



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

						Discharge Point
Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	EPA Point 1 - TOH F-490
						Average Result
9/12/2021	8/12/2021	25/11/2021	Actual stack flow rate		m3/min	190.4
			Average Stack Temperature		Degrees Celsius	246
			Velocity		m/s	11.222
			Moisture		%	12.378
			Dry gas density		kg/Nm3	1.32
			Molecular weight of stack gases (Wet)		g/g.mole	28.29
			Absolute Stack pressure		mb	1009
			Hydrogen Sulfide	5	mg/Nm3	<0.501
			Odour		ou	2.142
			Oxygen		%	8.568
			Nitrogen Oxides @ 7% O2		mg/Nm3	190.5
			Nitrogen Oxides @ 3% O2	350	mg/Nm3	191
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/Nm3	6.97
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/Nm3	5.71
			Total Solid Particulates (TSP) @ Stack O2		mg/Nm3	17.932
			Total Solid Particulates (TSP) @ 3% O2	50	mg/Nm3	26.6
Volatile Organic Compounds (expressed as n-propane) @ stack O2						
Volatile Organic Compounds (expressed as n-propane) @ 3% O2					<0.8111	

						Discharge Point
Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	EPA Point 1 - TOH F-490
6/08/2021	5/08/2021	17/07/2021	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						
Volatile Organic Compounds (expressed as n-propane) @ 3% O2					<2.03	

						Discharge Point	
						EPA Point 1 - TOH F-490	
Published Date	Obtained Date	Sampled Date	Parameter	Assessment Criteria	Unit of Measure	Average Result	
22/07/2020	10/07/2020	10/06/2020	Normal stack gas flow rate		m ³ /min	67	
			Temperature		Degrees Celsius	331	
			Velocity		m/s	9.8	
			Moisture		%	13	
			Dry gas density		kg/m ³	1.32	
			Molecular weight of stack gases		g/g.mole	29.7	
			Stack pressure		Kpa	102.9	
			Hydrogen Sulfide	5	mg/m ³	<0.3	
			Odour		ou	1400	
			Oxygen		%	6.3	
			Nitrogen Oxides @ stack O2		mg/m ³	84	
			Nitrogen Oxides @ 3% O2	350	mg/m ³	103	
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m ³	0.6	
			Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m ³	31.8	
			Total Solid Particulates (TSP) @ Stack O2		mg/m ³	31.8	
			Total Solid Particulates (TSP) @ 3% O2	50	mg/m ³	39	
			Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m ³	<3.9	
Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m ³	<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 SO3) @ 11% O2	100	mg/m3	12
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	30
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	42
		Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<4.3
		Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<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
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	31
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	42
		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	<5.7

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		
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	30.1	33.8
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	45.1	45.8
		Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3		
		Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	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	Explanation
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	66.7	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		m3/min	62
		Temperature		Degrees Celsius	280
		Velocity		m/s	8
		Moisture		%	9
		Dry gas density		kg/m3	1.32
		Molecular weight of stack gases		g/g.mole	29.5
		Stack pressure		Kpa	101.3
		Hydrogen Sulfide	5	mg/m3	<0.5
		Odour		ou	970
		Oxygen		%	9
		Nitrogen Oxides @ stack O2		mg/m3	201
		Nitrogen Oxides @ 3% O2	350	mg/m3	303
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	20.9
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	17.5
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	34.7
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	52.3
		Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<3.6
		Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<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		m3/min	63
		Temperature		Degrees Celsius	290
		Velocity		m/s	8.1
		Moisture		%	8.2
		Dry gas density		kg/m3	1.32
		Molecular weight of stack gases		g/g.mole	29.6
		Stack pressure		Kpa	101.5
		Hydrogen Sulfide	5	mg/m3	<0.3
		Odour		ou	474
		Oxygen		%	8
		Nitrogen Oxides @ stack O2		mg/m3	237
		Nitrogen Oxides @ 3% O2	350	mg/m3	329
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ Stack O2		mg/m3	15.6
		Sulfuric Acid Mist / Sulfur Trioxide (expressed as SO3) @ 11% O2	100	mg/m3	12
		Total Solid Particulates (TSP) @ Stack O2		mg/m3	26.2
		Total Solid Particulates (TSP) @ 3% O2	50	mg/m3	36.4
		Volatile Organic Compounds (expressed as n-propane) @ stack O2		mg/m3	<3.6
		Volatile Organic Compounds (expressed as n-propane) @ 3% O2	40	mg/m3	<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	

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