Annual performance report for: Peake GB Ltd

Permit Number: EPR/YP3934SM/V003

Year: 2022

This report is required under the Industrial Emissions Directive's Article 55(2) requirements on reporting and public information on waste incineration plants and co-incineration plants, which require the operator to produce an annual report on the functioning and monitoring of the plant and make it available to the public.

1. Introduction

Name and address of plant	Peake GB Ltd Stoneybridge Park Liskeard Cornwall PL14 3NQ
Description of waste input	Waste input is mainly clinical waste generated in the South West, either collected by the company or brought in from third parties. Other wastes include hazardous wastes contaminated packaging, confidential papers, ABP & plant tissue wastes.
Operator contact details if members of the public have any questions	

2. Plant description

The plant at Stoneybridge Park is a High Temperature Incineration facility which incinerates hazardous & non-hazardous wastes from hospitals, healthcare premises and other establishments in the South West. The plant is licensed to operate 24/7 with a maximum throughput of 650kg/hr. The plant is of a Rotary Kiln design which is capable of handling a wide range of wastes, the waste is fed into the plant by use of a bin tipper and ram loading box. The IBA (bottom ash) is discharged into skips at base of a transition chamber, the flue gases pass on to the secondary chamber then a heat exchanger, where the gasses are cooled before entering the reactor tower & abatement plant where sodium bicarbonate and activated carbon is injected to neutralise acid gasses. The sorbents are then captured on ceramic filter elements, to provide a further reaction surface before being recirculated and then discharged into IBC's for disposal. The cleaned flue gasses pass through the ceramic filters to the ID fan and on to the discharge stack.

3. Summary of Plant Operation

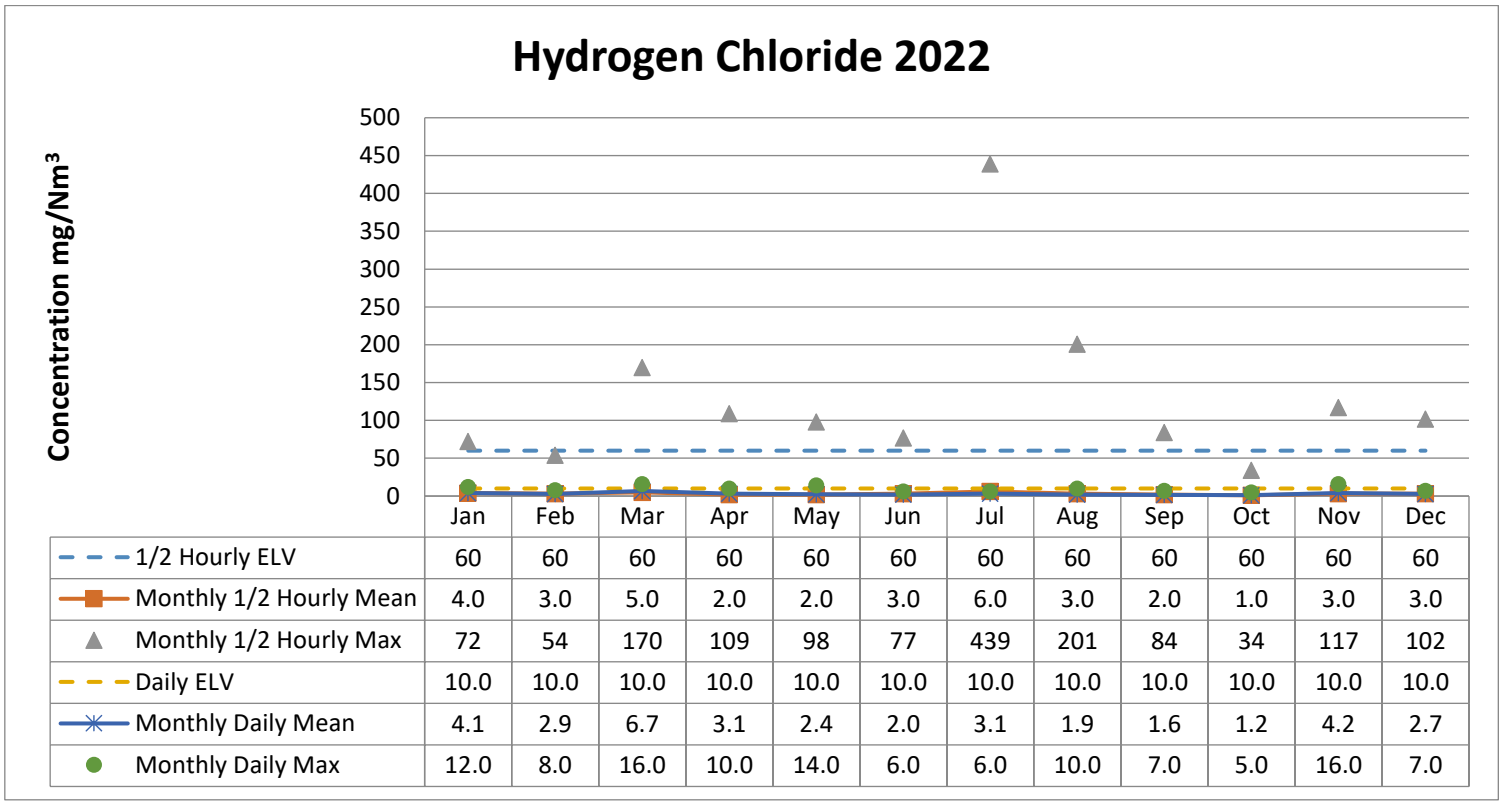
Clinical waste received	2531 tonnes
Other waste received	639 tonnes
Total waste received	3170 tonnes
Total plant operational hours	6720 hours
Total hours of “abnormal operation” (see permit for definition)	28 hours
Total quantity of incinerator bottom ash (IBA) produced	343 tonnes
Disposal or recovery route for IBA	Disposal by Treatment (D09)
Did any batches of IBA test as hazardous? If yes, state quantity	343 tonnes
Total quantity of air pollution control (APC) residues produced	121 tonnes
Disposal or recovery route for APC residues	Disposal by Treatment (D09)

4. Summary of Plant Emissions

4.1 Summary of continuous emissions monitoring results for emissions to air

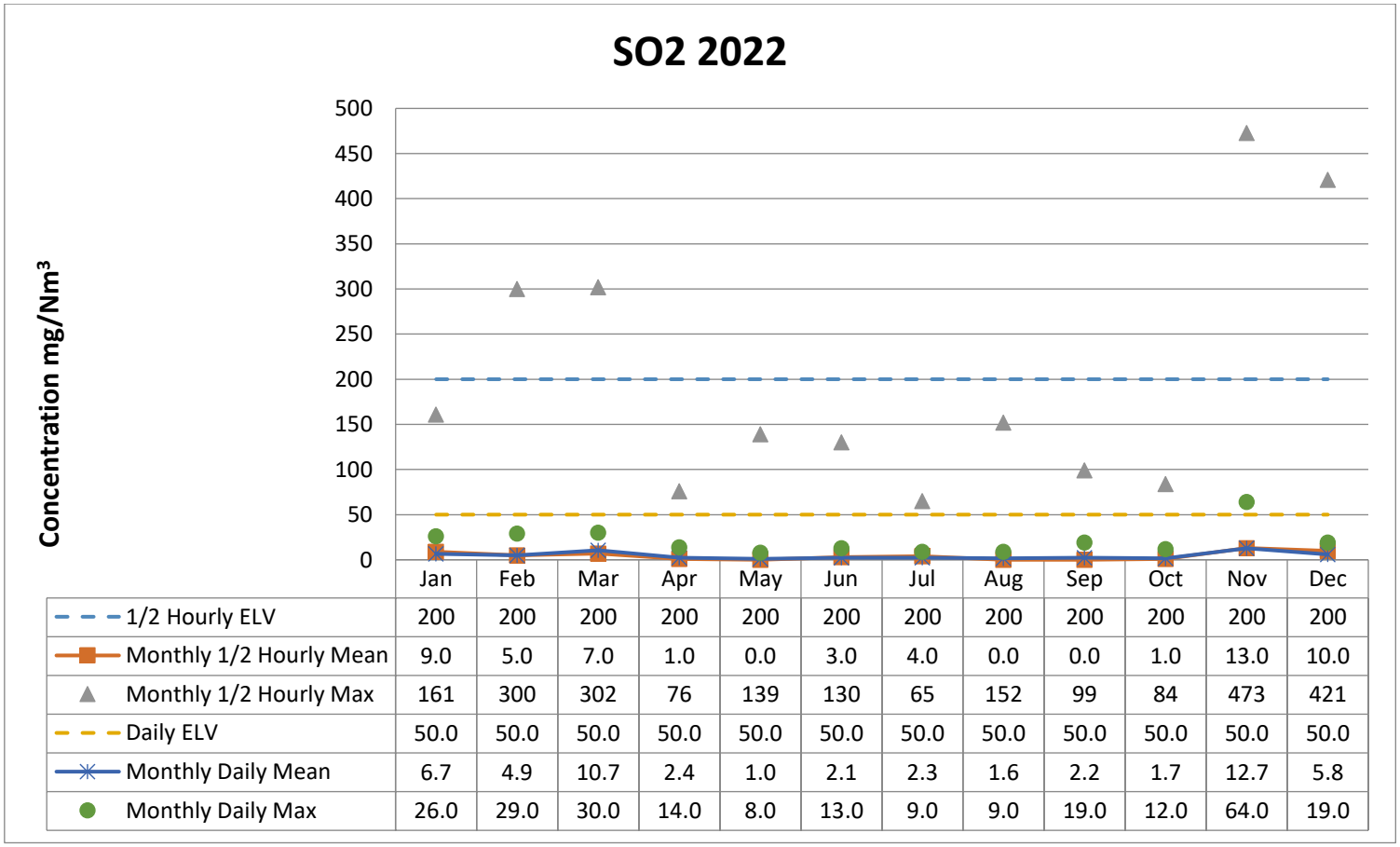
The following charts show the performance of the plant against its emission limit values (ELVs) for substances that are continuously monitored.

Line 1 - Hydrogen chloride



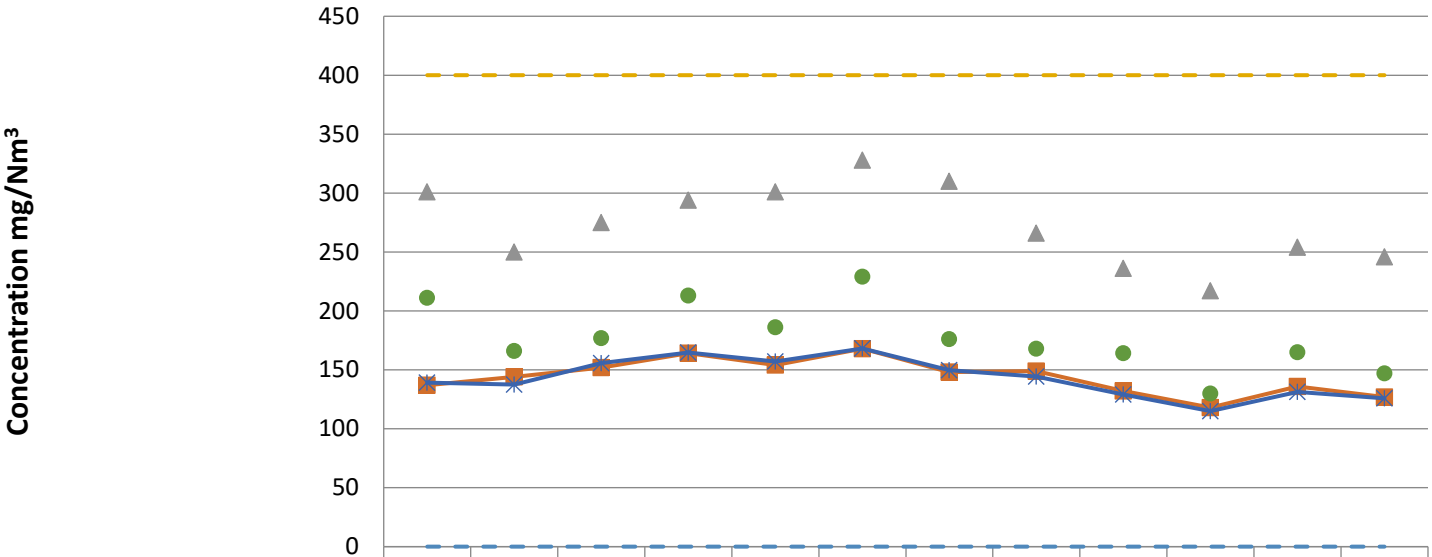
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	60	60	60	60	60	60	60	60	60	60	60	60
Monthly 1/2 Hourly Mean	4.0	3.0	5.0	2.0	2.0	3.0	6.0	3.0	2.0	1.0	3.0	3.0
Monthly 1/2 Hourly Max	72	54	170	109	98	77	439	201	84	34	117	102
Daily ELV	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Monthly Daily Mean	4.1	2.9	6.7	3.1	2.4	2.0	3.1	1.9	1.6	1.2	4.2	2.7
Monthly Daily Max	12.0	8.0	16.0	10.0	14.0	6.0	6.0	10.0	7.0	5.0	16.0	7.0

Line 1 – Sulphur dioxide



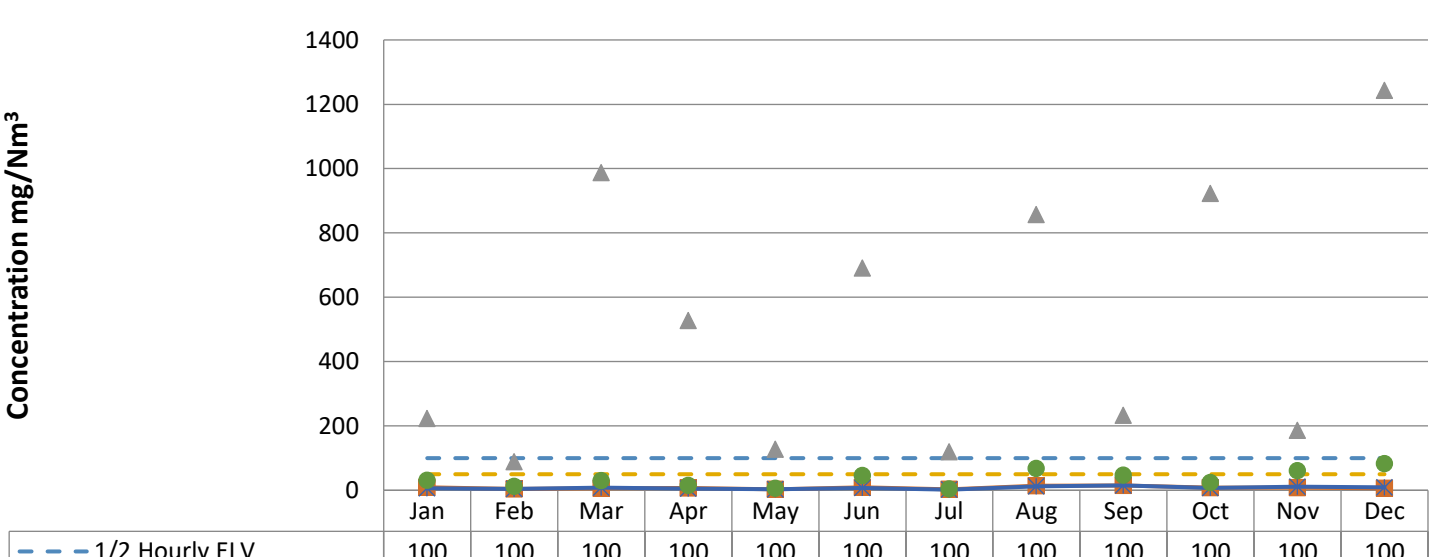
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly 1/2 Hourly Mean	9.0	5.0	7.0	1.0	0.0	3.0	4.0	0.0	0.0	1.0	13.0	10.0
Monthly 1/2 Hourly Max	161	300	302	76	139	130	65	152	99	84	473	421
Daily ELV	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Monthly Daily Mean	6.7	4.9	10.7	2.4	1.0	2.1	2.3	1.6	2.2	1.7	12.7	5.8
Monthly Daily Max	26.0	29.0	30.0	14.0	8.0	13.0	9.0	9.0	19.0	12.0	64.0	19.0

Line 1 – Oxides of nitrogen



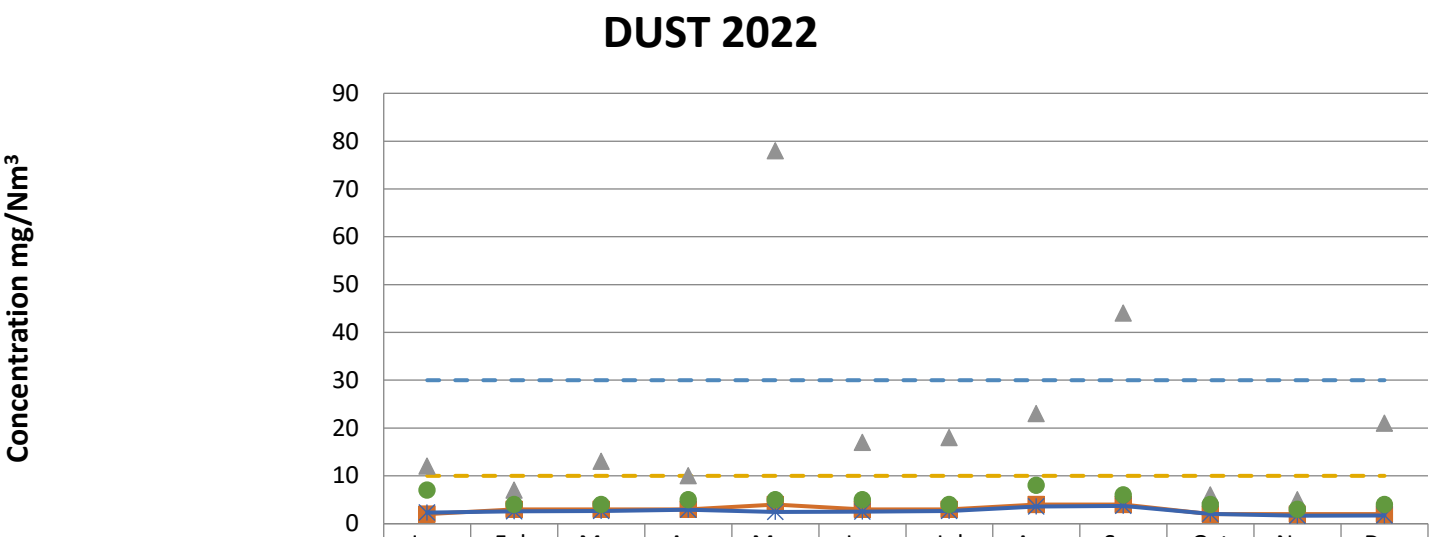
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	0	0	0	0	0	0	0	0	0	0	0	0
Monthly 1/2 Hourly Mean	137.0	144.0	152.0	164.0	154.0	168.0	148.0	149.0	132.0	118.0	136.0	127.0
Monthly 1/2 Hourly Max	301	250	275	294	301	328	310	266	236	217	254	246
Daily ELV	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Monthly Daily Mean	139.2	137.6	155.7	164.6	157.1	168.1	149.7	144.2	129.1	115.0	131.4	125.9
Monthly Daily Max	211.0	166.0	177.0	213.0	186.0	229.0	176.0	168.0	164.0	130.0	165.0	147.0

Line 1 – Carbon monoxide



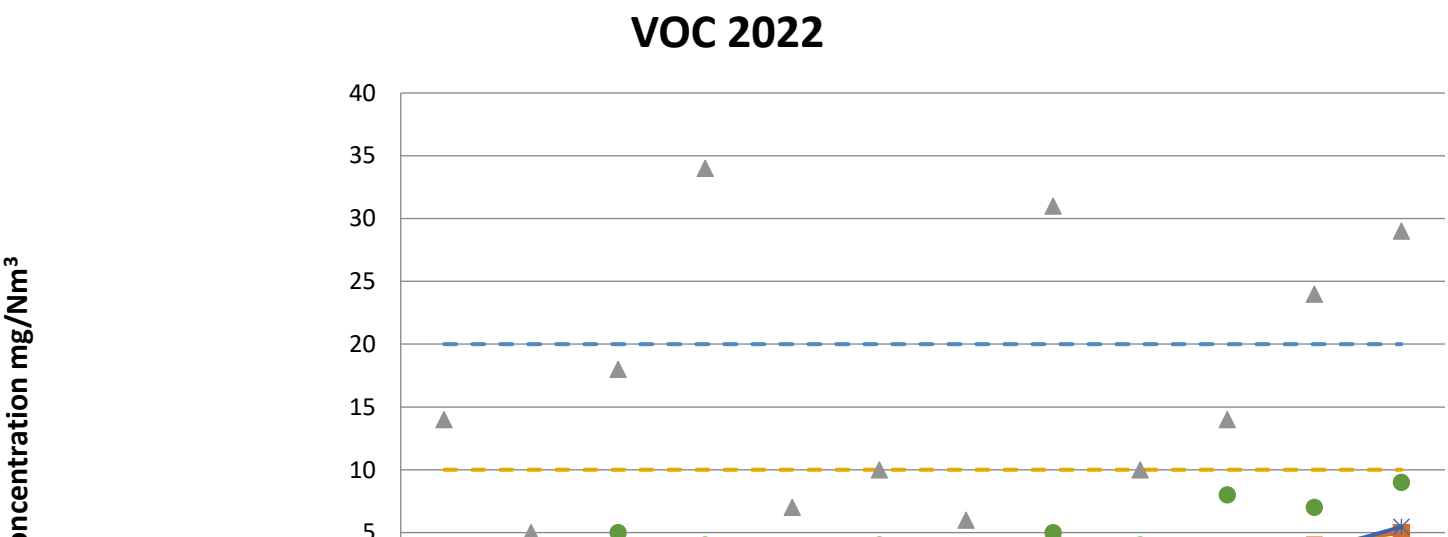
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	100	100	100	100	100	100	100	100	100	100	100	100
Monthly 1/2 Hourly Mean	9.0	4.0	6.0	7.0	3.0	9.0	3.0	14.0	15.0	8.0	8.0	6.0
Monthly 1/2 Hourly Max	223	89	988	528	128	691	120	857	233	923	186	1243
Daily ELV	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Monthly Daily Mean	6.6	4.7	8.2	5.2	3.1	7.6	2.0	12.5	15.1	7.2	10.8	8.9
Monthly Daily Max	31.0	12.0	30.0	15.0	6.0	46.0	4.0	68.0	47.0	24.0	61.0	83.0

Line 1 – Particulates (DUST)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	30	30	30	30	30	30	30	30	30	30	30	30
Monthly 1/2 Hourly Mean	2.0	3.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	2.0	2.0	2.0
Monthly 1/2 Hourly Max	12	7	13	10	78	17	18	23	44	6	5	21
Daily ELV	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Monthly Daily Mean	2.3	2.6	2.7	2.9	2.4	2.5	2.7	3.6	3.7	2.1	1.7	1.7
Monthly Daily Max	7.0	4.0	4.0	5.0	5.0	5.0	4.0	8.0	6.0	4.0	3.0	4.0

Line 1 – Total organic carbon (VOC)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 Hourly ELV	20	20	20	20	20	20	20	20	20	20	20	20
Monthly 1/2 Hourly Mean	3.0	2.0	3.0	3.0	2.0	3.0	3.0	4.0	3.0	3.0	4.0	5.0
Monthly 1/2 Hourly Max	14	5	18	34	7	10	6	31	10	14	24	29
Daily ELV	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Monthly Daily Mean	2.8	2.0	3.6	2.9	2.1	2.9	2.5	3.6	2.6	3.1	3.5	5.5
Monthly Daily Max	3.0	3.0	5.0	4.0	3.0	4.0	3.0	5.0	4.0	8.0	7.0	9.0

4.2 Summary of periodic monitoring results for emissions to air

The table below shows the results of periodically monitored substances.

Substance	Emission limit value	Results	
		24.05.22	25/10/22
Mercury and its compounds	0.05 mg/m^3	0.0017 mg/m^3	0.0025 mg/m^3
Cadmium & thallium and their compounds (total)	0.05 mg/m^3	0.0012 mg/m^3	0.00079 mg/m^3
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5 mg/m^3	0.23 mg/m^3	0.047 mg/m^3
Dioxins and furans (I-TEQ)	0.1 ng/m^3	0.2 ng/m^3	0.043 ng/m^3
Hydrogen Fluoride	2.0 mg/m^3	0.15 mg/m^3	0.07 mg/m^3

4.3 Summary of monitoring results for emissions to water

There are no emissions to water from the process [other than clean surface water].

5. Summary of Plant Compliance

Independent bi-annual testing & CEMS monitoring reports are carried out on the plant in accordance with permit requirements and the results submitted to the Agency. Where there have been emission non-compliances during 2022 these have been notified to the Agency. The site is certified to Environmental Management Systems Standards, ISO 14001 & ISO 9001 which is audited on a regular basis by Independent European Certification Ltd.

5.2 Summary of any complaints received and actions to taken to resolve them.

Date of complaint	Summary of complaint	Reason for complaint including whether substantiated by the operator or the EA	If substantiated, measures to prevent reoccurrence
	none		

6. Summary of plant improvements

Summary of any permit improvement conditions that have been completed within the year and the resulting environmental benefits.
None
Summary of any changes to the plant or operating techniques which required a variation to the permit and a summary of the resulting environmental impact.
None
Summary of any other improvements made to the plant or planned to be made and a summary of the resulting environmental benefits.
An Exhaust Gas Recirculation duct (EGR) is in the process of being designed with the aim to look to reduce oxygen levels and further improve emission results.