



EPL No:	854
Entity Name:	NationWide Oil Pty Ltd
Site:	6 Davis Road, Wetherill Park NSW
Monitoring Frequency:	Bi-Annual
Link to NSW EPA Register:	Click Here

Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
						EPA Point 1 - TOH F-490 Average Result
6/08/2021	5/08/2021		Actual stack flow rate		m3/min	150.5888
			Temperature		Degrees Celsius	264.05
			Velocity		m/s	8.876
			Moisture		%	11.82
			Dry gas density		kg/Nm3	1.32
			Molecular weight of stack gases (Wet)		g/g.mole	28.176
			Absolute Stack pressure		mb	1012.6
			Hydrogen Sulfide	5	mg/Nm3	<0.501
			Odour		ou	2.016
			Oxygen		%	7.508
			Nitrogen Oxides @ 7% O2		mg/Nm3	184
			Nitrogen Oxides @ 3% O2	350	mg/Nm3	184
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/Nm3	10.695
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/Nm3	7.9
			Total Solid Particulates (TSP) @ Stack O2		mg/Nm3	5.062
			Total Solid Particulates (TSP) @ 3% O2	50	mg/Nm3	6.76
			Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/Nm3	
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/Nm3	<2.03			

Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
						EPA Point 1 - TOH F-490 Average Result
30/11/2020	27/11/2020	29/10/2020	Normal stack gas flow rate		m3/min	65
			Temperature		Degrees Celsius	298
			Velocity		m/s	9.1
			Moisture		%	11
			Dry gas density		kg/m3	1.32
			Molecular weight of stack gases		g/g.mole	29.6
			Stack pressure		Kpa	101.3
			Hydrogen Sulfide	5	mg/m3	<0.4
			Odour		ou	3600
			Oxygen		%	7.5
			Nitrogen Oxides @ stack O2		mg/m3	105
			Nitrogen Oxides @ 3% O2	350	mg/m3	140
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	13.6
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	10.3
			Total Solid Particulates (TSP) @ Stack O2		mg/m3	22.6
			Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	30.9
			Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.4
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<6			

Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
						EPA Point 1 - TOH F-490 Average Result
22/07/2020	10/07/2020	10/06/2020	Normal stack gas flow rate		m3/min	67
			Temperature		Degrees Celsius	331
			Velocity		m/s	9.8
			Moisture		%	13
			Dry gas density		kg/m3	1.32
			Molecular weight of stack gases		g/g.mole	29.7
			Stack pressure		Kpa	102.9
			Hydrogen Sulfide	5	mg/m3	<0.3
			Odour		ou	1400
			Oxygen		%	6.3
			Nitrogen Oxides @ stack O2		mg/m3	84
			Nitrogen Oxides @ 3% O2	350	mg/m3	103
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	0.6
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	31.8
			Total Solid Particulates (TSP) @ Stack O2		mg/m3	31.8
			Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	39
			Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<3.9
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<4.8			

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
					EPA Point 1 - TOH F-490 Average Result
30/01/2020	17/12/2019	Normal stack gas flow rate		m3/min	60
		Temperature		Degrees Celsius	263
		Velocity		m/s	7.8
		Moisture		%	11
		Dry gas density		kg/m3	1.32
		Molecular weight of stack gases		g/g.mole	29.6
		Stack pressure		Kpa	102
		Hydrogen Sulfide	5	mg/m3	<0.5
		Odour		ou	533
		Oxygen		%	8
		Nitrogen Oxides @ stack O2		mg/m3	114
		Nitrogen Oxides @ 3% O2	350	mg/m3	158
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	16

	Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO ₃) @ 11% O ₂	100	mg/m ³	12
	Total Solid Particulates (TSP) @ Stack O ₂		mg/m ³	30
	Total Solid Particulates (TSP) @ 3% O ₂	50	mg/m ³	42
	Volatile Organic Compounds (expressed as n-propane) @ stack O ₂		mg/m ³	<4.3
	Volatile Organic Compounds (expressed as n-propane) @ 3% O ₂	40	mg/m ³	<5.9

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Average Result	
30/08/2019	14/08/2019	Normal stack gas flow rate		m3/min	64	
		Temperature		Degrees Celsius	248	
		Velocity		m/s	7.7	
		Moisture		%	8	
		Dry gas density		kg/m3	1.32	
		Molecular weight of stack gases		g/g.mole	29.6	
		Stack pressure		Kpa	102.9	
		Hydrogen Sulfide	5	mg/m3	<0.5	
		Odour		ou	580	
		Oxygen		%	7.6	
		Nitrogen Oxides @ stack O2		mg/m3	119	
		Nitrogen Oxides @ 3% O2	350	mg/m3	160	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	21	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	16	

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Run 1	Run 2
30/05/2019	17/05/2019 Note, this is an additional monitoring event in response to the Feb 2019 sampling	Normal stack gas flow rate		m3/min	58	57
		Temperature		Degrees Celsius	275	275
		Velocity		m/s	7.4	7.5
		Moisture		%	9	11
		Dry gas density		kg/m3	1.32	1.32
		Molecular weight of stack gases		g/g.mole	29.5	29.6
		Stack pressure		Kpa	102.9	102.9
		Hydrogen Sulfide	5	mg/m3		
		Odour		ou		
		Oxygen		%	8.9	7.7
		Nitrogen Oxides @ stack O2		mg/m3		
		Nitrogen Oxides @ 3% O2	350	mg/m3		
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3		
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3		

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Average Result	
28/03/2019	15/02/2019	Normal stack gas flow rate		m3/min	76	
		Temperature		Degrees Celsius	246	
		Velocity		m/s	9.3	
		Moisture		%	8.1	
		Dry gas density		kg/m3	1.3	
		Molecular weight of stack gases		g/g.mole	29.5	
		Stack pressure		Kpa	101.1	
		Hydrogen Sulfide	5	mg/m3	<0.5	
		Odour		ou	1000	
		Oxygen		%	10	
		Nitrogen Oxides @ stack O2		mg/m3	176	
		Nitrogen Oxides @ 3% O2	350	mg/m3	288	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	17.8	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	16.1	
Total Solid Particulates (TSP) @ Stack O2		mg/m3	40.8			
Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	66.7	Explanation Concentration of solid particles were within the limit under stack conditions when not corrected for O2 (40.8ppm), but exceeded when the 3% O2 correction factor was applied (66.7ppm). Cleanaway understands that the result recorded on 15 February is anomalous and has requested an additional confirmatory stack testing event to be undertaken (see May 2019 results above which reflect compliance).		
Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.2			
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<6.8			

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Average Result	
31/08/2018	8/08/2018	Normal stack gas flow rate		m3/min	94	
		Temperature		Degrees Celsius	286	
		Velocity		m/s	12	
		Moisture		%	8.6	
		Dry gas density		kg/m3	1.3	
		Molecular weight of stack gases		g/g.mole	29.6	
		Stack pressure		Kpa	101.3	
		Hydrogen Sulfide	5	mg/m3	<0.5	
		Odour		ou	325	
		Oxygen		%	8.4	
		Nitrogen Oxides @ stack O2		mg/m3	226	
		Nitrogen Oxides @ 3% O2	350	mg/m3	324	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	26	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	20	
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	22.1	
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	30.8	
		Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.2	
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<6.1			

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
					EPA Point 1 - TOH F-490
					Average Result
15/03/2018	22/02/2018	Normal stack gas flow rate		m ³ /min	62
		Temperature		Degrees Celsius	280
		Velocity		m/s	8
		Moisture		%	9
		Dry gas density		kg/m ³	1.32
		Molecular weight of stack gases		g/g.mole	29.5
		Stack pressure		Kpa	101.3
		Hydrogen Sulfide	5	mg/m ³	<0.5
		Odour		ou	970
		Oxygen		%	9
		Nitrogen Oxides @ stack O ₂		mg/m ³	201
		Nitrogen Oxides @ 3% O ₂	350	mg/m ³	303
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO ₃) @ Stack O ₂		mg/m ³	20.9
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO ₃) @ 11% O ₂	100	mg/m ³	17.5
		Total Solid Particulates (TSP) @ Stack O ₂		mg/m ³	34.7
Total Solid Particulates (TSP) @ 3% O ₂	50	mg/m ³	52.3		
Volatile Organic Compounds (expressed as n-propane) @ stack O ₂		mg/m ³	<3.6		
Volatile Organic Compounds (expressed as n-propane) @ 3% O ₂	40	mg/m ³	<5.4		

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point
					EPA Point 1 - TOH F-490
					Average Result
14/09/2017	26/07/2017	Normal stack gas flow rate		m ³ /min	63
		Temperature		Degrees Celsius	290
		Velocity		m/s	8.1
		Moisture		%	8.2
		Dry gas density		kg/m ³	1.32
		Molecular weight of stack gases		g/g.mole	29.6
		Stack pressure		Kpa	101.5
		Hydrogen Sulfide	5	mg/m ³	<0.3
		Odour		ou	474
		Oxygen		%	8
		Nitrogen Oxides @ stack O ₂		mg/m ³	237
		Nitrogen Oxides @ 3% O ₂	350	mg/m ³	329
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO ₃) @ Stack O ₂		mg/m ³	15.6
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO ₃) @ 11% O ₂	100	mg/m ³	12
		Total Solid Particulates (TSP) @ Stack O ₂		mg/m ³	26.2
Total Solid Particulates (TSP) @ 3% O ₂	50	mg/m ³	36.4		
Volatile Organic Compounds (expressed as n-propane) @ stack O ₂		mg/m ³	<3.6		
Volatile Organic Compounds (expressed as n-propane) @ 3% O ₂	40	mg/m ³	<4.9		

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Average Result - 16 February	Average Result - 23 March
26/04/2017	16/02/2017 & 23/03/2017	Normal stack gas flow rate		m3/min	64	73
		Temperature		Degrees Celsius	290.4	290
		Velocity		m/s	8.6	8.9
		Moisture		%	9.4	9.4
		Dry gas density		kg/m3	1.32	1.32
		Molecular weight of stack gases		g/g.mole	29.6	29.6
		Stack pressure		Kpa	101.3	101.8
		Hydrogen Sulfide (3%)	3	mg/m3	29.5	<0.5
		Odour		ou	3642	
		Oxygen		%	7.9	8.1
		Nitrogen Oxides @ stack O2		mg/m3	214	
		Nitrogen Oxides @ 3% O2	350	mg/m3	296	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	22.2	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	16.5	
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	34.8	
Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	46.5			
Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.23			
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<5.84			

Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Discharge Point	
					EPA Point 1 - TOH F-490	
					Average Result - 8th August	Average Result - 31st August
6/09/2016	8/08/2016 & 31/08/2016	Normal stack gas flow rate		m3/min	74	56
		Temperature		Degrees Celsius	305	310
		Velocity		m/s	10	7.8
		Moisture		%	8	9
		Dry gas density		kg/m3	1.3	1.3
		Molecular weight of stack gases		g/g.mole	29	29.5
		Stack pressure		Kpa	101.3	101.3
		Hydrogen Sulfide	3	mg/m3	<0.7	
		Odour		ou	800	
		Oxygen		%	11.3	9.5
		Nitrogen Oxides @ stack O2		mg/m3	184	
		Nitrogen Oxides @ 3% O2	350	mg/m3	344	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	56.7	
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	58.6	90.5
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	667	70.3
Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	1238	55.2		
Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.04			
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<7.55			

EPA Data Point Reference	EPA Data Point Name	EPA Data Point Description
1	Air Emissions monitoring and discharge	Thermal Oil Heater (TOH- F490)