Environmental Assurance Environmental Monitoring and Evaluation Monitoring Program Delivery

McInytre Centre 4946 – 89 Street Edmonton, Alberta T&E 5K1 Canada Telephone: (780) 427-7888 Fax: (780) 422-2011

File No(s). 2008 - 071A/096A

June 26, 2008

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Mike Bisaga Program Manager Peace Airshed Zone Association Otonabee Consulting Ltd 13440 – 62 Street Edmonton, Alberta T5A 0V7

Dear Mike

Re: Peace Air Shed Zone Association (PASZA) Ambient Air Monitoring Station Audits

Attached are the results from the PASZA air monitoring station audit conducted from June 16, 2008 to June 20, 2008.

Audits consist of station inspections as well as performance audits of all continuous parameters. All continuous analyzers were audited according to the guidelines set forth in the Air Monitoring Directive (AMD), Audit Protocol Document as well as operational limits specified by the manufacturer to ensure quality data.

Audit non-compliance items found, manufacture specifications not met and inspection issues found at the time of the AENV audit are listed below:

Smokey Heights

Audit failures:

TEOM main flow failed.

Manufacturer specifications not met:

 The ambient temperature sensor is outside the +/- 1 deg tolerance used by the auditors.

Inspection items:

- Manifold is dirty cleaned by contractor.
- Sample TEOM heads dirty.

Beaverlodge

Audit failures:

TEOM main flow failed.

Manufacturer specifications not met:

None at the time of the audit.

Inspection items:

- The site documentation is completed but was not available at the trailer.
- · Sample lines are dirty.
- Manifold is dirty.

Spirit River - Rover

Audit failures:

The NO2 failed the last GPT point as it was greater than 15% out.

Manufacturer specifications not met:

- The station temperature sensor is outside the +/- 1 deg tolerance used by the auditors.
- The ambient temperature sensor is outside the +/- 1 deg tolerance used by the auditors.

Inspection items:

Manifold is dirty.

Henry Pirker

Audit failures:

None at the time of the audit

Manufacturer specifications not met:

 The station temperature sensor is outside the +/- 1 deg tolerance used by the auditors.

Inspection items:

- · Sample lines dirty.
- Teom heads are dirty

Evergreen

Audit failures:

None at the time of the audit.

Manufacturer specifications not met:

None at the time of the audit.

Inspection items:

- The site documentation is completed but was not available at the trailer.
- Manifold is dirty cleaned during audit by contractor.
- Sample lines dirty.
- Spare manifold ports not capped.
- Pumps not properly exhausted from the room or scrubbed.
- TEOM heads are dirty.
- TEOM bypass filter dirty

Girouxville - PAML

Audit failures:

None at the time of the audit.

Manufacturer specifications not met:

• None at the time of the audit.

Inspection items:

- Manifold dirty.
- Sample lines dirty.

Valleyview

Audit failures:

None at the time of the audit

Manufacturer specifications not met:

- The station temperature sensor is outside the +/- 1 deg tolerance used by the auditors.
- The ambient temperature sensor is outside the +/- 1 deg tolerance used by the auditors.

Inspection items:

- · Site documentation not on site.
- Pumps not properly exhausted from the room or scrubbed.
- · Teom heads are dirty

During the audit the QAP was assessed on sections 2.3 through 3.0. A few observations were noted as follows. The AGAT SOPs are listed under PASZA reference number 13.0. Contractor stated is Focus. Also as per 8.3 monitoring/procedures, the monitoring methods are not separated, they are mentioned all as one. PASZA's QAP references contractor as being responsible for monitoring methods, but nothing from the contractor is actually listed.

Please address the issues noted above by July 25th, 2008, in writing indicating what corrective actions have been taken. If you have any questions please contact the undersigned at 780-427-7888.

Yours truly,

Jolene Scott

Monitoring Systems Auditor

Northern Region

Attachment(s): None

cc: Park Powell: District Approvals Manager Greg Smith: District Compliance Manager

Marilyn Albert: Industrial Monitoring Assessment Technologist

Janine Ross: Ambient Air Support Tech

Gerald Feschuk: Industrial Approvals Engineer



SUMMARY OF AUDIT RESULTS STATION/MONITORING SITE AUDITED

DATE: June 16 - 20, 2008

PARAMETER	Smokey Heights	Beaverlodge	Spirit River	Henry Pirker	Evergreen
AUDITED	June 16, 2008	June 17, 2008	June 17, 2008	June 18, 2008	June 18, 2008
NO 0.85-1.15	N/A	Pass 0.9751	Pass 0.9818	Pass 0.9982	N/A
NOX 0.85-1.15	N/A	Pass 0.9725	Pass 0.9955	Pass 1.0063	N/A
NO2 0.85-1.15	N/A	Pass 1.0117	Fail ⁴ 0.9932	Pass 1.008	N/A
NH3 0.85-1.15	N/A	N/A	N/A	N/A	N/A
OZONE 0.85-1.15	N/A	Pass 1.0127	Pass 1.0212	Pass 0.9998	N/A
TRS 0.85-1.15	Pass 0.9535	N/A	Pass 1.0092	Pass 1.0237	Pass 1.0041
H2\$ 0.85-1.15	N/A	N/A	N/A	N/A	N/A
SO2 0.85-1.15	Pass 0.9882	Pass 0.9965	Pass 0.9684	Pass 1.0121	Pass 0.9842
CO 0.85-1.15	N/A	N/A	N/A	Pass 0.9877	N/A
THC 0.85-1.15	N/A	N/A	N/A	Pass 1.0364	N/A
PAR/GSR	N/A	N/A	N/A	Good	N/A
ORIENTATION	Good	Good	Good	Good	Good
RH/Temp Rainfall	N/A/Fail ¹ N/A	Pass/Pass N/A	Pass/Fail1 ¹⁸³ N/A	Pass/Fail ¹ N/A	N/A/Pass
PM 2.5	Fail ²	Fail ²	N./A	Pass	N/A Pass

- Station temperature outside manufacturer's specification of +/- 1 °C
 Main flow outside manufacturer's specification of +/- 0.2 lpm
 Ambient temperature outside manufacturer's specification of +/- 1°C
 Last NO2 point greater than 15% out from calculated value

Audit Performed by:	J. Scott
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SUMMARY OF AUDIT RESULTS STATION/MONITORING SITE AUDITED

DATE: June 16 - 20, 2008

		1	,	 	
PARAMETER	Girouxville	Valleyview			
AUDITED	June 19, 2008	June 20, 2008	· · · · · · · · · · · · · · · · · · ·		
NO 0.85-1.15	N/A	N/A			
NOX 0.85-1.15	Pass 0.9701	N/A			
NO2 0.85-1.15	N/A	N/A			
NH3 0.85-1.15	Pass 1.0529	N/A			
OZONE 0.85-1.15	N/A	N/A			
TRS 0.85-1.15	Pass 0.9535	N/A			
H2\$ 0.85-1.15	Pass 0.9574	Pass 0.9735			
\$Q2 0.85-1.15	Pass 0.9749	Pass 0.9904			
CO 0.85-1.15	N/A	N/A		<u></u>	
THC 0.85-1.15	N/A	N/A			
PAR/GSR	N/A	N/A	***************************************	 	
ORIENTATION	Good	Good			
RH/Temp	N/A/Pass	Pass/Fail ^{1&2}			
Rainfall	N/A	N/A			
PM 2.5	N/A	N/A		 	

ı	. :	station	temperature	outside	manufacturer's	enacification	~ f . / 1	00
_				0 - 101-0	THE PROPERTY OF STREET	σουσφιμομισμοπ	OT 7/- 1	

Audit Performed by:	J. Scott
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^{2.} Ambient temperature outside manufacturer's specification of +/- 1°C



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	Smokey Heights
Approval No.	.: <u>N/A</u>	Smokey Heights	
GENERA		ned unchanged from previous au onditions adequate?	yES NO N/A X X X
DATA ACQUI	SITION		
	Are strip charts in use?	or data acquisition in use?	X
SYSTEM COM	Is a glass sampling mar. Is sampling manifold cl. Is a trap in place? Are spare manifold port. Is manifold mounted at Are manifold ports situated in the sample lines extend Are monitor sampling lines clear. Are monitors properly in the sampling lines clear.	ean? Is capped a slight downward angle? Interested to prevent water entering metry installed and operative? It least 3/4"into manifold? Interest connected to manifold? Interest and secure? Incounted and secure? Incounted from room or scrubbed	X X X X X X X X X X X X X X X X X X X
WIND EQUIPM	ŒNT		X
	Is wind equipment propo Does wind equipment ap	orly oriented? Opear to be functioning properly	7 X X
COMMENTS:	·	Manifold cleaned during aud	lit.
AUDITOR:	J. Scott	DAT	E: June 16, 2008

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 069A / 071A June 16, 2008 Performed by: J. Scott Station Name: Smokey Heights Location: Smokey Heights Facility/Zone: PASZA Operator: FOCUS Temp: Barometric Press: 700 mmHg Location Latitude N 55 23'47.8" Longitude W 118 16'51.3" Elevation 1011m Status of Site Documentation Good Manifold Material Good Manifold Condition Good Meteorological Observed Audit Value Wind Speed Direction 228.9 Deg 29 kph W 20 - 30 kph Station Temperature 28 C 22.96 C Relative Humidity ______N/A N/A Ambient Temperature 20.86 C 21.03 C Solar Radiation N/A N/A Precipitation N/A N/A Remarks:

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

		٠			File No.	2008 -	- 069A
Date	June 1	6, 2008	_ ,	Performed by: _		J. Scott	
Station	-						
	Smoke	/ Heights	-	Location:	Smoke	y Heights	
Facility/Zone	PA	SZA	_	Operator:	FO	cus	_
	Temp:	23	Baro	metric Press:	700 ı	mmHg	_
Monitor							
Make/Model:		Tec	o 43i	Serial No:	7011	20009	
Inlet flow (see				Full Scale Rar	ige ppm:	0.5	
Last cal. Date		May 2	3, 2008	Old C.F.	0.9	841	-
Zcro/Bkg							•
Span Coef	0.	712	-				
Calibrato		12					
Calibrat	ion Method:	GAS D	ILUTION	•			
N	lake/Model:	R&RM	FC 201	•	AMU#:	169	 1
	Cylinder #:	CLM (08622 Cyl. Conc PPM:		49	.7	
	alibrator Flo	w	Calculated	Indica	ted	% Diffe	rence
	(sccm)		Conc.	Concent	ration	vs	
Air	Gas	Total	(ppm)	(ppn	1)	Andit Gas	Limits
5547	0,00	5547	0,0000	0.001	4		
5125	38.61	5164	0.3716	0.368	6	-1.2%	± 15%
5134	18.13	5152	0.1749	0.174	9	-0.8%	± 15%
5092	9.08	5101	0.0885	980,0		-1.1%	± 15%
Linear Regre	ooio=	• ·- *	Absolute A	verage Percent	Difference	1.0%	
Emeat Vedic	ssion Anai	ysis:					
			y=mx+b (where x=calculate	ed concentrat	ion, y=indicated	concentration)
	Correlat	ion Cocff.=	1.0000		MITS		
		m (Slope)=	0.9882		0.995 85-1.15		
b (Interd	cept as % of	full scale)=	0.3163		3% F.S,		
					-/21.0,		
Remarks:							
				-		•	

Form No. F-AA-005 Version No. 1.1



TRS ANALYZER AUDIT

					File No.	2008 -	070A
Date:	June 16	3, 2008	_ 1	Performed by:		J. Scott	
Station	——————————————————————————————————————						
	Smokey	Heights	-	Location:	Smokey	/ Heights	•
Facility/Zone:	PAS	SZA	_	Operator:	FO	cus	
	Temp:	23	Barc	ometric Press:	700 n	nmHg	
Monitor							
Make/Model:		Tecc	o 43 C	Serial No:	4366	10004	
Inlet flow (sccr	· ·		'43	Full Scale Rang			
Last cal. Date:	F	May 2	3, 2008	Old C.F.			
Zero/Bkg	11.	6					
Span Coef	1.00	06	-				
Calibrator	r		•				
	-	CACD	" ! !***! O \ !				
	ion Method: _			-			
	lake/Model: _				AMU#:	169	
	Cylinder #:	UAL	4119	_ Cyl. (Conc PPM:	10.	0
Çr	alibrator Flow	N	Calculated	Indicate	ed	% Diffe	erence
	(sccm)		Conc.	Concentra	L	vs	
Air	Gas	Total	(ppm)	(ppm)		Audit Gas	Limits
5547	0.00	5547	0.0000	0.0004	1	MARKAGO A	
5126	37.63	5164	0.0729	0.0700)	-4.5%	± 15%
5135	17.33	5152	0.0336	0.0334	1	-1,9%	± 15%
5092	8.75	5101	0.0172	0.0173		-1.5%	± 15%
Lincer Boose	Amab		Absolute A	verage Percent	Difference	2.6%	
Linear Regres	SSION ANAIY	/SIS:				The state of the s	
			y=mx+b (wh	here x=calculated o	concentration MITS	ા, y=indicated co	oncentration)
	Correlati	ion Coeff.	0.9999).995		
		m (Slope)=			7.990 35-1,15		
b (Inter-	cept as % of f				3% F.S.		
					//U : .—.		
Remarks:							



ENLABONIMENT	TEOM A	וועט	
ENVIRONMENT		File No.	2008 - 071A
Date	: June 16, 2008	Performed by:	J. Scott
Station			
Name:	Smokey Heights	Location:	Smokey Heights
Facility/Zone:	PASZA	Operator:	FOCUS
Temp.	23.0 C	Barometric Press.	700 mmHg
Audit Transfer Standar	d		
Make/Model:	BIOS DC 2	Cell s/n:	106010
Serial Number:	105395	_	100010
Sampler Set-up and cur	rrent readings	F-Main Set Pt (1/min)	3.00
Make/Model	R&P 1400a	F-Aux Set Pt (I/min)	13.67
Unit # Control unit s/n	P.M. 2.5	Filter Load (%)	32
	140AB246340305	K _O Hactoří –	12122
Transducer s/n	140AB246340305	Temp (°C)	20.1
		Press (ATM)	0.923
Conversion from mm H	g or " Hg to AT	M (Atmospheres)	
ATM = $(mm Hg) X (1.3)$ Note: Tolerances are noted as B	OLD in Brackets	$\underline{\text{or}} \qquad \text{ATM} = (\text{"Hg}) \times (3.3)$	34207 X 10 ⁻²)
Note: Tolerances are noted as Barrier Sero flow	OLD in Brackets		,
Note: Tolerances are noted as B	OLD in Brackets Pum	p On (Time to reac	h set points)
Note: Tolerances are noted as Bacteria flow Pump Off	OLD in Brackets	ip On (Time to reac (45-60 Sec)_	h set points) 38
Note: Tolerances are noted as Boundary Zero flow Pump Off F-Main (I/min) F-Aux (I/min)	OLD in Brackets Pum 0.00	p On (Time to reac	h set points) 38
Note: Tolerances are noted as Boundary Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure	OLD in Brackets Pum 0.00 -0.01	ip On (Time to reac (45-60 Sec)_ (45-60 Sec)_	h set points) 38 45
Note: Tolerances are noted as Barace flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C)	OLD in Brackets Pum 0.00 -0.01	ip On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_	h set points) 38 45
Note: Tolerances are noted as Barriago flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM)	OLD in Brackets Pum 0.00 -0.01	op On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_	h set points) 38 45
Note: Tolerances are noted as Barre Sero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit	OLD in Brackets Pum 0.00 -0.01 20.5 0.921	ip On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_ Δ% from Set-point	h set points) 38 45 0.4 0.20%
Note: Tolerances are noted as Boundary Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68	op On (Time to reach (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_	0.4 0.20%
Note: Tolerances are noted as Barro flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68	op On (Time to reach (45-60 Sec)_ (45-60 Sec)_ Δ°C Δ% ATM_ Δ% from Set-point (± 2%)_ (± 2%)_	0.4 0.20% 0.0 % / 0.01% 0.01%
Note: Tolerances are noted as Barrian Sero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68	AP On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 1.0 l/min	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 lpm / 3.3%
Note: Tolerances are noted as Barre Sero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73	A°C	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%
Note: Tolerances are noted as Boundary Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73 Acti	On (Time to reach (45-60 Sec)	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%
Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73	A°C	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%
Note: Tolerances are noted as Boundary Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73 Acti	A°C_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_ (± 1.0 l/min (± 0.2 l/min 0.01	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%
Note: Tolerances are noted as Boundary Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min) Aux (< 0.15 I/min) Ko Factor Measured	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73 Acti 0.01 0.00	A°C	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%
Note: Tolerances are noted as B Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Leak Check Main (< 0.15 1/min) Aux (< 0.15 1/min)	OLD in Brackets Pum 0.00 -0.01 20.5 0.921 3.00 / 13.68 16.68 16.13 2.73 Acti	A°C_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_ (± 1.0 l/min (± 0.2 l/min 0.01	0.4 0.20% 0.0 % / 0.01% 0.01% 0.54 pm / 3.3% 0.27 LPM / 9.9%



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	Beaverlodge	_
Approval No.	: <u>N/A</u>	Site Name:	Beaverlodge	•
GENERA	L		YES NO	N/A
	Has the location remain	ed unchanged from previous aud	lit? X	T
	Is site secure?		X	
	Arc station operating co	onditions adequate?	X	
DATA ACQUIS	SITION			
	Are strip charts in use?		X	
	Is a telemetry system fo	r data acquisition in use?	X	
SYSTEM COM	PONENTS			
	Is a glass sampling man	ifold installed?	X	
	Is sampling manifold clo		X	
	Is a trap in place?		X	
	Are spare manifold ports	s capped	X	
		a slight downward angle?	$\frac{\hat{x}}{X}$	
	Are manifold ports situa	ted to prevent water entering mor	nitors? X	
	Is manifold pump proper	rly installed and operative?	X	
	Do sample lines extend a	at least 3/4"into manifold?	$\frac{\lambda}{X}$	=====
	Are monitor sampling lin	nes connected to manifold?	$\frac{\lambda}{X}$	
	Are sampling lines clean	?		-
	Are monitors properly m		X	
	Are monitors properly ex	chausted from room or scrubbed?		
	Arc zero and span systen	ns operational?	X X X	
WIND EQUIPM	ENT		<u> </u>	
	Is wind equipment prope	rly oriented?	V .	
	Does wind equipment ap	pear to be functioning properly?	X	
COMMENTS:				
-				
AUDITOR:	J. Scott	DATE.	June 17, 200)8

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 072A / 075A Date: June 17, 2008 Performed by: J. Scott Station Name: Beaverlodge Location: Beaverlodge Facility/Zone: PASZA Operator: FOCUS Temp: 24.5 C Barometric Press: 692mmHg Location Latitude N 55 11'46.7" Longitute W 119 23'50.7" Elevation 743m Status of Site Documentation Not on Site - completed Manifold Material Glass Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 290 Deg 7kph W 5-10kph Station Temperature N/A N/A Relative Humidity 56.70% 57.20% Ambient Temperature 14.9 C 14.7 C Solar Radiation N/A N/A Precipitation N/A N/A Remarks:

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					File No.	. 2008 -	· 072A
	June 1	7, 2008		Performed by:		J. Scott	
Station							
Name:	Beave	∍rlodge	_	Location:	Beave	e <u>rlodge</u>	
Facility/Zone:	PA	SZA		Operator:			
	Temp:	24.5 C	Baro	ometric Press: _	692n	nmHg	-
Monitor					***************************************		
Make/Model:			43i-TLE				
Inlet flow (sec	•		70	Full Scale Ran	ige ppm:	0.1	•
Last cal. Date:		May 12	2, 2008	Old C.F.	0,9	857	•
Zcro/Bkg	2.	54					
Span Coef	0.9	950	•				
Calibrato			•				
Calibrat	ion Method:	GAS D	ח וודו∩א				
V	Make/Model:	R&R M	MFC 201	-	A 7.AT T # +	180	24
	Cvlinder #:	SV-1	14616		AIVIU #	169 10.	37
			7010	• • • • • • • • • • • • • • • • • • • •	COMP 1 1 1111.		8
<u> </u>	alibrator Flor		Calculated	T. 4:			
~	(sccm)	w ,	Conc.			% Diffe	rence
Ait	Gas	Total	(ppm)	Concentr		VS Andit Gas	T :
5029	0.00	5029	0.0000	(ppm -0,000		Audit Gas	Limits
5043	32.61	5076	0.0694	0.068		-0.4%	± 15%
5103	18.06	5121	0.0381	0,038		0.3%	± 15%
5089	9.19	5098	0.0195	0.019	2	-0.4%	± 15%
t inner Dogge	*: - * 1		Absolute A	verage Percent		0.2%	. 101
Linear Regre	ssion Anai	ysis:			-		
			y=mx+b ((where x=calculate	ed concentrat	Jon, y=indicated	concentration)
	Correlat	tion Coeff.=	1.0000		IMITS		
		m (Slope)=			0.995		
b (Inter	cept as % of	tu (probe)-	0,9965 -0,1495		.85-1,15		
<u> </u>	>0p0 =0 ,0 0	Tun some,	*७,१५७७	3. ·	3% F.S.		
Remarks:							
				•			

Form No. F-AA-008 Version No. 1.1



NO-NOx-NO2 Analyzer Audit

	ENVIRONM	MENT	., .	107	1102	- <i>F</i> \ 1	atyz			072 4
		Date:	June 17,	2008			7)£4	File No.		- 073A
Statio	n.	Name:			- Door	- 1.4	Performe		-	Scott
	lity/Zone:	Name.	Beaverlodge PASZA	Location.		erlodge	Operator.		FOCUS	
Monito					_ Temp	۰, د	4.5 C	BP:	****	mmHg
MOINE	or:		Make/Model:		420	- .	Serial No		AMU 152	24
			et flow (sccm):		/ 85	_	Range ppm		1.0	
			Last cal. Date:	May i∠	2, 2008	_	Old C.F.'s			9849
		>≀^ Dlee	1.4	_				NOx:		9935
		NO Bkg NOx Bkg			_			NO2:	1.0	0223
		NOX BKg			_					
		NOx Coef			~					
		NO2 Coef		7 - 100	-					
			····		_					
	ation Met			Gas Di	ilution / C	GPT				
Calibra			Make/Model:	Sa	abio 201			- AMU#	17	749
	NO	cylinder#	CAL 01	3770	NO c	onc. ppn	50.0		conc. ppn	
r										
	Calibrato		Calc. C				Concentrat	ion	% Dif	ference
Air	Flows	***************************************	NO	NOx	NO	0	NOx		1	dit Gas
Air	Gas	Total	(ppm)	(ppm)		pm)	(pp	(m	NO NOx	
4825 4852	70.11	4825	0.0000	0.0000		0003	-0.0		<u> </u>	± 15%
4852	79.11 39.41	4931	0.8022	0.8070		78 1 7	0.78	346	-2.5%	-2.7%
4898	19.69	4933	0.3995	0.4018		3880	0.39		-2.8%	-2.8%
7000	13.05	4918	0.2002	0.2014		1938	0.19		-3.0%	-2.8%
					Absolute	e Averag	e Percent D	ifference	2.8%	2.8%
Linear	Regress	ion Analy	/ele:	·	14 A. A. A.	•				
_	114g	وبسبيد الحا	313.	<i>y≂mx</i> ⊣ NO	+b (wnen	e x=calcul. NOx	lated concen	tration, y=ir	ndicated coi	
		Сопте	lation Coeff.=	1.0000				NO ₂		LIMITS
		• *	m (Slope)=	0.9751		1.0000 0.9725	-	1.0000		≥ 0.995
	b (Inter	cept as % c	of full scale)=	-0.0943		-0.0340	-	1.0117		0.85-1.15
:					· · · · · · · · · · · · · · · · · · ·			-0.9093		± 3% F.S.
ļ	O ₃ Setting	Set	Flow	Indicated			NO	NO ₂	% Diff	erence
		Point	Rate	МО	NOx	NO ₂	Decrease	Increase	vs Aud	1
	0.00 V	$ \ge $	4931	0.7648	0.7693	0.0027	><		$\overline{\mathbb{Z}}$	%Dlf Limit
	0.75 V	\bowtie	4931	0.3881	0.7633	0.3749	0.3767	0.3722	-0.0119	± 15%
}	0.40 V		4931	0.5911	0.7613	0.1688	0.1737	0.1661	-0.0438	± 15%
į	0.20 V		4931	0.7087	0.7603	0.0507	0.0561	0.0480	-0.1444	± 15%
Conver	rter Efficie	anev			Absolute	Average	Percent D	ifference		
- ,			ter Efficiency							Military of the Company of the Compa
		30 00111011	or Editiciency_	93.3%						
Remark	(S: .					·*				
	-									



O₃ ANALYZER AUDIT

						File No.	2008 -	- 074A
	Date:	June 1	7, 2008	<u>.</u> :	Performed by:	;		
Γ	Station					7		
	Name:	Beave	arlodge	_	Location:	Beave	erlodge	
	Facility/Zone: PASZ		SZA		Operator:	FO	CUS	-
		Temp:	24.5 C	Bar	-	692n		<u>-</u>
Γ	Monitor			· · · · · · · · · · · · · · · · · · ·				
	Make/Model: Tec			49C	Scrial No:	AMU	1614	
	Inlet flow (seem):		737 /	/ 690		ange ppm:	0.5	•
	Last cal. Date:		May 13	3, 2008	Old C.F.	0.9	907	•
	Zero/Bkg	-0	1.2	•				•
	Span Coeff.	1.0)23	r				
	Calibrator							
		3.5 d 2	O - D0-4					
			Gas Díluti		-			
	NO cz	.C/IVIOGEI.	Sabio CAL 0	2010	- 3.50	AMU#:		
	110 09	Thiue, # .	UALU	13//0	_ NO conce	ntration ppm:	50	.0
		C	alibrator Flov	W	Calculated	Indicated	% Diff	erence
ı	Ozone		(sccm)		Conc.	Conc.	vs	
	Setting	Air	Gas	Total	(ppm)	(ppm)	Audit Gas	Limits
-	0.00V 0.75V	4931	>	4931	0.0000	0.0005	STATE STATE OF STATE	图1000年 0月10
	0.40V	4931	\Longrightarrow	4931	0.3767	0.3792	0.5%	± 15%
	0.20V	4931		4931	0.1737	0.1709	-1.9%	± 15%
ı	0.200	4931		4931	0.0561	0.0495	-12.7%	± 15%
	Linear Regressi	ion Anal	·	Absolute A	Average Perce	nt Difference	4.7%	企图的思想的
	Ellica, Magicasi	Oli Aliaiy						
				y=mx+b (w)		ed concentration	n, y=indicated c	oncentration)
		Correlat	tion Coeff.=	0.9998		LIMITS		
			m (Slope)=_	1.0127		≥ 0.995		
	b (Intercer	ot as % of	full scale)=	-0.7044	•	0.85-1.15 + 2% E.S		
_	` .			77.7 074		± 3% F.S.		
	Remarks:							
_								
_			-					



Alberta	TEOM AL	ווטנ	
ENVIRONMENT		File No.	2008 - 075A
Da	tc: June 17, 2008	Performed by:	J. Scott
Station			
Name:	Beaverlodge	Location:	Beaverlodge
Facility/Zone:	PASZA	Operator:	FOCUS
Temp.	24.5 C	Barometric Press.	692 mmHg
Audit Transfer Standa	ırd		
Make/Model:	BIOS DC 2	Cell s/n;	106010
Serial Number:	105395		
Sampler Set-up and c	urrent readings	F-Main Set Pt (1/min)	3.00
Make/Model	R&P 1400a	F-Aux Set Pt (1/min)	13.67
Unit #	P.M. 2.5	Filter Load (%)	34%
Control unit s/n	140AB252560407	K _O Factor	14237
Transducer s/n	140AB252560407	Temp (°C)	14.7
		Press (ATM)	0.913
Conversion from mm ATM = (mm Hg) X (1) Note: Tolerances are noted as Zero flow	.316 X 10 ⁻³)	M (Atmospheres) or ATM = ("Hg) X (3.3	4207 X 10 ⁻²)
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow	.316 X 10 ⁻³) BOLD in Brackets	<u>or</u> ATM = ("Hg) X (3.3	,
ATM = (mm Hg) X (1 Note: Tolerances are noted as	.316 X 10 ⁻³) BOLD in Brackets Pum	or ATM = ("Hg) X (3.3 op On (Time to reac	n set points)
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off	.316 X 10 ⁻³) BOLD in Brackets	or ATM = ("Hg) X (3.3 ap On (Time to reacle (45-60 Sec)_	h set points) 41
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01	or ATM = ("Hg) X (3.3 op On (Time to reac	h set points) 41
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01	or ATM = ("Hg) X (3.3 op On (Time to reacl (45-60 Sec) (45-60 Sec)	n set points) 41 53
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71	or ATM = ("Hg) X (3.3 op On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C	h set points) 41 53 0.01%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01	or ATM = ("Hg) X (3.3 op On (Time to reach	n set points) 41 53
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911	or ATM = ("Hg) X (3.3 op On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C	h set points) 41 53 0.01%
ATM = (mm Hg) X (1) Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65	or ATM = ("Hg) X (3.3 op On (Time to reach	0.01% 0.00% 0.00%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65	or ATM = ("Hg) X (3.3" IP On (Time to reach	0.01% 0.00% 0.00% 0.00%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 1.0 l/min	0.01% 0.00% 0.00% 0.00% 0.00% / 0.1% 0.10% 0.12 lpm / 0.3%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 1.0 l/min	0.01% 0.00% 0.00% 0.00%
ATM = (mm Hg) X (1) Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Measured Main Flow (1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55 2.76 Acti	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec)	0.01% 0.20% 0.00% 0.10% 0.12 lpm / 0.3% 0.24 lpm / 8.7%
ATM = (mm Hg) X (1) Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Leak Check Main (< 0.15 1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55 2.76 Actrophysical	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec) (45-60 Sec) \delta \delta \delta ATM \delta \delta ATM \delta \delta ATM (\pm Set-point (\pm 2%) (\pm 2%) (\pm 2%) (\pm 0.2 l/min \delta 0.2 l/min \delta 0.01	0.01% 0.20% 0.00% 0.10% 0.10% 0.12 lpm / 0.3% 0.24 lpm / 8.7%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Leak Check Main (< 0.15 1/min) Aux (< 0.15 1/min)	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55 2.76 Acti	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec)	0.01% 0.20% 0.00% / 0.1% 0.10% 0.12 lpm / 0.3% 0.24 lpm / 8.7%
ATM = (mm Hg) X (1 Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Measured Main Flow (1/min) Leak Check Main (< 0.15 1/min) Aux (< 0.15 1/min) Ko Factor Measured	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55 2.76 Actr 0.00 0.07	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec) (45-60 Sec) \delta \delta \delta ATM \delta \delta ATM \delta \delta ATM (\pm Set-point (\pm 2%) (\pm 2%) (\pm 2%) (\pm 0.2 l/min \delta 0.2 l/min \delta 0.01	0.01% 0.20% 0.00% 0.10% 0.12 lpm / 0.3% 0.24 lpm / 8.7%
ATM = (mm Hg) X (1) Note: Tolerances are noted as Zero flow Pump Off F-Main (1/min) F-Aux (1/min) Temperature/Pressur Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (1/min) Total Flow = Main + Aux (1/min) Measured Total Flow (1/min) Measured Main Flow (1/min) Measured Main Flow (1/min) Leak Check Main (< 0.15 1/min) Aux (< 0.15 1/min) Ko Factor	.316 X 10 ⁻³) BOLD in Brackets Pum 0.01 0.01 e 14.71 0.911 3.00 / 13.65 16.65 16.55 2.76 Actrophysical	or ATM = ("Hg) X (3.3 pp On (Time to reach (45-60 Sec) (45-60 Sec) \delta \delta \delta ATM \delta \delta ATM \delta \delta ATM (\pm Set-point (\pm 2%) (\pm 2%) (\pm 2%) (\pm 0.2 l/min \delta 0.2 l/min \delta 0.01	0.01% 0.20% 0.00% / 0.1% 0.10% 0.12 lpm / 0.3% 0.24 lpm / 8.7%



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	pirit River
Approval No.	N/A	Rover	
GENERAL			YES NO N/A
		ed unchanged from previous audit?	X
	Is site secure?		X
	Are station operating con	nditions adequate?	X
DATA ACQUIS	SITION		
	Are strip charts in use?		X
	Is a telemetry system for	data acquisition in use?	X
SYSTEM COM	PONENTS		
	Is a glass sampling mani	fold installed?	X
	Is sampling manifold cle		
	Is a trap in place?		X
	Are spare manifold ports	capped	X
	Is manifold mounted at a	slight downward angle?	X
		ted to prevent water entering monitor	
		ly installed and operative?	X
		at least 3/4"into manifold?	X
		es connected to manifold?	X
	Are sampling lines clean		X
	Are monitors properly m	ounted and secure?	X
	Are monitors properly ex	thausted from room or scrubbed?	X
	Are zero and span systen		X
WIND EQUIPM	<i>IENT</i>		
2	Is wind equipment prope	rly oriented?	X
		pear to be functioning properly?	X
COMMENTS:			1 1
AUDITOR:	J. Scott	DATE:	June 17, 2008

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 076A / 079A Date: June 17, 2008 Performed by: J. Scott Station Name: Location: Spirit River Rover Operator: FOCUS Facility/Zone: PASZA Barometric Press: 704 mmHg Temp: 22.5C Location Latitude N 55 48'41.0" Longitute W 118 51'53.9" 592m Elevation Status of Site Documentation On site - good Manifold Material Glass Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 298 Deg 5.5 kph NW 5-10 kph Station Temperature 31 C 28.14 C Relative Humidity _____ 66.30% 56.54% Ambient Temperature 14.0 C 16.42C Solar Radiation N/A N/A Precipitation N/A N/A Remarks:

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					Filc No.	2008 -	- 076A
	June 1	17, 2008		Performed by:		J. Scott	
Station							
Name:	Rc	over	_	Location:	Spirit	River	
Facility/Zone:	PA	SZA		Operator: FOCUS			•
	Temp: 22.5C			ometric Press: _		****	•
Monitor				722.00.20		Hitti iğ	
Make/Model:		Too	o 43C				
	100			_Serial No:			
Last cal. Date:	,		12 2008	Full Scale Ran			-
and the second of the database		June 1	12, 2008	_Old C.F	7.0	039	
Zero/Bkg	7	7.9			1		
Span Coef	-	137	•				
Calibrator			•				
		GAS DI		_			
IV.	lakc/Model:	R&R M	FC 201	_	AMU#;	169	∍ 1
,	Cylinder #:	CLM 0	MFC 201 AMU # ; 008622 Cyl. Conc PPM:			49.	
			E				
C	alibrator Flo	w	Calculated	Calculated Indicated		% Diffe	
	(sccm)		Conc.	Concentr		VS VS	gence
Air	Gas	Total	(ppm)	(ppm		Audit Gas	Limits
5105	0,00	5105	0,0000	0,000		110	Littorio
5123	38.39	5161	0,3697	0.358		-3.1%	± 15%
5128	18.19	5146	0.1757	0.170		-3.2%	± 15%
5106	9,16	51 1 5	0.0890	0.086	38	-2.5%	± 15%
I incar Boom		-	Absolute A	Average Percent	Difference	2.9%	
Linear Regres	ssion Anai	ysis:			-		
			y=mx+b ((where x=calculate	ed concentrati	ion, y=indicated	concentration)
	O=a1a	· * ~ ~		Li	IMITS		
		tion Coeff.=	1.0000		0.995		
h /Inter	به من المام الم	m (Slope)=	0.9684		85-1.15		
n (musit	cept as % of	full scale)=_	0.0398	土	3% F.S.		
					-		
Remarks:							
-							

Form No. F-AA-005 Version No. 1.1



TRS ANALYZER AUDIT

Date:June 17, 2008 Performed by: J. Sc Station	Scott
Name: Rover Location: Spirit River	er
Facility/Zone: PASZA Operator: FOCUS	
Temp: 22.5C Barometric Press: 704 mmHg	lg
Monitor	
Make/Model: <u>Teco 43C</u> Serial No: 609716238	ıΩ
T-1-4 (1-1)	
Last cal. Date: June 13, 2008 Old C.F. 0.971	-
Zero/Bkg 9.0	
Span Coef 1.454	
Calibrator	
Calibration Method: GAS DILUTION	
Make/Model: R&R MFC 201 AMU #:	1691
	1691 10.0
Make/Model: R&R MFC 201 AMU # :	1691 10.0
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM:	1691 10.0
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calibrator Flow Calculated Indicated	1691 10.0
Make/Model: R&R MFC 201 AMU #: Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow Calculated Indicated (sccm) Conc. Concentration visualization (sccm) Conc.	10.0
Make/Model: R&R MFC 201 Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow (sccm) Conc. Concentration Conc. Conc. Concentration Conc. Co	% Difference vs dit Gas Limits
Make/Model: R&R MFC 201 AMU#: Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow (scem) Calculated (scem) Indicated (scentration) Vyl. Conc (scentration) Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005	% Difference
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calculated (sccm) Indicated (concentration) Over the concentration (ppm) Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5181 0.0721 0.0732 0.9	% Difference vs dit Gas Limits 0.9% ± 15%
Make/Model: R&R MFC 201 AMU#: Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow (sccm) Calculated Conc. Indicated Concentration (ppm) Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5161 0.0721 0.0732 0.9 5129 17.25 5146 0.0335 0.0349 2.6	% Difference vs dit Gas Limits
Make/Model: R&R MFC 201 AMU#: Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow (sccm) Calculated Conc. Indicated Concentration (ppm) Concentratio	% Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15%
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calculated (scern) Indicated (procentration) 9 Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5181 0.0721 0.0732 0.9 5129 17.25 5146 0.0335 0.0349 2.6 5106 8.77 5115 0.0171 0.0178 0.9 Absolute Average Percent Difference 4.6	% Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15%
Make/Model: R&R MFC 201 AMU#: Cylinder #: CAL 4119 Cyl. Conc PPM: Calibrator Flow (sccm) Calculated Conc. Indicated Concentration (ppm) Concentratio	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calculated (sccm) Indicated (sccm) 9 Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5161 0.0721 0.0732 0.9 5129 17.25 5146 0.0335 0.0349 2.6 5106 8.77 5115 0.0171 0.0178 0.9 Absolute Average Percent Difference 1.5 Linear Regression Analysis:	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%
Calibrator Flow Calculated Indicated Cyl. Conc PPM: Cyl. Conc PPM: Cyl. Conc P	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calculated (sccm) Indicated (sccm) 9 Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5161 0.0721 0.0732 0.9 5129 17.25 5146 0.0335 0.0349 2.6 5106 8.77 5115 0.0171 0.0178 0.9 Absolute Average Percent Difference 1.5 Limits Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0092 0.85-1 1.5	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%
Make/Model: R&R MFC 201 AMU # : Cylinder # : CAL 4119 Cyl. Conc PPM: Calculated (sccm) Indicated (concentration) Cyl. Conc PPM: Air (sccm) Conc. (concentration) Concentration Concentration Cyl. Conc PPM: Air (sccm) Conc. (concentration) Concentration Cyl. Conc PPM: Air (sccm) Conc. (concentration) Concentration Concentration Cyl. Conc PPM: Air (sccm) Conc. (concentration) Concentration Concentration Concentration Concentration Concentration Concentration Concentration Concentration Cyl. Concentration	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%
Make/Model: R&R MFC 201 AMU#: Cyl. Conc PPM: Calibrator Flow (secm) Calculated Indicated (secm) Air Gas Total (ppm) (ppm) Audit 5105 0.00 5105 0.0000 0.0005 5124 37.20 5161 0.0721 0.0732 0.9 5129 17.25 5146 0.0335 0.0349 2.6 5106 8.77 5115 0.0171 0.0178 0.9 Absolute Average Percent Difference 1.5 Limits Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0092 0.85-1.15	10.0 % Difference vs dit Gas Limits 0.9% ± 15% 2.6% ± 15% 0.9% ± 15% 1.5%



Alberta NO-NOx-NO2 Analyzer Audit

	ENVIRONM	IENT			1102	- / \	atyz			050 4	
		Date:	June 17	7 3 000			4	File No		- 078A	
						Performe			Scott		
	n: ity/Zone:	Name:	Rover	Location		it River	Operator		FOCU		
			PASZA		_ Tem p	. 2	2.5 C	BP	:704	mmHg	
			Make/Model:		o 42i		Serial No),	7011200	11	
			t flow (sccm)		/ OK	_ _	Range ppm		0.5		
			Last cal. Date:	<u>June 1</u>	2, 2008	-	Old C.F.'s	NO.	: 0.9	9837	
37A 191				_				NQx:	0.9	9853	
NO Bkg					-			NO2	1.0	0055	
		NOx Bkg NO Coef			-						
		NOx Coef			_						
		NO2 Coef			-						
			1.00	71							
	ation Met			Gas D	ilution / (GPT					
Calibra			Make/Model:		abio 201	0	***	- AMU#	ŧ 1 [.]	749	
	NQ	cylinder#	CAL 0	1370	NO c	onc. ppn	1 50.0	_ NOx	conc. ppr		
	Calibrate				,						
	Flows	or	Calc. C					Concentration		% Difference	
Air	Gas	Total	NO	NOx	NO NOx			vs Audit Gas			
4885	0.00	4885	(ppm)	(ppm)		pm)	(pp		NO	NOx	
4891	39.88	4931	0.0000 0.4044	0.0000	0.0001 0.0002				± 15%		
4907	19.89	4927	0.2018	0.4068 0.2031		3972	0.40		-1.8%	-0.4%	
4901	9.88	4911	0.1006	0.1012		2004	0.20		-0.8%	0.9%	
		<u> </u>	0.1000	0.1012		998 9 Avers	e Percent D		-0.9%	0.8%	
					7.000(00	e waeing	e Percent L	illerence	1.2%	0.4%	
Linear	Regressi	ion Analy	sis:	y=mx	+b (wher	e x≅celcul	lated concen	tration col	ndiantad		
				NO	,	NOx	W.CO. 00/100//	NO ₂	nuicateu co	LIMITS	
		Correla	ation Coeff.=	1.0000		1.0000		1.0000		≥ 0.995	
			m (Slope)=	0.9818		0.9955	•	0.9932		0.85-1.15	
	b (Inter	cept as % o	f full scale)=	0.1773		0.2465	•	1.2298		± 3% F.S.	
	O ₃	Set	Flow	Indicated	Cone (r		NO		4		
	Setting	Point	Rate	NO	NO _x	NO ₂	NO	NO ₂		ference	
f	0.00V		4931	0.3947			Decrease	Increase		lit Gas	
	0.60V		4931	0.0893	0.4013	0.0075		$\geq \leq$		%Dif Limit	
	0.30V		4931	0.2810	0.4055	0.3168	0.3054	0.3093	1.28%	± 15%	
	0.15V		4931	0.3630	0.4065	0.1272	0.1137	0.1197	5.28%	± 15%	
_							Percent D	0.0372	17.35%	± 15%	
Conver	ter Effici				. roborate	riverage	s r effetti D	merencel	7.97%		
	Averag	ge Converte	er Efficiency_	108.0%							
Remark											
	-										

Form No. F-AA-009 Version No. 1.1



O₃ ANALYZER AUDIT

					File No	. 2008 -	079A
Date:	June 1	7, 2008	-	Performed by:		J. Scott	
Station							
Name:	R	over	_	Location:	Spiri	t River	
Facility/Zone:	Facility/Zone: PASZA			Operator:			
	Temp:	22.5C	- Ba:	rometric Press:			•
Monitor						~	
Make/Model:		Tecc	49C	Serial No.	6007	46040	
				Serial No. Full Scale R.	6097	0.5	•
Last cal. Date:				Old C.F.	ange ppm. 1.0	196	,
Zero/Bkg	0	0					
Span Coeff.	1.1	.0 38	•				
Calibrato			·				
Calibrat	ion Method;	Gas Dilut Sabio CAL 0	tion / GPT 2010 13770	NO conce		174 50.	
	C	alibrator Flo	w	Calculated	Indicated	n/ Diec	
Ozone	·	(seem)	"	Conc.	Сопс.	% Diffe	rence
Setting	Air	Gas	Total	(ppm)	(ppm)	Audit Gas	Limits
0.00V	4931	$\geq \leq$	4931	0.0000	0.0017	14.00	Dan Albandes
0.75∨	4931	$\geq \leq$	4931	0.3767	0.3866	2.2%	± 15%
0.40V	4931	$\geq \leq$	4931	0.1709	0.1742	0.9%	± 15%
0.20V	4931	$\geq \leq$	4931	0.0495	0.0523	2.2%	± 15%
Linear Regre	ssion Anal	veie:	Absolute	Average Perce	nt Difference	1.8%	探探影影 为
	JOIOII AIIGI	yaia.	v=mx+b (v	vhere x=calculate	ad concentratio	n veindinated a	•
					LIMITS	n, y-mulcateu co	лісепцацоп)
		ion Coeff.=	1.0000		≥ 0.995		
1 (7		m (Slope)=	1.0212		0.85-1.15		
b (Inter	cept as % of	full scale)=	0.2521	;	± 3% F.S.		
Remarks:							
remarks.							



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	Henry Pirker	
Approval No.:	N/A	Site Name:	Henry Pirker	
GENERAL	Has the location remained	1 unchanged from previous audit?		VA
	Is site secure?	a differentiating and the contract and the	X	
	Are station operating con	ditions adequate?	X	
DATA ACQUISI	TTION			
	Are strip charts in use?		X	
	Is a telemetry system for	data acquisition in use?	X	
SYSTEM COMP	CONENTS			
	Is a glass sampling manif	old installed?	X	
	Is sampling manifold clea	m?	X	
	Is a trap in place?		X	
	Are spare manifold ports	capped	X	
	Is manifold mounted at a	slight downward angle?	X	
	Are manifold ports situate	ed to prevent water entering monito	ors? X	
	Is manifold pump properly		X	
	Do sample lines extend at	least 3/4"into manifold?	X	-
	Are monitor sampling line	es connected to manifold?	X	-
	Are sampling lines clean?		X	
	Are monitors properly mo	unted and secure?	X	·
	Are monitors properly ext	austed from room or scrubbed?	X	
	Are zero and span system		X	
WIND EQUIPM	ENT			
	Is wind equipment proper	ly oriented?	X	
	Does wind equipment app	ear to be functioning properly?	X	
COMMENTS:				
•				
IUDITOR:	J. Scott	DATE:	June 18, 2008	8

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 080A / 086A Date: June 18, 2008 Performed by: J. Scott Station Name: Henry Pirker Location: Grande Prairie Facility/Zone: PASZA Operator: FOCUS Temp: 20.0 C Barometric Press: 700 mmHg Location Latitude N 55 10'37.1" Longitute W 118 48'26.7" Elevation 650 m Status of Site Documentation Good Manifold Material Glass Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 204 3 Deg 6.6 kph SSW 5-10 kph Station Temperature 30 C 24.19C Relative Humidity 42.80% 37,76% Ambient Temperature 19.3C 18.88C Solar Radiation _____742.3 Sunny with scattered clouds 1317mst Precipitation N/A N/A Remarks:

Form No. F-AA-002 Version No. 1.1



CO ANALYZER AUDIT

					File No.	2008 -	080A	
	June 18	3, 2008	P	Performed by:		J. Scott		
Station								
Name:	Henry I	Pirker	-	Location:	Grande	Prairle		
Facility/Zone:	PA\$	ZA	-	Operator:	FOO	cus		
	Temp:_	20.0 C	Baro	ometric Press:	700 m	ımHg		
Monitor	F **					-		
Make/Model:	-			Serial No:				
Inlet flow (scem): Last cal. Date:	_		32	Full Scale Rang	ge ppm:	50.0		
Lasi Cai, Daic;	-	June s	1, 2008	Old C.F.	1.00)03		
Zero/Bkg,	1.72	25						
Span Coeff.	1.0	17	•					
Calibrator					~			····
Mak	e/Model: _	Gas D R&R M FF 1	FC 201	СО concentr	AMU#:	169 252	91 20	
	rator Flow	<i>'</i>	Calculated	Indicate	ed	% Diffe	rence	\Box
Air	(sccm)	70 4-1	Conc.	Concentr		vs		
2989	Gas	Total	(ppm)	(ppm		Audit Gas	Limits	
2978	0.00	2989	0.00	0.17				忠.
2984	50.55 22.63	3029	42,06	41.66		-1.3%	± 15%	4
2970	9.10	3007 2979	18.96 7.70	18.77		-1.9%	± 15%	4
20,0	5.10	29/9		7.62 Average Percent		-3.2%	± 15%	
Linear Regress		vsls; on Coeff.=		here x=calculated (LI	concentration MITS		oncentration))
·		n (Slope)=	0.9877		0.995 PE 4 4E			
b (Intercep			0.1728		85-1.15 3% F.S.			
					-/u T .O.			
Remarks:							- commoding	

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					File No.	2008 -	081A			
Date:	June 18	3, 2008	_ F	erformed by:		J. Scott				
Station										
Name:	Henry	Pirker	_	Location:	Location: Grande Prairie					
Facility/Zone:	PAS	ZA	_	Operator:	FO	cus	_			
	Temp:	20.0 C	Ваго	metric Press:	700 r	nmHg	_			
Monitor							-			
Make/Model:		Tec	43C	Serial No:	A Nat i	1702				
Inlet flow (see	m):		95	Full Scale Rai	AIVIU	0,5	-			
Last cal. Date:				Old C.F.	υ σ γεε δίλου:	830	-			
	-		., ~~~		0.9	000	-			
Zero/Bkg	7.	5								
	0.8		•							
Calibrato			-							
	on Method:			•						
	lake/Model:			•	AMU#:	169 49	91			
	Cylinder # :	ÇLM (008622	. Cyl.	Conc PPM:	49	.7			
C	alibrator Flov	y	Calculated	Indicated		% Diff	erence			
	(sccm)		Conc.	Concent		V\$	C.C.I.C.C			
Air	Gas	Total	(ppm)	(ppn		Audit Gas	Limits			
5036	0.00	5036	0.0000	0.00			297.0.0			
5071	37.52	5109	0.3650	0.369		1,2%	± 15%			
5087	18.03	5105	0.1755	0.174		-0.6%	± 15%			
5056	9.02	5065	0.0885	0,088		0.2%	± 15%			
			Absolute A	verage Percent	Difference	0.3%	2 107			
Linear Regre	ssion Analy	/sis:		-	•		J			
			y=mx+b (where x=calcular	ted concentrat	ion, y=indicated	concentration)			
					IMITS					
		on Coeff.=	1.0000	≳	0.995					
4 /	1	n (Slope)=	1.0121	0	.85-1.15					
b (Inter	cept as % of i	ull scale)=	-0.2068	±	3% F.S.					
.										
Remarks:										
Remarks:							i			

Form No. F-AA-005 Version No. 1.1



TRS ANALYZER AUDIT

						File No	2008 -	· 082A
	Date:	June 1	8, 2008	_ F	Performed by:		J. Scott	
5	Station					***************************************		<u> </u>
	Name:	Henry	Pirker	_	Location:	Grande F	Prairie	
I	Facility/Zone: PASZA				Operator:	FOCI	JS	-
	Temp:		20.0 C				•	
	Monitor							•
	/ake/Model:		Tec	450	Serial No:	AN#1141	711	
	nlct flow (scen		59	Full Scale Rang	ANIO I	<u>/44</u> ∩ 1	•	
	ast cal. Date:	•		3, 2008	Old C.F.	1.019	95	•
	70-0/Dlea	45	7.0					•
	Span Coef	17 0.8	.9 171	-				
			7/ 1					
•	Calibrator			1				
	Calibratio	on Method:	GAS D	ILUTION				
	M	ake/Model:	GAS D R&R M	FC 201	•	AMU#:	169	91
	(Cylinder#:	CAL	4119	Cyl. Ç	onc PPM:	10	
					*			
	Ca	librator Flo	w	Calculated	Indicate	a l	% Diff	
L		(sccm)		Conc.	Concentra	_	200000	erence
	Air	Gas	Total	(ppm)	(ppm)		vs Audit Gas	Limits
	5036	0.00	5036	0.0000	-0.0011		KUMMANUSUSA	Diffic
L	5072	36.75	5109	0.0719	0.0725		2.3%	± 15%
L	5088	17.35	5105	0.0340	0.0335		1.8%	± 15%
L	5056	8.74	5065	0.0173	0.0164		1.4%	± 15%
					verage Percent I			
L,	inear Regres	sion Anal	ysis:		Ũ			BHH AND A SHADOW THE SERVICE OF THE
				y=mx+b (wl	here x≒calculated c	oncentration, y	v≕indicated c	oncentration)
				•		AITS	- ((E) # E E E E	onooni allony
			ion Coeff.=		≥ 0	.995		
			m (Slope)=	1.0237		5-1.15		
	b (Intere	ept as % of	full scale)=	-1.1994		% F.S.		
R	emarks:							-
				.,0				

Form No. F-AA-006 Version No. 1.1

HC ANALYZER AUDIT

Date: June 18, 2008 Performed by: J. Scott						File No.	2008	· 083A
Name: Henry Pirker Location: Grande Prairie	Date:	June 18	3, 2008	1	Performed by:		J. Scott	
Facility/Zone: PASZA Operator: FOCUS Temp: 20.0 C Barometric Press: 700 mmHg	Station							
Temp: Z0.0 C Barometric Press: T00 mmHg	Name: Henry Pirker			-	Location:	Grande	Prairie	
Nonitor Make/Model: Teco 51 - LT Serial No: 79009390 Total Sabio 2010 AMU # : 1749	Facility/Zone:	Facility/Zone: PASZA						•
Monitor Make/Model: Teco 51 - LT Serial No: 79009390 Inlet flow (sccm): N/A Full Scale Range ppm: 25.0 Last cal. Date: June 6, 2008 Old C.F. 1.0268 Calibrator Calibration Method: Gas Dllution AMU #: 1749 HC cylinder #: SV-10993 HC concentration ppm: 991 Calibrator Flow (sccm) Calculated Indicated Concentration vs Vs Air Gas Total (ppm) (ppm) (ppm) 2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2937 14.79 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% LIMITS Limits Limits<	Termy		20.0 C Baro					•
Nake/Model: N/A Full Scale Range ppm: 25.0		remp.	20.0 C	Baro	ometric Press:	700 n	nmHg	
Calibrator Calibrator Flow Calculated Concentration								
Calibrator Concentration Concentra		m).	l eco :	51 - LT				•
Calibrator Calibrator Sabio 2010 AMU # : 1749						ge ppm:	25.0	•
Calibration Method: Sabio 2010 AMU #: 1749 HC cylinder #: SV-10993 HC concentration ppm: 991 Calibrator Flow (sccm) Calculated Indicated % Difference Conc. (sccm) Conc. Concentration vs Air Gas Total (ppm) (ppm) Audit Gas Limits 2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% Absolute Average Percent Difference 3.5% ± 15% Limear Regression Analysis: V=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 M (Slope)= 1.0364 0.85-1.15 ± 3% F.S.		-	June	J, 2006		1.07	268	
Calibration Method: Sabio 2010 AMU #: 1749 HC cylinder #: SV-10993 HC concentration ppm: 991 Calibrator Flow (sccm) Calculated Indicated % Difference Conc. (sccm) Conc. Concentration vs Air Gas Total (ppm) (ppm) Audit Gas Limits 2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% Absolute Average Percent Difference 3.5% ± 15% Limear Regression Analysis: V=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 M (Slope)= 1.0364 0.85-1.15 ± 3% F.S.								
Make/Model: Sabio 2010 AMU#: 1749 HC cylinder #: SV-10993 HC concentration ppm: 991 Calibrator Flow (sccm) Calculated Conc. Concentration vs (ppm) Vs (ppm) Limits Air Gas Total (ppm) (ppm) Audit Gas Limits 2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% ± 15% Limear Regression Analysis: V=mx+b (where x=calculated concentration, y=indicated concentration) LiMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.	Calibrato							
Make/Model: Sabio 2010 AMU#: 1749 HC cylinder #: SV-10993 HC concentration ppm: 991 Calibrator Flow (sccm) Calculated Conc. Concentration vs (ppm) Vs (ppm) Limits Air Gas Total (ppm) (ppm) Audit Gas Limits 2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% ± 15% Limear Regression Analysis: V=mx+b (where x=calculated concentration, y=indicated concentration) LiMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.	Calibrat	ion Method:_	Gas D	llution				
Calibrator Flow (sccm) Calculated Indicated % Difference (sccm) Conc. Concentration vs Air Gas Total (ppm) (ppm) Audit Gas Limits	N	fake/Model:	Sabio	2010		AMU#:	174	49
$ \begin{array}{ c c c c c } \hline Calibrator Flow & Calculated & Indicated & \% Difference \\ \hline (sccm) & Conc. & Concentration & vs \\ \hline Air & Gas & Total & (ppm) & (ppm) & Audit Gas & Limits \\ \hline 2937 & 0.00 & 2937 & 0.00 & 0.05 & & & & \\ \hline 2925 & 59.14 & 2984 & 19.64 & 20.40 & 3.6\% & \pm 15\% \\ \hline 2922 & 29.55 & 2952 & 9.92 & 10.33 & 3.6\% & \pm 15\% \\ \hline 2937 & 14.79 & 2952 & 4.97 & 5.18 & 3.3\% & \pm 15\% \\ \hline 2937 & 14.79 & 2952 & 4.97 & 5.18 & 3.3\% & \pm 15\% \\ \hline & Absolute Average Percent Difference & 3.5\% & & & \\ \hline Linear Regression Analysis: & & & & & \\ \hline & & & & & & & \\ \hline & & & &$	HC	cylinder#:	SV-1	0993	HC concentr	ation ppm:	99	1
Conc. Concentration Vs Audit Gas Limits								
Conc. Concentration Vs Audit Gas Limits								
Conc. Concentration Vs Audit Gas Limits	¢	alibrator Flov	y	Calculated	Indicated		% Difference	
2937 0.00 2937 0.00 0.05 2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% Absolute Average Percent Difference 3.5% Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.				Conc.	1	į.		MONOC.
2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.			Total	(ppm)	(ppm)	Audit Gas	Limits
2925 59.14 2984 19.64 20.40 3.6% ± 15% 2922 29.55 2952 9.92 10.33 3.6% ± 15% 2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% Absolute Average Percent Difference 3.5% Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.				0.00	0.05			相關制造器的图象
2937 14.79 2952 4.97 5.18 3.3% ± 15% Absolute Average Percent Difference 3.5% Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 ≥ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.				19.64	20.40			
Absolute Average Percent Difference 3.5% Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 \$\infty\$ 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 \$\pm\$ 3.3% \$\pm\$ \$\pm\$ 15% Absolute Average Percent Difference 3.5% LIMITS 0.85-1.15 \$\pm\$ \$\pm\$ (Slope)= 1.0364 \$\pm\$ 0.85-1.15 \$\pm\$ \$\pm\$ (Intercept as % of full scale)= 0.1783					10.33		3.6%	± 15%
Linear Regression Analysis: $y=mx+b$ (where x=calculated concentration, y=indicated concentration) LIMITS Correlation Coeff.= 1.0000 \geq 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 \pm 3% F.S.	2837	14.79	2952					
$y=mx+b (where \ x=calculated \ concentration, \ y=indicated \ concentration)$ $LIMITS$ $Correlation \ Coeff.= $	Linear Regre	ssion Analy	eic.	Absolute A	iverage Percent	Difference _[3.5%	以外
Correlation Coeff.= 1.0000 \geq 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 \pm 3% F.S.		ovivii Allaly	313.	v=mv+b /wb	iaro venente dete d			
Correlation Coeff.= 1.0000 \geq 0.995 m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 \pm 3% F.S.				y-mx+u (w.			, y≕indicated çç	ncentration)
m (Slope)= 1.0364 0.85-1.15 b (Intercept as % of full scale)= 0.1783 ± 3% F.S.		Correlati	on Coeff.=	1.0000				
b (Intercept as % of full scale)= 0.1783 ± 3% F.S.		X	n (Slope)=	1,0364				
	b (Inter	cept as % of f	ull scale)=	0.1783		· -		
Remarks:								
	Remarks:							
					_			



ENVIRONMENT		110-1	NOX-		' An	alyze	er A	uait			
					File No			. <u>2008 - 084A</u>			
		Date:				-	J. \$	Scott			
Statio		Name:	Henry Pirker Location:		Grand	Grande Prairie Operator:			FOCUS		
Facil	ity/Zone:		PASZA			Temp. 20.0 C BP		: 700 mmHg			
Monitor: Make/Mo			Make/Model:	Tecc	42C		Serial No		AMU 165	58	
			t flow (sccm):						0.5		
		J	Last cal. Date:	June 4	, 2008		Old C.F.'s		9.0	846	
						_		NÓx		858	
		NO Bkg						NO2	1.0	075	
		NOx Bkg			_						
		NO Coef NOx Coef			_						
		NO2 Coef			_						
	·		1.00	<i>7</i> 0							
	ation Met	hod:		Gas D	ilution / (3PT					
Calibra			Make/Model:		abio 201	0		- AMU#	17	' 49	
	NO	cylinder#	CAL 01	3770	NO c	onc. ppm	50.0	NOx	conc. ppn	i 50.3	
	C 11									**********	
	Calibrate)T	Calc. C		Indicated Concentration				% Difference		
Air	Flows Air Gas Total		NO (===)	NOx	i b		NOx			Audit Gas	
4826	0.00	4826	(ppm)	(ppm)		pm)	(ppm)		NO NOx		
4851	39.58	4891	0.0000 0.4046	0.0000	·	0005	0.0006		Limit -0.1%	± 15%	
4888	19.75	4908	0.2012	0.4070 0.2024		1047		0.4106		0.7%	
4895	9.90	4905	0.1009	0.1015		028	0.20		0.8%	1.8%	
	•		<u> </u>	0.1010			e Percent D		1.4% 0.7%	2.5%	
						o i t v di li E		ATTOTOTOG	0.776	1.7%	
Linear	Linear Regression Analysis: y=mx+b (where x=calculated concentration, y=indicated concentration)										
				NO	•	NOx		NO ₂		LIMITS	
		Correl	ation Coeff =	1.0000	1.0000 1.0000			≥ 0.995			
	In (Taxaa)	57	m (Slope)=	0.9982	-	1.0063		1.0008	•	0.85-1.15	
2	b (Intercept as % of full scale)=		0.2958	•	0.3567	=	-0.3312		± 3% F.S.		
	О,	Set	Flow	Indicated	Conc. (r	(mag	NO	NO _z	% Diff	PTANCA	
	Setting	Point	Rate	NO	NOx	NO ₂	Decrease	Increase	vs Au		
	V 00.0	><	4891	0.4017	0.4097	0.0078			10214		
	0.60 V	><	4891	0.0904	0.4076	0.3177	0.3113	0.3099	-0.4497%	%Dif Limit ± 15%	
	0.30 V	$\geq <$	4891	0.2802	0.4078	0.1277	0.1215	0.1199	-1.3169%	± 15%	
	0.15 V	$\geq \leq$	4891	0.3645	0.4077	0.0434	0.0372	0.0356	-4,3011%	± 15%	
Conver	4au E85 . 1				Absolute	Average	Percent D	ifference	-0.0202	群岛加强的	
Collast	ter Effici		T.07 1					,		DOCUMENTS OF STREET	
		ge Convert	er Efficiency_	98.0%							
Remark	s:										
								•			

Form No. F-AA-009 Version No. 1.1



O₃ ANALYZER AUDIT

					File No	2008	-085A		
Date	_	Performed by: J. Scott							
Station		 		-					
	Henry	Pirker	<u>.</u>	Location:	Grand	le Prairie			
Facility/Zone:	PA	SZA				FOCUS			
	Temp:	20.0 C	Bar			700 mmHg			
Monitor	· · · · · · · · · · · · · · · · · · ·								
Make/Model:		Togg	400	0 1137		=			
Inlet flow (scc	m).	715 /	49C		AMU		-		
Last cal. Date:			, 2008	_ ruii Scale K	ange ppm:	0.5	<u>.</u>		
		vuile c	, ZVVQ	_Old C.F.	1.0	03/5	-		
Zero/Bkg	-0	.7							
Span Coeff.	Zero/Bkg								
Calibrato	•								
Calibrat	ion Method:	Gas Dilut	ion / GPT						
N	iakc/Model:	Sahin	2010		A 3.47 T -22	47	40		
NO	cylinder#:	CALO	13770		AMU#:	174			
	•,,	J/IL V	10110	NO conce	ntration ppm:	50	<u>.U</u>		
0	C	alibrator Flo	w	Calculated	Indicated	% Diff	crence		
Ozone Setting	A : T	(sccm)		Conc.	Conc.	vs			
0.00 V	Air	Gas	Total	(ppm)	(ppm)	Audit Gas	Limits		
0.75 V	4891		4891	0.0000	0.0011	技術的影響的影響	大学 日本本語 日本		
0.40 V	4891		4891	0.3798	0.3819	0.3%	± 15%		
0.20 V	4891		4891	0.1723	0.1726	-0.5%	± 15%		
0.20 V	4891		4891	0.0499	0.0533	4.6%	± 15%		
Linear Regre	Absolute Average Percent Difference 4 500 popularization								
ruicai i/egie:									
			y=mx+b (w			n, y=Indicated c	oncentration)		
	Correlat	ion Coeff.=	4.0000		LIMITS				
		m (Slope)=			≥ 0.995		i		
b (Inter	cept as % of	full scale)=_	0.9998 0.3518		0.85-1.15				
- (-,,		tuii scale)—_	0.3518		± 3% F.S.				
Remarks:									

Form No. F-AA-012 Version No. 1.1



Alberta	TEOM AL	JDIT	
ENVIRONMENT		File No	2008 -086A
Date	e: <u>June 18, 2008</u>	Performed by:	J. Scott
Station			
Name:	Henry Pirker	Location:	Grande Prairie
Facility/Zone:	PASZA	Operator:	FOCUS
Тетр.	19.5 C	Barometric Press.	700 mHg
Audit Transfer Standar	d		
Make/Model:	BIOS DC 2	Cell s/n:	106010
Serial Number:	105395	-	
Sampler Set-up and cu	rrent readings	F-Main Set Pt (1/min)	3.00
Makc/Model	R&P 1400a	F-Aux Set Pt (1/min)	13.67
Unit #	P.M. 2.5	Filter Load (%)	20%
Control unit s/n	140AB258750510	K _O Factor	13020
Transducer s/n	140AB258750510	Temp (°C)	17.3
		Press (ATM)	0.926
Conversion from mm H ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B	16 X 10 ⁻³)	1 (Atmospheres) or ATM = ("Hg) X (3.3	34207 X 10 ⁻²)
$ATM = (mm Hg) \times (1.3$	i16 X 10 ⁻³) <u>(</u> OLD in Brackets	$\frac{\text{or}}{\text{ATM}} = \text{("Hg)} \times \text{(3.3)}$,
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min)	i16 X 10 ⁻³) <u>(</u> OLD in Brackets	or ATM = ("Hg) X (3.3 p On (Time to reacl	h set points)
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off	i16 X 10 ⁻³) <u>(</u> OLD in Brackets Pum	or ATM = ("Hg) X (3.3 p On (Time to reacl (45-60 Sec)_	h set points)
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min)	OLD in Brackets Pum 0.10	or ATM = ("Hg) X (3.3 p On (Time to reacl	h set points)
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C)	OLD in Brackets Pum 0.10	p On (Time to reach (45-60 Sec)_ (45-60 Sec)_	h set points) 26 49
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27	or ATM = ("Hg) X (3.3 p On (Time to reacl (45-60 Sec) Δ°C	h set points)
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C)	116 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27	or ATM = ("Hg) X (3.3 p On (Time to reacl (45-60 Sec) Δ°C Δ% ATM	h set points) 26 49 0.34
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM)	116 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27	P ATM = ("Hg) X (3.3 p On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point	0.34 0.50%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min)	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921	P ATM = ("Hg) X (3.3 p On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%)	0.34 0.50%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min)	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65	P ATM = ("Hg) X (3.3 p On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 2%)	0.34 0.50% 0.0% / 0.1%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min)	116 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65	P On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 1.0 l/min	0.34 0.50%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check	Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65 16.20 2.95	P On (Time to reach (45-60 Sec) Δ°C Δ Δ°C Δ Δ°M ATM Δ°C Δ°M ATM Δ°C Δ°M ATM (± 2%) (± 2%) (± 1.0 l/min. (± 0.2 l/min. —	0.34 0.50% 0.00% / 0.1% 0.10% 0.47 lpm / 2.9% 0.05 lpm / 1.7%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min)	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65 16.20 2.95 Actu 0.12	P On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 1.0 l/min	0.34 0.50% 0.00% / 0.1% 0.10% 0.47 lpm / 2.9% 0.05 lpm / 1.7%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65 16.20 2.95 Actu	P ATM = ("Hg) X (3.3 p On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 1.0 l/min (± 0.2 l/min tal leakage = Pump O	0.34 0.50% 0.00% / 0.1% 0.10% 0.47 lpm / 2.9% 0.05 lpm / 1.7%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min)	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65 16.20 2.95 Actu 0.12	P On (Time to reach (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 0.2 l/min (± 0.02 l/min (0.02 l/min	0.34 0.50% 0.00% / 0.1% 0.10% 0.47 lpm / 2.9% 0.05 lpm / 1.7%
ATM = (mm Hg) X (1.3 Note: Tolerances are noted as B Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Mcasured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min) Aux (< 0.15 I/min)	16 X 10 ⁻³) OLD in Brackets Pum 0.10 0.27 17.64 0.921 3.00 / 13.65 16.65 16.20 2.95 Actu 0.12	P On (Time to reach (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point (± 2%) (± 2%) (± 0.2 l/min to 0.02 0.03	0.34 0.50% 0.00% / 0.1% 0.10% 0.47 lpm / 2.9% 0.05 lpm / 1.7%



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	Evergreen Park	
Approval No.	N/A	Site Name:	Evergreen	_
GENERAL	•		YES NO	N/A
	Has the location remain	X		
	Is site secure?		X	
	Are station operating c	onditions adequate?	X	
DATA ACQUIS	ITION			
	Are strip charts in use?		X	
	Is a telemetry system for	or data acquisition in use?	X	
SYSTEM COMP	PONENTS			
	Is a glass sampling mar	nifold installed?	Х	1)
	Is sampling manifold cl		X	
	Is a trap in place?		X	
	Are spare manifold por	ts capped		
		a slight downward angle?	X	
		ated to prevent water entering monito		
	Is manifold pump prope	X		
		at least 3/4"into manifold?	X	
		ines connected to manifold?	X	
	Are sampling lines clear	X		
	Are monitors properly r	nounted and secure?	X	
		xhausted from room or scrubbed?	X	
	Are zero and span syste	ms operational?	X	
WIND EQUIPM	ENT			
· -	Is wind equipment prop	erly oriented?		****
		opear to be functioning properly?	X	
COMMENTS:			<u> </u>	• • •
· · · · · · · · · · · · · · · · · · ·		Manifold cleaned during audit.	,	
•			,	
AUDITOR:	J. Scott	$DATE\cdot$	Tune 18 20	ΛO

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 087A / 089A Date: June 18, 2008 Performed by: _____ J. Scott Station Name: Evergreen Location: Evergreen Park Facility/Zone: PASZA Operator: FOCUS Temp: 23.0 C Barometric Press: 700 mmHg Location Latitude N 55 07'02.9" Longitute W 118 45'54.1" Elevation 650 m Status of Site Documentation Good - not on site Manifold Material Glass Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 313 Deg 6.5 kph NNW 5 - 10kph Station Temperature 23.0 C 22.06 C Relative Humidity N/A N/A Ambient Temperature 18.73 C 18.95 C Solar Radiation N/A N/A____ Precipitation N/A N/A Remarks:

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					File No.	2008	- 087 <u>A</u>
Date	: June	18, 2008	_ 1	Performed by: _		J. Scott	
Station		-					
Name:	Ever	green		Location:	Evergre	en Park	_
Facility/Zone	:PA	SZA		Operator:	tor: FOCUS		
						···	<u></u>
	remp:	23.0 C	Baro	metric Press:	700 n	nmHg	_
Monitor Make/Model Inlet flow (so Last cal. Date	cm):	4	20 43i 46 9, 2008	Serial No: Full Scale Ran Old C.F.	70112 ge ppra: 0.9	1.0	
Zero/Bkg Span Coc	g 9 f 0.9	.1 945					•
Calibrato	r	***					
Canora	tion Method: Make/Model: Cylinder # :	R&R M	IFC 201	. Cyl. (AMU#:	169 49	
	Calibrator Flo	w	Calculated	Indicat	ed l	% Diffe	
	(sccm)		Conc.	Concentr	· · · ·	VS DITTE	a ence
Air	Gas	Total	(ppm)	(ppm		Audit Gas	Limits
5089	0.00	5089	0.0000	0,001			
2996	44.21	3040	0.7228	0,712	7	-1.5%	± 15%
2997 2971	22.60	3020	0,3719	0.366	3	-1.7%	± 15%
Linear Regre	8.96 Ssion Anal	2980 ysis:	O.1494 Absolute A	0.148 verage Percent		-1,2% 1.5%	± 15%
				where x=calculate LII	d concentratio	on, y=indicated	' concentration)
		ion Coeff.=		•	0.995		
b (Inter	cept as % of	m (Slopc)= full scale)=	0,9842 0.1212	0.85-1.15			
Remarks:	F / W. C.		0.1212	± 3	3% F.S.		
			-				

Form No. F-AA-005 Version No. 1.1



TRS ANALYZER AUDIT

					File No.	2008 -	- 088A
Date: June 18, 2008		_ P	Performed by:		J. Scott		
Station					-		
Name:	Ever	reen	_	Location:	Evergree	n Park	_
Facility/Zone:	PAS	SZA	-	Operator: FOCI		us	
	Temp:	23.0 C	Batometric Press: 700 mr		mHg	•	
Monitor							
Make/Model:		Tec	43C	Serial No:	426610	0005	
Inlet flow (seco	n):			Full Scale Range			-
Last cal. Date:		May 9	, 2008	Old C.F.	1.018	B7	
Zero/Bkg	15	.1					
Span Coef	0.6	16	•				
Calibrator						······································	
Calibrati	on Mathad.	CACD	LITION				
M	on Method: ake/Model:	DODIN	EC 204	<u>.</u>			
172	Cylinder # :	CVI	4440			169	
	Cymidel # .,	OAL	4119	Cyl. C	one PPM:	10	.0
C	librator Flo	v	Calculated	Indicate	,	n/ Dicc	
	(sccm)	,	Conc.	Concentra	-	% Diffe	erence
Air	Gas	Total	(ppm)	(ppm)		vs Audit Gas	T immit.
5089	0.00	5089	0.0000	-0.0005			Limits
3018	21.69	3040	0.0713	0.0712	CHI	A FD/	KAN SERVICE
3011	8.65	3020	0.0286	0.0291		0.5%	± 15%
2975	4.52	2980	0.0152	0.0149		3.3%	± 15%
		******		verage Percent I	i ffarme	1.5%	± 15%
Linear Regres	ssion Anal	/sis:	Arosovato 2	verage refeem t	urresence[_	1.8%	
Ū		, (10)	v=my+h (wh	am vendoulated a	anannteetiae		
			y-mx.b (w)	nere x≒calculated d	IITS	y=inaicatea ci	oncentration)
	Correlat	ion Coeff.=	0.9999				
		m (Slope)=	1.0041		.995 5 4 4 5		
b (Intercept as % of full scale)=					5-1.15		
D (Interd	cent as % of						
D (Interd	cept as % of	ruii scaie)=	-0.2334	I 3	% F.S.		
Remarks:	cept as % of	ruii scare)=	40.2334	13	% F.S.		
	cept as % of	run scare)=	40.2334	Ε3	% F.S.		



TEOM AUDIT

	TEOM AUDIT					
ENVIRUNMENT		File No.	2008 - 089A			
Date:	June 18, 2008	Performed by:	J. Scott			
Station		100				
Name:	Evergreen	Location:	Evergreen Park			
Facility/Zone:	PASZA	Operator:	FOCUS			
Temp.	23.0 C	Barometric Press.	700 mmHg			
Audit Transfer Standard	.					
Make/Model:	BIOS DC 2	Cell s/n:	1060101			
Serial Number:	105395	-	1000101			
Sampler Set-up and cur	rent readings	F-Main Set Pt (1/min)	3.00			
Make/Model	R&P 1400a	F-Aux Set Pt (1/min)	13.67			
Unit #	P.M. 2.5	Filter Load (%)	36%			
Control unit s/n	140AB215519705	Ko Factor	10124			
Transducer s/n	140AB215549705	Temp (°C)	19.1			
		Press (ATM)	0.931			
Conversion from mm Ho ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow	16 X 10 ⁻³)	<u>M (Atmospheres)</u> <u>or</u> ATM = ("Hg) X (3.3	34207 × 10 ⁻²)			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off	16 X 10 ⁻³) OLD in Brackets	or ATM = ("Hg) \times (3.3)	·			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (l/min)	16 X 10 ⁻³) OLD in Brackets	or ATM = ("Hg) X (3.3 op On (Time to reac	h set points)			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off	16 X 10 ⁻³) DLD in Brackets Pum	or ATM = ("Hg) \times (3.3)	h set points)			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (l/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01	or ATM = ("Hg) X (3.: ap On (Time to reac (45-60 Sec)_	h set points)			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Mcasured Temp (± 1 °C)	16 X 10 ⁻³) DLD in Brackets Pum 0.01	or ATM = ("Hg) X (3.3 ap On (Time to reac (45-60 Sec)_ (45-60 Sec)_	h set points) 30 45			
ATM = (mm Hg) X (1.31 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01	or ATM = ("Hg) X (3.: ap On (Time to reac (45-60 Sec)_	h set points)			
ATM = (mm Hg) X (1.35 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit	16 X 10 ⁻³) OLD in Brackets Pum 0.01 -0.01 18.93 0.921	or ATM = ("Hg) X (3.s ap On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_	h set points) 30 45			
ATM = (mm Hg) X (1.35 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (l/min) F-Aux (l/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (l/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67	or ATM = ("Hg) X (3.3) Ap On (Time to reac) (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point	h set points) 30 45			
ATM = (mm Hg) X (1.33 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67	or ATM = ("Hg) X (3.3 ap On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_	h set points) 30 45 0.17 1.10%			
ATM = (mm Hg) X (1.33 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67 16.36	or ATM = ("Hg) X (3.3) Ap On (Time to reac) (45-60 Sec) (45-60 Sec) Δ°C Δ% ATM Δ% from Set-point	h set points) 30 45 0.17 1.10%			
ATM = (mm Hg) X (1.33 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67	or ATM = ("Hg) X (3.3 app On (Time to reac (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_ (± 2%)_	h set points) 30 45 0.17 1.10% 0.0% / 0.0% 0.00%			
ATM = (mm Hg) X (1.33 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (l/min) F-Aux (l/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (l/min) Total Flow = Main + Aux (l/min) Measured Total Flow (l/min) Measured Main Flow (l/min) Measured Main Flow (l/min) Leak Check	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67 16.36 2.92 Act	or ATM = ("Hg) X (3.3 ap On (Time to reach (45-60 Sec)_ (45-60 Sec)_ Δ°C_ Δ% ATM_ Δ% from Set-point (± 2%)_ (± 2%)_ (± 1.0 l/min (± 0.2 l/min ual leakage = Pump C	0.17 1.10% 0.0% / 0.0% 0.00% 0.31 lpm / 1.9% 0.08 lpm / 2.7%			
ATM = (mm Hg) X (1.33 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67 16.36 2.92 Act 0.02	or ATM = ("Hg) X (3.3 app On (Time to reach (45-60 Sec)_ (45-60 Sec)_ (45-60 Sec)_ Δ" ATM_ Δ" from Set-point (± 2%)_ (± 2%)_ (± 2%)_ (± 1.0 l/min (± 0.2 l/min ual leakage = Pump Co.01	0.17 1.10% 0.0% / 0.0% 0.00% 0.31 lpm / 1.9% 0.08 lpm / 2.7%			
ATM = (mm Hg) X (1.35 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min) Aux (< 0.15 I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67 16.36 2.92 Act	or ATM = ("Hg) X (3.3 app On (Time to reach (45-60 Sec)_ (45-60 Sec)_ (45-60 Sec)_ Δ" ATM_ Δ" from Set-point (± 2%)_ (± 2%)_ (± 1.0 l/min (± 0.2 l/min ual leakage = Pump (0.01 0.10	h set points) 30 45 0.17 1.10% 0.0% / 0.0% 0.00% 0.31 lpm / 1.9% 0.08 lpm / 2.7% Dn - Pump Off			
ATM = (mm Hg) X (1.35 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (l/min) F-Aux (l/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (l/min) Total Flow = Main + Aux (l/min) Measured Total Flow (l/min) Measured Main Flow (l/min) Leak Check Main (< 0.15 l/min) Aux (< 0.15 l/min) Ko Factor	Pum 0.01 -0.01 -0.01 -18.93 0.921 3.00 / 13.67 16.67 16.36 2.92 Act 0.02 0.09	or ATM = ("Hg) X (3.3 app On (Time to reach (45-60 Sec)_ (45-60 Sec)_ (45-60 Sec)_ Δ" ATM_ Δ" from Set-point (± 2%)_ (± 2%)_ (± 2%)_ (± 1.0 l/min (± 0.2 l/min ual leakage = Pump Co.01	h set points) 30 45 0.17 1.10% 0.0% / 0.0% 0.00% 0.31 lpm / 1.9% 0.08 lpm / 2.7% Dn - Pump Off			
ATM = (mm Hg) X (1.35 Note: Tolerances are noted as BC Zero flow Pump Off F-Main (I/min) F-Aux (I/min) Temperature/Pressure Measured Temp (± 1 °C) Measured Press (± 1.5% ATM) Flow Audit Indicated Main/Aux Flow (I/min) Total Flow = Main + Aux (I/min) Measured Total Flow (I/min) Measured Total Flow (I/min) Measured Main Flow (I/min) Leak Check Main (< 0.15 I/min) Aux (< 0.15 I/min)	16 X 10 ⁻³) DLD in Brackets Pum 0.01 -0.01 18.93 0.921 3.00 / 13.67 16.67 16.36 2.92 Act 0.02	or ATM = ("Hg) X (3.3 app On (Time to reach (45-60 Sec)_ (45-60 Sec)_ (45-60 Sec)_ Δ" ATM_ Δ" from Set-point (± 2%)_ (± 2%)_ (± 1.0 l/min (± 0.2 l/min ual leakage = Pump (0.01 0.10	h set points) 30 45 0.17 1.10% 0.0% / 0.0% 0.00% 0.31 lpm / 1.9% 0.08 lpm / 2.7% Dn - Pump Off			



Industrial Performance Audit Station Summary

Company:	PASZA	Girouxville		
Approval No.	:N/A	PAML		
GENERA <u>I</u>		ed unchanged from previous audit	YES NO A X X	V/A {
DATA ACQUIS	Are strip charts in use?	τ data acquisition in use?	X	
SYSTEM COM	Is a glass sampling manifold clease a trap in place? Are spare manifold ports. Is manifold mounted at a Are manifold ports situal. Is manifold pump proper Do sample lines extend a Are monitor sampling lines cleaned. Are monitors properly manifold properly manifold properly manifold.	ean? s capped a slight downward angle? ted to prevent water entering mon- rly installed and operative? at least 3/4"into manifold? nes connected to manifold? accounted and secure? schausted from room or scrubbed?	X	
WIND EQUIPM COMMENTS:	Is wind equipment prope	rly oriented? pear to be functioning properly?	X	
AUDITOR:	J. Scott	DATE:	Tune 19, 2008	

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 090A / 094A Date: June 19, 2008 Performed by: J. Scott Station Name: PAML Location: Girouxville Facility/Zone: PASZA Operator: FOCUS Temp: 24.0 C Barometric Press: 710 mmHg Location Latitude N 55 41'32.7" Longitute W 117 26'56.7" Elevation 651 m Status of Site Documentation Good Manifold Material Glass Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 229 Deg 18 kph 10-20 W\$W Station Temperature 27 C 26.28 C Relative Humidity N/A N/A ____ Ambient Temperature N/A N/A Solar Radiation N/A N/A Precipitation N/A N/A Remarks:

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					File No	. 2008	- 090A
Date:	Date: <u>June 19, 2008</u>			Performed by: _		J. Scott	
Station						*****	
Name:	PA	ML		Location:	Giro	uxville	
Facility/Zone:	PA	SZA	_	Operator:	FO	cus	
	Temp:	24.0 C	Baro	metric Press:			-
Monitor							
Makc/Model:			22	Serial No:	A R AL	1 4 4 0 4	
Inlet flow (sccn	1):			Full Scale Ran			-
Last cal. Date:			1, 2008	Old C.F.	и с Ве ћЪпг	1.0	-
					<u>Ψ,,</u>	7002	No.
	0.						
Span Coef	4.	71					
Calibrator							
Calibratic	n Mathad.	CASD	HUTION				
Cantrant M	ake/Model	GAS D R&R M	IEC 204	-	43.677.0	4.00	
		CLM (1691		
) mileter (/	OLIVI	J000ZZ	08622 Cyl. Conc PPM: 49			./
Ca	librator Flo		Calculated	Indiant		0/ 75'00	
	(sccm)	*1	Conc.	Indicated Concentration		% Diff	erence
Air	Gas	Total	(ppm)	(ppm		vs Audit Gas	Limits
5105	0.00	5105	0.0000	0.000		Audit Gas	Comis
5132	38.77	517 1	0,3726	0.364		-2.3%	± 15%
5166	18.21	5184	0.1746	0.173		-0.9%	± 15%
5131	9,20	5140	0.0890	0.090	··	0.6%	± 15%
–	_		Absolute A	verage Percent	Difference	0.9%	
Linear Regres	sion Anal	ysis:			2		
			y=mx+b ('where x⊐calculate	ed concentra	tion, y=indicated	f concentration)
					MITS	·	ĺ
		ion Coeff.=			0.995		
b (7m4sms		m (Slope)=	0.9749	0.	85-1.15		
o (interc	ept as % of	tull scale)=	0.2367	±	3% F.S.		
Remarks:			†				
ivemaiks:							

Form No. F-AA-004 Version No. 1.1



H₂S ANALYZER AUDIT

				F	ile No	2008 -	091A
Date: _	June 19	9, 2008	I	Performed by:		J. Scott	
Station							
	PAI	ML	_	Location:	Giroux	/ille	
Facility/Zone:	PAS	3ZA	-	Operator:	FOCL	JS	
	Temp:	24.0 C	Barç	ometric Press:	710 mm	ıHg	
Monitor							
Make/Model:	-			_Serial No:			
Inlet flow (sccm)): -	5:	50	Full Scale Range pr	pm:	0.1	
Last cal. Date:	-	June 1	1, 2008	Old C.F.	1.046	4	
7ma/Rkg	3.5	=0					
Zero/Bkg Span Coef	0.5	<u>,9</u> =e	-				
		<u> </u>					
Calibrator							
Calibration	n Method:	GAS DI	ILUTION				
Ma!	kc/Model:	R&R M	IFC 201	۔ Aì	MU#:	169	a 1
		CAL		Cyl. Conc	PPM:	10.	
				-			
Cali	ibrator Flow	ar	Calculated	Indicated		% Diffe	
	(sccm)		Conc.	Concentration	. -	vs Diffe	erence
Air	Gas	Total	(ppm)	(ppm)			Limits
5105	0.00	5105	0.0000	-0.0005			et Generalia
5133	37.56	5171	0.0726	0.0692	1000	-4.0%	± 15%
5167	17,40	5184	0.0336	0.0323		-2.3%	± 15%
5131	8.85	5140	0.0172	0.0166	-	-0.7%	± 15%
			Absolute /	Average Percent Diff	erence		
Linear Regress	sion Analy	ysis;		-	-	- Laboratoria	SESSESSION OF SE
			y=mx+b (wl	here x=calculated conce	entration, y	=indicated co	oncentration)
				LIMIT			-
		ion Coeff.=		≥ 0.99			
1. CT .	7	m (Slope)=	0.9574	_ 0.85-1			
b (Interce	pt as % of f	full scale)=	-0.1405	_ ± 3%	F.S.		
Remarks:							
			····			-	

Form No. F-AA-005 Version No. 1.1



TRS ANALYZER AUDIT

						File No.	2008 -	- 092A
D	ate:	June 1	9, 2008	_ 1	Performed by:		J. Scott	
Station)							
Name:	,	PA	.ML	_	Location:	Girou:	xville	_
Facility/Zo	one:	PAS	SZA	<u> </u>	Operator:	FOC	us	···
		Temp:	24.0 C	Barc	ometric Press:	710 m	mHg	-
Monito	r					· · · · · · · · · · · · · · · · · · ·		
Make/Mod			Tec	o 45A	Serial No:	AMU	1264	
Inlet flow	-		6	75	Full Scale Rang	ge ppm:	0.1	-
Last cal. D	ate:		June 1	1, 2008	Old C.F.	1.05	07	<u>-</u>
Zero/I	3kg	3.0	06					
Span C	oef	2.3	06 30	•				
Calibra		<u></u>		·				
Calil	heation I	Mathod	GVSD	!! ! !T!^\!				
Cu.,	Make	Madal.	GAS DI R&R M	ILU HUN	•		40	
	Cvli	/IVIOLO	CAL	4410	Cwl. (AMU#;	16	91
		(4119	. Oyı, c	Conc PPM:_	10	1,0
	Calibr	rator Flor	(Z)	Calculated	Indicate	-1	o/ Diff	
		scem)	1	Conc.	Concentr	· -	% Diff	erence
Air	$\overline{}$	Gas	Total	(ppm)	(ppm	1	vs Audit Gas	Limits
5105		0.00	5105	0.0000	-0.000		Addit Gas	
5133		37.56	5171	0.0726	0.0688		-5.1%	± 15%
5167		17.40	5184	0.0336	0.0313		-6.4%	± 15%
5131		8.85	5140	0.0172	0.015		-11.7%	± 15%
	11-				verage Percent			
Linear Re	gressio	n Anal	ysis:			نما ا	10.0	NO STREET, STR
				y=mx+b (wi	here x=calculated	concentration,	v=indicated c	oncentration)
						MITS	J-manesace .	Onochio Gasty
		Correlati	ion Coeff.=	0.9999		0.995		
			m (Slope)=			85-1.15		
b (I	ntercept	as % of	full scale)=			3% F.S.		
Remarks:								



Alberta NO-NOY-NO2 Analyzer Audit

ENVIRONMENT NOT NOT Allatyzer Audit									
							File No	2008	- 093A
		Date:	June 19	, 2008		Performe	d by:	J. Scott	
Station		Name:	PAML	Location:	GirouxvIIIe	Operator		FOCUS	}
Facili	ity/Zone:		PASZA	•		24.0°C	BP		nmHg
Monito	or:		Make/Model:	Teco		Serial No		AMU 143	
			t flow (sccm):			Range ppm		2.0	<u> </u>
			Last cal. Date:			Old C.F.'s			
							NOx:	,	025
		NO Bkg	1.5	5			NO2:	7,7	720
		NOx Bkg	9.2	<u> </u>			1102.		
		NO Cocf	1.06	3					
		NOx Coef		35					
		NO2 Cocf							
Calibra	ition Met	hod:		Gas Dil	ution / GPT				*
Calibra			Make/Model:		abio 2010		- AMU#	47	49
		cylinder#	CAL 01		NO conc. ppi	m 50.0			
					то сопс. рр	.1100.0	- NOX	conc. ppm	50.3
	Calibrate)T	Calc. C	onc.	Indicated	Concentrat	ion	% Diff	ference
	Flows		NO	NQx	NQ	NOx		4	dit Gas
Air	Gas	Total	(ppm)	(ppm)	(ppm)	(pp		NO	NOx
4886	0.00	4886	0.0000	0.0000	N/A	-0.0		<u> </u>	± 15%
4907	98.12	5005	0.9802	0.9861	N/A	0.9		N/A	-3.5%
4922	49.55	4972	0.4983	0.5013	N/A	0.46		N/A	-8.0%
4921	24.80	4946	0.2507	0.2522	N/A	0.22	207	N/A	-12.2%
					Absolute Avera	ge Percent C	ifference	N/A	7.9%
Linoar	Dograas						•		
FIIIGGI	Regress	ion Analy	SIS:	y≔mx∙	b (where x=calcu	ılated concen		ndicated cor	
		Correl	ation Coeff.=	NO	NOx		NO ₂		LIMITS
		Corre	m (Slope)=	N/A	0.9995		#DIV/0!		≥ 0.995
	h (Inter	cent as 0/ o	f full scale)=	N/A	0.9701		#DIV/0!		0.85-1.15
,		эсрг нз /0 С	u tun scale)=	N/A	-0.6979	<u>-</u>	#DIV/0!		± 3% F.S.
	O ₃	Set	Flow	Indicated	Conc. (ppm)	NO	NO ₂	% Diff	erence
	Setting	Point	Rate	NO	NO _x NO ₂	Decrease	Încrease	vs Auc	
		> <	5005						%Dlf Limit
[> <	5005			0.0000	0.0000	#DIV/0!	
		> <	5005			0.0000	0.0000	#DIV/0!	± 15%
		$\geq <$	5005			0.0000	0.0000	#DIV/01	± 15%
•					Absolute Averag				建筑器制度
Conver	ter Effici					,		#D14701	(1994年) (1994年) (1994年)
	Avcra	ge Convert	er Efficiency_	#DIV/0!					
Remark	s:			NOx n	ortion of the Ni	12 cook co			
	•			V P	or notificially large lar	io analyzei	<u> </u>		

Form No. F-AA-010 Version No. 1.1



NH₃ ANALYZER AUDIT

					File No.	2008 -	094A	
Date:	tc: June 18, 2008		Performed by:			J. Scott		
Station						·		
Name:	P/	AML	-	Location:	Girou	xville		
Facility/Zone:	PA	S7A	-	Operator	FOO			
			-	_				
	Temp.	24.0 C	- Baro	metric Press.	710 n	nmHg		
Monitor							*****	
Make/Model:		Tec	o 42	Serial No:	AMU	1437		
Inlet flow (see		17.2	VAC	Full Scale Ra	nge ppm:	2.0		
Last cal. Date:		June 1	0, 2008	Old C.F.	0.9	911		
Zero/Bkg								
Span Coef								
Calibrato			-					
	_	~"						
Cambrai	ion Method:	Dilu	tion	•				
Calibration Method: Dilu Make/Model: Sabio Perm Tube /Cylinder # : CLM 0		2010		AMU # :	174	19		
Tomi Tube	Cymidei # .	CLIVIC	103257	Perm rate	e /Cyl. conc:	303	,.3	
	alibrator Flo	NT7	Calculated	T., 41		0/ 5:00		
	(scem))W	Calculated Conc.	Indicated Concentration		% Diffe	rence	
Air	Gas	Total	(ppm)	(ppi		vs Audit Gas	Limits	
4886	0.00	4886	0.0000	-0.00		THE R. P. LEWIS CO., LANSING, S. LEWIS CO., LANSING, S. L.	MESONS.	
4921	24.72	4946	1.5159	1.59		5.2%	± 15%	
4898	14.92	4913	0.9211	0.94	-00	2.4%	± 15%	
4982	7.50	4989	0.4560	0.45		-0.1%	± 15%	
		_	Absolute A	verage Percen	nt Difference	2.5%		
Linear Regre	ession Ana	lysis:						
			y=mx+b (wi	nere x=celculated		n, y≕indicated co	ncentration)	
	Comala	tion C-AFF			-IMITS			
Correlation Coeff.=				≥ 0.995				
b (Inte	rcept as % o	=(Slope) m =(full scale	1.0529 -0.8306).85-1.15 t 3% F.S.			
		, ran seate)	-0.0000		. 378 F.S.			
Remarks;								
			•	***		•		



Industrial Performance Audit Station Summary

Company:	PASZA	Facility Name:	Valleyview	
Approval No.:	N/A	Site Name:	Valleyview	_
GENERAL			YES NO	N/A
	Has the location remained	d unchanged from previous audit?	X	
	Is site secure?		X	
	Are station operating con	ditions adequate?	X	
DATA ACQUIS	ITION			
2	Are strip charts in use?		X	1
	Is a telemetry system for	data acquisition in use?	X	
SYSTEM COMP	PONENTS			
	Is a glass sampling manif	old installed?		1
	Is sampling manifold clea		X	#
	Is a trap in place?	.,,		X
	Are spare manifold ports	canned		X
	Is manifold mounted at a	• •		X
		ed to prevent water entering monit		X
	Is manifold pump properly		OIS /	X
	Do sample lines extend at			X
	Are monitor sampling line			X
	Are sampling lines clean?			<u> X</u>
	Are monitors properly mo		X	4
			X	<u> </u>
		nausted from room or scrubbed?	X	<u> </u>
	Are zero and span system	s operational?	X	
WIND EQUIPM	ENT			
	Is wind equipment proper	y oriented?	X	T
	Does wind equipment app	ear to be functioning properly?	X	
COMMENTS:				-
•				
·				
AUDITOR:	J. Scott	DATE:	June 20 2	2008

Form No. F-AA-001 Version No. 1.1



STATION AUDIT

File No. 2008 - 095A / 096A Date: June 20, 2008 Performed by: J. Scott Station Name: Valleyview Location: Valleyview Facility/Zone: PASZA Operator: FOCUS Temp: 20.5 C Barometric Press: 704 mmHg Location Latitude N 54 56'24.5 Longitute W 117 12'55.5" 639 m Elevation Status of Site Documentation Not on site Manifold Material Teffon line Manifold Condition Good Meterological Observed Audit Value Wind Speed Direction 37 Deg 3.1 kph NE 0-5 kph Station Temperature 25 C 23.21 C Relative Humidity 40.18% 30.21% Ambient Temperature 18.5 C 23.38 C Solar Radiation N/A N/A Precipitation N/A N/A Remarks: Ambient and RH taken from the gound not at the sensor.

Form No. F-AA-003 Version No. 1.1



SO₂ ANALYZER AUDIT

					File No.	2008 -	- 095A
Date:	Date:June 20, 2008		. F	erformed by:_		J. Scott	
Station							
Name:	Valle	yview		Location:	Valle	yview	_
Facility/Zone:	PA	SZA	_	Operator:	FO	CUS	
	Temp:	20.5 C	Baro	metric Press:			-
Monitor							
Make/Model:		Teco	45 C	Serial No:	45C-57	531_313	
Inlet flow (secr	π):	4	73	Full Scale Ran	too.o.	1.0	
Last cal. Date:	,	June 2	2, 2008	Old C.F.	0.9 0.9	778	-
							•
Zero/Bkg_	27	'.8	_				
Span Coef	0.7	' 40	.				
Calibrator							
Calibrati	on Method:	GAS DI	LUTION				
M	ake/Model:	R&R M	FC 201		AMU#:	169	
	-yimder#:	CLM	08622	Cyl.	Conc PPM:	49	.7
Ca	librator Flo	₩	Calculated	Indica	ted	% Diff	erence
	(sccm)		Conc.	Concentration		VS	d Circ
Air	Gas	Total	(ppm)	(ppm		Audit Gas	Limits
5029	0,00	5029	0.0000	-0.000			
2960	43.81	3004	0.7248	0.717	'8	-0.9%	± 15%
2986	22.49	3008	0.3716	0.371		0.1%	± 15%
2971	8,96	2980	0.1494	0,149	7	0.4%	± 15%
			Absolute A	verage Percent	Difference		
Linear Regres	ssion Anal	ysis:					***************************************
			y=mx+b (where x=ca/culat	ed concentrat	ion, y=Indicated	(concentration)
					IMITS	, •	,
		ion Coeff.=	1,0000	2	0.995		
• ~		m (Slopc)=	0.9904		85-1.15		
b (Intere	ept as % of	full scale)= .	0.1239	±	3% F.S.		
Remarks:							

Form No. F-AA-004 Version No. 1.1



H₂S ANALYZER AUDIT

						File No.	2008 -	096A	
	Date: _	ate:June 20, 2008		. Р	Performed by:		J. Scott		
	Station								_
	Name:	Valle	yview	_	Location:	Valle	yview		
	Facility/Zone:	PA	ŞZA		Operator:	FO	cus		
	_	Temp:	20.5 C	Baro	metric Press:				
_	Wassins.	•		•					
	Monitor Make/Model: Inlet flow (scent Last cal. Date:	n):	4:	30	Full Scale Rang	70112 e ppm: 1.0	0.1		
						,.0	122		
	Zero/Bkg _ Span Coef		.7						
	`		J20	·					
	Calibrator			1000					_
			GAS DI						
		kc/Model:				AMU#:	169		
		-yunder#:	CAL	4119	Cyl. Conc PPM: 10			.0	
									-
	C-	librator Flo							
	Ca	(sccm))W	Calculated	Indicate	1.00	% Diffe	erence	
	Air	Gas	Total	Conc. (ppm)	Concentra		VS Andit Coo	T :::	
	5029	0.00	5029	0.0000	(ppm) 0.0000		Audit Gas	Limits	
	2983	21.32	3004	0.0710	0.0691		-2.6%	CONTRACTOR OF STREET	
	2999	8.59	3008	0.0288	0.0285		-0.2%	± 15%	
	2976	4.49	2980	0.0151	0.0147		-2.4%	± 15%	
					verage Percent				
	Linear Regres	sion Ana	lysis:				110 /0		
			-	y=mx+b (wh	ere x=calculated c	oncentratio	n. v=(ndicated c	oncentration)	
						MITS	,,		
		Correla	tion Coeff.=	0.9999	≥ (.995			
			m (Slope)=	0.9735	0,8	5-1.15			
	b (Interc	ept as % of	f full scale)=	0.1865	±3	% F.S.			
Remarks:									