ENERGY WORKS
helping to energise the city

Annual Performance Report 2020

Permit EPR/NP3837NV

Energy Works (Hull) Limited

Energy Works

Year:	2020		
Address:	Hull Energy Works, 125 Cleveland Street, Hull, HU8 7AU		
Tel:	REDACTED		
Email:	REDACTED		
Prepared by:	REDACTED	Position:	Project Manager
Approved by:		Position:	
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Distribution

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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.

Plant Description and Design

The plant will receive pre-processed Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) waste. The waste derived fuel will be gasified within a fluidised bed gasification plant to generate electricity and heat.

Summary of Operational Processes and Procedures

The main purpose of the activities of the gasification plant will be to recover energy in the form of steam, which will be used to produce electricity for export to the National Grid and heat to local heat users.
In outline the process would be as follows:
(1) Pre-processed waste derived fuels will be delivered to the facility and unloaded into the waste storage facilities.
(2) Storage facilities for pre-processed fuels will be contained within a building.
(3) Pre-processed fuels will gasified in a fluidised bed gasification plant. The resultant syngas will be combusted in the combustion zone of the gasification plant.
(4) Tramp material and other non-combustible materials from will be extracted from the fluidised bed through the bed recycle system. A cyclone will remove particulates (non-hazardous ash) from the flue gases.
(5) Emissions of nitrogen oxides would be controlled by the injection of urea in a SNCR system.
(6) Hot gases from the combustion of the syngas would be passed through a boiler to raise steam. The steam would then be passed to a steam turbine to generate electricity for export to the National Grid.
(7) The facility will be “CHP ready”. When a district heating market becomes available, the provision of a heat off-take to supply a network would be possible without any modifications to the installed system.
(8) The flue gases would be cleaned in a flue gas treatment plant. This would include the injection of carbon, primarily to control dioxin emissions, the injection of lime to control acid gas emissions, and the use of a fabric filter to remove dust.
(9) The cleaned exhaust gases would be released to atmosphere via a 70 m stack

Operational Data

Plant Size		240,000	tonnes pa		MWth	28 MWe
No. of combustion lines	1		No. of Turbines:		1	

Waste types received	Unit	Q1	Q2	Q3	Q4	**Year Total**	%
Household / Local Authority	tonnes					**-**	-
Commercial & Industrial						**-**	-
Hazardous						**-**	-
Clinical						**-**	-
Waste wood (biomass)						**-**	-
Refuse derived fuel		4,553	6,299	2,961		**13,814**	100.0%
Solid recovered fuel						**-**	-
Other [Please specify]						**-**	-
Other [Please specify]							
Other [Please specify]							
Total waste received		**4,553**	**6,299**	**2,961**	**-**	**13,814**	100.0%
Rejected Waste						**-**	-
Waste transferred out						**-**	-

Energy Useage / Export	Unit	Q1	Q2	Q3	Q4	**Year Total**	KWh/te
Power Generated	MWh	11,031	8,234	2,412	3,278	**24,955**	1,807
Power Exported		9,751	7,066	2,052	2,881	**21,750**	1,575
Power Used on site						**-**	-
Power Imported		1,407	1,814	1,135	871	**5,227**	378
Parasitic Load	%	21.6%	29.7%	42.1%	30.6%	27.9%	
Thermal Energy Produced	GWh					**-**	-
Thermal Energy Exported		-	-	-	-	**-**	-
R1 value						Design / Operational / n/a	

Waste Disposal & Recovery	Unit	Q1	Q2	Q3	Q4	**Year Total**	% inputs
APC Residues - produced	tonnes	216	329	183	85	**813**	5.9%
IBA - produced		334	654	134	81	**1,203**	8.7%
Metals recycling		106	140	112	43	**401**	2.9%
Fly Ash (Non-APC Residues)		440	132	107	18	**697**	5.0%
Inert		53	-	-	407	**460**	3.3%
Fines		28	126	260	314	**728**	5.3%

Raw Material Usage	Unit	Q1	Q2	Q3	Q4	**Year Total**	kg or Ltr /te
Mains Water	m^3	2,136	4,016		6,507	**12,659**	916.42
Other Water	m^3					**-**	-
Ammonia / Urea	kgs	6,929			64,140	**71,069**	5,144.89
Activated Carbon	kgs	12,886			44,650	**57,536**	4,165.19
Lime / hydrated lime	kgs				1,533	**1,533**	111.00
Fuel oil	ltrs	6,289,380			592,778	**6,882,158**	498,216.46
Gas	cf	-	-	-	-	**-**	-
Other		-	-	-	-	**-**	-

Summary of Hours	Line/Unit	Q1	Q2	Q3	Q4	**Year Total**	
Hours of waste combustion, total	1	2	395	112	214	**723**	x %
Hours of waste combustion, total	2					**-**	x %
Hours of waste combustion, total	3	44,253				**44,253**	x %
Hours of waste combustion, total	4					**-**	x %
Hours of waste combustion, total	5					**-**	x %
Hours of turbine operations, total	1	649	550	157	207	**1,563**	x %
Hours of turbine operations, total	2					**-**	x %
Hours of heat / steam export						**-**	n/a

Abnormal Events	qty.		-	no
Abnormal operation	hours		-	0.00%
Permit Breaches	qty.		-	no

Summary of Plant Operations and Maintenance during the reporting year
The plant is currently still in the commissioning phase.

Summary of Residue Handling for the reporting year
Tramp residues (APCr & Fly Ash)

2020 Annual Reporting Performance Form 1

Permit EPR/NP3837NV
Operator: 0
Facility: Energy Works (Hull) Limited
Form: Performance 1

Reporting Period from: 01 January 2020 to: 31 December 2020

2020 Annual Reporting of Waste Disposal and Recovery

Waste Description	Disposal Route(s)	Disposal Tonnes	Recovery Tonnes	% / tonne of waste incinerated
1) Hazardous Wastes				
APC Residues	D09	813.0		5.9%
Fly Ash	D09	697.4		5.0%
RDF	R13		564.0	4.1%
				-
Total Hazardous Waste		1,510.4	564.0	15.0%
2) Non-Hazardous Wastes				
IBA	D09	1,202.4		8.7%
Ferrous Metal	R04		282.4	2.0%
Non-Ferrous Metal	R04		117.8	0.9%
Inert	R05		459.9	3.3%
Fines	R01		727.8	5.3%
Total Non-Hazardous Waste		1,202.4	1,588.0	20.2%
TOTAL WASTE		**2,712.9**	**2,151.9**	35.2%

Operator's comments :

2020 Annual Reporting of Water and Other Raw Material Usage

Raw Material	Usage	Unit	Specific Useage	Unit
Mains Water	12659	m^3	0.92	m^3/te
Total Water	12659	m^3	0.92	m^3/te
Urea / Ammonia	71069.47	kg	5.14	kg/te
Activated Carbon	57536.19	kg	4.17	kg/te
Lime / hydrated lime / Sodium Bicarb.	1533.3	kg	0.11	kg/te

Operator's comments :

2020 Annual Reporting of other performance indicators

Parameter	Results by Line							
	A1	A2	A3	A4	A5		Turbine 1	Turbine 2
Operating hours for the year, hours	723						1563	
Number of periods of abnormal operation, qty.								
Cumulative hours of abnormal operation for this year, hours								

Operator's comments :

#######

Signed: _____ Date: _____

2020 Annual Reporting of Energy Usage/Export

Permit EPR/NP3837NV Operator: 0

Facility: Energy Works (Hull) Limited Form: Energy 1

Reporting Period from: 01 January 2020 to: 31 December 2020

Energy Source	Energy Usage	Unit	Specific Useage (KWh/tonne incinerated
Electricity Produced	24,955	MWh	1807
Electricity Imported	5227	MWh	378
Electricity Exported	21,750	MWh	1575
Gas Oil		tonnes	
Steam/hot water exported	0	GWh	-

Operator's comments :

Signed: _____ Date: _____

Summary of Permit Compliance

Compliance with permit limits for continuously monitored pollutants

The plant met its emission limits as shown in the table below:

Substance	Percentage time compliant during operation	
	Half-hourly limit	Daily limit
Particulates	xx %	xx %
Oxides of nitrogen	xx %	xx %
Sulphur dioxide	xx %	xx %
Carbon monoxide	xx % or xx% 95% of 10-min averages	xx %
Total organic carbon	xx %	xx %
Hydrogen chloride	xx %	xx %
Hydrogen fluoride		
	xx %	xx %

Summary of any notifications or non-compliances under the permit

Date	Summary of notification or non-compliance [including Line/Reference]	Reason	Measures taken to prevent reoccurrence

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

Date	Summary of complaint [including Line/Reference]	Reason *	Measures taken to prevent reoccurrence

*** including whether substantiated by the operator or the EA**

Summary of Plant Improvements

Summary of any efficiency improvements that have been completed within the year.

Summary of any permit improvement conditions that have been completed within the year and the resulting environmental benefits.
A comprehensive improvement programme has been copleted to reduce noise from the facility.

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.

Summary of any other improvements made to the plant or planned to be made and a summary of the resulting environmental benefits.

Details of Public & Stakeholder Liasion

Summary of events held during the reporting year.	
Date	**Description**

List of events planned for next year	
Date	**Description**

If you wish to be involved in the public liasion programme, please contact REDACTED

Residue Quality Monitoring Requirements

Summary of monitoring undertaken and compliance

Commentary on any specific events	
Date & Event	**Description**

Residue Quality Monitoring Results			
Parameter (unit)	**Limit**	**Normal Operation**	
		Bottom ash	**APC Residues**
Loss on Ignition (%)	<5%		
ToC (%)	<3%		
No. of Assessments Undertaken	---	3	3
No. of Hazardous Assessments	---	0	

Comments :
The average LoI has been reported.

Emissions to Water

Summary of monitoring undertaken and compliance

Commentary on any specific events	
Date & Event	**Description**

Emissions to Water / Sewer

Parameter	Monitoring Frequency	Limit	Target	Max.	Average

Emissions to Air (periodically monitored)

Summary of monitoring undertaken, standards used and compliance

Results of emissions to air that are periodically monitored							
Substance	**Ref. Period**	**Emission Limit Value**	**Average**				
			A1	**A2**	**A3**	**A4**	**A5**
Hydrogen fluoride	1 hr	2 mg/m^3					
Cd and Th and their compounds	6-8hrs	0.05 mg/m^3					
Hg and its compounds	6-8hrs	0.05 mg/m^3					
Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds	6-8hrs	0.5 mg/m^3					
Dioxins & Furans (I-TEQ)	6-8hrs	0.1 ng/m^3					
PCBs (WHO-TEQ Humans / Mammals)	6-8hrs	None set ng/m^3					
PCBs (WHO-TEQ Fish)	6-8hrs	None set ng/m^3					
PCBs (WHO-TEQ Birds)	6-8hrs	None set ng/m^3					
Dioxins & Furans (WHO-TEQ Humans / Mammals)	6-8hrs	None set ng/m^3					
Dioxins & Furans (WHO-TEQ Fish)	6-8hrs	None set ng/m^3					
Dioxins & Furans (WHO-TEQ Birds)	6-8hrs	None set ng/m^3					
Anthanthrene	6-8hrs	None set µg/m^3					
Benzo(a)anthracene	6-8hrs	None set µg/m^3					
Benzo(a)pyrene	6-8hrs	None set µg/m^3					
Benzo(b)fluoranthene	6-8hrs	None set µg/m^3					
Benzo(b)naptho(2,1-d) thiophene	6-8hrs	None set µg/m^3					
Benzo(c)phenanthrene	6-8hrs	None set µg/m^3					
Benzo(ghi)perylene	6-8hrs	None set µg/m^3					
Benzo(k)fluoranthene	6-8hrs	None set µg/m^3					
Cholanthrene	6-8hrs	None set µg/m^3					
Chrysene	6-8hrs	None set µg/m^3					
Cyclopenta(cd)pyrene	6-8hrs	None set µg/m^3					
Dibenzo(ai)pyrene	6-8hrs	None set µg/m^3					
Dibenzo(ah)anthracene	6-8hrs	None set µg/m^3					
Fluoranthene	6-8hrs	None set µg/m^3					
Indeno(123-cd) pyrene	6-8hrs	None set µg/m^3					
Naphthalene	6-8hrs	None set µg/m^3					
Comments :							

Emissions to Air (continously monitored)

Summary of monitoring undertaken, standards used and compliance

Results of emissions to air that are continuously monitored

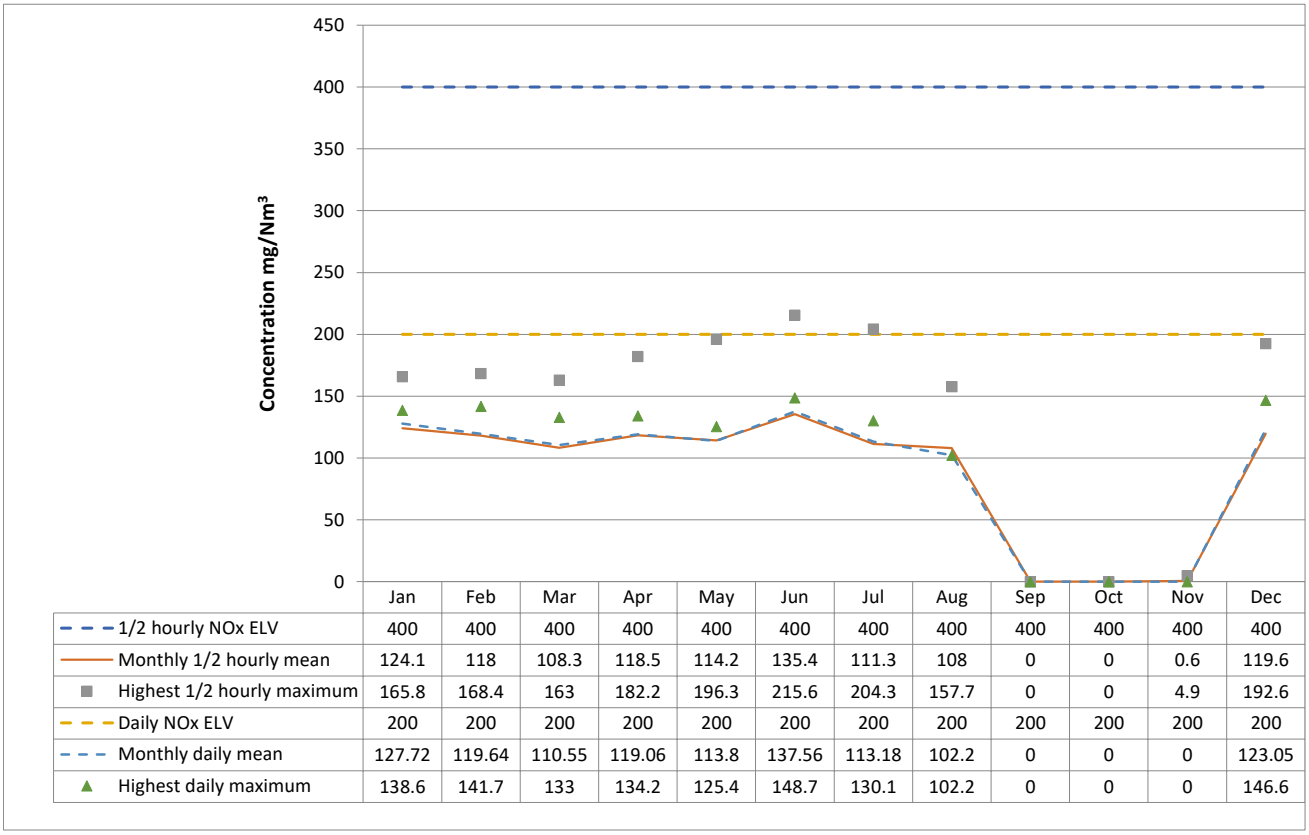
Substance	**Reference Period**	**Emission Limit Value**	**A1**		**A2**		**A3**		**A4**		**A5**	
			Max.	**Avg.**	**Max.**	**Avg.**	**Max.**	**Avg.**	**Max.**	**Avg.**	**Max.**	**Avg.**
Oxides of nitrogen	Daily mean	200 mg/m^3										
	½ hourly mean	400 mg/m^3										
Particulates	Daily mean	10 mg/m^3										
	½ hourly mean	30 mg/m^3										
Total Organic Carbon	Daily mean	10 mg/m^3										
	½ hourly mean	20 mg/m^3										
Hydrogen chloride	Daily mean	10 mg/m^3										
	½ hourly mean	60 mg/m^3										
Sulphur dioxide	Daily mean	50 mg/m^3										
	½ hourly mean	200 mg/m^3										
Carbon monoxide	Daily mean	50 mg/m^3										
	½ hourly mean *	100 mg/m^3 *										
	95%ile 10-min avg *	150 mg/m^3 *										
Ammonia	Daily mean	No limit set										

* = delete or amend as appropriate

Comments :

Monitoring of Oxides of Nitrogen emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly NOx ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily NOx ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	400	124.1	165.8	200	127.72	138.6
Feb	400	118	168.4	200	119.64	141.7
Mar	400	108.3	163	200	110.55	133
Apr	400	118.5	182.2	200	119.06	134.2
May	400	114.2	196.3	200	113.8	125.4
Jun	400	135.4	215.6	200	137.56	148.7
Jul	400	111.3	204.3	200	113.18	130.1
Aug	400	108	157.7	200	102.2	102.2
Sep	400	-	-	200	-	-
Oct	400	-	-	200	-	-
Nov	400	0.6	4.9	200	-	-
Dec	400	119.6	192.6	200	123.05	146.6

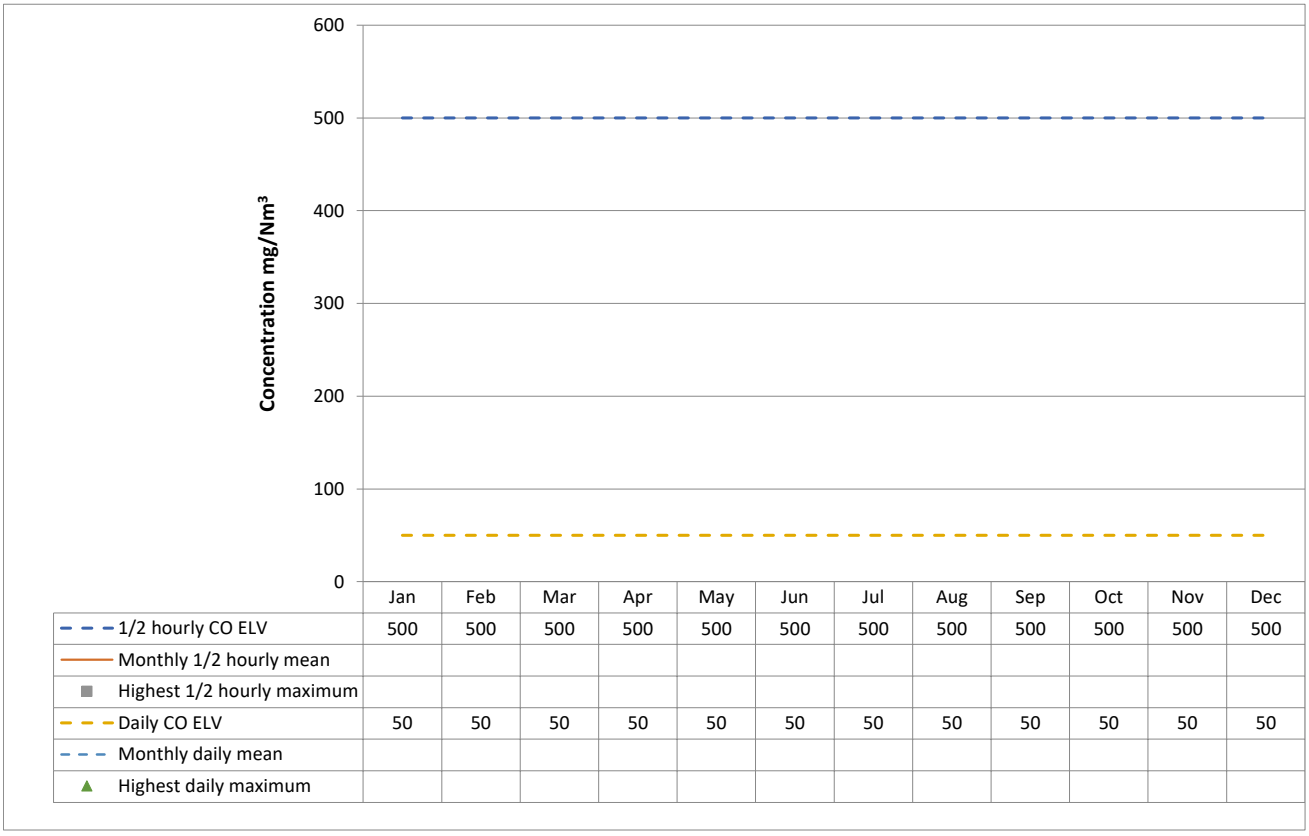


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly NOx ELV	400	400	400	400	400	400	400	400	400	400	400	400
Monthly 1/2 hourly mean	124.1	118	108.3	118.5	114.2	135.4	111.3	108	0	0	0.6	119.6
Highest 1/2 hourly maximum	165.8	168.4	163	182.2	196.3	215.6	204.3	157.7	0	0	4.9	192.6
Daily NOx ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly daily mean	127.72	119.64	110.55	119.06	113.8	137.56	113.18	102.2	0	0	0	123.05
Highest daily maximum	138.6	141.7	133	134.2	125.4	148.7	130.1	102.2	0	0	0	146.6

Comments :

Monitoring of Carbon Monoxide (half hourly) **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly CO ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily CO ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	500			50		
Feb	500			50		
Mar	500			50		
Apr	500			50		
May	500			50		
Jun	500			50		
Jul	500			50		
Aug	500			50		
Sep	500			50		
Oct	500			50		
Nov	500			50		
Dec	500			50		

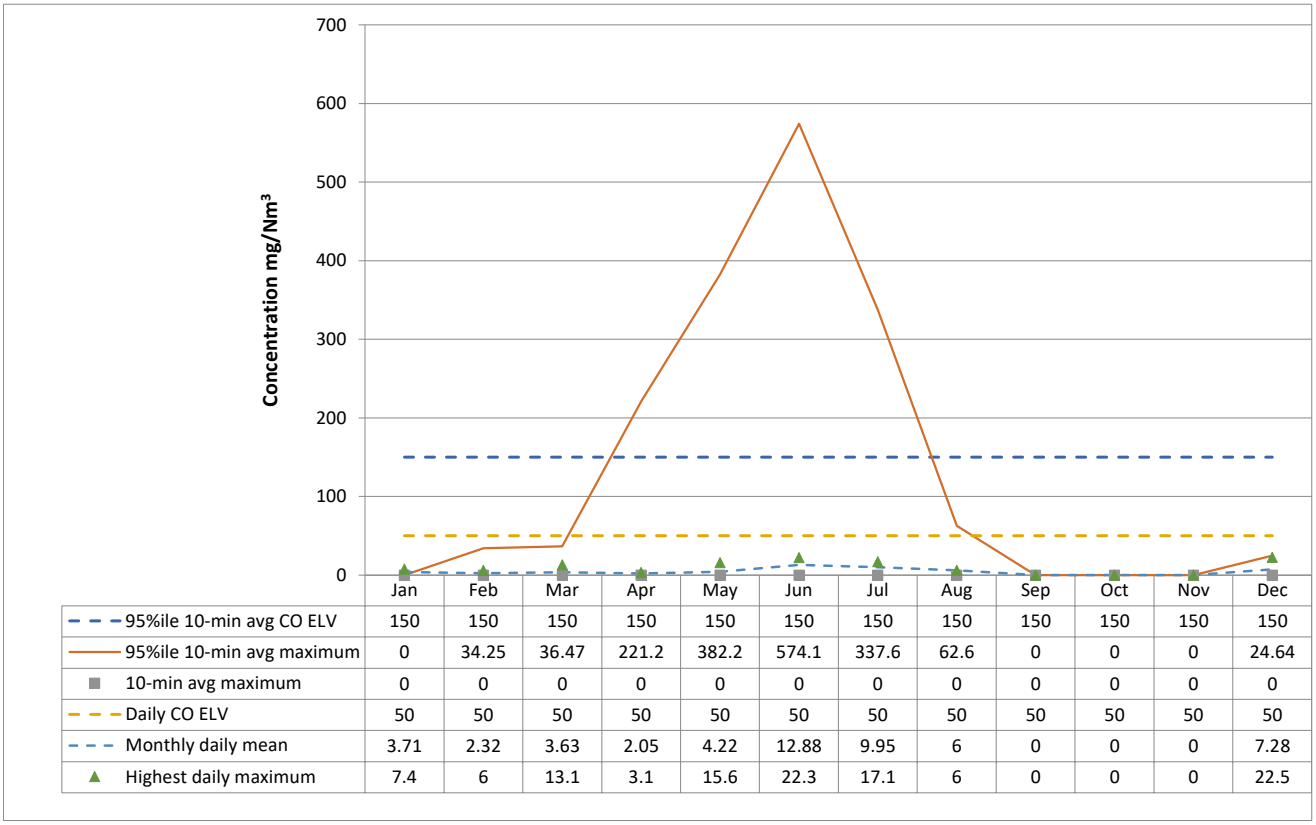


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly CO ELV	500	500	500	500	500	500	500	500	500	500	500	500
Monthly 1/2 hourly mean												
Highest 1/2 hourly maximum												
Daily CO ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily mean												
Highest daily maximum												

Comments :

Monitoring of Carbon Monoxide (10-minute avg) **Whole Installation** *See Notes in Cell S3*

mg/Nm^3	10-minute Reference Periods				Daily Reference Periods		
2020	**95%ile 10-min avg CO ELV**	**95%ile 10-min avg maximum**	**Monthly CO 10-min avg mean**	**10-min avg maximum**	**Daily CO ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	150	-	9.8	-	50	3.71	7.4
Feb	150	34.25	6.5	-	50	2.32	6
Mar	150	36.47	7.6	-	50	3.63	13.1
Apr	150	221.2	3.1	-	50	2.05	3.1
May	150	382.2	9.4	-	50	4.22	15.6
Jun	150	574.1	18.9	-	50	12.88	22.3
Jul	150	337.6	11.5	-	50	9.95	17.1
Aug	150	62.6	6.7	-	50	6	6
Sep	150	-	-	-	50	-	-
Oct	150	-	-	-	50	-	-
Nov	150	0	0	-	50	-	-
Dec	150	24.64	7.3	-	50	7.28	22.5



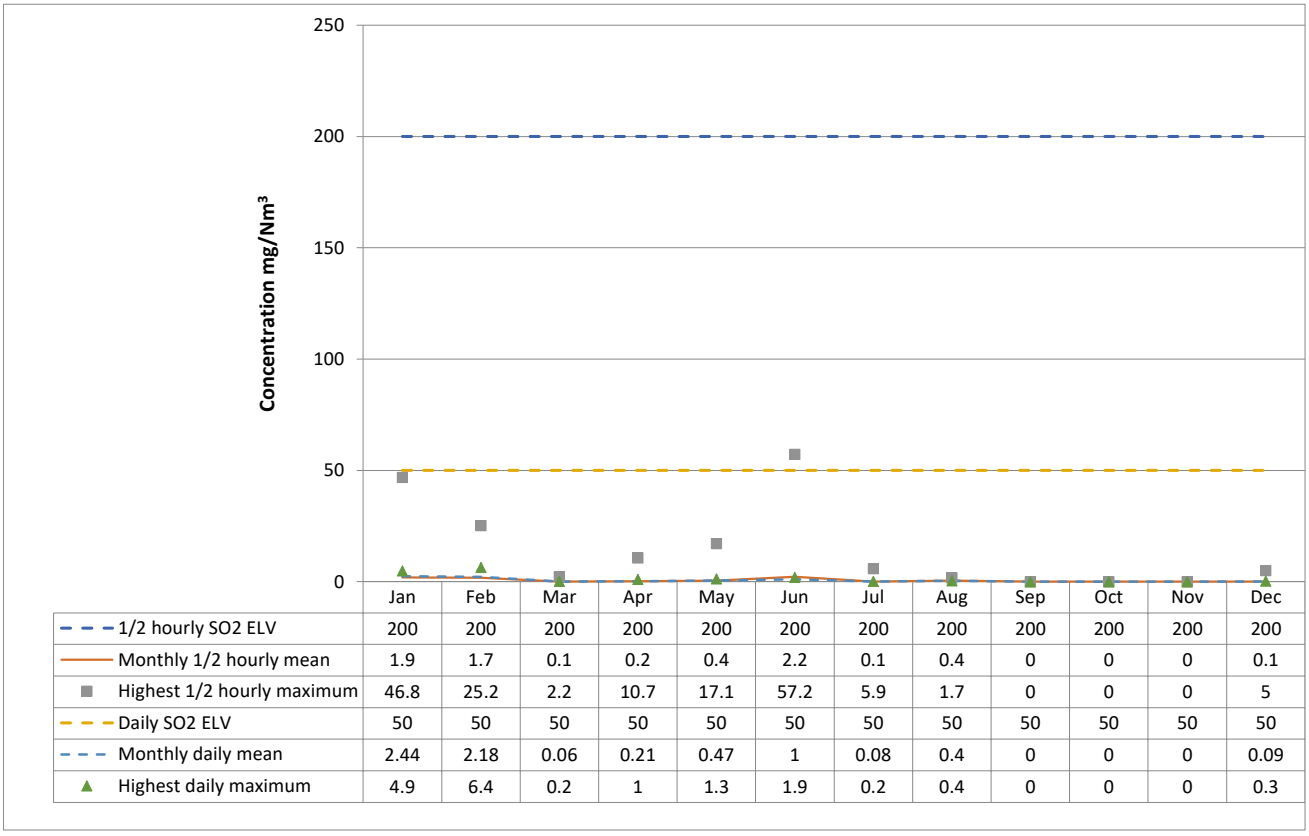
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
95%ile 10-min avg CO ELV	150	150	150	150	150	150	150	150	150	150	150	150
95%ile 10-min avg maximum	0	34.25	36.47	221.2	382.2	574.1	337.6	62.6	0	0	0	24.64
10-min avg maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily CO ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily mean	3.71	2.32	3.63	2.05	4.22	12.88	9.95	6	0	0	0	7.28
Highest daily maximum	7.4	6	13.1	3.1	15.6	22.3	17.1	6	0	0	0	22.5

Comments :

Environment Agency explanatory note: The 10-minute average ELV is based on the “95th percentile”. In this case this means that 95% of the 10 minute averages in the relevant 24-hour period (i.e. 137) must be below 150 mg/Nm3, and 5% (i.e. 7) are allowed to be any value above 150 mg/Nm3. Whilst we expect operators to minimise CO emissions at all times, it is perfectly acceptable for the value of the maximum 10-minute average to be above 150 mg/Nm3, provided the 95th percentile ELV has been met for that period.

Monitoring of Sulphur dioxide emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly SO2 ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily SO2 ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	200	1.9	46.8	50	2.44	4.9
Feb	200	1.7	25.2	50	2.18	6.4
Mar	200	0.1	2.2	50	0.06	0.2
Apr	200	0.2	10.7	50	0.21	1
May	200	0.4	17.1	50	0.47	1.3
Jun	200	2.2	57.2	50	1	1.9
Jul	200	0.1	5.9	50	0.08	0.2
Aug	200	0.4	1.7	50	0.4	0.4
Sep	200	-	-	50	-	-
Oct	200	-	-	50	-	-
Nov	200	-	-	50	-	-
Dec	200	0.1	5	50	0.09	0.3

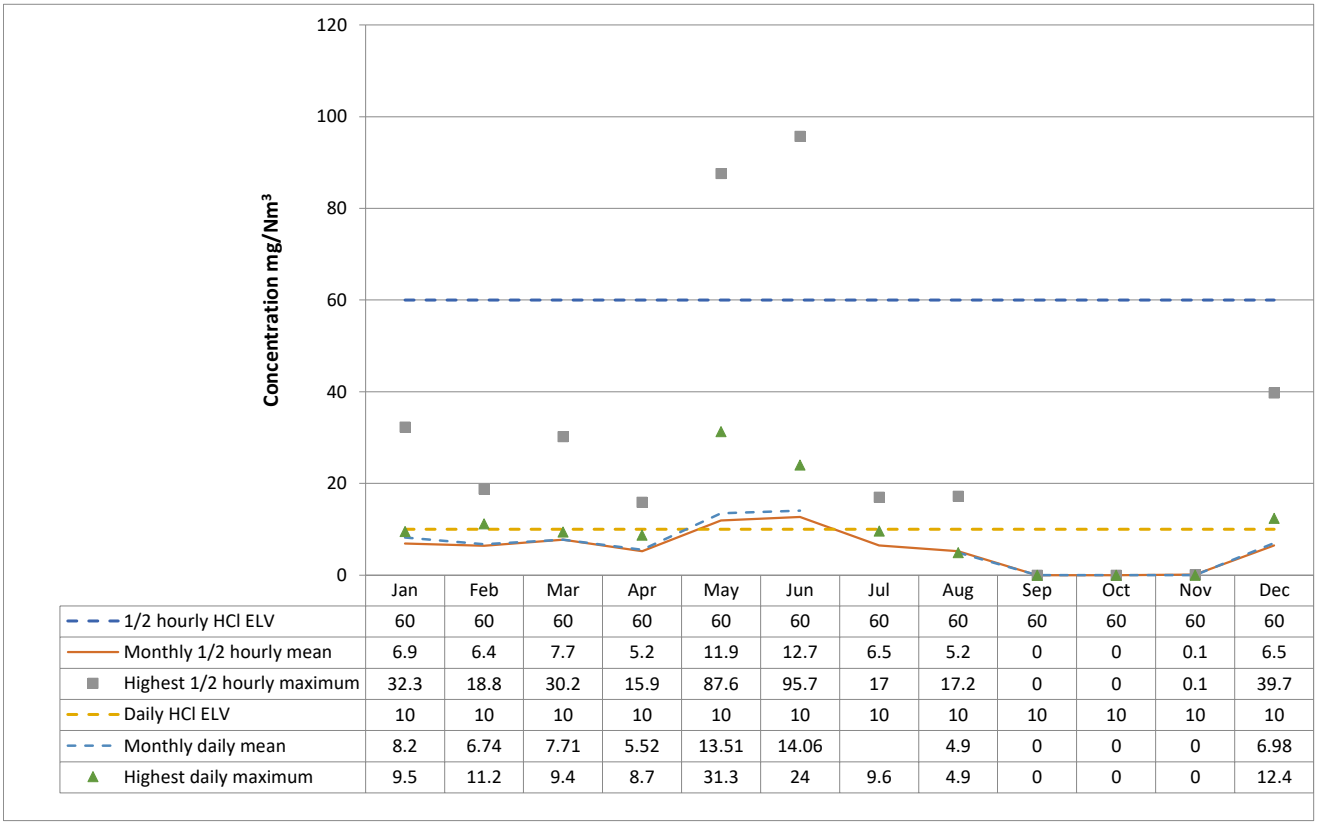


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly SO2 ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly 1/2 hourly mean	1.9	1.7	0.1	0.2	0.4	2.2	0.1	0.4	0	0	0	0.1
Highest 1/2 hourly maximum	46.8	25.2	2.2	10.7	17.1	57.2	5.9	1.7	0	0	0	5
Daily SO2 ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily mean	2.44	2.18	0.06	0.21	0.47	1	0.08	0.4	0	0	0	0.09
Highest daily maximum	4.9	6.4	0.2	1	1.3	1.9	0.2	0.4	0	0	0	0.3

Comments :

Monitoring of Hydrogen Chloride emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly HCl ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily HCl ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	60	6.9	32.3	10	8.2	9.5
Feb	60	6.4	18.8	10	6.74	11.2
Mar	60	7.7	30.2	10	7.71	9.4
Apr	60	5.2	15.9	10	5.52	8.7
May	60	11.9	87.6	10	13.51	31.3
Jun	60	12.7	95.7	10	14.06	24
Jul	60	6.5	17	10		9.6
Aug	60	5.2	17.2	10	4.9	4.9
Sep	60	-	-	10	-	-
Oct	60	-	-	10	-	-
Nov	60	0.1	0.1	10	-	-
Dec	60	6.5	39.7	10	6.98	12.4

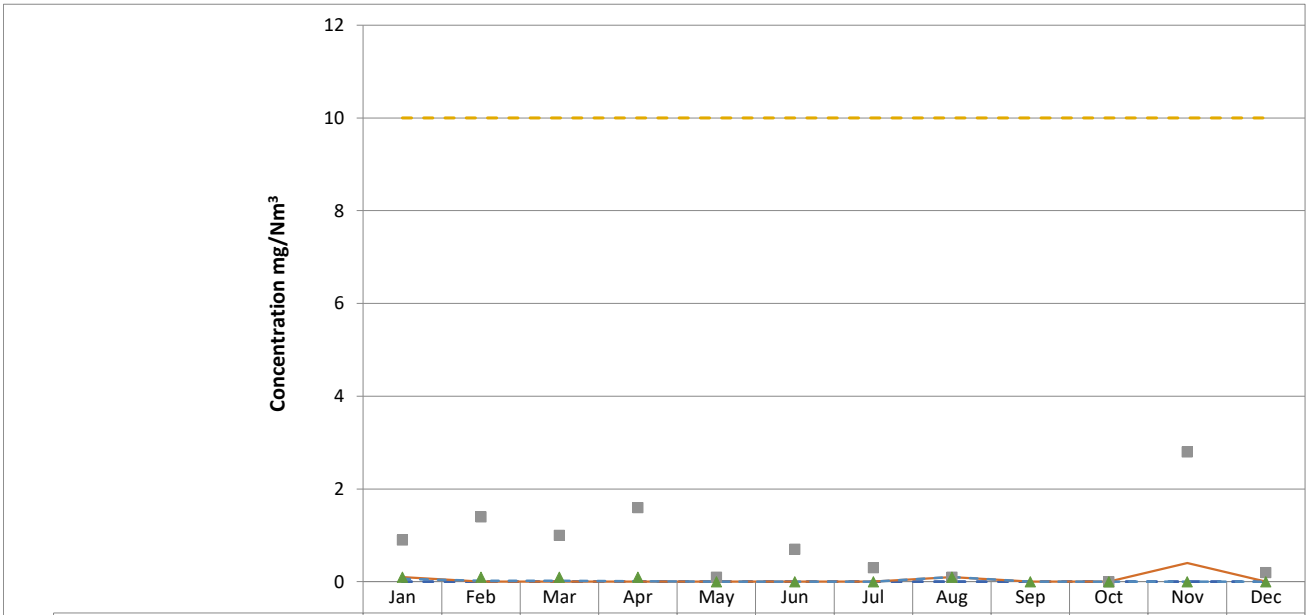


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly HCl ELV	60	60	60	60	60	60	60	60	60	60	60	60
Monthly 1/2 hourly mean	6.9	6.4	7.7	5.2	11.9	12.7	6.5	5.2	0	0	0.1	6.5
Highest 1/2 hourly maximum	32.3	18.8	30.2	15.9	87.6	95.7	17	17.2	0	0	0.1	39.7
Daily HCl ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily mean	8.2	6.74	7.71	5.52	13.51	14.06		4.9	0	0	0	6.98
Highest daily maximum	9.5	11.2	9.4	8.7	31.3	24	9.6	4.9	0	0	0	12.4

Comments :

Monitoring of Ammnonia emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly NH3 ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily NH3 ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	0	0.1	0.9	10	0.06	0.1
Feb	0	0	1.4	10	0.02	0.1
Mar	0	0	1	10	0.02	0.1
Apr	0	0	1.6	10	0.01	0.1
May	0	0	0.1	10	0	0
Jun	0	0	0.7	10	0	0
Jul	0	0	0.3	10	0	0
Aug	0	0.1	0.1	10	0.1	0.1
Sep	0	-		10	-	-
Oct	0	-	-	10	-	-
Nov	0	0.4	2.8	10	-	-
Dec	0	0	0.2	10	0	0



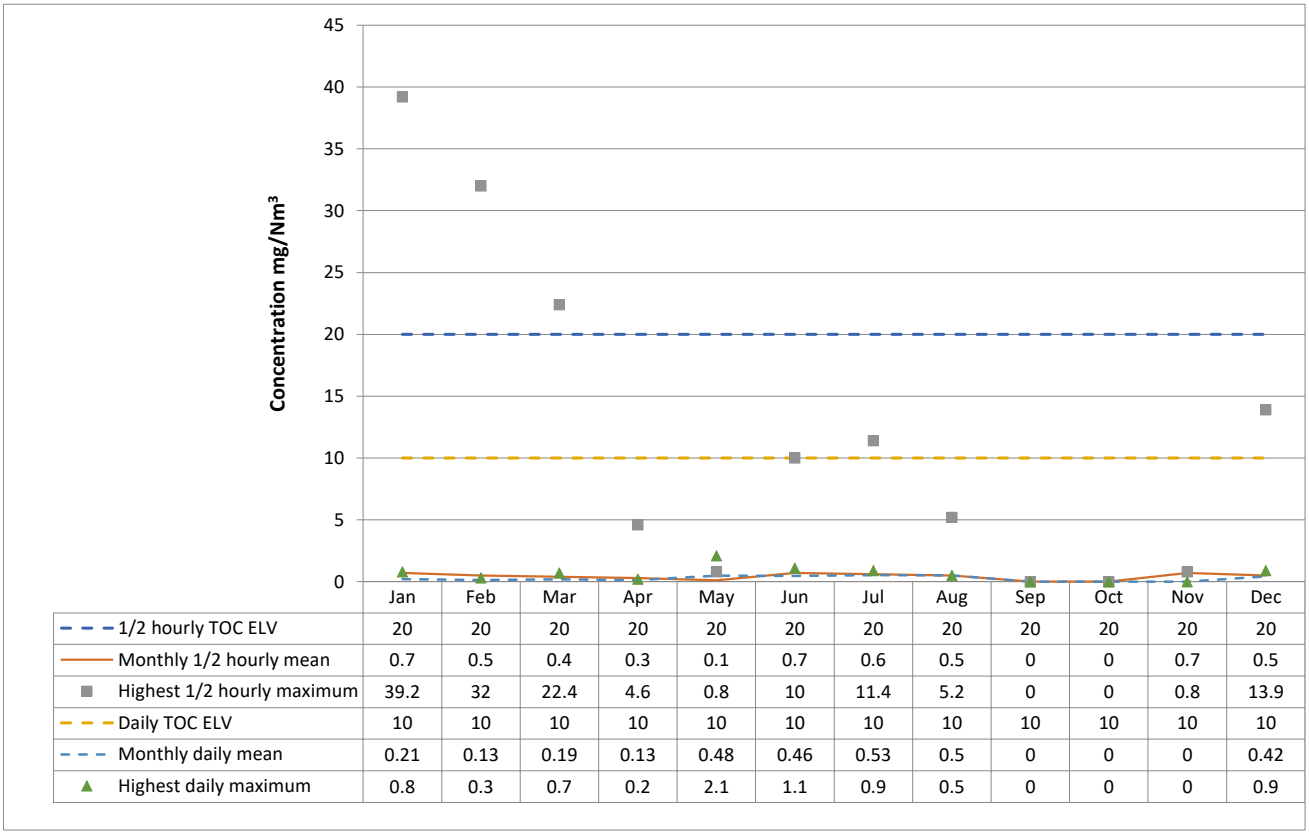
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly NH3 ELV	0	0	0	0	0	0	0	0	0	0	0	0
Monthly 1/2 hourly mean	0.1	0	0	0	0	0	0	0.1	0	0	0.4	0
Highest 1/2 hourly maximum	0.9	1.4	1	1.6	0.1	0.7	0.3	0.1		0	2.8	0.2
Daily NH3 ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily mean	0.06	0.02	0.02	0.01	0	0	0	0.1	0	0	0	0
Highest daily maximum	0.1	0.1	0.1	0.1	0	0	0	0.1	0	0	0	0

Comments :

An indicated ELV value of zero in the table above means that no ammonia limit is set in the permit.

Monitoring of Total organic carbon emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly TOC ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily TOC ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	20	0.7	39.2	10	0.21	0.8
Feb	20	0.5	32	10	0.13	0.3
Mar	20	0.4	22.4	10	0.19	0.7
Apr	20	0.3	4.6	10	0.13	0.2
May	20	0.1	0.8	10	0.48	2.1
Jun	20	0.7	10	10	0.46	1.1
Jul	20	0.6	11.4	10	0.53	0.9
Aug	20	0.5	5.2	10	0.5	0.5
Sep	20	-	-	10	-	-
Oct	20	-	-	10	-	-
Nov	20	0.7	0.8	10	-	-
Dec	20	0.5	13.9	10	0.42	0.9

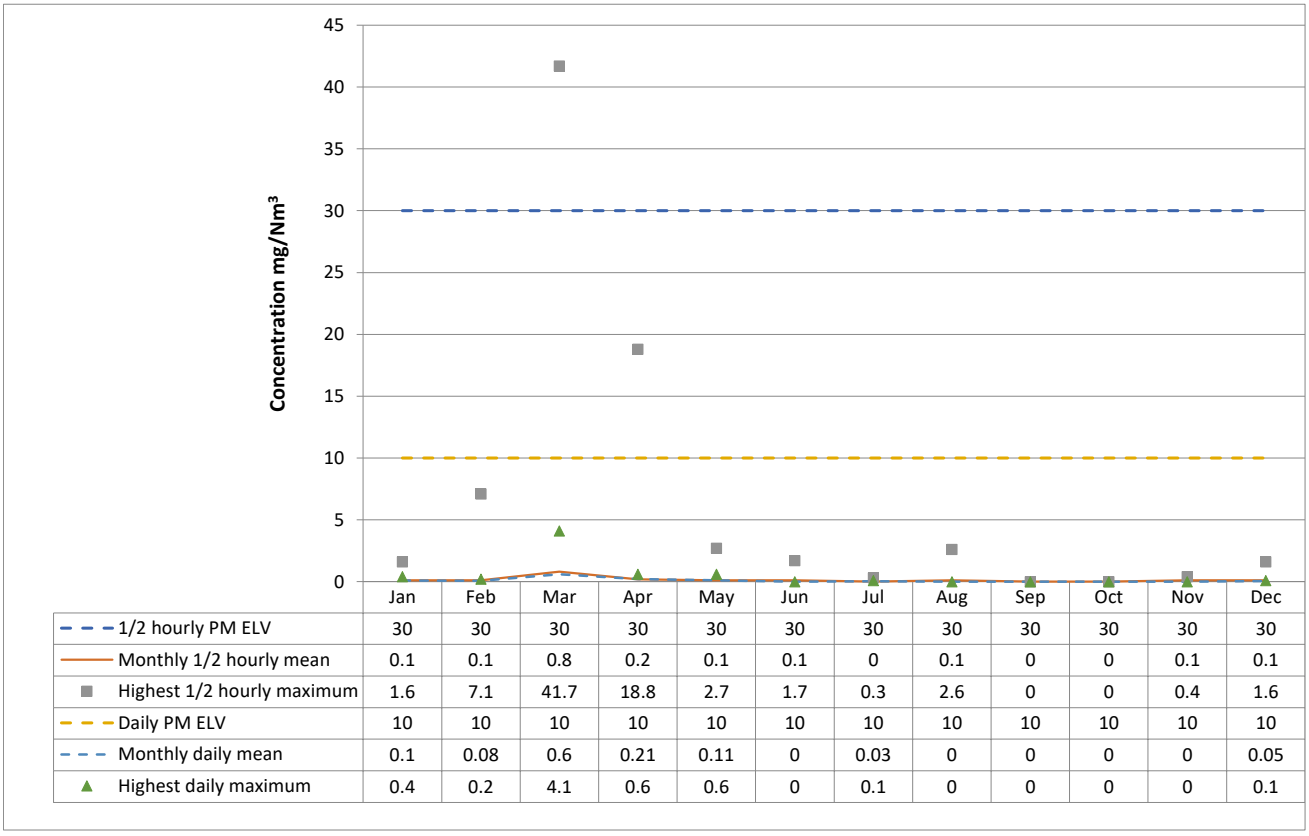


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly TOC ELV	20	20	20	20	20	20	20	20	20	20	20	20
Monthly 1/2 hourly mean	0.7	0.5	0.4	0.3	0.1	0.7	0.6	0.5	0	0	0.7	0.5
Highest 1/2 hourly maximum	39.2	32	22.4	4.6	0.8	10	11.4	5.2	0	0	0.8	13.9
Daily TOC ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily mean	0.21	0.13	0.19	0.13	0.48	0.46	0.53	0.5	0	0	0	0.42
Highest daily maximum	0.8	0.3	0.7	0.2	2.1	1.1	0.9	0.5	0	0	0	0.9

Comments :

Monitoring of Particulate matter emissions **Whole Installation** *See Notes in Cell Q3*

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2020	**1/2 hourly PM ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily PM ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	30	0.1	1.6	10	0.1	0.4
Feb	30	0.1	7.1	10	0.08	0.2
Mar	30	0.8	41.7	10	0.6	4.1
Apr	30	0.2	18.8	10	0.21	0.6
May	30	0.1	2.7	10	0.11	0.6
Jun	30	0.1	1.7	10	0	0
Jul	30	0	0.3	10	0.03	0.1
Aug	30	0.1	2.6	10	0	0
Sep	30	-	-	10	-	-
Oct	30	-	-	10	-	-
Nov	30	0.1	0.4	10	-	-
Dec	30	0.1	1.6	10	0.05	0.1



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly PM ELV	30	30	30	30	30	30	30	30	30	30	30	30
Monthly 1/2 hourly mean	0.1	0.1	0.8	0.2	0.1	0.1	0	0.1	0	0	0.1	0.1
Highest 1/2 hourly maximum	1.6	7.1	41.7	18.8	2.7	1.7	0.3	2.6	0	0	0.4	1.6
Daily PM ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily mean	0.1	0.08	0.6	0.21	0.11	0	0.03	0	0	0	0	0.05
Highest daily maximum	0.4	0.2	4.1	0.6	0.6	0	0.1	0	0	0	0	0.1

Comments :