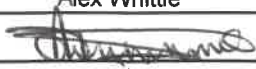
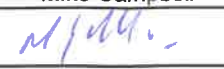




Annual Performance Report 2021
WP3833FT
MVV Environment Devonport Ltd
Devonport Energy from Waste CHP

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Signed		28th Jan 2022	

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Signed		28/01/22	

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Version Control		
No	Information	Date
1	Emission data input	04/01/2021
1.1	Issue out to business functions for data input	04/01/2021
1.2	Collate inputs	07/01/2021
1.3	Collate inputs	18/01/2021
1.4	Review and Reconciliation	25/01/2021
2	Final Review and sign off	28/02/2021

Distribution	
1	Electronically in IMS Cloud Based System
2	Facility Manager
3	Operations Manager
4	QHSE Manager
5	Contracts Manager
6	Environment Agency
7	SWDWP (Client)

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 installation is designed to dispose of residual non recyclable municipal waste, commercial and industrial waste of a similar nature to residual municipal waste, by incineration. These wastes were historically landfilled. Heat energy is recovered from the incineration process in the form of electricity, which is fed into the Naval Dockyard and any excess to the national grid. A Steam take off also supplies the adjacent Naval Dockyard with district heating.

The maximum permitted operating capacity of waste throughput is 265,000 tonnes per year. The incinerator is of a mass burn design. Waste is delivered by road and tipped within the main building in the tipping hall directly into the Waste Bunker. The waste is stored and mixed in the waste bunker prior to being burnt in a moving grate incinerator plant. Heat from the combustion process is used to generate steam at high pressure. The high-pressure steam is fed to a steam turbine to generate electricity. Lower pressure steam is supplied to the Devonport dockyard. This replaces steam currently generated at the dockyard in a combustion plant burning natural gas. The plant is highly efficient due to its designed ability to recover heat thus reducing thermal loss plus its very low parasitic load demand which is less than 10% of generated power. Heat not recovered in the form of electricity or steam is dissipated through air cooled condensers. The plant is also designed to be very quiet with high levels of noise and vibration attenuation.

Summary of Operational Processes and Procedures

The installation uses a combination of techniques for treating emissions from the combustion process in order to prevent and minimise pollution. These are:

- Good combustion control T2s at 850.c
- Selective non-catalytic reduction for NOx control
- Dry scrubbing with sodium bicarbonate and activated carbon for the control of acid gases, metals and dioxins and furans
- Bag filters for particulate control
- A 95m chimney

The incineration process results in solid residues of incinerator bottom ash and air pollution control residues. Treatment for recovery or disposal of solid residues takes place clear from the installation with only minimal storage occurring onsite.

The installation processes maximise reuse and recycling all its own water, which comprises that from periodic boiler blowdown and boiler feed water treatment wastewater. However, from time to time, disposal of wastewater to sewer will be required.

The site is in the northern section of Her Majesty's Naval Base, Devonport Dockyard in Plymouth.

The installation receives primarily mixed non recyclable residual municipal wastes to include a range of commercial and industrial wastes which can be safely burnt in the incineration plant. Pre-treatment of waste is not carried out, other than the shredding of some bulky items. However, the installation does not receive wastes intended to be recovered or recycled unless they are contaminated to the extent that they are unsuitable for recovery or recycling or would otherwise be destined for landfill.

Operational Data							
Plant Size		tonnes pa	265,000	MWth		MWe	
No. of combustion lines	1	No. of Turbines:		1			

Waste types received	Unit	Q1	Q2	Q3	Q4	Year Total	%
Household / Local Authority	tonnes	46,908	49,206	48,103	44,274	188,491	77.6%
Commercial & Industrial		19,417	9,785	12,611	12,728	54,541	22.4%
Hazardous		-	-	-	-	-	0.0%
Clinical		-	-	-	-	-	0.0%
Waste wood (biomass)		-	-	-	-	-	0.0%
Refuse derived fuel		-	-	-	-	-	0.0%
Solid recovered fuel		-	-	-	-	-	0.0%
Total waste received			66,325	58,991	60,714	57,002	243,032
Total waste Incinerated		63,583	61,761	63,873	54,135	243,352	100.1%
Rejected Waste						-	-
Waste transferred out						-	-

Energy Usage / Export	Unit	Q1	Q2	Q3	Q4	Year Total	KWh/te
Power Generated	MWh	46,297	50,327	53,235	41,444	191,303	786
Power Exported		42,136	45,910	48,387	37,572	174,005	715
Power Used on site		4,161	4,417	4,848	3,872	17,298	71
Power Imported		231	161	98	450	940	4
Parasitic Load	%	8.9%	8.7%	9.1%	9.4%	9.1%	
Thermal Energy Produced	GWh	24	11	3	17	54	0
Thermal Energy Exported		24	11	3	17	54	0
R1 value					0.84	Design / Operational	

Disposal & Recovery	Unit	Q1	Q2	Q3	Q4	Year Total	% inputs
APC Residues - produced	tonnes	1,878	1,698	1,644	1,570	6,790	2.8%
IBA - produced		16,172	16,361	16,709	13,214	62,456	25.7%
Metals recycling		-	-	-	-	-	-

Raw Material Usage	Unit	Q1	Q2	Q3	Q4	Year Total	kg or Ltr /te
Mains Water	m3	21448	13819	10794	18352	64413	0.24
Other Water	m ³	NA	NA	NA	NA	0	0
Ammonia / Urea	ltrs	45800	54900	56300	70000	227000	0.65
Activated Carbon	kgs	14000	18500	15900	14400	62800	0.22
Sodium Bi Carb	kgs	1065000	1031000	979000	803000	3878000	17.33
Fuel oil	ltrs	276280	60047	38627	162349	537303	0.68
Gas	cf	NA	NA	NA	NA	0	-

8760

Summary of Hours	Line	Q1	Q2	Q3	Q4	Year Total	
Hours of waste combustion, t	1	1944	2010	2120	1682	7756	0.89
Hours of turbine operations, t	1	1976.8	2018.9	2120.5	1691	7807.2	0.89
Hours of heat / steam export		1944	2010	2120	1682	7756	0.89
Abnormal Events	qty.	-	-	-	-	-	None
Abnormal operation	hours	-	-	-	-	-	0.00%
Permit Breaches	qty.	-	-	-	-	-	None

Summary of Plant Operations and Maintenance during the reporting year

The plant suffered a challenging year for 2021 with several significant combustion grate related defects and some de-slagger defects leading to significant un-planned outage. >400hrs grate related and 146hrs De-Slagger related. "On Waste Fire" availability achieving was 7,756 hrs which equates to 89% availability for the calendar year.

Average CV of waste inputs remains lower than design at 9,320kj/kg. Total processed waste 243,352t = 31.4t/hr

CHP supply remains lower than plant capability with seasonal average ranging from an average high of 19.4t/hr in Mar to a low of 1.8t/hr in July, Aug & Sept. The Summer period average was 2.4 t/hr with the Winter average at just 14t/hr. The system can supply max 39t/hr. MVV continue to explore other CHP supply possibilities.

Despite this low CHP supply the average Net Efficiency with CHP is >35%

The main planned maintenance shutdown for 2021 took place in Oct planned at 504 hrs and completed in 472hrs.

Inspections:

Eco 3 replaced with a stainless steel; Teflon coated unit showed no sign of corrosion.

Super Heaters extraordinarily little to no corrosion.

Pressure Parts Inspections under Written scheme undertaken and all good with no corrosion

Turbine outlet blading visual inspection good

All ash conveyors checked

Major Maintenance\Repair Works

Grate Zone 1 stripped, inspected and repaired as required, zone 2 inspected with some repairs

Extensive refractory (brick and Gunned) works in combustion chamber

CL De-Slagger Chain replaced all De-Slaggers inspected repairs as required

Turbine exhaust baffle crack repairs,

Further extension of economiser 1 shields

Feeder table repairs, De slagger drop off chute over plating repairs due to corrosion

Planned maintenance on SNCR system, Burners, Cranes, all HV systems, all sensor systems, frequency convertors, thermal imaging system, fire detection and suppression systems, hydraulic systems.

Summary of Residue Handling for the reporting year

All of the IBA has been transported to Hill Barton Exeter where Rock Solid enact the same storage and processing operation as in the Netherlands.

For the duration of the year APCr has predominantly been collected from site and transported to FCC in Leeds for treatment and hazardous landfill disposal. A small fraction has been transported to Germany for the purpose of salt mine reclamation.

Annual Reporting Performance Form 1

Annual Performance Report 2021

Facility: MVV Environment Devonport Ltd

Operator: Devonport Energy from Waste CHP

Form: Performance 1

Reporting Period from:

1st Jan 2021

to:

31st Dec 2021

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		6,112.8	677.1	2.8%
IBA		0.0	0.0	-
Total Hazardous Waste		6,112.8	677.1	2.8%
2) Non-Hazardous Wastes				
IBA		0.0	62,455.5	25.7%
Ferrous Metal			4,553.0	1.9%
Process Water		0.0	122.6	0.1%
Total Non-Hazardous Waste		0.0	67,131.2	27.6%
TOTAL WASTE		6,112.8	67,808.2	30.4%

Annual Reporting of Water and Other Raw Material Usage

Raw Material	Usage	Unit	Specific Usage	Unit
Mains Water	64413	m ³	0.26	m ³ /te
Total Water	64413	m ³	0.26	m ³ /te
Urea / Ammonia	227000	Ltr	0.93	Ltr/te
Activated Carbon	62800	kg	0.26	kg/te
Sodium Bicarb.	3878000	kg	15.94	kg/te

Annual Reporting of other performance indicators

Parameter	Results by Line	
	A1	Turbine 1
Operating hours for the year, hours	7756	7,807
Number of periods of abnormal operation, qty.	0	0
Cumulative hours of abnormal operation for this year, hours	0	0

Annual Reporting of Energy Usage/Export

Annual Performance Report 2021

Operator: Devonport Energy from Waste CHP

Facility: MVV Environment Devonport Ltd

Form: Energy 1

Reporting Period from:

01 January 2021

to:

31 December 2021

Energy Source	Energy Usage	Unit	Specific Useage KWh/tonne incinerated
Electricity Produced	191,303	MWh	786
Electricity Imported	940.1	MWh	4
Electricity Exported	174,005	MWh	715
Steam/hot water exported	54	GWh	0

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 (7756Hrs)	
	Half-hourly limit	Daily limit
Particulates	100%	100%
Oxides of nitrogen	100%	100%
Sulphur dioxide	100%	100%
Carbon monoxide	100%	100%
Total organic carbon	100%	100%
Hydrogen chloride	100%	100%

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
14/03/2021	Schedule 5 CO Half Hour Average Exceedance	Boiler was starting-up, waste fire had just been established and both burners had just shutdown 0303. Sudden decrease in O2 caused CO to increase	The Primary and Secondary air was increased, the recirc air was decreased to overall increase the supply of oxygen to the boiler
17/03/2021	Schedule 5 No limit iaw permit section 4.3.1	Mobile plant suffered hydraulic hose failure resulting in loss of ~25ltrs oil.	Equipment isolated, spill response effectively deployed. No oil reached the ground or surface drains.
02/08/2021	Schedule 5 Partial failure of annual stack test	Annual Stack Testing undertaken end of June 2021; results received Friday 30th July indicate partial failure on some of the parameters.	Arrange correction coefficients and retest. Air 1-6 and QAL3 do not indicate any exceedance.

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

Date	Summary of complaint [including Line/Reference]		Reason *	Measures taken to prevent reoccurrence
02/04/2020	Complainant reported	Investigation found cause to be off site	Investigation found cause to be off site	None
14/04/2020	Complainant reported high	Recirc bucket elevator	Recirc bucket elevator	Minor defect identified and rectified.
04/06/2020	Report of noxious	Off site inspection undertaken. Not	Off site inspection undertaken. Not attributable to MVV	None
16/06/2020	Report of black smoke	Plant in normal operation and stack	Plant in normal operation and stack plume normal	None
04/07/2020	Noise complaint	Noise coming from adjacent demolition	Noise coming from adjacent demolition site	None
09/09/2020	Noise complaint	Noise coming from adjacent demolition	Noise coming from adjacent demolition site	None
06/10/2020	Two reports of odour at Rodney St via the EA	Off site rounds undertaken, no odour detected. Carbon filters in full	Off site rounds undertaken, no odour detected. Carbon filters in full operation with no anomalies	Monitor carbon filter efficacy. Conduct off site monitoring.

18/11/2020	Resident complaint to EA about odour	Joint MVV & EA offsite tour to establish source and considered not	Joint MVV & EA offsite tour to establish source and considered not attributable to MVV undertaking	None
* 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.

A continual and rolling programme of industrial lighting exchange to more efficient LED type.

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.

Installation of 3 x 22Kw electric vehicle charging points

Details of Public & Stakeholder Liaison**Summary of events held during the reporting year.**

Date	Description
12/02/2021	Plymouth University environmental science careers event (virtual; >50 students in attendance)
06-09/04/2021	Green Skills week: COP26/waste (virtual; 8 students)
13/06/2021	Annual community litter pick (10 x attendees from local community)
08/07 26/07 and 26/08 2021	3 x virtual insight days linked to COP26 and waste management/sustainability (34 x students across all three events)
27/09/2021	Outage mailshot to 1630 local residents
18/10/2021	Bee hive installed in preparation for colony and hive cam
25/11/2021	Plymouth University built environment careers event (in person; 28 students)
Jan 2021 – Dec 2021	2 x work experience placements accommodated on site
Jan 2021 – Dec 2021	Various Moths to a Flame workshops with schools and youth clubs (outreach; approx. 180 young people contributing to art installation at COP26)

List of events planned for next year

Date	Description
Apr-22	Community litter pick
Oct-22	Annual facility open day
Jan 2022 - Dec 2022	In-person site tours and work experience
Jan 2022 - Dec 2022	School visits – pandemic and guidance allowing

Residue Quality Monitoring Requirements

Summary of monitoring undertaken and compliance

Jan 2021 to Dec 2021, 12 x IBA sample analysed as per annual test programme.

May 2021 a full suite analysis on IBA undertaken for HP 1-15

APCR continues as a quarterly sample and analysis regime as per permit requirements.

Quarterly and annual residue returns completed

Commentary on any specific events

Date & Event	Description
	None in this reporting period

Residue Quality Monitoring Results

Parameter (unit)	Limit	Normal Operation	
		Bottom ash	APC Residues
Loss on Ignition (%)	<5%	2.8 (annual average)	
ToC (%)	<3%	0.74 (annual average)	
No. of Assessments Undertaken	---	12	4
No. of Hazardous Assessments	---	0	

Comments :

MVV Devonport undertook monthly sampling of Incinerator Bottom Ash iaw WM3 and ESA protocol. To the end of 2021 a total of 138 samples have been presented for analysis since commencement of operation in 2015, all to date have returned as non-hazardous.

Emissions to Water

Summary of monitoring undertaken and compliance

Continuous monitoring undertaken for flow and temperature

Quarterly returns issued to regulator

P-Red list analysis for surface water run off not undertaken as all prior analysis campaigns has returned below limits of detection.

Commentary on any specific events

Date & Event	Description
2021	None in reporting period

Emissions to Water / Sewer

Parameter	Monitoring Frequency	Limit	Target	Max.	Average
Flow	Continuous	No limit	No limit	7.5m ³ /hr	0.85m ³ /hr
Temperature	Continuous	No limit	No limit	25.49°C	18.8°C

Emissions to Air (periodically monitored)**Summary of monitoring undertaken, standards used and compliance**

Bi-annual testing law permit using MCERTS accredited and technically endorsed contractor

Results of emissions to air that are periodically monitored

Substance	Ref. Period	Emission Limit Value	Jun-21	Nov-21	Average
					A1
Hydrogen fluoride	1 hr	2 mg/m ³	0.17	0.02	0.095
Cd and Th and their compounds	6-8hrs	0.05 mg/m ³	0.001	0.004	0.0025
Hg and its compounds	6-8hrs	0.05 mg/m ³	0.002	0.0014	0.0017
Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds	6-8hrs	0.5 mg/m ³	0.029	0.0188	0.0239
Dioxins & Furans (I-TEQ)	6-8hrs	0.1 ng/m ³	0.002	0.0017	0.00185
PCBs (WHO-TEQ Humans / Mammals)	6-8hrs	None set ng/m ³	0.0005	0.006	0.0032515
PCBs (WHO-TEQ Fish)	6-8hrs	None set ng/m ³	2.7E-05	0.0002	0.0001135
PCBs (WHO-TEQ Birds)	6-8hrs	None set ng/m ³	0.00158	0.0008	0.0011875
Dioxins & Furans (WHO-TEQ Humans / Mammals)	6-8hrs	None set ng/m ³	0.0017	0.0016	0.00165
Dioxins & Furans (WHO-TEQ Fish)	6-8hrs	None set ng/m ³	0.0019	0.0017	0.0018
Dioxins & Furans (WHO-TEQ Birds)	6-8hrs	None set ng/m ³	0.0053	0.0029	0.0041
Anthanthrene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Benzo(a)anthracene	6-8hrs	None set µg/m ³	0.0032	0.0012	0.0022
Benzo(a)pyrene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Benzo(b)fluoranthene	6-8hrs	None set µg/m ³	0.0035	0.0012	0.00235
Benzo(b)naphtho(2,1-d) thiophene	6-8hrs	None set µg/m ³	0.0013	0.0012	0.00125
Benzo(c)phenanthrene	6-8hrs	None set µg/m ³	0.0022	0.0012	0.0017
Benzo(ghi)perylene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Benzo(k)fluoranthene	6-8hrs	None set µg/m ³	0.0013	0.0012	0.00125
Cholanthrene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Chrysene	6-8hrs	None set µg/m ³	0.01	0.0012	0.0056
Cyclopenta(cd)pyrene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Dibenzo(ai)pyrene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Dibenzo(ah)anthracene	6-8hrs	None set µg/m ³	0.0007	0.0012	0.00095
Fluoranthene	6-8hrs	None set µg/m ³	0.0246	0.01	0.0173
Indeno(123-cd) pyrene	6-8hrs	None set µg/m ³	0.0039	0.0012	0.00255
Naphthalene	6-8hrs	None set µg/m ³	0.3674	0.13	0.2487

Emissions to Air (continuously monitored)

Summary of monitoring undertaken, standards used and compliance

Continuous emission monitoring to meet BS EN 14181 / BS EN 15267-3

Bi-annual to meet BS ISO 15713 / BS EN 14385 / BS EN 13211 / BS EN 14791 / BS EN ISO 21258 / BS EN 1948 Parts 1, 2 and 3 / BS EN 1948-4 / BS ISO 11338 Parts 1 and 2 for all other determinands specified within the permit.

Results of emissions to air that are continuously monitored

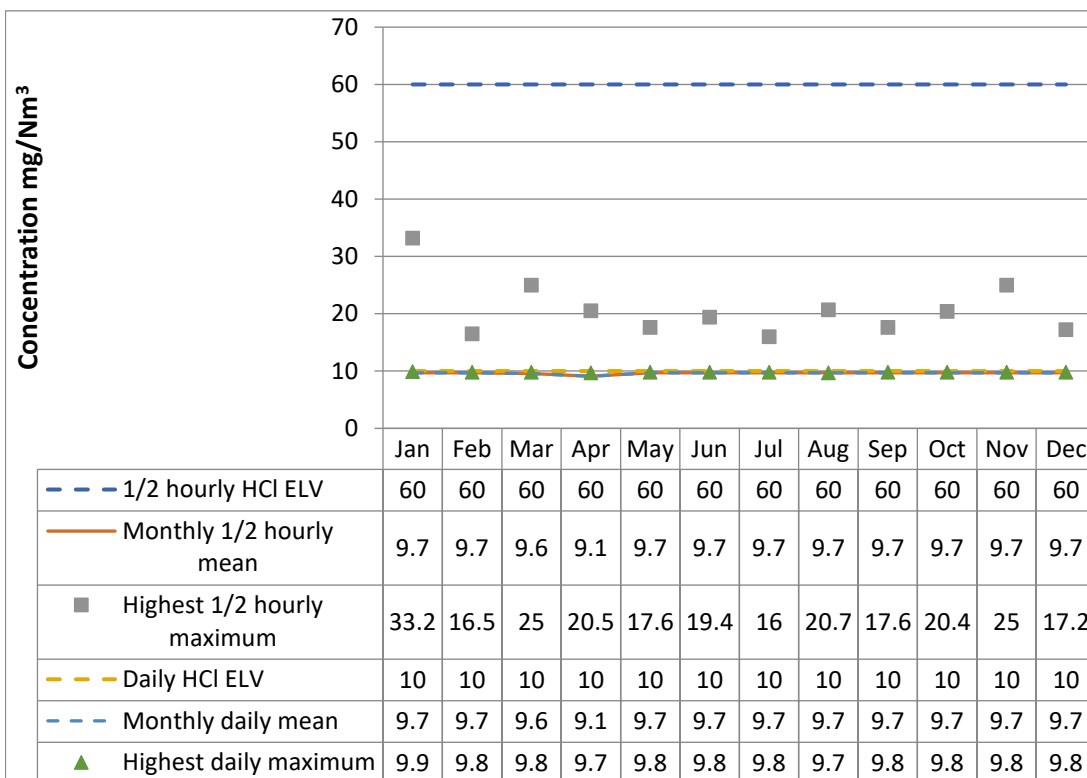
Substance	Reference Period	Emission Limit Value	A1	
			Max.	Avg.
Oxides of nitrogen	Daily mean	200 mg/m ³	199	179.85
	½ hourly mean	400 mg/m ³	251	179.85
Particulates	Daily mean	10 mg/m ³	1.1	0.4
	½ hourly mean	30 mg/m ³	1.5	0.46
Total Organic Carbon	Daily mean	10 mg/m ³	1.1	0.34
	½ hourly mean	20 mg/m ³	4.9	0.34
Hydrogen chloride	Daily mean	10 mg/m ³	9.9	9.64
	½ hourly mean	60 mg/m ³	33.2	9.64
Sulphur dioxide	Daily mean	50 mg/m ³	22.31	17.63
	½ hourly mean	200 mg/m ³	49.32	17.63
Carbon monoxide	Daily mean	50 mg/m ³	9.4	4.35
	½ hourly mean	100 mg/m ³	245.9	4.35

* = delete or amend as appropriate

Monitoring of Hydrogen Chloride emissions

See Notes in Cell Q3

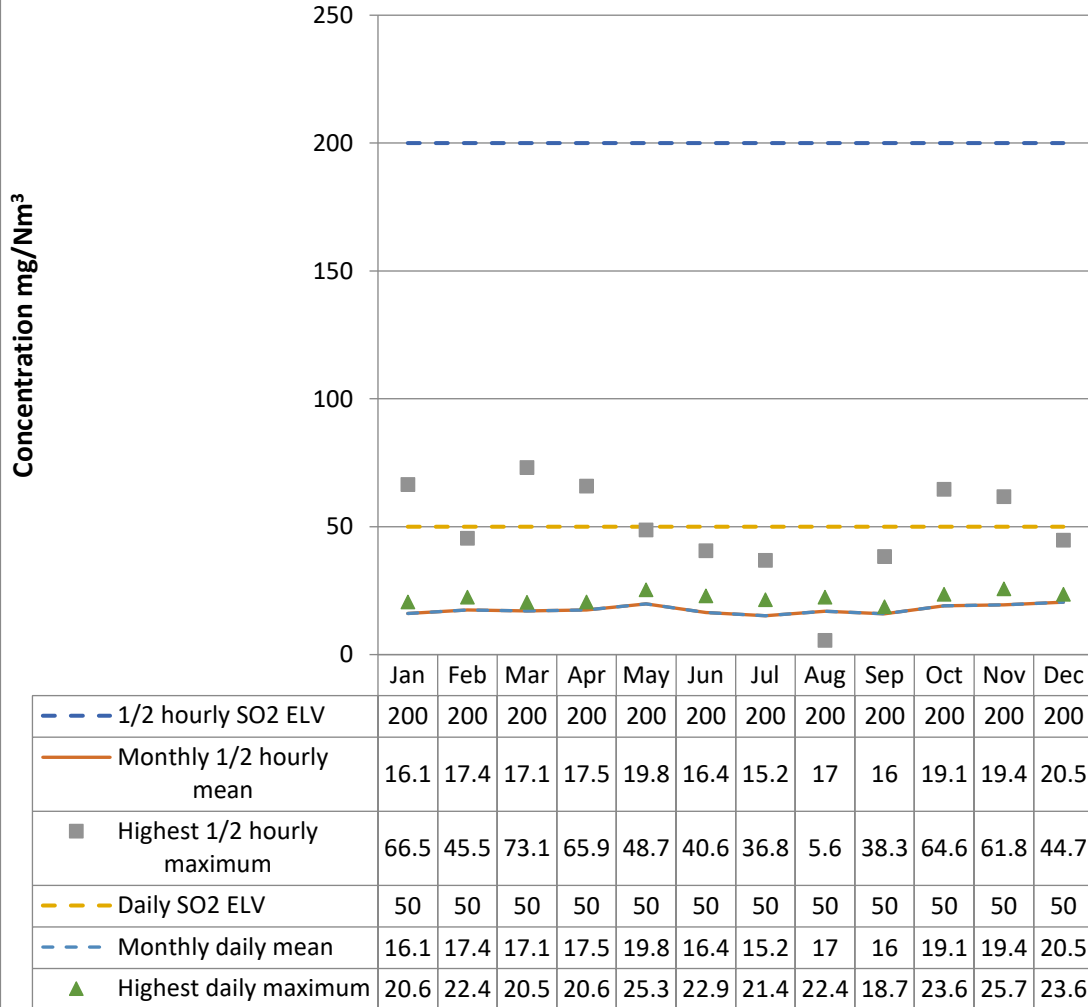
mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	1/2 hourly HCl ELV	Monthly 1/2 hourly mean	Highest 1/2 hourly maximum	Daily HCl ELV	Monthly daily mean	Highest daily maximum
Jan	60	9.7	33.2	10	9.7	9.9
Feb	60	9.7	16.5	10	9.7	9.8
Mar	60	9.6	25	10	9.6	9.8
Apr	60	9.1	20.5	10	9.1	9.7
May	60	9.7	17.6	10	9.7	9.8
Jun	60	9.7	19.4	10	9.7	9.8
Jul	60	9.7	16	10	9.7	9.8
Aug	60	9.7	20.7	10	9.7	9.7
Sep	60	9.7	17.6	10	9.7	9.8
Oct	60	9.7	20.4	10	9.7	9.8
Nov	60	9.7	25	10	9.7	9.8
Dec	60	9.7	17.2	10	9.7	9.8



Monitoring of Sulphur dioxide emissions

See Notes in Cell Q3

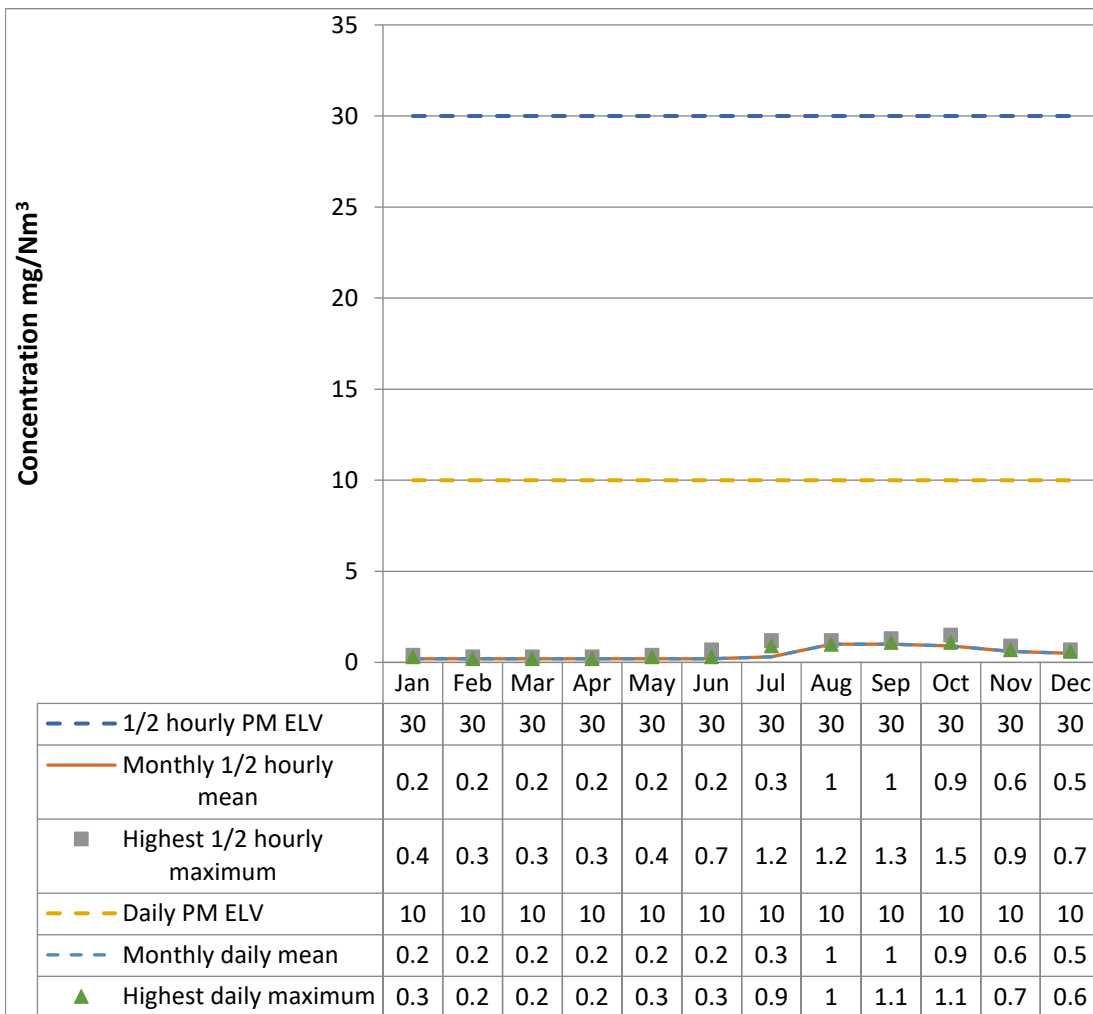
mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	1/2 hourly SO2 ELV	Monthly 1/2 hourly mean	Highest 1/2 hourly maximum	Daily SO2 ELV	Monthly daily mean	Highest daily maximum
Jan	200	16.1	66.5	50	16.1	20.6
Feb	200	17.4	45.5	50	17.4	22.4
Mar	200	17.1	73.1	50	17.1	20.5
Apr	200	17.5	65.9	50	17.5	20.6
May	200	19.8	48.7	50	19.8	25.3
Jun	200	16.4	40.6	50	16.4	22.9
Jul	200	15.2	36.8	50	15.2	21.4
Aug	200	17	5.6	50	17	22.4
Sep	200	16	38.3	50	16	18.7
Oct	200	19.1	64.6	50	19.1	23.6
Nov	200	19.4	61.8	50	19.4	25.7
Dec	200	20.5	44.7	50	20.5	23.6



Monitoring of Particulate matter emissions

See Notes in Cell Q3

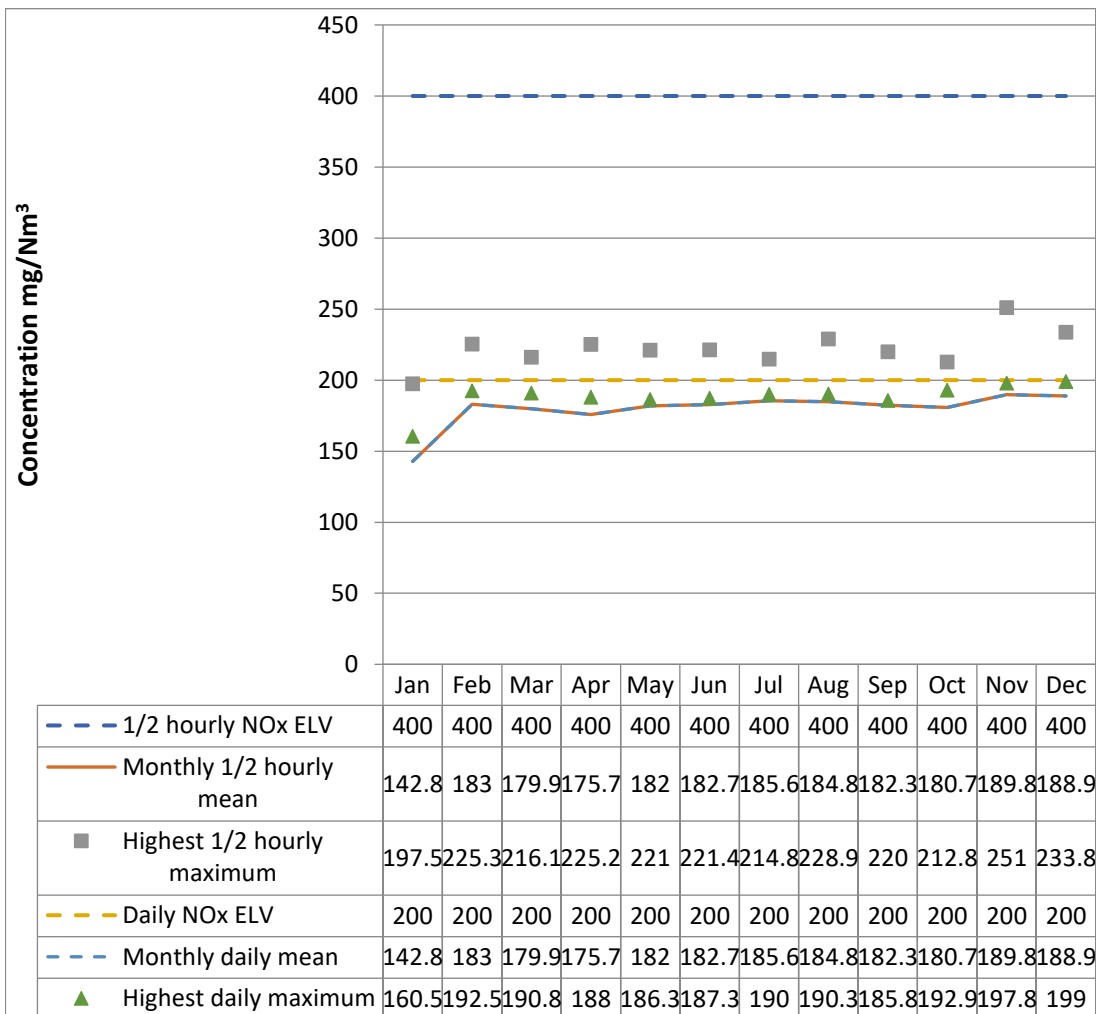
mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	1/2 hourly PM ELV	Monthly 1/2 hourly mean	Highest 1/2 hourly maximum	Daily PM ELV	Monthly daily mean	Highest daily maximum
Jan	30	0.2	0.4	10	0.2	0.3
Feb	30	0.2	0.3	10	0.2	0.2
Mar	30	0.2	0.3	10	0.2	0.2
Apr	30	0.2	0.3	10	0.2	0.2
May	30	0.2	0.4	10	0.2	0.3
Jun	30	0.2	0.7	10	0.2	0.3
Jul	30	0.3	1.2	10	0.3	0.9
Aug	30	1	1.2	10	1	1
Sep	30	1	1.3	10	1	1.1
Oct	30	0.9	1.5	10	0.9	1.1
Nov	30	0.6	0.9	10	0.6	0.7
Dec	30	0.5	0.7	10	0.5	0.6



Monitoring of Oxides of Nitrogen emissions

See Notes in Cell Q3

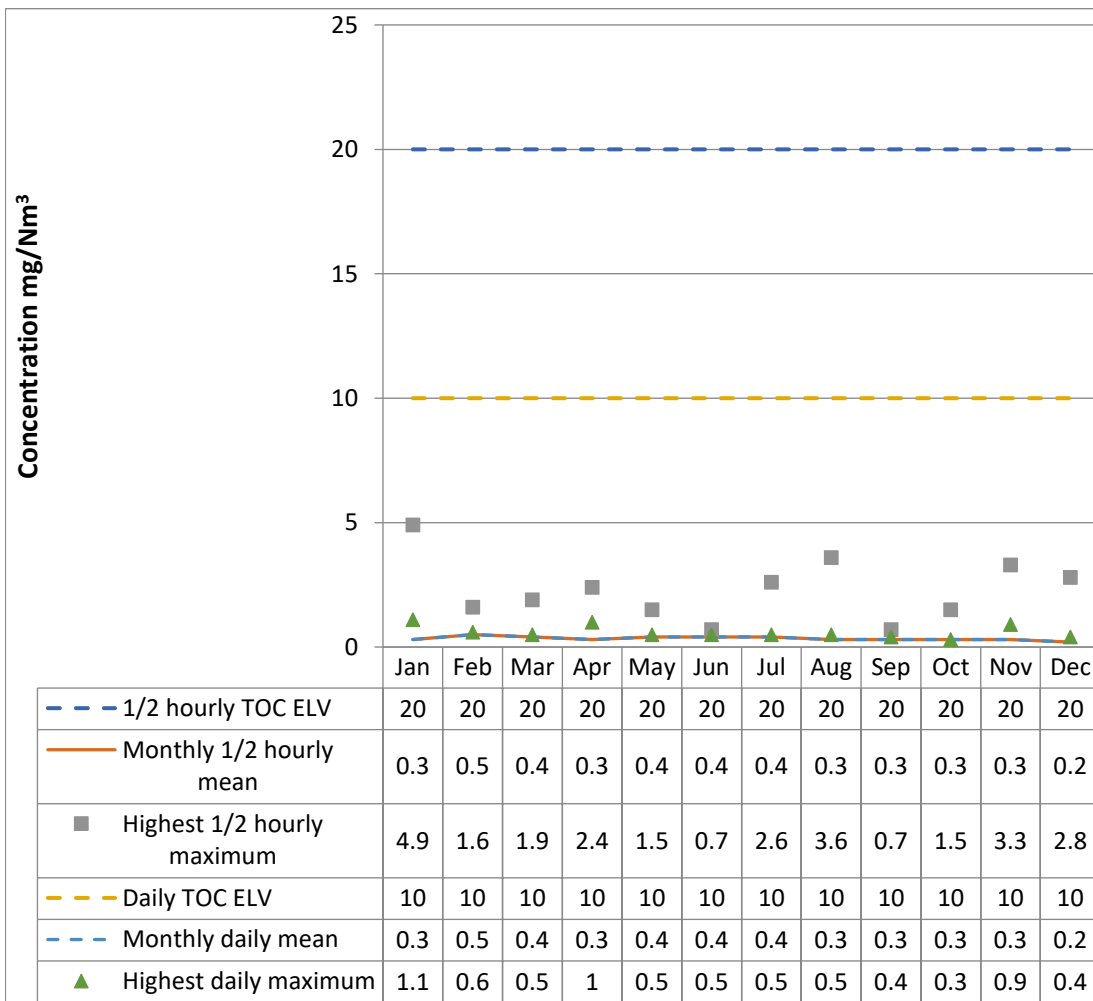
mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	1/2 hourly NOx ELV	Monthly 1/2 hourly mean	Highest 1/2 hourly maximum	Daily NOx ELV	Monthly daily mean	Highest daily maximum
Jan	400	142.8	197.5	200	142.8	160.5
Feb	400	183	225.3	200	183	192.5
Mar	400	179.9	216.1	200	179.9	190.8
Apr	400	175.7	225.2	200	175.7	188
May	400	182	221	200	182	186.3
Jun	400	182.7	221.4	200	182.7	187.3
Jul	400	185.6	214.8	200	185.6	190
Aug	400	184.8	228.9	200	184.8	190.3
Sep	400	182.3	220	200	182.3	185.8
Oct	400	180.7	212.8	200	180.7	192.9
Nov	400	189.8	251	200	189.8	197.8
Dec	400	188.9	233.8	200	188.9	199



Monitoring of Total organic carbon emissions

See Notes in Cell Q3

mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	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	0.3	4.9	10	0.3	1.1
Feb	20	0.5	1.6	10	0.5	0.6
Mar	20	0.4	1.9	10	0.4	0.5
Apr	20	0.3	2.4	10	0.3	1
May	20	0.4	1.5	10	0.4	0.5
Jun	20	0.4	0.7	10	0.4	0.5
Jul	20	0.4	2.6	10	0.4	0.5
Aug	20	0.3	3.6	10	0.3	0.5
Sep	20	0.3	0.7	10	0.3	0.4
Oct	20	0.3	1.5	10	0.3	0.3
Nov	20	0.3	3.3	10	0.3	0.9
Dec	20	0.2	2.8	10	0.2	0.4



Monitoring of Carbon Monoxide (half hourly)

See Notes in Cell Q3

mg/Nm ³	1/2 Hourly Reference Periods			Daily Reference Periods		
	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	100	6.2	89.5	50	6.2	9.4
Feb	100	6.2	83.8	50	6.2	8.1
Mar	100	5	245.9	50	5	6
Apr	100	3.6	36.8	50	3.6	4.5
May	100	3.7	30.7	50	3.7	5.3
Jun	100	3.3	13.1	50	3.3	4.5
Jul	100	3.3	36	50	3.3	5.3
Aug	100	3	58.3	50	3	4.4
Sep	100	3.6	11.7	50	3.6	5
Oct	100	5	47.5	50	5	5.5
Nov	100	4.5	47.6	50	4.5	6
Dec	100	4.8	52.4	50	4.8	6.8

