



EPL No:	12555
Entity Name:	Cleanaway Refiners Pty Ltd
Site:	41 Kyle Street, Rutherford NSW 2320
Monitoring Frequency:	Annually
Link to NSW EPA Register:	<a href="#">Click Here</a>

Published Date	Report Date	Sample Date	Parameter	Unit of Measure	Assessment Criteria	Discharge Point							
						DP2 - 3MW Boiler	DP3 - 0.2MW Boiler	Assessment Criteria	DP 5 - Light end Scrubber	Assessment Criteria	DP 19 - Fired Heater	Assessment Criteria	DP 20 - Reformer
16-Jan-21	14-Jan-21	Dec-20	Temperature	Degrees Celsius		186	256		29.1		98		Monitoring at DP20 to be completed in March 2021. Unable to complete monitoring in Dec 2020 due sample point access issues / unable to open testing portal.
			Oxygen	%		4.97	9.09		20.7		6.16		
			Carbon dioxide	%		9.17	7.6		0.0651		8.77		
			Moisture	%		6.58	6.8		1.77		14.6		
			Dry gas density	kg/m3		1.32	1.32		1.29		1.32		
			Molecular weight of dry stack gases	g/g-mol		29.7	29.5		28.8		29.6		
			Velocity	m/s		3.21	10.4		2.71		3.08		
			Volumetric flowrate	m3/s		0.594	0.157		0.085		0.548		
			VOC as propane	mg/m3		<1.72	<1.91	20	<1.88		<1.83		
			VOC as propane (@ 8% O2)	mg/m3	10	<1.38	<1.92		-	10	<1.57	10	
			Hydrogen sulfide	mg/m3		5.39	1.88		3.71		<1.81		
			Hydrogen sulfide (@ 8% O2)	mg/m3		4.33	1.89		-	5	<1.61		
			Nitrogen Oxides	mg/m3		110	100		-		168		
			Nitrogen Oxides (@ 8% O2)	mg/m3	350	89.7	101		-	350	146	350	
			Solid Particles	mg/m3		7.19	<3.54		5.22		53.1		
			Solid Particles (@ 8% O2)	mg/m3	10	6.34	<3.77		-	50	48.1	10	
			Formaldehyde	mg/m3		<1.86	4.74		<0.186		0.36		
			Formaldehyde (@ 8% O2)	mg/m3		<1.5	4.79		-		0.32		
			Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3		0.442	0.567		0.595		7.56		
			Sulfuric acid mist and sulfur trioxide (as SO3) (@ 8% O2)	mg/m3		0.361	0.572		-	100	6.58		
			Sulphur dioxide	mg/m3		2.76	4.45		5.27		12.1		
			Sulphur dioxide (@ 8% O2)	mg/m3		2.226	4.49		-	1360	10.6		
			Fine Particles (PM10)	mg/m3		<7.19	<3.54		<5.22		<53.1		
			Fine Particles (PM10) (@ 8% O2)	mg/m3		<6.34	<3.77		-		<48.7		
			Benzene	mg/m3		<0.0687	<0.0762		<0.0753		<0.073		
			Benzene (@ 8% O2)	mg/m3		<0.0553	<0.0768		-		<0.063		
			Benzo(a)pyrene (Equivalent - total)	mg/m3		-	-		<0.000013		<0.0000021		
			Benzo(a)pyrene (Equivalent - total) @8% O2	mg/m3		-	-		-		<0.0000018		
			Odour	OU		-	-		1896		2142		
			Total PAHs - Lower	mg/m3		-	-		0.0809		0.17237		
Total PAHs - Lower (@ 8% O2)	mg/m3		-	-		-		0.14793					
Arsenic	mg/m3		-	-		-		<0.00929					
Arsenic (@ 8% O2)	mg/m3		-	-		-		<0.00824					
Lead	mg/m3		-	-		-		0.0164					
Lead (@ 8% O2)	mg/m3		-	-		-		0.0146					
Mercury	mg/m3		-	-		-		0.00103					
Mercury (@ 8% O2)	mg/m3		-	-		-		0.00092					

Sample Date	Parameter	Unit of Measure	Discharge Point								
			Assessment Criteria	DP2 - 3MW Boiler	DP3 - 0.2MW Boiler	Assessment Criteria	DP 5 - Light end Scrubber	Assessment Criteria	DP 19 - Fired Heater	Assessment Criteria	DP 20 - Reformer
Dec-19	Temperature	Degrees Celsius		193	257		23.1		109		815
	Oxygen	%		6.31	3.88		20.8		5.65		7.2
	Carbon dioxide	%		6.86	10.3		0.02		8.39		10.1
	Moisture	%		9.39	11.3		2.97		11.1		17
	Dry gas density	kg/m3		1.31	1.33		1.29		1.32		1.33
	Molecular weight of dry stack gases	g/g-mol		29.3	29.8		28.8		29.6		29.9
	Velocity	m/s		3.19	10.5		3.73		3.1		13.5
	Volumetric flowrate	m3/s		0.563	0.151		0.117		0.556		0.263
	VOC as propane	mg/m3		<1.84	<1.85	20	<1.84		<1.99		<1.81
	VOC as propane (@ 8% O2)	mg/m3	10	<1.63	<1.4		-	10	<1.68	10	<2.24
	Hydrogen sulfide	mg/m3		<1.84	<1.84		<1.82		<1.82		<1.82
	Hydrogen sulfide (@ 8% O2)	mg/m3		<1.63	<1.39		-	5	<1.51		<2.22
	Nitrogen Oxides	mg/m3		53.2	148		-		105		90
	Nitrogen Oxides (@ 8% O2)	mg/m3	350	47	112		-	350	89	350	112
	Solid Particles	mg/m3		2.77	3.39		2.87		23.1		3.52
	Solid Particles (@ 8% O2)	mg/m3	10	3.24	2.64		-	50	19.9	10	4.44
	Formaldehyde	mg/m3		<1.86	3.71		<1.84		5.44		-
	Formaldehyde (@ 8% O2)	mg/m3		<1.64	2.81		-		4.68		-
	Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3		1.7	5.02		0.287		3.1		1.3
	Sulfuric acid mist and sulfur trioxide (as SO3) (@ 8% O2)	mg/m3		1.5	3.8		-	100	2.67		1.63
	Sulphur dioxide	mg/m3		13	15.1		3.14		36.5		11.4
	Sulphur dioxide (@ 8% O2)	mg/m3		11.5	11.5		-	1360	31.4		14.3
	Fine Particles (PM10)	mg/m3		<2.7	<3.39		<2.87		23.1		<3.52
	Fine Particles (PM10) (@ 8% O2)	mg/m3		<3.24	<2.64		-		19.9		<4.44
	Benzene	mg/m3		<0.0737	<0.0740		<0.0736		<0.724		<0.724
	Benzene (@ 8% O2)	mg/m3		<0.0652	<0.0561		-		<0.611		<0.896
	Benzo(a)pyrene (Equivalent - total)	mg/m3		-	-		0.000594		0.0000314		0.000514
	Benzo(a)pyrene (Equivalent - total) @8% O2	mg/m3		-	-		-		0.000027		0.00064
	Odour	OU		-	-		1266		2891		2311
	Total PAHs - Lower	mg/m3		-	-		0.0356		0.00136		0.00869
	Total PAHs - Lower (@ 8% O2)	mg/m3		-	-		-		0.00117		0.0108
	Arsenic	mg/m3		-	-		-		<0.00942		<0.00971
Arsenic (@ 8% O2)	mg/m3		-	-		-		<0.00788		<0.000901	
Lead	mg/m3		-	-		-		0.015		0.0292	
Lead (@ 8% O2)	mg/m3		-	-		-		0.0125		0.0355	
Mercury	mg/m3		-	-		-		0.00155		0.000927	
Mercury (@ 8% O2)	mg/m3		-	-		-		0.0013		0.00113	

