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National Technical Systems 1536 East Valencia Drive Fullerton, California 92831

June 16, 2016

Valhalla Scientific Inc. 12127 Kirkham Road Poway, California 92064

Purchase Order Number: D22589

- **Explosive Atmosphere** A. TEST: B. TEST ITEM: One (1) Digital Igniter Tester P/N ALPHA4314 S/N 65-1360
- C. SPECIFICATIONS: 1. MIL-STD-810G, Method 511.5, Procedure I
 - 2. ANSI NCSL Z540-1
 - 3. ISO 17025:2005

D. <u>RESULTS</u>:

This is to certify that the Digital Igniter Tester was subjected to the Explosive Atmosphere Test in accordance with the above specifications.

Visual examination showed no evidence of physical damage resulting from the test. The Digital Igniter Tester was returned to Valhalla Scientific Inc. for post tests and final evaluation.

Test data, an equipment list, and photographs are attached.

R.M. "Rick" Clemens, Preparer

John Guzman.

Program Manager

Kumble

Cathy Rumble Quality Coordinator

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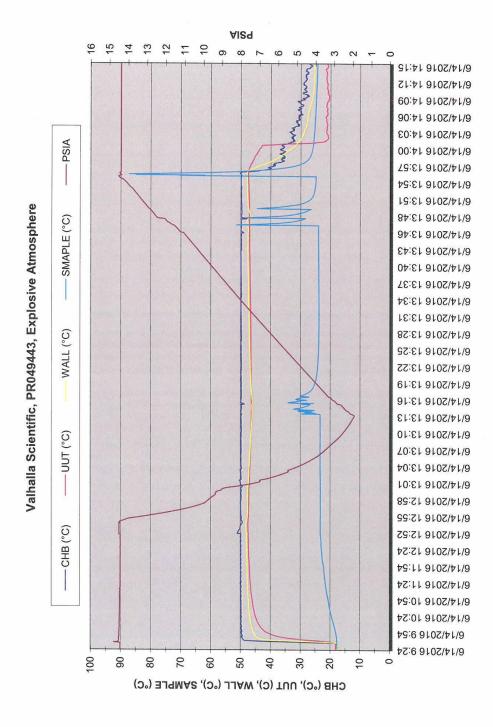
EXPLOSIVE ATMOSPHERE

CUSTOMER:	/alhalla Sc	ientific	MJO:	PR049443				
TEST ITEM: Digital Igniter Tester					6/14/16			
PART NUMBER: Alpha4314					65-1360			
SPECIFICATION	: MIL-STI	D-810G		PARA. 511.5				
		TE	ST DESCRI	PTION				
The Explosive A	tmosphere Te	st was repeat	ed at test altit	udes of:				
Test Altitude	Chamber Temp (°C)	Specimen Temp (°C)	Wall Temp (°C)	Specimo		Results		
46K	49.7	46.3	46	Norm	al C	OK		
43K	49.7	46.3	46.1	Norm	al (OK		
40K	48.6	46.3	46.1	Norm	al (OK		
36K	49.7	46.3	46.2	Norm		OK		
6.6K	49.9	47.1	47.6	Norm	al (OK		
5K	49	47.1	46.8	Norm	al C	OK		
3.3K	49.6	47.1	47.3	Norm		OK		
Site	49.7	47.4	47.8	Norm	al C	OK		
REMARKS: NO	ANOMALIES							
CALCULATION:	ime P	ressure	Temperature	Temperature	Specific Gravity	Volume 95%		
(ft ³)		(PSIA)	(°C)	(°R)	of Hexane	Hexane (mL		
26.14 26.14		2.04 2.35	50 50	581.7	0.673	20		
26.14		2.35	50	581.7 581.7	0.673	23 27		
		3.30	50	581.7	0.673	33		
the second se		11.6	50	581.7	0.673	116		
		12.2	50	581.7	0.673	122		
26.14 12.9		12.9	50	581.7	0.673	129		
	26.14 14.7		50	581.7	0.673	147		
26.14								
	n-hexane (ml) =				chamber pressure ecific gravity of n-l	(psia))		

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EXPLOSIVE ATMOSPHERE	EQUIPMENT LIST
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Client: Valhalla Scientific		PR No.: PR049443		Start Date: 6/14/2016		End Date: 06/14/16	
Equipment	Manufacturer	Model No.	Serial No.	Accuracy	Range	Calibration	
						Cycle	Cal. Due
Chamber (Explosive Atmosphere)	Harris Products	NONE	1471	± 2.2° C	-67° to 177° C	No Calibration Required	N/A
Meter (Data Logger)	Fluke	2625A	6281500	MFG	300V	12 Months	6/2/2017
Transducer (Pressure)	Omega Engineering	PX209- 030A5V	609611	± 0.5%	0 to 30 psia	12 Months	1/19/2017
	Equipment Chamber (Explosive Atmosphere) Meter (Data Logger)	Equipment Manufacturer Chamber (Explosive Atmosphere) Harris Products Meter (Data Logger) Fluke	Equipment Manufacturer Model No. Chamber (Explosive Atmosphere) Harris Products NONE Meter (Data Logger) Fluke 2625A Transducer (Pressure) Omega Engineering PX209-	Equipment Manufacturer Model No. Serial No. Chamber (Explosive Atmosphere) Harris Products NONE 1471 Meter (Data Logger) Fluke 2625A 6281500 Transducer (Pressure) Omega Engineering PX209- 609611	Equipment Manufacturer Model No. Serial No. Accuracy Chamber (Explosive Atmosphere) Harris Products NONE 1471 ± 2.2° C Meter (Data Logger) Fluke 2625A 6281500 MFG Transducer (Pressure) Omena Engineering PX209- 609611 ± 0.5%	Equipment Manufacturer Model No. Serial No. Accuracy Range Chamber (Explosive Atmosphere) Harris Products NONE 1471 ± 2.2° C -67° to 177° C Meter (Data Logger) Fluke 2625A 6281500 MFG 300V Transducer (Pressure) Omega Engineering PX209- 609611 ± 0.5% 0 to 20 price	Equipment Manufacturer Model No. Serial No. Accuracy Range Calibra Cycle Chamber (Explosive Atmosphere) Harris Products NONE 1471 ± 2.2° C -67° to 177° C No Calibration Required Meter (Data Logger) Fluke 2625A 6281500 MFG 300V 12 Months Transducer (Pressure) Omega Engineering PX209- 609611 ± 0.5% 0.1c 20 ppin 10 Months





Test Item Identification P/N ALPHA4314, S/N 65-1360



Explosive Atmosphere Setup

End of Report