

Summary of AURN Site Visit

To	CMCU Casella Stanger	QA/QC Unit netcen
FAO	Duncan Pritchard-Davies	Geoff Broughton
Fax No.	0207 261 1425	0870 190 6610
From		

AURN Site Name _____

Name of LSO/ESU _____

Date of visit _____

Reason For visit (please tick ✓)

LSO Routine Cal.	
LSO Call-Out	
ESU Call-Out	
Service	
Other	

Other (please specify)

Equipment Attended to: (please tick ✓)

	Fault on Arrival	Attended to	Fault on Leaving
All			
NOx Analyser			
O3 Analyser			
CO Analyser			
SO2 Analyser			
PM10 Monitor			
Air Con. Unit			
Other			

Other (please specify)

PRECALIBRATION CHECKLIST		Page 1 of 9
Site _____ Date _____ Operator _____ Start time _____ GMT/BST No Pollution Episode in progress <input type="checkbox"/> (see Section 10.6)		
Tick boxes or note the test values obtained in the spaces provided. If any of the 'tick' checks are not correct, inform the CMCU after completing all of the Checklist and before proceeding with the calibration. Refer to section A.3 of Site Operator's Manual.		
<p><u>(i) CO Analyser</u></p> Time _____ Ambient _____ Fault messages displayed? <input type="checkbox"/> If yes list: _____ _____ _____ _____ Analyser parameters: INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ VERSION _____	<p><u>(ii) NO_x Analyser</u></p> Time _____ Ambient NO _____ NO ₂ _____ NO _x _____ Fault messages displayed? <input type="checkbox"/> If yes list: _____ _____ _____ _____ Analyser parameters: INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ AMBIENT PRESSURE _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ HIGH VOLTAGE _____ VERSION _____	
<p><u>COMMENTS:</u></p> 		

PRECALIBRATION CHECKLIST		Page 2 of 9
Site _____ Date _____ Operator _____ Start time _____ GMT/BST No Pollution Episode in progress <input type="checkbox"/> (see Section 10.6)		
Tick boxes or note the test values obtained in the spaces provided. If any of the 'tick' checks are not correct, inform the CMCU after completing all of the Checklist and before proceeding with the calibration. Refer to section A.3 of Site Operator's Manual.		
<p><u>(i) SO₂ Analyser</u></p> Time _____ Ambient _____ Fault messages displayed? <input type="checkbox"/> If yes list: _____ _____ _____ _____ Analyser parameters: INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ HIGH VOLTAGE _____ LAMP CURRENT _____ VERSION _____	<p><u>(ii) O₂ Analyser</u></p> Time _____ Ambient _____ Fault messages displayed? <input type="checkbox"/> If yes list: _____ _____ _____ _____ Analyser parameters: INSTR. ZERO _____ INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ LAMP CURRENT _____ VERSION _____	
COMMENTS:		

PRECALIBRATION CHECKLIST		Page 3 of 9
<p><u>(v) TEOM Particulate Monitor</u></p> <p>POWER on <input type="checkbox"/></p> <p>STATUS light off <input type="checkbox"/></p> <p>Current status code _____</p> <p>Current operating mode _____</p> <p>Percentage of filter lifetime used _____</p> <p>Current RS-232 mode _____</p> <p>Current time _____</p> <p>Mass conc _____</p> <p>30-Min MC _____</p> <p>01-Hr MC _____</p> <p>08-HR MC _____</p> <p>24-HR MC _____</p> <p>Total mass _____</p> <p>Case temp _____</p> <p>Air Temp _____</p> <p>Cap temp _____</p> <p>Encl temp _____</p> <p>Main flow _____</p> <p>Aux flow _____</p> <p>Ave temp* _____</p> <p>Ave pres* _____</p> <p>Noise _____</p> <p>Frequency _____</p> <p>* Model 1400 E only</p>	<p><u>(vii) Modem</u></p> <p>Modem lights on <input type="checkbox"/></p> <hr/> <p><u>(viii) Data Logger</u></p> <p>Logger cables secure <input type="checkbox"/></p> <p>All pollutants at SAMPLE <input type="checkbox"/></p> <p>If NOT give details:-</p> <p>NOX _____</p> <p>CO _____</p> <p>SO2 _____</p> <p>O3 _____</p> <p>PM10 _____</p> <hr/> <p><u>(ix) Chart Recorder</u></p> <p>RCD light on <input type="checkbox"/></p> <p>All traces clear on chart <input type="checkbox"/></p> <p>Chart paper not jammed <input type="checkbox"/></p> <p>'BAT' indicator not illuminated <input type="checkbox"/></p>	
<p><u>(vi) Air Sampling Manifold</u></p> <p>Manifold intact <input type="checkbox"/></p> <p>Manifold fan running <input type="checkbox"/></p> <p>Instrument sample inlets secure and tight <input type="checkbox"/></p>	<p><u>(x) Zero Air Generation</u></p> <p>Silica gel OK <input type="checkbox"/></p> <p>Purafil OK <input type="checkbox"/></p> <p>Tubing connections secure <input type="checkbox"/></p> <p>Cylinder Pressure _____ psi/bar</p>	
<p><u>(xi) Completion of Precalibration Check</u></p> <p>If any tick check is not correct, inform the MCU before proceeding with the instrument calibration.</p> <p>If all are correct, proceed to change the TEOM filter (if required) and the analyser calibration.</p>		
<p>LSO Comments:</p> 		

TEOM PARTICULATE MONITOR FILTER CARTRIDGE CHANGE RECORD SHEET	Page 4 of 9
Site _____ Date _____ Operator _____	
<p>Filter changed? <input type="checkbox"/></p> <p>Reason for change: 2/4 weeks since last change <input type="checkbox"/></p> <p> Percentage of filter lifetime used >80% <input type="checkbox"/></p> <p> PM10 head removed and cleaned <input type="checkbox"/></p>	
<p>Wait at least 1 hour until the status light goes out and the 'current operating mode' is 4. Then complete part (v) of the postcalibration sheet.</p> <p>If the status light has not gone out or the 'current operating mode' has not reached 4 within 2 hours, contact the CMCU.</p>	
LSO Comments:	

CALIBRATION RECORD SHEET					Page 5 of 9	
Site _____ Date _____ Operator _____						
Chart recorder set to 60 mm/hour <input type="checkbox"/>						
(i) CO Analyser Analyser set to ZERO <input type="checkbox"/> SPAN <input type="checkbox"/>						
				Instr ppm	Cyl No	Cyl pres psi/bar
Instr No	ZERO CAL	CO		_____		
	CO CAL	CO		_____		

CO Analyser sample inlet filter change <input type="checkbox"/>						
(ii) NO_x Analyser Analyser set to ZERO <input type="checkbox"/> SPAN <input type="checkbox"/>						
				Instr ppm	Cyl No	Cyl pres psi/bar
Instr No	ZERO CAL	NO _x		_____		
		NO		_____		
		NO ₂		_____		
Range	NO CAL	NO _x		_____	NO	
		NO		_____		
		NO ₂		_____		
	NO ₂ CAL	NO _x		_____	NO ₂	
		NO		_____		
		NO ₂		_____		
NO _x Analyser sample inlet filter changed <input type="checkbox"/>						

CALIBRATION RECORD SHEET					Page 6 of 9	
(iii) SO₂ Analyser Analyser set to ZERO <input type="checkbox"/> SPAN <input type="checkbox"/>						
				Instr ppm	Cyl No	Cyl pres psi/bar
Instr No	ZERO CAL	SO ₂		_____		

Range	SO ₂ CAL	SO ₂		_____		

SO ₂ Analyser sample inlet filter changed <input type="checkbox"/>						
(iv) Ozone Analyser Analyser set to ZERO <input type="checkbox"/> SPAN <input type="checkbox"/>						
				Instr ppm		
Instr No	ZERO CAL	O ₃		_____		

	SPAN CAL	O ₃		_____		

Ozone Analyser sample inlet filter changed <input type="checkbox"/>						
(vi) Chart recorder						
Chart speed reset to 10 mm/hour <input type="checkbox"/>						
Chart paper checked and replaced, if necessary <input type="checkbox"/>						
Chart date/time checked and reset, if necessary <input type="checkbox"/>						
LSO Comments:						

POSTCALIBRATION CHECKS, SAFETY AND SECURITY INSPECTION		Page 7 of 9
Site _____ Date _____ Operator _____		
Tick boxes or note the test values obtained in the spaces provided. If any of the 'tick' checks are not correct, inform the CMCU after completing all of the Checklist. Refer to section A.6 of Site Operator's Manual.		
<p><u>(i) CO Analyser</u></p> <p>Time _____ Ambient _____</p> <p>Fault messages displayed? <input type="checkbox"/></p> <p>If yes list: _____ _____ _____ _____</p> <p>Analyser parameters:</p> <p>INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ VERSION _____</p>	<p><u>(ii) NO_x Analyser</u></p> <p>Time _____ Ambient NO _____</p> <p style="text-align: right;">NO₂ _____ NO_x _____</p> <p>Fault messages displayed? <input type="checkbox"/></p> <p>If yes list: _____ _____ _____ _____</p> <p>Analyser parameters:</p> <p>INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ AMBIENT PRESSURE _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ HIGH VOLTAGE _____ VERSION _____</p>	
COMMENTS:		

POSTCALIBRATION CHECKS, SAFETY AND SECURITY INSPECTION		Page 8 of 9
Site _____ Date _____ Operator _____		
Tick boxes or note the test values obtained in the spaces provided. If any of the 'tick' checks are not correct, inform the CMCU after completing all of the Checklist. Refer to section A.6 of Site Operator's Manual.		
<p><u>(i) SO₂ Analyser</u></p> <p>Time _____ Ambient _____</p> <p>Fault messages displayed? <input type="checkbox"/></p> <p>If yes list: _____ _____ _____ _____</p> <p>Analyser parameters:</p> <p>INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ HIGH VOLTAGE _____ LAMP CURRENT _____ VERSION _____</p>	<p><u>(ii) O₂ Analyser</u></p> <p>Time _____ Ambient _____</p> <p>Fault messages displayed? <input type="checkbox"/></p> <p>If yes list: _____ _____ _____ _____</p> <p>Analyser parameters:</p> <p>INSTR. ZERO _____ INSTR. GAIN _____ GAS FLOW: _____ GAS PRESSURE: _____ REF VOLTAGE: _____ CONC. VOLTAGE: _____ ANALOG SUPPLY: _____ DIGITAL SUPPLY: _____ GROUND OFFSET _____ LAMP CURRENT _____ VERSION _____</p>	
COMMENTS:		

POSTCALIBRATION CHECKS, SAFETY AND SECURITY INSPECTION		Page 9 of 9
<p><u>(v) TEOM Particulate Monitor</u></p> <p>Filter changed <input type="checkbox"/></p> <p>POWER light on _____</p> <p>STATUS light off _____</p> <p>Current status code _____</p> <p>Current operating mode _____</p> <p>Percentage of filter lifetime used _____</p> <p>Current RS-232 mode _____</p> <p>Current time _____</p> <p>Mass conc _____</p> <p>30-Min MC _____</p> <p>01-Hr MC _____</p> <p>08-HR MC _____</p> <p>24-HR MC _____</p> <p>Total mass _____</p> <p>Case temp _____</p> <p>Air Temp _____</p> <p>Cap temp _____</p> <p>Encl temp _____</p> <p>Main flow _____</p> <p>Aux flow _____</p> <p>Ave temp _____</p> <p>Ave pres _____</p> <p>Noise _____</p> <p>Frequency _____</p>	<p><u>(vi) Air Sampling Manifold</u></p> <p>Manifold intact <input type="checkbox"/></p> <p>Manifold fan running <input type="checkbox"/></p> <p>Instrument sample inlets secure and tight <input type="checkbox"/></p> <hr/> <p><u>(vii) Modem</u></p> <p>Modem lights on <input type="checkbox"/></p> <hr/> <p><u>(viii) Data Logger</u></p> <p>Logger cables secure <input type="checkbox"/></p> <p>All pollutants at SAMPLE <input type="checkbox"/></p> <p>If NOT give details:-</p> <p>NOX _____</p> <p>CO _____</p> <p>SO2 _____</p> <p>O3 _____</p> <p>PM10 _____</p>	
<p><u>TEOM Noise on Chart</u></p> <p>Peak-to-peak noise in vertical divisions on chart trace:</p> <p>If greater than 7 divisions (60 µgm³) refer to Section A.4</p>	<p><u>(ix) Chart Recorder</u></p> <p>RCD light on <input type="checkbox"/></p> <p>'BAT' indicator not illuminated <input type="checkbox"/></p> <p>All traces clear on chart <input type="checkbox"/></p> <p>Chart paper not jammed <input type="checkbox"/></p> <p>All traces normal(section 11.6) <input type="checkbox"/></p> <p>Auto Cal traces OK <input type="checkbox"/></p>	
<p><u>(x) Final Checks</u></p> <p>Check all sample inlet filters changed <input type="checkbox"/></p> <p>All "SERVICE" switches reset to "SAMPLE" <input type="checkbox"/></p> <p>Calibration end time _____ GMT/BST</p> <p>Safety and security check of site:</p> <p>Manifold inlet /TEOM headclear and ladder stowed <input type="checkbox"/></p> <p>Calibration cylinders turned off and secure <input type="checkbox"/></p> <p>Note: Do not close valves on CO daily span cylinder</p> <p>Site clean and tidy <input type="checkbox"/></p> <p>Fax all check and calibration sheets <u>TODAY</u> to CMCU : 0207 261 1425</p> <p style="text-align: right;">and QA/QC Unit : 0870 190 6610</p>		