BIOMASS UK NO.2 LTD

Annual Performance Report 2022

Permit EPR/AB3790ZB

Barry Energy Production Facility

Biomass UK No.2 Ltd

Year:	2022		
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Contents

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Section	Information	Date

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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 Barry Energy Production Facility is a renewable energy generation facility which has been designed to recover energy from pre-prepared mixed waste wood feedstocks using gasification. The gasification facility is an Advanced Thermal Treatment (ATT) process that will produce a combustible synthesis gas, which is then used to raise steam and generate electricity, through steam cycle turbine generation.

The Advanced Thermal Treatment (ATT) plant is designed to process shredded mixed waste wood feedstocks to produce heat to raise steam in a conventional tube boiler for utilisation in a steam turbine for the production of renewable electricity with an export capacity up to 10MWe (notionally 9.95MWe).

The Installation has been designed to process approximately 86,400 tonnes of pre-processed non-hazardous mixed waste wood per annum.

The site has not been operational for the entirety of the year. As such no waste has been received or processed onsite.

Summary of Operational Processes and Procedures

The principle components of the process comprise the following:

Waste Acceptance and Reception : All waste wood is delivered directly into the fuel storage building via electrically operated roller shutter doors. When required, the waste is discharged onto the feedstock feed system, which delivers the waste into the gasification building. All waste is accepted in accordance to the sites waste acceptance procedures.

Gasification : The feedstock feed system delivers the waste into the fluidised bed gasification system where the waste is combusted to produce a synthetic gas (syngas). The syngas is then combusted to produce a high temperature flue-gas. A steam boiler then recovers the heat from the combustion gases through the conversion into superheated steam.

Electricity Generation : The superheated steam then passes to a Steam Turbine and Generator, which will export 10MWe (net) of renewable electricity onto the Local Distribution Network.

Flue-Gas Cleaning : Flue gas cleaning and pollution control consists of urea injection for De-NOx, lime injection for acid gas neutralisation and activated carbon powder injection for absorption and removal of heavy metals, dioxins, VOCs and other harmful substances. The stream has a baghouse system, which is designed to have the capacity to remove submicron dust particles within anticipated emission limit values (ELV's) stipulated by Chapter IV of the Industrial Emissions Directive (IED).

The plant is operated in accordance with its Environmental Management System which is designed to meet the requirements of ISO14001:2004.

Summary of Plant Operations and Maintenance during the reporting year
The ongoing Covid-19 situation combined with the ongoing planning related issues, it was decided to take the plant fully off line to facilitate a series of plant mechanical improvements. These improvement upgrades have been targeted at increasing the reliability of the facility and to ensure that the process is not subject to fouling and/or slagging. As such the facility has been non-operational during 2022 and will come online once clarity around the planning regularisation is assured by the Welsh Government. As a result of the above, the site did not process any wastes during 2022 and all fuel storage and reception areas have remained empty.

Operational Data

Plant Size		86,400	tonnes pa		MWth	10 MWe
No. of combustion lines	1		No. of Turbines:		1	

Total waste received	Unit	Q1	Q2	Q3	Q4	**Year Total**
Waste wood (biomass)	Tonnes	-	-	-	-	**-**
Total waste wood co-incinerated		**-**	**-**	**-**	**-**	**-**

Energy Usage / Export	Unit	Q1	Q2	Q3	Q4	**Year Total**	MWh/tonne incinerated
Electrical Energy Generated	MWh	-	-	-	-	**-**	#DIV/0!
Electrical Energy Exported		-	-		-	**-**	#DIV/0!
Electrical Energy Used on site		-	-		-	**-**	#DIV/0!
Power Imported		-	-		-	**-**	#DIV/0!
Parasitic Load	%	0.0%	-	-	-	-	
Thermal Energy Produced	MWh	-	-	-	-	**-**	-
Thermal Energy Used on site		-	-	-	-	**-**	-

Waste Disposal & Recovery	Unit	Q1	Q2	Q3	Q4	**Year Total**	tonnes/tonne of waste co-incinerated
APC Residues - produced	tonnes	-	-	-	-	**-**	#DIV/0!
Bottom Ash - produced		-	-	-	-	**-**	#DIV/0!

Raw Material Usage	Unit	Q1	Q2	Q3	Q4	**Year Total**	tonnes/tonne of waste co-incinerated
Water Consumption	m^3	-	-	-	-	**-**	#DIV/0!
Urea Consumption	tonnes	-	-	-	-	**-**	#DIV/0!
Activated Carbon Consumption	tonnes	-	-	-	-	**-**	#DIV/0!
Lime Consumption	tonnes	-	-	-	-	**-**	#DIV/0!
Fuel oil Consumption	tonnes	-	-	-	-	**-**	#DIV/0!

2022 Annual Reporting Performance Form 1

Permit EPR/AB3790ZB
Facility: Barry Energy Production Facility

Operator: Biomass UK No.2 Ltd
Form: Performance 1

Reporting of Performance Parameters for the Period from: 01 January 2022 31 December 2022

Parameter	Total Values	Units	Specific Value	Units
Electrical Energy imported from national grid	0	MWh	#DIV/0!	MWh/tonne of waste co-incinerated (dry basis)
Electrical Energy exported to national grid	0	MWh	#DIV/0!	MWh/tonne of waste co-incinerated (dry basis)
Electrical Energy used at the installation	0	MWh	#DIV/0!	MWh/tonne of waste co-incinerated (dry basis)
Fuel Oil consumption	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Mass of bottom ash (including boiler ash)	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Mass of APC residues produced	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Urea consumption	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Activated Carbon consumption	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Lime Consumption	0	tonnes	#DIV/0!	tonnes/tonne of waste co-incinerated (dry basis)
Water consumption	0	m^3	#DIV/0!	m^3/tonne of waste co-incinerated (dry basis)

Operator's comments :
The plant has been in shutdown since April 2020 due to planning conditions by WAG and the Local Authority.

Reporting of Annual Production / Treatment for the Period from: 01 January 2022 to: 31 December 2022

Parameter	Value	Unit
Total Waste Wood Received	0	Tonnes
Total Waste Wood Co-incinerated	0	Tonnes
Electrical Energy Generated	0	MWh
Electrical Energy Exported	0	MWh
Electrical Energy Used on Installation	0	MWh
Thermal Energy produced	0	MWh
Thermal Energy used on installation	0	MWh
Total bottom ash (including boiler ash produced)	0	Tonnes
Total APC residue produced	0	Tonnes

Operator's comments :
The plant has been in shutdown since April 2020 due to planning conditions by WAG and the Local Authority.

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	100%	100%
Oxides of nitrogen	100%	100%
Sulphur dioxide	100%	100%
Carbon monoxide	100%	100%
Total organic carbon	100%	100%
Hydrogen chloride	100%	100%
Hydrogen fluoride	100%	100%
Ammonia	N/A	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
	None		

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
N/A	None	N/A	N/A
N/A	None	N/A	N/A

*** 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.
The plant was not operational in 2022 pending the conclusion of the planning regularisation and appeal. The site has been subject to a number of plant engineering reliability modifications with the intention of resolving a number of reliability issues. The impact on efficiency will only be known once the plant is back on line and operational.

Summary of any permit improvement conditions that have been completed within the year and the resulting environmental benefits.
All Pre-operational conditions of the permit have now been completed with the final PO5 and PO6 having been signed off in January 2020. Plant undergoing re-commissioning and was not operational in 2022.

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.
The gasification plant has been undergoing some modifications to improve reliability and plant stability . The improvements will yield some gains in efficiency, however these will only be quantified once the plant is fully operational.

2022 Annual Reporting Residues Form 1

Permit EPR/AB3790ZB
Facility: Barry Energy Production Facility

Operator: Biomass UK No.2 Ltd
Form: Performance 1

Reporting of Residue Quality Period from: 01 January 2022 to: 31 December 2022

Residue Composition (TOC, Metals, Dioxins, etc.)																							
	TOC	Sb	Cd	Tl	Hg	Pb	Cr	Cu	Mn	Ni	As	Co	V	Zn	Dioxin/furan	Dioxin / Furan			Dioxin-like PCBS				
	<3 %	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	l-TEQ ng/kg	WHO-TEQ ng/kg			WHO-TEQ ng/kg				
																Humans/mammals	Birds	Fish	Humans/mammals	Birds	Fish		
Bottom Ash (including boiler ash)																							
APC Residues	N/A																						

Reporting of Ash solubility Period from: N/A to:

Ash Solubility (Metals)													
	Sb	Cd	Tl	Hg	Pb	Cr	Cu	Mn	Ni	As	Co	V	Zn
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bottom Ash (including boiler ash)													
APC Residues													

Operator's comments :
The plant was not operational in 2022 and therefore did not produce residue on which to undertake testing. Residue testing has not been carried out in 2022.

Signed: _____ Date: _____

Emissions to Water

Summary of monitoring undertaken and compliance
N/A

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
Not applicable at this stage. QAL-2 Periodic monitoring and AST testing was not undertaken in 2022 as plant was non-operational. The plant has been in shutdown all year, upon re-commencement of operations QAL-2 periodic monitoring will be undertaken at the earliest opportunity.

Results of emissions to air that are periodically monitored

Substance	Ref. Period	Emission Limit Value	Average				
			Q1	Q2	Q3	Q4	Total
Hydrogen fluoride	min 1 hr	3 mg/m^3					
Cd and Th and their compounds	30 min, max 8hrs	0.05 mg/m^3					
Hg and its compounds	30 min, max 8hrs	0.05 mg/m^3					
Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds	30 min, max 8hrs	0.5 mg/m^3					
Dioxins & Furans (I-TEQ)	6-8hrs	0.01 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					
PCBs (WHO-TEQ Humans / Mammals)	6-8hrs	None set ng/m^3					
PCBs (WHO-TEQ Fish)	2021	None set ng/m^3					
PCBs (WHO-TEQ Birds)	6-8hrs	None set ng/m^3					
Total PAHs	6-8hrs	0.001 mg/m^3					
Comments :							

Emissions to Air (continuously monitored)

Summary of monitoring undertaken, standards used and compliance
CEMS equipment has been in calibration and operational since December 2019. Plant has been in shutdown during 2022. Therefore there is no data relating to air emissions from the plant.

Results of emissions to air that are continuously monitored

Substance	**Reference Period**	**Emission Limit Value**	**A1**	
			Max.	**Avg.**
Oxides of nitrogen	Daily mean	300 mg/m^3		
	½ hourly mean	600 mg/m^3		
Particulates	Daily mean	15 mg/m^3		
	½ hourly mean	45 mg/m^3		
Total Organic Carbon	Daily mean	15 mg/m^3		
	½ hourly mean	30 mg/m^3		
Hydrogen chloride	Daily mean	15 mg/m^3		
	½ hourly mean	2021		
Hydrogen fluoride	Daily mean	6 mg/m^3		
	½ hourly mean	1.5 mg/m^3		
Sulphur dioxide	Daily mean	75 mg/m^3		
	½ hourly mean	300 mg/m^3		
Carbon monoxide	Daily mean	75 mg/m^3		
	½ hourly mean	150 mg/m^3		
Ammonia	Daily mean	5 mg/m^3		
Nitrous oxide	Daily mean		n/a	n/a

* = delete or amend as appropriate

Comments :

Monitoring of Hydrogen Chloride emissions **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	90	-	-	15	-	-
Feb	90	-	-	15	-	-
Mar	90	-	-	15	-	-
Apr	90	-	-	15	-	-
May	90	-	-	15	-	-
Jun	90	-	-	15	-	-
Jul	90	-	-	15	-	-
Aug	90	-	-	15	-	-
Sep	90	-	-	15	-	-
Oct	90	-	-	15	-	-
Nov	90	-	-	15	-	-
Dec	90	<1	<1	15	<1	<1

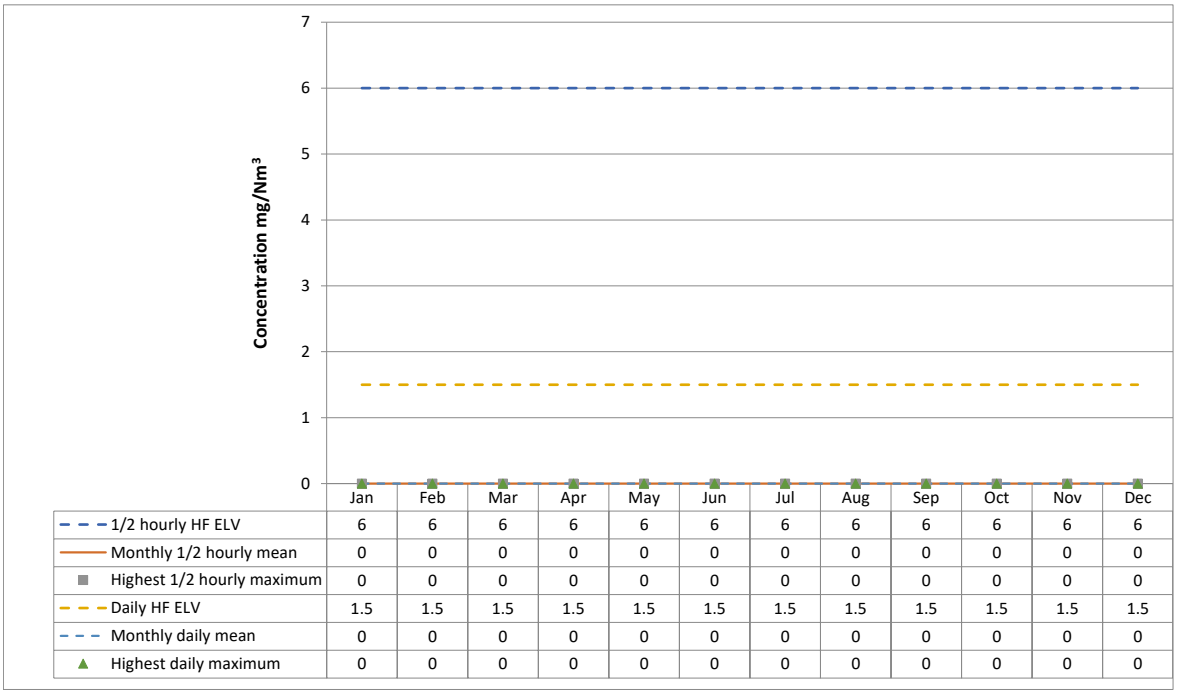
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly HCl ELV	90	90	90	90	90	90	90	90	90	90	90	90
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily HCl ELV	15	15	15	15	15	15	15	15	15	15	15	15
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Hydrogen Fluoride emissions **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**1/2 hourly HF ELV**	**Monthly 1/2 hourly mean**	**Highest 1/2 hourly maximum**	**Daily HF ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	6	-	-	1.5	-	-
Feb	6	-	-	1.5	-	-
Mar	6	-	-	1.5	-	-
Apr	6	-	-	1.5	-	-
May	6	-	-	1.5	-	-
Jun	6	-	-	1.5	-	-
Jul	6	-	-	1.5	-	-
Aug	6	-	-	1.5	-	-
Sep	6	-	-	1.5	-	-
Oct	6	-	-	1.5	-	-
Nov	6	-	-	1.5	-	-
Dec	6	<1	<1	1.5	<1	<1



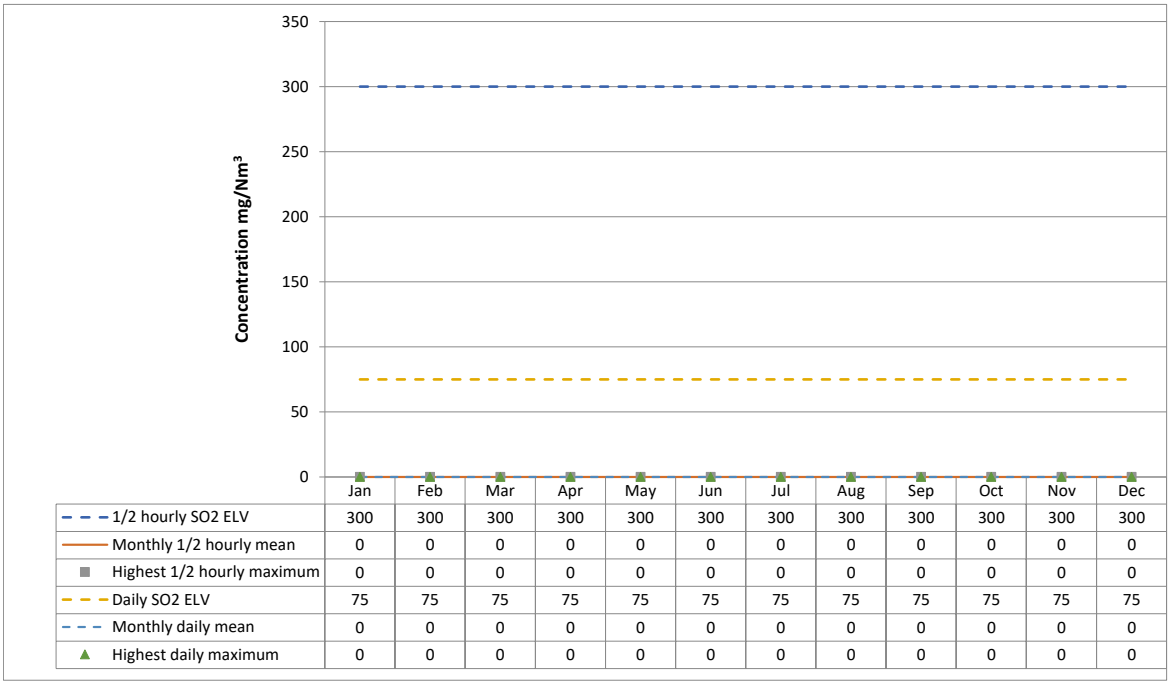
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly HF ELV	6	6	6	6	6	6	6	6	6	6	6	6
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily HF ELV	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Sulphur dioxide emissions **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	300	-	-	75	-	-
Feb	300	-	-	75	-	-
Mar	300	-	-	75	-	-
Apr	300	-	-	75	-	-
May	300	-	-	75	-	-
Jun	300	-	-	75	-	-
Jul	300	-	-	75	-	-
Aug	300	-	-	75	-	-
Sep	300	-	-	75	-	-
Oct	300	-	-	75	-	-
Nov	300	-	-	75	-	-
Dec	300	0	0	75	0	0



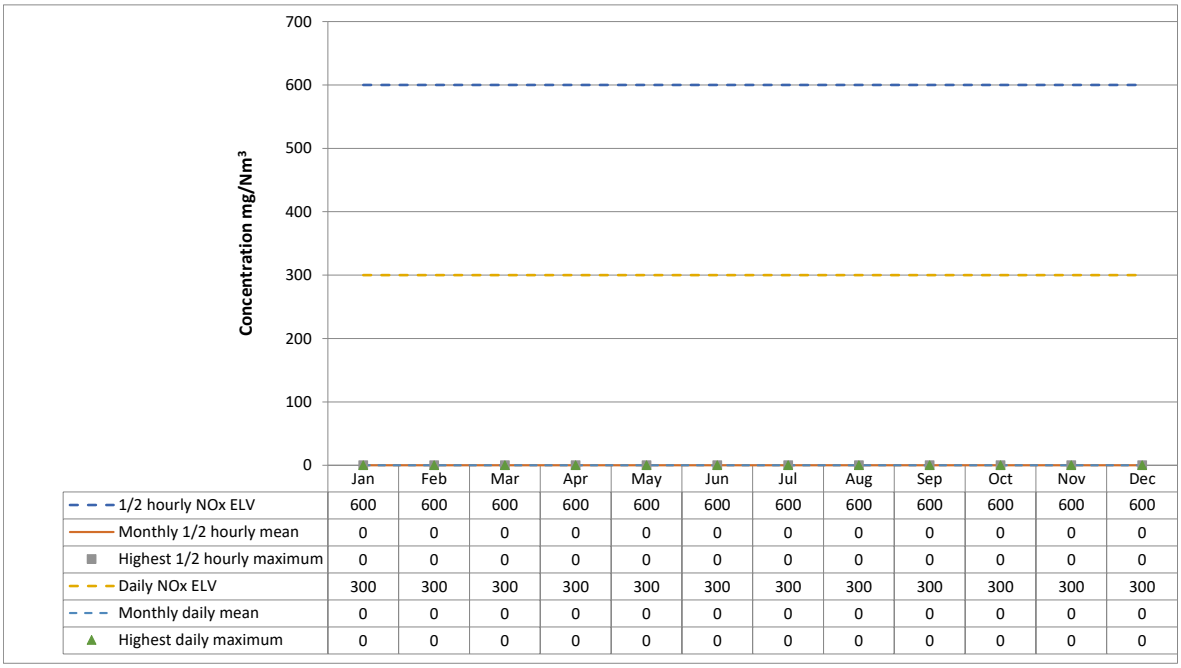
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly SO2 ELV	300	300	300	300	300	300	300	300	300	300	300	300
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily SO2 ELV	75	75	75	75	75	75	75	75	75	75	75	75
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Oxides of Nitrogen emissions **Whole Installation (A1)**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	600	-	-	300	-	-
Feb	600	-	-	300	-	-
Mar	600	-	-	300	-	-
Apr	600	-	-	300	-	-
May	600	-	-	300	-	-
Jun	600	-	-	300	-	-
Jul	600	-	-	300	-	-
Aug	600	-	-	300	-	-
Sep	600	-	-	300	-	-
Oct	600	-	-	300	-	-
Nov	600	-	-	300	-	-
Dec	600	0	0	300	0	0



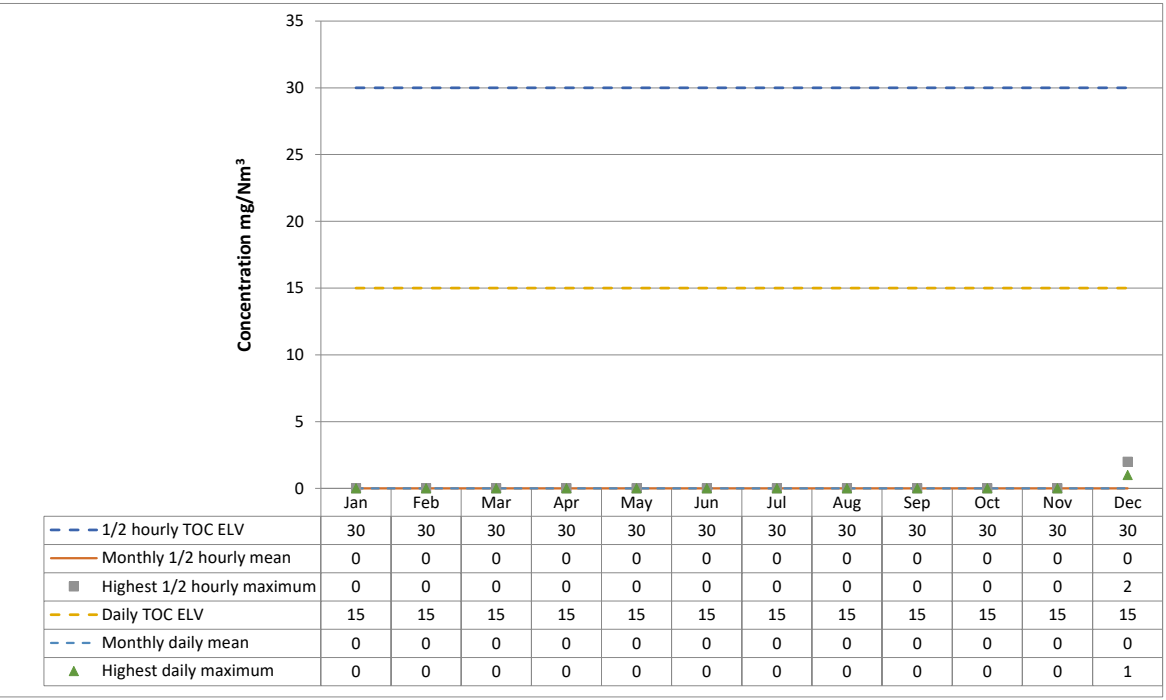
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly NOx ELV	600	600	600	600	600	600	600	600	600	600	600	600
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily NOx ELV	300	300	300	300	300	300	300	300	300	300	300	300
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Total organic carbon emissions **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	30	-	-	15	-	-
Feb	30	-	-	15	-	-
Mar	30	-	-	15	-	-
Apr	30	-	-	15	-	-
May	30	-	-	15	-	-
Jun	30	-	-	15	-	-
Jul	30	-	-	15	-	-
Aug	30	-	-	15	-	-
Sep	30	-	-	15	-	-
Oct	30	-	-	15	-	-
Nov	30	-	-	15	-	-
Dec	30	0	2	15	0	1



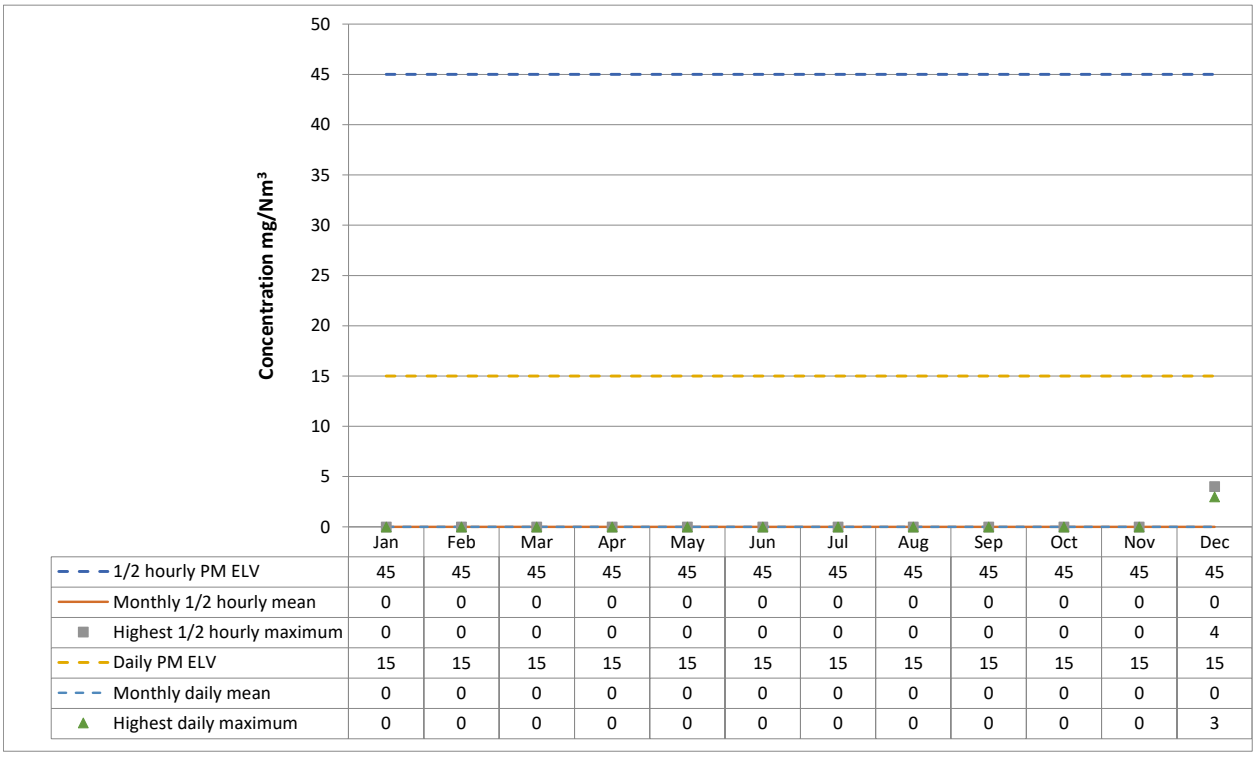
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly TOC ELV	30	30	30	30	30	30	30	30	30	30	30	30
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	2
Daily TOC ELV	15	15	15	15	15	15	15	15	15	15	15	15
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	1

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Particulate matter emissions **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	45	-	-	15	-	-
Feb	45	-	-	15	-	-
Mar	45	-	-	15	-	-
Apr	45	-	-	15	-	-
May	45	-	-	15	-	-
Jun	45	-	-	15	-	-
Jul	45	-	-	15	-	-
Aug	45	-	-	15	-	-
Sep	45	-	-	15	-	-
Oct	45	-	-	15	-	-
Nov	45	-	-	15	-	-
Dec	45	0	4	15	0	3



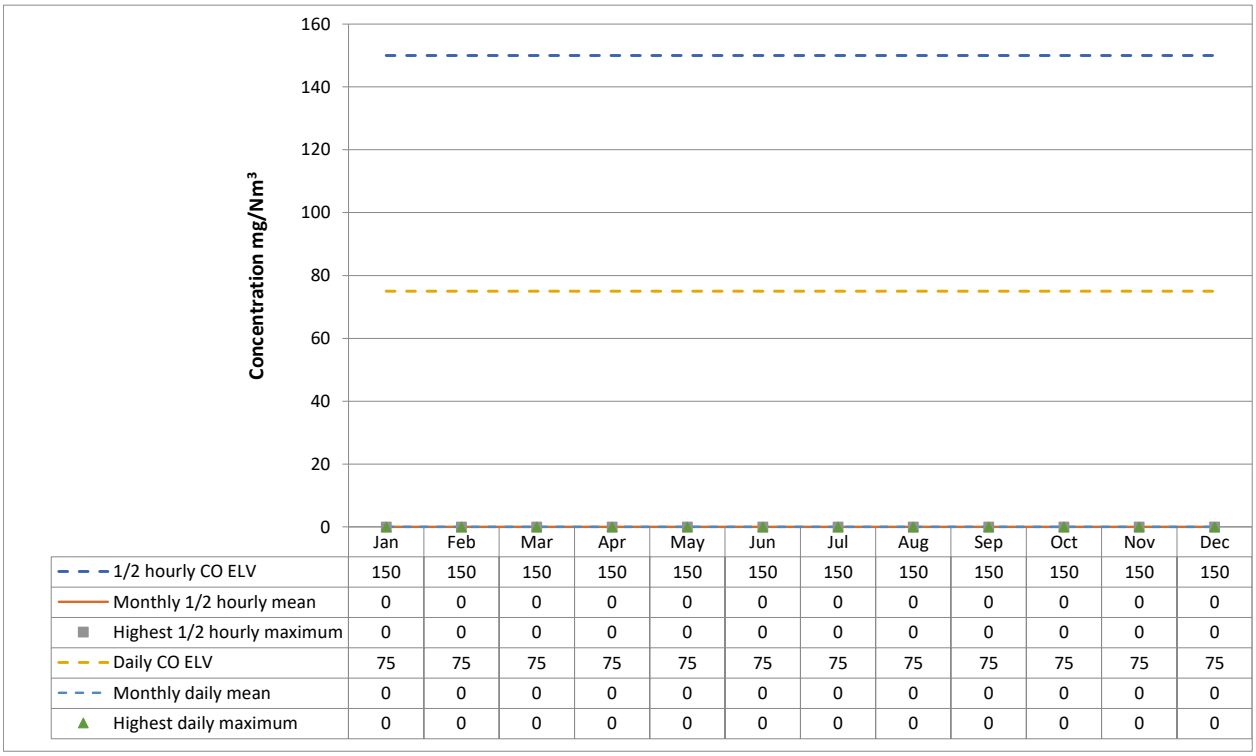
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly PM ELV	45	45	45	45	45	45	45	45	45	45	45	45
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	4
Daily PM ELV	15	15	15	15	15	15	15	15	15	15	15	15
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	3

Comments :

On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Carbon Monoxide (half hourly) **Whole Installation**

mg/Nm^3	1/2 Hourly Reference Periods			Daily Reference Periods		
2022	**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	150	-	-	75	-	-
Feb	150	-	-	75	-	-
Mar	150	-	-	75	-	-
Apr	150	-	-	75	-	-
May	150	-	-	75	-	-
Jun	150	-	-	75	-	-
Jul	150	-	-	75	-	-
Aug	150	-	-	75	-	-
Sep	150	-	-	75	-	-
Oct	150	-	-	75	-	-
Nov	150	-	-	75	-	-
Dec	150	<1	<1	75	<1	<1



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly CO ELV	150	150	150	150	150	150	150	150	150	150	150	150
Monthly 1/2 hourly mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest 1/2 hourly maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily CO ELV	75	75	75	75	75	75	75	75	75	75	75	75
Monthly daily mean	0	0	0	0	0	0	0	0	0	0	0	0
Highest daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

Comments :

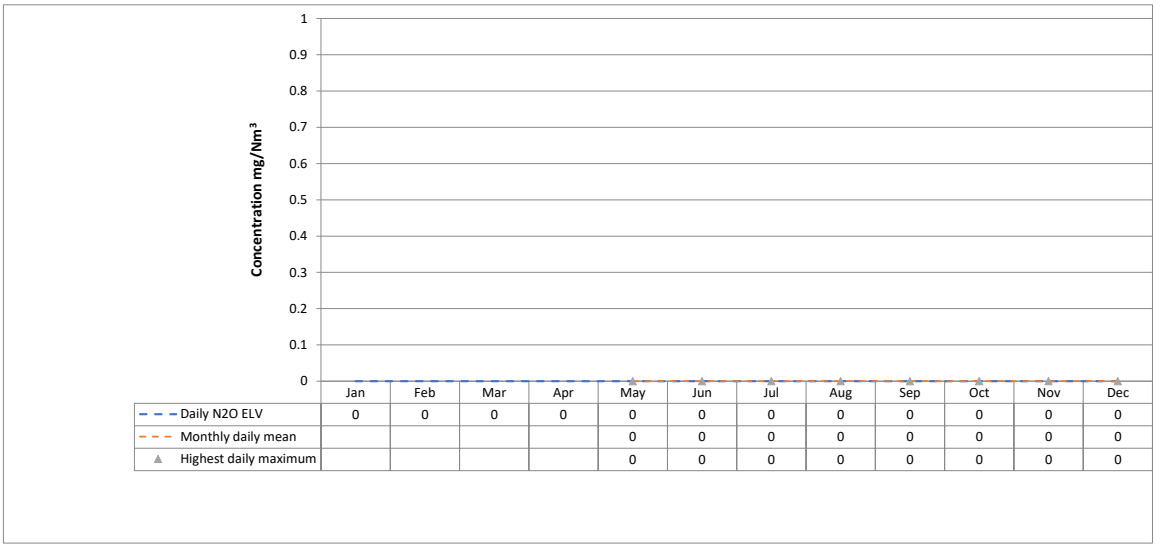
On the 21st December the plug screws were run as part of the sites preventative maintenance schedule. This gave the on signal to the CEMS equipment despite the plant being offline. The site will ensure the CEMs is set to maintenance mode in future during these maintenance operations.

Monitoring of Nitrous Oxide emissions

mg/Nm^3	Daily Reference Periods		
2022	**Daily N2O ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	0		
Feb	0		
Mar	0		
Apr	0		
May	0	-	-
Jun	0	-	-
Jul	0	-	-
Aug	0	-	-
Sep	0	-	-
Oct	0	-	-
Nov	0	-	-
Dec	0	-	-

Monitoring of Nitrous Oxide e Per Combustion Line

2022	mg/Nm3	Monthly daily mean	Monthly daily maximum
A1	Jan		
	Feb		
	Mar		
	Apr		
	May	-	-
	Jun	-	-
	Jul	-	-
	Aug	-	-
	Sep	-	-
	Oct	-	-
	Nov	-	-
	Dec	-	-
	Annual	#DIV/0!	0



Comments :

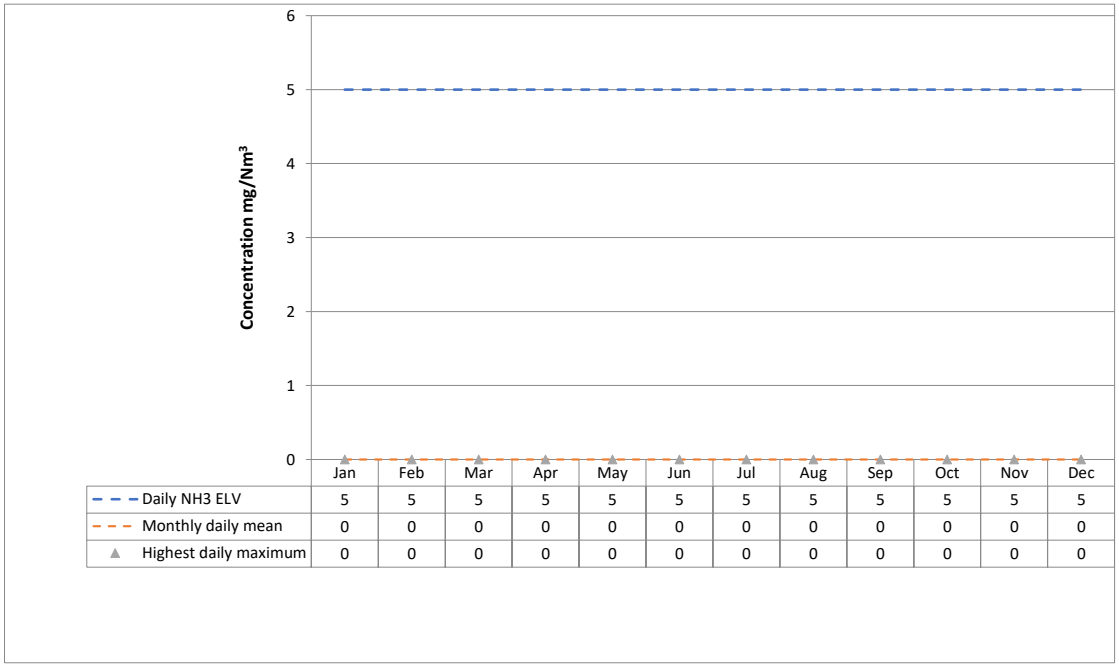
An indicated ELV value of zero in the table above means that no nitrous oxide limit is set in the permit.

Monitoring of Ammnonia emissions

mg/Nm^3	Daily Reference Periods		
2022	**Daily NH3 ELV**	**Monthly daily mean**	**Highest daily maximum**
Jan	5	-	-
Feb	5	-	-
Mar	5	-	-
Apr	5	-	-
May	5	-	-
Jun	5	-	-
Jul	5	-	-
Aug	5	-	-
Sep	5	-	-
Oct	5	-	-
Nov	5	-	-
Dec	5	<1	<1

Monitoring of Amm Per Combustion Line

2022	mg/Nm3	Monthly daily mean	Monthly daily maximum
A1	Jan		
	Feb		
	Mar		
	Apr		
	May	-	-
	Jun	-	-
	Jul	-	-
	Aug	-	-
	Sep	-	-
	Oct	-	-
	Nov	-	-
	Dec	<1	<1
	Annual	#DIV/0!	0



Comments :