About this Document

This Audit sheet is a recommended list of system checks for the Met One Instruments BAM-1020 unit. Some of the line items in this form may not be applicable to certain units due to optional hardware. Certain units may need additional checks not listed on this sheet.

To use this form for system audits, fill out the "as found" items without making any changes to the unit. To use this form for a test and calibration record, fill out the "as found" and "as left" items, performing any necessary maintenance and calibrations required.

This document may be modified, revised, translated, or incorporated into SOPs by the end user as needed.

- **Flow Audits:** Perform an as-found leak check, then clean the nozzle and vane and perform an as-left leak check. Perform a flow audit or calibration, recording the values before and after making any changes.
- **Mechanical Audits:** Inspect each of the listed items and perform any maintenance necessary. Check each box as the item is completed.
- **Analog Voltage Audit:** Enter the TEST>DAC screen and force the voltage output to each level, then measure the voltage at the back of the BAM and at the analog data logger to verify agreement. These checks are not required if no external analog data logger is used.
- **Membrane Audit:** Record the last span membrane measurement (LAST m) from the OPERATE>NORMAL screen and compare it to the ABS value. Calculate and record the difference.
- **Setup Values:** Enter the SETUP menus and verify each setting value has not been changed. Items marked with an asterisk are critical PM2.5 FEM settings. Enter the factory calibration settings from the unit's calibration certificate. The rest of the expected values should be recorded when the instrument is initially set up, since some of the settings will differ for various applications.

BAM-1020 Audit Sheet

Model: BAM-1020 **Serial Number:**

Audit Date: **Audited By:**

Flow Audits			
Flow Reference Standard Used:	Model:	Serial No:	Calibration Date:
Temperature Standard Used:	Model:	Serial No:	Calibration Date:
Barometric Pressure Standard Used:	Model:	Serial No:	Calibration Date:

Leak Check Value: as found: slpm as left: slpm

		BAM	Ref. Std.		BAM	Ref. Std.
Ambient Temperature:	as found:	C	C	as left:	C	C
Barometric Pressure:	as found:	mmHg	mmHg	as left:	mmHg	mmHg
Flow Rate 15.0 lpm:	as found:	lpm	lpm	as left:	lpm	lpm
Flow Rate 18.4 lpm:	as found:	lpm	lpm	as left:	lpm	lpm
Flow Rate 16.7 lpm:	as found:	lpm	lpm	as left:	lpm	lpm

Mechanical Checks

Pump muffler unclogged:	as found		as left		PM10 particle trap clean:	as found		as left	
Sample nozzle clean:	as found		as left		PM10 drip jar empty:	as found		as left	
Tape support vane clean:	as found		as left		PM10 bug screen clear:	as found		as left	
Capstan shaft clean:	as found		as left		PM2.5 cyclone particle trap clean:	as found		as left	
Rubber pinch rollers clean:	as found		as left		Inlet tube water-tight seal OK:	as found		as left	
Chassis ground wire installed:	as found		as left		Inlet tube perpendicular to BAM:	as found		as left	

Analog Voltage Output Audit			N/A
DAC Test Screen	**BAM Voltage Output**	**Logger Voltage Input**	
0.000 Volts	Volts	Volts	
0.500 Volts	Volts	Volts	
1.000 Volts	Volts	Volts	

Span Membrane Check	
LAST m:	mg/cm2
ABS:	mg/cm2
Difference:	mg/cm2
Difference:	%

BAM Clock	
BAM Date:	
BAM Time:	
Actual Time:	
Set? (Y/N)	

SETUP > SAMPLE Settings			SETUP > CALIBRATE Settings			Other Settings		
Parameter	**Expected**	**Found**	**Parameter**	**Expected**	**Found**	**Parameter**	**Expected**	**Found**
RS232	9600		FLOW RATE	16.7 lpm*		e1	-0.015 mg	
BAM SAMPLE	42 min*		FLOW TYPE	ACTUAL*		Cycle Mode	STANDARD	
STATION #			CONC TYPE	ACTUAL*		RH Control	YES*	
MET SAMPLE	60 min		Cv			RH Setpoint	35%*	
RANGE	1.000 mg		Qo			Datalog RH	YES	
OFFSET	-0.015 mg		ABS			Delta-T Control	NO*	
CONC UNITS	mg/m3		µ sw			Delta-T Setpoint	99	
COUNT TIME	8 min*		K			Datalog Delta-T	NO	
			BKGD					
			STD TEMP	25 C				
			HEATER	AUTO*				

* Required PM2.5 FEM settings. See manual.

Last 8 Errors in the BAM-1020 Error Log

Error	Date	Time	Error	Date	Time
1			5		
2			6		
3			7		
4			8		

Notes: