



## GREATMOOR ANNUAL REPORT January-December 2016

Permit UP3734HT

FCC Environment  
Greatmoor Road Woodham  
Aylesbury  
Buckinghamshire  
HP18 0QE

---

## Introduction

Condition 4.2.2 of the Greatmoor Permit requires a report on the performance of the activities over the previous year, the information is provided below is intended to meet that requirement.

Greatmoor EFW is a new plant with commissioning commencing on the 31st of December 2015 and take over took place on the 20th of June 2016.

The facility can accept 300,000 tonnes per annum of non-hazardous municipal and commercial and industrial waste with an assumed calorific value of 9.765 MJ/kg and a waste throughput of 37.5 T/h

The plant is a single line facility.

## Annual Waste Throughputs

The facility received a total of 267,479 tonnes of waste in the reporting period.

Waste types and sources are reported quarterly to the Environment Agency within the waste returns.

## Total Plant hours

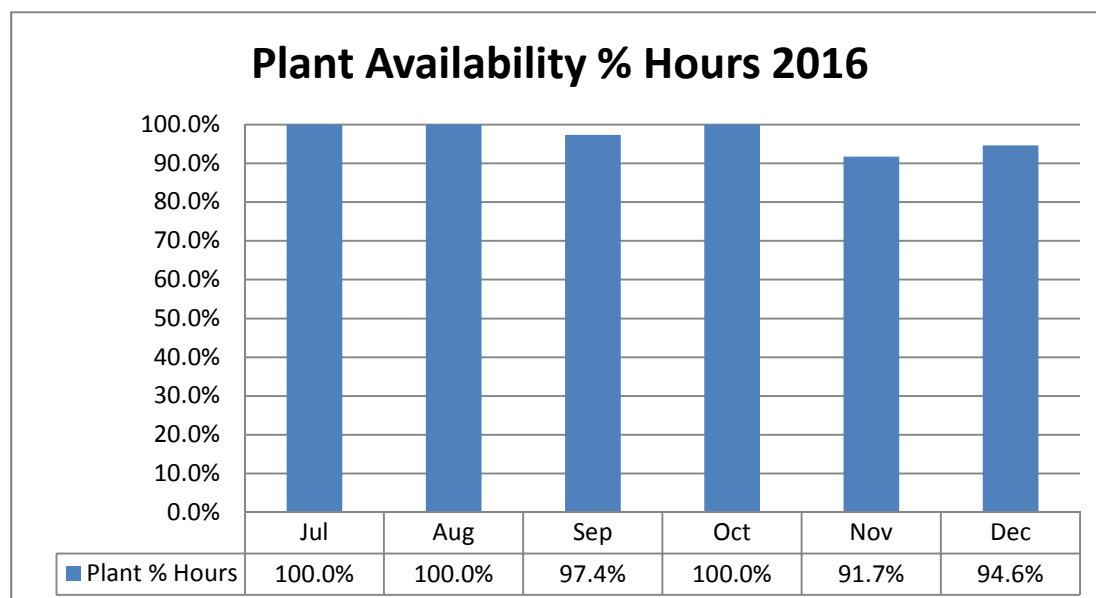
The plant has been operational 7,352.36 hours in 2016.

During the commissioning period the plant was not operational through several intervals of time while the different test were carried out as part of the contractual performance requirement.

Prior to take over there was a planned shutdown which lasted 22 days to allow an inspection in May. Since take over no major shut downs have occurred except a five day small outage at the end of November running through to the beginning of December to allow minor works on the plant.

The graph below shows plant availability since completion of commissioning.

Graph 1



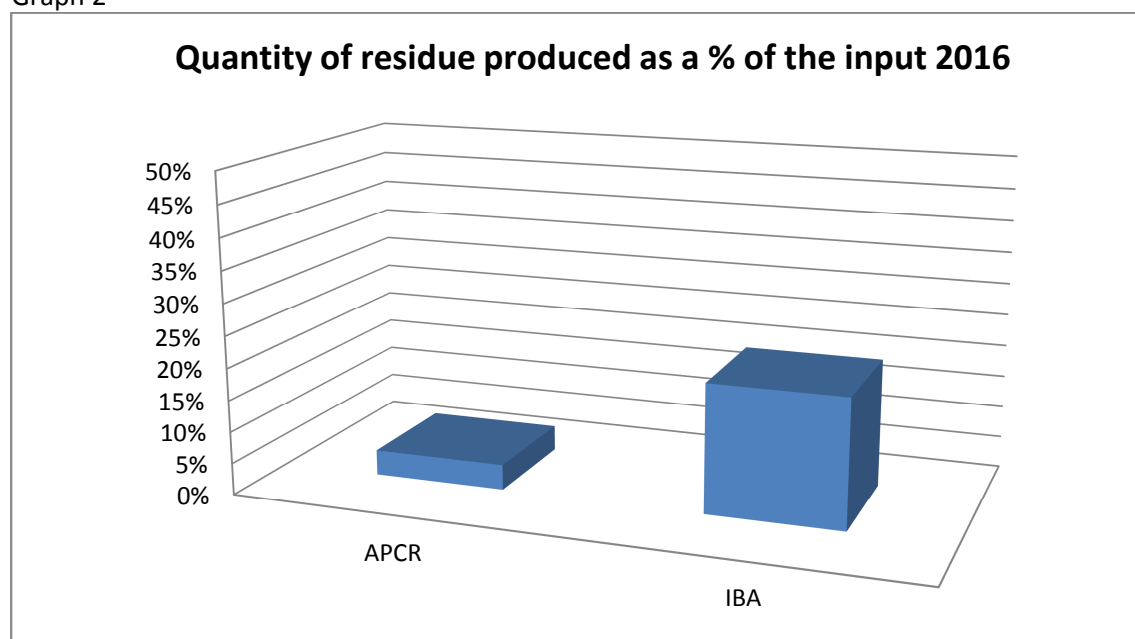
## Residue

The process generates two main solid waste residues. Air Pollution Control Residue (APCR) which includes boiler ash and fly ash from combustion that is removed from the flue gases, and bottom ash (IBA).

The graph below represents the percentage of each residue produced in relation with the total waste tonnage.

As detailed within improvement condition 3 these values compare well against the standards as detailed within the Waste Incineration BREF.

Graph 2



## Energy production

For the reporting period Greatmoor EFW exported to the National Grid 164,220.16 MW.

## Summary of plant emissions

The monitoring requirements are set out in Schedule 3 of the permit.

The plant is required to carry out both continuous monitoring as well as periodic testing quarterly in the first year from takeover and then biannual after testing on a quarterly basis. It can be seen on the data provided that the plant achieved full compliance against emission limit values in 2016.

### Pollutants Measured

Parameter	Continuously	Periodically
Particulates	✓	
Total Organic Carbon	✓	
Hydrogen Chloride	✓	
Carbon monoxide	✓	
Sulphur dioxide	✓	
Oxides of Nitrogen	✓	
Ammonia	✓	

Nitrous Oxide	✓	
Hydrogen fluoride		✓
Cadmium & Thallium		✓
Mercury		✓
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V		✓
Dioxins and furans		✓

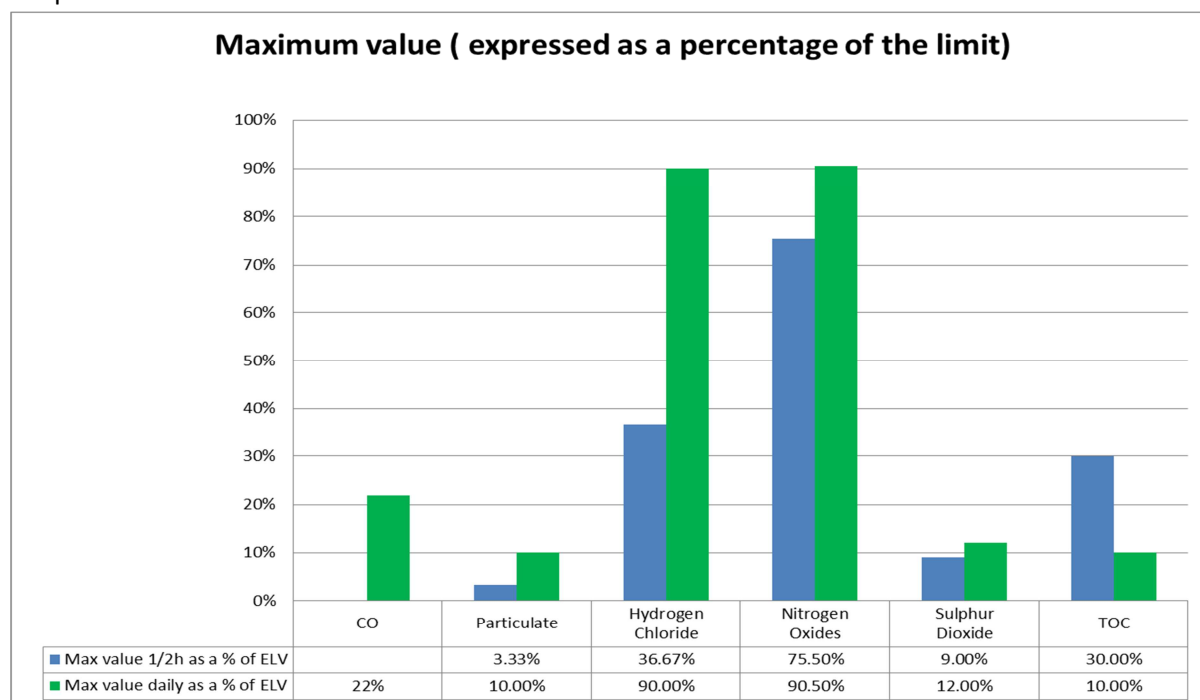
## Continuous monitoring

The reporting of continuous monitoring commenced in July after take over. The graph below shows the maximum value obtained through the months July to December as a percentage of the Emission Limit Value (ELV).

The highest percentages are the Hydrogen Chloride and Nitrogen Oxides values which are the parameters that are controlled by specific set points as explained in Improvement Condition 5.

Appendix 1 shows the maximum value for each month since take over, as a percentage of the Emission Limit Value (ELV) for all parameters monitored continuously.

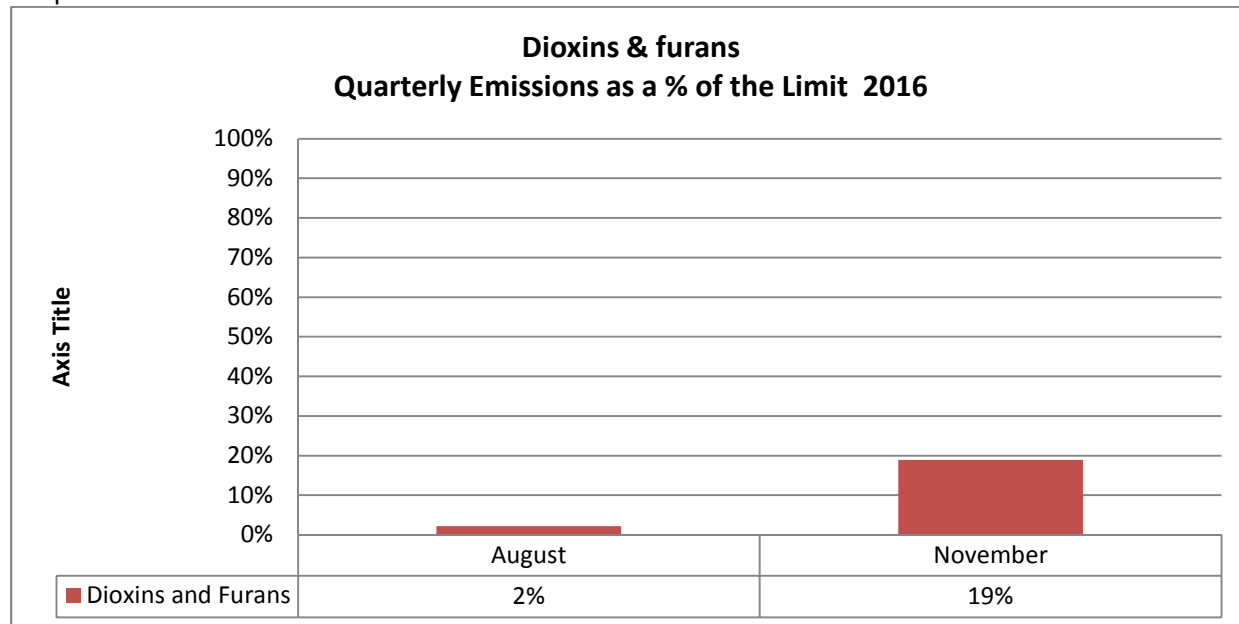
Graph 3



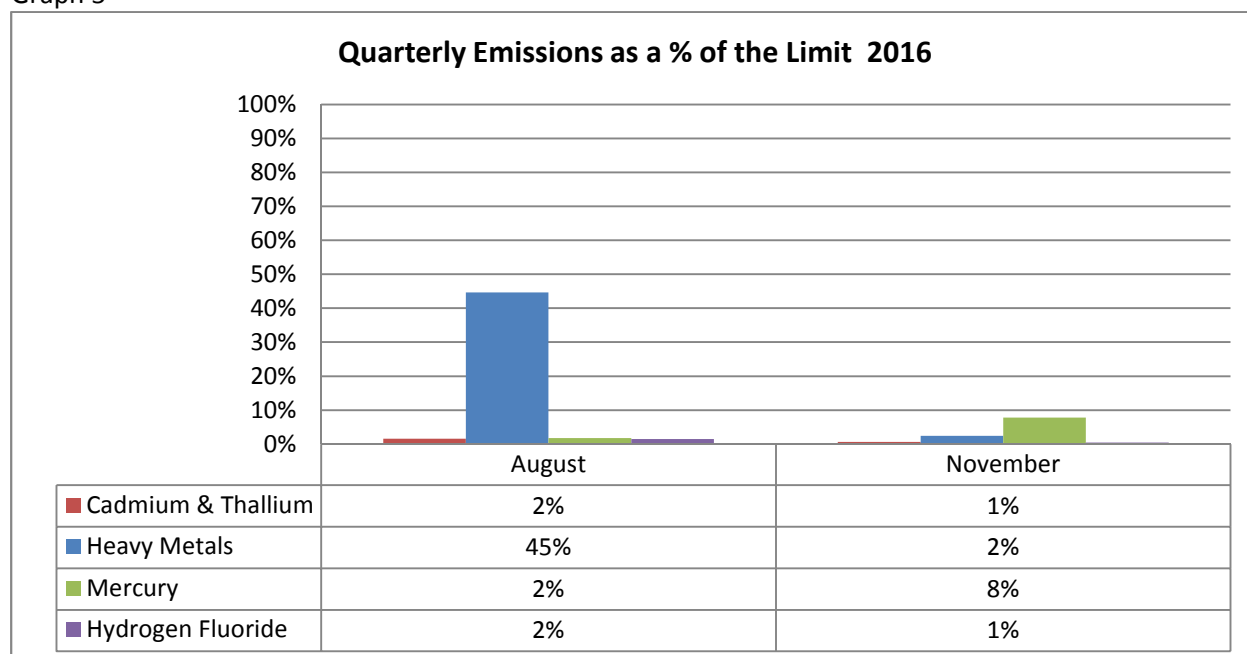
## Periodic monitoring

The first quarterly stack testing was carried out in August and the second quarter in November. As shown on graph 4 the highest levels of dioxins and furans are at 20% of the limit. Graph 5 shows the levels of Cadmium and Thallium, Heavy metals, Mercury and Hydrogen Fluoride as a percentage of the limit, all levels are within the permit limits.

Graph 4



Graph 5



## Summary of plant compliance

No notifications were required to be submitted in 2016.

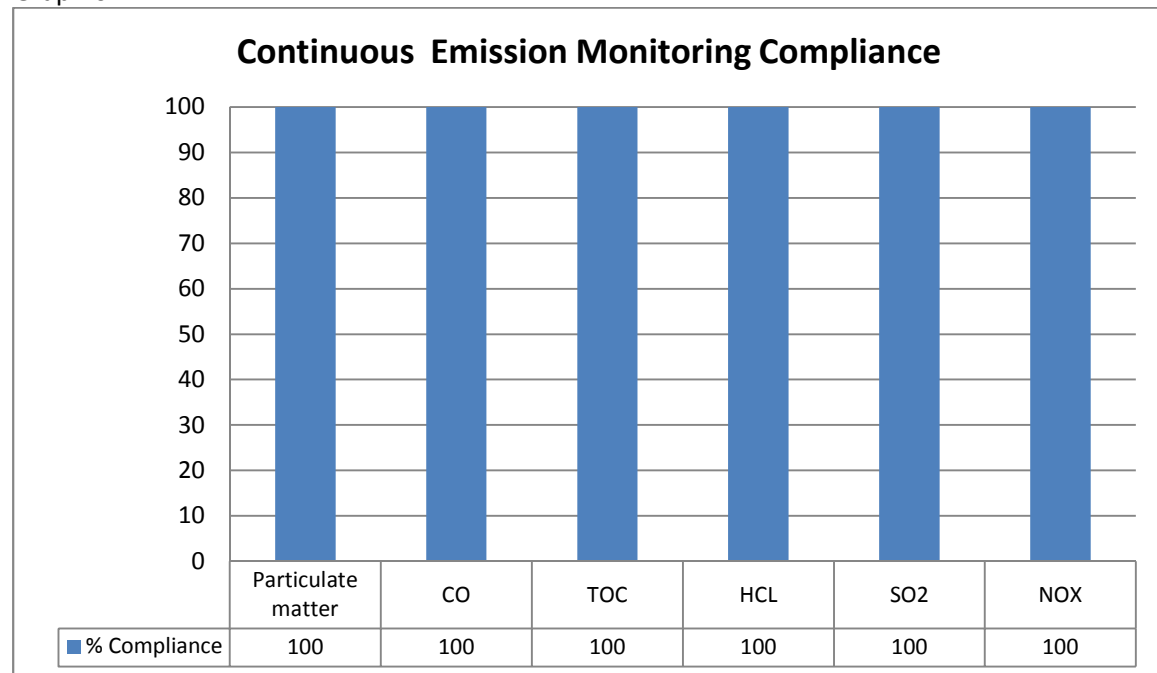
During 2016 we had two periods of abnormal operation which have been reported within the quarterly data.

The first abnormal operation period was on the 12th of December, it lasted one half hour. There was a failure of our two CDAS computers due to a Windows update restart. This caused us to lose twenty minutes worth of data from CDAS.

The second abnormal operation period was on the 26th of December, it lasted one half hour, due to a zero calibration issue. This caused us to lose thirty minutes worth of data from CDAS.

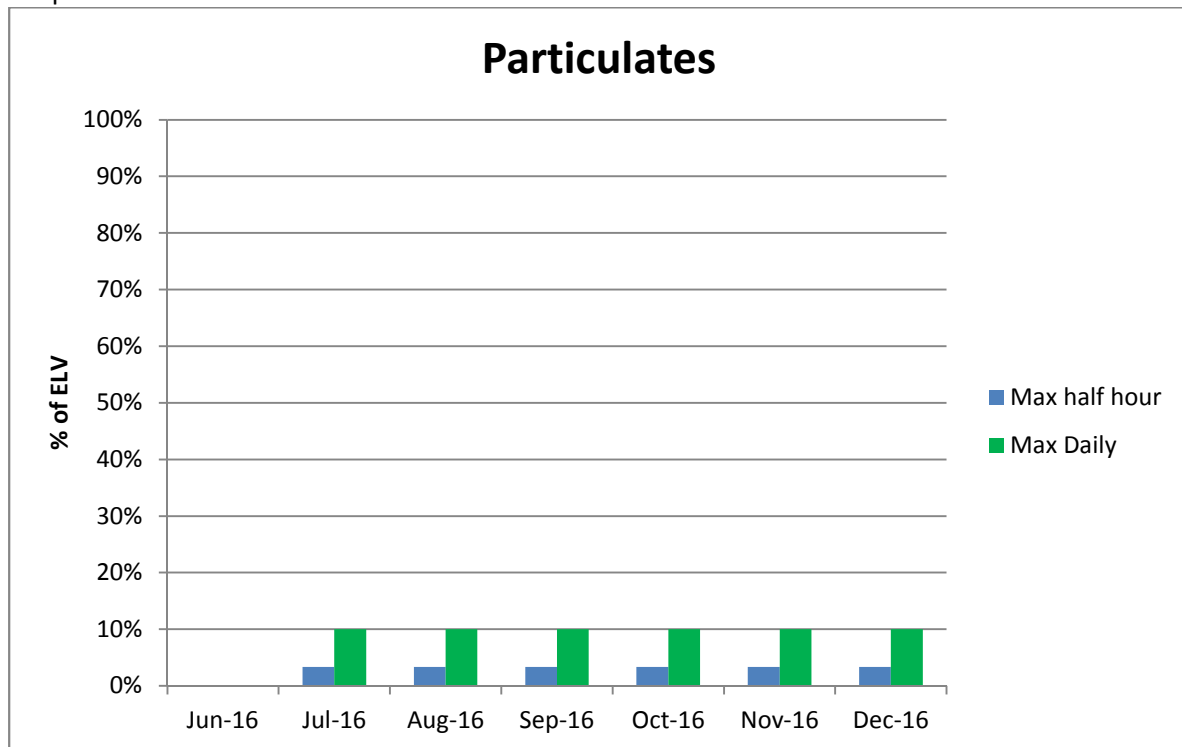
The IBA and APCR have been tested monthly in 2016; all the results are fully compliant. The IBA has also been tested twice a month for hazardous assessment; the IBA continues to be classified as non-hazardous.

Graph 6

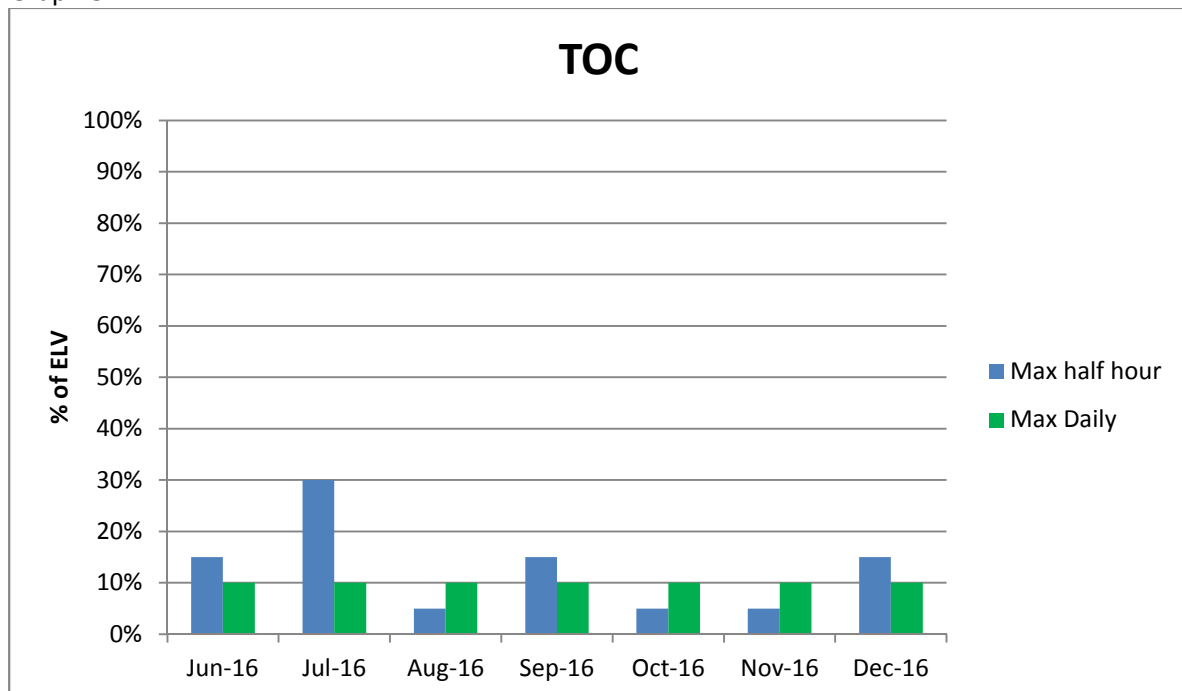


## Appendix 1

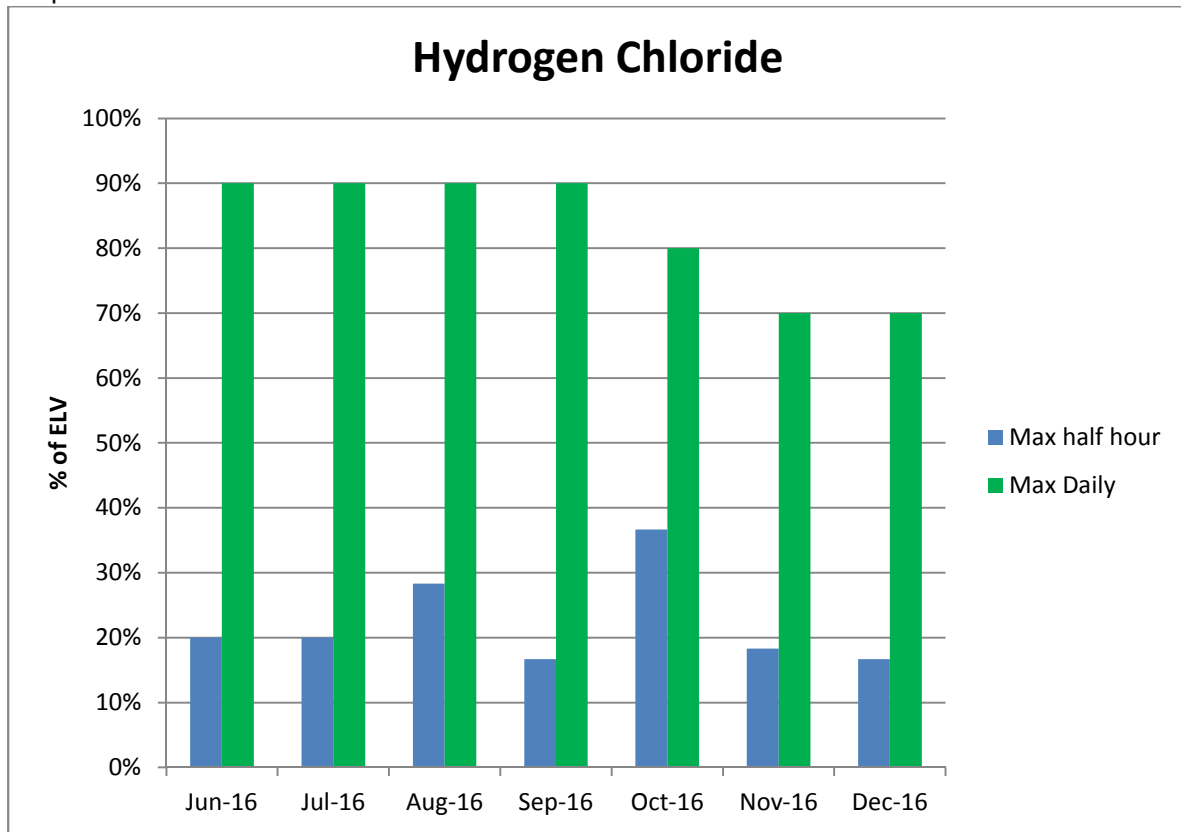
Graph 7



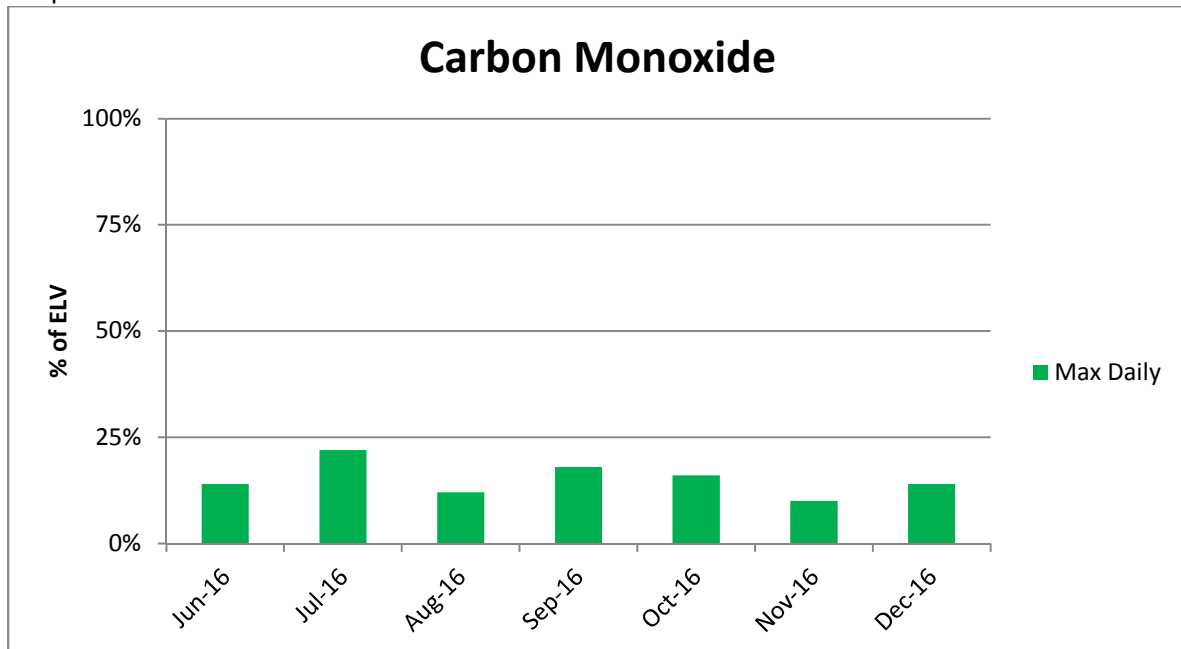
Graph 8



Graph 9



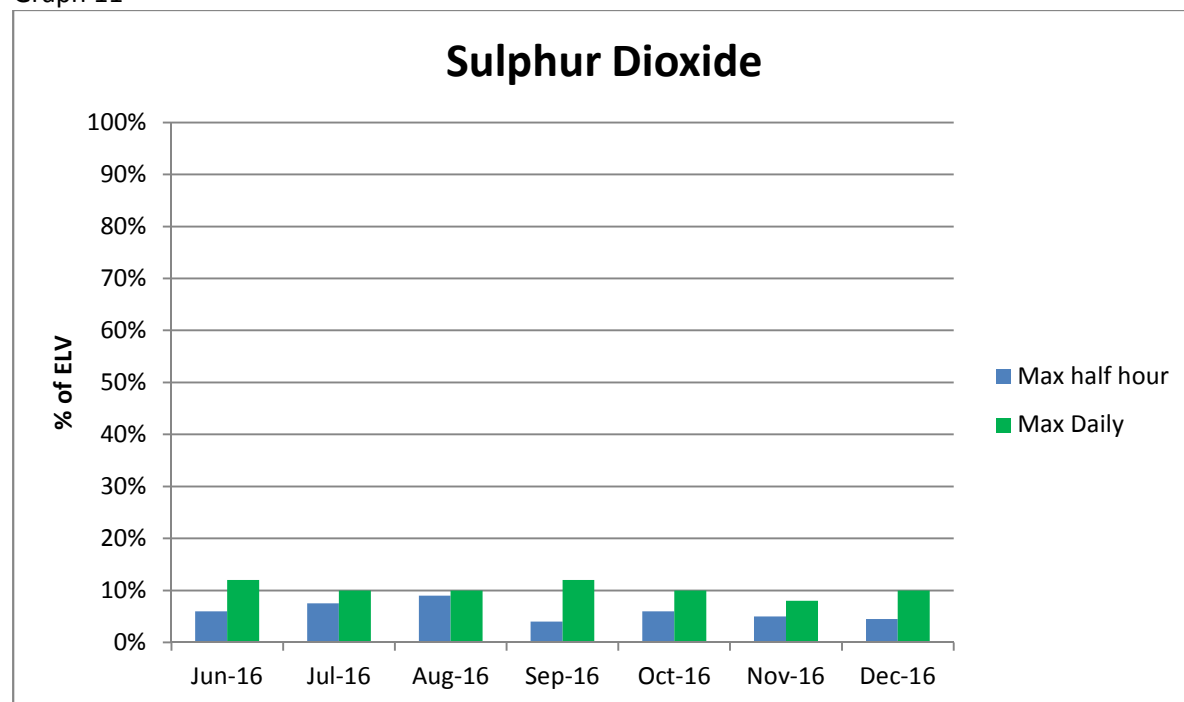
Graph 10



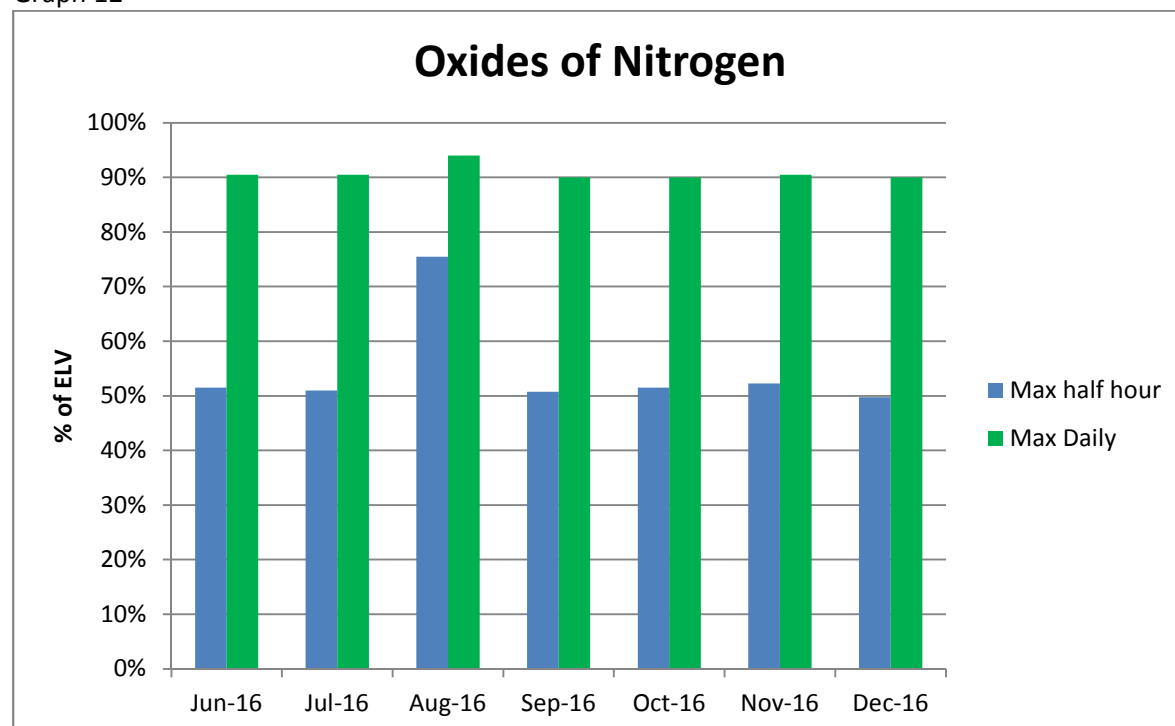
Carbon Monoxide reporting requirement of 95% compliance of all 10 minutes average in any 24 hour period has been compliant in 2016.



Graph 11



Graph 12



Permit Number: UP3734HT Operator: FCC Recycling (UK) Limited

Facility: Greatmoor EFW Form Number: R1

## Reporting of Waste Disposal and Recovery for the year 2016

Waste Description	Disposal Route	Tonnes	Recovery Tonnes
1) Hazardous Wastes			
APC Residues	Treatment	11,007.96	0
IBA which is classified as hazardous waste		0	0
Total hazardous waste	Treatment	11,007.96	0
2) Non-Hazardous Wastes			
IBA	Reprocessing	55,427.79	0
Other non-hazardous wastes	Recycling	0	0
Total non-hazardous waste		55,427.79	0
TOTAL WASTE		0	0

Operator's comments :  
Note:

Signed .....  
(Authorised to sign as representative of Operator)



Date.....24/01/2017.....

*Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.*

Permit Number: UP3734HT

Operator: FCC Recycling (UK) Limited

Facility: Greatmoor EFW

Form Number: Energy1

### Reporting of Energy Usage for the year 2016

Energy Source	Energy Usage	Unit	Contained Energy (MWh)
Electricity produced	182,480.02	MW	24.82
Electricity imported	1,888.90	MW	
Electricity Exported	166,089.81	MW	22.59
Natural Gas	0	tonnes	0
Gas Oil	635.922	tonnes	8,090,208
Electricity used on installation	18,465.01	MW	2.51
Waste heat utilised by the installation	0	KWhrs	0

Operator's comments :

Signed .....



.....

Date.....24/01/2017.....

(Authorised to sign as representative of Operator)

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.

Permit Number: UP3734HT

Operator: FCC Recycling (UK) Limited

Facility: Greatmoor EFW

Form Number: WU/RM1

## Reporting of Water and Other Raw Material Usage for the year 2016

Raw Material	Usage	Unit	Specific Usage	Unit
Mains water		Litres		
Total water usage	39,171	M3		
Ammonia (or Urea)	368,300	Litres		
Activated carbon (or coke)	63.598	Tonnes		
Lime/hydrated lime or sodium bicarbonate	6,240	Tonnes		

Operator's comments :

Signed .....



Date.....24/01/2017.....

(Authorised representative of Operator)

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.