



Address (Head Office)
7 Redland Drive
MITCHAM VIC 3132

Office Locations
VIC NSW WA QLD

Postal Address
52 Cooper Road
COCKBURN CENTRAL WA 6164

Freecall: 1300 364 005
www.ektimo.com.au
ABN: 86 600 381 413

Report Number R007405

VRU Performance Test
Terminals Pty Ltd, Port Botany, Site C

Prepared for Oil & Gas Technologies Pty Ltd



Document Information

Client Name: Oil & Gas Technologies
 Report Number: R007405
 Date of Issue: 14 May 2019
 Attention: Zaine Morgan
 Address: 1/45 Chelmsford Street
 Williamstown North Vic 3016
 Testing Laboratory: Ektimo Pty Ltd, ABN 86 600 381 413

Report Status

Format	Document Number	Report Date	Prepared By	Reviewed By (1)	Reviewed By (2)
Preliminary Report	-	-	-	-	-
Draft Report	R007405[DRAFT]	13/05/2019	ADo	SCo	ADa
Final Report	R007405	14/05/2019	ADo	SCo	ADa
Amend Report	-	-	-	-	-

Template Version: 081217

Amendment Record

Document Number	Initiator	Report Date	Section	Reason
Nil	-	-	-	-

Report Authorisation



Steven Cooper
Client Manager

NATA Accredited Laboratory
No. 14601

Accredited for compliance with ISO/IEC 17025 - Testing. NATA is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

Table of Contents

1	Executive Summary	4
2	Licence Comparison	4
3	Results	5
3.1	Mass of unrecovered vapours	5
3.2	Test Instrumentation & Calibration	6
4	Plant Operating Conditions	6
5	Test Methods.....	6
6	Quality Assurance/ Quality Control Information	7
7	Definitions	8
8	Appendices	9
8.1	Appendix 1 - Tank Truck Loading Data	9
8.2	Appendix 2 - Chart Recording of Measured VRU Outlet TOC Emissions	14
8.3	Appendix 3 - Logged VRU Outlet TOC Emissions & Velocity Measurements.....	15

1 EXECUTIVE SUMMARY

Ektimo was engaged by Oil and Gas Technologies to perform emission testing of the Vapour Recovery Unit (VRU) at the Port Botany site C of Terminals Pty Ltd. Testing was conducted pursuant to the requirements of Environment Protection Licence 1048.

Testing was conducted on 12 April 2019 to determine the total mass of unrecovered organic vapours emitted to atmosphere over a four (4) hour sampling duration.

The sampling methodologies chosen by Ektimo are those recommended by the NSW Office of Environment and Heritage (as specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales, January 2007).

All results are reported on a dry basis at STP. Unless otherwise indicated, the methods cited in this report have been performed without deviation.

A Non-dispersive Infrared (NDIR) analyser was calibrated and verified on-site at the start and end of the sample duration. Zero and span drift were observed to be less than 2%.

Plant operating conditions have been noted in the report. Tanker loading data is contained in Appendix 1. A total of 270,217 litres were loaded during the four hours of sampling. A total of 160,460 litres of Volatile Organic Liquid (VOL) were loaded during this period

2 LICENCE COMPARISON

The following licence comparison table shows that all analytes highlighted in green are below the licence limit set by the NSW EPA as per licence 1048 (last amended on 23/11/2017).

EPA No.	Location Description	Pollutant	Units	Licence limit	Detected values V.O.L. only	Detected values Total VRU Throughput
					12/04/2019	
9	Vapour Recovery Unit	Organic Vapours	mg/L	20	10	6.2

3 RESULTS

3.1 Mass of unrecovered vapours

The mass of unrecovered organic vapours emitted for each litre of organic liquid is:

$$(318 \times C \times A \times M \times P \times V) \div (L \times T) \text{ milligrams}$$

C = the average concentration of hydrocarbons expressed as equivalent propane in ppm over the test period.

A = the cross-sectional area of the exhaust duct at the plane where the measurements are made in m².

M = the total time for organic liquid to pass into the tank or out of the industrial plant in minutes.

P = the atmospheric pressure in kPa.

V = the average exhaust gas velocity in metres per second.

L = the volume of organic liquid passing into the tank or out of the industrial plant in litres.

T = the average exhaust gas temperature in kelvins (273 + temperature in °C).

318 = a conversion factor

Parameters at Terminals Port Botany, 12 April 2019, 0420-0820;

	Throughput	
	Total	V.O.L. Only
C (ppm)	1987.49	1987.49
A (m ²)	0.0314	0.0314
M (min)	241	241
P (kPa)	102.431	102.431
V (m/s)	0.99	0.99
L (L)	270217	160460
T (°K)	290.1	290.1

The average total mass of unrecovered vapours was calculated to be **6.2 mg/L** when using total VRU throughput as parameter L.

The average total mass of unrecovered vapours was calculated to be **10 mg/L** when diesel loading volumes are excluded from this calculation.

Hydrocarbon concentration and velocity was logged every 60 seconds for the entire sampling duration of 241 minutes.

3.2 Test Instrumentation & Calibration

An Infrared Technologies Total organic compound (NDIR) analyser was used to measure hydrocarbon concentrations.

The analyser was calibrated on site, at the start and end of the sampling period using medical air for zero calibration and a 9.98% Propane in Synthetic Air mix for span adjustment.

Zero Drift 0.2%

Span Drift 1.3%

Both span and zero drift were determined to be equal or less than +/- 2%.

A Data logger was used to record data at 60 second intervals for the entirety of the sampling duration. This data is available on request.

Differential pressure and thus velocity was recorded at 60 second intervals with a Velocalc manometer for the entirety of the sampling duration. This data is available on request.

4 PLANT OPERATING CONDITIONS

Unless otherwise stated, the plant operating conditions were normal at the time of testing. See Terminals records for complete process conditions.

5 TEST METHODS

Parameter	Sampling Method	Analysis Method	Uncertainty*	NATA Accredited	
				Sampling	Analysis
Sample plane criteria	NSW TM-1	NA	-	✓	NA
Flow rate, temperature and velocity	NSW TM-2	NA	8%, 2%, 7%	✓	NA
Determination of total mass of unrecovered organic vapours from vapour recovery units	NSW TM-20	NSW TM-20	13%	✓	✓

181219

* Uncertainty values cited in this table are calculated at the 95% confidence level (coverage factor = 2)

6 QUALITY ASSURANCE/ QUALITY CONTROL INFORMATION

Ektimo is accredited by the National Association of Testing Authorities (NATA) for the sampling and analysis of air pollutants from industrial sources. Unless otherwise stated test methods used are accredited with the National Association of Testing Authorities. For full details, search for Ektimo at NATA's website www.nata.com.au.

Ektimo is accredited by NATA (National Association of Testing Authorities) to ISO/IEC 17025 - Testing. ISO/IEC 17025 - Testing requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Quality Director.

NATA is a member of APLAC (Asia Pacific Laboratory Accreditation Co-operation) and of ILAC (International Laboratory Accreditation Co-operation). Through the mutual recognition arrangements with both of these organisations, NATA accreditation is recognised world –wide.

A formal Quality Control program is in place at Ektimo to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

7 DEFINITIONS

The following symbols and abbreviations may be used in this test report:

~	Approximately
<	Less than
>	Greater than
≥	Greater than or equal to
APHA	American public health association, Standard Methods for the Examination of Water and Waste Water
AS	Australian Standard
BSP	British standard pipe
CARB	Californian Air Resources Board
CEM	Continuous Emission Monitoring
CEMS	Continuous Emission Monitoring System
CTM	Conditional test method
D	Duct diameter or equivalent duct diameter for rectangular ducts
D ₅₀	'Cut size' of a cyclone defined as the particle diameter at which the cyclone achieves a 50% collection efficiency ie. half of the particles are retained by the cyclone and half are not and pass through it to the next stage. The D ₅₀ method simplifies the capture efficiency distribution by assuming that a given cyclone stage captures all of the particles with a diameter equal to or greater than the D ₅₀ of that cyclone and less than the D ₅₀ of the preceding cyclone.
DECC	Department of Environment & Climate Change (NSW)
Disturbance	A flow obstruction or instability in the direction of the flow which may impede accurate flow determination. This includes centrifugal fans, axial fans, partially closed or closed dampers, louvres, bends, connections, junctions, direction changes or changes in pipe diameter.
DWER	Department of Water and Environmental Regulation
EPA	Environment Protection Authority
FTIR	Fourier Transform Infra Red
ISC	Intersociety committee, Methods of Air Sampling and Analysis
ISO	International Organisation for Standardisation
NA	Not applicable
NATA	National Association of Testing Authorities
NIOSH	National Institute of Occupational Safety and Health
NT	Not tested or results not required
OM	Other approved method
OU	The number of odour units per unit of volume. The numerical value of the odour concentration is equal to the number of dilutions to arrive at the odour threshold (50% panel response).
PM ₁₀	Atmospheric suspended particulate matter having an equivalent aerodynamic diameter of less than approximately 10 microns (µm).
PM _{2.5}	Atmospheric suspended particulate matter having an equivalent aerodynamic diameter of less than approximately 2.5 microns (µm).
PSA	Particle size analysis
RATA	Relative Accuracy Test Audit
STP	Standard temperature and pressure. Gas volumes and concentrations are expressed on a dry basis at 0°C, at discharge oxygen concentration and an absolute pressure of 101.325 kPa, unless otherwise specified.
TM	Test Method
TOC	The sum of all compounds of carbon which contain at least one carbon to carbon bond, plus methane and its derivatives.
USEPA	United States Environmental Protection Agency
VDI	Verein Deutscher Ingenieure (Association of German Engineers)
Vic EPA	Victorian Environment Protection Authority
VOC	Any chemical compound based on carbon with a vapour pressure of at least 0.010 kPa at 25°C or having a corresponding volatility under the particular conditions of use. These compounds may contain oxygen, nitrogen and other elements, but specifically excluded are carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonate salts.
XRD	X-ray Diffractometry

8 APPENDICES

8.1 Appendix 1 - Tank Truck Loading Data

FUEL-FACS - Port Botany TERMINAL
 300 - Supplier Lifting Detail Report
 Report Generated at 09/05/2019 10:07:19
 Start Folio Number: 20190412 11/04/2019 23:57:01
 End Folio Number: 20190412 12/04/2019 23:56:55
 Supplier From: 150001
 Supplier To: 150001

Unit of Measure: Liters
 Supplier : 150001 - TRAFIGURA PTE LTD

Movement Number	STS	Customer Code	Customer Name	Carrier Code	Carrier Name	Driver Code	Driver Name	Load Date	Supplier Code	Supplier Product Name	Gross	Temp	Dens	Net																		
98254	LD	56789	PARK FUELS	30	WISKOCH PTY LTD	6123	PETER DENISON	12/04/2019 04:31:25	105	DIESEL	8006.0	19.9	834.2	7972.0																		
<table border="0" style="width: 100%;"> <tr> <td style="width: 10%;">104</td> <td style="width: 10%;">DIESEL</td> <td style="width: 10%;">44055.0</td> <td style="width: 10%;">20.4</td> <td style="width: 10%;">834.2</td> <td style="width: 10%;">44266.0</td> </tr> <tr> <td colspan="6">Order Total</td> </tr> <tr> <td>44055.0</td> <td>20.4</td> <td>834.2</td> <td colspan="3">44266.0</td> </tr> </table>															104	DIESEL	44055.0	20.4	834.2	44266.0	Order Total						44055.0	20.4	834.2	44266.0		
104	DIESEL	44055.0	20.4	834.2	44266.0																											
Order Total																																
44055.0	20.4	834.2	44266.0																													
<table border="0" style="width: 100%;"> <tr> <td style="width: 10%;">118</td> <td style="width: 10%;">DIESEL</td> <td style="width: 10%;">15000.0</td> <td style="width: 10%;">19.4</td> <td style="width: 10%;">834.2</td> <td style="width: 10%;">15246.0</td> </tr> <tr> <td colspan="6">Order Total</td> </tr> <tr> <td>15000.0</td> <td>19.4</td> <td>834.2</td> <td colspan="3">15246.0</td> </tr> </table>															118	DIESEL	15000.0	19.4	834.2	15246.0	Order Total						15000.0	19.4	834.2	15246.0		
118	DIESEL	15000.0	19.4	834.2	15246.0																											
Order Total																																
15000.0	19.4	834.2	15246.0																													



FUEL-FACS -

Port Botany

TERMINAL

300 - Supplier Lifting Detail Report

Report Generated at 06/05/2019 10:07:19

Start Folio Number: 20190412 11/04/2019 23:57:01

End Folio Number: 20190412 12/04/2019 23:56:55

Supplier From: 150001

Supplier To: 150001

Unit of Measure: Liters

Supplier : 150001 - TRAFIGURA PTE LTD

Movement Number	STS	Customer Code	Customer Name	Carrier Code	Carrier Name	Driver Code	Driver Name	Load Date	Supplier Code	Product Name	Gross	Temp	Dens	Net
58234	LD	59789	PARK FUELS	30	WISKICH PTY LTD	6123	PETER DENISON	12/04/2019 04:31:25						
Rev. 0														

112										ULP 91	20027.0	20.0	725.3	19099.0
117										ULP 95R MAX	8003.0	18.1	755.7	7984.0
Order Total											38030.0	19.9	756.2	35635.0

58236	LD	59789	PARK FUELS	30	WISKICH PTY LTD	6120	KERRIE O'BRIEN	12/04/2019 04:48:19						
Rev. 0														

105										DIESEL	7420.0	19.9	834.2	7399.0
114										SPULP 98	7319.0	19.8	786.7	7277.0
116										E10	24018.0	18.0	732.5	23929.0
Order Total											38757.0	19.7	756.3	38595.0

FUEL-FACS -

Port Botany

TERMINAL

300 - Supplier Lifting Detail Report

Report Generated at 06/05/2019 10:07:19

Start Folio Number: 20190412

11/04/2019 23:57:01

End Folio Number: 20190412

12/04/2019 23:56:55

Supplier From: 150001

Supplier To: 150001

Unit of Measure: Liters

Supplier : 150001 - TRAFIGURA PTE LTD

Movement Number	STS	Customer Code	Customer Name	Carrier Code	Carrier Name	Driver Code	Driver Name	Load Date	Supplier Code	Supplier Product Name	Gross	Temp	Dens	Net
98257	LD	150003	PUMA SUPPLIER B	10	PARK FUELS	6280	Ewan Lloyd	12/04/2019 04:54:20	105	DIESEL	4259.0	20.1	834.2	4234.0
Order Total														
											4259.0	20.1	834.2	4234.0

98258	LD	150003	PUMA SUPPLIER B	1	OLEUM ENERGY PTY LTD	11	FIA TANIELA	12/04/2019 06:25:04	105	DIESEL	44259.0	19.8	834.2	44073.0
Order Total														
											44259.0	19.8	834.2	44073.0

98259	LD	150003	PUMA SUPPLIER B	9	BULK FUEL AUSTRALIA	9318	Ryan Macdonald	12/04/2019 08:11:38	105	DIESEL	3001.0	19.6	834.2	2989.0
Order Total														
											3001.0	19.6	834.2	2989.0

98260	LD	66789	PARK FUELS	06	Park Pty Ltd	6385	Daniel Simmons	12/04/2019 05:38:04	117	ULP 95R MAX	578.0	19.4	765.7	575.0
Order Total														
											3573.0	19.8	821.5	3564.0

FUEL-FACS -

Port Botany

TERMINAL

300 - Supplier Lifting Detail Report

Report Generated at 08/05/2019 10:07:19

Start Folio Number: 20190412 11/04/2019 23:57:01

End Folio Number: 20190412 12/04/2019 23:56:55

Supplier From: 150001

Supplier To: 150001

Unit of Measure: Liters

Supplier : 150001 - TRAFIGURA PTE LTD

Movement Number	STS Code	Customer Code	Customer Name	Carrier Code	Carrier Name	Driver Code	Driver Name	Load Date	Supplier Code	Supplier Product Name	Gross	Temp	Dens	Net
32260	LD	56789	PARK FUELS	86	Park Pty Ltd	6385	Daniel Simmons	12/04/2019 08:36:04						
Rev. 0														
									112	ULP 91	21016.0	20.3	725.3	20877.0
									114	SPULP 98	6998.0	19.7	755.7	6659.0
									115	E10	7205.0	18.0	732.5	7178.0
Order Total											35219.0	19.7	732.8	35014.0

98261 LD 56789 PARK FUELS 18 PARK FUELS 8430 Justin Hodgins 12/04/2019 08:32:57

105 DIESEL 3294.0 20.4 834.2 3279.0

Order Total 3294.0 20.4 834.2 3279.0

98282 LD 56789 PARK FUELS 86 Park Pty Ltd 6148 Robert Mitchell 12/04/2019 08:55:01

105 DIESEL 22002.0 19.7 894.2 21912.0

112 ULP 91 12007.0 20.5 728.3 11924.0

Order Total 34009.0 20.0 796.8 33836.0

FUEL-FACS -

Port Botany

TERMINAL

300 - Supplier Lifting Detail Report

Report Generated at 06/05/2019 10:07:19

Start Folio Number: 20190412 11/04/2019 23:57:04

End Folio Number: 20190412 12/04/2019 23:58:55

Supplier From: 150001

Supplier To: 150001

Unit of Measure: Liters

Supplier : 150001 - TRAFIGURA PTE LTD

Movement Number	STS Code	Customer Code	Customer Name	Carrier Code	Carrier Name	Driver Code	Driver Name	Load Date	Supplier Code	Product Name	Gross	Temp	Dens	Net
98263	LD	58789	PARK FUELS	86	Park Pty Ltd	6151	Tuan Thanh Tran	12/04/2019 08:12:34						
Rev. 0														

105	DIESEL	12601.0	19.6	834.2	12552.0
112	ULP 91	8362.0	20.5	725.3	6294.0
114	SF/ULP 88	6629.0	19.4	750.7	4994.0
115	E10	9583.0	18.2	732.3	6547.0

Order Total 37165.0 19.4 759.5 36997.0

12/04/2019 09:28:44

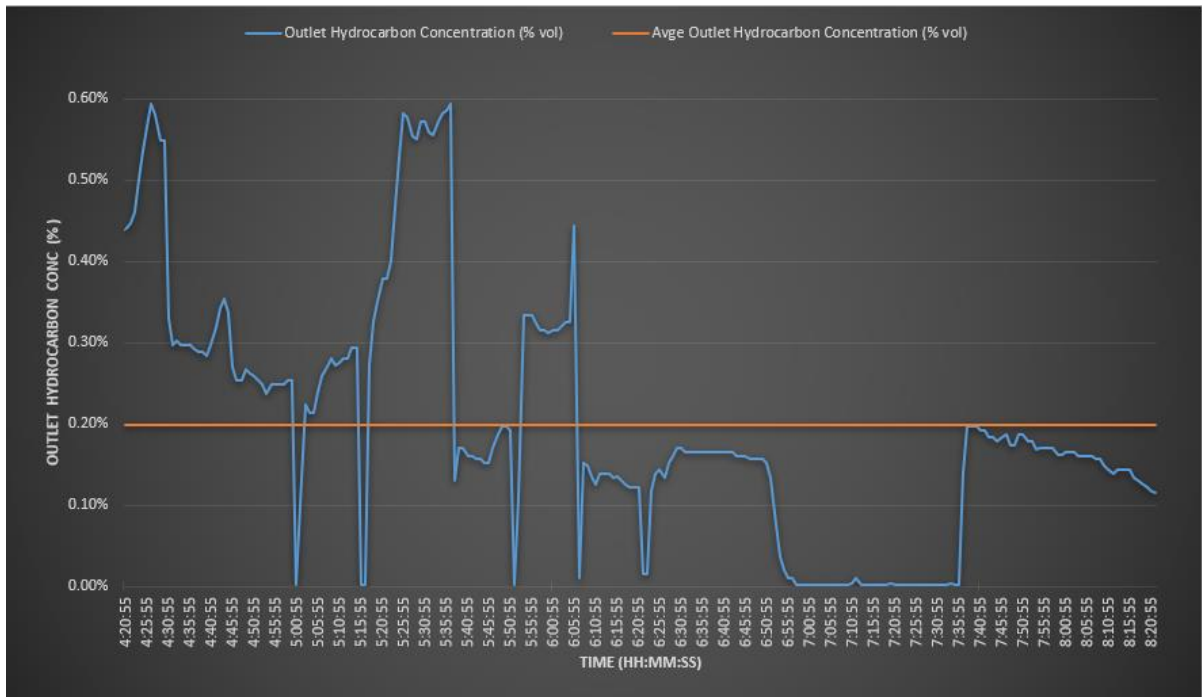
112	ULP 91	15517.0	20.5	725.3	14609.0
117	ULP 95R	2497.0	19.9	755.7	3477.0
	MAX				

Order Total 19014.0 20.4 730.9 16886.0

12/04/2019 07:35:07

112	ULP 91	23893.0	19.3	725.3	2595.0
-----	--------	---------	------	-------	--------

8.2 Appendix 2 - Chart Recording of Measured VRU Outlet TOC Emissions



8.3 Appendix 3 - Logged VRU Outlet TOC Emissions & Velocity Measurements.

	VRU Outlet TOC Emission	VRU Outlet Velocity
	%	m/s
Average	0.20%	0.99
Maximum	0.59%	6.95
Minimum	0.00%	0.00
Time	VRU Outlet TOC Emissions	VRU Outlet Velocity
	%	m/s
4:20:55 AM	0.44%	0.34
4:21:55 AM	0.45%	0.48
4:22:55 AM	0.46%	2.27
4:23:55 AM	0.50%	2.60
4:24:55 AM	0.54%	2.81
4:25:55 AM	0.57%	2.79
4:26:55 AM	0.59%	0.89
4:27:55 AM	0.58%	0.00
4:28:55 AM	0.55%	0.89
4:29:55 AM	0.55%	1.76
4:30:55 AM	0.33%	1.66
4:31:55 AM	0.30%	4.88
4:32:55 AM	0.30%	2.89
4:33:55 AM	0.30%	1.01
4:34:55 AM	0.30%	0.34
4:35:55 AM	0.30%	0.00
4:36:55 AM	0.29%	0.00
4:37:55 AM	0.29%	0.00
4:38:55 AM	0.29%	0.00
4:39:55 AM	0.28%	0.34
4:40:55 AM	0.30%	1.85
4:41:55 AM	0.32%	2.79
4:42:55 AM	0.34%	3.01
4:43:55 AM	0.35%	2.22
4:44:55 AM	0.34%	1.85
4:45:55 AM	0.27%	0.00
4:46:55 AM	0.25%	6.95
4:47:55 AM	0.25%	5.02
4:48:55 AM	0.27%	2.46
4:49:55 AM	0.26%	1.01
4:50:55 AM	0.26%	0.34
4:51:55 AM	0.25%	0.34
4:52:55 AM	0.25%	0.00
4:53:55 AM	0.24%	0.68
4:54:55 AM	0.25%	1.01
4:55:55 AM	0.25%	0.76
4:56:55 AM	0.25%	0.00
4:57:55 AM	0.25%	0.00
4:58:55 AM	0.25%	0.34
4:59:55 AM	0.25%	0.00

	VRU Outlet TOC Emission	VRU Outlet Velocity
	%	m/s
Average	0.20%	0.99
Maximum	0.59%	6.95
Minimum	0.00%	0.00
Time	VRU Outlet TOC Emissions	VRU Outlet Velocity
	%	m/s
5:00:55 AM	0.00%	0.00
5:01:55 AM	0.13%	3.12
5:02:55 AM	0.22%	3.01
5:03:55 AM	0.21%	1.31
5:04:55 AM	0.21%	1.59
5:05:55 AM	0.24%	2.39
5:06:55 AM	0.26%	2.39
5:07:55 AM	0.27%	2.48
5:08:55 AM	0.28%	1.82
5:09:55 AM	0.27%	0.34
5:10:55 AM	0.28%	1.07
5:11:55 AM	0.28%	1.39
5:12:55 AM	0.28%	1.35
5:13:55 AM	0.29%	0.59
5:14:55 AM	0.29%	0.59
5:15:55 AM	0.00%	0.00
5:16:55 AM	0.00%	0.00
5:17:55 AM	0.27%	0.59
5:18:55 AM	0.32%	1.91
5:19:55 AM	0.35%	2.19
5:20:55 AM	0.38%	2.19
5:21:55 AM	0.38%	1.22
5:22:55 AM	0.40%	2.08
5:23:55 AM	0.47%	4.14
5:24:55 AM	0.53%	4.77
5:25:55 AM	0.58%	4.60
5:26:55 AM	0.58%	1.62
5:27:55 AM	0.55%	0.00
5:28:55 AM	0.55%	1.31
5:29:55 AM	0.57%	0.59
5:30:55 AM	0.57%	0.59
6:43:55 AM	0.16%	0.59
6:44:55 AM	0.16%	0.59
6:45:55 AM	0.16%	0.48
6:46:55 AM	0.16%	0.48
6:47:55 AM	0.16%	0.48
6:48:55 AM	0.16%	0.48
6:49:55 AM	0.16%	0.48
6:50:55 AM	0.15%	0.48
6:51:55 AM	0.13%	0.48
6:52:55 AM	0.08%	0.48
6:53:55 AM	0.04%	0.48
6:54:55 AM	0.02%	0.48
6:55:55 AM	0.01%	0.59
6:56:55 AM	0.01%	0.59
6:57:55 AM	0.00%	0.59
6:58:55 AM	0.00%	0.59
6:59:55 AM	0.00%	0.48

	VRU Outlet TOC Emission	VRU Outlet Velocity
	%	m/s
Average	0.20%	0.99
Maximum	0.59%	6.95
Minimum	0.00%	0.00
Time	VRU Outlet TOC Emissions	VRU Outlet Velocity
	%	m/s
7:00:55 AM	0.00%	0.48
7:01:55 AM	0.00%	0.59
7:02:55 AM	0.00%	0.59
7:03:55 AM	0.00%	0.59
7:04:55 AM	0.00%	0.59
7:05:55 AM	0.00%	0.59
7:06:55 AM	0.00%	0.59
7:07:55 AM	0.00%	0.59
7:08:55 AM	0.00%	0.59
7:09:55 AM	0.00%	0.59
7:10:55 AM	0.00%	0.59
7:11:55 AM	0.01%	0.59
7:12:55 AM	0.00%	0.59
7:13:55 AM	0.00%	0.59
7:14:55 AM	0.00%	0.59
7:15:55 AM	0.00%	0.59
7:16:55 AM	0.00%	0.59
7:17:55 AM	0.00%	0.59
7:18:55 AM	0.00%	0.59
7:19:55 AM	0.00%	0.59
7:20:55 AM	0.00%	0.59
7:21:55 AM	0.00%	0.59
7:22:55 AM	0.00%	0.59
7:23:55 AM	0.00%	0.59
7:24:55 AM	0.00%	0.59
7:25:55 AM	0.00%	0.59
7:26:55 AM	0.00%	0.68
7:27:55 AM	0.00%	0.68
7:28:55 AM	0.00%	0.59
7:29:55 AM	0.00%	0.68
7:30:55 AM	0.00%	0.68
7:31:55 AM	0.00%	0.68
7:32:55 AM	0.00%	0.68
7:33:55 AM	0.00%	0.68
7:34:55 AM	0.00%	0.68
7:35:55 AM	0.00%	1.18
7:36:55 AM	0.14%	0.90
7:37:55 AM	0.20%	0.68
7:38:55 AM	0.20%	0.68
7:39:55 AM	0.20%	0.68

	VRU Outlet TOC Emission	VRU Outlet Velocity
	%	m/s
Average	0.20%	0.99
Maximum	0.59%	6.95
Minimum	0.00%	0.00
Time	VRU Outlet TOC Emissions	VRU Outlet Velocity
	%	m/s
7:40:55 AM	0.19%	0.59
7:41:55 AM	0.19%	0.59
7:42:55 AM	0.18%	0.59
7:43:55 AM	0.18%	0.59
7:44:55 AM	0.18%	0.59
7:45:55 AM	0.18%	0.59
7:46:55 AM	0.19%	0.59
7:47:55 AM	0.17%	0.59
7:48:55 AM	0.17%	0.59
7:49:55 AM	0.19%	0.59
7:50:55 AM	0.19%	0.59
7:51:55 AM	0.18%	0.59
7:52:55 AM	0.18%	0.59
7:53:55 AM	0.17%	0.59
7:54:55 AM	0.17%	0.59
7:55:55 AM	0.17%	0.59
7:56:55 AM	0.17%	0.59
7:57:55 AM	0.17%	0.59
7:58:55 AM	0.16%	0.59
7:59:55 AM	0.16%	0.59
8:00:55 AM	0.17%	0.59
8:01:55 AM	0.17%	0.68
8:02:55 AM	0.17%	0.59
8:03:55 AM	0.16%	0.59
8:04:55 AM	0.16%	0.59
8:05:55 AM	0.16%	0.68
8:06:55 AM	0.16%	0.59
8:07:55 AM	0.16%	0.59
8:08:55 AM	0.16%	0.68
8:09:55 AM	0.15%	0.59
8:10:55 AM	0.14%	0.59
8:11:55 AM	0.14%	0.68
8:12:55 AM	0.14%	0.59
8:13:55 AM	0.14%	0.68
8:14:55 AM	0.14%	0.68
8:15:55 AM	0.14%	0.59
8:16:55 AM	0.13%	0.68
8:17:55 AM	0.13%	0.68
8:18:55 AM	0.13%	0.68
8:19:55 AM	0.12%	0.68
8:20:55 AM	0.12%	0.68
8:21:55 AM	0.12%	0.76