



4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 ■ FAX/377-7158

KA 624-09-07
KA 624-01-02
April 30, 2010

Mrs. Trina Vielhauer, Bureau Chief
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

RECEIVED
MAY 03 2010
BUREAU OF
AIR REGULATION

RE: AC Permit 1210465-018-AC
Close-out Report
Suwannee American Cement; Branford Cement Plant, Facility ID: 1210465

Dear Mrs. Vielhauer:

On behalf of Suwannee American Cement (SAC), this letter serves as the close-out report required by condition 28 of permit 1210465-018-AC. The PM10 monitors (AIRS IDs: 12-023-003 and 12-121-0001) were operated in accordance with the original permit condition No. 28 until March 31, 2010 (i.e., end of the first quarter 2010). As performed for all previous quarterly submittals, the PM10 monitoring data for first quarter 2010 were submitted to FDEP using the FAMAS database system. SAC feels completing the entire quarter (January 1 through March 31, 2010) provides a concise endpoint of the PM10 monitoring data rather than March 1, 2010. Attached are the standard data quality assurance records that were collected for this final quarter. These data are the typical information package transferred to FDEP during past FDEP data audits conducted by Ed Huck. Please forward the information to Dick Arbes and Ed Huck for BAAMS files. To comply with the permit condition to submit a summary of the ambient PM10 emissions and any periods of missing data, attached are printouts from the FAMAS database. Obviously, more details of the PM10 monitoring data can be obtained from the database.

We sincerely appreciate the Department's assistance in the entire process of operating these monitors over the years. The expertise of Dick Arbes and Ed Huck has been extremely helpful in to ensure adequate quality assurance of the PM10 monitoring data.

Please feel free to contact me at (352) 377-5822 or mlee@kooglerassociates.com or Krishna Cole, Suwannee American Cement at (386) 935-5023 or krishnaC@suwanneecement.com, if you have any questions regarding this submittal.

Best Regards,



Max Lee, PhD., P.E.
Senior Engineer
KOOGLER AND ASSOCIATES, INC.

Enclosure: PM10 Monitoring data Summary
PM10 QA data -1st qtr, 2010

cc: Krishna Cole, Suwannee American Cement

PM10 Monitoring Data Summary

Date Range:1/01/2002 00:00 to 3/31/2010 23:59

Site	Parameter Units	Interval	% Valid Observations	Percentiles							Max Values					Historic Max*	Arithmetic Mean	Standard Deviation
				10	25	50	75	90	95	99	1 st 6 th	2 nd 7 th	3 rd 8 th	4 th 9 th	5 th 10 th			
Z0230003	PM10C ug/m3	001h	92%	6	12	20	31	45	55	83	501 (05/11/07:09)	501 (05/11/07:10)	501 (05/11/07:14)	458 (05/11/07:13)	428 (05/11/07:15)	-	23.6	18.9
											424 (05/11/07:08)	417 (05/07/02:19)	357 (05/11/07:11)	344 (12/14/07:17)	335 (05/11/07:17)			
Z1210001	PM10C ug/m3	001h	89%	0	8	17	29	46	59	88	560 (04/27/02:11)	501 (05/11/07:09)	501 (05/11/07:10)	446 (06/20/09:15)	421 (02/17/10:08)	22 (01/2000)	20.4	21.8
											393 (02/14/10:08)	388 (05/11/07:08)	369 (04/04/09:23)	348 (05/11/07:18)	344 (05/19/07:07)			

* Historic maximum prior to 1/01/2002 00:00

Site:Z0230003 Parameter:PM10C Interval:001h

January		February		March	
744 Readings Expected		672 Readings Expected		744 Readings Expected	
Valid Readings	740 99.46%	Valid Readings	657 97.77%	Valid Readings	739 99.33%
AT-CALIBRATION	2 0.27%	AL-VOIDED BY OPERATOR	10 1.49%	AN-MACHINE MALFUNCTION	1 0.13%
AX-PRECISION CHECK (PREC)	2 0.27%	AT-CALIBRATION	2 0.30%	AT-CALIBRATION	2 0.27%
		AX-PRECISION CHECK (PREC)	2 0.30%	AX-PRECISION CHECK (PREC)	2 0.27%
		AZ-Q C AUDIT (AUDT)	1 0.15%		
2010 Quarter 1 Totals					
	2160 Readings Expected				
Valid Readings	2136 98.89%				
AL-VOIDED BY OPERATOR	10 0.46%				
AN-MACHINE MALFUNCTION	1 0.05%				
AT-CALIBRATION	6 0.28%				
AX-PRECISION CHECK (PREC)	6 0.28%				
AZ-Q C AUDIT (AUDT)	1 0.05%				

Site:Z1210001 Parameter:PM10C Interval:001h

January		February		March	
744 Readings Expected		672 Readings Expected		744 Readings Expected	
Valid Readings	588 79.03%	Valid Readings	567 84.38%	Valid Readings	607 81.59%
AN-MACHINE MALFUNCTION	152 20.43%	AN-MACHINE MALFUNCTION	100 14.88%	AN-MACHINE MALFUNCTION	134 18.01%
AT-CALIBRATION	2 0.27%	AT-CALIBRATION	2 0.30%	AQ-COLLECTION ERROR	1 0.13%
AX-PRECISION CHECK (PREC)	2 0.27%	AX-PRECISION CHECK (PREC)	2 0.30%	AT-CALIBRATION	1 0.13%
		AZ-Q C AUDIT (AUDT)	1 0.15%	AX-PRECISION CHECK (PREC)	1 0.13%
2010 Quarter 1 Totals					
	2160 Readings Expected				
Valid Readings	1762 81.57%				
AN-MACHINE MALFUNCTION	386 17.87%				
AQ-COLLECTION ERROR	1 0.05%				
AT-CALIBRATION	5 0.23%				
AX-PRECISION CHECK (PREC)	5 0.23%				
AZ-Q C AUDIT (AUDT)	1 0.05%				

Elapsed time: 0 sec

PM10 QA data -1st qtr, 2010

FAMAS Verification - 2010 Quarter 1

Verification Criteria Summary

Site Name	Parameter	Interval	Collection Frequency
Z0230003	PM10C	001h	
Z1210001	PM10C	001h	

Exceedances

Site Name	Parameter	Time	Value	Units	Standard
Z0230003	PM10C		Passed: Annual Standard		
Z0230003	PM10C		Passed: 24-hour Standard		

Site Name	Parameter	Time	Value	Units	Standard
Z1210001	PM10C		Passed: Annual Standard		
Z1210001	PM10C		Passed: 24-hour Standard		

Historic Maxes

Site Name	Parameter	Interval	Historic Max	1 st Max	2 nd Max	3 rd Max	4 th Max	Units
Z0230003	PM10C	001h	501 (05/2007)	207 (01/08/2010 16:00)	138 (03/10/2010 22:00)	137 (02/10/2010 10:00)	125 (03/10/2010 21:00)	ug/m3
Z1210001	PM10C	001h	560 (04/2002)	421 (02/17/2010 08:00)	393 (02/14/2010 08:00)	294 (02/10/2010 00:00)	228 (03/05/2010 07:00)	ug/m3

Range Test

Site Name	Parameter	Interval	Time	Value	Low	High
Z0230003	PM10C	001h		Passed range test	-50	5000
Z1210001	PM10C	001h		Passed range test	-50	5000

Negative Daily Averages

Site Name	Parameter	Days with a Negative 24-Hr Average
Z0230003	PM10C	No Negative 24-Hr Averages Found
Z1210001	PM10C	No Negative 24-Hr Averages Found

Negative Daily Averages - Details

Site Name	Parameter	Date	24-Hr Average
Z0230003	PM10C		See summary above
Z1210001	PM10C		See summary above

Blank Records

Site Name	Parameter	Interval	Blank Records
Z0230003	PM10C	001h	No Blank Records
Z1210001	PM10C	001h	No Blank Records

Blank Records Details

Site Name	Parameter	Interval	Block Start	Block End	Blank Count
Z0230003	PM10C	001h			See summary above
Z1210001	PM10C	001h			See summary above

Internal Temperature

Site Name	Interval	Block Start	Block End	Extreme Value
Z0230003				Internal temperature is not reported
Z1210001				Internal temperature is not reported

Persistence

Site Name	Parameter	Interval	Block Start	Block End	Count	Value
Z0230003	PM10C	001h				Passed persistence test
Z1210001	PM10C	001h				Passed persistence test

Counts

Site Name	Parameter	Interval	Expected	Total	Valid	Verified To EPA	Certified
Z0230003	PM10C	001h	2160	2160 (100%)	2136 (99%)	2160	0
Z1210001	PM10C	001h	2160	2160 (100%)	1762 (82%)	2160	0
Totals:			4320	4320 (100%)	3898 (90%)	4320	0

Verification Results:

- Exceedances - Passed
- Range Check - Passed
- Negative 24-Hr Average Check - Passed
- Blank Records Check - Passed
- Internal Temperature - Passed
- Persistence Check - Passed

D. Shultz - AA ST
4/29/10

SWA0110RP.txt

RP	I	12	121	0001	81102	1	2	001	073	076	20100104	15.13	16.05		
RP	I	12	121	0001	81102	1	2	001	073	076	20100122	15.15	16.35		
RP	I	12	121	0001	81102	1	2	001	073	076	20100203	15.05	16.17		
RP	I	12	121	0001	81102	1	2	001	073	076	20100218	15.01	16.32		
RP	I	12	121	0001	81102	1	2	001	073	076	20100302	15.20	16.25		
RP	I	12	121	0001	81102	1	2	001	073	076	20100312	15.20	16.33		
RP	I	12	023	0003	81102	1	2	001	073	076	20100104	15.73	16.50		
RP	I	12	023	0003	81102	1	2	001	073	076	20100122	16.25	16.75		
RP	I	12	023	0003	81102	1	2	001	073	076	20100203	15.84	16.45		
RP	I	12	023	0003	81102	1	2	001	073	076	20100218	15.77	16.50		
RP	I	12	023	0003	81102	1	2	001	073	076	20100312	16.00	16.50		
RP	I	12	023	0003	81102	1	2	001	073	076	20100321	16.30	16.40		

*W. Hultes, NAI
9/29/10*

SWA0110RA.txt

RA|I|12|121|0001|81102|1|1|1|073|076|2010|Q1|20100101|AUDIT NOT BY RO|CHINOOK FTS|FLOW|PE|990104|20101112|20100203||16.80|17.05|
RA|I|12|023|0003|81102|1|1|1|073|076|2010|Q1|20100101|AUDIT NOT BY RO|CHINOOK FTS|FLOW|PE|990104|20101112|20100203||16.02|16.78|

Certificate of Calibration

This Streamline Pro™ MultiCal™ System, serial number: **M030403**

was calibrated against the following NIST-traceable Reference Standards:

Flow: Critical Flow Venturi S/Ns 10961, 10962, 10963, 18491, 30421

Barometric Pressure: Precision Barometer S/N 913930-M1

Temperature: NIST Traceable Hg-in-glass thermometers,
S/Ns 2J3106, 2Y6027, 3L9452.

on date: 04/01/09

on date: 03/31/09

on date: 04/01/09

Quality Assurance:

Flow:	Reference Std. Q _{ref} (l/min)	Streamline Pro Q _{SLPro} (l/min)	Absolute difference (l/min)	% Diff. F.S.
	0.89	0.88	-0.01	-0.05%
	3.00	3.01	0.02	0.09%
	6.67	6.67	0.00	-0.01%
	10.01	10.00	-0.01	-0.06%
	13.67	13.67	0.01	0.03%
	16.67	16.68	0.01	0.03%
	19.01	19.01	0.00	-0.02%

BP:	Reference Std. BP _{ref} (atm)	Streamline Pro BP _{SLPro} (atm)	Absolute difference (atm)	% Diff. F.S.
	0.750	0.750	0.000	0.00%
	0.900	0.900	0.000	0.01%
	1.050	1.050	0.000	0.01%

Temp.:	Reference Std. T _{ref} (°C)	Streamline Pro T _{SLPro} (°C)	Absolute difference (°C)	% Diff. F.S.*
	0.0	0.0	0.0	0.00%
	17.3	17.3	0.0	0.01%
	41.1	41.1	0.0	0.01%

* based on absolute temp. scale (K)

Lab temp: 23.2 °C

Lab pressure: 0.861 atm

Reviewed: _____

Date: April 1, 2009

Chinook Engineering
555 Absaraka Street
Sheridan, Wyoming USA 82801
(307) 672-7790
www.chinookengineering.net

CALIBRATION CERTIFICATE

Foil Set No.: 1225

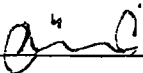
Ref.-No. FH 62 I-N / 424250126

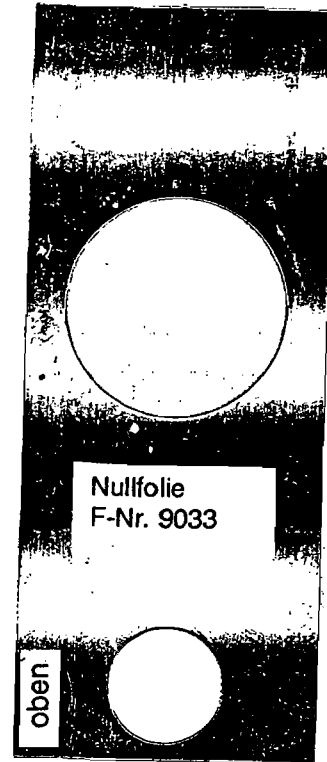
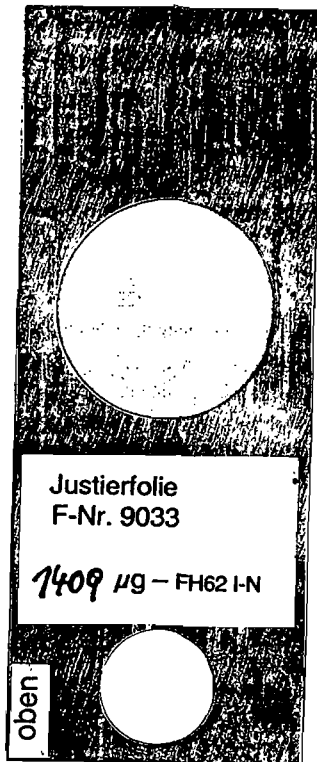
	FH 62 I-N
Zero Foil	0 µg
Foil 1	2323 µg
The values of the foils correspond to the values of quartz dust.	

Thermo Electron (Erlangen) GmbH
- Air Quality -

13 February 2007
Date


Signature

CALIBRATION CERTIFICATE		ESM Andersen Instruments GmbH D-91056 Erlangen Germany	
Foliensatz / Foil Set No.: <u>9033</u>			
ZN/Ref.-No.	424250126	425451012	
	FH 62 I-R	FH 62 I-N	
Nullfolie / Zero Foil	μg	+ 29 μg	
Folie / Foil 1	μg	1438 μg	← 1438 μg
Istwert / Actual value	μg	1409 μg	← 1409 μg
Die Werte, mit denen die Folien beschriftet sind, entsprechen den Werten für Quarzstaub FH 62 I-R und FH 62 I-N. The values of the foils are correspond to the values of quartz dust for FH 62 I-R and FH 62 I-N			
Datum/Date: <u>22.08.07</u>		Unterschrift/Sign 	



rec'd new foil set
7/2/02 from sky
Pattow during site visit

Certificate of Calibration

Streamline™ flow transfer standard (FTS) # 981126A
 was calibrated against NIST traceable critical flow venturis
 S/Ns 10961, 10962, 10963, 18491, 30421 on: 11/12/2009

This calibration expires: **11/12/2010**

r8

The actual flow rate (Q_a) through the FTS is:

$$Q_a = \left[m \times \sqrt{\frac{(\Delta P)(T_{amb})}{(P_{amb})}} \right] + b$$

$m = 0.4284$

$b = -0.8834$

Q_a = actual flow rate in liters/minute

ΔP = pressure reading from the manometer in "H₂O

T_{amb} = ambient temperature in Kelvins

P_{amb} = ambient pressure in atmospheres*

* 1 atmosphere = 760 mmHg, = 29.92"Hg, =101,325 Pa

Reviewed: 

Date: 11/12/09

Quality Assurance Check

Primary Standard Q_{actual} (l/min)	Streamline FTS ΔP ("H ₂ O)	Streamline FTS $Q_{line\ fit}$ (l/min)	Absolute Difference (l/min)	% Difference* full scale
20.03	6.90	20.01	-0.03	-0.15%
17.51	5.35	17.51	0.00	0.01%
15.00	4.01	15.03	0.03	0.15%
12.50	2.84	12.51	0.01	0.06%
9.98	1.87	9.99	0.01	0.05%
7.48	1.10	7.47	-0.01	-0.03%
4.98	0.54	4.97	-0.02	-0.09%

T_a (°C) = 22.8

P_a (atm) = 0.859

$r = 1.0000$

*all points must be within ±2%

Chinook Engineering

A Division of Inter-Mountain Laboratories, Inc.

555 Absaraka Street

Sheridan, Wyoming 82801 USA

(307) 672-7790

chinook@imlinc.com

Streamline™ FTS, US Patent #5792966

**Ambient Air Services, Inc.
 Manometer Calibration / Certification Form**

Date: January 5, 2010 Calibrated Manometer: 475-10-5
 Calibrated Manometer Range: 10 inches of water
 Recalibration due: January 6, 2011 Standard Manometer: SL-2

Standard Manometer (inches water)		Calibrated Manometer (inches water)		Percent Different from Full Scale (+/- 2.0%)	
Reading positive side	Reading negative side	Reading positive side	Reading negative side	Reading positive side	Reading negative side
0.0	0.0	0.0	0.0	0.0	0.0
1.0	1.0	1.0	1.0	0.0	0.0
3.0	3.0	3.0	3.0	0.0	0.0
5.0	5.0	5.0	5.0	0.0	0.0
7.0	7.0	7.1	7.1	-1.0	-1.0
9.0	9.0	9.1	9.1	-1.0	-1.0
10.0	10.0	10.2	10.1	-2.0	-1.0
Average percent difference:				-0.6	-0.4

Comments:

Technician:
Date:

David J. Pate
1/5/2010

QA Review:
Date:

David Skyles
01/05/10

Ambient Air Services, Inc.
Thermometer Calibration / Certification Form

Date: January 5, 2010 Calibrated Thermometer: 5008
 Barometric Pressure: 30.04 inches Hg Pressure Standard: HGB-1
 Ambient Temperature: 22.00 deg. C Temperature Standard: 9703-2

Standard Thermometer		Calibrated Thermometer		Percent Difference (+/- 1.0%)
2.00	deg. C	2.10	deg. C	0.04%
17.90	deg. C	17.60	deg. C	0.10%
44.10	deg. C	44.40	deg. C	0.09%

Comments:

Recalibration due: January 5, 2011

Technician: David J. Patil
 Date: 1/5/2010

QA Review: David Sholtis
 Date: 01/05/10

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

QUARTERLY AUDIT FORM

Date of Audit 4/29/2010
Quarter Audited 1/2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
120230003811021	ICHETUCKNEE SPRINGS SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Approved EPA AIRS Null Codes applied? Yes No*
- 2. Compare data summaries vs. AIRS output file, are they correct? Yes No*
- 3. Review PARS data, compare field data entry vs. data entry Yes No*
- 4. Review 10% of quarterly data? Yes No*
- 5. Complete Missing Data Report Form-as needed? Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Sholtes SIGNATURE: David Sholtes

D Shultz - AA5I
4/29/10

	Ichetuck	120230003	2010	lqtr	.prn				
11202300038110211001076100101000	032	050	054	044	017	004	003	006	I
11202300038110211001076100101080	011	003	004	002	010	007	030	019	I
11202300038110211001076100101160	001	-008	-001	-001	005	-004	013	010	I
11202300038110211001076100102000	009	008	003	007	002	001	-006	003	I
11202300038110211001076100102080	010	017	059	015	027	033	023	011	I
11202300038110211001076100102160	002	-005	-006	-016	-010	005	004	000	I
11202300038110211001076100103000	011	004	006	010	002	004	009	009	I
11202300038110211001076100103080	010	022	017	020	013	026	027	015	I
11202300038110211001076100103160	001	010	-007	-001	023	032	038	030	I
11202300038110211001076100104000	040	017	010	001	000	006	007	009	I
11202300038110211001076100104080	010	028	048	039	065	049	015	99869	I
11202300038110211001076100104160	99909	002	-009	-012	-002	009	015	012	I
11202300038110211001076100105000	034	014	007	-008	-006	012	007	011	I
11202300038110211001076100105080	009	028	036	034	033	032	036	011	I
11202300038110211001076100105160	015	-011	-011	-017	003	015	014	016	I
11202300038110211001076100106000	030	019	016	008	009	011	018	010	I
11202300038110211001076100106080	016	034	057	043	058	045	020	020	I
11202300038110211001076100106160	016	002	003	-013	008	029	027	037	I
11202300038110211001076100107000	047	050	034	033	027	024	038	035	I
11202300038110211001076100107080	038	051	079	073	040	032	021	012	I
11202300038110211001076100107160	002	001	017	010	005	006	017	025	I
11202300038110211001076100108000	033	033	026	015	020	025	032	028	I
11202300038110211001076100108080	009	-002	-006	000	014	012	015	019	I
11202300038110211001076100108160	207	006	-007	-009	-006	012	010	006	I
11202300038110211001076100109000	004	006	009	010	008	006	009	011	I
11202300038110211001076100109080	010	013	014	018	023	029	018	023	I
11202300038110211001076100109160	026	000	000	-018	012	020	014	008	I
11202300038110211001076100110000	022	020	012	013	017	015	009	014	I
11202300038110211001076100110080	011	034	054	047	058	044	033	021	I
11202300038110211001076100110160	009	-006	-015	-017	009	023	020	009	I
11202300038110211001076100111000	040	013	002	015	012	003	019	011	I
11202300038110211001076100111080	033	055	063	071	072	035	018	012	I
11202300038110211001076100111160	011	001	-002	-017	010	003	014	012	I
11202300038110211001076100112000	023	023	009	012	010	011	013	014	I
11202300038110211001076100112080	023	063	083	092	030	029	023	015	I
11202300038110211001076100112160	010	003	001	009	-014	-005	001	009	I
11202300038110211001076100113000	023	012	018	011	012	016	002	017	I
11202300038110211001076100113080	018	055	081	059	051	035	029	021	I
11202300038110211001076100113160	021	010	012	025	-003	002	007	022	I
11202300038110211001076100114000	024	027	024	019	011	015	017	033	I
11202300038110211001076100114080	029	053	075	060	039	055	039	029	I
11202300038110211001076100114160	016	009	000	002	015	010	015	006	I
11202300038110211001076100115000	048	019	030	029	042	031	033	013	I
11202300038110211001076100115080	025	067	029	030	041	040	016	018	I
11202300038110211001076100115160	016	009	006	008	008	012	020	015	I
11202300038110211001076100116000	022	034	026	027	009	031	029	014	I
11202300038110211001076100116080	022	021	022	008	010	015	014	017	I
11202300038110211001076100116160	002	014	006	006	018	012	018	012	I
11202300038110211001076100117000	034	018	011	008	000	010	001	002	I
11202300038110211001076100117080	005	007	037	019	000	016	008	022	I
11202300038110211001076100117160	018	005	004	019	009	016	011	008	I
11202300038110211001076100118000	021	020	008	015	007	010	007	004	I
11202300038110211001076100118080	004	005	014	005	021	018	012	014	I
11202300038110211001076100118160	012	-002	006	002	010	013	011	004	I
11202300038110211001076100119000	014	011	001	019	014	009	-009	000	I
11202300038110211001076100119080	017	065	030	022	028	022	028	026	I
11202300038110211001076100119160	019	-010	000	-004	011	010	011	010	I
11202300038110211001076100120000	001	013	008	008	009	019	028	017	I
11202300038110211001076100120080	029	033	030	003	039	026	023	025	I
11202300038110211001076100120160	018	-001	002	019	000	019	004	015	I
11202300038110211001076100121000	037	025	022	011	013	015	018	013	I
11202300038110211001076100121080	025	023	041	043	026	001	004	085	I
11202300038110211001076100121160	037	022	018	011	023	030	017	018	I
11202300038110211001076100122000	064	047	032	013	014	016	004	012	I
11202300038110211001076100122080	016	019	9986999909	035	021	020	004	I	
11202300038110211001076100122160	019	-012	-004	-010	007	009	025	014	I
11202300038110211001076100123000	017	052	022	019	017	020	018	010	I
11202300038110211001076100123080	023	016	034	026	032	028	035	025	I
11202300038110211001076100123160	013	004	-002	004	015	019	016	015	I
11202300038110211001076100124000	046	034	022	017	022	018	027	023	I
11202300038110211001076100124080	020	025	041	032	030	020	030	024	I
11202300038110211001076100124160	018	018	005	017	020	026	018	031	I
11202300038110211001076100125000	043	082	011	-007	-002	000	008	011	I
11202300038110211001076100125080	011	016	027	021	021	014	000	009	I
11202300038110211001076100125160	000	-010	001	005	013	012	015	019	I
11202300038110211001076100126000	037	014	004	007	011	010	013	007	I
11202300038110211001076100126080	017	047	035	019	022	037	032	024	I
11202300038110211001076100126160	014	010	005	003	019	010	006	013	I
11202300038110211001076100127000	039	010	003	009	010	001	013	011	I
11202300038110211001076100127080	027	030	074	017	037	023	030	021	I
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11202300038110211001076100128000	035	011	014	013	009	009	013	021	I
11202300038110211001076100128080	027	063	063	034	042	034	034	022	I
11202300038110211001076100128160	015	018	008	020	034	042	036	031	I
11202300038110211001076100129000	038	028	025	016	027	032	028	028	I
11202300038110211001076100129080	015	019	037	032	035	029	029	021	I
11202300038110211001076100129160	018	010	004	016	017	011	020	007	I
11202300038110211001076100130000	016	024	025	020	019	014	025	021	I
11202300038110211001076100130080	023	023	028	022	015	020	003	006	I
11202300038110211001076100130160	001	011	004	000	002	007	011	003	I
11202300038110211001076100131000	009	018	003	-001	016	-001	008	003	I

D. Shultz - AASE
4/29/10

		Ichetuck		120230003		2010		1qtr.prn		
11202300038110211001076100131080	000	003	007	032	001	015	009	016		I
11202300038110211001076100131160	006	-005	007	010	007	003	000	012		I
11202300038110211001076100201000	037	016	009	013	008	020	015	013		I
11202300038110211001076100201080	021	023	025	021	034	023	028	019		I
11202300038110211001076100201160	006	018	012	004	019	008	008	008		I
11202300038110211001076100202000	038	022	016	014	002	012	005	002		I
11202300038110211001076100202080	011	010	015	009	009	012	005	002		I
11202300038110211001076100202160	014	-007	-003	-001	006	-002	010	002		I
11202300038110211001076100203000	018	018	010	019	014	012	-002	005		I
11202300038110211001076100203080	026	999299990999869	043	028	025	015				I
11202300038110211001076100203160	014	-008	-007	009	007	012	016	013		I
11202300038110211001076100204000	017	023	024	016	010	010	014	014		I
11202300038110211001076100204080	004	005	030	041	032	023	022	024		I
11202300038110211001076100204160	007	016	020	011	009	015	015	021		I
11202300038110211001076100205000	063	036	027	026	022	019	021	020		I
11202300038110211001076100205080	023	016	029	016	021	016	-009	007		I
11202300038110211001076100205160	008	000	000	-003	-004	015	008	-003		I
11202300038110211001076100206000	019	020	005	014	011	009	004	006		I
11202300038110211001076100206080	005	010	004	007	008	012	010	010		I
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11202300038110211001076100208000	039	020	014	011	021	006	013	014		I
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11202300038110211001076100209160	036	001	004	-001	001	-002	009	012		I
11202300038110211001076100210000	011	016	-001	-012	-007	-001	004	009		I
11202300038110211001076100210080	004	106	137	044	003	011	011	010		I
11202300038110211001076100210160	005	001	-002	-001	020	005	001	-004		I
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11202300038110211001076100212160	016	017	000	-008	003	-001	-004	003		I
11202300038110211001076100213000	002	006	008	009	009	010	008	009		I
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11202300038110211001076100213160	015	004	-004	008	007	003	-003	004		I
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11202300038110211001076100215000	014	018	-001	017	002	009	008	011		I
11202300038110211001076100215080	036	051	032	037	029	016	001	013		I
11202300038110211001076100215160	006	010	004	007	-002	-003	004	003		I
11202300038110211001076100216000	014	-002	-008	005	005	003	-009	-001		I
11202300038110211001076100216080	011	046	040	014	001	016	027	016		I
11202300038110211001076100216160	019	-004	000	002	007	-005	009	015		I
11202300038110211001076100217000	-008	010	007	006	004	007	007	-003		I
11202300038110211001076100217080	026	064	062	023	009	026	022	019		I
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11202300038110211001076100218000	020	032	001	014	009	006	004	003		I
11202300038110211001076100218080	022	066	050	014	025	031	9986999909			I
11202300038110211001076100218160	027	-014	-018	-002	022	006	-002	011		I
11202300038110211001076100219000	038	025	017	013	015	018	010	014		I
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11202300038110211001076100220080	024	056	035	035	046	077	049	035		I
11202300038110211001076100220160	040	018	013	99789997899978999789997899	092	049	037			I
11202300038110211001076100221000	99789997899978999789997899	082	036	034	012	016	025	012	009	I
11202300038110211001076100221080	082	005	001	015	030	025	024	041	032	I
11202300038110211001076100222000	051	045	027	025	019	011	026	018		I
11202300038110211001076100222080	034	040	035	041	005	-009	-015	021		I
11202300038110211001076100222160	018	010	009	-002	007	008	007	016		I
11202300038110211001076100223000	022	026	016	012	007	016	012	004		I
11202300038110211001076100223080	022	016	016	017	029	032	027	015		I
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11202300038110211001076100224080	012	021	026	017	024	008	013	011		I
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11202300038110211001076100225160	013	000	002	022	-012	-002	007	021		I
11202300038110211001076100226000	002	022	018	015	018	010	018	019		I
11202300038110211001076100226080	034	068	077	030	008	032	027	021		I
11202300038110211001076100226160	012	008	007	036	027	019	029	036		I
11202300038110211001076100227000	032	030	026	020	012	026	046	037		I
11202300038110211001076100227080	024	030	028	035	010	010	032	025		I
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11202300038110211001076100228000	006	009	-003	-001	008	013	008	007		I
11202300038110211001076100228080	028	063	052	005	033	037	032	017		I
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11202300038110211001076100301000	016	020	020	021	014	012	010	017		I
11202300038110211001076100301080	052	050	042	033	048	059	041	023		I
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11202300038110211001076100302080	010	015	017	026	020	009	012	009		I

W. Shultz - AA 21
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	Ichetuck	120230003	2010	lqtr.	prn				
11202300038110211001076100302160-004	005	003	005	010	004	013	017	I	
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11202300038110211001076100303160	024	-005	001	002	026	007	004	000	I
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11202300038110211001076100305080	047	070	053	018	032	034	024	024	I
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11202300038110211001076100308080	043	049	058	037	054	056	030	028	I
11202300038110211001076100308160	026	015	030	016	055	086	096	070	I
11202300038110211001076100309000	057	045	049	057	045	042	041	048	I
11202300038110211001076100309080	035	031	035	025	044	056	037	016	I
11202300038110211001076100309160	016	014	018	019	026	030	033	028	I
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11202300038110211001076100310080	037	060	074	041	046	035	046	026	I
11202300038110211001076100310160	016	017	006	043	113	125	138	076	I
11202300038110211001076100311000	052	079	030	025	020	020	008	019	I
11202300038110211001076100311080	020	014	011	005	019	011	009	011	I
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11202300038110211001076100312080	017	023	013	9986999909	013	000	018	I	
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11202300038110211001076100325080	037	028	036	028	033	021	047	024	I
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11202300038110211001076100329160	017	003	009	009	016	020	013	027	I
11202300038110211001076100330000	032	030	027	016	015	014	019	023	I
11202300038110211001076100330080	027	024	033	018	045	048	039	029	I
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11202300038110211001076100331000	044	039	017	022	007	019	011	027	I
11202300038110211001076100331080	039	033	035	032	055	059	045	034	I
11202300038110211001076100331160	030	011	001	004	026	032	057	040	I

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/29/2010
Month Audited July 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
120230003811021	ICHETUCKNEE SPRINGS SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Datalogger vs. monitor data comparison, do they compare? Yes No*
- 2. Review field log sheets from previous month,
are they complete, correct and signed by technician and auditor? Yes No*
- 3. Are correct and approved AIRS Null codes applied to data? Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Sholtes SIGNATURE: David Sholtes

D. Shultz - AAAS
4/29/10

01_10i.txt

Current Date : 04/29/10
 Current Time : 12:44

Monthly Parameter Report - Hourly Averages
 Environmental Systems Corporation
 01/10

Logger Id : 01
 Site Name : ICHETUCKNEE SITE
 Parameter : PM10
 Units : UG/M3
 Avg Interval : 01

99969996

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Max	Avg	Rds	
01	31.8	49.9	53.9	43.5	16.5	3.7	2.5	6.3	11.2	3.1	4.0	2.0	9.5	7.2	30.1	19.4	1.0	-8.3	-1.3	-.5	4.7	-3.6	12.9	10.2	53.9	12.9	24	
02	9.2	7.7	3.1	6.8	1.7	.8	-5.9	2.7	10.2	17.1	59.0	15.3	26.6	32.5	22.9	10.7	2.1	-4.5	-5.5	-15.5	-10.4	4.7	3.5	.3	59.0	8.1	24	
03	10.9	3.6	5.8	9.7	2.1	4.0	8.5	8.9	9.6	22.4	16.9	19.9	12.6	26.1	26.7	15.4	.8	9.9	-6.9	-1.1	23.0	32.1	38.2	30.2	38.2	13.7	24	
04	39.8	16.6	10.1	1.1	.0	6.1	7.3	9.0	9.5	28.0	48.4	39.3	64.5	49.4	15.2	54.6	2.3	-9.2	-12.2	-2.2	9.2	14.8	12.0	64.5	10.4	24		
05	33.9	13.9	6.7	-7.6	-5.9	11.8	6.5	10.6	8.5	27.7	35.9	34.3	33.0	32.3	35.8	11.3	15.4	-10.7	-10.6	-17.3	3.2	15.2	14.3	15.5	35.9	13.0	24	
06	30.3	19.4	15.5	8.0	8.8	10.5	18.3	9.7	16.0	34.1	57.1	42.8	57.5	45.4	19.8	19.5	15.6	2.4	2.7	-13.2	8.4	28.9	27.3	37.4	57.5	21.7	24	
07	47.1	49.8	34.4	32.8	27.4	23.8	37.7	35.2	37.9	51.0	78.9	73.3	39.7	32.4	20.6	12.4	1.6	1.4	17.2	10.2	4.9	6.2	17.1	24.7	78.9	29.9	24	
08	33.2	33.0	25.6	14.6	19.6	25.4	31.9	27.7	9.2	-2.3	-5.5	.0	13.5	12.4	14.6	19.2	206.7	5.9	-7.0	-9.1	-5.6	12.4	10.2	5.6	206.7	20.4	24	
09	3.6	5.6	9.2	9.5	7.6	6.1	9.1	10.7	10.0	13.0	14.2	17.6	22.6	28.6	18.1	22.5	25.6	-.1	.0	-18.0	11.8	19.8	13.6	8.4	28.6	11.2	24	
10	21.9	20.1	11.7	13.3	16.6	15.4	9.4	13.5	11.1	34.2	53.5	47.3	58.3	44.1	33.4	21.1	9.3	-6.1	-14.9	-16.8	8.7	22.6	20.0	9.1	58.3	19.0	24	
11	39.6	12.6	2.3	14.9	12.1	2.6	18.6	11.4	33.2	54.9	62.6	71.1	72.0	35.3	17.5	12.4	11.3	1.2	-2.2	-17.1	9.6	3.1	13.9	11.8	72.0	21.0	24	
12	23.1	22.8	8.6	11.7	10.0	10.7	13.4	14.3	22.8	62.8	82.8	91.9	29.7	28.7	23.4	14.8	10.0	2.8	1.4	9.3	-14.1	-4.6	1.3	9.0	91.9	20.2	24	
13	23.1	11.5	17.6	11.1	11.8	15.8	2.2	17.3	17.8	54.8	80.7	59.0	51.0	35.2	28.9	20.6	20.5	10.2	12.1	24.8	-3.1	1.5	7.4	22.1	80.7	23.0	24	
14	24.3	26.9	23.6	18.6	11.4	14.6	16.7	32.5	29.1	52.8	75.1	60.4	39.2	54.9	39.2	29.1	16.4	9.2	-.4	1.5	14.8	9.7	14.6	6.2	75.1	25.8	24	
15	48.0	19.0	30.4	29.3	42.4	30.5	32.5	13.0	24.6	67.1	28.7	29.7	41.0	40.1	16.1	18.1	16.0	9.4	5.8	8.4	8.3	12.4	19.9	14.6	67.1	25.2	24	
16	21.5	34.3	26.2	26.9	8.9	31.2	29.0	14.3	22.1	21.0	22.0	7.6	10.4	14.5	14.4	17.3	2.4	14.1	6.4	6.1	18.4	11.9	18.1	11.9	34.3	17.1	24	
17	33.8	17.7	10.8	7.5	.3	10.0	1.3	2.3	4.8	7.3	36.6	19.0	.0	16.0	7.8	21.9	18.0	5.0	4.2	18.5	8.6	16.1	10.8	7.9	36.6	11.9	24	
18	21.3	19.7	7.5	14.7	7.0	10.2	6.9	4.4	3.8	4.5	13.7	4.5	21.1	17.5	11.8	14.3	11.8	-2.4	5.6	1.9	10.4	12.8	10.7	4.4	21.3	9.9	24	
19	14.4	10.8	.7	18.7	14.3	9.2	-9.4	.0	17.4	65.3	30.3	21.5	27.9	21.9	28.2	26.2	18.8	-9.7	.0	-3.9	11.1	10.2	11.3	9.7	65.3	14.3	24	
20	1.1	12.7	7.7	8.2	9.2	19.2	28.0	16.5	28.8	33.1	29.6	3.2	39.0	25.9	22.8	25.3	17.9	-.6	2.1	18.5	-.4	18.5	4.4	15.1	39.0	16.0	24	
21	37.1	24.8	22.2	11.0	12.7	14.6	17.5	12.9	24.8	23.2	41.4	42.9	26.4	.6	4.1	84.6	36.9	22.4	17.7	11.4	23.4	30.1	17.3	17.6	84.6	24.0	24	
22	64.2	46.5	31.5	13.0	14.3	16.1	3.8	11.6	15.5	19.0	65.3	91.0	34.9	20.9	20.2	3.8	18.6	-12.0	-4.3	-9.6	7.3	9.1	24.8	14.0	91.0	16.1	24	
23	16.9	52.2	22.3	19.4	17.1	19.9	18.3	9.6	23.2	16.3	34.1	25.6	31.8	28.2	34.6	24.8	13.0	3.7	-1.9	3.8	14.5	18.6	15.8	15.1	52.2	19.8	24	
24	45.5	34.3	22.0	17.3	22.2	17.9	27.3	23.1	19.5	25.3	40.9	32.0	29.9	20.1	29.9	23.9	17.6	18.4	5.3	16.5	19.7	25.6	18.3	30.6	45.5	24.2	24	
25	42.6	81.7	11.0	-6.6	-1.5	-.1	8.3	10.6	10.5	16.2	27.0	20.8	21.3	14.0	.0	9.3	.7	-1.0	10.0	.7	4.8	12.7	11.6	15.1	19.3	81.7	13.2	24
26	37.0	13.6	3.5	6.7	10.7	10.2	12.9	7.4	17.1	46.6	34.8	19.2	22.2	37.4	32.3	23.9	14.0	9.5	4.5	3.3	18.6	10.2	5.7	12.5	46.6	17.2	24	
27	38.5	10.0	3.2	9.3	9.5	1.4	12.9	10.5	26.5	29.8	73.8	16.8	36.9	22.6	29.5	20.8	15.9	-4.6	3.7	4.0	12.5	11.6	5.0	15.9	73.8	17.3	24	
28	35.2	10.6	14.3	13.4	9.4	8.6	13.0	21.2	27.3	62.7	62.6	33.5	42.4	33.9	33.9	22.0	15.4	18.1	8.2	20.2	33.8	42.1	36.0	31.3	62.7	27.0	24	
29	37.6	28.3	25.4	15.9	27.2	32.0	28.0	27.6	14.7	18.8	37.3	31.9	34.9	28.5	28.6	21.4	18.2	10.1	4.0	15.6	17.2	10.5	20.3	7.1	37.6	22.5	24	
30	16.4	24.1	25.0	20.3	19.2	14.3	24.6	20.8	22.7	22.8	28.2	21.9	15.3	19.5	2.8	6.2	1.3	11.3	3.8	-.2	1.6	7.3	11.2	2.7	28.2	14.2	24	
31	8.6	17.7	2.7	-1.2	15.9	-1.3	8.2	3.1	.1	2.5	7.4	31.6	.5	14.9	9.2	6.2	6.1	-4.9	6.8	9.7	6.7	2.8	.2	12.4	31.6	7.3	24	
Max	64.2	81.7	53.9	43.5	42.4	32.0	37.7	35.2	37.9	67.1	82.8	91.9	72.0	54.9	39.2	84.6	206.7	22.4	17.7	24.8	33.8	42.1	38.2	37.4	206.7			
Avg	28.7	24.2	15.9	13.2	12.2	12.7	14.1	13.5	17.4	30.1	36.9	33.1	31.1	27.1	21.6	14.3	20.4	3.0	1.5	1.7	8.9	13.5	14.6	14.3		17.7		
Rds	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31		744	

'*****' indicates the average was too large to fit into the field.

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

West
Serial No. KF1141
AIRS site ID No.: 2121210001

Ichetucknee
KF4443
2120230003

DATE: 1/4/10 Operator Initials NC

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

~~DATALOGGER
READING
ug/m3
#~~

~~MONITOR
READING
ug/m3~~

QA Reviewed D. Shultz - NASE
Date 4/29/10

~~DATALOGGER
READING
time~~

~~MONITOR
READING
time~~

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if
OK

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES

NO

NOTES:

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.	West KF1141	<u>Ichetucknee</u> KF1143
AIFIRS site ID No.:	2121210001	2120230003

DATE: 1/4/10
Operator Initials _____

2. Radiation Source Calibration

QA Reviewed D. Shultz - BASE
Date 4/29/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>232</u>	<u>-7</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2285</u>	<u>2323</u>	<u>1.6%</u>
Span Pot Setting		(D-S)/S x100
<u>6.25</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>—</u>	<u>—</u>	
Span Pot Setting		(D-S)/S x100

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

West KF1141	Ichetucknee KE1143
AIRS site ID No.: 2121210001	2120230003

DATE: 4/4/10

Operator Initials NL

METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline Control Unit	CU02022	4/1/2009
Pro-Cal Streamline Meter Unit	M030403	4/1/2009
Time: Casio	A	Lifetime valid
Voltmeter: 6240102	81830087	1/14/2009

QA Reviewed	<u>J. Muller - NASE</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.5 2) 1.5
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

3. PRECISION FLOW CHECK

<p>ProCal Data</p> <p>ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.73</u></p> <p>Pressure (atm) PCal P <u>1.004</u></p> <p>Temperature (C°) PCal T <u>14.9</u></p> <p>Time (Casio)* (hr:min) <u>15:50</u></p> <p><small>* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.</small></p>	<p>Monitor Data - AT START of Flow Check</p> <table border="1"> <tr> <td>Monitor Temperature at Start (C°) mon temp1 <u>18</u></td> <td>Monitor Actual Flow at Start (L/hr) Mon flow1 <u>990</u></td> </tr> <tr> <td>xx (mon temp)</td> <td>xx (Mon std1)</td> </tr> <tr> <td>xx</td> <td>xx (Mon flow)</td> </tr> </table> <p>Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"</p> <p>Monitor Data - AT END of Flow Check</p> <table border="1"> <tr> <td>Temperature at End (C°) mon temp2 <u>18</u></td> <td>Monitor Actual Flow at End (L/hr) Mon flow2 <u>990</u></td> </tr> </table>	Monitor Temperature at Start (C°) mon temp1 <u>18</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>990</u>	xx (mon temp)	xx (Mon std1)	xx	xx (Mon flow)	Temperature at End (C°) mon temp2 <u>18</u>	Monitor Actual Flow at End (L/hr) Mon flow2 <u>990</u>
Monitor Temperature at Start (C°) mon temp1 <u>18</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>990</u>								
xx (mon temp)	xx (Mon std1)								
xx	xx (Mon flow)								
Temperature at End (C°) mon temp2 <u>18</u>	Monitor Actual Flow at End (L/hr) Mon flow2 <u>990</u>								

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow <u>15.73</u>	<small>actual flow: should be between 15.0 to 18.4 lpm</small>
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MONITOR Actual Measured Flow (L/min) (Mon flow) <u>16.50</u>	<small>actual flow: should be between 15.0 to 18.4 lpm</small>
<small>= (Mon flow2+ Mon flow 1)</small>	

FLOW VALUE PERCENT DIFFERENCE

$(\text{Mon flow} - \text{Pcal_flow}) / \text{Pcal_flow}$	<u>4.9 %</u>
---	--------------

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	West KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 01/22/10 Operator Initials NL

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

~~DATALOGGER
READING
ug/m3

DATALOGGER
READING
time
_____~~

~~MONITOR
READING
ug/m3

MONITOR
READING
time
_____~~

QA Reviewed D. Kholter - AA5I
Date 4/29/10

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

- 1. Inspect heater to determine if operational: Check if OK ✓
- 2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed: ✓
- 3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.
- 4. Corrective Action Form Required?: YES NO

NOTES:

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	West	Ichetucknee
Serial No.	KF1141	KF1143
AIHRS site ID No.:	2121210001	2120230003

DATE: 01/22/10
Operator Initials NL

2. Radiation Source Calibration

QA Reviewed	<u>D. Switzer - ASE</u>
Date	<u>4/29/10</u>

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>726</u>	<u>0</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2336</u>	<u>2323</u>	<u>~ 0.0</u>
Span Pot Setting		(D-S)/S x100
<u>6.25</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u> </u>	<u> </u>	<u> </u>
Span Pot Setting		(D-S)/S x100
<u> </u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
offset %	

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
		percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

West
KF1141
2121210001

Ichetucknee
KF1149
2120230003

DATE: 01/22/10 Operator Initials NL

	METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline	<u>Control Unit</u>	<u>CU02022</u>	<u>4/1/2009</u>
Pro-Cal Streamline	<u>Meter Unit</u>	<u>M030403</u>	<u>4/1/2009</u>
Time:	<u>Casio</u>	<u>A</u>	Lifetime valid
Voltmeter:	<u>6240102</u>	<u>81830087</u>	<u>1/14/2009</u>

QA Reviewed D. Butler - PCSI
Date 4/29/10

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) <u>1.5</u> 2) <u>1.5</u>

Voltage percent difference
(E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

3. PRECISION FLOW CHECK

<p>ProCal Data</p> <p>ProCal FLOW (ACTUAL L/min) <u>Pcal_flow</u> <u>16.25</u></p> <p>Pressure (atm) <u>PCal P</u> <u>6.916</u></p> <p>Temperature (C°) <u>PCal T</u> <u>22.3</u></p> <p>Time (Casio)* (hr:min) <u>10:32</u></p>	<p>Monitor Data - AT START of Flow Check</p> <table border="1"> <tr> <td>Monitor Temperature at Start (C°) <u>24</u></td> <td>Monitor Actual Flow at Start (L/hr) <u>Mon flow1</u> <u>1005</u></td> </tr> <tr> <td>xx (mon temp)</td> <td>xx (Mon flow)</td> </tr> </table> <p>Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"</p> <p>Monitor Data - AT END of Flow Check</p> <table border="1"> <tr> <td>Temperature at End (C°) <u>24</u></td> <td>Monitor Actual Flow at End (L/hr) <u>Mon flow2</u> <u>1005</u></td> </tr> </table>	Monitor Temperature at Start (C°) <u>24</u>	Monitor Actual Flow at Start (L/hr) <u>Mon flow1</u> <u>1005</u>	xx (mon temp)	xx (Mon flow)	Temperature at End (C°) <u>24</u>	Monitor Actual Flow at End (L/hr) <u>Mon flow2</u> <u>1005</u>
Monitor Temperature at Start (C°) <u>24</u>	Monitor Actual Flow at Start (L/hr) <u>Mon flow1</u> <u>1005</u>						
xx (mon temp)	xx (Mon flow)						
Temperature at End (C°) <u>24</u>	Monitor Actual Flow at End (L/hr) <u>Mon flow2</u> <u>1005</u>						

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) <u>Pcal_flow</u> <u>16.25</u>	actual flow, should be between 15.0 to 18.4 lpm
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MONITOR Actual Measured Flow (L/min) (Mon flow) <u>16.75</u>	actual flow, should be between 15.0 to 18.4 lpm = (Mon flow2+ Mon flow 1)
--	--

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow) / Pcal_flow <u>3.0</u> %
--

D. Shultz - AA 55
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Ichetucknee

Serial No.

KF1143

AIRS site ID No.:

2120230003

Date: 01/04/10

Initials: NAL

Time: 15:27

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	9:00	22	21	19:00	-11	41	5:00	9
2	9:30	23	22	19:30	9	42	5:30	3
3	10:00	19	23	20:00	23	43	6:00	15
4	10:30	14	24	20:30	22	44	6:30	-1
5	11:00	19	25	21:00	25	45	7:00	8
6	11:30	21	26	21:30	40	46	7:30	10
7	12:00	13	27	22:00	42	47	8:00	2
8	12:30	12	28	22:30	32	48	8:30	18
9	13:00	28	29	23:00	30	49	9:00	21
10	13:30	23	30	23:30	30	50	9:30	36
11	14:00	28	31	0:00	38	51	10:00	45
12	14:30	25	32	0:30	41	52	10:30	52
13	15:00	13	33	1:00	17	53	11:00	29
14	15:30	17	34	1:30	14	54	11:30	50
15	16:00	0	35	2:00	5	55	12:00	74
16	16:30	1	36	2:30	15	56	12:30	54
17	17:00	4	37	3:00	-2	57	13:00	62
18	17:30	16	38	3:30	3	58	13:30	34
19	18:00	-1	39	4:00	-5	59	14:00	13
20	18:30	-15	40	4:30	4	60	14:30	17

A Sholtz - AA
4/29/10

Current Date : 04/29/10
Current Time : 14:10

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger ID : 01
Parameter : PM10B Interval : 030M
Units : UG/M3

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhLJjVWXYzf	Status Flags I?*>=m^vEd9za Q
01/03/10	09:00	21.7		
01/03/10	09:30	23.1		
01/03/10	10:00	20.0		
01/03/10	10:30	13.8		
01/03/10	11:00	18.8		
01/03/10	11:30	20.9		
01/03/10	12:00	13.9		
01/03/10	12:30	11.4		
01/03/10	13:00	28.0		
01/03/10	13:30	24.1		
01/03/10	14:00	27.4		
01/03/10	14:30	25.9		
01/03/10	15:00	13.4		
01/03/10	15:30	17.5		
01/03/10	16:00	1.0		
01/03/10	16:30	.5		
01/03/10	17:00	3.4		
01/03/10	17:30	16.4		
01/03/10	18:00	.8		
01/03/10	18:30	-14.7		
01/03/10	19:00	-11.3		
01/03/10	19:30	9.0		
01/03/10	20:00	22.8		
01/03/10	20:30	23.1		
01/03/10	21:00	24.0		
01/03/10	21:30	40.2		
01/03/10	22:00	43.7		
01/03/10	22:30	32.7		
01/03/10	23:00	30.2		
01/03/10	23:30	30.2		
01/04/10	00:00	37.7		
01/04/10	00:30	41.8		
01/04/10	01:00	18.3		
01/04/10	01:30	14.8		
01/04/10	02:00	5.5		
01/04/10	02:30	14.8		
01/04/10	03:00	-.1		
01/04/10	03:30	2.6		
01/04/10	04:00	-3.7		
01/04/10	04:30	3.2		
01/04/10	05:00	9.3		
01/04/10	05:30	2.9		
01/04/10	06:00	14.9		
01/04/10	06:30	.0		
01/04/10	07:00	6.7		
01/04/10	07:30	11.3		
01/04/10	08:00	1.3		
01/04/10	08:30	17.7		
01/04/10	09:00	20.2		
01/04/10	09:30	35.8		
01/04/10	10:00	44.0		
01/04/10	10:30	52.7		
01/04/10	11:00	30.3		
01/04/10	11:30	48.2		
01/04/10	12:00	75.2		
01/04/10	12:30	53.8		
01/04/10	13:00	62.7		
01/04/10	13:30	36.0		
01/04/10	14:00	13.0		

N. Muller - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Ichetucknee

Serial No.

KF1143

AIRS site ID No.:

2120230003

Date: 01/08/10

Initials: NAL

Time: 15:57

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	10:00	45	21	20:00	3	41	6:00	19
2	10:30	74	22	20:30	6	42	6:30	26
3	11:00	85	23	21:00	4	43	7:00	38
4	11:30	71	24	21:30	8	44	7:30	33
5	12:00	75	25	22:00	4	45	8:00	21
6	12:30	50	26	22:30	12	46	8:30	18
7	13:00	27	27	23:00	23	47	9:00	-2
8	13:30	46	28	23:30	23	48	9:30	-5
9	14:00	16	29	0:00	36	49	10:00	0
10	14:30	18	30	0:30	32	50	10:30	0
11	15:00	24	31	1:00	34	51	11:00	-13
12	15:30	13	32	1:30	30	52	11:30	0
13	16:00	11	33	2:00	36	53	12:00	0
14	16:30	5	34	2:30	28	54	12:30	10
15	17:00	-3	35	3:00	22	55	13:00	17
16	17:30	-5	36	3:30	15	56	13:30	13
17	18:00	8	37	4:00	14	57	14:00	11
18	18:30	14	38	4:30	25	58	14:30	11
19	19:00	20	39	5:00	13	59	15:00	18
20	19:30	16	40	5:30	31	60	15:30	14

D. Shultes - AASIS
4/29/10

Current Date : 04/29/10
Current Time : 14:11

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhLJjVWXYzf	Status Flags I?*>=m^vEd9za Q
01/07/10	10:00	71.9		
01/07/10	10:30	85.9		
01/07/10	11:00	71.8		
01/07/10	11:30	74.8		
01/07/10	12:00	53.3		
01/07/10	12:30	26.1		
01/07/10	13:00	47.4		
01/07/10	13:30	17.4		
01/07/10	14:00	16.4		
01/07/10	14:30	24.8		
01/07/10	15:00	13.5		
01/07/10	15:30	11.4		
01/07/10	16:00	5.4		
01/07/10	16:30	-2.2		
01/07/10	17:00	-5.1		
01/07/10	17:30	8.0		
01/07/10	18:00	13.3		
01/07/10	18:30	21.0		
01/07/10	19:00	16.6		
01/07/10	19:30	3.8		
01/07/10	20:00	5.7		
01/07/10	20:30	4.1		
01/07/10	21:00	8.3		
01/07/10	21:30	4.2		
01/07/10	22:00	12.2		
01/07/10	22:30	22.0		
01/07/10	23:00	24.1		
01/07/10	23:30	25.2		
01/08/10	00:00	32.2		
01/08/10	00:30	34.2		
01/08/10	01:00	29.4		
01/08/10	01:30	36.6		
01/08/10	02:00	28.7		
01/08/10	02:30	22.6		
01/08/10	03:00	15.6		
01/08/10	03:30	13.7		
01/08/10	04:00	26.3		
01/08/10	04:30	13.0		
01/08/10	05:00	31.1		
01/08/10	05:30	19.7		
01/08/10	06:00	25.9		
01/08/10	06:30	37.9		
01/08/10	07:00	33.9		
01/08/10	07:30	21.4		
01/08/10	08:00	18.8		
01/08/10	08:30	-.2		
01/08/10	09:00	-4.9		
01/08/10	09:30	.3		
01/08/10	10:00	1.0		
01/08/10	10:30	-12.0		
01/08/10	11:00	-.7		
01/08/10	11:30	.3		
01/08/10	12:00	9.5		
01/08/10	12:30	17.5		
01/08/10	13:00	13.6		
	Max	85.9		
	Min	-12.0		
	Mean	20.8		

D Shulte - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit Ichetucknee
 Serial No. KF1143
 AIRS site ID No.: 2120230003

Date: 01/22/10
 Initials: NAL
 Time: 10:15

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	4:30	10	21	14:30	-8	41	0:30	44
2	5:00	15	22	15:00	18	42	1:00	87
3	5:30	8	23	15:30	86	43	1:30	53
4	6:00	21	24	16:00	83	44	2:00	38
5	6:30	12	25	16:30	33	45	2:30	38
6	7:00	22	26	17:00	40	46	3:00	22
7	7:30	7	27	17:30	21	47	3:30	15
8	8:00	19	28	18:00	23	48	4:00	9
9	8:30	23	29	18:30	21	49	4:30	7
10	9:00	26	30	19:00	13	50	5:00	22
11	9:30	29	31	19:30	9	51	5:30	13
12	10:00	17	32	20:00	14	52	6:00	19
13	10:30	41	33	20:30	24	53	6:30	6
14	11:00	42	34	21:00	22	54	7:00	0
15	11:30	44	35	21:30	31	55	7:30	11
16	12:00	41	36	22:00	29	56	8:00	12
17	12:30	23	37	22:30	21	57	8:30	11
18	13:00	29	38	23:00	13	58	9:00	20
19	13:30	13	39	23:30	17	59	9:30	16
20	14:00	-15	40	0:00	18	60	10:00	22

D. Sholler - ASI
4/29/10

Current Date : 04/29/10
Current Time : 14:12

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWXYZf	Status Flags I?*>=m^vEd9za Q
01/21/10	05:00	8.3		
01/21/10	05:30	20.8		
01/21/10	06:00	12.4		
01/21/10	06:30	22.6		
01/21/10	07:00	7.4		
01/21/10	07:30	18.5		
01/21/10	08:00	23.5		
01/21/10	08:30	26.1		
01/21/10	09:00	29.3		
01/21/10	09:30	17.1		
01/21/10	10:00	40.6		
01/21/10	10:30	42.1		
01/21/10	11:00	44.7		
01/21/10	11:30	41.1		
01/21/10	12:00	24.9		
01/21/10	12:30	27.9		
01/21/10	13:00	15.8		
01/21/10	13:30	-14.4		
01/21/10	14:00	-8.3		
01/21/10	14:30	16.6		
01/21/10	15:00	81.8		
01/21/10	15:30	87.4		
01/21/10	16:00	33.2		
01/21/10	16:30	40.6		
01/21/10	17:00	21.3		
01/21/10	17:30	23.4		
01/21/10	18:00	21.3		
01/21/10	18:30	14.2		
01/21/10	19:00	9.0		
01/21/10	19:30	13.9		
01/21/10	20:00	23.9		
01/21/10	20:30	22.9		
01/21/10	21:00	29.9		
01/21/10	21:30	30.4		
01/21/10	22:00	21.4		
01/21/10	22:30	13.3		
01/21/10	23:00	17.6		
01/21/10	23:30	17.7		
01/22/10	00:00	41.6		
01/22/10	00:30	86.7		
01/22/10	01:00	56.0		
01/22/10	01:30	37.0		
01/22/10	02:00	39.7		
01/22/10	02:30	23.2		
01/22/10	03:00	15.5		
01/22/10	03:30	10.5		
01/22/10	04:00	6.4		
01/22/10	04:30	22.2		
01/22/10	05:00	13.8		
01/22/10	05:30	18.4		
01/22/10	06:00	7.7		
01/22/10	06:30	.0		
01/22/10	07:00	10.7		
01/22/10	07:30	12.5		
01/22/10	08:00	10.9		
01/22/10	08:30	20.2		
01/22/10	09:00	16.1		
01/22/10	09:30	21.8		

**KOUGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/29/2010
Month Audited Feb 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
120230003811021	ICHETUCKNEE SPRINGS SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Datalogger vs. monitor data comparison, do they compare? Yes No*
- 2. Review field log sheets from previous month,
are they complete, correct and signed by technician and auditor? Yes No*
- 3. Are correct and approved AIRS Null codes applied to data? Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Sholtes SIGNATURE: David Sholtes

D. Switzer - AASI
4/29/10

Current Date : 04/29/10
Current Time : 12:45

Monthly Parameter Report - Hourly Averages
Environmental Systems Corporation
02/10

Logger Id : 01
Site Name : ICHETUCKNEE SITE
Parameter : PM10
Units : UG/M3
Avg Interval : 01

9992 9990 9986

9986 9970

Day	Hours																							Max	Avg	Rds		
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
01	37.2	15.9	8.5	13.4	7.9	20.2	14.5	13.3	20.9	22.9	25.2	20.5	33.8	22.6	27.9	19.2	5.5	17.8	12.3	4.4	19.2	8.3	8.0	7.6	37.2	16.9	24	
02	38.4	22.0	16.2	13.8	2.4	12.4	4.9	2.0	11.0	10.2	14.6	9.2	9.3	11.5	5.0	2.4	13.8	-6.5	-3.1	-1.0	5.9	-1.5	9.8	1.6	38.4	8.5	24	
03	18.3	17.8	10.1	19.4	14.2	12.2	-1.7	5.1	25.5	22.1	11.7	42.7	27.8	24.8	15.7	13.8	-7.5	-7.4	9.2	7.2	11.9	16.0	13.0	42.7	4.9	24		
04	16.5	22.7	24.2	16.4	10.3	10.1	14.3	14.0	3.5	5.2	30.1	41.3	32.4	22.9	22.1	23.6	7.1	16.1	20.2	10.5	9.2	15.0	14.8	20.8	41.3	17.6	24	
05	62.7	36.3	26.8	25.9	21.8	18.5	21.3	19.9	22.7	15.5	28.5	16.3	21.4	16.0	-9.2	7.3	7.9	.4	.2	-2.8	-4.4	15.0	7.9	-2.9	62.7	15.5	24	
06	18.8	19.7	5.4	13.7	11.0	8.8	4.2	5.5	4.6	10.1	4.4	6.8	7.6	12.1	10.0	10.2	2.6	-3.4	-.1	-.5	-.3	9.8	7.3	11.4	19.7	7.4	24	
07	32.0	22.3	10.2	8.2	13.8	5.7	6.9	11.4	16.5	16.6	28.1	15.1	12.7	19.9	13.8	19.8	9.8	1.6	16.9	5.5	18.5	14.0	1.8	30.4	32.0	14.6	24	
08	38.7	19.8	14.0	11.1	20.9	5.7	12.8	13.9	26.8	48.6	54.2	6.8	24.8	28.0	30.3	17.3	17.6	4.4	-.3	15.1	18.4	22.5	13.4	13.0	54.2	19.7	24	
09	35.9	15.5	14.3	15.4	20.2	25.6	20.4	22.1	16.1	21.9	8.8	12.3	12.3	11.1	13.8	11.7	36.0	.7	4.1	-.5	1.1	-2.4	9.2	11.6	36.0	14.0	24	
10	10.8	16.2	-1.4	-12.2	-6.8	-1.1	3.9	9.4	4.2	105.6	137.2	44.0	2.5	11.0	10.7	9.7	4.5	.7	-1.5	-1.3	19.5	5.3	.7	-3.5	137.2	15.3	24	
11	5.1	1.0	4.2	1.6	11.7	4.6	9.4	4.9	13.1	36.6	44.6	32.5	9.7	37.6	14.5	7.3	8.7	8.0	11.3	6.4	19.1	14.1	10.4	18.8	44.6	13.9	24	
12	45.0	31.4	9.8	14.4	16.7	9.0	7.4	15.1	9.5	8.0	1.9	11.7	1.5	-4.0	3.4	17.2	16.1	16.6	.3	-8.1	3.4	-1.4	-3.7	3.3	45.0	8.6	24	
13	1.7	6.4	8.1	8.7	8.7	9.9	7.6	9.1	7.0	12.9	21.1	17.6	-7.9	23.6	24.2	11.7	15.2	4.0	-3.5	7.7	7.2	2.6	-3.0	4.2	24.2	8.5	24	
14	.0	14.8	1.9	8.7	4.0	14.1	4.9	21.0	15.9	57.1	73.1	24.4	26.1	29.7	34.6	21.6	14.4	-2.4	1.2	-6.5	.9	9.6	12.3	-4.3	73.1	15.7	24	
15	13.7	17.5	-1.3	16.6	2.1	8.7	8.4	11.3	36.2	50.5	32.0	37.2	28.6	16.1	1.2	12.9	6.3	10.3	4.3	7.3	-2.4	-3.0	3.7	2.5	50.5	13.3	24	
16	14.3	-2.2	-8.1	4.8	4.8	2.6	-8.7	-1.2	10.9	45.8	40.0	14.2	.5	15.6	27.2	16.2	18.8	-3.9	.2	1.6	7.2	-5.0	9.4	14.6	45.8	9.1	24	
17	-8.0	9.6	6.9	5.6	3.6	7.1	7.1	-2.5	25.8	64.2	62.0	23.0	8.8	25.7	22.2	18.6	12.7	2.7	7.7	10.5	15.0	22.9	13.6	6.6	64.2	15.4	24	
18	20.2	31.8	1.0	13.6	9.0	5.5	4.2	3.2	22.2	66.0	50.0	13.9	25.4	31.1	13.5	13.5	27.3	-13.8	-18.2	-1.9	22.4	5.7	-1.8	10.7	135.4	2.2	24	
19	37.9	24.7	17.2	13.3	15.0	17.8	9.8	13.6	34.9	52.5	55.1	20.7	47.6	40.9	32.9	21.0	20.7	7.2	.0	22.2	14.4	11.0	14.7	27.6	55.1	23.8	24	
20	36.4	29.2	32.7	22.8	11.7	5.2	15.7	19.0	24.3	56.3	34.7	35.1	45.8	77.1	48.9	35.2	39.6	18.3	13.2	15.8	54.23	81.61	63.15	9.285	423.8	81.0	24	
21	256.1192.0	97.2106.4101.4	92.4	49.1	37.2	81.5	36.1	34.4	11.7	15.6	25.2	12.2	9.3	4.9	1.3	15.0	29.8	24.8	24.2	40.7	31.7	256.1	55.4	24	24	24	24	
22	50.6	45.1	27.2	24.7	18.7	10.5	25.8	18.1	33.6	40.0	35.2	41.2	4.6	-8.5	-14.5	20.9	17.8	10.4	8.8	-1.5	6.7	7.7	6.5	16.2	50.6	18.5	24	
23	21.9	26.0	15.8	11.8	7.1	16.2	11.8	3.6	21.9	15.7	15.9	16.7	28.9	31.8	26.9	15.2	20.5	6.9	.7	-3.4	1.5	23.1	8.8	15.3	31.8	15.0	24	
24	45.9	28.7	21.5	13.6	13.7	13.4	19.2	9.1	11.9	20.6	25.9	17.1	23.6	7.9	13.4	11.2	9.9	6.2	10.7	14.9	19.2	3.7	19.7	-6.0	45.9	15.6	24	
25	8.3	18.7	2.5	13.2	7.3	11.2	16.7	8.1	13.3	40.5	39.8	12.8	20.3	11.6	37.9	20.8	12.6	.0	1.9	21.7	-12.2	-1.8	6.8	20.7	40.5	13.8	24	
26	2.0	22.0	18.1	15.1	18.3	10.2	18.1	18.7	34.0	68.3	76.5	30.1	8.2	32.2	27.2	20.5	11.9	8.1	6.7	35.8	26.6	18.7	28.6	36.3	76.5	24.6	24	
27	32.3	29.7	25.8	20.2	12.4	26.3	46.1	37.4	23.9	30.0	28.2	35.2	9.6	10.0	31.9	24.6	20.6	2.9	10.1	22.0	25.3	22.7	8.8	12.2	46.1	22.8	24	
28	6.1	9.2	-2.5	-.5	8.1	13.2	8.1	7.2	27.9	63.2	51.6	5.0	32.5	37.4	32.0	17.1	8.9	5.9	4.8	2.3	6.2	45.5	28.7	21.5	63.2	18.3	24	
Max	256.1192.0	97.2106.4	101.4	92.4	49.1	37.4	81.5	105.6	137.2	44.0	47.6	77.1	48.9	135.4	39.6	18.3	20.2	15.8	54.23	81.61	63.15	9.285	3	423.8	81.0	24		
Avg	32.1	26.5	14.5	15.7	13.9	14.1	12.9	12.4	21.4	37.2	30.3	20.8	18.8	22.2	4.1	19.7	14.4	4.0	4.1	12.7	25.1	16.4	21.7	22.1	18.2	18.2	24	
Rds	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	672	24

prescribed burn
9978

'****' indicates the average was too large to fit into the field.

Ambient Air Services, Inc. 106 Ambient Airway Starke, Florida 32091
SAC - Branford Plant - Anderson FH I - N PM-10 Monitor Audit sheet

Site: **Ichetucknee**

Date: **February 3, 2010** Site Contact: **Lofgren** Audit Performed by: **Sholtes**

Sampler pause: **11:07 EST**

Sampler restart: **11:07 EST**

Sampler Information

Audit and Site Information

Serial Number **328**

AIRS # **12-023-0003**

Radiation Source # **KF-1143**

Audit Temp **14.6** Degrees Celcius

Audit BP : **765.6** mm Hg

Audit Flow

Actual Sampler Flow (Observed): **1007** liters/hour

Converted Actual Sampler Flow Value: **16.78** liters/minute

Audit Flow Manometer Indication: **5.45** inches H₂O

Audit Flow (Known Flow): **16.02** liters/minute

Flow Value Percent Difference: **4.76** % ($\pm 7\%$) or recalibrate

Audit Equipment

Digital Thermometer:	Manuf:	Atkins	SN: 5008	
Barometer / Altimeter	Manuf:	Microtim	SN: 352	
Atomic clock reference:	Manuf:	Radio Shack	SN: AASI 1-1	
Digital Manometer:	Manuf:	Dwyer	SN: 475-10-5	
Venturi FTS:	Manuf:	Chinook	SN: 981126A	m= 0.4284
				b= -0.8834

Comments: Last audit

Auditor Signature:

David Sholtes

Date:

02/03/10

Review Signature:

David J. Pate

Date:

02/03/10

EQUATIONS:

Temperature Difference = Sensor T Actual - Monitor T
 Pressure Difference = Sensor BP Actual - Monitor BP

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	West KF1141	<u>Ichetucknee</u> KF1149
AIRS site ID No.:	2121210001	2120230003

DATE: 2/3/10

Operator Initials NL

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

~~DATALOGGER
READING
ug/m3~~

~~MONITOR
READING
ug/m3~~

QA Reviewed D. Sholtes - AAST
Date 4/29/10

~~DATALOGGER
READING
time~~

~~MONITOR
READING
time~~

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if
OK

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES

NO

NOTES:

QA audit with Dave Sholtes

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	West	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFIRS site ID No.:	2121210001	2120230003

DATE: 2/3/10
Operator Initials NC

2. Radiation Source Calibration

QA Reviewed	<u>David Shultz</u>
Date	<u>4/29/10</u>

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>21T</u>	<u>39</u>

221

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2425</u>	<u>2323</u>	<u>4.4</u>
Span Pot Setting		(D-S)/S x100
<u>6.25</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2345</u>	<u>2323</u>	<u>0.95</u>
Span Pot Setting		(D-S)/S x100
<u>6.00</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

David Shultz
Field Auditor Signature (if accuracy audit performed)

02/03/2010
Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
offset %	
<u>140</u>	<u>-56</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>1406</u>	<u>1409</u>	
Span Pot Setting		(D-S)/S x100
<u>6.25</u>		

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) **SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1**

1. Site Visited (circle one):

<u>West</u>	<u>Ichetucknee</u>
KF1141	KF1143
2121210001	2120230003

DATE:

2/3/10

Operator Initials

NL

Pro-Cal Streamline	METER ID: <u>Control Unit</u>	Serial No. <u>CU02022</u>	last calibr. date <u>4/1/2009</u>
Pro-Cal Streamline	METER ID: <u>Meter Unit</u>	Serial No. <u>M030403</u>	last calibr. date <u>4/1/2009</u>
Time:	<u>Casio</u>	<u>A</u>	Lifetime valid
Voltmeter:	<u>6240102</u>	<u>81830087</u>	<u>1/14/2009</u>

QA Reviewed	<u>Daniel Keltner - AA5T</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) <u>2)</u>
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

No meter available
FDEP is checking the calibration

3. PRECISION FLOW CHECK

ProCal Data		Monitor Data - AT START of Flow Check	
ProCal FLOW (ACTUAL L/min) Pcal_flow	<u>15.84</u>	Monitor Temperature at Start (C°) mon temp1	<u>17</u>
Pressure (atm) Pcal P	<u>1.007</u>	Monitor Actual Flow at Start (L/hr) Mon flow1	<u>987</u>
Temperature (C°) Pcal T	<u>18.0</u>	xx (mon temp) xx (Mon std1) (Mon flow) xx	
Time (Casio)* (hr:min)	<u>11:11</u>	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"	
	* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.	Monitor Data - AT END of Flow Check	
		Temperature at End (C°) mon temp2	<u>17</u>
		Monitor Actual Flow at End (L/hr) Mon flow2	<u>987</u>
CALCULATIONS		FLOW VALUE PERCENT DIFFERENCE	
ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow	<u>15.84</u>	MONITOR Actual Measured Flow (L/min) (Mon flow)	<u>16.45</u>
	actual flow, should be between 15.0 to 18.4 lpm		actual flow, should be between 15.0 to 18.4 lpm
			$(\text{Mon flow} - \text{Pcal_flow}) / \text{Pcal_flow}$
			<u>3.85 %</u>
			$= (\text{Mon flow2} - \text{Mon flow 1})$

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

	West	Ichetucknee
Serial No.	KF1141	KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 2/18/10 Operator Initials NL

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER READING ug/m3	MONITOR READING ug/m3	QA Reviewed <u>D. Shultz / ATF</u> Date <u>4/29/10</u>
DATALOGGER READING time	MONITOR READING time	

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

- 1. Inspect heater to determine if operational: _____
- 2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed: _____
- 3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.
- 4. Corrective Action Form Required?: YES NO

Check if OK A

NOTES:

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 2/18/10
Operator Initials NL

2. Radiation Source Calibration

QA Reviewed David Schultz - ASE
Date 4/29/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>284</u>	<u>-120</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2161</u>	<u>2323</u>	<u>7.0</u>
Span Pot Setting		(D-S)/S x100
<u>6.0</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2315</u>	<u>2323</u>	<u>0.3</u>
Span Pot Setting		(D-S)/S x100
<u>6.65</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
offset %	

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
		percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

	METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline	<u>Control Unit</u>	<u>CU02022</u>	<u>4/1/2009</u>
Pro-Cal Streamline	<u>Meter Unit</u>	<u>M030403</u>	<u>4/1/2009</u>
Time:	<u>Casio</u>	<u>A</u>	Lifetime valid
Voltmeter:	<u>6240102</u>	<u>81830087</u>	<u>1/14/2009</u>

<u>West</u>	<u>Ichetucknee</u>
KF1141	KF1143
2121210001	2120230003

DATE: 2/18/10 Operator Initials NC

QA Reviewed	<u>D. Shultz - ASE</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) <u>2)</u>

Voltage percent difference
(E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

Meter w/ FDEP for recalibration

3. PRECISION FLOW CHECK

ProCal Data ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.77</u> Pressure (atm) PCal P <u>1.006</u> Temperature (C) PCal T <u>22.0</u> Time (Casio)* (hr:min) <u>15:00</u>	Monitor Data - AT START of Flow Check Monitor Temperature at Start (C) <u>24</u> Monitor Actual Flow at Start (L/hr) <u>990</u>
	xx (mon temp) xx (Mon std1) xx (Mon flow) Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
	Monitor Data - AT END of Flow Check Temperature at End (C) <u>24</u> Monitor Actual Flow at End (L/hr) <u>990</u>
	* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow <u>15.77</u>	actual flow should be between 15.0 to 18.4 lpm
---	--

MONITOR Actual Measured Flow (L/min) (Mon flow) <u>16.50</u>	actual flow should be between 15.0 to 18.4 lpm = (Mon flow2+ Mon flow 1)
--	---

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow)/ Pcal_flow <u>4.6 %</u>

D Shultz - AAII
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Ichetucknee

Serial No.

KF1143

AIRS site ID No.:

2120230003

Date: 02/03/10

Initials: NAL

Time: 10:30

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	4:30	7	21	14:30	2	41	0:30	13
2	5:00	-4	22	15:00	8	42	1:00	24
3	5:30	4	23	15:30	4	43	1:30	17
4	6:00	22	24	16:00	1	44	2:00	17
5	6:30	-2	25	16:30	16	45	2:30	8
6	7:00	11	26	17:00	10	46	3:00	12
7	7:30	4	27	17:30	-5	47	3:30	13
8	8:00	-1	28	18:00	-9	48	4:00	26
9	8:30	12	29	18:30	-5	49	4:30	6
10	9:00	9	30	19:00	-2	50	5:00	23
11	9:30	9	31	19:30	-2	51	5:30	17
12	10:00	11	32	20:00	0	52	6:00	6
13	10:30	17	33	20:30	-1	53	6:30	-5
14	11:00	11	34	21:00	13	54	7:00	2
15	11:30	-1	35	21:30	1	55	7:30	10
16	12:00	20	36	22:00	-5	56	8:00	-1
17	12:30	15	37	22:30	8	57	8:30	22
18	13:00	2	38	23:00	11	58	9:00	29
19	13:30	17	39	23:30	5	59	9:30	19
20	14:00	5	40	0:00	-2	60	10:00	25

D. Holter - AA52
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor

Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

Date: 2/3/10
Initials: NL
Time: 10:31

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	4:30	7	21	14:30	2	41	05:30	13
2	5	-4	22	15	8	42	1	24
3		4	23		4	43		17
4	6	22	24	16	1	44	2	17
5		-2	25		16	45		8
6	7	11	26	17	10	46	3	12
7		4	27		-5	47		13
8	8	-1	28	18	-9	48	4	26
9		12	29		-5	49		6
10	9	9	30	19	-2	50	5	23
11		9	31		-2	51		17
12	10	11	32	20	-0	52	6	6
13		17	33		-1	53		-5
14	11	11	34	21	13	54	7	2
15		-1	35		1	55		10
16	12	20	36	22	-5	56	8	-1
17		15	37		8	57		22
18	13	2	38	23	11	58	9	29
19		17	39		5	59		19
20	14	5	40	0	-2	60	10	25

10:30 20

D Sholtes - AASI
4/29/10

Current Date : 04/29/10
Current Time : 14:14

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B Interval : 030M
Units : UG/M3

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWXYZf	Status Flags I?*>=m^vEd9za Q
02/02/10	04:00	7.3		
02/02/10	04:30	-2.5		
02/02/10	05:00	1.8		
02/02/10	05:30	23.0		
02/02/10	06:00	-.7		
02/02/10	06:30	10.7		
02/02/10	07:00	5.4		
02/02/10	07:30	-1.2		
02/02/10	08:00	12.4		
02/02/10	08:30	9.6		
02/02/10	09:00	9.5		
02/02/10	09:30	10.9		
02/02/10	10:00	16.2		
02/02/10	10:30	13.0		
02/02/10	11:00	-1.4		
02/02/10	11:30	20.0		
02/02/10	12:00	15.9		
02/02/10	12:30	2.7		
02/02/10	13:00	16.8		
02/02/10	13:30	6.2		
02/02/10	14:00	1.4		
02/02/10	14:30	8.6		
02/02/10	15:00	4.3		
02/02/10	15:30	.5		
02/02/10	16:00	16.7		
02/02/10	16:30	10.9		
02/02/10	17:00	-3.8		
02/02/10	17:30	-9.1		
02/02/10	18:00	-4.4		
02/02/10	18:30	-1.7		
02/02/10	19:00	-1.5		
02/02/10	19:30	-.3		
02/02/10	20:00	.0		
02/02/10	20:30	12.0		
02/02/10	21:00	3.0		
02/02/10	21:30	-6.1		
02/02/10	22:00	8.4		
02/02/10	22:30	11.3		
02/02/10	23:00	6.1		
02/02/10	23:30	-2.8		
02/03/10	00:00	12.7		
02/03/10	00:30	24.0		
02/03/10	01:00	17.3		
02/03/10	01:30	18.4		
02/03/10	02:00	7.2		
02/03/10	02:30	13.0		
02/03/10	03:00	11.5		
02/03/10	03:30	27.2		
02/03/10	04:00	5.7		
02/03/10	04:30	22.7		
02/03/10	05:00	17.5		
02/03/10	05:30	6.9		
02/03/10	06:00	-4.5		
02/03/10	06:30	1.0		
02/03/10	07:00	10.9		
02/03/10	07:30	-.4		
02/03/10	08:00	20.7		
02/03/10	08:30	30.3		
02/03/10	09:00	18.6		

D Sholtis - BASSI
4/29/10

02/03/10 09:30 25.6

Max 30.3
Min -9.1
Mean 8.5
Records 60

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled, 'T' - Out-of-
Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' - Maintenance, 'O' - Analog
Overrange, 'U' - Analog Underrange,
Change, 'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum, 'R' - Rate of
'H' - High-High Alarm, 'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm, 'J' - High Rate
of Change, 'j' - Low Rate of Change,
Obs, 'V' - DIS #1 Obs, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs, 'Y' - DIS #4
'Z' - DIS #5 Obs.

D. Hultes - AASZ
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Ichetucknee

Serial No.

KF1143

AIRS site ID No.:

2120230003

Date: 02/10/10

Initials: NAL

Time: 09:35

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	3:30	11	21	13:30	11	41	23:30	17
2	4:00	21	22	14:00	12	42	0:00	5
3	4:30	14	23	14:30	18	43	0:30	6
4	5:00	27	24	15:00	9	44	1:00	17
5	5:30	21	25	15:30	8	45	1:30	21
6	6:00	30	26	16:00	16	46	2:00	10
7	6:30	21	27	16:30	42	47	2:30	-2
8	7:00	19	28	17:00	29	48	3:00	-2
9	7:30	21	29	17:30	2	49	3:30	-16
10	8:00	23	30	18:00	-1	50	4:00	-9
11	8:30	24	31	18:30	2	51	4:30	-7
12	9:00	8	32	19:00	6	52	5:00	-7
13	9:30	18	33	19:30	-2	53	5:30	2
14	10:00	26	34	20:00	0	54	6:00	-5
15	10:30	17	35	20:30	5	55	6:30	1
16	11:00	-2	36	21:00	-4	56	7:00	7
17	11:30	11	37	21:30	0	57	7:30	12
18	12:00	13	38	22:00	-5	58	8:00	6
19	12:30	13	39	22:30	1	59	8:30	-10
20	13:00	11	40	23:00	18	60	9:00	-2

J. Shultz - AASE
4/29/10

Current Date : 04/29/10
Current Time : 14:15

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWXYzf	Status Flags I?*>=m^vEd9za Q
02/09/10	04:00	13.5		
02/09/10	04:30	26.8		
02/09/10	05:00	20.9		
02/09/10	05:30	30.3		
02/09/10	06:00	21.4		
02/09/10	06:30	19.5		
02/09/10	07:00	21.4		
02/09/10	07:30	22.8		
02/09/10	08:00	23.9		
02/09/10	08:30	8.4		
02/09/10	09:00	17.5		
02/09/10	09:30	26.3		
02/09/10	10:00	18.5		
02/09/10	10:30	-.6		
02/09/10	11:00	10.0		
02/09/10	11:30	14.6		
02/09/10	12:00	12.1		
02/09/10	12:30	12.5		
02/09/10	13:00	10.4		
02/09/10	13:30	11.8		
02/09/10	14:00	17.8		
02/09/10	14:30	9.8		
02/09/10	15:00	8.1		
02/09/10	15:30	15.3		
02/09/10	16:00	40.9		
02/09/10	16:30	31.1		
02/09/10	17:00	2.3		
02/09/10	17:30	-.6		
02/09/10	18:00	1.9		
02/09/10	18:30	6.4		
02/09/10	19:00	-1.7		
02/09/10	19:30	.1		
02/09/10	20:00	5.5		
02/09/10	20:30	-3.2		
02/09/10	21:00	-.5		
02/09/10	21:30	-4.2		
02/09/10	22:00	.6		
02/09/10	22:30	17.8		
02/09/10	23:00	17.9		
02/09/10	23:30	5.3		
02/10/10	00:00	5.8		
02/10/10	00:30	15.9		
02/10/10	01:00	21.7		
02/10/10	01:30	10.8		
02/10/10	02:00	-1.7		
02/10/10	02:30	-1.1		
02/10/10	03:00	-14.7		
02/10/10	03:30	-9.8		
02/10/10	04:00	-5.2		
02/10/10	04:30	-8.4		
02/10/10	05:00	3.0		
02/10/10	05:30	-5.3		
02/10/10	06:00	.8		
02/10/10	06:30	7.0		
02/10/10	07:00	12.3		
02/10/10	07:30	6.4		
02/10/10	08:00	10.3		
02/10/10	08:30	-1.7		

D. Shultz - BAST
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Ichetucknee

Serial No.

KF1143

AIRS site ID No.:

2120230003

Date: 02/18/10

Initials: NAL

Time: 13:38

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	8:00	2	21	18:00	1	41	4:00	7
2	8:30	21	22	18:30	11	42	4:30	8
3	9:00	31	23	19:00	4	43	5:00	10
4	9:30	60	24	19:30	17	44	5:30	4
5	10:00	69	25	20:00	3	45	6:00	6
6	10:30	65	26	20:30	15	46	6:30	0
7	11:00	57	27	21:00	16	47	7:00	8
8	11:30	21	28	21:30	29	48	7:30	10
9	12:00	23	29	22:00	16	49	8:00	-5
10	12:30	-3	30	22:30	9	50	8:30	7
11	13:00	21	31	23:00	18	51	9:00	39
12	13:30	31	32	23:30	2	52	9:30	58
13	14:00	19	33	0:00	10	53	10:00	74
14	14:30	23	34	0:30	9	54	10:30	56
15	15:00	22	35	1:00	32	55	11:00	41
16	15:30	34	36	1:30	31	56	11:30	13
17	16:00	1	37	2:00	31	57	12:00	14
18	16:30	16	38	2:30	-5	58	12:30	23
19	17:00	9	39	3:00	7	59	13:00	28
20	17:30	4	40	3:30	19	60	13:30	24

D Shultz - RAS
4/29/10

Current Date : 04/29/10
Current Time : 14:15

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhlJjVWXYzf	Status Flags I?*>=m^vEd9za Q
02/17/10	08:00	20.8		
02/17/10	08:30	30.7		
02/17/10	09:00	58.8		
02/17/10	09:30	69.7		
02/17/10	10:00	65.3		
02/17/10	10:30	58.6		
02/17/10	11:00	22.4		
02/17/10	11:30	23.5		
02/17/10	12:00	-2.1		
02/17/10	12:30	19.7		
02/17/10	13:00	31.6		
02/17/10	13:30	19.7		
02/17/10	14:00	23.0		
02/17/10	14:30	21.4		
02/17/10	15:00	34.7		
02/17/10	15:30	2.4		
02/17/10	16:00	15.0		
02/17/10	16:30	10.3		
02/17/10	17:00	3.9		
02/17/10	17:30	1.5		
02/17/10	18:00	10.9		
02/17/10	18:30	4.5		
02/17/10	19:00	17.3		
02/17/10	19:30	3.7		
02/17/10	20:00	14.4		
02/17/10	20:30	15.5		
02/17/10	21:00	28.7		
02/17/10	21:30	17.1		
02/17/10	22:00	8.4		
02/17/10	22:30	18.8		
02/17/10	23:00	3.2		
02/17/10	23:30	10.1		
02/18/10	00:00	8.8		
02/18/10	00:30	31.6		
02/18/10	01:00	31.0		
02/18/10	01:30	32.7		
02/18/10	02:00	-3.5		
02/18/10	02:30	5.6		
02/18/10	03:00	19.6		
02/18/10	03:30	7.5		
02/18/10	04:00	8.1		
02/18/10	04:30	9.9		
02/18/10	05:00	4.6		
02/18/10	05:30	6.4		
02/18/10	06:00	.2		
02/18/10	06:30	8.2		
02/18/10	07:00	10.1		
02/18/10	07:30	-3.6		
02/18/10	08:00	6.0		
02/18/10	08:30	38.4		
02/18/10	09:00	57.7		
02/18/10	09:30	74.2		
02/18/10	10:00	58.0		
02/18/10	10:30	42.0		
02/18/10	11:00	14.9		
02/18/10	11:30	12.9		
02/18/10	12:00	23.9		
02/18/10	12:30	27.0		
02/18/10	13:00	24.7		

KOOGLER & ASSOCIATES ENVIRONMENTAL SERVICES CORRECTIVE ACTION / DATA EXCLUSION FORM

The Corrective Action / Data Exclusion Form should be completed for the following events:

- 1) Monitor or related equipment calibration out of range,
- 2) Monitor or related equipment not operating,
- 3) Or, any incident/event that prevents proper collection of monitor data.

SITE LOCATION (circle): _____ Met station Ichetucknee West
AIRS code 121210002 120230003 121210001

PERSON COMPLETING THIS FORM Max Lee TODAY'S DATE: 4/29/10

DATE PROBLEM DISCOVERED: _____

PROBLEM: prescribed burn per phone call to park ranger

SUGGESTED ACTIONS TO RESOLVE PROBLEM:

ACTION ASSIGNED TO: _____ APPROX. DEADLINE: _____

DESCRIBE CORRECTIVE ACTION: _____

IS DATA TO BE EXCLUDED? (circle) YES NO

PARAMETER: PM10, all met data OR, temperature, wind dir, wind speed, solar rad., rainfall

DATE AND HOURS OF EXCLUDED DATA:

Date/Hours	<u>2/20/10-7 19:00 → 2/21/10 04:00</u>	AIRS NULL CODE	<u>8978</u>
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____

(note: If a single event involves different NULL codes fill in multiple Date/Hours)

REASON DATA TO BE EXCLUDED: burn

DESCRIBE EVIDENCE OF EXCLUSION REASON (attach written documentation as needed):

Attachment 1) hurry any data

Attachment 2) _____

DATE COMPLETED: 4/29/10

Program Manager: Max Lee SIGNATURE [Signature] DATE: 4/29/10

QA Auditor: David Skoltes SIGNATURE [Signature] DATE: 4/29/10

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/29/2010
Month Audited Apr 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
120230003811021	ICHETUCKNEE SPRINGS SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Datalogger vs. monitor data comparison, do they compare? Yes No*
- 2. Review field log sheets from previous month,
are they complete, correct and signed by technician and auditor? Yes No*
- 3. Are correct and approved AIRS Null codes applied to data? Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

2nd quarterly audit performed 4/1/2010

AUDITOR: David Sholtes SIGNATURE: David Sholtes

W. Scholtes - AAST
4/29/10

Current Date : 04/29/10
Current Time : 12:46

Monthly Parameter Report - Hourly Averages
Environmental Systems Corporation
03/10

Logger Id : 01
Site Name : ICHETUCKNEE SITE
Parameter : PM10
Units : UG/M3
Avg Interval : 01

Day	Hours																							Max	Avg	Rds	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22				23
01	15.9	19.7	19.6	21.3	13.6	12.2	10.4	16.6	51.6	50.4	42.0	33.0	48.2	59.1	40.9	23.0	24.1	11.7	4.4	9.7	24.2	47.0	47.4	22.9	59.1	27.8	24
02	24.9	36.5	41.9	32.2	34.2	15.7	12.3	4.1	9.7	14.7	16.8	25.6	20.0	9.2	12.2	8.8	-3.5	4.9	3.3	4.6	9.9	3.8	12.7	17.0	41.9	15.4	24
03	26.3	10.9	12.2	11.0	7.7	13.9	8.8	12.8	9.7	14.3	17.4	29.4	6.8	24.2	22.8	22.9	24.0	-4.5	.9	2.4	26.0	6.7	3.7	.0	29.4	12.9	24
04	22.6	18.4	14.9	11.5	-1.4	3.1	10.8	14.8	16.9	54.4	42.4	16.8	20.8	29.9	40.4	17.9	21.7	1.1	15.3	11.1	21.5	3.8	9.6	12.5	54.4	17.9	24
05	16.6	21.4	14.9	23.9	14.6	19.3	12.2	6.2	47.4	69.8	53.2	17.8	32.1	34.2	24.2	23.6	18.3	1.3	6.5	3.5	45.1	43.0	9.0	20.5	69.8	24.1	24
06	46.5	30.0	22.2	21.8	18.5	13.7	7.7	16.9	43.2	79.6	58.8	22.3	37.5	34.7	30.0	14.9	20.5	2.4	-3	19.7	55.3	71.4	52.0	91.7	91.7	33.7	24
07	69.3	38.9	31.9	29.0	8.2	16.8	11.9	22.2	26.7	82.0	58.6	39.3	31.1	46.4	30.2	32.1	7.9	9.3	3.8	-6.4	19.1	55.9	68.6	59.9	82.0	33.0	24
08	36.2	41.3	28.3	19.8	13.7	18.5	22.0	32.5	42.7	49.0	58.0	36.5	53.6	56.1	29.9	27.6	25.5	14.5	29.7	15.7	55.4	85.6	95.6	70.2	95.6	39.9	24
09	56.5	45.2	48.9	56.5	44.9	41.7	40.7	47.7	34.7	30.6	34.6	25.4	43.7	55.8	37.2	16.4	15.8	14.2	17.9	18.9	26.1	29.7	32.8	28.3	56.5	35.1	24
10	53.2	34.3	25.1	13.5	25.0	20.0	21.1	34.8	36.8	60.4	73.5	41.1	45.6	35.1	45.6	26.0	16.3	16.8	5.6	43.1	112.9	124.6	6138.3	75.9	138.3	46.8	24
11	51.7	79.3	29.6	24.8	20.2	20.2	8.2	19.0	20.0	13.5	11.1	4.7	18.6	11.0	8.5	10.8	7.8	9.3	2.6	10.6	1.1	10.4	10.0	5.1	79.3	17.0	24
12	32.0	23.8	9.6	19.5	17.7	11.2	14.3	20.1	16.7	23.2	13.3	5.4	13.4	13.1	.3	18.1	9.3	-1.8	.8	.2	3.1	.0	9.1	7.8	55.1	13.8	24
13	23.9	28.9	29.4	26.8	23.0	17.4	11.5	23.0	32.6	13.5	16.2	6.3	14.4	21.3	15.7	20.0	14.4	25.5	18.0	18.6	24.9	13.7	9.9	19.3	32.6	19.5	24
14	45.1	26.5	15.2	18.0	7.2	9.8	7.5	13.3	8.4	-5	25.0	3.7	24.1	33.8	17.6	25.6	5.1	14.5	6.3	10.2	8.1	13.3	17.3	9.7	45.1	15.1	24
15	29.1	26.6	13.9	8.0	10.9	7.1	8.8	14.5	4.8	14.8	14.5	13.3	19.3	13.5	8.4	22.2	8.4	-2	11.6	6.1	19.8	23.7	26.3	27.0	29.1	14.6	24
16	29.9	23.2	16.6	9.4	7.6	11.6	8.1	20.6	22.8	23.4	16.9	14.4	32.6	58.5	43.7	42.8	33.7	2.9	11.0	8.5	12.8	46.1	40.0	39.2	59.5	24.0	24
17	43.3	43.8	21.2	27.7	24.8	26.6	41.4	29.4	18.6	15.2	16.8	22.2	9.5	19.8	28.4	12.2	9.6	.0	14.2	13.7	-4.2	3.3	10.9	12.0	43.8	19.1	24
18	9.4	21.1	15.1	12.5	5.1	14.6	10.6	7.4	8.2	-4.5	6.7	3.6	23.0	2.9	11.1	16.1	11.3	4.0	10.1	17.0	12.4	13.5	9.2	14.1	23.0	10.6	24
19	37.5	18.5	4.5	16.4	7.6	15.3	8.7	11.9	56.7	13.7	25.8	19.0	49.2	61.9	62.2	44.3	28.6	15.1	20.6	2.1	16.7	23.7	22.5	19.5	62.2	25.0	24
20	54.2	34.0	30.0	19.7	17.4	19.7	24.4	22.0	43.6	43.3	39.7	24.0	46.0	60.7	43.7	38.4	18.5	6.2	-7.5	10.2	43.3	65.9	61.1	47.8	65.9	33.5	24
21	64.6	53.9	33.8	21.4	18.9	13.7	20.5	4.4	19.5	14.2	20.2	18.7	18.5	23.8	12.9	7.4	4.1	10.8	11.2	16.6	12.1	17.2	20.8	64.6	19.7	24	
22	34.4	25.4	9.6	11.8	24.9	6.8	15.7	27.8	8.5	10.1	17.2	7.1	28.9	32.9	21.2	17.9	21.3	13.9	8.9	13.9	3.6	10.5	10.5	9.5	34.4	16.3	24
23	30.0	29.3	15.3	2.7	10.9	.0	6.7	25.3	29.9	23.4	4.0	23.7	21.1	35.9	41.8	29.1	18.0	8.0	5.4	-1.3	2.4	7.0	20.9	19.6	41.8	17.0	24
24	56.8	29.7	18.7	29.6	15.3	10.1	10.5	14.1	42.5	23.6	38.4	39.4	53.9	48.9	30.4	22.6	33.0	29.1	29.7	25.2	33.3	45.2	49.6	81.3	81.3	33.7	24
25	79.7	63.0	35.6	43.1	46.8	34.3	36.3	59.2	36.7	27.9	36.2	28.3	33.1	20.7	46.8	23.9	12.9	26.3	-7.9	27.6	11.0	16.9	17.8	5.9	79.7	31.7	24
26	68.5	36.8	16.5	19.0	17.7	8.7	15.0	9.4	13.3	31.6	98.7	44.6	27.7	32.2	20.1	17.2	-1.1	1.8	-10.9	1.1	9.3	14.8	18.5	98.7	22.3	23	
27	39.3	34.1	22.6	23.7	11.4	13.1	13.6	23.8	61.9	18.2	44.8	31.9	28.3	45.7	47.8	25.7	22.9	9.5	1.9	16.6	5.2	14.9	21.2	20.0	61.9	24.8	24
28	43.7	39.9	32.3	26.8	21.7	18.0	10.0	12.6	25.8	29.3	28.2	26.0	28.2	22.6	21.9	16.4	10.4	4.5	8.4	-6	1.3	6.4	10.3	13.3	43.7	19.0	24
29	28.6	34.1	11.5	2.0	13.2	11.8	16.6	16.5	13.1	16.2	23.2	11.5	20.0	6.6	18.0	2.1	16.5	3.1	9.4	9.2	15.9	19.9	13.0	26.9	34.1	14.9	24
30	31.9	30.0	27.1	16.3	15.0	14.2	18.9	22.9	27.2	24.2	33.3	18.3	45.3	48.0	38.8	28.6	22.8	11.1	5.5	-6.7	7.0	18.0	13.9	19.9	48.0	22.1	24
31	44.0	38.9	16.8	22.0	6.6	19.1	10.7	27.1	38.8	33.0	34.7	32.3	54.8	59.3	45.1	34.2	29.9	11.2	.6	3.7	26.1	31.8	56.6	40.4	59.3	29.9	24
Max	79.7	79.3	48.9	56.5	46.8	41.7	41.4	59.2	61.9	82.0	73.5	98.7	54.8	61.9	62.2	44.3	33.7	29.1	29.7	43.1	112.9	124.6	6138.3	91.7	138.3		
Avg	40.1	33.4	22.0	20.7	16.8	15.4	15.3	20.4	28.0	29.4	30.6	25.4	31.1	33.8	29.7	22.4	17.0	8.6	8.0	9.9	21.1	28.2	30.0	28.2		23.6	
Rds	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	31		743	

9986 9990

9980 missing data

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	West KF1141	Ichetucknee KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 3/12/10 Operator Initials ML

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER READING ug/m3 #	MONITOR READING ug/m3	QA Reviewed <u>David Mueller - AASI</u> Date 4/29/10
DATALOGGER READING time	MONITOR READING time	

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if OK

2. Inspect filter tape, if tom inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES NO

NOTES:

recent control fires around area

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 3/12/10

Operator Initials ML

2. Radiation Source Calibration

QA Reviewed	<u>D Shultz - ASE</u>
Date	<u>4/29/10</u>

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>50</u>	<u>-60</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2300</u>	<u>2323</u>	<u>-1</u>
Span Pot Setting		(D-S)/S x100
<u>67</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>—</u>	<u>—</u>	<u>—</u>
Span Pot Setting		(D-S)/S x100
<u>—</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
offset %	

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
		percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

<u>West</u>	<u>Ichetucknee</u>
Serial No. KF1141	Serial No. KF1143
AIRS site ID No.: 2121210001	AIRS site ID No.: 2120230003

DATE: 3/2/10 Operator Initials inL

Pro-Cal Streamline	METER ID: Control Unit	Serial No. CU02022	last calibr. date 4/1/2009
Pro-Cal Streamline	Meter Unit	M030403	4/1/2009
Time:	Casio	A	Lifetime valid
Voltmeter:	6240102	81830087	1/14/2009 <i>not returned yet by ml</i>

QA Reviewed D. Sholter - ASE
Date 4/29/10

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.45 2) 1.4
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

3. PRECISION FLOW CHECK

ProCal Data ProCal FLOW (ACTUAL U/min) Pcal_flow Pressure (atm) PCal P Temperature (C°) PCal T Time (Casio)* (hr:min)	16.00 6.997 20.0 11:40	Monitor Data - AT START of Flow Check Monitor Temperature at Start (C°) mon temp1 Monitor Actual Flow at Start (L/hr) Mon flow1 25 990 xx xx (Mon std1) (Mon flow) (mon temp) xx xx Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
	* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.	Monitor Data - AT END of Flow Check Temperature at End (C°) mon temp2 Monitor Actual Flow at End (L/hr) Mon flow2 25 989

CALCULATIONS ProCal Actual Measured Flow (ACTUAL U/min) Pcal_flow 16.00 <small>actual flow, should be between 15.0 to 18.4 lpm</small>	MONITOR Actual Measured Flow (U/min) (Mon flow) 16.50 <small>actual flow, should be between 15.0 to 18.4 lpm</small> = (Mon flow2 - Mon flow 1)	FLOW VALUE PERCENT DIFFERENCE (Mon flow - Pcal_flow)/ Pcal_flow 3.1 %
--	--	--

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	West KF1141	Idche/Idcknee KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 3/21/10 Operator Initials ML

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER
READING
ug/m3
#

DATALOGGER
READING
time

MONITOR
READING
ug/m3

MONITOR
READING
time

QA Reviewed D. Shultz - ACSI

Date 4/29/10

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if
OK

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES

NO

NOTES:

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFIRS site ID No.:	2121210001	2120230003

DATE: 3/21/16
Operator Initials ml

2. Radiation Source Calibration

QA Reviewed D. Switzer - AAST
Date 4/29/10

PRECISION

FOIL Serial No.(please check): 539 ✓

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>-35</u>	<u>60</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2350</u>	<u>2323</u>	<u>-</u>
Span Pot Setting		(D-S)/S x100
<u>6.7</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>-</u>	<u>-</u>	<u>-</u>
Span Pot Setting		(D-S)/S x100

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed) _____ Date _____

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) **SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1**

1. Site Visited (circle one):

<u>West</u>	<u>lchetucknee</u>
KF1141	KF1143
2121210001	2120230003

DATE: 3/21/10 Operator Initials ML

METER ID:	Serial No.	last calibr. date
Control Unit	CU02022	4/1/2009
Meter Unit	M030403	4/1/2009
Time:	Casio	A
Voltmeter:	6240102	81830087
		1/11/2009 - 3/24/10

QA Reviewed	<u>D. Switzer - ABI</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.5 2) 1.5
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check
ProCal FLOW (ACTUAL L/min) Pcal_flow	Monitor Temperature at Start (C°) mon temp1
16.30	23
Pressure (aim) PCal P	Monitor Actual Flow at Start (L/hr) Mon flow1
0.99	5980
Temperature (C°) PCal T	xx (Mon std1) (Mon flow) (mon temp) xx xx xx
26	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
Time (Casio)* (hr:min)	Monitor Data - AT END of Flow Check
11:08	Temperature at End (C°) mon temp2
	22
	Monitor Actual Flow at End (L/hr) Mon flow2
	589

CALCULATIONS

FLOW VALUE PERCENT DIFFERENCE

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow	MONITOR Actual Measured Flow (L/min) (Mon flow)	(Mon flow - Pcal_flow) / Pcal_flow
16.3	16.40	0.6 %
	actual flow: should be between 15.0 to 18.4 lpm	
	actual flow: should be between 15.0 to 18.4 lpm	
	= (Mon flow2 - Mon flow 1)	

D. Smetts - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
 AIRS site ID No.:

Ichetucknee

KF1143

2120230003

Date: 4/1/2010
 Initials: ML
 Time: 10:00

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	3/31/2010 4:00	19	21	14:00	52	41	0:00	27
2	4:30	12	22	14:30	53	42	0:30	47
3	5:00	-1	23	15:00	35	43	1:00	66
4	5:30	18	24	15:30	34	44	1:30	46
5	6:00	21	25	16:00	33	45	2:00	25
6	6:30	12	26	16:30	36	46	2:30	31
7	7:00	9	27	17:00	21	47	3:00	27
8	7:30	25	28	17:30	0	48	3:30	32
9	8:00	31	29	18:00	23	49	4:00	22
10	8:30	64	30	18:30	6	50	4:30	22
11	9:00	9	31	19:00	-7	51	5:00	27
12	9:30	21	32	19:30	1	52	5:30	19
13	10:00	48	33	20:00	6	53	6:00	21
14	10:30	31	34	20:30	23	54	6:30	38
15	11:00	38	35	21:00	29	55	7:00	23
16	11:30	45	36	21:30	2	56	7:30	42
17	12:00	17	37	22:00	42	57	8:00	56
18	12:30	42	38	3/31/10 22:30	63	58	8:30	89
19	13:00	70	39	23:00	49	59	9:00	54
20	13:30	65	40	23:30	52	60	4/1/2010 9:30	-3

D. Shultz - WASH
4/29/10

Current Date : 04/29/10
Current Time : 14:33

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B Interval : 030M
Units : UG/M3

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhlJjVWXYzf	Status Flags I?*>=m^vEd9za Q
03/31/10	04:00	12.8		
03/31/10	04:30	.4		
03/31/10	05:00	15.9		
03/31/10	05:30	22.3		
03/31/10	06:00	12.3		
03/31/10	06:30	9.0		
03/31/10	07:00	24.9		
03/31/10	07:30	29.4		
03/31/10	08:00	64.9		
03/31/10	08:30	12.6		
03/31/10	09:00	18.1		
03/31/10	09:30	47.9		
03/31/10	10:00	32.2		
03/31/10	10:30	37.3		
03/31/10	11:00	45.9		
03/31/10	11:30	18.7		
03/31/10	12:00	39.4		
03/31/10	12:30	70.2		
03/31/10	13:00	65.7		
03/31/10	13:30	52.9		
03/31/10	14:00	53.8		
03/31/10	14:30	36.4		
03/31/10	15:00	34.6		
03/31/10	15:30	33.8		
03/31/10	16:00	36.3		
03/31/10	16:30	23.5		
03/31/10	17:00	.2		
03/31/10	17:30	22.2		
03/31/10	18:00	9.0		
03/31/10	18:30	-7.6		
03/31/10	19:00	1.2		
03/31/10	19:30	6.1		
03/31/10	20:00	22.3		
03/31/10	20:30	29.9		
03/31/10	21:00	22.9		
03/31/10	21:30	40.6		
03/31/10	22:00	63.6		
03/31/10	22:30	49.6		
03/31/10	23:00	52.6		
03/31/10	23:30	28.2		
04/01/10	00:00	44.8		
04/01/10	00:30	66.6		
04/01/10	01:00	47.6		
04/01/10	01:30	26.1		
04/01/10	02:00	30.9		
04/01/10	02:30	27.7		
04/01/10	03:00	31.7		
04/01/10	03:30	23.5		
04/01/10	04:00	20.9		
04/01/10	04:30	27.9		
04/01/10	05:00	19.9		
04/01/10	05:30	20.3		
04/01/10	06:00	38.3		
04/01/10	06:30	23.8		
04/01/10	07:00	41.0		
04/01/10	07:30	55.5		
04/01/10	08:00	86.8		
04/01/10	08:30	60.0		

D. Shultz - AAII
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

Date: 3/21/10
Initials: ML
Time: 11:00

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5	10	21	33	44	41	13	60
2	6	27	22	4	31	42	2	48
3	65	26	23	53	24	43	23	43
4	7	23	24	5	14	44	3	22
5	73	11	25	53	1	45	33	24
6	8	34	26	6	8	46	4	18
7	83	67	27	63	-4	47	43	12
8	9	22	28	7	-9	48	5	26
9	93	21	29	73	13	49	53	18
10	10	65	30	8	8	50	6	8
11	105	44	31	83	35	51	63	26
12	11	34	32	9	50	52	7	11
13	113	19	33	93	70	53	73	-1
14	12	30	34	10	62	54	8	24
15	123	45	35	103	60	55	83	14
16	1	47	36	11	60	56	9	7
17	13	59	37	113	44	57	93	18
18	2	60	38	12	50	58	10	12
19	23	45	39	1230	44	59	10:30	28
20	3	42	40	1	83	60	11	17

D Shultz - AASF
4/29/10

Current Date : 04/29/10
Current Time : 14:59

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : ICHETUCKNEE SITE
Logger Id : 01
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjvWXYzf	Status Flags I?*>=m^vEd9za Q
03/20/10	05:00	12.2		
03/20/10	05:30	27.1		
03/20/10	06:00	25.8		
03/20/10	06:30	22.9		
03/20/10	07:00	11.2		
03/20/10	07:30	32.9		
03/20/10	08:00	65.7		
03/20/10	08:30	21.5		
03/20/10	09:00	20.5		
03/20/10	09:30	66.1		
03/20/10	10:00	47.4		
03/20/10	10:30	32.0		
03/20/10	11:00	18.2		
03/20/10	11:30	29.8		
03/20/10	12:00	43.8		
03/20/10	12:30	48.1		
03/20/10	13:00	59.4		
03/20/10	13:30	62.1		
03/20/10	14:00	45.3		
03/20/10	14:30	42.0		
03/20/10	15:00	45.6		
03/20/10	15:30	31.2		
03/20/10	16:00	22.9		
03/20/10	16:30	14.0		
03/20/10	17:00	2.7		
03/20/10	17:30	9.7		
03/20/10	18:00	-5.8		
03/20/10	18:30	-9.2		
03/20/10	19:00	12.3		
03/20/10	19:30	8.1		
03/20/10	20:00	36.0		
03/20/10	20:30	50.7		
03/20/10	21:00	69.4		
03/20/10	21:30	62.4		
03/20/10	22:00	60.3		
03/20/10	22:30	61.9		
03/20/10	23:00	44.0		
03/20/10	23:30	51.6		
03/21/10	00:00	44.2		
03/21/10	00:30	85.0		
03/21/10	01:00	58.7		
03/21/10	01:30	49.1		
03/21/10	02:00	44.2		
03/21/10	02:30	23.4		
03/21/10	03:00	24.5		
03/21/10	03:30	18.3		
03/21/10	04:00	12.1		
03/21/10	04:30	25.7		
03/21/10	05:00	19.6		
03/21/10	05:30	7.8		
03/21/10	06:00	14.4		
03/21/10	06:30	26.5		
03/21/10	07:00	11.0		
03/21/10	07:30	-2.1		
03/21/10	08:00	24.8		
03/21/10	08:30	14.1		
03/21/10	09:00	8.6		
03/21/10	09:30	19.8		
03/21/10	10:00	12.5		

**KOUGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

QUARTERLY AUDIT FORM

Date of Audit 4/29/10
Quarter Audited 1/2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
121210001811021	WEST SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Approved EPA AIRS Null Codes applied? Yes No*
- 2. Compare data summaries vs. AIRS output file, are they correct? Yes No*
- 3. Review PARS data, compare field data entry vs. data entry Yes No*
- 4. Review 10% of quarterly data? Yes No*
- 5. Complete Missing Data Report Form-as needed? *n/a -* Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

see AIRS printout - too much to write

AUDITOR: David Shultz SIGNATURE: David Shultz

D. Shultz - AASF
4/29/10

west 121210001 2010 lqtr.prm

11212100018110211001076100131080	013	011	011	9980999809998099980999809	I
112121000181102110010761001311609980999809998099980999809998099980999809					I
112121000181102110010761002010009980999809998099980999809998099980999809					I
112121000181102110010761002010809980999809998099980999809998099980999809	-004	009	017	024	-008
11212100018110211001076100201160	018	004	011	012	000 007 003 006
11212100018110211001076100202000	009	010	000	006	006 004 014 -003
11212100018110211001076100202080	004	016	011	99809-002	023 005 015
11212100018110211001076100202160	002	-015	-002	-013	-002 006 005 -002
11212100018110211001076100203000	000	008	007	004	004 023 017 -021
11212100018110211001076100203080999299990999869	053	025	017	010	014
11212100018110211001076100203160	008	001	009	003	037 058 093 106
11212100018110211001076100204000	016	016	001	9980999809	130 012 011
11212100018110211001076100204080	017	020	049	9980999809998099980999809	
1121210001811021100107610020416099809998099980999809998099980999809					I
1121210001811021100107610020500099809998099980999809998099980999809					I
1121210001811021100107610020508099809	040	028	054	023	004 -009 008
11212100018110211001076100205160	001	002	008	-012	003 009 007 005
11212100018110211001076100206000	011	002	010	012	001 011 -006 011
11212100018110211001076100206080	002	013	006	012	014 021 -018 019
11212100018110211001076100206160	010	005	-015	-015	-011 001 003 003
11212100018110211001076100207000	013	007	007	018	015 012 018 011
11212100018110211001076100207080	011	018	015	013	016 016 002 006
11212100018110211001076100207160	017	001	-016	-008	007 008 026 019
11212100018110211001076100208000	019	020	016	022	018 020 022 015
11212100018110211001076100208080	038	012	-007	99809-007	011 020 021
11212100018110211001076100208160	011	000	-019	-026	-007 020 014 015
11212100018110211001076100209000	017	022	016	011	010 017 014 013
11212100018110211001076100209080	015	012	019	045	009 005 003 023
11212100018110211001076100209160	032	008	-007	-007	-009 001 004 008
11212100018110211001076100210000	294	99809	007	029	051 004 040 032
1121210001811021100107610021008099809998099980999809998099980999809	-024	-021	003	031	029 024
11212100018110211001076100210160	-006	-002	-020	-015	-006 008 005 009
11212100018110211001076100211000	013	012	016	017	020 009 012 017
112121000181102110010761002110080	024	007	-006	022	013 011 003 -010
11212100018110211001076100211160	001	002	-008	-002	006 011 013 012
11212100018110211001076100212000	010	012	011	015	012 013 016 010
11212100018110211001076100212080	008	011	004	99809-008	006 -013 002
11212100018110211001076100212160	020	-002	-003	003	000 -001 000 001
11212100018110211001076100213000	006	003	004	012	009 011 011 007
11212100018110211001076100213080	008	008	020	037	027 010 011 011
11212100018110211001076100213160	-002	-003	-025	-025	001 020 037 027
11212100018110211001076100214000	018	019	023	020	008 019 067 167
11212100018110211001076100214080	393	99809998099980999809998099980999809998099980999809			
112121000181102110010761002141609980999809998099980999809998099980999809					I
112121000181102110010761002150009980999809998099980999809998099980999809					I
112121000181102110010761002150809980999809998099980999809998099980999809	000	-004	003	031	
11212100018110211001076100215160	031	-011	002	006	022 016 -011 000
11212100018110211001076100216000	012	014	027	034	023 020 040 045
11212100018110211001076100216080	-027	99809-044	-023	004	000 008 018
11212100018110211001076100216160	005	-004	-016	-009	007 047 047 072
11212100018110211001076100217000	045	030	-004	020	010 018 018 058
11212100018110211001076100217080	421	9980999809998099980999809998099980999809998099980999809	-018	003	003 012 000
11212100018110211001076100217160	011	-003	003	000	016 033 055 072
11212100018110211001076100218000	060	049	008	015	020 011 016 045
11212100018110211001076100218080	036	99809-041	9980999809	006	003 99869
1121210001811021100107610021816099909	017	-021	-018	-005	008 022 027
11212100018110211001076100219000	055	053	018	029	048 007 -004 030
11212100018110211001076100219080	107	9980999809	009	041	031 024 023
11212100018110211001076100219160	014	-011	-019	-031	-003 011 000 004
11212100018110211001076100220000	018	017	023	036	030 038 049 074
11212100018110211001076100220080	037	99809	028	9980999809	016 031 014
11212100018110211001076100220160	012	-011	-018	-030	019 035 061 051
11212100018110211001076100221000	051	052	046	038	043 034 049 141
11212100018110211001076100221080	041	9980999809	021	016	020 025 006
11212100018110211001076100221160	006	012	006	003	008 013 030 045
11212100018110211001076100222000	021	042	020	080	-037 053 -002 027
11212100018110211001076100222080	014	-031	-013	030	008 036 050 045
11212100018110211001076100222160	-036	017	016	-001	021 034 011 009
11212100018110211001076100223000	011	006	009	011	009 000 -002 005
11212100018110211001076100223080	043	-035	-036	-008	059 047 031 022
11212100018110211001076100223160	018	-009	-040	-010	013 038 036 024
11212100018110211001076100224000	020	040	040	034	004 018 013 049
11212100018110211001076100224080	076	9980999809	018	020	007 008 006
11212100018110211001076100224160	-006	-006	016	040	052 004 003 036
11212100018110211001076100225000	041	042	043	023	038 040 034 044
112121000181102110010761002250809980999809998099980999809998099980999809	-011	99809998099980999809998099980999809998099980999809998099980999809			I
112121000181102110010761002251609980999809998099980999809998099980999809	000	020	044	062	060
11212100018110211001076100226000	032	050	051	038	044 -008 005 123
112121000181102110010761002260809980999809998099980999809998099980999809	-039	9980999809	001	012	003
11212100018110211001076100226160	003	-001	-018	-012	014 033 052 060
11212100018110211001076100227000	078	079	051	039	052 092 010 -013
11212100018110211001076100227080	-049	99809-041	99809-024	006	005 011
11212100018110211001076100227160	-003	010	000	-007	005 016 025 021
11212100018110211001076100228000	019	023	016	030	033 043 059 082
112121000181102110010761002280809980999809998099980999809998099980999809	-045	-005	009	018	010 007 007
11212100018110211001076100228160	001	011	-014	000	001 027 047 094
11212100018110211001076100301000	052	-008	016	025	025 027 032 144
11212100018110211001076100301080	107	99809-017	033	036	012 022 021
11212100018110211001076100301160	012	003	-032	-027	-010 019 014 031
11212100018110211001076100302000	041	023	013	033	144 069 016 031
112121000181102110010761003020809980999809998099980999809998099980999809	012	9986699909	030	000	-011 -010

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west 121210001 2010 1qtr.prn												
11212100018110211001076100302160	011	-001	-010	9980999809	021	039	017					I
11212100018110211001076100303000	005	009	013	003	011	018	014	005				I
11212100018110211001076100303080	009	008	002	012	015	014	015	002				I
11212100018110211001076100303160	009	000	008	-012	066	109	062	006				I
11212100018110211001076100304000	026	-003	-014	000	042	041	053	054				I
112121000181102110010761003040809980999809	-021	027	028	018	014	019	014					I
11212100018110211001076100304160	011	-002	-017	-014	000	042	061	058				I
11212100018110211001076100305000	072	082	057	015	012	004	010	228				I
112121000181102110010761003050809980999809	-008	034	018	019	020	016						I
11212100018110211001076100305160	017	005	-026	-020	-009	010	025	043				I
11212100018110211001076100306000	065	064	026	044	035	025	025	115				I
112121000181102110010761003060809983999809	-008	998099980999809998099980999809										I
11212100018110211001076100306160998099980999809998099980999809998099980999809												I
11212100018110211001076100307000998099980999809998099980999809998099980999809												I
11212100018110211001076100307080998099980999809998099980999809998099980999809	-046	025	019	018	012							I
11212100018110211001076100307160	000	-002	-016	-017	-011	013	022	027				I
11212100018110211001076100308000	038	030	035	054	046	033	067	080				I
11212100018110211001076100308080-034	99809	033	046	030	024	013	019					I
11212100018110211001076100308160	010	003	-009	-001	004	030	046	066				I
11212100018110211001076100309000	048	045	049	046	025	015	026	072				I
11212100018110211001076100309080	023	99809	-013	026	035	035	008	009				I
11212100018110211001076100309160	014	012	022	-007	012	007	024	003				I
11212100018110211001076100310000	039	047	064	041	033	029	053	021				I
1121210001811021100107610031008099809	009	023	036	045	034	021	025					I
11212100018110211001076100310160	021	-003	-010	-024	-014	002	025	025				I
11212100018110211001076100311000	034	098	098	078	004	99809	016	011				I
11212100018110211001076100311080	014	003	012	006	019	023	009	025				I
11212100018110211001076100311160	017	-002	008	002	015	000	008	002				I
11212100018110211001076100312000	003	-001	003	009	004	012	009	022				I
11212100018110211001076100312080	010	017	022	99809998099980999809998099980999809998099980999809								I
11212100018110211001076100312160998099980999809998099980999809998099980999809												I
11212100018110211001076100313000998099980999809998099980999809998099980999809												I
11212100018110211001076100313080998099980999809998099980999809998099980999809	032	018	010	-004	000							I
11212100018110211001076100313160	005	005	005	006	009	013	014	013				I
11212100018110211001076100314000	011	008	-002	-002	000	003	006	012				I
11212100018110211001076100314080	015	036	021	031	009	004	-008	022				I
11212100018110211001076100314160-009	-010	003	005	008	025	005	009					I
11212100018110211001076100315000	005	010	005	002	015	-006	99809	003				I
11212100018110211001076100315080	020	029	035	046	007	014	012	020				I
11212100018110211001076100315160	003	-009	-016	-016	-004	-010	004	012				I
11212100018110211001076100316000	018	012	010	007	007	021	007	020				I
11212100018110211001076100316080	028	050	049	062	029	029	038	053				I
11212100018110211001076100316160	018	-007	-021	-040	-022	000	003	011				I
11212100018110211001076100317000	006	019	007	021	028	022	028	033				I
11212100018110211001076100317080	047	029	021	99809998099980999809998099980999809998099980999809								I
11212100018110211001076100317160998099980999809998099980999809998099980999809												I
11212100018110211001076100318000998099980999809998099980999809998099980999809												I
11212100018110211001076100318080998099980999809998099980999809998099980999809	062	025	006	022	014							I
11212100018110211001076100318160-011	-006	001	-004	-008	-007	002	009					I
11212100018110211001076100319000	006	004	007	002	013	009	013	018				I
11212100018110211001076100319080	050	044	062	070	034	031	016	004				I
11212100018110211001076100319160	004	-012	-025	-023	-023	-006	009	005				I
11212100018110211001076100320000	018	021	025	018	019	018	020	018				I
11212100018110211001076100320080	061	056	053	058	023	026	017	029				I
11212100018110211001076100320160	006	-012	-024	-021	-023	-003	021	040				I
11212100018110211001076100321000	030	033	021	024	020	009	000	010				I
11212100018110211001076100321080	014	012	004	013	021	031	023	008				I
11212100018110211001076100321160-005	-005	001	005	-002	005	013	000	-004				I
11212100018110211001076100322000	009	009	006	011	028	014	016	018				I
11212100018110211001076100322080	020	022	016	036	030	021	018	012				I
11212100018110211001076100322160-004	-004	-002	-001	005	011	009	001	-002				I
11212100018110211001076100323000	007	001	-001	003	-002	021	017	016				I
11212100018110211001076100323080	042	046	042	99809998099980999809998099980999809998099980999809								I
11212100018110211001076100323160998099980999809998099980999809998099980999809												I
11212100018110211001076100324000998099980999809998099980999809998099980999809												I
11212100018110211001076100324080998099980999809998099980999809998099980999809	012	036	005	021	020							I
11212100018110211001076100324160	016	001	000	-007	010	013	019	016				I
11212100018110211001076100325000	026	028	028	036	040	021	029	025				I
11212100018110211001076100325080	037	039	042	030	021	034	014	022				I
11212100018110211001076100325160	009	013	006	-015	-012	010	010	003				I
11212100018110211001076100326000	016	008	008	007	008	005	018	003				I
11212100018110211001076100326080	011	038	038	038	019	029	016	023				I
11212100018110211001076100326160	006	001	-015	-047	-032	000	-002	-002				I
11212100018110211001076100327000	011	005	018	012	012	020	015	024				I
11212100018110211001076100327080	042	047	059	053	043	041	041	036				I
11212100018110211001076100327160	014	-001	-020	-010	-005	-001	008	017				I
11212100018110211001076100328000	021	012	022	023	020	018	013	022				I
11212100018110211001076100328080	030	041	037	029	009	026	025	029				I
11212100018110211001076100328160	022	004	-003	-013	-003	-006	-001	002				I
11212100018110211001076100329000	001	007	-003	-003	012	011	013	007				I
11212100018110211001076100329080	022	043	045	99809998099980999809998099980999809998099980999809								I
11212100018110211001076100329160998099980999809998099980999809998099980999809												I
11212100018110211001076100330000998099980999809998099980999809998099980999809												I
11212100018110211001076100330080998099980999809998099980999809998099980999809	010	017	015	028	017							I
11212100018110211001076100330160	014	-011	-021	-037	-012	005	027	005				I
11212100018110211001076100331000	014	006	004	006	013	016	020	026				I
11212100018110211001076100331080	060	055	048	042	036	023	016	021				I
11212100018110211001076100331160	008	-016	-006	-023	-032	-005	002	010				I

**KOUGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/29/2010
Month Audited Jan 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
121210001811021	WEST SITE	Beta gauge PM10

Yes	No*
-----	-----

1. Datalogger vs. monitor data comparison, do they compare?

2. Review field log sheets from previous month,

are they complete, correct and signed by technician and auditor?

3. Are correct and approved AIRS Null codes applied to data?

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Skoltes SIGNATURE: David Skoltes

D. Sholtes - AHSI
4/29/10

01_10w.txt

Current Date : 04/29/10
Current Time : 12:46

Monthly Parameter Report - Hourly Averages
Environmental Systems Corporation
01/10

Logger Id : 02
Site Name : WEST SITE
Parameter : PM10
Units : UG/M3
Avg Interval : 01

9986 9990

all 9980
except codes shown to
left

		Hours																							Max	Avg	Rds	
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
01	27.0	24.9	5.0	22.5	1.8	-3.8	2.2	14.9	3.1	.9	15.2	7.2	7.8	22.2	43.8	7.1	-1.2	14.6	-7.7	-5.7	21.0	29.2	16.6	24.5	43.8	10.9	24	
02	11.8	9.9	-19.7	2.2	5.1	7.5	7.8	18.2	24.2	38.0	5.4	-20.2	.4	9.2	11.0	1.1	-7.9	12.7	-34.9	5.1	30.3	27.7	14.6	18.5	38.0	6.1	24	
03	13.7	5.0	6.0	4.8	4.3	13.4	-1.5	10.2	13.8	18.4	6.9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	18.4	*****	24	
04	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	5.2	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	51.4	*****	24	
05	20.0	6.3	-5.3	7.9	9.3	13.8	9.2	9.4	9.6	33.0	15.8	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	33.0	*****	24	
06	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	37.4	*****	24	
07	17.7	4.5	8.6	4.2	10.9	16.1	29.4	18.6	31.5	59.2	29.9	22.1	-19.3	4.2	-2.7	2.7	-2.8	-4.7	-27.7	-18.2	13.5	46.1	31.5	24.1	59.2	12.4	24	
08	21.0	18.5	12.2	7.2	1.2	7.5	-9.6	-3.1	-6.2	5.8	6.8	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	21.0	*****	24	
09	10.0	7.1	15.5	15.2	7.1	13.4	12.0	8.1	12.4	9.1	14.3	22.4	11.5	9.9	-6	6.8	15.3	2.9	3.7	23.1	31.8	18.6	25.3	20.6	31.8	13.1	24	
10	13.5	14.5	7.0	15.1	17.5	9.7	13.2	5.5	24.6	37.9	16.4	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	37.9	*****	24	
11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	46.1	*****	24
12	14.8	10.8	.2	4.7	12.9	6.2	3.2	9.2	27.0	51.1	-23.3	-49.5	-17.8	5.0	19.4	.0	5.8	-4.1	-18.3	5.3	29.7	43.9	40.3	28.4	51.1	9.3	24	
13	20.2	24.0	22.8	15.2	14.2	22.5	15.8	21.6	51.9	30.1	-13.2	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	51.9	4.3	24	
14	23.5	32.2	23.4	24.7	24.9	26.7	40.3	50.0	36.8	53.3	2.5	2.8	26.5	33.5	26.6	23.5	20.6	11.6	-15.7	-8.7	23.0	37.0	42.6	39.9	53.3	25.0	24	
15	34.9	29.6	29.8	31.1	15.0	22.3	13.7	15.2	28.0	22.1	26.5	19.5	36.2	24.0	8.3	20.2	19.7	19.3	8.9	-2.1	6.6	11.8	10.4	10.8	36.2	19.2	24	
16	16.7	20.6	21.4	15.7	18.5	21.8	17.1	14.3	13.7	33.4	20.9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	21.8	*****	24	
17	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	26.2	*****	24
18	8.5	6.8	6.7	11.1	4.9	4.6	9.2	5.3	5.2	9.5	18.2	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	19.0	-16.1	24	
19	13.8	11.8	18.3	10.5	13.0	9.6	16.9	23.9	25.2	25.2	-19.2	31.3	27.9	10.8	21.9	7.2	-7.2	-9.4	-27.8	-33.8	-7.9	1.1	7.4	15.9	31.3	7.7	24	
20	21.3	16.9	22.0	19.2	18.8	19.0	3.8	5.5	4.6	17.6	17.3	31.7	40.1	35.1	31.9	8.9	4.4	-14.0	-20.4	-1.7	-2.0	3.6	9.2	-2.7	40.1	12.0	24	
21	2.9	10.6	14.6	7.8	20.5	18.4	14.0	15.8	27.9	23.2	36.0	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	36.0	-2.5	24	
22	26.8	17.8	12.8	1.1	14.5	.9	9.0	14.1	2.5	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	125.2	21.4	24	
23	99.9	56.9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	99.9	*****	24	
24	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	40.0	*****	24
25	21.3	-10.1	6.2	-10.3	-.6	7.0	10.9	12.9	14.3	30.2	37.6	36.0	19.1	9.9	6.3	-2.2	-7.1	-8.3	-12.5	-14.9	7.0	13.9	15.4	13.5	37.6	8.1	24	
26	17.6	16.2	14.1	9.0	14.6	10.3	6.0	20.2	30.9	-10.1	12.1	41.3	14.9	7.2	15.5	9.5	-14.5	6.5	-22.3	-18.1	-4.6	8.0	19.0	23.5	41.3	9.4	24	
27	16.5	22.3	18.8	18.8	12.7	17.5	30.6	14.5	45.6	19.8	-15.6	-4.0	20.2	11.2	15.2	12.8	11.0	-11.8	-27.4	-21.3	-7.6	25.9	34.0	34.8	45.6	12.2	24	
28	32.9	21.1	28.6	12.9	23.7	14.4	19.4	31.6	54.2	22.4	-7.9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	54.2	-1.0	24	
29	27.3	30.0	17.4	22.1	15.8	18.0	13.8	10.1	17.4	18.1	53.1	22.1	22.8	25.8	10.8	15.4	4.9	-2.2	3.2	-3.9	11.3	13.6	14.1	3.3	53.1	16.0	24	
30	10.1	8.8	13.7	19.1	19.4	10.2	21.8	21.5	16.2	11.3	30.0	59.6	-1.9	2.7	15.8	5.2	9.3	8.6	-1.0	-7.7	-1.0	17.3	-1.2	4.0	59.6	12.1	24	
31	8.6	5.2	-2.2	4.9	10.1	3.0	15.0	13.4	13.1	10.6	10.8	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	15.0	*****	24	
Max	99.9	56.9	29.8	31.1	24.9	26.7	40.3	50.0	54.2	59.2	53.1	59.6	47.5	38.1	43.8	40.0	32.6	51.4	14.5	47.3	64.7	72.1	111.1	7125.2	125.2			
Avg	-62.8	-67.0	-77.1	-79.3	-70.2	-70.2	-69.6	-67.7	-62.9	-47.0	-37.3	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	-86.9		
Rds	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31		744	

'*****' indicates the average was too large to fit into the field.

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

<u>West</u>	<u>Ichetucknee</u>
Serial No. KF1141	KF1143
AIRS site ID No.: 2121210001	2120230003

DATE: 1/4/10 Operator Initials NO

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER
READING
ug/m3
#

MONITOR
READING
ug/m3

QA Reviewed	<u>D. Shultes - RASI</u>
Date	<u>4/29/10</u>

DATALOGGER
READING
time

MONITOR
READING
time

IMPORTANT!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

Check if
OK

1. Inspect heater to determine if operational: _____

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed: _____

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES

NO

NOTES:

Unit not run on arrival

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.:	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIIRS site ID No.:	2121210001	2120230003

DATE: 4/10
Operator Initials: NL

2. Radiation Source Calibration

QA Reviewed: D. Sholtes - AASI
Date: 4/29/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>5.1</u>	<u>21</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2436</u>	<u>2323</u>	<u>4.9</u>
Span Pot Setting		(D-S)/S x100
<u>7.55</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2338</u>	<u>2323</u>	<u>0.6</u>
Span Pot Setting		(D-S)/S x100
<u>7.05</u>		

NL
4/10

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 1/4/10 Operator Initials [Signature]

METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline Control Unit	CU02022	4/1/2009
Pro-Cal Streamline Meter Unit	M030403	4/1/2009
Time: Casio	A	Lifetime valid
Voltmeter: 6240102	81830087	1/14/2009

QA Reviewed D. Sholtis - AASI
Date 4/29/10

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) <u>1.4</u> 2) <u>1.5</u>

Voltage percent difference (E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

Temperature (C°) PCal T 11.7

Time (Casio)* (hr:min) 14:57

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check
ProCal FLOW (ACTUAL U/min) Pcal_flow <u>15.13</u>	Monitor Temperature at Start (C°) mon temp1 <u>15</u>
Pressure (atm) PCal P <u>1.064</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>963</u>
Temperature (C°) PCal T <u>11.7</u>	xx (mon temp) xx (Mon std1) (Mon flow) xx
Time (Casio)* (hr:min) <u>14:57</u>	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.	Monitor Data - AT END of Flow Check
	Temperature at End (C°) mon temp2 <u>13</u>
	Monitor Actual Flow at End (L/hr) Mon flow2 <u>963</u>

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow 15.13

actual flow: should be between 15.0 to 18.4 lpm

MONITOR Actual Measured Flow (L/min) (Mon flow) 16.05

actual flow: should be between 15.0 to 18.4 lpm

= (Mon flow2 - Mon flow 1)

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow) / Pcal_flow

6.1 %

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIFIRS site ID No.:	2121210001	2120230003

DATE: 01/22/10²²

Operator Initials _____

2. Radiation Source Calibration

QA Reviewed D. Holter - AASE

Date 4/29/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>59</u>	<u>14</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2325</u>	<u>2323</u>	<u>~ 0</u>
Span Pot Setting		(D-S)/S x100
<u>2.05</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
_____	_____	
Span Pot Setting		(D-S)/S x100

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
_____	_____

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
_____	_____	_____
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) **SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1**

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 9/22/10 Operator Initials NL

METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline Control Unit	CU02022	4/1/2009
Pro-Cal Streamline Meter Unit	M030403	4/1/2009
Time: Casio	A	Lifetime valid
Voltmeter: 6240102	81830087	11/4/2009 <u>3/14/09</u> ^{ml}

QA Reviewed D Switzer - ASE
Date 4/29/10

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.5 2) 1.5

Voltage percent difference
(E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check
ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.07</u> ^{15 NL}	Monitor Temperature at Start (C°) mon temp1 <u>27</u>
Pressure (atm) PCal P <u>0.995</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>981</u>
Temperature (C°) PCal T <u>27.0</u>	xx (mon temp) xx (Mon std1) xx (Mon flow) Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
Time (Casio)* (hr:min) <u>09:34</u>	Monitor Data - AT END of Flow Check
* or similar measure: Time not required for calcs. Time only needed to determine when calibration checks performed.	Temperature at End (C°) mon temp2 <u>27</u>
	Monitor Actual Flow at End (L/hr) Mon flow2 <u>981</u>

CALCULATIONS	MONITOR	FLOW VALUE PERCENT DIFFERENCE
ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow <u>15.15</u>	Actual Measured Flow (L/min) (Mon flow) <u>1635</u>	(Mon flow - Pcal_flow) / Pcal_flow <u>7.33</u> ^{NL} <u>7.33</u> %
actual flow: should be between 15.0 to 18.4 lpm	actual flow: should be between 15.0 to 18.4 lpm = (Mon flow2 - Mon flow 1)	

D. Walter - PASF
4/29/10

Current Date : 04/29/10
Current Time : 13:44

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B Interval :
030M
Units : UG/M3

Flags	Date	Time	Average	Data Flags	Status
=m^vEd9za Q				<PDTFBCMOUA+-RHLhlJjVWXYZf	I?*>
	01/02/10	04:30	.0		
	01/02/10	05:00	16.9		
	01/02/10	05:30	-1.8		
	01/02/10	06:00	10.6		
	01/02/10	06:30	5.0		
	01/02/10	07:00	14.4		
	01/02/10	07:30	12.0		
	01/02/10	08:00	14.6		
	01/02/10	08:30	33.9		
	01/02/10	09:00	41.3		
	01/02/10	09:30	34.7		
	01/02/10	10:00	12.4		
	01/02/10	10:30	-1.6		
	01/02/10	11:00	-12.6		
	01/02/10	11:30	-27.7		
	01/02/10	12:00	-3.5		
	01/02/10	12:30	4.4		
	01/02/10	13:00	4.8		
	01/02/10	13:30	13.6		
	01/02/10	14:00	8.8		
	01/02/10	14:30	13.2		
	01/02/10	15:00	10.4		
	01/02/10	15:30	-8.2		
	01/02/10	16:00	-11.1		
	01/02/10	16:30	-4.8		
	01/02/10	17:00	-3.5		
	01/02/10	17:30	-21.9		
	01/02/10	18:00	-29.5		
	01/02/10	18:30	-40.3		
	01/02/10	19:00	-7.4		
	01/02/10	19:30	17.8		
	01/02/10	20:00	35.3		
	01/02/10	20:30	25.2		
	01/02/10	21:00	24.2		
	01/02/10	21:30	31.2		
	01/02/10	22:00	17.3		
	01/02/10	22:30	12.0		
	01/02/10	23:00	21.7		
	01/02/10	23:30	15.3		
	01/03/10	00:00	13.6		
	01/03/10	00:30	13.8		

N. Swallow - AAII
4/29/10

01/03/10 01:00	1.7
01/03/10 01:30	8.3
01/03/10 02:00	13.0
01/03/10 02:30	-.7
01/03/10 03:00	9.5
01/03/10 03:30	.1
01/03/10 04:00	6.0
01/03/10 04:30	2.5
01/03/10 05:00	11.3
01/03/10 05:30	15.4
01/03/10 06:00	4.2
01/03/10 06:30	-7.3
01/03/10 07:00	-.1
01/03/10 07:30	20.7
01/03/10 08:00	8.1
01/03/10 08:30	19.5
01/03/10 09:00	9.1
01/03/10 09:30	27.7
01/03/10 10:00	7.6
01/03/10 10:30	6.2
Max	41.3
Min	-40.3
Mean	7.6
Records	61

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled,
'T' - Out-of-Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' -
Maintenance, 'O' - Analog Overage, 'U' - Analog Underrange,
'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum,
'R' - Rate of Change, 'H' - High-High Alarm,
'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm,
'J' - High Rate of Change, 'j' - Low Rate of Change,
'V' - DIS #1 Obs, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs,
'Y' - DIS #4 Obs, 'Z' - DIS #5 Obs.

D. Shultz - AASF
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Date: 01/04/10
Initials: NAL
Time: 16:26

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	11:00	6	21	21:00	13	41	7:00	13
2	11:30	17	22	21:30	10	42	7:30	2
3	12:00	-2	23	22:00	-8	43	8:00	8
4	12:30	10	24	22:30	-11	44	8:30	13
5	13:00	5	25	23:00	-5	45	9:00	-1
6	13:30	14	26	23:30	-4	46	9:30	9
7	14:00	12	27	0:00	-22	47	10:00	0
8	14:30	14	28	0:30	-30	48	10:30	6
9	15:00	35	29	1:00	-41	49	11:00	2
10	15:30	41	30	1:30	-8	50	11:30	11
11	16:00	35	31	2:00	17	51	12:00	15
12	16:30	12	32	2:30	35	52	12:30	4
13	17:00	-2	33	3:00	25	53	13:00	-7
14	17:30	16	34	3:30	24	54	13:30	-1
15	18:00	-28	35	4:00	31	55	14:00	20
16	18:30	-4	36	4:30	17	56	14:30	8
17	19:00	4	37	5:00	12	57	15:00	19
18	19:30	4	38	5:30	21	58	15:30	9
19	20:00	13	39	6:00	15	59	16:00	27
20	20:30	9	40	6:30	13	60	16:30	7

10:00

D. Dulter - BAST
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

Date: 01/08/10
Initials: NL
Time: 16:25

** When I arrived monitor was not running*

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5:30	6	21	15:30	3	41	1:30	20
2	6	25	22	16	2	42	2	16
3		26	23		-5	43		17
4	7	32	24	17	-1	44	3	7
5		18	25		-1	45		1
6	8	19	26	18	-9	46	4	13
7		20	27		-21	47		-5
8	9	42	28	19	-35	48	5	7
9		61	29		-23	49		6
10	10	57	30	20	-14	50	6	9
11		38	31		12	51		-22
12	11	22	32	21	14	52	7	2
13		28	33		43	53		-2
14	12	17	34	22	49	54	8	-5
15		-34	35		29	55		-8
16	13	-5	36	23	33	56	9	-5
17		5	37		29	57		1
18	14	3	38	0	17	58	10	10
19		-3	39		18	59		4
20	15	-3	40	1	23	60	11	7

D. Shultes - AAST
4/29/10

Current Date : 04/29/10
Current Time : 13:48

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B Interval :
030M
Units : UG/M3

Flags	Date	Time	Average	Data Flags	Status
=m^vEd9za Q				<PDTFBCMOUA+-RHLh1JjvWXYzf	I?*>
	01/07/10	05:00	6.7		
	01/07/10	05:30	25.4		
	01/07/10	06:00	26.5		
	01/07/10	06:30	32.3		
	01/07/10	07:00	18.1		
	01/07/10	07:30	19.1		
	01/07/10	08:00	20.1		
	01/07/10	08:30	42.9		
	01/07/10	09:00	61.7		
	01/07/10	09:30	56.8		
	01/07/10	10:00	37.6		
	01/07/10	10:30	22.2		
	01/07/10	11:00	28.3		
	01/07/10	11:30	15.9		
	01/07/10	12:00	-34.2		
	01/07/10	12:30	-4.4		
	01/07/10	13:00	4.8		
	01/07/10	13:30	3.5		
	01/07/10	14:00	-2.9		
	01/07/10	14:30	-2.5		
	01/07/10	15:00	3.6		
	01/07/10	15:30	1.8		
	01/07/10	16:00	-5.3		
	01/07/10	16:30	-.2		
	01/07/10	17:00	-.2		
	01/07/10	17:30	-9.0		
	01/07/10	18:00	-21.0		
	01/07/10	18:30	-34.3		
	01/07/10	19:00	-23.1		
	01/07/10	19:30	-13.3		
	01/07/10	20:00	12.7		
	01/07/10	20:30	14.3		
	01/07/10	21:00	43.4		
	01/07/10	21:30	48.8		
	01/07/10	22:00	29.2		
	01/07/10	22:30	33.9		
	01/07/10	23:00	29.0		
	01/07/10	23:30	19.2		
	01/08/10	00:00	18.3		
	01/08/10	00:30	23.7		
	01/08/10	01:00	20.5		

D. Sholtis - ASI
4/29/10

01/08/10 01:30	16.6
01/08/10 02:00	16.9
01/08/10 02:30	7.5
01/08/10 03:00	1.3
01/08/10 03:30	13.1
01/08/10 04:00	-5.1
01/08/10 04:30	7.5
01/08/10 05:00	6.1
01/08/10 05:30	8.9
01/08/10 06:00	-21.8
01/08/10 06:30	2.4
01/08/10 07:00	-1.5
01/08/10 07:30	-4.7
01/08/10 08:00	-7.8
01/08/10 08:30	-4.6
01/08/10 09:00	1.5
01/08/10 09:30	10.2
01/08/10 10:00	4.4
01/08/10 10:30	9.2

Max	61.7
Min	-34.3
Mean	10.4
Records	60

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled,
'T' - Out-of-Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' -
Maintenance, 'O' - Analog Overrange, 'U' - Analog Underrange,
'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum,
'R' - Rate of Change, 'H' - High-High Alarm,
'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm,
'J' - High Rate of Change, 'j' - Low Rate of Change,
'V' - DIS #1 Obs, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs,
'Y' - DIS #4 Obs, 'Z' - DIS #5 Obs.

D. Sholtis - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

Date: 01/22/10
Initials: NL
Time: 08:56

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5:19	21	21	15:30	16	41	1:30	16
2	6	17	22	16	2	42	2	5
3	7	1	23		11	43		15
4	7	6	24	17	-2	44	3	14
5	8	0	25		-18	45		2
6	8	10	26	18	-10	46	4	12
7	9	6	27		-36	47		17
8	9	3	28	19	-7	48	5	23
9	10	19	29		3	49		23
10	10	15	30	20	-7	50	6	13
11	11	13	31		-6	51		29
12	11	20	32	21	+1	52	7	7
13	12	27	33		-0	53		14
14	12	35	34	22	7	54	8	17
15	13	41	35		16	55		23
16	13	39	36	23	2	56	9	32
17	14	34	37		-0	57		15
18	14	35	38	0	-5	58	10	30
19	15	29	39		-6	59		28
20	15	34	40	1	+10	60	11:	43

D. Shults - ASE
4/29/10

Current Date : 04/29/10
Current Time : 13:52

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B Interval :
030M
Units : UG/M3

Flags	Date	Time	Average	Data Flags	Status
=m^vEd9za Q				<PDTFBCMOUA+-RHLhLJjVWXYZf	I?*>
	01/20/10	05:00	21.3		
	01/20/10	05:30	16.7		
	01/20/10	06:00	.6		
	01/20/10	06:30	7.0		
	01/20/10	07:00	.1		
	01/20/10	07:30	10.9		
	01/20/10	08:00	5.8		
	01/20/10	08:30	3.5		
	01/20/10	09:00	20.0		
	01/20/10	09:30	15.1		
	01/20/10	10:00	13.8		
	01/20/10	10:30	20.8		
	01/20/10	11:00	27.6		
	01/20/10	11:30	35.7		
	01/20/10	12:00	41.1		
	01/20/10	12:30	39.1		
	01/20/10	13:00	34.8		
	01/20/10	13:30	35.3		
	01/20/10	14:00	29.5		
	01/20/10	14:30	34.3		
	01/20/10	15:00	15.5		
	01/20/10	15:30	2.2		
	01/20/10	16:00	11.7		
	01/20/10	16:30	-2.8		
	01/20/10	17:00	-17.5		
	01/20/10	17:30	-10.5		
	01/20/10	18:00	-34.9		
	01/20/10	18:30	-5.9		
	01/20/10	19:00	3.1		
	01/20/10	19:30	-6.7		
	01/20/10	20:00	-4.9		
	01/20/10	20:30	.9		
	01/20/10	21:00	.1		
	01/20/10	21:30	7.0		
	01/20/10	22:00	16.2		
	01/20/10	22:30	2.1		
	01/20/10	23:00	-.1		
	01/20/10	23:30	-5.1		
	01/21/10	00:00	-5.4		
	01/21/10	00:30	11.3		
	01/21/10	01:00	15.7		

D. Molter - AAST
4/29/10

01/21/10 01:30	5.5
01/21/10 02:00	15.8
01/21/10 02:30	13.4
01/21/10 03:00	2.6
01/21/10 03:30	13.0
01/21/10 04:00	17.3
01/21/10 04:30	23.7
01/21/10 05:00	23.3
01/21/10 05:30	13.5
01/21/10 06:00	20.5
01/21/10 06:30	7.5
01/21/10 07:00	14.3
01/21/10 07:30	17.4
01/21/10 08:00	24.0
01/21/10 08:30	31.8
01/21/10 09:00	15.2
01/21/10 09:30	31.3
01/21/10 10:00	27.7
01/21/10 10:30	44.3

Max	44.3
Min	-34.9
Mean	12.7
Records	60

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled,
'T' - Out-of-Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' -
Maintenance, 'O' - Analog Overrange, 'U' - Analog Underrange,
'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum,
'R' - Rate of Change, 'H' - High-High Alarm,
'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm,
'J' - High Rate of Change, 'j' - Low Rate of Change,
'V' - DIS #1 Obs, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs,
'Y' - DIS #4 Obs, 'Z' - DIS #5 Obs.

KOOGLER & ASSOCIATES ENVIRONMENTAL SERVICES CORRECTIVE ACTION / DATA EXCLUSION FORM

The Corrective Action / Data Exclusion Form should be completed for the following events:

- 1) Monitor or related equipment calibration out of range,
- 2) Monitor or related equipment not operating,
- 3) Or, any incident/event that prevents proper collection of monitor data.

SITE LOCATION (circle): _____ Met station _____ Ichetucknee _____ West 2
AIRS code 121210002 120230003 121210001

PERSON COMPLETING THIS FORM Max Lee TODAY'S DATE: 4/29/10

DATE PROBLEM DISCOVERED: ongoing - January 2010

PROBLEM: pump shut down random

SUGGESTED ACTIONS TO RESOLVE PROBLEM:

attempted to solve in Fall 2009. No solution, remotely restart pump if shutdown or pump restart on its own

ACTION ASSIGNED TO: _____ APPROX. DEADLINE: _____

DESCRIBE CORRECTIVE ACTION: _____

IS DATA TO BE EXCLUDED? (circle) YES NO

PARAMETER: PM10, all met data OR, temperature, wind dir, wind speed, solar rad., rainfall

DATE AND HOURS OF EXCLUDED DATA:

Date/Hours	<u>multiple hours - see monthly 1-hr sheet</u>	AIRS NULL CODE	<u>9980</u>
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____

(note: If a single event involves different NULL codes fill in multiple Date/Hours)

REASON DATA TO BE EXCLUDED: erroneous data

DESCRIBE EVIDENCE OF EXCLUSION REASON (attach written documentation as needed):

Attachment 1) 1-hr monthly summary
 Attachment 2) _____

DATE COMPLETED: _____

Program Manager: Max Lee SIGNATURE [Signature] DATE: 4/29/10

QA Auditor: David Sholtz SIGNATURE [Signature] DATE: 4/29/10

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/29/2010
Month Audited Feb 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
121210001811021	WEST SITE	Beta gauge PM10

Yes	No*
-----	-----

- 1. Datalogger vs. monitor data comparison, do they compare? Yes No*
- 2. Review field log sheets from previous month,
are they complete, correct and signed by technician and auditor? Yes No*
- 3. Are correct and approved AIRS Null codes applied to data? Yes No*

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Skoltes SIGNATURE: David Skoltes

Dholtes-ASFI
4/29/10

02_10w.txt

Current Date : 04/29/10
Current Time : 12:46

Monthly Parameter Report - Hourly Averages
Environmental Systems Corporation
02/10

Logger Id : 02
Site Name : WEST SITE
Parameter : PM10
Units : UG/M3
Avg Interval : 01

9992 9990 9986

9980
multiple hours

Day	Hours																							Max	Avg	Rds										
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22				23									
01	*****																																			
02	9.3	10.1	.0	5.8	5.5	4.3	14.1	-3.0	4.0	16.0	11.1	-2.2	23.0	4.6	14.8	2.1	-14.8	-1.6	-12.7	-1.5	6.1	5.3	-1.7	23.0	-2.8	24										
03	.0	7.7	7.3	3.8	3.8	22.5	17.3	-20.6	80.1	33.9	52.7	25.1	17.1	10.4	13.6	8.2	.7	9.1	2.9	36.6	57.9	92.5	106.0	106.0	9.7	24										
04	16.3	15.5	.9	99.2	130.2	12.4	10.8	16.5	20.1	49.0	*****																							130.2	*****	24
05	*****																																			
06	11.1	2.4	9.8	11.9	1.0	10.7	-5.5	10.5	2.4	13.3	5.9	12.3	14.2	20.5	-18.0	19.4	10.3	5.3	-14.7	-14.7	-10.7	9	3.4	3.1	20.5	4.3	24									
07	13.0	7.4	7.1	17.9	14.6	11.9	17.9	11.2	10.6	18.3	15.3	13.1	15.9	16.0	2.0	5.5	16.6	1.3	-16.1	-8.3	7.1	8.3	26.0	19.2	26.0	10.4	24									
08	19.3	20.3	16.1	22.2	18.0	19.8	21.5	14.8	38.1	12.1	-7.2	-7.0	11.2	19.6	21.2	11.2	.0	-19.0	-25.5	-7.3	20.1	14.1	14.7	38.1	-1.2	24										
09	16.9	21.9	15.5	11.4	10.4	17.3	14.2	12.6	15.2	11.8	18.8	45.4	8.7	4.5	3.2	22.7	31.7	7.9	-6.6	-7.1	-9.3	1.1	4.0	7.9	45.4	11.6	24									
10	293.7	6.9	28.6	50.9	3.5	39.6	31.8	80.5	91.6	24.1	20.8	3.1	31.4	28.8	23.7	-5.9	-2.2	-20.1	-14.7	-6.3	8.2	5.4	9.2	293.7	5.2	24										
11	13.3	11.9	16.4	16.9	19.5	8.6	11.5	17.0	24.2	6.7	-5.7	22.1	13.3	11.3	2.8	-10.2	.6	1.8	-8.2	-1.7	6.4	11.2	13.2	11.8	24.2	8.9	24									
12	10.1	12.0	10.8	14.5	12.2	13.3	16.1	9.6	8.4	10.9	4.0	-7.7	6.3	-12.9	2.1	19.9	-1.9	-2.5	2.9	.0	-6	-4	1.0	19.9	.4	24										
13	6.2	2.5	4.1	11.6	8.9	10.5	11.3	6.8	7.8	7.6	19.5	37.4	26.6	9.7	10.6	11.0	-2.0	-2.5	-24.9	-24.9	.8	20.4	36.8	26.8	37.4	9.2	24									
14	18.0	19.2	23.1	19.8	8.4	19.4	67.0	167.4	393.3	*****																							393.3	*****	24	
15	*****																																			
16	12.0	13.8	27.3	34.4	22.7	19.6	40.2	44.5	-27.4	80.7	-48.9	-22.8	3.6	.0	8.0	18.0	4.9	-4.0	-16.2	-8.9	7.4	46.9	46.9	71.9	71.9	8.8	24									
17	44.9	30.3	-4.4	20.0	9.8	18.3	17.9	58.0	420.6	89.4	-18.0	3.0	2.5	11.6	.0	11.3	-2.7	3.0	.3	15.5	33.3	55.1	72.1	420.6	10.5	24										
18	60.4	49.1	7.7	15.4	20.1	11.3	15.5	45.1	35.7	-41.2	-55.2	6.0	2.5	5.9	16.5	-20.6	-17.5	-4.7	7.7	22.1	27.1	60.4	-13.8	24												
19	54.9	52.7	17.7	28.6	48.2	7.1	-3.6	30.2	106.8	53.5	9.1	41.0	30.5	23.8	23.3	13.8	-10.9	-19.2	-30.9	-3.1	10.6	.0	4.4	106.8	10.9	24										
20	18.4	17.1	22.8	35.9	30.2	38.4	49.2	74.4	36.5	27.6	16.1	30.5	13.6	12.4	-11.3	-17.7	-30.1	18.8	34.5	60.7	50.5	74.4	-10.7	24												
21	50.7	52.0	45.8	37.8	42.7	34.4	49.1	141.3	41.4	50.3	21.3	16.4	19.7	25.1	6.2	5.6	11.5	6.2	3.2	7.8	13.4	29.8	45.3	141.3	18.0	24										
22	20.6	41.9	19.8	80.1	-37.1	52.9	-1.6	27.0	14.2	-30.8	-12.9	29.9	7.7	36.2	49.8	45.4	-35.9	16.6	16.3	-1.0	21.0	34.2	10.8	9.1	80.1	17.2	24									
23	10.5	6.0	8.8	11.3	8.5	.0	-1.9	5.2	42.9	-35.0	-35.5	-7.7	59.0	47.1	30.8	21.8	17.5	-9.4	-40.3	-9.9	12.5	37.5	35.9	24.4	59.0	10.0	24									
24	20.0	39.6	40.3	33.7	4.1	18.2	13.4	49.2	75.9	80.2	18.3	19.5	7.2	8.2	5.8	-5.8	-6.3	15.9	40.4	52.1	4.0	3.0	36.1	75.9	11.8	24										
25	41.3	42.2	42.6	23.3	38.4	40.2	34.0	44.0	69.4	-10.6	*****																							62.0	*****	24
26	32.4	50.0	50.7	37.6	43.8	-8.3	4.5	123.4	82.1	38.9	*****																							123.4	-15.0	24
27	77.7	78.6	50.6	39.1	51.7	91.8	9.5	-13.1	-48.5	51.7	-41.2	24.0	5.9	4.9	11.1	-2.7	10.4	-2	-6.7	4.8	16.3	25.0	20.9	91.8	7.0	24										
28	19.1	23.0	16.4	29.9	33.4	42.7	58.5	82.2	45.0	-5.2	8.7	18.2	9.6	6.8	7.1	.8	10.5	-14.2	-.4	.5	26.9	47.1	94.2	94.2	14.0	24										
Max	293.7	78.6	50.7	80.1	51.7	130.2	67.0	167.4	4420.6	80.1	49.0	54.4	59.0	47.1	49.8	45.4	31.7	16.6	16.3	40.4	52.1	57.9	92.5	106.0	420.6											
Avg	-21.7	-37.3	-36.9	-37.7	-40.3	-30.7	-34.9	-18.5	-24.9	*****	-53.8	*****	-59.9	-41.0	-43.5	-46.8	-47.3	-47.5	-47.1	-41.8	-28.3	-17.5	-12.5	-7.6		-41.2										
Rds	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	672										

'*****' indicates the average was too large to fit into the field.

9986 9990

Ambient Air Services, Inc. 106 Ambient Airway Starke, Florida 32091
SAC - Branford Plant - Anderson FH I - N PM-10 Monitor Audit sheet

Site: **West**

Date: **February 3, 2010** Site Contact: **Lofgren** Audit Performed by: **Sholtes**

Sampler pause: **8:30 EST**

Sampler restart: **8:36 EST**

Sampler Information

Audit and Site Information

Serial Number **329**

AIRS # **12-121-0001**

Radiation Source # **KF-1143**

Audit Temp **14.7** Degrees Celcius

Audit BP : **764.3** mm Hg

Audit Flow

Actual Sampler Flow (Observed): **1023** liters/hour

Converted Actual Sampler Flow Value: **17.05** liters/minute

Audit Flow Manometer Indication: **5.95** inches H₂O

Audit Flow (Known Flow): **16.80** liters/minute

Flow Value Percent Difference: **1.51** % ($\pm 7\%$) or recalibrate

Audit Equipment

Digital Thermometer:	Manuf: Atkins	SN: 5008	
Barometer / Altimeter	Manuf: Microtim	SN: 352	
Atomic clock reference:	Manuf: Radio Shack	SN: AASI 1-1	
Digital Manometer:	Manuf: Dwyer	SN: 475-10-5	
Venturi FTS:	Manuf: Chinook	SN: 981126A	m= 0.4284
			b= -0.8834

Comments: Last audit

Auditor Signature: *David Sholtes* Date: *02/03/10*
 Review Signature: *David Lofgren* Date: *02/03/10*

EQUATIONS: Temperature Difference = Sensor T Actual - Monitor T
 Pressure Difference = Sensor BP Actual - Monitor BP

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

West
Serial No. KF1141
AIRS site ID No.: 2121210001

Ichetucknee
KF1143
2120230003

DATE: 2/3/10 Operator Initials NL

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER
READING
ug/m3
#

MONITOR
READING
ug/m3

QA Reviewed D. Sholtes - AAST
Date 4/29/10

DATALOGGER
READING
time

MONITOR
READING
time

IMPORTANT!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if
OK

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES NO

NOTES:

QA audit review with Dave Sholtes

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	Ichetucknee
Serial No.	KF1141	KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 2/3/10
Operator Initials NC

2. Radiation Source Calibration

QA Reviewed David Skoltes - AASI
Date 4/24/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>39</u>	<u>56</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2294</u>	<u>2323</u>	<u>1.2</u>
Span Pot Setting		(D-S)/S x100
<u>7.05</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2332</u>	<u>2323</u>	<u>0.4</u>
Span Pot Setting		(D-S)/S x100
<u>7.20</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

David Skoltes
Field Auditor Signature (if accuracy audit performed)

02/03/10
Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse
<u>-39</u>	<u>23</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>1459</u>	<u>1409</u>	<u>3.5</u>
Span Pot Setting		(D-S)/S x100
<u>7.05</u>		

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 2/3/10 Operator Initials NL

METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline <u>Control Unit</u>	CU02022	4/1/2009
Pro-Cal Streamline <u>Meter Unit</u>	M030403	4/1/2009
Time: <u>Casio</u>	A	Lifetime valid
Voltmeter: <u>6240102</u>	81830087	1/14/2009

QA Reviewed	<u>D. Mueller - ABSE</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) * 2) *
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

* No meter available
FDEP is checking the calibration

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check	
ProCal FLOW (ACTUAL L/min) Pcal flow	Monitor Temperature at Start (C°) mon temp1	Monitor Actual Flow at Start (L/hr) Mon flow1
15.05	16	970
Pressure (atm) PCal P	xx (mon temp)	xx (Mon flow)
1.066	xx	xx
Temperature (C°) PCal T	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"	
11.4	Monitor Data - AT END of Flow Check	
Time (Casio)* (hr:min)	Temperature at End (C°) mon temp2	Monitor Actual Flow at End (L/hr) Mon flow2
08:55	16	970

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow	actual flow, should be between 15.0 to 18.4 lpm
15.05	

MONITOR Actual Measured Flow (L/min) (Mon flow)	actual flow, should be between 15.0 to 18.4 lpm
16.17	
= (Mon flow2 - Mon flow 1)	

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow) / Pcal_flow	
7.4	%

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	West KF1141	Ichetucknee KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 2/18/10 Operator Initials NSL

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

~~DATALOGGER
READING
ug/m3

DATALOGGER
READING
time~~

~~MONITOR
READING
ug/m3
MONITOR
READING
time~~

QA Reviewed D. Sholtz - ANSI
Date 4/29/10

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if OK was not but fixed

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES NO

NOTES:

The heater on the inlet was cold when I arrived. I tightened the connections - fix

It was working after calibration

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.
AIFRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

DATE: 2/18/10
Operator Initials NL

2. Radiation Source Calibration

QA Reviewed David Sholtes-ARSI
Date 4/29/10

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>43</u>	<u>53</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2800</u>	<u>2323</u>	<u>3.3</u>
Span Pot Setting		(D-S)/S x100
<u>7.20</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2315</u>	<u>2323</u>	<u>0.34</u>
Span Pot Setting		(D-S)/S x100
<u>6.80</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) **SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1**

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 2/18/10 Operator Initials NC

METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline <u>Control Unit</u>	CU02022	4/1/2009
Pro-Cal Streamline <u>Meter Unit</u>	M030403	4/1/2009
Time: <u>Casio</u>	A	Lifetime valid
Voltmeter: <u>6240102</u>	81830087	1/14/2009

QA Reviewed	<u>D. Sholtes - ASSE</u>
Date	<u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1.5 1.5
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

~~No meter available~~
FDEV
had it for calibration

3. PRECISION FLOW CHECK

ProCal Data		Monitor Data - AT START of Flow Check	
ProCal FLOW (ACTUAL L/min) Pcal_flow	15.01	Monitor Temperature at Start (C°) mon temp1	Monitor Actual Flow at Start (L/hr) Mon flow1
Pressure (atm) PCal P	1.004	23	779
Temperature (C°) PCal T	19.1	xx (Mon std1) (Mon flow) xx (mon temp) xx xx	
Time (Casio)* (hr:min)	15:44	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"	
		Monitor Data - AT END of Flow Check	
		Temperature at End (C°) mon temp2	Monitor Actual Flow at End (L/hr) Mon flow2
		23	779
CALCULATIONS		FLOW VALUE PERCENT DIFFERENCE	
ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow	15.01	MONITOR Actual Measured Flow (L/min) (Mon flow)	(Mon flow - Pcal_flow) / Pcal_flow
		16.32	8.7 %
			<small>= (Mon flow2 - Mon flow 1)</small>

D. Shultz - AA5T
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Date: 02/03/10
Initials: NAL
Time: 08:55

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5:00	10	21	15:00	35	41	1:00	16
2	5:30	4	22	15:30	47	42	1:30	-5
3	6:00	1	23	16:00	23	43	2:00	4
4	6:30	11	24	16:30	12	44	2:30	5
5	7:00	18	25	17:00	5	45	3:00	6
6	7:30	14	26	17:30	3	46	3:30	12
7	8:00	12	27	18:00	12	47	4:00	-1
8	8:30	21	28	18:30	8	48	4:30	-2
9	9:00	5	29	19:00	16	49	5:00	10
10	9:30	17	30	19:30	-1	50	5:30	15
11	10:00	4	31	20:00	2	51	6:00	12
12	10:30	13	32	20:30	-3	52	6:30	1
13	11:00	8	33	21:00	9	53	7:00	-8
14	11:30	11	34	21:30	5	54	7:30	16
15	12:00	62	35	22:00	-4	55	8:00	-8
16	12:30	19	36	22:30	10	56	8:30	10
17	13:00	0	37	23:00	1	57	9:00	21
18	13:30	12	38	23:30	10	58	9:30	9
19	14:00	21	39	0:00	12	59	10:00	13
20	14:30	11	40	0:30	6	60	10:30	10

D. Sholto AASF
4/29/10

Current Date : 04/29/10
Current Time : 13:58

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B Interval : 030M
Units : UG/M3

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhLJjVWXYZf	Status Flags I?*>=m^vEd9za Q
02/01/10	11:30	62.0		
02/01/10	12:00	18.4		
02/01/10	12:30	-2		
02/01/10	13:00	12.9		
02/01/10	13:30	20.6		
02/01/10	14:00	11.8		
02/01/10	14:30	35.9		
02/01/10	15:00	-64.7		
02/01/10	15:30	47.6		
02/01/10	16:00	22.9		
02/01/10	16:30	12.7		
02/01/10	17:00	5.3		
02/01/10	17:30	3.0		
02/01/10	18:00	12.5		
02/01/10	18:30	8.5		
02/01/10	19:00	16.6		
02/01/10	19:30	7.1		
02/01/10	20:00	2.2		
02/01/10	20:30	-2.3		
02/01/10	21:00	9.9		
02/01/10	21:30	4.7		
02/01/10	22:00	-3.6		
02/01/10	22:30	10.0		
02/01/10	23:00	1.5		
02/01/10	23:30	10.3		
02/02/10	00:00	12.8		
02/02/10	00:30	5.8		
02/02/10	01:00	3.7		
02/02/10	01:30	16.4		
02/02/10	02:00	-5.5		
02/02/10	02:30	5.1		
02/02/10	03:00	5.2		
02/02/10	03:30	6.4		
02/02/10	04:00	11.8		
02/02/10	04:30	-5		
02/02/10	05:00	-1.8		
02/02/10	05:30	10.5		
02/02/10	06:00	15.6		
02/02/10	06:30	12.6		
02/02/10	07:00	1.0		
02/02/10	07:30	-7.0		
02/02/10	08:00	15.9		
02/02/10	08:30	-7.8		
02/02/10	09:00	10.4		
02/02/10	09:30	21.5		
02/02/10	10:00	9.1		
02/02/10	10:30	13.1		
	Max	62.0		
	Min	-64.7		
	Mean	8.9		
	Records	47		

Status : '<' - Less than ##% Data, 'P' - Power Fail, 'D' - Disabled, 'T' - Out-of-Control,
'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' - Maintenance, 'O' - Analog Overrange,
'U' - Analog Underrange,
'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum, 'R' - Rate of Change,
'H' - High-High Alarm,

D. K. Miller - AAII
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Date: 02/10/10
Initials: NAL
Time: 09:00

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	3:00	15	21	13:00	5	41	23:00	10
2	3:30	27	22	13:30	-4	42	23:30	-3
3	4:00	17	23	14:00	12	43	0:00	15
4	4:30	20	24	14:30	4	44	0:30	432
5	5:00	15	25	15:00	2	45	1:00	207
6	5:30	18	26	15:30	14	46	1:30	-238
7	6:00	21	27	16:00	30	47	2:00	-68
8	6:30	17	28	16:30	30	48	2:30	7
9	7:00	25	29	17:00	33	49	3:00	7
10	7:30	16	30	17:30	22	50	3:30	-5
11	8:00	13	31	18:00	-5	51	4:00	59
12	8:30	20	32	18:30	-12	52	4:30	89
13	9:00	55	33	19:00	-2	53	5:00	17
14	9:30	27	34	19:30	-6	54	5:30	-42
15	10:00	-1	35	20:00	-8	55	6:00	46
16	10:30	-8	36	20:30	-4	56	6:30	28
17	11:00	-7	37	21:00	-15	57	7:00	50
18	11:30	40	38	21:30	-1	58	7:30	46
19	12:00	50	39	22:00	3	59	8:00	20
20	12:30	12	40	22:30	-2	60	8:30	-84

A Sholtes - RASE
4/29/10

Current Date : 04/29/10
Current Time : 14:02

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B
Units : UG/M3
Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWXYZf	Status Flags I?*>=m^vEd9za Q
02/09/10	00:00	9.9		
02/09/10	00:30	23.9		
02/09/10	01:00	24.4		
02/09/10	01:30	19.4		
02/09/10	02:00	9.8		
02/09/10	02:30	21.3		
02/09/10	03:00	12.7		
02/09/10	03:30	10.2		
02/09/10	04:00	10.7		
02/09/10	04:30	10.1		
02/09/10	05:00	28.6		
02/09/10	05:30	6.1		
02/09/10	06:00	16.7		
02/09/10	06:30	11.8		
02/09/10	07:00	11.7		
02/09/10	07:30	13.4		
02/09/10	08:00	13.3		
02/09/10	08:30	17.2		
02/09/10	09:00	9.3		
02/09/10	09:30	14.2		
02/09/10	10:00	19.0		
02/09/10	10:30	18.6		
02/09/10	11:00	41.6		
02/09/10	11:30	49.2		
02/09/10	12:00	12.0		
02/09/10	12:30	5.4		
02/09/10	13:00	-3.8		
02/09/10	13:30	12.9		
02/09/10	14:00	4.0		
02/09/10	14:30	2.4		
02/09/10	15:00	15.6		
02/09/10	15:30	29.9		
02/09/10	16:00	30.3		
02/09/10	16:30	33.2		
02/09/10	17:00	21.7		
02/09/10	17:30	-5.9		
02/09/10	18:00	-11.2		
02/09/10	18:30	-2.0		
02/09/10	19:00	-5.9		
02/09/10	19:30	-8.3		
02/09/10	20:00	-3.2		
02/09/10	20:30	-15.3		
02/09/10	21:00	.0		
02/09/10	21:30	2.4		
02/09/10	22:00	-1.8		
02/09/10	22:30	9.9		
02/09/10	23:00	-2.7		
02/09/10	23:30	18.5		
02/10/10	00:00	408.9		
02/10/10	00:30	178.5		
02/10/10	01:00	-282.6		
02/10/10	01:30	-62.3		
02/10/10	02:00	7.0		
02/10/10	02:30	6.7		
02/10/10	03:00	-3.8		
02/10/10	03:30	61.0		
02/10/10	04:00	88.6		
02/10/10	04:30	13.2		
02/10/10	05:00	-39.9		

W. Wolter - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
 AIRS site ID No.:

West
KF1141
2121210001

Date: 02/18/10
 Initials: NAL
 Time: 15:20

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5:30	27	21	15:30	1	41	1:30	46
2	6:00	9	22	16:00	-1	42	2:00	52
3	6:30	13	23	16:30	6	43	2:30	15
4	7:00	21	24	17:00	15	44	3:00	1
5	7:30	26	25	17:30	1	45	3:30	14
6	8:00	81	26	18:00	-7	46	4:00	16
7	8:30	67	27	18:30	-2	47	4:30	18
8	9:00	579	28	19:00	7	48	5:00	22
9	9:30	-728	29	19:30	7	49	5:30	-1
10	10:00	-658	30	20:00	-6	50	6:00	22
11	10:30	-138	31	20:30	8	51	6:30	29
12	11:00	-51	32	21:00	21	52	7:00	3
13	11:30	-23	33	21:30	38	53	7:30	-3
14	12:00	-14	34	22:00	28	54	8:00	83
15	12:30	8	35	22:30	50	55	8:30	273
16	13:00	-3	36	23:00	59	56	9:00	-145
17	13:30	-2	37	23:30	63	57	9:30	-281
18	14:00	6	38	0:00	80	58	10:00	-87
19	14:30	5	39	0:30	67	59	10:30	-46
20	15:00	18	40	1:00	54	60	11:00	-58

D Sholter - AASI
4/29/10

Current Date : 04/29/10
Current Time : 14:04

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B
Units : UG/M3
Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWKYZf	Status Flags I?*>=m^vEd9za Q
02/17/10	05:00	27.0		
02/17/10	05:30	9.7		
02/17/10	06:00	13.6		
02/17/10	06:30	22.2		
02/17/10	07:00	25.6		
02/17/10	07:30	90.4		
02/17/10	08:00	459.6		
02/17/10	08:30	381.6		
02/17/10	09:00	-456.5		
02/17/10	09:30	-463.9		
02/17/10	10:00	-129.3		
02/17/10	10:30	-49.6		
02/17/10	11:00	-22.3		
02/17/10	11:30	-13.7		
02/17/10	12:00	9.1		
02/17/10	12:30	-3.1		
02/17/10	13:00	-1.2		
02/17/10	13:30	6.4		
02/17/10	14:00	5.1		
02/17/10	14:30	18.1		
02/17/10	15:00	.5		
02/17/10	15:30	-1.0		
02/17/10	16:00	7.2		
02/17/10	16:30	15.4		
02/17/10	17:00	.9		
02/17/10	17:30	-6.5		
02/17/10	18:00	-.6		
02/17/10	18:30	7.0		
02/17/10	19:00	7.0		
02/17/10	19:30	-6.4		
02/17/10	20:00	8.7		
02/17/10	20:30	22.3		
02/17/10	21:00	38.3		
02/17/10	21:30	28.3		
02/17/10	22:00	51.3		
02/17/10	22:30	59.0		
02/17/10	23:00	63.8		
02/17/10	23:30	80.5		
02/18/10	00:00	66.8		
02/18/10	00:30	54.0		
02/18/10	01:00	47.0		
02/18/10	01:30	51.3		
02/18/10	02:00	13.6		
02/18/10	02:30	1.9		
02/18/10	03:00	14.5		
02/18/10	03:30	16.2		
02/18/10	04:00	18.4		
02/18/10	04:30	21.9		
02/18/10	05:00	-.2		
02/18/10	05:30	23.1		
02/18/10	06:00	29.4		
02/18/10	06:30	1.6		
02/18/10	07:00	-1.4		
02/18/10	07:30	91.7		
02/18/10	08:00	232.9		
02/18/10	08:30	-161.4		
02/18/10	09:00	-275.5		
02/18/10	09:30	-82.1		
02/18/10	10:00	-45.9		

D Shultz - BASI
4/29/00

02/10/10 05:30	46.9
02/10/10 06:00	29.1
02/10/10 06:30	50.0
02/10/10 07:00	46.0
02/10/10 07:30	17.7
02/10/10 08:00	-85.5

Max	408.9
Min	-282.6
Mean	16.0
Records	65

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled, 'T' - Out-of-Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' - Maintenance, 'O' - Analog Overrange, 'U' - Analog Underrange,
Change, 'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum, 'R' - Rate of Change, 'H' - High-High Alarm, 'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm, 'J' - High Rate of Change, 'j' - Low Rate of Change,
Obs, 'V' - DIS #1 Obs, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs, 'Y' - DIS #4 Obs, 'Z' - DIS #5 Obs.

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
CORRECTIVE ACTION / DATA EXCLUSION FORM**

The Corrective Action / Data Exclusion Form should be completed for the following events:

- 1) Monitor or related equipment calibration out of range,
- 2) Monitor or related equipment not operating,
- 3) Or, any incident/event that prevents proper collection of monitor data.

SITE LOCATION (circle): _____ Met station _____ Ichetucknee _____ West 2
AIRS code 121210002 120230003 121210001

PERSON COMPLETING THIS FORM Max Lee TODAY'S DATE: 4/29/10

DATE PROBLEM DISCOVERED: ongoing - month February 2010

PROBLEM: pump shut down random

SUGGESTED ACTIONS TO RESOLVE PROBLEM:

attempted to solve in fall 2009. no solution, remotely restart pump if shutdown or pump restart on its own

ACTION ASSIGNED TO: _____ APPROX. DEADLINE: _____

DESCRIBE CORRECTIVE ACTION: _____

IS DATA TO BE EXCLUDED? (circle) YES NO

PARAMETER: PM10, all met data OR, temperature, wind dir, wind speed, solar rad., rainfall

DATE AND HOURS OF EXCLUDED DATA:

Date/Hours	<u>multiple hours - see monthly 1-hr sheet</u>	AIRS NULL CODE	<u>9980</u>
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____
Date/Hours	_____	AIRS NULL CODE	_____

(note: If a single event involves different NULL codes fill in multiple Date/Hours)

REASON DATA TO BE EXCLUDED: err red data

DESCRIBE EVIDENCE OF EXCLUSION REASON (attach written documentation as needed):

Attachment 1) 1-hr monthly summary
Attachment 2) _____

DATE COMPLETED: _____

Program Manager: Max Lee SIGNATURE [Signature] DATE: 4/29/10

QA Auditor: David Sholtes SIGNATURE [Signature] DATE: 4/29/10

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES**

QUALITY ASSURANCE DATA AUDIT FORM

MONTHLY AUDIT FORM

Date of Audit 4/25/2010
Month Audited Mar 2010

MONITOR ID	SITE DESCRIPTION	PARAMETER
121210001811021	WEST SITE	Beta gauge PM10

Yes	No*
-----	-----

1. Datalogger vs. monitor data comparison, do they compare?

2. Review field log sheets from previous month,

are they complete, correct and signed by technician and auditor?

3. Are correct and approved AIRS Null codes applied to data?

* Discrepancies noted, action taken described below:

DISCREPANCY AND ACTION TAKEN

AUDITOR: David Sholtes SIGNATURE: David Sholtes

D. Shultz - AASI
4/29/10

03_10w.txt

Current Date : 04/29/10
Current Time : 12:46

Monthly Parameter Report - Hourly Averages
Environmental Systems Corporation
03/10

Logger Id : 02
Site Name : WEST SITE
Parameter : PM10
Units : UG/M3
Avg Interval : 01

9980
7986 7990

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Max	Avg	Rds	
01	52.0	-7.9	15.8	25.2	24.9	27.4	32.3	144.4	107.0	*****	-16.6	33.1	36.3	12.3	22.0	20.7	12.0	3.2	-31.7	-27.2	-9.8	18.7	14.0	30.7	144.4	9.4	24	
02	41.1	22.7	13.2	32.5	143.9	69.0	16.4	31.1	58.9	12.3	-22.6	8.8	30.1	.0	-10.7	-10.4	10.5	-1.2	-10.3		20.8	38.9	17.1	143.9	16.6	22		
03	4.9	9.3	13.3	2.9	10.7	18.1	13.8	4.6	9.0	8.2	1.9	11.5	15.0	14.4	14.7	2.2	8.5	.0	7.7	-11.6	65.6	108.8	62.3	6.4	108.8	16.7	24	
04	25.6	-3.3	-14.3	.2	42.2	40.9	53.3	54.2	51.4	-21.0	26.5	27.8	14.1	18.6	14.4	11.1	-1.5	-17.2	-14.2	-4	42.0	60.5	57.8	60.5	10.8	24		
05	71.9	82.0	57.0	15.1	12.1	4.3	9.92	28.3	*****	-7.8	33.9	18.0	19.2	20.0	16.4	16.8	5.2	-25.9	-20.0	-9.1	9.6	24.7	42.7	228.3	11.6	24		
06	64.7	63.6	26.2	44.4	34.5	25.1	25.4	115.4	-72.9	*****	-8.2	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	115.4	*****	24	
07	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	24
08	37.9	29.6	34.9	54.3	45.9	32.8	66.8	79.6	-33.8	80.0	-32.9	46.0	30.0	23.6	12.6	19.4	9.7	3.2	-9.0	-1.4	3.5	29.9	46.4	66.3	79.6	24.2	24	
09	47.6	45.4	49.2	46.1	24.8	15.0	25.8	71.6	22.6	-51.4	-13.4	25.5	35.3	34.6	8.2	9.0	13.5	12.2	22.0	-6.6	12.2	7.1	24.4	2.5	71.6	20.1	24	
10	39.4	46.7	63.9	41.4	32.8	29.0	52.7	20.7	*****	8.9	22.5	36.0	44.5	34.1	20.7	24.7	20.6	-2.8	-10.4	-24.1	-14.3	2.0	24.9	24.8	63.9	17.7	24	
11	34.3	97.5	98.3	78.3	4.2	*****	16.2	10.9	14.1	2.8	11.9	6.2	18.5	22.9	8.5	25.0	16.5	-2.0	7.6	1.5	14.7	.0	7.9	1.7	98.3	10.9	24	
12	2.5	-1.3	2.6	9.4	3.7	12.2	8.7	21.7	10.2	17.3	21.9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	21.9	*****	24
13	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	24
14	11.4	7.8	-2.2	-2.2	.2	3.3	5.5	12.1	15.0	35.5	20.6	30.5	9.1	3.7	-8.2	22.0	-9.1	-9.9	3.4	5.2	8.1	24.7	4.6	9.4	35.5	8.3	24	
15	4.7	9.8	4.8	2.4	14.7	-6.0	*****	3.0	19.7	28.7	34.9	45.5	6.9	13.9	12.4	19.8	2.5	-8.5	-16.3	-15.5	-3.7	-9.6	3.5	12.4	45.5	7.8	23	
16	17.7	12.1	9.8	6.9	7.1	20.8	6.7	19.5	28.0	49.5	49.4	62.4	29.3	29.0	37.5	52.7	18.0	-7.2	-21.1	-39.8	-22.2	-1	3.1	11.0	62.4	15.8	24	
17	6.3	19.2	7.3	21.3	27.9	22.4	27.7	33.4	47.0	28.7	20.5	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	47.0	*****	24
18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	23
19	6.3	3.7	7.2	1.9	12.8	8.8	12.8	18.1	50.3	44.2	61.8	70.2	33.6	31.1	15.9	3.7	3.9	-12.1	-24.8	-22.8	-23.2	-5.8	8.8	5.4	70.2	12.9	24	
20	17.8	20.8	24.6	17.8	18.6	17.8	20.0	18.4	61.4	56.2	53.4	57.5	22.8	26.3	17.3	28.9	5.6	-12.0	-23.7	-21.0	-23.3	-2.9	21.2	40.3	61.4	19.3	24	
21	29.9	33.1	21.3	23.7	20.3	9.1	*****	9.7	13.6	12.2	4.3	13.3	20.9	31.2	23.4	7.7	-4.9	1.4	5.2	-1.5	5.3	13.7	.4	-3.6	33.1	12.5	23	
22	9.1	8.5	5.9	11.3	28.4	13.5	15.8	18.3	19.9	22.1	15.6	35.6	30.2	21.4	17.5	12.3	-3.6	-1.6	-1.3	4.9	11.4	8.8	.8	-1.6	35.6	12.6	24	
23	7.4	1.0	-1.2	2.6	-1.6	21.3	16.8	16.0	42.1	46.3	42.1	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	46.3	*****	24
24	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	24
25	25.9	27.8	27.5	36.0	39.5	21.3	28.9	25.2	37.4	38.8	41.7	30.2	21.2	34.2	14.2	21.9	9.1	12.9	5.9	-15.2	-11.6	10.3	9.9	2.7	41.7	20.6	24	
26	15.9	7.7	7.7	7.2	7.7	4.7	18.3	2.6	10.5	38.0	38.2	37.9	18.6	28.9	16.4	22.8	5.9	1.3	-15.2	-46.8	-31.6	-1	-1.5	-2.4	38.2	8.0	24	
27	10.8	4.5	17.5	12.0	11.8	20.2	15.4	23.7	42.4	47.1	59.4	52.8	43.2	41.1	41.1	36.3	14.0	-6	-20.3	-10.3	-5.0	-1.1	8.4	16.6	59.4	20.0	24	
28	20.8	11.5	22.4	23.1	19.8	17.5	12.9	22.4	29.6	40.9	36.9	28.6	9.4	26.4	25.3	28.9	21.9	3.9	-3.1	-13.3	-3.4	-6.8	-.5	2.3	40.9	15.7	24	
29	7	6.9	-3.2	-2.9	11.6	10.6	12.5	7.1	22.2	43.0	44.7	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	44.7	*****	24
30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	24
31	14.4	5.5	4.0	5.7	13.0	15.9	20.3	26.2	59.5	55.4	47.8	42.1	36.1	22.5	15.8	20.6	7.9	-16.4	-6.4	-22.8	-32.1	-5.2	2.4	9.7	59.5	14.2	24	
Max	71.9	97.5	98.3	78.3	143.9	69.0	66.8	228.3	107.0	56.2	61.8	70.2	44.5	41.1	41.1	52.7	21.9	12.9	22.0	5.7	65.6	108.8	62.3	66.3	228.3			
Avg	-60.5	-62.4	-64.0	-63.9	-60.9	-72.8	-52.3	-47.1	-75.7	-87.5	-62.1	-49.9	-59.4	-63.2	-66.8	-65.6	-73.6	-82.0	-87.6	-95.4	-86.0	-70.9	-66.1	-66.9		-68.4		
Rds	31	31	31	31	31	31	28	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31		739	

'****' indicates the average was too large to fit into the field.

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 3/2/10

Operator Initials _____

2. Radiation Source Calibration

QA Reviewed	<u>D. Switzer - BASI</u>
Date	<u>4/29/10</u>

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>-10</u>	<u>48</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2300</u>	<u>2323</u>	<u>—</u>
Span Pot Setting		(D-S)/S x100
<u>6.8</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>—</u>	<u>—</u>	<u>—</u>
Span Pot Setting		(D-S)/S x100
<u>—</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed) _____

Date _____

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display	Masse
offset %	

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
		percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

Serial No. KF1141	Serial No. CU02022	last calibr. date 4/1/2009	DATE: <u>3/2/10</u>	Operator Initials <u>ML</u>
AIRS site ID No.: 2121210001	Serial No. M030403	last calibr. date 4/1/2009		
Pro-Cal Streamline Control Unit	METER ID: Control Unit	Serial No. CU02022	QA Reviewed <u>D. Shetter - RASI</u>	
Pro-Cal Streamline Meter Unit	METER ID: Meter Unit	Serial No. M030403		
Time: Casio	Time: Casio	A	Date <u>4/29/10</u>	
Voltmeter: 6240102	Voltmeter: 6240102	81830087	Lifetime valid <u>1/14/2009</u> - <u>not returned by FDEP</u> *	

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter	
Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) * / 2) *
Voltage percent difference (E volts-M volts)/M volts x 100	
Change batteries if either less than 1.3 Volts	

NOTES

* Voltmeter @ FDEP Lab for recalibration

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check
ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.20</u>	Monitor Temperature at Start (C°) mon temp1 <u>20</u>
Pressure (atm) Pcal P <u>0.99</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>975</u>
Temperature (C°) Pcal T <u>20</u>	xx (Mon std1) (Mon flow) (mon temp) xx Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
Time (Casio)* (hr:min) <u>11:10</u>	Monitor Data - AT END of Flow Check
* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.	Temperature at End (C°) mon temp2 <u>20</u>
	Monitor Actual Flow at End (L/hr) Mon flow2 <u>975</u>
CALCULATIONS	FLOW VALUE PERCENT DIFFERENCE
ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow <u>15.20</u>	MONITOR Actual Measured Flow (L/min) (Mon flow) <u>16.25</u> actual flow: should be between 15.0 to 18.4 lpm actual flow: should be between 15.0 to 18.4 lpm = (Mon flow2 - Mon flow 1)
	(Mon flow - Pcal_flow) / Pcal_flow <u>7.0</u> %

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIFIRS site ID No.:	2121210001	2120230003

DATE: 3/12/10

Operator Initials pm

2. Radiation Source Calibration

QA Reviewed	<u>D. Holter - AAST</u>
Date	<u>4/29/10</u>

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>2.5</u>	<u>30</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2420</u>	<u>2323</u>	<u>4.7</u>
Span Pot Setting <u>6.8 in 6.8</u>		(D-S)/S x100

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2350</u>	<u>2323</u>	<u>1.2</u>
Span Pot Setting <u>6.7</u>		(D-S)/S x100

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

Field Auditor Signature (if accuracy audit performed)

Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
Span Pot Setting		(D-S)/S x100

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) **SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1**

1. Site Visited (circle one):

Pro-Cal Streamline	METER ID: <u>Control Unit</u>	Serial No. <u>CU02022</u>	last calibr. date <u>4/1/2009</u>
Pro-Cal Streamline	METER ID: <u>Meter Unit</u>	Serial No. <u>M030403</u>	last calibr. date <u>4/1/2009</u>
Time: <u>Casio</u>			Lifetime valid <u>not back from</u>
Voltmeter: <u>6240102</u>		<u>81830087</u>	<u>4/4/2009</u> <u>not back from</u> <u>4/1/10</u> <u>FDA</u>

<u>West</u> KF1141 2121210001	<u>Ichetucknee</u> KF1143 2120230003
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DATE: 3/12/10 Operator Initials ML

QA Reviewed <u>D. Stetter - RASC</u>
Date <u>4/29/10</u>

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.4 2) 1.4

Voltage percent difference (E volts-M volts)/M volts x 100

Change batteries if either less than 1.3 Volts

NOTES

voltmeter not certified

3. PRECISION FLOW CHECK

ProCal Data		Monitor Data - AT START of Flow Check	
ProCal FLOW (ACTUAL L/min) Pcal_flow	15.20	Monitor Temperature at Start (C°) mon temp1	23
Pressure (atm) PCal P	0.996	Monitor Actual Flow at Start (L/hr) Mon flow1	980
Temperature (C°) PCal T	20.0	xx (mon temp) xx (Mon std1) xx (Mon flow)	
Time (Casio)* (hr:min)	10:45	Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"	
		Monitor Data - AT END of Flow Check	
		Temperature at End (C°) mon temp2	23
		Monitor Actual Flow at End (L/hr) Mon flow2	979
CALCULATIONS		FLOW VALUE PERCENT DIFFERENCE	
ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow	15.20	MONITOR Actual Measured Flow (L/min) (Mon flow)	1633
			$(Mon\ flow - Pcal_flow) / Pcal_flow$
			7.4 %

D. Sholtz - AASI
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Date: 3/12/2010
Initials: ML
Time: 11:10

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	5:30		21	15:30	9	41	1:30	4
2	6:00		22	16:00	7	42	2:00	0
3	6:30		23	16:30	28	43	2:30	3
4	7:00		24	17:00	22	44	3:00	-8
5	7:30	20	25	17:30	9	45	3:30	1
6	8:00	12	26	18:00	23	46	4:00	3
7	8:30	7	27	18:30	12	47	4:30	1
8	9:00	14	28	19:00	-15	48	5:00	9
9	9:30	18	29	19:30	9	49	5:30	4
10	10:00	10	30	20:00	5	50	6:00	3
11	10:30	-1	31	20:30	6	51	6:30	10
12	11:00	6	32	21:00	-3	52	7:00	14
13	11:30	19	33	21:30	7	53	7:30	6
14	12:00	5	34	22:00	21	54	8:00	11
15	12:30	-1	35	22:30	4	55	8:30	13
16	13:00	12	36	23:00	-4	56	9:00	29
17	13:30	17	37	23:30	8	57	9:30	3
18	14:00	19	38	3/12/10 0:00	7	58	10:00	15
19	14:30	18	39	0:30	-2	59	10:30	27
20	15:00	27	40	1:00	5	60	11:00	9

D Sholtis-AA-II
4/29/10

Current Date : 04/29/10
Current Time : 14:06

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLh1JjVWXYzf	Status Flags I?*>=m^vEd9za Q
03/11/10	06:00	20.0		
03/11/10	06:30	12.4		
03/11/10	07:00	6.9		
03/11/10	07:30	14.9		
03/11/10	08:00	18.3		
03/11/10	08:30	10.0		
03/11/10	09:00	-1.1		
03/11/10	09:30	6.7		
03/11/10	10:00	19.8		
03/11/10	10:30	4.1		
03/11/10	11:00	.4		
03/11/10	11:30	12.0		
03/11/10	12:00	18.2		
03/11/10	12:30	18.8		
03/11/10	13:00	18.5		
03/11/10	13:30	27.3		
03/11/10	14:00	8.3		
03/11/10	14:30	8.6		
03/11/10	15:00	29.1		
03/11/10	15:30	20.9		
03/11/10	16:00	8.9		
03/11/10	16:30	24.1		
03/11/10	17:00	9.8		
03/11/10	17:30	-13.9		
03/11/10	18:00	10.2		
03/11/10	18:30	5.0		
03/11/10	19:00	6.2		
03/11/10	19:30	-3.1		
03/11/10	20:00	8.5		
03/11/10	20:30	21.0		
03/11/10	21:00	3.9		
03/11/10	21:30	-4.0		
03/11/10	22:00	8.5		
03/11/10	22:30	7.2		
03/11/10	23:00	-2.6		
03/11/10	23:30	6.2		
03/12/10	00:00	4.0		
03/12/10	00:30	1.0		
03/12/10	01:00	5.2		
03/12/10	01:30	-8.0		
03/12/10	02:00	2.5		
03/12/10	02:30	2.7		
03/12/10	03:00	10.6		
03/12/10	03:30	8.2		
03/12/10	04:00	4.8		
03/12/10	04:30	2.5		
03/12/10	05:00	10.7		
03/12/10	05:30	13.7		
03/12/10	06:00	6.1		
03/12/10	06:30	11.2		
03/12/10	07:00	14.0		
03/12/10	07:30	29.3		
03/12/10	08:00	2.1		
03/12/10	08:30	18.2		
03/12/10	09:00	25.3		
03/12/10	09:30	9.4		
	Max	29.3		
	Min	-13.9		

D. Shultes - AA-SF
4/29/10

SAC-BRANFORD PLANT - PM10 Monitor
Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

Date: 3/2/10
Initials: ML
Time: 11:00

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1		17	21	33	26	41	17	21
2	6	38	22	4	16	42	2	2
3	83	30	23	42	14	43	23	24
4	7	35	24	5	6	44	3	21
5	73	62	25	53	9	45	33	44
6	8	255	26	6	-2	46	4	150
7	83	400	27	83	-30	47	43	135
8	9	-200	28	7	-23	48	5	95
9	92	-440	29	72	-29	49	53	40
10	10	-170	30	8	-16	50	6	7
11	103	-30	31	83	-1	51	63	30
12	11	-3	32	9	-	52	7	20
13	113	19	33	93	34	53	73	40
14	12	45	34	10	28	54	8	-9
15	123	36	35	103	4	55	83	-130
16	1	36	36	11	33	56	9	-8
17	13	18	37	113	28	57	93	30
18	2	6	38	12	40	58	10	-20
19	23	29	39	1230	34	59	103	-25
20	3	15	40	1	23	60	11	-25

D. Shultes - AA SI
4/29/10

Current Date : 04/29/10
Current Time : 15:55

Daily Parameter Report - Auxiliary Averages with Flags
Environmental Systems Corporation

Logger Name : WEST SITE
Logger Id : 02
Parameter : PM10B
Units : UG/M3

Interval : 030M

Date	Time	Average	Data Flags <PDTFBCMOUA+-RHLhJjVWXYZf	Status Flags I?*>=m^vEd9za Q
03/01/10	05:00	17.6		
03/01/10	05:30	37.3		
03/01/10	06:00	29.6		
03/01/10	06:30	35.0		
03/01/10	07:00	61.5		
03/01/10	07:30	227.4		
03/01/10	08:00	433.9		
03/01/10	08:30	-219.8		
03/01/10	09:00	-452.3		
03/01/10	09:30	-172.6		
03/01/10	10:00	-30.4		
03/01/10	10:30	-2.8		
03/01/10	11:00	19.5		
03/01/10	11:30	46.7		
03/01/10	12:00	36.5		
03/01/10	12:30	36.1		
03/01/10	13:00	18.2		
03/01/10	13:30	6.3		
03/01/10	14:00	28.8		
03/01/10	14:30	15.2		
03/01/10	15:00	26.2		
03/01/10	15:30	15.2		
03/01/10	16:00	17.2		
03/01/10	16:30	6.9		
03/01/10	17:00	9.0		
03/01/10	17:30	-2.5		
03/01/10	18:00	-30.5		
03/01/10	18:30	-32.9		
03/01/10	19:00	-25.0		
03/01/10	19:30	-29.4		
03/01/10	20:00	-18.1		
03/01/10	20:30	-1.4		
03/01/10	21:00	2.9		
03/01/10	21:30	34.5		
03/01/10	22:00	24.6		
03/01/10	22:30	3.5		
03/01/10	23:00	33.0		
03/01/10	23:30	28.4		
03/02/10	00:00	43.8		
03/02/10	00:30	38.5		
03/02/10	01:00	24.1		
03/02/10	01:30	21.2		
03/02/10	02:00	2.5		
03/02/10	02:30	23.8		
03/02/10	03:00	20.6		
03/02/10	03:30	44.3		
03/02/10	04:00	154.7		
03/02/10	04:30	133.1		
03/02/10	05:00	97.2		
03/02/10	05:30	40.7		
03/02/10	06:00	1.7		
03/02/10	06:30	31.0		
03/02/10	07:00	21.3		
03/02/10	07:30	41.0		
03/02/10	08:00	-8.2		
03/02/10	08:30	-129.7		
03/02/10	09:00	-7.0		
03/02/10	09:30	31.7		
03/02/10	10:00	-19.1		

N Shultes - AAII
4/29/10

03/02/10 10:30 -26.1
03/02/10 11:00 -15.0

Max 433.9
Min -452.3
Mean 13.1
Records 61

Status : '<' - Less than ### Data, 'P' - Power Fail, 'D' - Disabled, 'T' - Out-of-
Control, 'F' - Boiler Off-Line,
Flags : 'B' - Bad Status, 'C' - Calibration, 'M' - Maintenance, 'O' - Analog
Overrange, 'U' - Analog Underrange,
Change, 'A' - Arithmetic Error, '+' - Maximum, '-' - Minimum, 'R' - Rate of
Change, 'H' - High-High Alarm,
of Change, 'L' - Low-Low Alarm, 'h' - High Alarm, 'l' - Low Alarm, 'J' - High Rate
of Change, 'j' - Low Rate of Change, 'W' - DIS #2 Obs, 'X' - DIS #3 Obs, 'Y' - DIS #4
Obs, 'V' - DIS #1 Obs, 'Z' - DIS #5 Obs.

**KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
CORRECTIVE ACTION / DATA EXCLUSION FORM**

The Corrective Action / Data Exclusion Form should be completed for the following events:

- 1) Monitor or related equipment calibration out of range,
- 2) Monitor or related equipment not operating,
- 3) Or, any incident/event that prevents proper collection of monitor data.

SITE LOCATION (circle): _____ Met station _____ Ichetucknee _____ West West
 AIRS code _____ 121210002 _____ 120230003 _____ 121210001

PERSON COMPLETING THIS FORM Max Lee TODAY'S DATE: 4/29/10

DATE PROBLEM DISCOVERED: ongoing - month March, 2010

PROBLEM: pump shut down random

SUGGESTED ACTIONS TO RESOLVE PROBLEM:
attempted to solve in fall 2009, no solution, remotely restart pump if shutdown or pump restart on its own

ACTION ASSIGNED TO: _____ APPROX. DEADLINE: _____

DESCRIBE CORRECTIVE ACTION: _____

IS DATA TO BE EXCLUDED? (circle) YES NO
 PARAMETER: PM10, all met data OR, temperature, wind dir, wind speed, solar rad., rainfall

DATE AND HOURS OF EXCLUDED DATA:
 Date/Hours multiple hours - see monthly 1-hr sheet AIRS NULL CODE 9980
 Date/Hours _____ AIRS NULL CODE _____
 Date/Hours _____ AIRS NULL CODE _____
 Date/Hours _____ AIRS NULL CODE _____

(note: If a single event involves different NULL codes fill in multiple Date/Hours)

REASON DATA TO BE EXCLUDED: erroneous data

DESCRIBE EVIDENCE OF EXCLUSION REASON (attach written documentation as needed):
 Attachment 1) 1-hr monthly summary
 Attachment 2) _____

DATE COMPLETED: _____

Program Manager: Max Lee SIGNATURE [Signature] DATE: 4/29/10

QA Auditor: David Skottes SIGNATURE [Signature] DATE: 4/29/10

April 1 - Final Site Audit,
Not submitted as part of 1st Qtr, 2010 data

Ambient Air Services, Inc. 106 Ambient Airway Starke, Florida 32091
SAC - Branford Plant - Anderson FH I - N PM-10 Monitor Audit sheet

Site: **West**

Date: **April 1, 2010** Site Contact: **Lee** Audit Performed by: **Sholtes**

Sampler pause: **9:15 EST**

Sampler restart: **9:20 EST**

Sampler Information

Audit and Site Information

Serial Number **329**

AIRS # **12-121-0001**

Radiation Source # **KF-1143**

Audit Temp **23.1** Degrees Celcius

Audit BP : **765.0** mm Hg

Audit Flow

Actual Sampler Flow (Observed): **988** liters/hour

Converted Actual Sampler Flow Value: **16.47** liters/minute

Audit Flow Manometer Indication: **5.18** inches H₂O

Audit Flow (Known Flow): **15.84** liters/minute

Flow Value Percent Difference: **3.94** % ($\pm 7\%$) or recalibrate

Audit Equipment

Digital Thermometer:	Manuf:	Atkins	SN: 5008	
Barometer / Altimeter	Manuf:	Microtim	SN: 352	
Atomic clock reference:	Manuf:	Radio Shack	SN: AASI 1-1	
Digital Manometer:	Manuf:	Dwyer	SN: 475-10-5	
Venturi FTS:	Manuf:	Chinook	SN: 981126A	m= 0.4284
				b= -0.8834

Comments: Last audit

Auditor Signature: *David Sholtes* Date: 4/02/10
 Review Signature: *Daniel Pate* Date: 4/02/10

EQUATIONS:
 Temperature Difference = Sensor T Actual - Monitor T
 Pressure Difference = Sensor BP Actual - Monitor BP

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

1) SITE VISIT DATA - INITIAL SITE REVIEW

1. Site Visited (circle one):

Serial No.	<u>West</u> KF1141	<u>Ichetucknee</u> KF1143
AIRS site ID No.:	2121210001	2120230003

DATE: 4/1/10 Operator Initials ML

2. Record, simultaneously, datalogger and monitor time/concentration readings (optional)

DATALOGGER
READING
ug/m3 #

DATALOGGER
READING
time

MONITOR
READING
ug/m3

MONITOR
READING
time

QA Reviewed _____
Date _____

IMPORTANT!!: If time indicated on datalogger or monitor differ from time indicated on the certified time piece (e.g., Casio watch) by more than 1 minute, adjust time on datalogger or monitor.

3. Place datalogger in Maintenance Mode

2) Preventative Maintenance (perform each visit)

1. Inspect heater to determine if operational:

Check if
OK ✓

2. Inspect filter tape, if torn inspect inlet filter to pump, replace as needed:

✓

3. See attached "Scheduled Maintenance for Beta Attenuation Monitor" sheet. Perform as stated on sheet.

4. Corrective Action Form Required?: YES

NO

NOTES:

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 4/1/10
Operator Initials ML

2. Radiation Source Calibration

QA Reviewed _____
Date _____

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>120</u>	<u>20</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>2200</u>	<u>2327</u>	<u>5.3</u>
Span Pot Setting		(D-S)/S x100
<u>6.82</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>—</u>	<u>—</u>	<u>—</u>
Span Pot Setting		(D-S)/S x100
<u>—</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

David Holter
Field Auditor Signature (if accuracy audit performed)

4/01/10
Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse
<u>115</u> ^{MS}	<u>39</u>
<u>113</u>	

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error
<u>1590</u>	<u>1409</u>	<u>12.8</u>
Span Pot Setting		(D-S)/S x100
<u>682</u>		

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

West
KF1141
2121210001

Ichetucknee
KF1143
2120230003

DATE: 4/1/10 Operator Initials ml

	METER ID:	Serial No.	last calibr. date
Pro-Cal Streamline	<u>Control Unit</u>	CU02022	4/1/2009
Pro-Cal Streamline	<u>Meter Unit</u>	M030403	4/1/2009
Time:	<u>Casio</u>	A	Lifetime valid <u>3/14/10 ml</u>
Voltmeter:	<u>6240102</u>	81830087	4/4/2009 <u>4/4/10</u>

QA Reviewed _____
Date _____

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.4 2) 1.4

Voltage percent difference
(E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

3. PRECISION FLOW CHECK

<p>ProCal Data</p> <p>ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.2</u></p> <p>Pressure (atm) PCal P <u>1.006</u></p> <p>Temperature (C°) PCal T <u>16.1</u></p> <p>Time (Casio)* (hr:min) <u>8:19</u></p>	<p>Monitor Data - AT START of Flow Check</p> <table border="1"> <tr> <td>Monitor Temperature at Start (C°) mon temp1 <u>25</u></td> <td>Monitor Actual Flow at Start (L/hr) Mon flow1 <u>989</u></td> </tr> </table> <p>xx (mon temp) xx (Mon std1) xx (Mon flow) Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"</p>	Monitor Temperature at Start (C°) mon temp1 <u>25</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>989</u>
Monitor Temperature at Start (C°) mon temp1 <u>25</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>989</u>		
<p>* or similar measure. Time not required for calcs. Time only needed to determine when calibration checks performed.</p>	<p>Monitor Data - AT END of Flow Check</p> <table border="1"> <tr> <td>Temperature at End (C°) mon temp2 <u>25</u></td> <td>Monitor Actual Flow at End (L/hr) Mon flow2 <u>983</u></td> </tr> </table>	Temperature at End (C°) mon temp2 <u>25</u>	Monitor Actual Flow at End (L/hr) Mon flow2 <u>983</u>
Temperature at End (C°) mon temp2 <u>25</u>	Monitor Actual Flow at End (L/hr) Mon flow2 <u>983</u>		

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min)
Pcal_flow
15.2

actual flow; should be between 15.0 to 18.4 lpm

MONITOR Actual Measured Flow (L/min)
(Mon flow)
16.42

actual flow; should be between 15.0 to 18.4 lpm

= (Mon flow2 - Mon flow 1)

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow) / Pcal_flow
= 8.0 %

SAC-BRANFORD PLANT - PM10 Monitor

Andersen Instruments, FH 62 I-N PM10 Monitor

Circle Site Visit

Serial No.
AIRS site ID No.:

West
KF1141
2121210001

Date: 4/1/2010
 Initials: ML
 Time: 9:00 AM

No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)	No.	Reading Time (hh:mm)	Half hour Reading (mg/m ³)
1	3/31/2010 8:00	4	21	18:00	46	41	4:00	0
2	8:30	4	22	18:30	27	42	4:30	4
3	9:00	-6	23	19:00	36	43	5:00	8
4	9:30	16	24	19:30	10	44	5:30	10
5	10:00	13	25	20:00	7	45	6:00	11
6	10:30	13	26	20:30	22	46	6:30	27
7	11:00	12	27	21:00	26	47	7:00	3
8	11:30	19	28	21:30	16	48	7:30	15
9	12:00	24	29	22:00	16	49	8:00	18
10	12:30	18	30	22:30	1	50	8:30	22
11	13:00	7	31	23:00	-10	51	9:00	19
12	13:30	41	32	23:30	-22	52	9:30	28
13	14:00	63	33	0:00	-7	53	10:00	10
14	14:30	55	34	0:30	-7	54	10:30	2
15	15:00	61	35	1:00	-22	55	11:00	10
16	15:30	50	36	1:30	-23	56	11:30	12
17	16:00	51	37	2:00	-33	57	12:00	20
18	16:30	44	38	4/1/10 2:30	-31	58	12:30	24
19	17:00	46	39	3:00	-7	59	13:00	17
20	17:30	38	40	3:30	-5	60	4/1/2010 13:30	24

Ambient Air Services, Inc. 106 Ambient Airway Starke, Florida 32091
SAC - Branford Plant - Anderson FH I - N PM-10 Monitor Audit sheet

Site: **Ichetucknee**

Date: **April 1, 2010** Site Contact: **Lee** Audit Performed by: **Sholtes**

Sampler pause: **10:07 EST**

Sampler restart: **10:17 EST**

Sampler Information

Audit and Site Information

Serial Number **328**

AIRS # **12-023-0003**

Radiation Source # **KF-1143**

Audit Temp **23.0** Degrees Celcius

Audit BP : **765.0** mm Hg

Audit Flow

Actual Sampler Flow (Observed): **988** liters/hour

Converted Actual Sampler Flow Value: **16.47** liters/minute

Audit Flow Manometer Indication: **5.87** inches H₂O

Audit Flow (Known Flow): **16.92** liters/minute

Flow Value Percent Difference: **-2.68** % ($\pm 7\%$) or recalibrate

Audit Equipment

Digital Thermometer:	Manuf:	Atkins	SN: 5008	
Barometer / Altimeter	Manuf:	Microtim	SN: 352	
Atomic clock reference:	Manuf:	Radio Shack	SN: AASI 1-1	
Digital Manometer:	Manuf:	Dwyer	SN: 475-10-5	
Venturi FTS:	Manuf:	Chinook	SN: 981126A	m= 0.4284
				b= -0.8834

Comments: Last audit

Auditor Signature: *David Sholtes* Date: 4/02/10
 Review Signature: *David Pate* Date: 4/02/10

EQUATIONS: Temperature Difference = Sensor T Actual - Monitor T
 Pressure Difference = Sensor BP Actual - Monitor BP

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

2) SITE VISIT DATA: RADIATION SOURCE PRECISION AND ACCURACY

1. Site Visited (circle one):

	<u>West</u>	<u>Ichetucknee</u>
Serial No.	KF1141	KF1143
AIFRS site ID No.:	2121210001	2120230003

DATE: 4/1/10
Operator Initials ML

2. Radiation Source Calibration

QA Reviewed _____
Date _____

PRECISION

FOIL Serial No.(please check): 539

Zero and Sp #

1. Measure Zero Foil

Initial Analyzer Display (+ or - 400%)* offset %	Masse
<u>249</u>	<u>40</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>2420</u>	<u>2323</u>	<u>4.17</u>
Span Pot Setting		(D-S)/S x100
<u>7.56</u>		

3) Adjust Span Potentiometer

Adjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>—</u>	<u>—</u>	<u>—</u>
Span Pot Setting		(D-S)/S x100
<u>—</u>		

* If OFFSET is not within range call Andersen Instruments, technical support for resetting the zero value.

ACCURACY

FOIL Serial No.(please check): 9033

David C. Skoltes
Field Auditor Signature (if accuracy audit performed)

4/01/10
Date

Zero and Span Data

1. Measure Zero Foil

Initial Analyzer Display offset %	Masse
<u>170</u>	<u>31</u>

2. Measure Span Foil

Unadjusted Span Analyzer Display (D) (µg)	Standard (S) (µg)	Percent Error percent
<u>1570</u>	<u>1409</u>	<u>11.4</u>
Span Pot Setting		(D-S)/S x100
<u>—</u>		

SAC-BRANFORD PLANT, Andersen Instruments, FH 62 I-N PM10 Monitor

3) SITE VISIT DATA: AIR FLOW - PRECISION LEVEL 1

1. Site Visited (circle one):

Serial No.	West KF1141	Serial No.	lchetuknee KF1143
AIRS site ID No.:	2121210001	Serial No.	2120230003
METER ID:	Control Unit	Serial No.	last calibr. date
Pro-Cal Streamline	CU02022	CU02022	4/1/2009
Pro-Cal Streamline	Meter Unit	M030403	4/1/2009
Time:	Casio	A	Lifetime valid
Voltmeter:	6240102	81830087	1/14/2009 ⁱⁿ 1/14/10

DATE: 4/1/10 Operator Initials _____

QA Reviewed _____
Date _____

NOTE: CHECK O-RING IN MEASURING CAP TO ENSURE LEAK-TIGHT FIT. IF O-RING IS DAMAGED, REPLACE O-RING PRIOR TO PERFORMING FLOW CHECK

2. PROCAL BATTERY CHECK

Measure battery voltage with NIST-traceable volt meter

Voltage (DC)	
Expected (E Volts)	Measured (M Volts)
1.5	1) 1.4 2) 1.4

Voltage percent difference
(E volts-M volts)/M volts x 100
Change batteries if either less than 1.3 Volts

NOTES

3. PRECISION FLOW CHECK

ProCal Data	Monitor Data - AT START of Flow Check
ProCal FLOW (ACTUAL L/min) Pcal_flow <u>15.50</u>	Monitor Temperature at Start (C°) mon temp1 <u>29</u>
Pressure (atm) PCal P <u>1.008</u>	Monitor Actual Flow at Start (L/hr) Mon flow1 <u>9.88</u>
Temperature (C°) PCal T <u>23.5</u>	xx (Mon std1) (Mon flow) xx (mon temp) xx (Mon flow) Note the numbers are arranged as follows on the LCD Screen, "Voltage w/ Calibration"
Time (Casio)* (hr:min) <u>10:38</u>	Monitor Data - AT END of Flow Check
	Temperature at End (C°) mon temp2 <u>29</u>
	Monitor Actual Flow at End (L/hr) Mon flow2 <u>9.87</u>

CALCULATIONS

ProCal Actual Measured Flow (ACTUAL L/min) Pcal_flow <u>15.50</u>	actual flow. should be between 15.0 to 18.4 lpm
--	---

MONITOR Actual Measured Flow (L/min) (Mon flow) <u>16.47</u>	actual flow. should be between 15.0 to 18.4 lpm = (Mon flow2 - Mon flow 1)
---	---

FLOW VALUE PERCENT DIFFERENCE

(Mon flow - Pcal_flow) / Pcal_flow <u>-6.2 %</u>
