

Air Monitoring Data Report

14-Apr-24

The attached report contains the air monitoring data for all the licenced air monitoring points as required by the Environment Protection Licence 10232, for July to March 2024 as part of the reporting period July 2023 - June 2024.

Authorised by:



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Latest Publication Date: 14-Apr-24

Monitoring Location No: 1

Environment Protection Licence: 10232

Description: Exit point from Stack 1 to atmosphere

Reporting Period: July 2023 to June 2024

Monitoring Type: Continuous

Sample Type: Air

Month	Date of publication	Pollutant	Unit of measure	Concentration Limit	Data collected (%)	Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
July	14-Aug	Flow	Nm3/s	100	100.00	65.19	89.62	83.10	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	33.80	2.92	Y	
		Moisture	%	N/A	100.00	0.00	31.38	23.14	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	133.75	247.67	199.08	Y	
		Opacity	%	20	99.62	2.76	89.49	8.24	N	Recovery Boiler issues
		Oxygen (O2)	%	N/A	100.00	1.65	12.48	3.77	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	25.82	499.85	68.72	N	NCG diverted to PB
		Temperature	°C	N/A	100.00	120.70	180.65	159.95	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.08	0.69	0.20	Y	
August	14-Sep	Flow	Nm3/s	100	100.00	65.47	93.55	81.40	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	18.15	2.51	Y	
		Moisture	%	N/A	100.00	0.00	26.41	22.89	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	110.85	309.20	196.27	Y	
		Opacity	%	20	99.65	2.16	89.47	7.89	N	Plant issues
		Oxygen (O2)	%	N/A	100.00	2.78	11.47	3.81	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	37.47	379.55	73.87	Y	Planned Maintenance
		Temperature	°C	N/A	100.00	90.30	180.65	169.58	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.61	1.51	1.09	Y	
September	14-Oct	Flow	Nm3/s	100	100.00	64.50	86.62	79.56	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	14.17	2.22	Y	
		Moisture	%	N/A	100.00	0.00	26.60	22.73	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	130.37	221.11	188.89	Y	
		Opacity	%	20	99.64	2.02	81.47	7.75	N	Lime Kiln A Issues
		Oxygen (O2)	%	N/A	100.00	2.79	7.64	3.84	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	49.08	432.68	71.17	Y	Planned Maintenance
		Temperature	°C	N/A	100.00	131.24	180.65	169.02	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.84	1.51	1.12	Y	
October	14-Nov	Flow	Nm3/s	100	100.00	5.19	85.05	56.36	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	9.75	1.78	Y	
		Moisture	%	N/A	100.00	0.00	25.68	16.51	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	15.51	224.16	110.44	Y	
		Opacity	%	20	99.62	0.94	88.32	9.55	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.67	19.65	5.94	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.40	187.52	52.22	Y	
		Temperature	°C	N/A	100.00	40.54	180.65	158.14	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.53	1.25	0.97	Y	
November	14-Dec	Flow	Nm3/s	100	99.86	13.31	99.04	76.49	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	28.09	1.83	Y	
		Moisture	%	N/A	100.00	0.00	18.90	12.79	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	6.94	306.78	58.74	Y	
		Opacity	%	20	99.63	2.76	89.46	11.27	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.70	16.27	3.78	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	1.27	96.48	50.78	Y	
		Temperature	°C	N/A	100.00	121.36	180.65	165.22	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.10	3.36	0.97	Y	
December	14-Jan	Flow	Nm3/s	100	100.00	59.94	84.85	77.51	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	8.66	1.47	Y	
		Moisture	%	N/A	100.00	0.00	12.06	8.11	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.00	128.65	26.41	Y	
		Opacity	%	20	99.68	3.24	54.65	10.16	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.58	9.24	3.68	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	12.10	53.76	31.88	Y	
		Temperature	°C	N/A	100.00	113.95	171.56	144.36	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	1.02	1.06	1.04	Y	
January	14-Feb	Flow	Nm3/s	100	100.00	41.93	85.46	76.89	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	12.70	1.16	Y	
		Moisture	%	N/A	100.00	0.00	11.49	7.00	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.00	93.43	14.83	Y	
		Opacity	%	20	99.65	0.01	66.08	5.65	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.63	11.72	3.78	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	11.55	58.33	30.68	Y	
		Temperature	°C	N/A	100.00	111.17	178.00	143.86	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.11	1.07	1.04	Y	
February	14-Mar	Flow	Nm3/s	100	100.00	13.89	95.07	76.81	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	16.53	1.22	Y	
		Moisture	%	N/A	100.00	0.00	26.49	19.75	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.04	337.77	149.03	Y	
		Opacity	%	20	99.61	1.45	49.15	5.78	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.47	11.68	3.65	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	1.16	449.11	39.11	N	Equipment Issues
		Temperature	°C	N/A	100.00	0.31	200.86	148.22	N/A	
		TRS (as H2S)	mg/m3	3.6	100.00	0.33	0.33	0.33	Y	
March	14-Apr	Flow	Nm3/s	100	100.00	56.90	84.81	75.51	Y	
		Hydrogen chloride	mg/m3	50	100.00	0.00	22.55	1.44	Y	
		Moisture	%	N/A	100.00	0.00	26.73	22.47	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	105.73	303.47	196.17	Y	
		Opacity	%	20	99.68	1.61	47.65	6.25	N	Equipment Issues
		Oxygen (O2)	%	N/A	100.00	2.72	12.21	3.96	N/A	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.00	490.94	34.24	N	Equipment Issues
		Temperature	°C	N/A	100.00	123.23	227.94	182.22	N/A	
		TRS (as H2S)	mg/m3	3.6	0.00	0.00	0.00	0.00	N	Analyser Fault

Latest Publication Date: 14-Apr-24

Monitoring Location No: 1

Environment Protection Licence: 10232

Description: Exit point from Stack 1 to Atmosphere

Reporting Period: July 2023 to June 2024

Monitoring Type: Grab Sample

Sample Type: Air

Pollutant	Unit of measure	Concentration Limit	Sampling Freq	Date of Sample	Date of Report	Report No.	Data	Compliance (Yes/No)	Comment
Chlorine	mg/m3	100	Annual	15-Nov-23	11-Mar-24	R015723	0.25	Yes	
Sulfuric acid mist & sulfur trioxide (as SO3)	mg/m3	20	Annual	15-Nov-23	11-Mar-24	R015723	1.8	Yes	
TCDD (equivalent)	ng/m3	0.1	Annual	15-Nov-23	11-Mar-24	R015723	0.0084	Yes	
Total Solid Particles	mg/m3	50	1st Qrt	15-Aug-23	06-Sep-23	R015496	65	No	
Total Solid Particles	mg/m3	50	2nd Qrt	15-Nov-23	11-Mar-24	R015723	95	No	
Total Solid Particles	mg/m3	50	3rd Qrt	21-Feb-24	25-Mar-24	R016507	41	Yes	
Total Solid Particles	mg/m3	50	4th Qrt						
Type 1 and 2 substances	mg/m3	1	Annual	15-Nov-23	11-Mar-24	R015723	<0.06	Yes	

ND- No Data

N/A- Not Applicable

Latest Publication Date: 14-Apr-24

Monitoring Location No: 2

Environment Protection Licence:

10232

Description: Discharge duct downstream of Recovery Boiler A prior to junction with Stack 1

Reporting Period:

July 2023 to June 2024

Monitoring Type: Continuous

Sample Type: Air

Month	Date of publication	Pollutant	Unit of measure	Reporting Level	Data collected (%)	Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
July	14-Aug	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.70	435.07	27.75	N/A	
		Flow	Nm3/s	N/A	100.00	0.01	97.83	29.23	N/A	
		Moisture	%	N/A	100.00	0.00	25.97	23.26	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.30	124.47	86.54	N/A	
		Opacity	%	N/A	100.00	0.04	78.61	3.56	N/A	
		Oxygen (O2)	%	N/A	100.00	0.01	18.42	3.75	N/A	
		Temperature	°C	N/A	100.00	151.78	257.14	175.36	N/A	
August	14-Sep	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.70	382.17	33.19	N/A	
		Flow	Nm3/s	N/A	100.00	0.03	96.64	29.10	N/A	
		Moisture	%	N/A	100.00	0.00	25.74	23.68	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	99.87	0.57	125.20	82.67	N/A	
		Opacity	%	N/A	100.00	1.44	64.86	4.85	N/A	
		Oxygen (O2)	%	N/A	100.00	2.44	15.23	3.64	N/A	
		Temperature	°C	N/A	100.00	165.52	257.36	173.33	N/A	
September	14-Oct	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.33	283.28	21.13	N/A	
		Flow	Nm3/s	N/A	100.00	0.02	96.62	35.49	N/A	
		Moisture	%	N/A	100.00	0.00	25.81	23.50	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	1.62	124.76	78.73	N/A	
		Opacity	%	N/A	100.00	2.06	52.45	4.69	N/A	
		Oxygen (O2)	%	N/A	100.00	2.50	9.55	3.71	N/A	
		Temperature	°C	N/A	100.00	87.97	259.61	172.57	N/A	
October	14-Nov	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.18	326.88	13.58	N/A	
		Flow	Nm3/s	N/A	100.00	0.00	96.77	45.01	N/A	
		Moisture	%	N/A	100.00	0.00	26.36	20.27	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.01	129.53	60.87	N/A	
		Opacity	%	N/A	100.00	0.00	71.78	5.90	N/A	
		Oxygen (O2)	%	N/A	100.00	0.94	20.84	6.35	N/A	
		Temperature	°C	N/A	100.00	7.75	183.96	138.47	N/A	
November	14-Dec	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.20	1332.88	37.43	N/A	
		Flow	Nm3/s	N/A	100.00	0.02	98.80	59.54	N/A	
		Moisture	%	N/A	100.00	0.00	26.57	23.48	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	1.55	168.43	77.19	N/A	
		Opacity	%	N/A	100.00	0.00	93.87	8.27	N/A	
		Oxygen (O2)	%	N/A	100.00	1.74	20.34	3.73	N/A	
		Temperature	°C	N/A	100.00	93.57	185.50	167.70	N/A	
December	14-Jan	Carbon monoxide (CO)	mg/m3	N/A	100.00	2.90	855.73	37.66	N/A	
		Flow	Nm3/s	N/A	100.00	0.05	97.78	43.18	N/A	
		Moisture	%	N/A	100.00	0.00	25.78	23.74	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.05	158.78	68.62	N/A	
		Opacity	%	N/A	100.00	0.03	53.03	3.78	N/A	
		Oxygen (O2)	%	N/A	100.00	1.04	9.17	3.49	N/A	
		Temperature	°C	N/A	100.00	99.68	177.12	170.11	N/A	
January	14-Feb	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.05	515.55	22.13	N/A	
		Flow	Nm3/s	N/A	100.00	0.00	98.49	33.94	N/A	
		Moisture	%	N/A	100.00	0.00	34.79	23.33	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	245.29	103.00	N/A	
		Opacity	%	N/A	100.00	0.00	92.26	2.67	N/A	
		Oxygen (O2)	%	N/A	100.00	1.14	20.36	3.82	N/A	
		Temperature	°C	N/A	100.00	143.74	179.39	170.99	N/A	
February	14-Mar	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.92	723.26	51.97	N/A	
		Flow	Nm3/s	N/A	100.00	0.00	97.29	31.72	N/A	
		Moisture	%	N/A	100.00	0.00	25.85	23.34	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	98.71	0.65	273.13	187.16	N/A	
		Opacity	%	N/A	100.00	0.00	50.77	3.93	N/A	
		Oxygen (O2)	%	N/A	100.00	1.49	20.56	3.65	N/A	
		Temperature	°C	N/A	100.00	151.10	178.26	172.90	N/A	
March	14-Apr	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.18	356.40	11.62	N/A	
		Flow	Nm3/s	N/A	100.00	0.01	96.14	28.82	N/A	
		Moisture	%	N/A	100.00	0.00	26.13	23.28	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	25.93	229.95	166.75	N/A	
		Opacity	%	N/A	100.00	0.00	46.07	2.06	N/A	
		Oxygen (O2)	%	N/A	100.00	2.13	19.08	4.19	N/A	
		Temperature	°C	N/A	100.00	91.07	179.05	168.48	N/A	

Latest Publication Date: 14-Apr-24

Monitoring Location No: 2

Environment Protection Licence:

10232

Description: Discharge duct downstream of Recovery Boiler A prior to
junction with Stack 1

Reporting Period:

July 2023 to June 2024

Monitoring Type: Grab Sample

Sample Type:

Air

Pollutant	Unit of measure	Reporting Level	Sampling Freq	Date of Sample	Date of Report	Report No.	Data	Compliance(Yes/No)	Comment
Methanol	mg/m3	N/A	Annual	16-Nov-23	11-Mar-24	R015723	<0.3	Yes	
Total Solid Particles	mg/m3	N/A	Annual	16-Nov-23	11-Mar-24	R015723	35	Yes	

ND - No Data

N/A - Not applicable

Latest Publication Date: 14-Apr-24

Monitoring Location No: 3

Environment Protection Licence:

10232

Description: Discharge duct downstream of Power Boiler prior to junction with Stack 1

Reporting Period:

July 2023 to June 2024

Monitoring Type: Continuous

Sample Type: Air

Month	Date of publication	Pollutant	Unit of measure	Reporting Level	Data collected (%)	Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
July	14-Aug	Carbon monoxide (CO)	mg/m3	140	100.00	2.99	76.93	25.57	Y	
		Flow	Nm3/s	N/A	100.00	0.03	97.89	47.82	N/A	
		Moisture	%	N/A	100.00	0.00	28.07	18.41	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	42.91	136.11	99.37	N/A	
		Opacity	%	N/A	100.00	3.18	53.81	8.95	N/A	
		Oxygen (O2)	%	N/A	100.00	0.08	0.13	0.10	N/A	
		Temperature	°C	N/A	100.00	190.19	220.15	204.26	N/A	
August	14-Sep	Carbon monoxide (CO)	mg/m3	140	99.87	5.61	165.06	37.11	Y	Planned Maintenance
		Flow	Nm3/s	N/A	100.00	0.02	93.29	36.55	N/A	
		Moisture	%	N/A	100.00	0.00	30.61	20.45	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	99.87	28.95	236.93	159.44	N/A	
		Opacity	%	N/A	100.00	3.16	34.74	9.54	N/A	
		Oxygen (O2)	%	N/A	100.00	0.02	9.88	4.15	N/A	
		Temperature	°C	N/A	100.00	184.92	216.77	203.88	N/A	
September	14-Oct	Carbon monoxide (CO)	mg/m3	140	100.00	11.71	131.72	31.16	Y	
		Flow	Nm3/s	N/A	100.00	0.02	75.42	33.99	N/A	
		Moisture	%	N/A	100.00	0.00	31.42	21.02	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	114.31	191.53	165.07	N/A	
		Opacity	%	N/A	100.00	3.10	32.65	9.61	N/A	
		Oxygen (O2)	%	N/A	100.00	1.92	8.00	4.37	N/A	
		Temperature	°C	N/A	100.00	186.05	212.72	202.25	N/A	
October	14-Nov	Carbon monoxide (CO)	mg/m3	140	100.00	0.03	312.50	57.28	Y	Planned Maintenance
		Flow	Nm3/s	N/A	100.00	0.00	75.16	28.47	N/A	
		Moisture	%	N/A	100.00	0.00	31.44	17.83	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.01	224.21	140.71	N/A	
		Opacity	%	N/A	100.00	4.13	75.54	16.26	N/A	
		Oxygen (O2)	%	N/A	100.00	1.32	20.11	6.10	N/A	
		Temperature	°C	N/A	100.00	12.01	245.57	185.26	N/A	
November	14-Dec	Carbon monoxide (CO)	mg/m3	140	100.00	9.86	312.50	65.24	Y	Equipment Issues
		Flow	Nm3/s	N/A	100.00	0.04	90.32	33.53	N/A	
		Moisture	%	N/A	100.00	0.00	31.59	20.23	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	17.02	288.94	158.42	Y	
		Opacity	%	N/A	100.00	2.13	44.98	7.43	N/A	
		Oxygen (O2)	%	N/A	100.00	0.11	9.60	4.19	N/A	
		Temperature	°C	N/A	100.00	187.83	215.19	199.87	N/A	
December	14-Jan	Carbon monoxide (CO)	mg/m3	140	100.00	7.50	135.57	28.54	Y	
		Flow	Nm3/s	N/A	100.00	0.04	94.69	33.21	N/A	
		Moisture	%	N/A	100.00	0.00	31.46	20.57	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	96.22	231.53	176.17	N/A	
		Opacity	%	N/A	100.00	2.37	23.30	7.61	N/A	
		Oxygen (O2)	%	N/A	100.00	1.29	8.73	4.08	N/A	
		Temperature	°C	N/A	100.00	184.72	211.33	197.93	N/A	
January	14-Feb	Carbon monoxide (CO)	mg/m3	140	100.00	8.47	182.32	37.97	Y	Planned Maintenance
		Flow	Nm3/s	N/A	100.00	0.04	77.12	34.24	N/A	
		Moisture	%	N/A	100.00	0.00	32.81	21.13	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	99.87	108.00	235.47	169.41	N/A	
		Opacity	%	N/A	100.00	2.84	34.84	8.10	N/A	
		Oxygen (O2)	%	N/A	100.00	1.11	8.44	4.16	N/A	
		Temperature	°C	N/A	100.00	186.60	213.88	200.29	N/A	
February	14-Mar	Carbon monoxide (CO)	mg/m3	140	98.28	0.13	174.93	34.54	Y	
		Flow	Nm3/s	N/A	100.00	0.04	77.01	32.79	N/A	
		Moisture	%	N/A	100.00	0.00	32.51	20.88	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	35.98	234.11	157.44	N/A	
		Opacity	%	N/A	100.00	0.58	39.40	7.91	N/A	
		Oxygen (O2)	%	N/A	100.00	1.73	16.04	4.14	N/A	
		Temperature	°C	N/A	100.00	186.60	211.99	198.83	N/A	
March	14-Apr	Carbon monoxide (CO)	mg/m3	140	100.00	16.65	93.81	47.27	Y	
		Flow	Nm3/s	N/A	100.00	0.04	79.40	34.91	N/A	
		Moisture	%	N/A	100.00	0.00	30.49	18.08	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	12.93	243.15	136.16	N/A	
		Opacity	%	N/A	100.00	2.81	33.58	8.51	N/A	
		Oxygen (O2)	%	N/A	100.00	1.53	9.71	3.99	N/A	
		Temperature	°C	N/A	100.00	182.17	213.88	198.50	N/A	

Latest Publication Date: 14-Apr-24

Monitoring Location No: 3

Environment Protection Licence:

10232

Description: Discharge duct downstream of Power Boiler prior to junction with Stack 1

Reporting Period: July 2023 to June 2024

Monitoring Type: Grab Sample

Sample Type: Air

Pollutant	Unit of measure	Concentration Limit	Sampling Freq	Date of Sample	Date of Report	Report No.	Data	Compliance (Yes/No)	Comment
Cadmium	mg/m3	0.06	1st Qrt						Note
Mercury	mg/m3	0.06	1st Qrt						Note
TCDD (equivalent)	ng/m3	0.1	1st Qrt						Note
Type 1 and 2 substances	mg/m3	0.6	1st Qrt						Note
Cadmium	mg/m3	0.06	2nd Qrt						Note
Mercury	mg/m3	0.06	2nd Qrt						Note
TCDD (equivalent)	ng/m3	0.1	2nd Qrt						Note
Total Solid Particles	mg/m3	30	Annual	16-Nov-23	11-Mar-24	R015723	25	Yes	Note
Type 1 and 2 substances	mg/m3	0.6	2nd Qrt						Note
Cadmium	mg/m3	0.06	3rd Qrt						Note
Mercury	mg/m3	0.06	3rd Qrt						Note
TCDD (equivalent)	ng/m3	0.1	3rd Qrt						Note
Type 1 and 2 substances	mg/m3	0.6	3rd Qrt						Note
Cadmium	mg/m3	0.06	4th Qrt						Note
Mercury	mg/m3	0.1	4th Qrt						Note
TCDD (equivalent)	ng/m3	0.1	4th Qrt						Note
Type 1 and 2 substances	mg/m3	0.6	4th Qrt						Note

ND- No Data

N/A- Not Applicable

Note: Quarterly when non-standard fuels are being burnt in the Power Boiler, and not required at other times

Note 2: Concentration Limit only applicable when non-standard fuel is being burnt in the Power Boiler

Latest Publication Date: 14-Apr-24

Monitoring Location No: 4

Environment Protection Licence:

10232

Description: Discharge duct downstream of Lime Kiln A
prior to junction with Stack 1

Reporting Period:

July 2023 to June 2024

Monitoring Type: Continuous

Sample Type: Air

Month	Date of publication	Pollutant	Unit of measure	Reporting Level	Data collected (%)	Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
July	14-Aug	Carbon monoxide (CO)	mg/m3	N/A	100.00	4.21	5514.33	254.41	N/A	
		Moisture	%	N/A	100.00	0.00	31.37	24.94	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	230.78	92.63	N/A	
		Opacity	%	N/A	100.00	0.58	65.93	9.01	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	20.59	2.64	N/A	
		Temperature	°C	N/A	100.00	220.03	294.94	267.53	N/A	
August	14-Sep	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.84	8046.63	351.09	N/A	
		Moisture	%	N/A	100.00	0.00	29.78	25.19	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	157.32	88.22	N/A	
		Opacity	%	N/A	100.00	0.46	71.88	9.21	N/A	
		Oxygen (O2)	%	N/A	100.00	0.02	20.39	2.62	N/A	
		Temperature	°C	N/A	100.00	223.98	301.35	266.67	N/A	
September	14-Oct	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.84	8046.63	351.66	N/A	
		Moisture	%	N/A	100.00	0.00	32.82	25.60	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.89	234.39	89.08	N/A	
		Opacity	%	N/A	100.00	0.55	89.51	9.87	N/A	
		Oxygen (O2)	%	N/A	100.00	0.00	20.41	2.80	N/A	
		Temperature	°C	N/A	100.00	204.93	296.26	258.03	N/A	
October	14-Nov	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.84	8046.63	366.41	N/A	
		Moisture	%	N/A	100.00	0.00	28.82	20.55	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.02	210.45	64.60	N/A	
		Opacity	%	N/A	100.00	0.02	89.93	8.88	N/A	
		Oxygen (O2)	%	N/A	100.00	0.00	21.84	4.35	N/A	
		Temperature	°C	N/A	100.00	0.09	562.62	238.26	N/A	
November	14-Dec	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.69	8035.67	304.04	N/A	
		Moisture	%	N/A	100.00	0.00	30.14	24.43	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	189.48	87.74	N/A	
		Opacity	%	N/A	100.00	0.36	85.56	10.49	N/A	
		Oxygen (O2)	%	N/A	100.00	0.02	20.26	2.77	N/A	
		Temperature	°C	N/A	100.00	230.21	294.94	268.29	N/A	
December	14-Jan	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.69	8035.67	89.51	N/A	
		Moisture	%	N/A	100.00	0.00	32.08	26.69	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.11	250.09	133.40	N/A	
		Opacity	%	N/A	100.00	0.20	68.98	10.19	N/A	
		Oxygen (O2)	%	N/A	100.00	0.01	19.54	2.77	N/A	
		Temperature	°C	N/A	100.00	213.80	289.85	252.66	N/A	
January	14-Feb	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.69	3886.24	193.51	N/A	
		Moisture	%	N/A	100.00	0.00	32.45	25.36	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	230.44	110.59	N/A	
		Opacity	%	N/A	100.00	0.67	87.18	10.10	N/A	
		Oxygen (O2)	%	N/A	100.00	0.01	9.45	2.51	N/A	
		Temperature	°C	N/A	100.00	204.93	297.58	259.55	N/A	
February	14-Mar	Carbon monoxide (CO)	mg/m3	N/A	100.00	1.69	6075.28	119.37	N/A	
		Moisture	%	N/A	100.00	0.00	33.34	26.27	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	1.50	224.39	121.48	N/A	
		Opacity	%	N/A	100.00	0.22	49.76	9.86	N/A	
		Oxygen (O2)	%	N/A	100.00	0.04	18.93	2.48	N/A	
		Temperature	°C	N/A	100.00	215.12	296.26	259.33	N/A	
March	14-Apr	Carbon monoxide (CO)	mg/m3	N/A	100.00	4.49	8038.76	233.32	N/A	
		Moisture	%	N/A	100.00	0.00	32.69	25.27	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.01	207.82	105.46	N/A	
		Opacity	%	N/A	100.00	0.01	66.59	9.05	N/A	
		Oxygen (O2)	%	N/A	100.00	0.01	19.75	2.88	N/A	
		Temperature	°C	N/A	100.00	216.26	296.26	261.77	N/A	

Latest Publication Date: 14-Apr-24

Monitoring Location No: 21

Environment Protection Licence:

10232

Description: Discharge duct downstream of Lime Kiln B
prior to junction with Stack 1

Reporting Period:

July 2023 to June 2024

Monitoring Type: Continuous

Sample Type:

Air

Month	Date of publication	Pollutant	Unit of measure	Reporting Level	Data collected (%)	Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
July	14-Aug	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.49	6000.00	153.52	N/A	
		Moisture	%	N/A	100.00	0.00	50.58	26.19	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.01	979.71	542.72	N/A	
		Opacity	%	N/A	100.00	0.01	90.64	6.65	N/A	
		Oxygen (O2)	%	N/A	100.00	0.05	21.00	2.09	N/A	
		Temperature	°C	N/A	100.00	78.05	455.96	282.42	N/A	
August	14-Sep	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.51	6000.00	255.95	N/A	
		Moisture	%	N/A	100.00	0.00	46.55	27.02	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	1000.00	344.13	N/A	
		Opacity	%	N/A	100.00	0.01	90.64	6.46	N/A	
		Oxygen (O2)	%	N/A	100.00	0.05	21.00	2.29	N/A	
		Temperature	°C	N/A	100.00	80.58	438.80	276.45	N/A	
September	14-Oct	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.51	6000.00	287.21	N/A	
		Moisture	%	N/A	100.00	0.00	44.23	29.37	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	1000.00	344.34	N/A	
		Opacity	%	N/A	100.00	0.01	90.64	5.21	N/A	
		Oxygen (O2)	%	N/A	100.00	0.04	21.00	1.96	N/A	
		Temperature	°C	N/A	100.00	70.75	441.64	276.62	N/A	
October	14-Nov	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.52	6000.00	395.49	N/A	
		Moisture	%	N/A	100.00	0.00	37.92	23.67	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	618.51	292.76	N/A	
		Opacity	%	N/A	100.00	0.01	90.67	5.58	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	21.00	7.47	N/A	
		Temperature	°C	N/A	100.00	0.56	500.00	260.99	N/A	
November	14-Dec	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.52	6000.00	439.32	N/A	
		Moisture	%	N/A	100.00	0.00	43.03	28.78	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	1000.00	247.24	N/A	
		Opacity	%	N/A	100.00	0.01	90.60	8.70	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	21.00	2.07	N/A	
		Temperature	°C	N/A	100.00	62.18	458.08	284.88	N/A	
December	14-Jan	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.53	6000.00	229.39	N/A	
		Moisture	%	N/A	100.00	0.00	52.88	28.32	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	533.07	169.56	N/A	
		Opacity	%	N/A	100.00	0.01	90.64	9.33	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	21.00	2.80	N/A	
		Temperature	°C	N/A	100.00	61.62	433.46	275.51	N/A	
January	14-Feb	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.50	4982.52	255.11	N/A	
		Moisture	%	N/A	100.00	0.00	39.53	27.98	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	717.66	151.72	N/A	
		Opacity	%	N/A	100.00	0.01	90.46	8.03	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	21.00	2.55	N/A	
		Temperature	°C	N/A	100.00	74.30	460.04	277.83	N/A	
February	14-Mar	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.49	6000.00	310.23	N/A	
		Moisture	%	N/A	100.00	0.00	37.62	29.36	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	1000.00	186.77	N/A	
		Opacity	%	N/A	100.00	0.01	90.46	5.92	N/A	
		Oxygen (O2)	%	N/A	100.00	0.02	21.00	2.27	N/A	
		Temperature	°C	N/A	100.00	70.75	471.84	283.19	N/A	
March	14-Apr	Carbon monoxide (CO)	mg/m3	N/A	100.00	0.50	6000.00	184.79	N/A	
		Moisture	%	N/A	100.00	0.00	39.51	29.73	N/A	
		Nitrogen Oxides (as NO2)	mg/m3	N/A	100.00	0.00	741.41	329.15	N/A	
		Opacity	%	N/A	100.00	0.01	90.35	6.66	N/A	
		Oxygen (O2)	%	N/A	100.00	0.03	21.00	2.53	N/A	
		Temperature	°C	N/A	100.00	68.93	467.20	282.70	N/A	



Latest Publication Date:

14-Apr-24

Monitoring Location No:

21

Description:

Discharge duct downstream of Lime Kiln B prior to junction with Stack 1

Monitoring Type:

Grab Sample

Environment Protection Licence:

10232

Reporting Period:

July 2023 to June 2024

Sample Type:

Air

Pollutant	Unit of measure	Sampling Freq	Date of Sample	Date of Report	Report No.	Data	Comment
Total Solid Particles	mg/m3	Annual	16-Nov-23	11-Mar-24	R015723	370	

General Note: Limits are not applicable to this monitoring point

Sample Type: Air

Month	Date of publication	Pollutant	Unit of measure	Concentration Limit	Data		Lowest value	Highest value	Mean	Compliance (Yes/No)	Comment
					collected (%)	value					
July	14-Aug	Flow	Nm3/s	N/A	100.00	0.02	42.43	34.06	N/A	Auto Calibration	
		Hydrogen chloride	mg/m3	50	99.60	6.28	51.70	11.53	Y		
		Moisture	%	N/A	100.00	15.71	27.71	17.72	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	37.29	256.68	135.52	Y		
		Opacity	%	20	99.70	2.28	24.69	4.86	Y		
		Oxygen (O2)	%	N/A	100.00	7.47	23.29	9.89	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.14	0.82	0.63	Y		
		Temperature	°C	N/A	100.00	155.71	181.09	167.00	N/A		
August	14-Sep	TRS (as H2S)	mg/m3	3.6	100.00	0.00	0.82	0.54	Y	Instrument Error	
		Flow	Nm3/s	100	100.00	0.02	54.16	29.29	N/A		
		Hydrogen chloride	mg/m3	50	98.92	0.00	130.18	18.72	Y		
		Moisture	%	N/A	100.00	17.04	27.71	17.67	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.06	185.83	111.69	Y		
		Opacity	%	20	99.62	0.06	25.04	4.96	Y		
		Oxygen (O2)	%	N/A	100.00	3.52	21.98	11.61	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.00	50.74	0.58	Y		
September	14-Oct	Temperature	°C	N/A	100.00	115.72	177.34	165.06	N/A	Auto Calibration	
		TRS (as H2S)	mg/m3	3.6	100.00	0.00	1.07	0.37	Y		
		Flow	Nm3/s	N/A	100.00	3.94	44.86	39.20	N/A		
		Hydrogen chloride	mg/m3	50	100.00	0.00	2.87	0.20	Y		
		Moisture	%	N/A	100.00	15.06	27.69	17.56	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	22.78	128.44	114.25	Y		
		Opacity	%	20	99.71	2.21	28.75	7.27	Y		
		Oxygen (O2)	%	N/A	100.00	7.03	19.67	8.16	N/A		
October	14-Nov	Sulphur dioxide (SO2)	mg/m3	250	100.00	0.17	0.82	0.64	Y	Equipment Issues	
		Temperature	°C	N/A	100.00	153.96	170.37	163.57	N/A		
		TRS (as H2S)	mg/m3	3.6	100.00	0.07	0.61	0.50	Y		
		Flow	Nm3/s	N/A	100.00	0.07	70.27	29.79	N/A		
		Hydrogen chloride	mg/m3	50	100.00	0.73	6.12	1.29	Y		
		Moisture	%	N/A	100.00	16.33	33.65	17.54	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.47	120.36	94.08	Y		
		Opacity	%	20	99.74	0.01	59.70	9.11	N		
November	14-Dec	Oxygen (O2)	%	N/A	100.00	0.03	19.73	10.67	N/A	Equipment Issues	
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.00	18.70	0.50	Y		
		Temperature	°C	N/A	100.00	13.61	170.47	154.91	N/A		
		TRS (as H2S)	mg/m3	3.6	100.00	0.00	1.15	0.40	Y		
		Flow	Nm3/s	100	100.000	0.230	80.900	34.760	N/A		
		Hydrogen chloride	mg/m3	50	0.000	0.000	0.000	0.000	Y		
		Moisture	%	N/A	100.000	15.800	27.420	17.570	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.000	0.340	120.570	89.710	Y		
December	14-Jan	Opacity	%	20	99.600	0.580	28.940	9.590	N	Equipment Issues	
		Oxygen (O2)	%	N/A	100.000	0.010	18.760	9.590	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.000	0.000	19.790	0.490	Y		
		Temperature	°C	N/A	100.000	151.090	172.500	165.730	N/A		
		TRS (as H2S)	mg/m3	3.6	100.000	0.000	3.390	0.380	Y		
		Flow	Nm3/s	N/A	100.00	14.93	57.66	48.15	N/A		
		Hydrogen chloride	mg/m3	50	100.00	0.00	3.99	0.25	Y		
		Moisture	%	N/A	100.00	15.24	28.75	17.59	N/A		
January	14-Feb	Nitrogen Oxides (as NO2)	mg/m3	400	100.00	2.74	147.19	114.01	Y	Planned Maintenance	
		Opacity	%	20	99.69	0.99	38.12	4.38	N		
		Oxygen (O2)	%	N/A	100.00	2.72	16.24	4.85	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.06	25.98	0.65	Y		
		Temperature	°C	N/A	100.00	137.69	171.97	165.63	N/A		
		TRS (as H2S)	mg/m3	3.6	100.00	0.04	0.86	0.67	Y		
		Flow	Nm3/s	100	100.00	13.76	58.37	51.34	N/A		
		Hydrogen chloride	mg/m3	50	100.00	0.18	2.59	0.48	Y		
February	14-Mar	Moisture	%	N/A	100.00	17.12	28.08	17.66	N/A	Auto Calibration	
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	0.25	144.15	124.94	Y		
		Opacity	%	20	99.73	0.00	47.42	4.37	Y		
		Oxygen (O2)	%	N/A	100.00	2.77	16.27	4.17	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.03	0.88	0.72	Y		
		Temperature	°C	N/A	100.00	152.59	176.69	166.08	N/A		
		TRS (as H2S)	mg/m3	3.6	100.00	0.08	0.94	0.81	Y		
		Flow	Nm3/s	100	100.00	14.19	59.39	53.09	N/A		
March	14-Apr	Hydrogen chloride	mg/m3	50	100.00	0.00	2.12	0.42	Y	Instrument Error	
		Moisture	%	N/A	100.00	17.09	26.82	17.58	N/A		
		Nitrogen Oxides (as NO2)	mg/m3	400	100.00	24.54	155.89	120.88	Y		
		Opacity	%	20	99.66	1.96	25.27	5.72	Y		
		Oxygen (O2)	%	N/A	100.00	2.85	16.24	4.00	N/A		
		Sulphur dioxide (SO2)	mg/m3	250	100.00	0.19	0.88	0.74	Y		
		Temperature	°C	N/A	100.00	144.12	173.49	166.45	N/A		
		TRS (as H2S)	mg/m3	3.6	100.00	0.27	0.91	0.80	Y		



Latest Publication Date: 14-Apr-24

Monitoring Location No: 22

Description: Exit point from Stack 2 to atmosphere

Monitoring Type: Grab Sample

Environment Protection Licence: 10232

Reporting Period: July 2023 to June 2024

Sample Type: Air

Pollutant	Unit of measure	Concentration		Sampling Freq	Date of Sample	Date of Report	Report No.	Data	Compliance (Yes/No)	Comments
		Limit								
Chlorine	mg/m3	100		Annual	14-Nov-23	11-Mar-24	R015723	0.24	Yes	
Sulfuric acid mist & sulfur trioxide (as SO3)	mg/m3	20		Annual	14-Nov-23	11-Mar-24	R015723	0.073	Yes	
TCDD (equivalent)	ng/m3	0.1		Annual	14-Nov-23	11-Mar-24	R015723	0.0051	Yes	
Total Solid Particles	mg/m3	50		1st Qrt	15-Aug-23	06-Sep-23	R015496	8.8	Yes	
Total Solid Particles	mg/m3	50		2nd Qrt	14-Nov-23	11-Mar-24	R015723	26	Yes	
Total Solid Particles	mg/m3	50		3rd Qrt	21-Feb-24	25-Mar-24	R016507	18	Yes	
Total Solid Particles	mg/m3	50		4th Qrt						
Type 1 and 2 substances	mg/m3	1		Annual	14-Nov-23	11-Mar-24	R015723	<0.03	Yes	

ND- No Data
N/A- Not Applicable