text{Pa}]$   
 $Q_a = V_a / \text{Time}$

For subsequent flow rate calculations:

$Q_{std} = 1/m \{ [\text{SQRT}(\text{H2O}(\text{Pa}/760)(298/\text{Ta}))] - b \}$   
 $Q_a = 1/m \{ [\text{SQRT} \text{H2O}(\text{Ta}/\text{Pa})] - b \}$



Electronic Repair &amp; Calibration

530 BOSTON ROAD (RTE. 3A)  
BILLERICA, MA 01821  
TEL. (978) 663-4800  
FAX. (978) 663-3812  
WEB hayesinstruments.com

## Certificate of Calibration

Submitted by: TRC  
21 GRIFFIN RD NORTH  
WINDSOR, CT 06095

Calibration Date: January 22, 2015  
Due Date: January 22, 2016

Manufacturer: SHORTRIDGE INSTRUMENTS  
Model: ADM-870  
Description: AIRDATA MULTIMETER  
Serial Number: M96376  
Property Number:

The above unit was calibrated in accordance with purchase order requirements on the date noted above and was performing in accordance with the manufacturer's specifications at the time of release from this laboratory. This certification was performed using standards maintained by this laboratory, which are periodically certified traceable to the National Institute of Standards and Technology. The cycling and certification of all standards of measurement used by Hayes Instrument Service meet the requirements of ISO 9001:2008, MIL-STD-45662A, ISO/IEC 17025:2005, ISO-10012:2003 and ANSI/NCSL Z540-1-1994. The calibration standards used have an uncertainty error of no more than 1/4 of the tolerance of the equipment being calibrated, or have an accuracy that ensures the equipment being calibrated will be within required tolerances. (Accomplished under quality system manual, QM-100 dated 04/06/04 Rev. F May 2012)

STANDARD	N.I.S.T Trace	CERT#
DC Voltage	Fluke 732A	281264
AC Voltage	Fluke 5790A/03	661030
Resistance	ESI SR104	071907
Frequency	VLF Transmission ON WWVB & GPS	
Mass Weight	Set 1031	268730
Dimensional	MTY 516-958-02	276493

  
Authorized Signature

Temperature & Humidity  
72°F ± 5°      45% ± 25% R.H.

Received in tol   x   out tol       
Returned in tol   x   out tol

# Hayes Instrument Service, Inc.

**SUBMITTED BY** TRC  
**MANUFACTURER** SHORTRIDGE INSTRUMENTS  
**MODEL NO** ADM-870  
**DESCRIPTION** AIRDATA MULTIMETER  
**SERIAL NO.** M96376

**CALIBRATION DATE** 1.22.15  
**DUE DATE** 1.22.16  
**CAL ENGINEER** 151  
**CAL PROCEDURE** T.O. 33K6-4-3092-1  
**PROPERTY NO.** \_\_\_\_\_

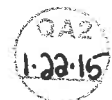
TEMP & HUMIDITY  
70 30

**APPROVED BY** CPB **CALIBRATION RECORD**

FUNCTION TESTED	RANGE	STANDARD VALUE	ACTUAL MEAS. VALUE	AFTER ADJUST MEAS. VALUE	TOLERANCE
PRESSURE	inH <sub>2</sub> O	0	PASS	NO ADJ	PASS TEST
		10.00	10.11		9.80 - 10.20
		20.00	20.15		19.60 - 20.40
		30.00	30.21		29.40 - 30.60
		40.00	40.18		39.20 - 40.80
50.00	50.15	49.00 - 51.00			
ABSOLUTE PRESSURE	inHg	10.0	10.0		9.8 - 10.2
		20.0	20.0		19.5 - 20.5
		30.0	30.0		29.3 - 30.7
		40.0	40.1		39.2 - 40.8
TEMP PROBE	°F	32.0	32.1		31.5 - 32.5
		75.0	72.0		71.5 - 72.5
		150.0	149.9		149.5 - 150.5

### H.I.S. REFERENCE STANDARDS

Mfg	Description	Model #	Serial #	Next cal due	Cycle	HIS#
DRUCK	PRESSURE CALIBRATOR	DPI800-P	8000010965	01/31/15	24 mo	1491
DRUCK	PRESSURE CALIBRATOR	UPM-P	2256128	01/31/15	24 mo	1492
DRUCK	PRESSURE STANDARD	DPI150	3268327	04/30/16	24 mo	1585
FLUKE	PRT	5618B	831273	02/29/16	24 mo	1539
FLUKE	DEEP WELL CALIBRATOR W/R.O.	9173SD	A56008	11/30/15	12 mo	1450



Page: \_\_\_\_\_ of \_\_\_\_\_  
 Project # 200454.0000.0000  
 CFA Quote #: CFAP13-0020  
 COC Number <sup>(1)</sup>: \_\_\_\_\_  
 PO Number: \_\_\_\_\_

# Cape Fear Analytical, LLC

## Chain of Custody and Analytical Request

**CFA Work Order Number:** \_\_\_\_\_

Cape Fear Analytical, LLC  
 3306 Kitty Hawk Rd. Suite 120  
 Wilmington, NC 28405  
 Phone: (910) 795-0421

**Client Name:** TRC Environmental  
**Project/Site Name:** Montgomery County RRF  
**Address:** 21 Griffin Road North, Windsor, CT  
**Collected by:** \_\_\_\_\_  
**Send Results To:** ghunt@trcsolutions.com  
**Phone #:** \_\_\_\_\_  
**Fax #:** \_\_\_\_\_

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (i)	Field Filtered (b)	Sample Matrix (a)	Total number of containers		TO-9A Modified CTDEEP	Sample Analysis Requested <sup>(6)</sup> (Fill in the number of containers for each test)	<-- Preservative Type (b)	Comments
						Yes	No				
B'ville-Dioxins- PS-4 -Primary (PUF / Filter)	3-04-15	21:40			AIR	2	X				Volume: To be provided
B'ville-Dioxins- PS-1 -Collocate (PUF / Filter)	3-04-15	21:40			AIR	2	X				Volume: To be provided
B'ville-Dioxins- PS-2 -back-up A (PUF / Filter)	3-04-15	21:40			AIR	2	X				HOLD back-up: do not analyze
B'ville-Dioxins- PS-3 -back-up B (PUF / Filter)	3-04-15	21:40			AIR	2	X				HOLD back-up: do not analyze
Lucketts-Dioxins- PS-5 -Primary (PUF / Filter)	3-04-15	20:00			AIR	2	X				Volume: To be provided
Lucketts-Dioxins- PS-6 -back-up (PUF / Filter)	3-04-15	20:00			AIR	2	X				HOLD back-up: do not analyze
B'ville Blank-Dioxins (PUF / Filter)	3-04-15	21:40			AIR	2	X				
Lucketts Blank-Dioxins (PUF / Filter)	3-04-15	20:00			AIR	2	X				

TAT Requested: Normal; Rush: \_\_\_\_\_ Specify: 15 (Subject to Surchage) Fax Results: Yes / No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Time Zone: Eastern Pacific Other \_\_\_\_\_  
**Remarks:** Are there any known hazards applicable to these samples? If so, please list the hazards  
 do not analyze back-up samples unless directed to do so by Gary Hunt or Melita Lihzis

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>Stephen Boyko</i>	3-5-15	15:50			

CFA PM: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_ Date Shipped: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

**Chain of Custody Number = Client Determined**  
 1) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 2) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered  
 3) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 4) Sample Analysis Requested: Analytical method requested (i.e. 8290B, 1668B) and number of containers provided for each (i.e. 8290B - 3, 1668B - 1)  
 5) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 6) For Lab Receiving Use Only  
 Custody Seal Intact? YES NO  
 Cooler Temp: C

**WHITE = LABORATORY**  
**YELLOW = FILE**  
**PINK = CLIENT**

PS-1

# TRC

## Compendium Method TO-9A Field Sampling Data Sheet

General Information	
Client:	Montgomery County RRF
TRC Job Number:	200454.0000.0000.000002.000001
Operators:	Steve Boyko
Sampler ID:	PS-1
Sampler Location:	Beallsville
PUF Batch Number:	
PUF Cartridge Cert. Date:	

Sampling Data		
	Start	Stop
Date:	2-3-15	3-4-15
Barometric Pressure ("Hg):	29.47	29.44
Ambient Temperature (°C):	30°F / 0°C	39°F / 3.9°C
Clock Time:	12:10	21:40
Elapsed Timer:	02965.47	03670.95

Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)
2/11/15	9:57	30°F/1°C	30.08	30		03155.26	
2/20/15	10:10	13°F/-11°C	30.43	30		03371.28	
2/27/15	9:49	27°F/-3°C	30.43	30		03539.68	
3/4/15	21:40	30°F/3°C	29.44	30		04070.95	705.48 hr
					20385		42328.8min

Comments: \_\_\_\_\_  
 \* hose came loose sometime after check on 2/20 - reattached by Spectrum on 2/27

Pre Cal @ 30 Post Cal @ 30 Average =  $20385 \times 42328.8 \text{ min} = 8,628,563 \text{ Liters}$

8,628.563 m<sup>3</sup> STP

# TRC

PS-2

## Compendium Method TO-9A Field Sampling Data Sheet

### General Information

Client: Montgomery County RRF  
 TRC Job Number: 200454.0000.0000.000002.000001  
 Operators: Steve Boyko  
 Sampler ID: PS-2  
 Sampler Location: Beallsville  
 PUF Batch Number: -  
 PUF Cartridge Cert. Date: -

### Sampling Data

	Start	Stop
Date:	2-3-15	3-4-15
Barometric Pressure ("Hg):	29.97	29.44
Ambient Temperature (°C):	30°F / -1.1 °C	39°F / 3.9 °C
Clock Time:	12:10	21:40
Elapsed Timer:	10346.5	52675.5

Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)
2/11/15	9:59	30°F / 2°C	30.08	30	184.4	21734.9	
2/20/15	10:08	13°F / -11°C	30.43	24	174.45	34694.6	
2/27/15	9:47	27°F / -3°C	30.43	30	184.4	44761.7	
3/4/15	21:40	39°F / 3.9°C	29.44	30	184.4	52675.5	42,328.5

\*

Comments: Total Volume 7,676,427 Liters SIP  
 2/20 - Magnehelic reading was only 24, readjusted to 30 during check

$$\begin{array}{r}
 34694.5 \text{ min} \\
 - 21734.9 \text{ min} \\
 \hline
 12959.6 \text{ min} \\
 \times 174.45 \text{ average flow @ 24 and 30} \\
 \hline
 2,260,802 \text{ L}
 \end{array}$$

$$\begin{array}{r}
 42,328.5 \text{ Total/min} \\
 - 12,959.6 * \\
 \hline
 29,368.9 \text{ min} \\
 \times 184.4 \text{ average flow @ 30} \\
 \hline
 5,415,625 \text{ L}
 \end{array}$$

+

$$2,260,802 \text{ L} + 5,415,625 \text{ L} = 7,676,427 \text{ L}$$



PS-3

# TRC

## Compendium Method TO-9A Field Sampling Data Sheet

General Information	
Client:	Montgomery County RRF
TRC Job Number:	200454.0000.0000.000002.000001
Operators:	Steve Boyko
Sampler ID:	PS-3
Sampler Location:	Beallsville
PUF Batch Number:	-
PUF Cartridge Cert. Date:	-

Sampling Data		
	Start	Stop
Date:	2-3-15	3-4-15
Barometric Pressure ("Hg):	29.47	29.44
Ambient Temperature (°C):	30°F / 1 °C	39°F / 3.9°C
Clock Time:	12:10	21:40
Elapsed Timer:	05452.86	06158.34

Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)
2/11/2015	10:00	36°F / 2°C	30.08	30	207.1	05642.68	
2/20/15	10:05	13°F / -11°C	30.43	22	191.43	05858.64	
2/27/15	9:46	27°F / -3°C	30.43	30	207.1	06026.43	
3/4/15	21:40	39°F / 3.9°C	29.44	30	207.1	06158.34	705.48 hr
							42328.8 min

Comments: Total Volume 8563249 Liters STP  
 2/20 - Magnehelic reading was only 22; readjusted to 30 during check

\* 5858.64 hr  
 - 5642.68 hr  
 -----  
 215.96 hr  
 X 60

12957.6 min (from 2/11/15 to 2/20/15)  
 X 191.43 average flow @ 30 & 22

2,480,473 L +

705.48 Total hrs  
 - 215.96 \*  
 -----  
 489.52  
 X 60

29,371.2 min  
 X 207.1 average flow

6,082,776 = 8,563,249 L STP

# TRC

PS-4

## Compendium Method TO-9A Field Sampling Data Sheet

General Information								
Client: Montgomery County RRF								
TRC Job Number: 200454.0000.0000.000002.000001								
Operators: Steve Boyko								
Sampler ID: PS-4								
Sampler Location: Beallsville								
PUF Batch Number: -								
PUF Cartridge Cert. Date: -								
Sampling Data								
				Start	Stop			
Date:				2-3-15		3-4-15		
Barometric Pressure ("Hg):				29.97		29.44		
Ambient Temperature (°C):				23°F / °C		39°F / 3.9°C		
Clock Time:				12:10		21:40		
Elapsed Timer:				04315.01		05020.49		
Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)	
2/11/15	10:01	36°F/2°C	30.08	30		04504.84		
2/20/15	10:03	13°F/-11°C	30.43	30		04720.77		
2/27/15	9:44	27°F/-3°C	30.43	30		04888.57		
3/4/15	21:40	39°F/3.9°C	29.44	30		05020.49	705.48 hr	
					20895		42328.8 min	

Comments: Total Volume 8,844,603 Liters STP

---



---



---



---

# TRC

## Compendium Method TO-9A Field Sampling Data Sheet

PS-5

General Information							
Client: Montgomery County RRF							
TRC Job Number: 200454.0000.0000.000002.000001							
Operators: Steve Boyko							
Sampler ID: PS-5							
Sampler Location: Lucketts School							
PUF Batch Number:							
PUF Cartridge Cert. Date:							
Sampling Data							
			Start			Stop	
Date:			2-3-15			3-4-15	
Barometric Pressure ("Hg):			30.22			29.61	
Ambient Temperature (°C):			23 F / -5 C			40 F / 4.4 C	
Clock Time:			10:20			20:00	
Elapsed Timer:			29505.9			71846.2	
Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)
2/11/15	9:20	34°F/1°C	30.07	30		40764.8	
2/20/15	9:17	10°F/-12°C	30.31	30		53922.7	
2/27/15	9:08	25°F/-4°C	30.29	30		63993.4	
3/4/15	20:00	40°F/4°C	29.61	30	20565	71846.2	42340.3

Comments: Total Volume 8,707,283 liters STP

---



---



---



---

TRC

PS-6

Compendium Method TO-9A  
Field Sampling Data Sheet

General Information	
Client:	Montgomery County RRF
TRC Job Number:	200454.0000.0000.000002.000001
Operators:	Steve Boyko
Sampler ID:	PS-6
Sampler Location:	Luckett's school
PUF Batch Number:	
PUF Cartridge Cert. Date:	-

Sampling Data		
	Start	Stop
Date:	2-3-15	3-4-15
Barometric Pressure ("Hg):	30.22	29.61
Ambient Temperature (°C):	23°F / -5°C	40°F / 4.4°C
Clock Time:	10:20	20:00
Elapsed Timer:	70351.4	112691.8

Weekly Check Date:	Station Check Time:	Ambient Temp. (°C)	Barometric Pressure ("Hg)	Magnehelic Reading ("WC)	Flow Rate (lpm)	Elapsed Timer	Total Running Time (minutes)
2/11/15	9:17	34°F / 1°C	30.07	30		81808.8	
2/20/15	9:15	10°F / -12°C	30.31	30		94767.4	
2/27/15	9:06	25°F / -4°C	30.29	30		04838.4	
3/4/15	20:00	40°F / 4°C	29.61	30	201.25	12691.8	42,340.4

Comments: Total Volume 8,521,001 Liters STP  
 2/19 - hose blew off unit; reattached by Spectrum on 2/11  
 2/19 - hose blew off unit; reattached by Spectrum on 2/20

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS1  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start of 30 day test

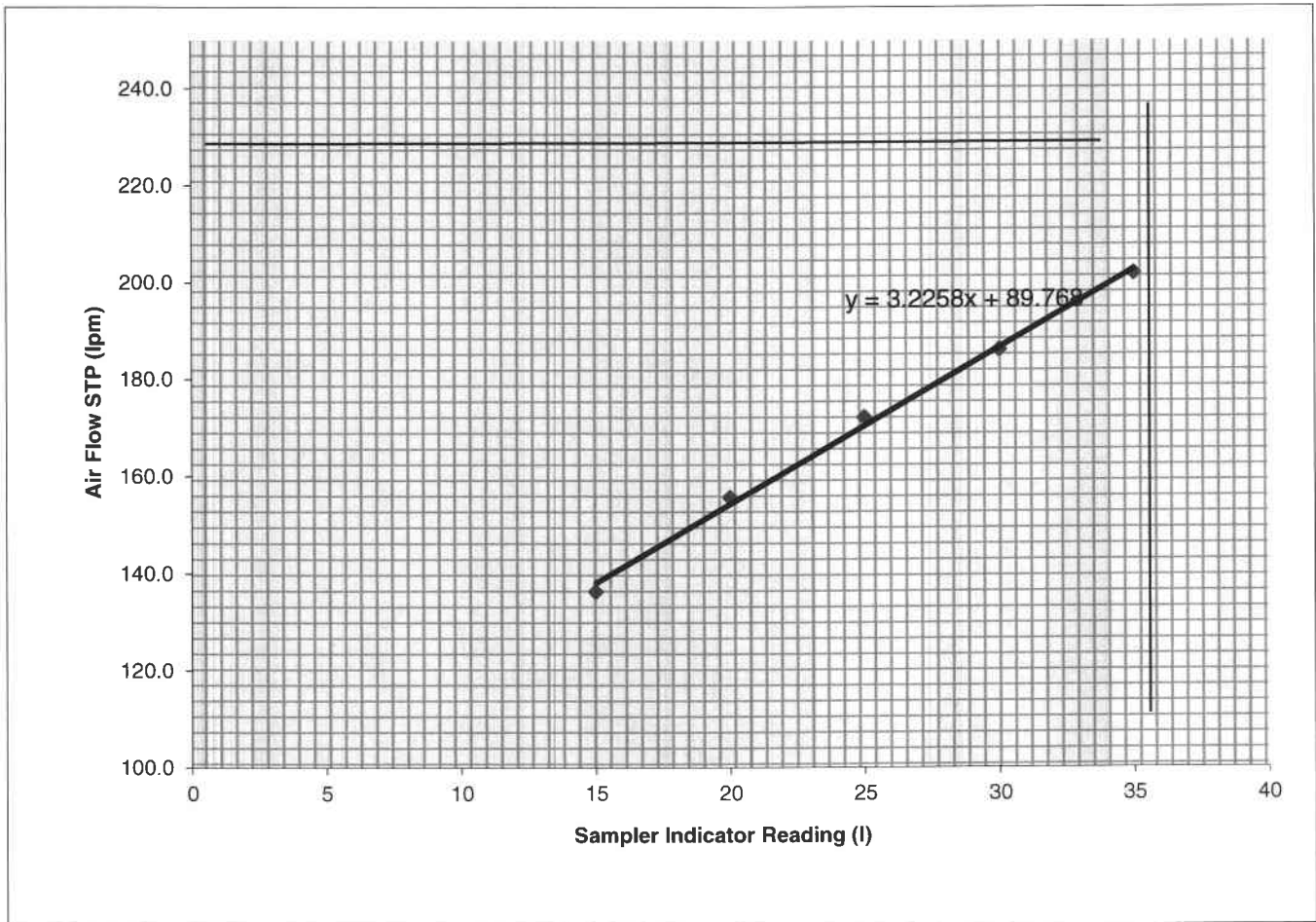
Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.75	1.8333	149.3	136.4	15	15.0
2.29	2.3990	170.4	155.6	20	19.9
2.81	2.9438	188.5	172.1	25	24.9
3.29	3.4466	203.8	186.1	30	29.9
3.88	4.0647	221.1	201.8	35	34.9

$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$   
 $l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$

m = 3.55                      b = 98.2                      r = 0.998289861



Desired Flow Rate (lpm): 204.7

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS1  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End of 30 Day Test

Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @ STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.80	1.8520	147.4	139.5	15	14.7
2.27	2.3356	165.3	156.4	20	19.6
2.87	2.9529	185.5	175.5	25	24.5
3.40	3.4982	201.7	190.8	30	29.4
3.92	4.0332	216.3	204.7	35	34.3

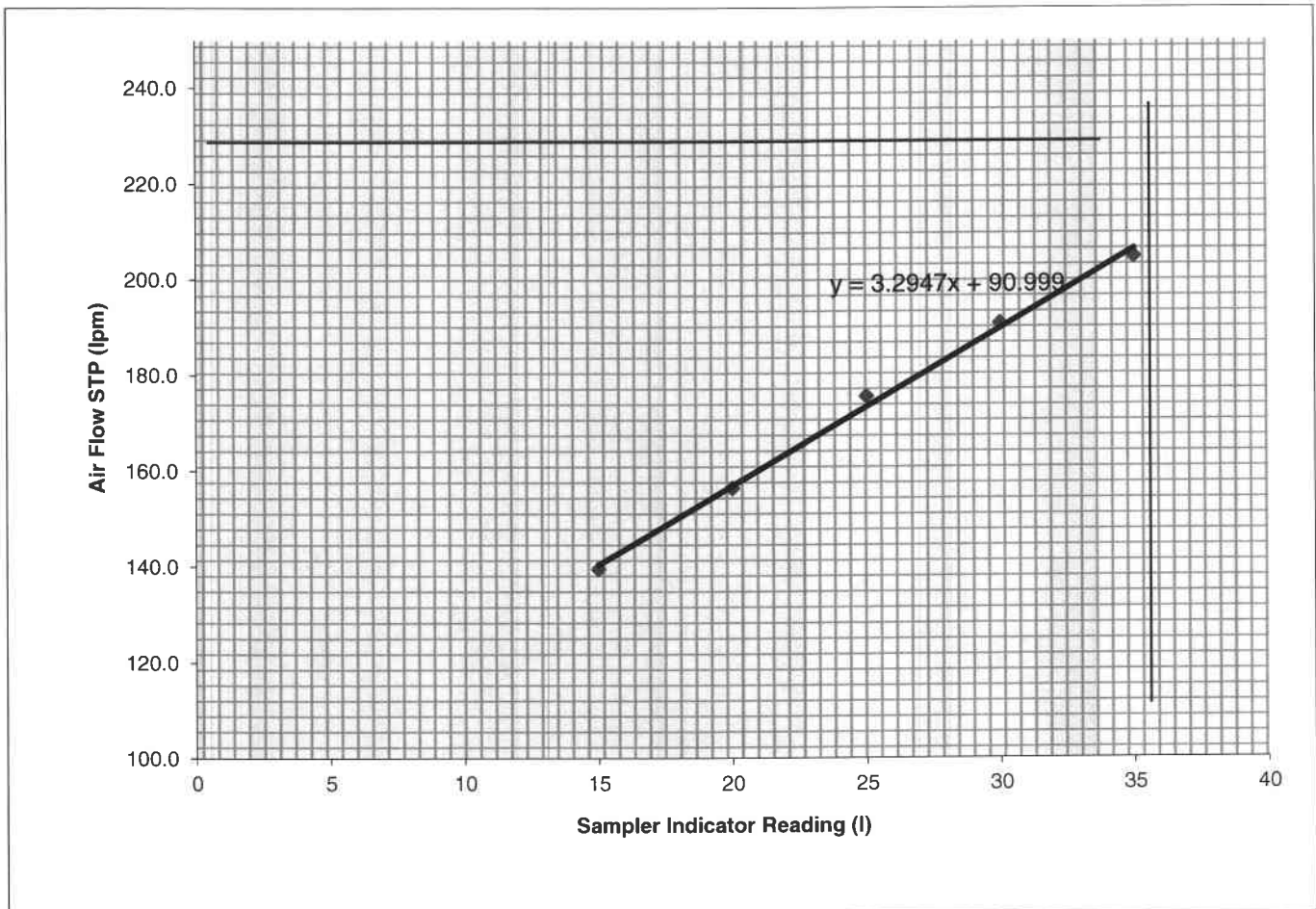
$$H_c = H \times \sqrt{0.392 \times (P1/T1)}$$

$$l_c = l \times \sqrt{[(P1/P2) \times (T2/T1)]}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P1/760) \times (297.18/T1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T1/P1) - b_c]}\} \times 1000$$

m = 3.56                      b = 96.1                      r = 0.998302829



Desired Flow Rate (lpm): 203

Sampler Setting: 30.0

## PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS2  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day test

Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	I	Ic
1.40	1.4667	133.8	122.3	15	15.0
1.80	1.8857	151.4	138.3	20	19.9
2.25	2.3571	169.0	154.3	25	24.9
2.71	2.8390	185.2	169.1	30	29.9
3.18	3.3314	200.4	183.0	35	34.9

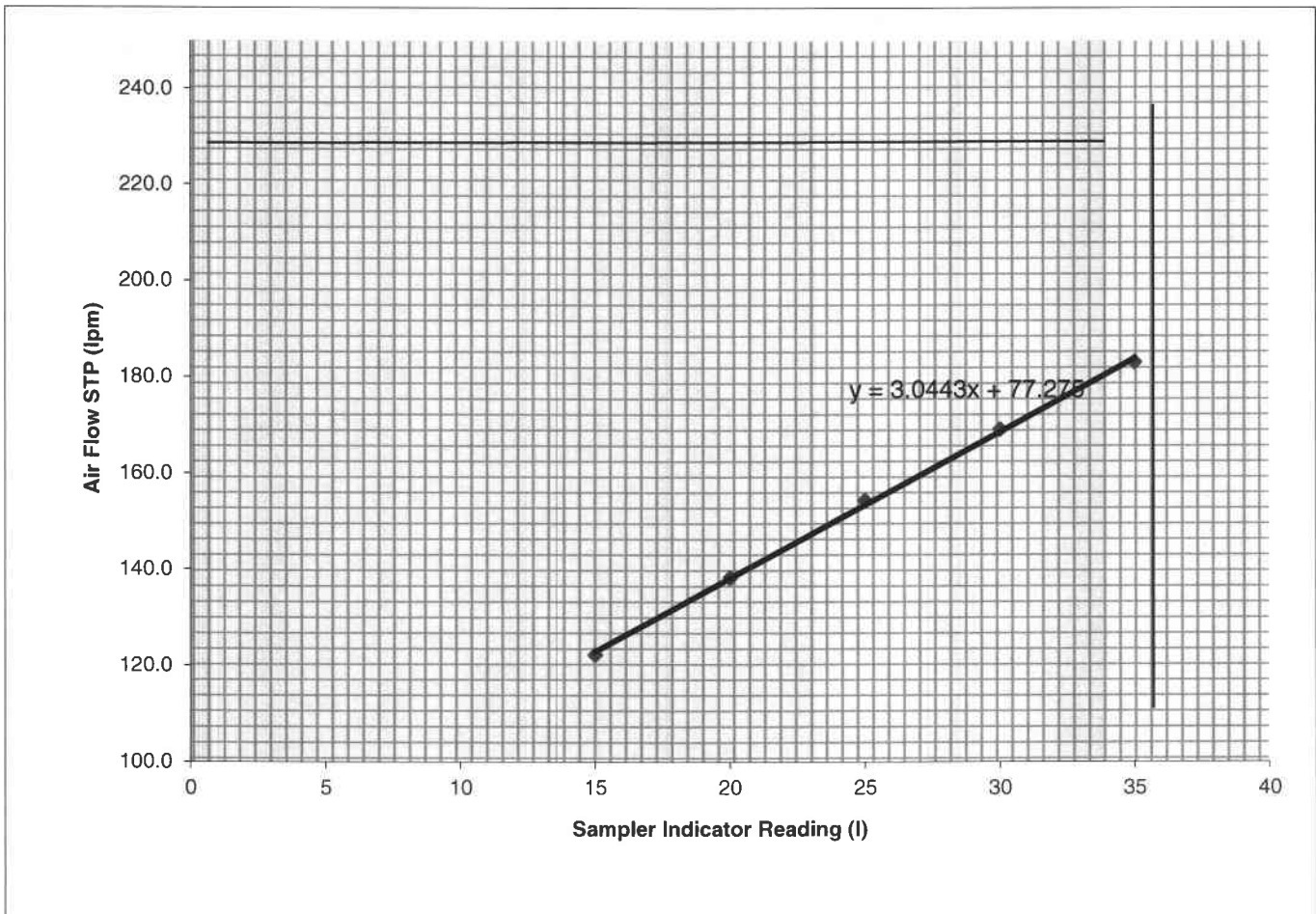
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$I_c = I \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.35                      b = 84.5                      r = 0.999499374



Desired Flow Rate (Ipm): 185

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS2  
 Technician: S.Boyko      Date: 3/4/2014      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End of first 30 day test. Post cal.

Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.02325	0

Delta H	Delta Hc	Qstd	Qact	I	Ic
1.41	1.4507	130.8	125.1	15	14.7
1.88	1.9343	150.6	143.8	20	19.6
2.32	2.3870	167.0	159.3	25	24.5
2.78	2.8603	182.6	174.0	30	29.4
3.21	3.3027	196.0	186.7	35	34.3

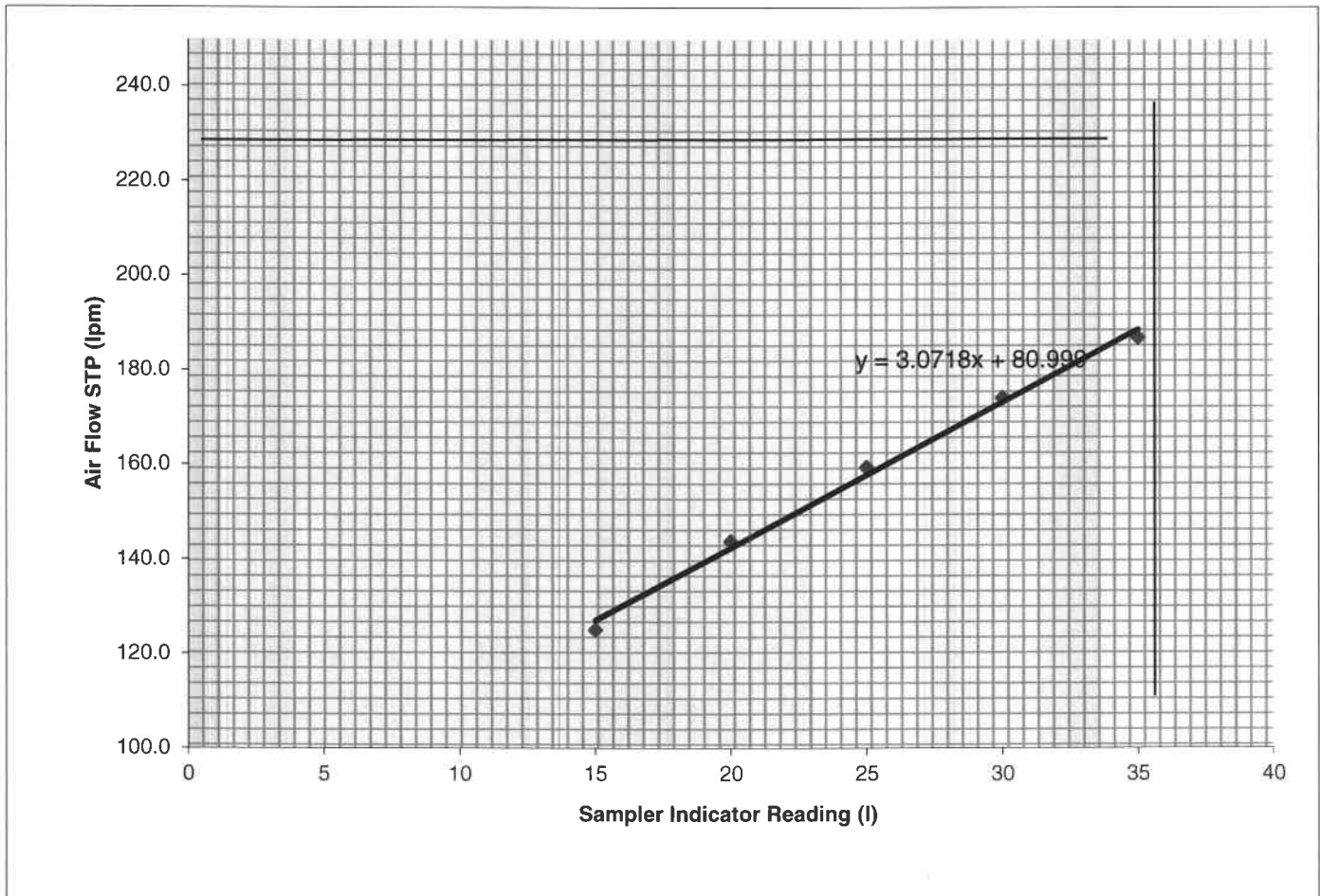
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$I_c = I \times \sqrt{(P_1/P_2) \times (T_2/T_1)}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.32                      b = 84.2                      r = 0.997409913



Desired Flow Rate (Ipm): 183.8

Sampler Setting: 30.0



### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS 3  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day test

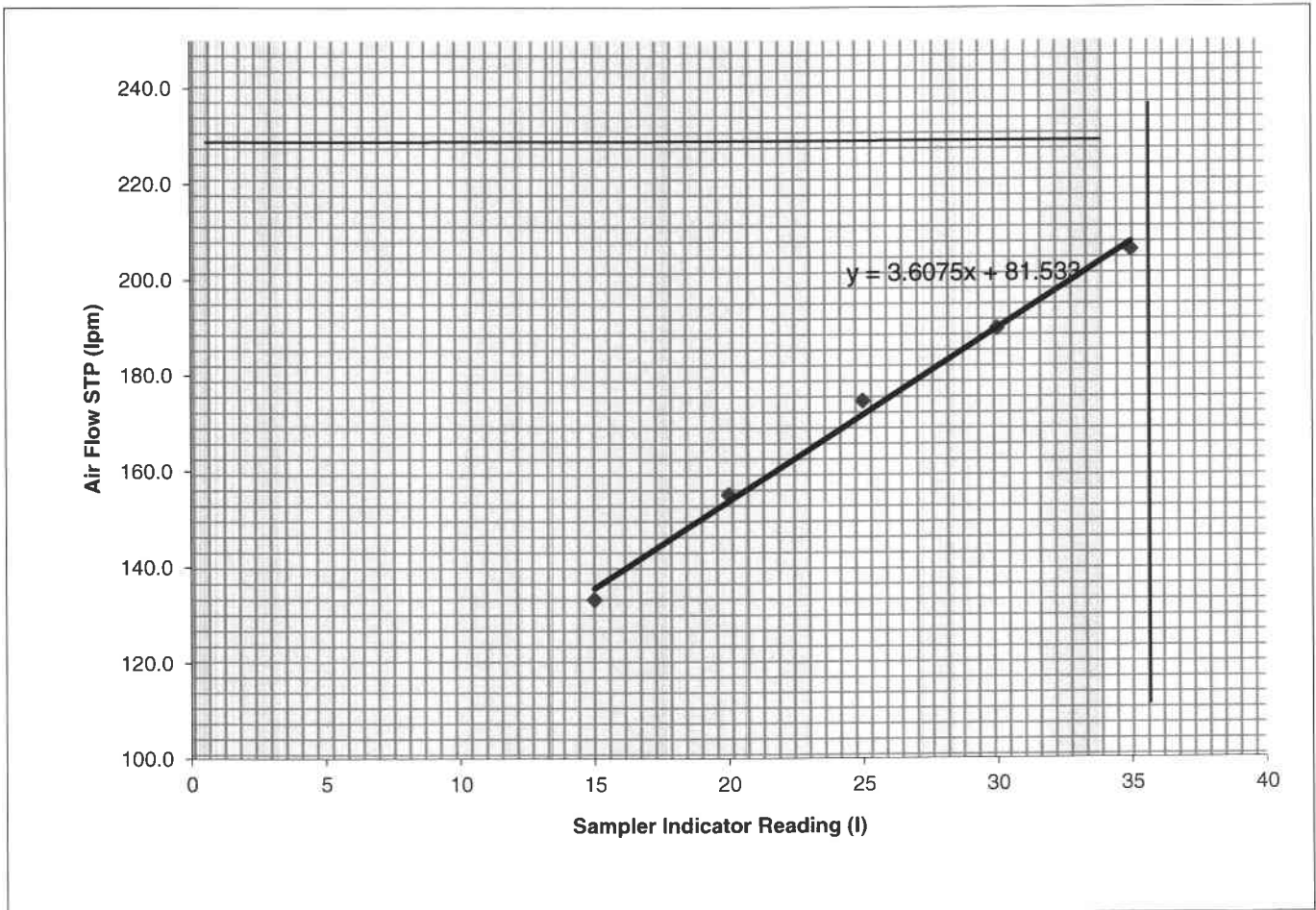
Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	I	Ic
1.67	1.7495	145.9	133.3	15	15.0
2.27	2.3781	169.7	155.0	20	19.9
2.89	3.0276	191.2	174.5	25	24.9
3.42	3.5828	207.7	189.6	30	29.9
4.05	4.2428	225.8	206.1	35	34.9

$H_c = H \times \sqrt{[0.392 \times (P_1/T_1)]}$   
 $I_c = I \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$

m = 3.97                      b = 89.2                      r = 0.997263123



Desired Flow Rate (Ipm): 208.4

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS-3  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End of 30 day test. Post cal.

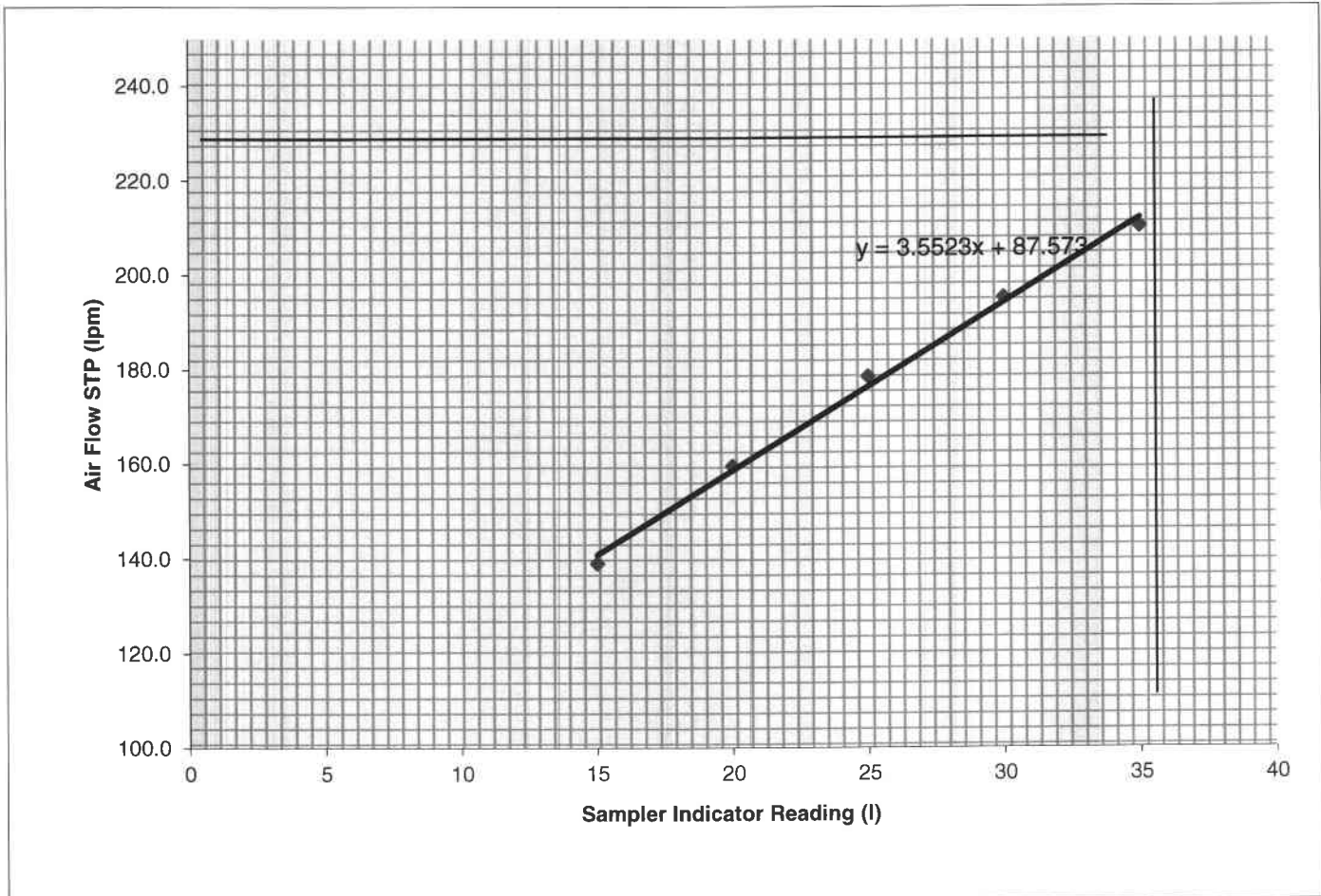
Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.02611	0

Delta H	Delta Hc	Qstd	Qact	l	lc
1.74	1.7903	145.0	139.0	15	14.7
2.31	2.3767	166.7	159.5	20	19.6
2.91	2.9941	186.8	178.5	25	24.5
3.49	3.5908	204.3	195.0	30	29.4
4.06	4.1773	220.1	210.0	35	34.3

$H_c = H \times \sqrt{[0.392 \times (P_1/T_1)]}$   
 $l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]} \} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]} \} \times 1000$

m = 3.84                      b = 90.7                      r = 0.997953272



Desired Flow Rate (lpm): 205.8

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS-4  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day Test

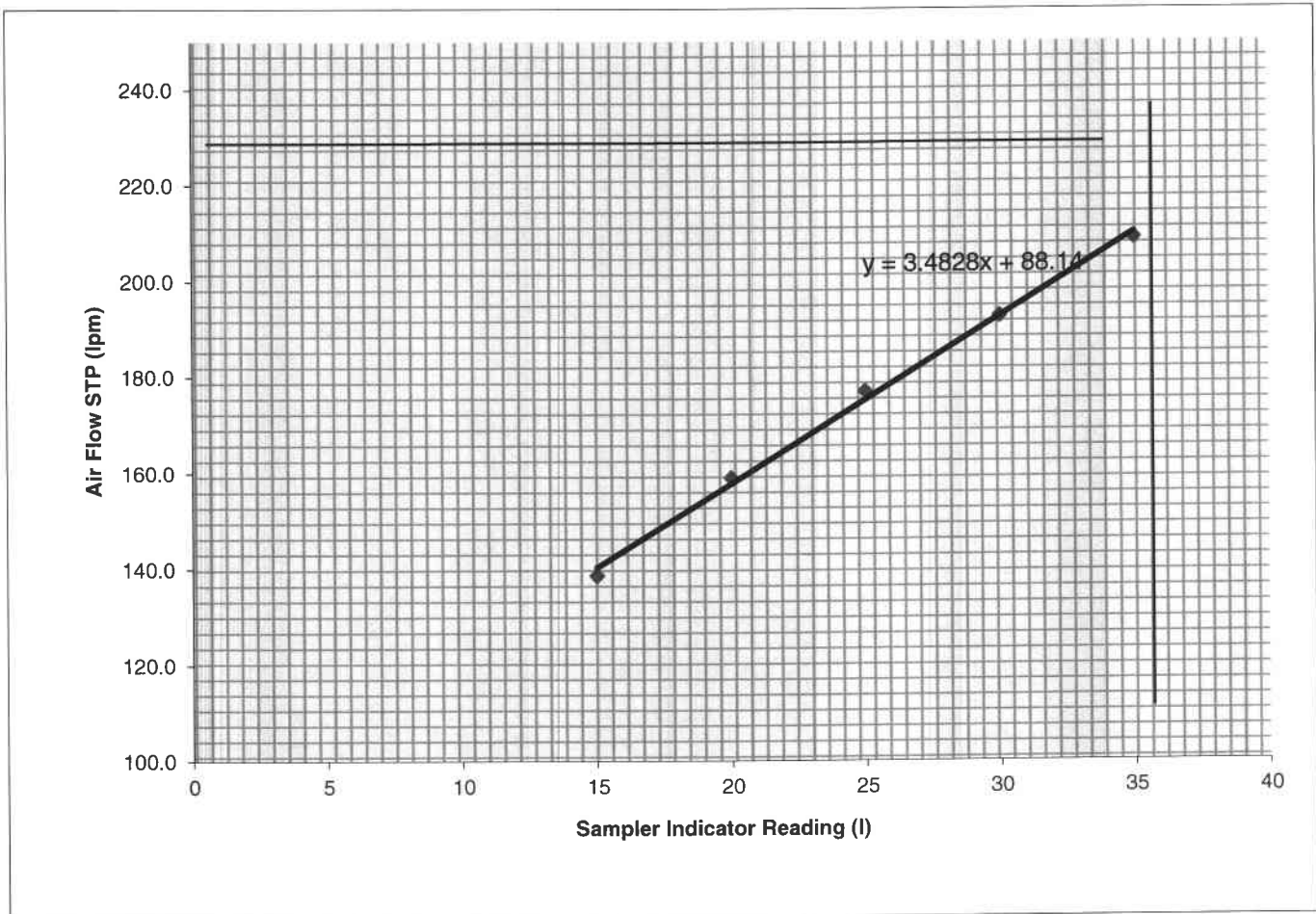
Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.81	1.8962	151.8	138.7	15	15.0
2.39	2.5038	174.1	159.0	20	19.9
2.97	3.1114	193.7	176.9	25	24.9
3.53	3.6981	211.0	192.6	30	29.9
4.16	4.3580	228.8	208.9	35	34.9

$H_c = H \times \sqrt{0.392 \times (P1/T1)}$   
 $l_c = l \times \sqrt{(P1/P2) \times (T2/T1)}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P1/760) \times (297.18/T1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T1/P1) - b_c]}\} \times 1000$

m = 3.83                      b = 96.4                      r = 0.998605511



Desired Flow Rate (lpm): 211.4

Sampler Setting: 30.0

**TRC**  
Environmental Corporation

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS-4  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End 30 Day Sample

Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @ STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.75	1.8006	145.4	137.6	15	14.7
2.36	2.4282	168.4	159.4	20	19.6
2.91	2.9941	186.8	176.7	25	24.5
3.52	3.6217	205.1	194.1	30	29.4
4.10	4.2184	221.2	209.3	35	34.3

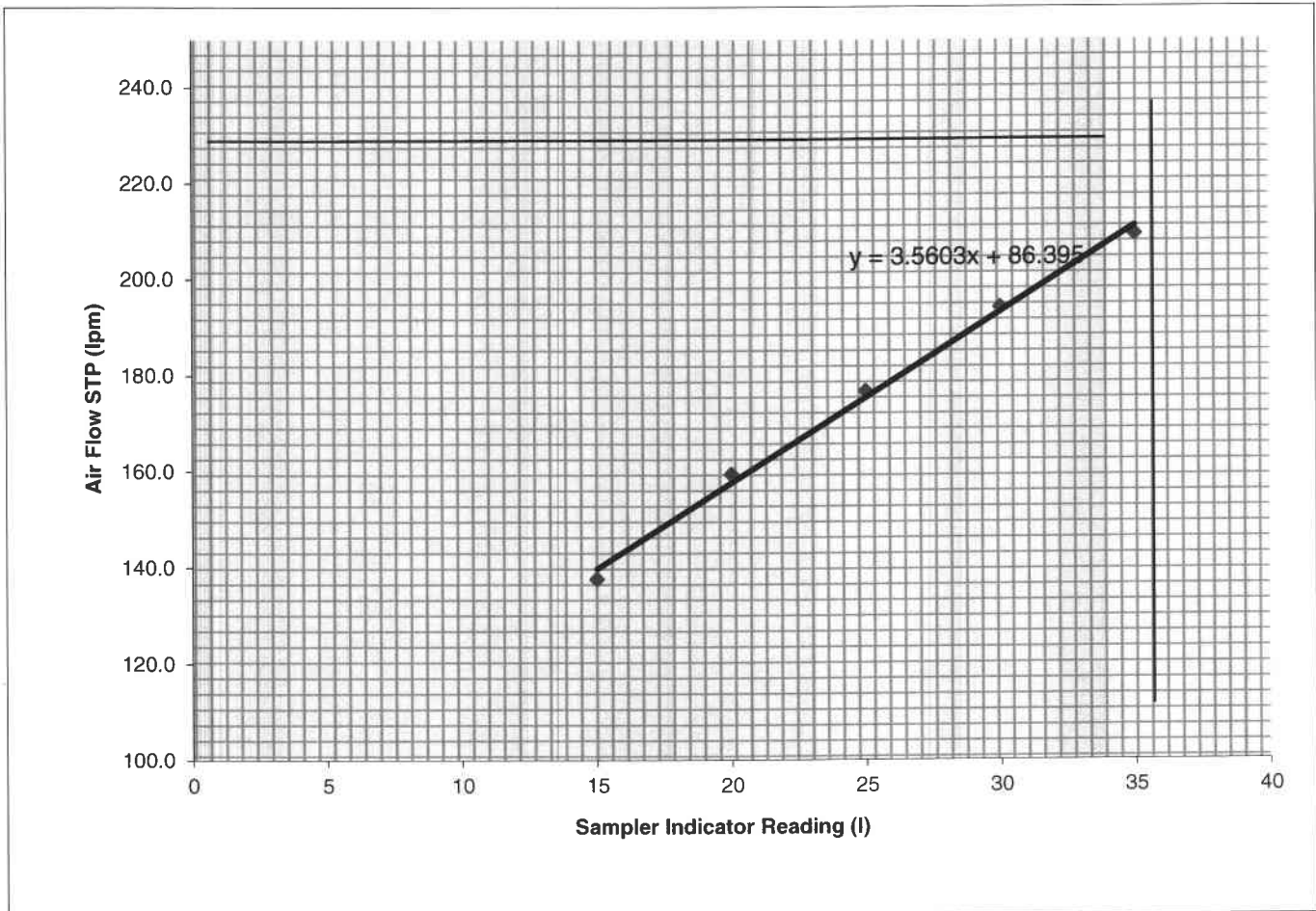
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.85                      b = 91.3                      r = 0.997877113



Desired Flow Rate (lpm): 206.5

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Lucketts      Serial#: \_\_\_\_\_      Station: PS-5  
 Technician: S.Boyko      Date: 2/3/2014      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: start 30 day first test

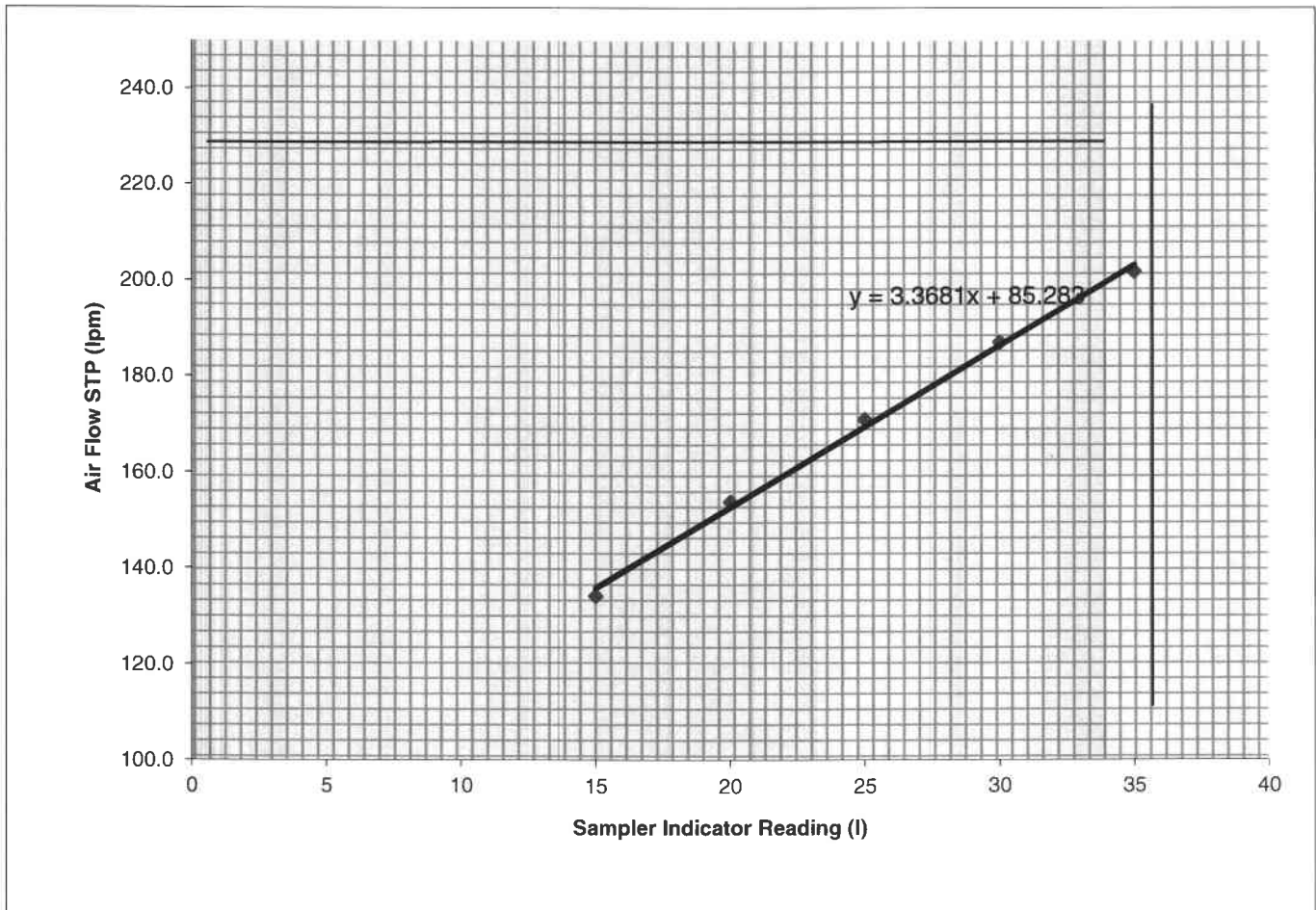
Amb. Temp, T1 (°C / K)	-5.0	268	Bar. Press., P1 (inHg / mmHg)	30.22	768
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.71	1.8119	150.1	134.1	15	15.1
2.26	2.3947	172.2	153.8	20	20.2
2.80	2.9669	191.4	170.9	25	25.2
3.36	3.5602	209.4	186.9	30	30.2
3.92	4.1536	226.0	201.7	35	35.3

$H_c = H \times \sqrt{0.392 \times (P1/T1)}$   
 $l_c = l \times \sqrt{[(P1/P2) \times (T2/T1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P1/760) \times (297.18/T1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T1/P1) - b_c]}\} \times 1000$

m = 3.75                      b = 95.4                      r = 0.998483402



Desired Flow Rate (lpm): 207.8

Sampler Setting: 30.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Lucketts      Serial#: \_\_\_\_\_      Station: PS-5  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End 30 day test

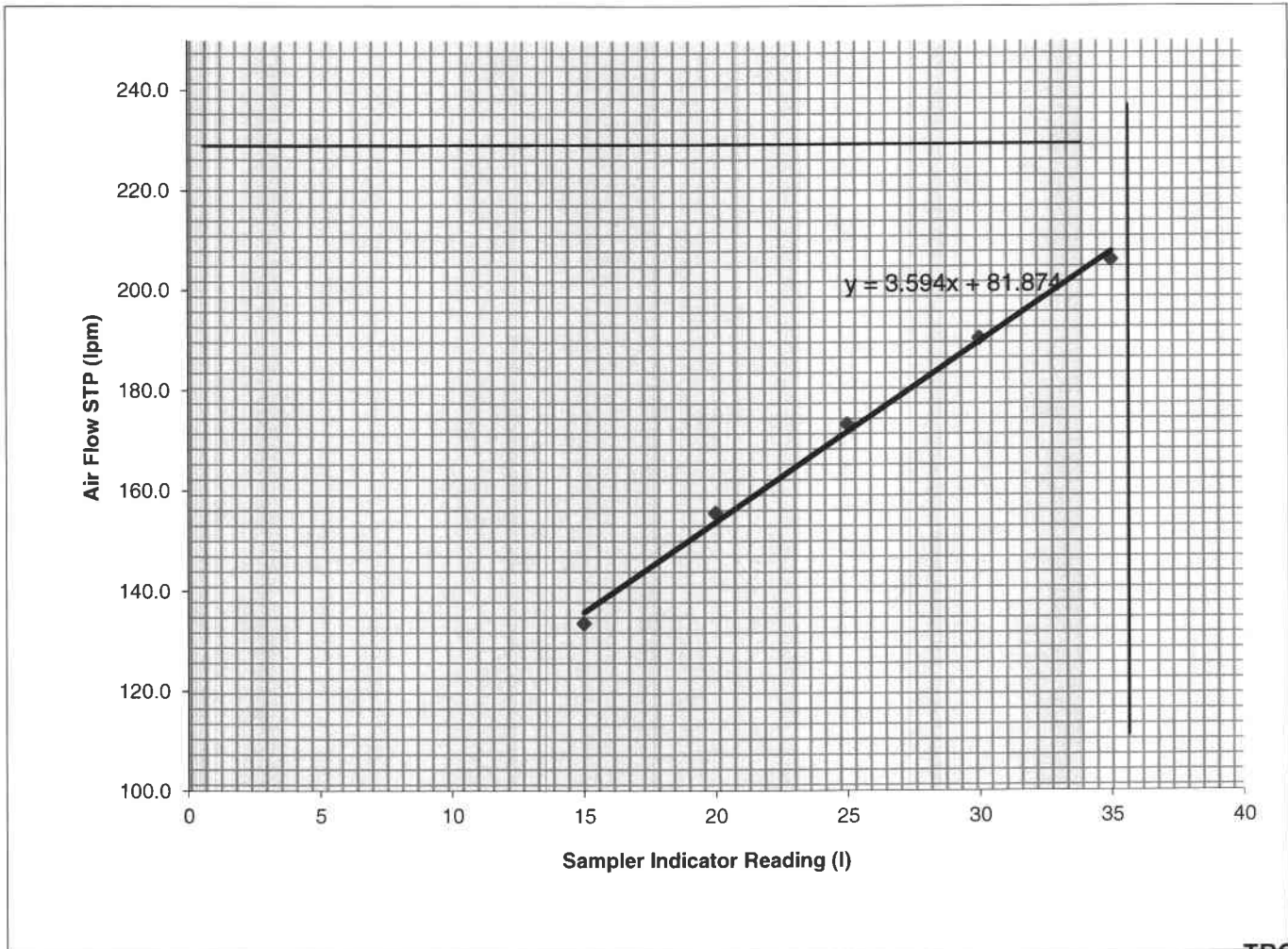
Amb. Temp, T1 (°C / K)	4.4	277	Bar. Press., P1 (inHg / mmHg)	29.61	752
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	I	Ic
1.65	1.7010	141.7	133.6	15	14.7
2.25	2.3196	165.0	155.5	20	19.6
2.80	2.8866	183.8	173.2	25	24.5
3.39	3.4948	202.0	190.3	30	29.4
3.98	4.1031	218.6	206.0	35	34.3

$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$   
 $I_c = I \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$

m = 3.89                      b = 86.8                      r = 0.997924108



## PSI Calibration Data

Client: Montgomery RRF      Site: Lucketts      Serial#: \_\_\_\_\_      Station: PS-6  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day test

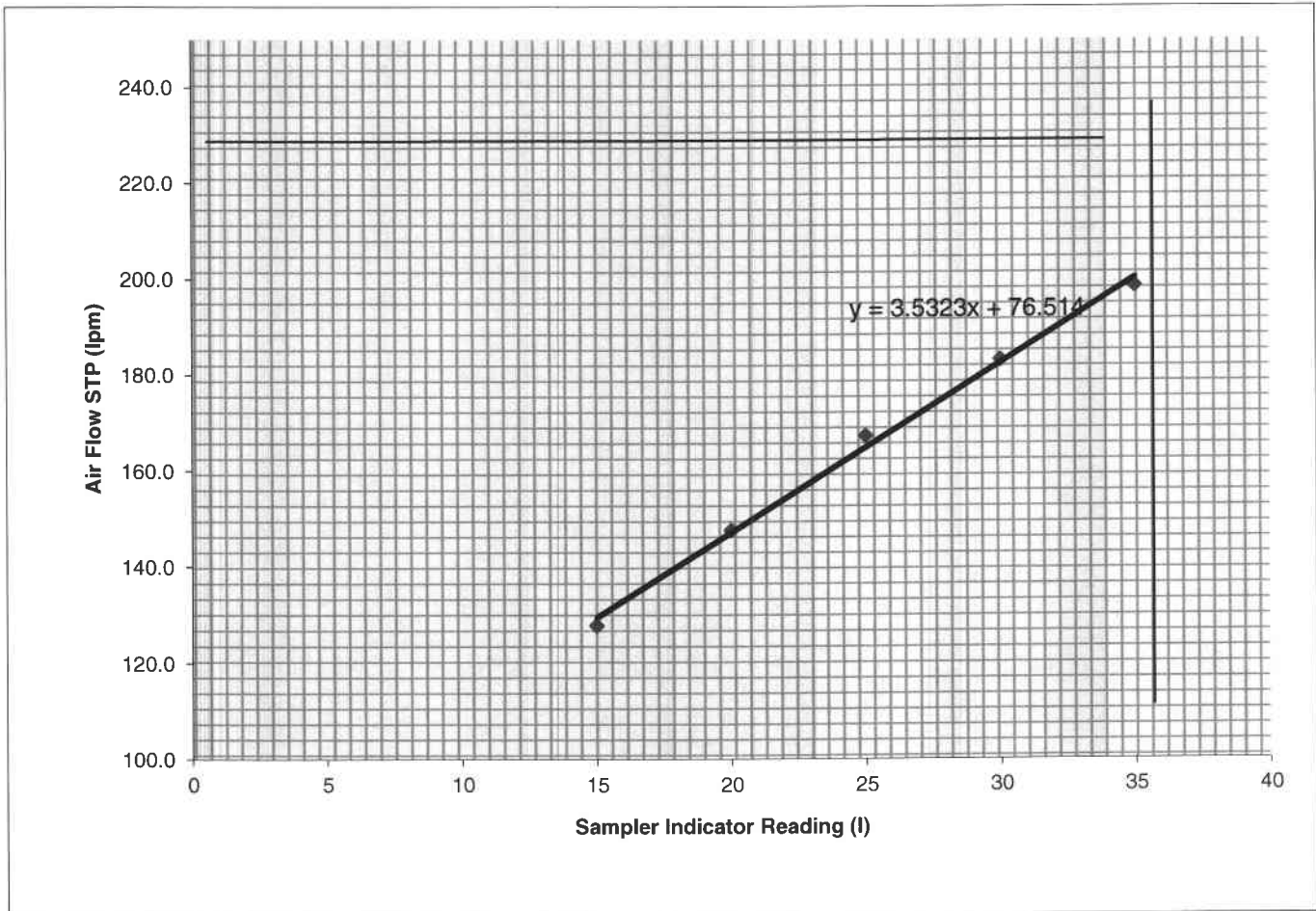
Amb. Temp, T1 (°C / K)	-5.0	268	Bar. Press., P1 (inHg / mmHg)	30.22	768
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @ STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.55	1.6424	143.1	127.8	15	15.1
2.08	2.2040	165.3	147.6	20	20.2
2.68	2.8397	187.3	167.2	25	25.2
3.22	3.4119	205.1	183.1	30	30.2
3.79	4.0159	222.2	198.4	35	35.3

$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$   
 $l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$

m = 3.93                      b = 85.6                      r = 0.99802359



Desired Flow Rate (lpm): 203.5

Sampler Setting: 30.0

## PSI Calibration Data

Client: Montgomery RRF      Site: Lucketts      Serial#: \_\_\_\_\_      Station: PS-6  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End 30 day test

Amb. Temp, T1 (°C / K)	4.4	277	Bar. Press., P1 (inHg / mmHg)	29.61	752
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	I	Ic
1.54	1.5876	137.0	129.1	15	14.7
2.11	2.1752	159.9	150.7	20	19.6
2.65	2.7319	178.9	168.6	25	24.5
3.22	3.3196	196.9	185.6	30	29.4
3.85	3.9691	215.1	202.7	35	34.3

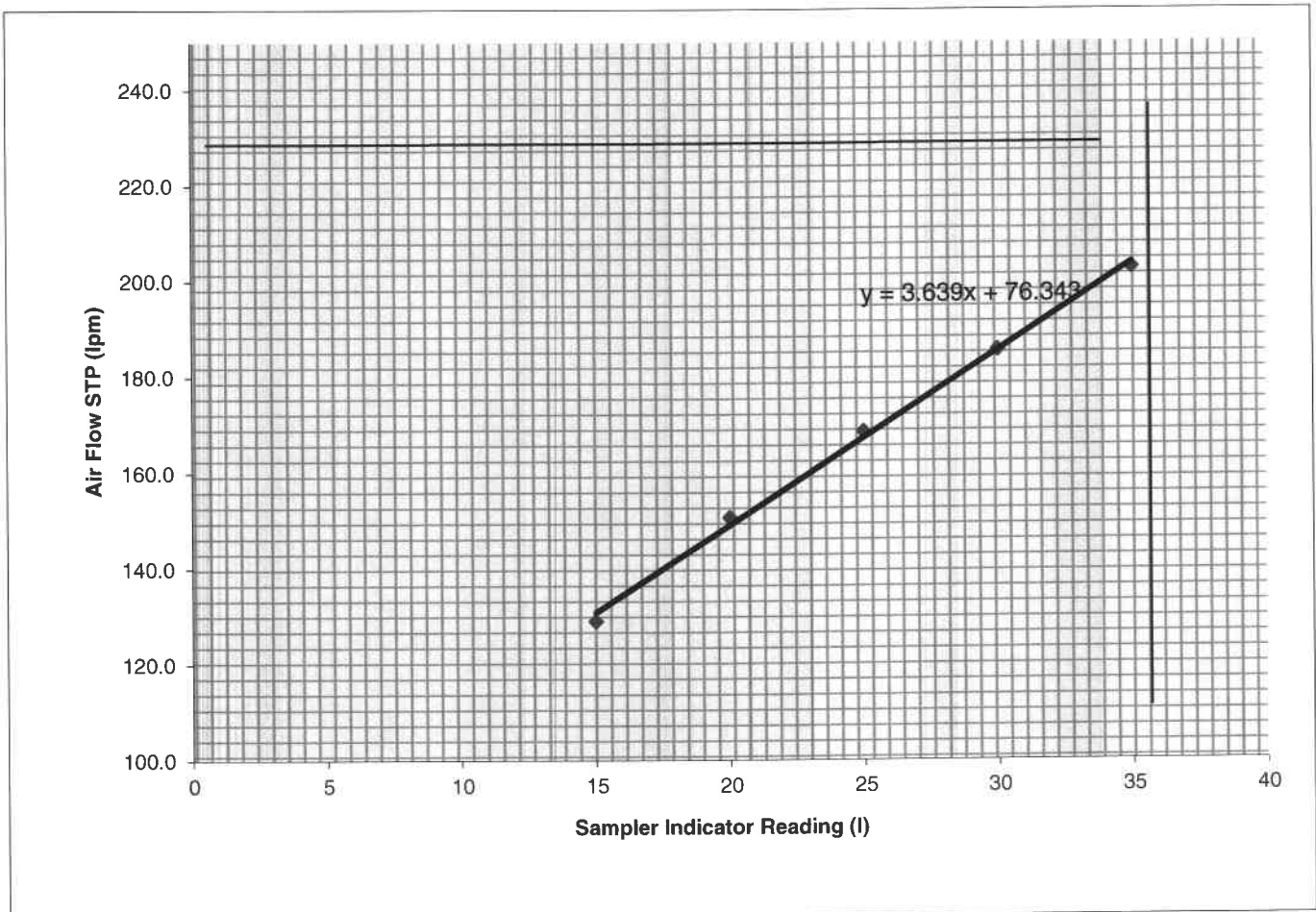
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$I_c = I \times \sqrt{(P_1/P_2) \times (T_2/T_1)}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.94                      b = 81.0                      r = 0.998728723



Desired Flow Rate (Ipm): 199

Sampler Setting: 30.0



### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS2  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day test

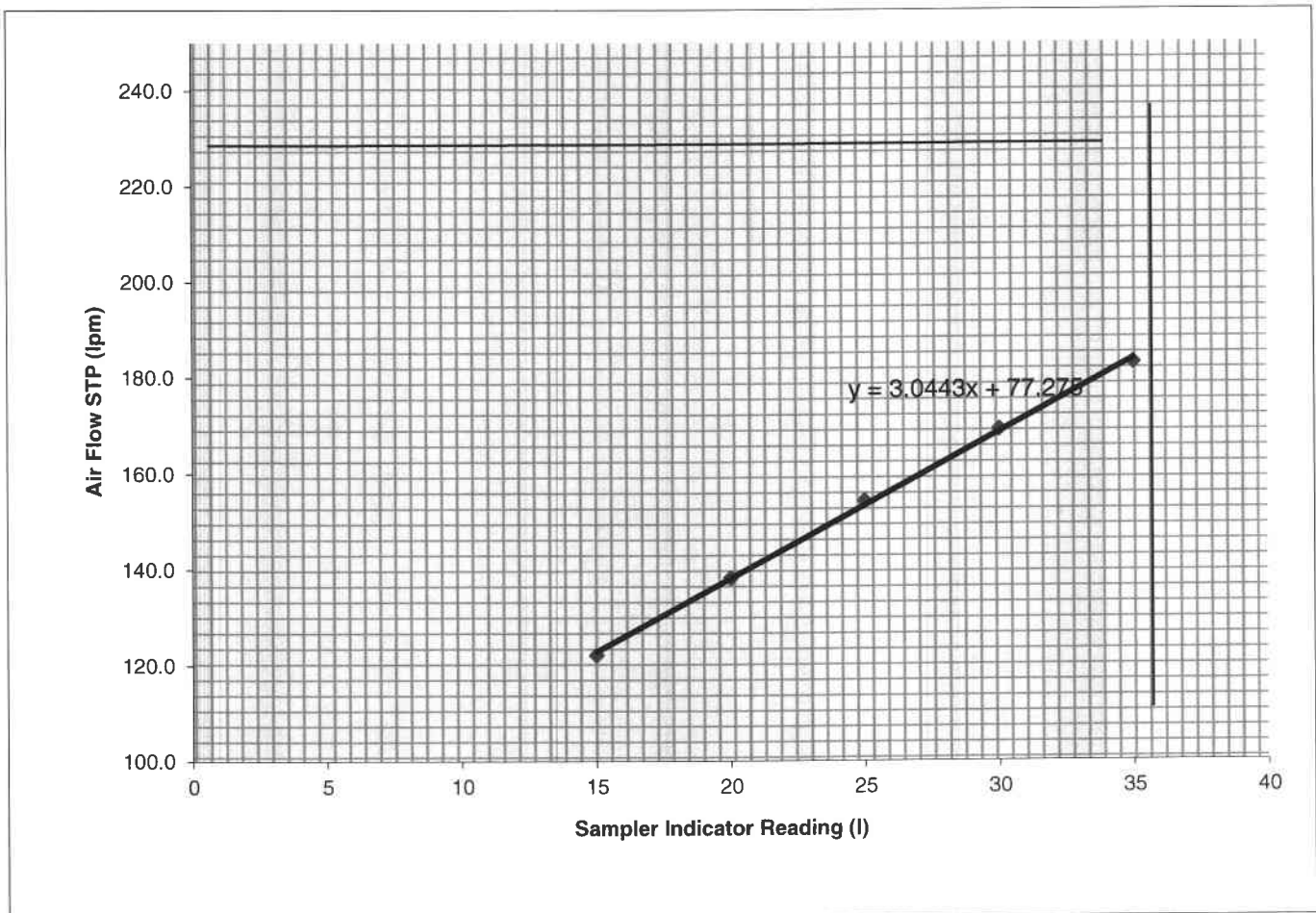
Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @ STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.40	1.4667	133.8	122.3	15	15.0
1.80	1.8857	151.4	138.3	20	19.9
2.25	2.3571	169.0	154.3	25	24.9
2.71	2.8390	185.2	169.1	30	29.9
3.18	3.3314	200.4	183.0	35	34.9

$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$   
 $l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$

$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$   
 $Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$

m = 3.35                      b = 84.5                      r = 0.999499374



Desired Flow Rate (lpm): 165

Sampler Setting: 24.0

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS2  
 Technician: S.Boyko      Date: 3/4/2014      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End of first 30 day test. Post cal.

Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.02325	0

Delta H	Delta Hc	Qstd	Qact	l	lc
1.41	1.4507	130.8	125.1	15	14.7
1.88	1.9343	150.6	143.8	20	19.6
2.32	2.3870	167.0	159.3	25	24.5
2.78	2.8603	182.6	174.0	30	29.4
3.21	3.3027	196.0	186.7	35	34.3

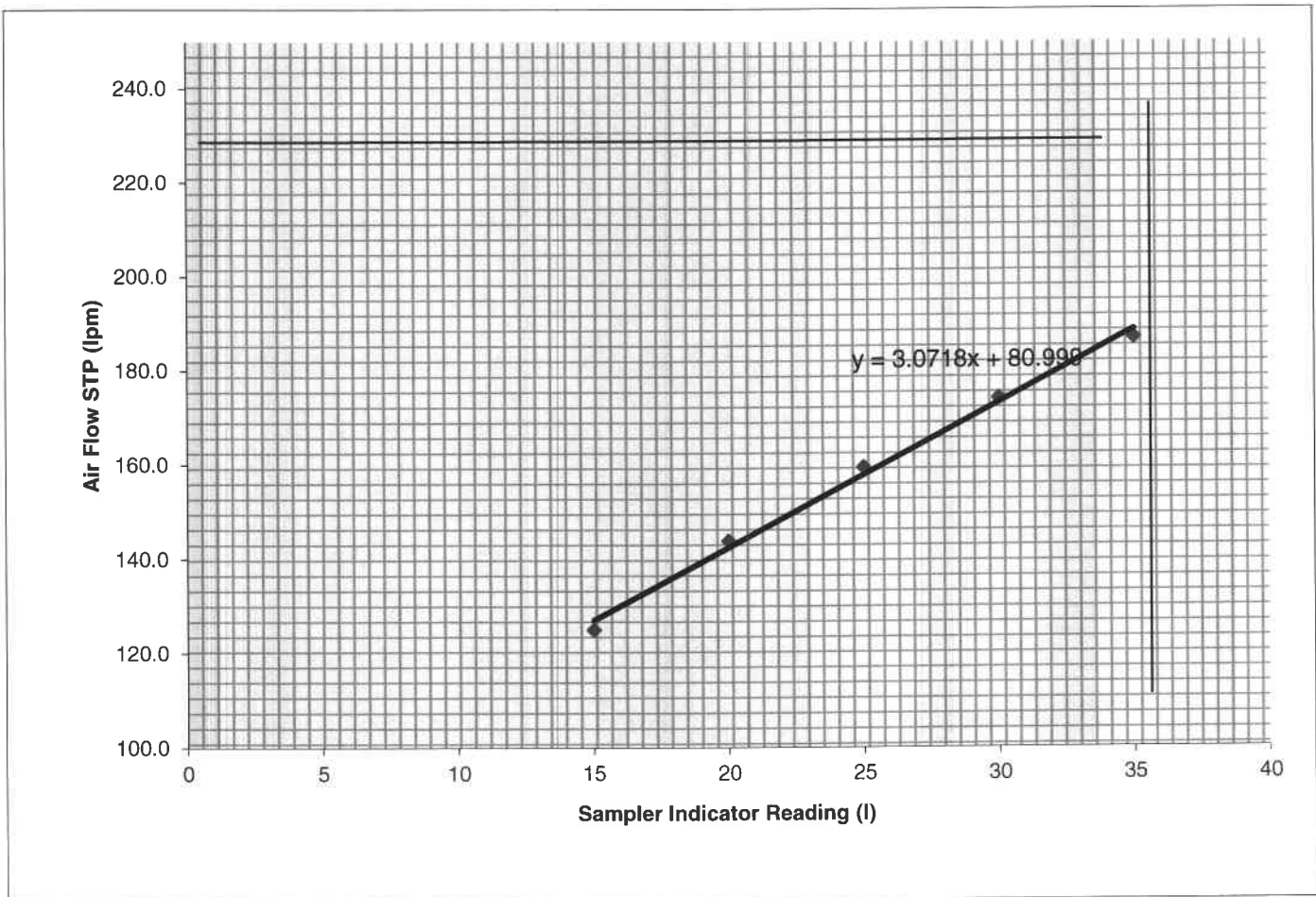
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.32                      b = 84.2                      r = 0.997409913



Desired Flow Rate (lpm): 164

Sampler Setting: 24.0

## PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS 3  
 Technician: S.Boyko      Date: 2/3/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: Start 30 day test

Amb. Temp, T1 (°C / K)	-1.1	272	Bar. Press., P1 (inHg / mmHg)	29.97	761
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @ STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.01549	

Delta H	Delta Hc	Qstd	Qact	l	lc
1.67	1.7495	145.9	133.3	15	15.0
2.27	2.3781	169.7	155.0	20	19.9
2.89	3.0276	191.2	174.5	25	24.9
3.42	3.5828	207.7	189.6	30	29.9
4.05	4.2428	225.8	206.1	35	34.9

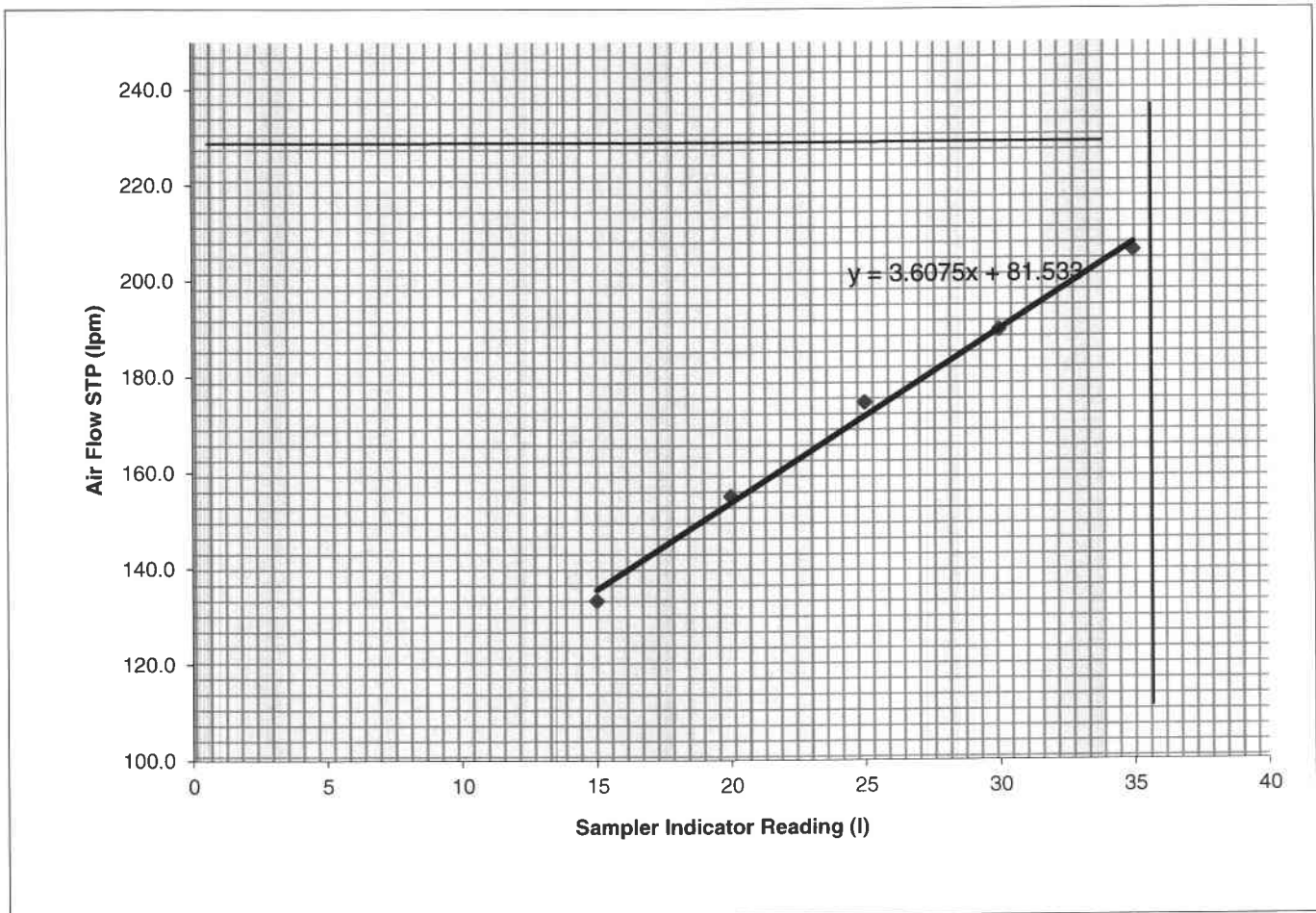
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$l_c = l \times \sqrt{[(P_1/P_2) \times (T_2/T_1)]}$$

$$Q_{std} = \{(1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]}\} \times 1000$$

$$Q_{act} = \{(1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]}\} \times 1000$$

m = 3.97                      b = 89.2                      r = 0.997263123



Desired Flow Rate (lpm): 176.5

Sampler Setting: 22.0

**TRC**  
Environmental Corporation

### PSI Calibration Data

Client: Montgomery RRF      Site: Beallsville      Serial#: \_\_\_\_\_      Station: PS-3  
 Technician: S.Boyko      Date: 3/4/2015      Orifice S/N: 1233      Cal Date: 1/7/2015  
 Reason for Puff Sampler Calibration: End of first 30 day test. Post cal.

Amb. Temp, T1 (°C / K)	3.9	277	Bar. Press., P1 (inHg / mmHg)	29.44	748
Seas. Temp, T2 (°C / K)	-3.3	270	Mean Press., P2 (inHg / mmHg)	29.92	760
Calibrator Slope @STP (m <sub>c</sub> )	9.65651		Calibrator Intercept @ STP (b <sub>c</sub> )	-0.02534	
Calibrator Slope - actual (m <sub>c</sub> )	6.04674		Calibrator Intercept - actual (b <sub>c</sub> )	-0.02611	0

Delta H	Delta Hc	Qstd	Qact	l	lc
1.74	1.7903	145.0	139.0	15	14.7
2.31	2.3767	166.7	159.5	20	19.6
2.91	2.9941	186.8	178.5	25	24.5
3.49	3.5908	204.3	195.0	30	29.4
4.06	4.1773	220.1	210.0	35	34.3

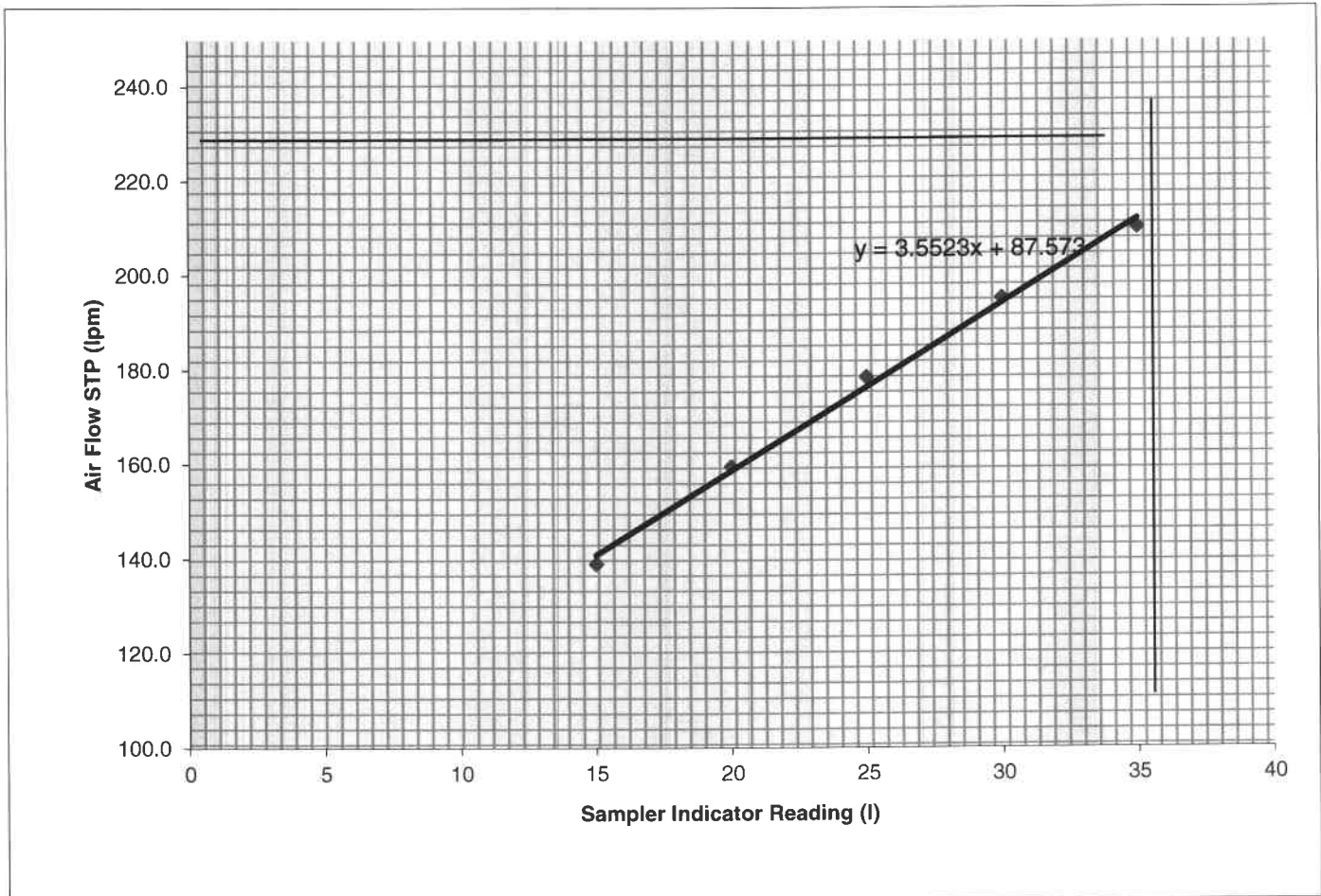
$$H_c = H \times \sqrt{0.392 \times (P_1/T_1)}$$

$$l_c = l \times \sqrt{(P_1/P_2) \times (T_2/T_1)}$$

$$Q_{std} = \left\{ (1/m_c) \times \sqrt{[H_c \times (P_1/760) \times (297.18/T_1) - b_c]} \right\} \times 1000$$

$$Q_{act} = \left\{ (1/m_c) \times \sqrt{[H_c \times (T_1/P_1) - b_c]} \right\} \times 1000$$

m = 3.84                      b = 90.7                      r = 0.997953272



Desired Flow Rate (lpm): 175

Sampler Setting: 22.0