ISLE OF MAN
Energy from Waste Facility

2009 ANNUAL PERFORMANCE REPORT

DOCUMENT TITLE:	Isle of Man – Energy from Waste Facility 2009 Annual Performance Report

ISSUE DATE:	January 2010

PREPARED BY:	**NAME**	**SIGNATURE**
Compliance Officer	Stuart Woodward	
Environment Support Manager – EfWs	Rita Greenwood	

APPROVED BY:	**NAME**	**SIGNATURE**
Plant Manager	Darren Thomas	

REPORT DISTRIBUTION:	**NAME**	**No. of Copies**
	SITA – Environment Department – Narborough	1
	SITA – Environment Support Manager	1
	SITA – Plant Manager	1
	EPU	1

CONTENTS

1. INTRODUCTION

Name of Company	SITA Waste (Isle of Man) Limited
Name of Plant	SITA Isle of Man - Energy from Waste Facility
Permit Number	WDL/06/2003/V4
Address	Energy from Waste Facility, Richmond Hill, Douglas, Isle of Man IM4 1JH
Phone	01624 695260
Contact Name/Position	Darren Thomas – Plant Manager
Further information, description of waste types burned and origin	Primary Incinerator: - Municipal solid waste from Island residents and businesses, - Sewage screenings, - Waste tyres. Secondary Incinerator: - Clinical waste from the Island's hospital, - Waste oils,

2. PLANT DESCRIPTION

This municipal waste incinerator operates 24/7 with the exception of two planned shutdowns per year for essential maintenance of the plant. The facility has two lines with a combined capacity to receive up to 65,000 tonnes of waste per year from the Isle of Man's residents and businesses.

The heat provided by the Primary incinerator is used to produce steam which is converted into electricity for use on-site and for export to the Manx Electricity grid, with heat from the Secondary incinerator used to pre-heat the boiler feed-water. The facility is designed to export up to 7MW of electricity to the Manx grid.

3. SUMMARY OF PLANT OPERATION

The Primary incineration line is used to process MSW, sewage screenings and waste tyres. These wastes are delivered to the site in covered vehicles that are weighed before proceeding to the tipping hall. The vehicles tip the incoming waste into a concrete lined bunker from where a grab transfers the waste to the feed hopper of the combustion plant. The grab is also used to mix the waste in the bunker to achieve a homogenous feedstock and to remove any unsuitable items identified by the grab operator.

The Primary incinerator operates a reciprocating grate design with a water-cooled grate to allow the combustion of high calorific value materials. The design is intended to provide good mixing of waste on the grate and hence to promote effective combustion. Waste is fed into the furnace, from the feed hopper, using a feed ram. The incinerator temperature is continuously monitored and an automatic system ensures that waste can only be fed into the furnace provided the temperature is above 850°C. There are two auxiliary burners which burn gas oil when necessary to raise the temperature to at least 850°C and maintain this temperature for at least 2 seconds in the presence of excess oxygen. The oxygen concentration and the temperature are carefully controlled to ensure effective combustion and to minimise the formation of pollutants, including dioxins. The combustion system incorporates a three-staged air supply to ensure effective incineration of the waste and to minimise the production of pollutants.

As the waste moves along the grate it is progressively dried & burned and the resultant ash (bottom ash) drops into a slag extractor trough supplied with cooling water before being discharged into the ash pit.

At the exit of the main combustion chamber there is a steam-generating boiler. Hot gases from the combustion of the waste are passed through a series of heat exchangers and the heat is used to produce steam in the boiler. The steam produced is fed to a steam turbine, which is used to generate electricity for use on site and for export to the Manx grid system.

The flue gases are passed through a number of stages prior to release to the atmosphere. Firstly ammonia solution is injected into the flue gases to convert oxides of nitrogen to nitrogen and water. After cooling in the boiler, the flue gases are treated in a spray dryer absorber in which atomised lime slurry is injected to neutralise the acidic components (sulphur dioxide, hydrogen chloride & hydrogen fluoride).

After the spray dryer, activated carbon or lignite coke is injected into the gas stream to adsorb pollutants such as volatile organic compounds (VOCs), dioxins/furans, PCBs & metals. The flue gases at this stage contain particulates from the combustion process (fly ash) together with particulates from the earlier gas cleaning processes; these mixed particulates being known as Air Pollution Control Residues (APCRs). Prior to discharge the flue gases are passed through bag filters to remove these suspended particulates and the APCRs are collected.

The bottom ash is collected in a water-filled trough from which the slag extractor moves the ash onto a conveyor. The ash passes through a magnetic separator, to remove ferrous metals, to an ash storage pit prior to removal from the site. Separated ferrous metals are collected in a dedicated skip and sent for recycling. Bottom ash is then sent for disposal. The APCRs are collected and handled in a fully enclosed system. They are stored in a silo and discharged directly into bulk tankers for off-site disposal

The cleaned flue gases are discharged to air via a 67m high chimney stack. The stack has separate flues for the primary and secondary incineration streams.

The discharging gases are continuously monitored for : particulates, carbon monoxide (CO), ammonia (NH_3), sulphur dioxide (SO_2), hydrogen chloride (HCl), oxygen (O_2), water (H_2O), oxides of nitrogen (NO and NO_2 expressed as NO_2) and volatile organic compounds (VOCs expressed as TOC). They are also continuously sampled to provide an average concentration of dioxins/furans and are periodically tested for: dioxins/furans, dioxin-like polychlorinated biphenyls (PCBs), hydrogen fluoride (HF) and a range of metals.

The visibility of the plume is controlled according to a Plume Management Plan agreed with the Department of Local Government and the Environment.

Plant size, including number of lines	65,000 tonnes of waste per year, 2 lines			
Annual waste throughputs	Primary – 53,619 tonnes Secondary – 523 tonnes			
Total plant operational hours in the year and reasons for any significant outages (e.g. annual shutdown, abatement plant failure, boiler failure etc)	Primary – 7,537 hours Secondary – 1,101 hours 2 annual shutdowns in 2009			
Residues produced	Bottom ash	APCR	Metals	Other (specify)
Amount of each residue, including metals (where appropriate) recycled/land filled	12,055 tonnes	1,817 tonnes	815 tonnes	
Electricity exported	28,410 MWh			

Annual waste throughputs breakdown

PRIMARY **Waste types**	**Tonnes**
Confidential	35.6
Construction	1232.7
Diary	15.4
Municipal	48242.5
Packaging	▪ 22.7
Tyres	217
Screenings & bio-pellets	685.8
Wood	2667.4
SECONDARY **Waste Types**	**Tonnes**
Clinical	178.1
Oil	345

4. SUMMARY OF PLANT MONITORING

Waste licence monitoring requirements

Table 6.1.2: Emission limits into air					
Parameters	Emission Points A1 and A2				
	Units	**Half Hour Average Limit**	**Daily Average Limit**	**Other Limit**	**Monitoring Requirements**
Particulate matter (Total dust)	mg/m^3	30	10	-	Continuous; plus One measurement every 3 months to check CEM calibration. Average value over sample period of at least 1 hour.
VOCs as Total Organic Carbon (TOC)	mg/m^3	20	10	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Hydrogen chloride	mg/m^3	60	10	-	Continuous; plus One measurement every 6 months to check CEM calibration. Average value over sample period of at least 1 hour.
Hydrogen fluoride	mg/m^3	-	-	2	One spot measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours.
Carbon monoxide	mg/m^3	100	50	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Sulphur dioxide	mg/m^3	200	50	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Oxides of nitrogen (NO and NO_2 expressed as NO_2)	mg/m^3	400	200	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Ammonia	mg/m^3	-	-	-	Continuous; plus One measurement every 6 months to check CEM calibration. Average value over sample period of at least 1 hour.
Cadmium & thallium and their compounds (total)	mg/m^3	-	-	0.05	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours.
Mercury and its compounds (total)	mg/m^3	-	-	0.05	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours.
Sb, As, Cr, Co, Cu, Pb, Mn, Ni and V and their compounds (total)	mg/m^3	-	-	0.5	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours.
Polyaromatic hydrocarbons (PAHs)	mg/m^3	-	-	-	One measurement every 6 months. Average value over sample period of at least 2 hours.
Dioxin-like PCBs (TEQ)	ng/m^3	-	-	-	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 6 and 8 hours.
Dioxins & furans (TEQ)	ng/m^3	-	-	0.1	Continuous sampling; plus One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 6 and 8 hours.

Table 6.3.2a : Emission limits into water		
Parameter	**Emission Point W1**	**Monitoring Requirements**
Suspended solids (mg/l)	60	The timing of spot sampling should be varied so as not to fall at the same time or on the same day every month. Test frequency = once per month
BOD (mg/l)	40	
pH minimum	6	
pH maximum	10	
Visible oil	Nil	

Table 6.3.2b : Emission limits into water		
Parameter	**Emission Point W2**	**Monitoring Requirements**
pH minimum	6	Continuous measurement.
pH maximum	10	
Conductivity	-	
Temperature maximum	30°C	
Flow duration (hrs.mins)	-	When overflow occurs
Suspended solids (mg/l)	-	Spot sample to be taken and analysed at least once in every 3 month period during which a discharge has taken place.
COD (mg/l)	-	
Sulphides (mg/l)	-	
Metals (mg/l)	-	
Visible oil	Nil	
Ammonia (N)	0.6 mg/l	Spot sample when the boiler water drain down has occurred.

CEMS data

The data collected from the CEMS has been represented in graphical form for 2009 (APPENDIX 1), an example of which is shown below

Data represented is:

½ Hourly ELV – shows the ½ hourly emission limit value

Monthly ½ Hourly mean – shows the average values for ½ hourly continuous monitoring over the month.

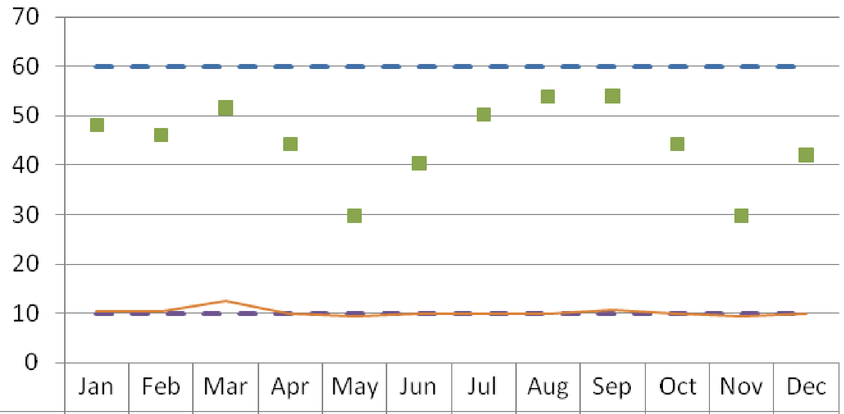
Monthly ½ Hourly maximum – shows the maximum value for ½ hourly continuous monitoring over the month.

Daily ELV – shows the daily emission limit value.

Monthly Daily mean – shows the average values for daily continuous monitoring over the month.

Monthly Daily maximum – shows the maximum value for daily continuous monitoring over the month.

PRIMARY INCINERATOR – 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 maximum	48.1	46.1	51.6	44.2	29.8	40.4	50.2	53.9	54	44.3	29.8	42
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	10.3	10.3	12.4	10	9.3	10	9.96	10	10.7	9.9	9.5	10

5. SUMMARY OF PLANT COMPLIANCE

Table showing percentage of the operating time the plant was in compliance with the permit conditions.

Pollutants measured	% of operational time plant was in compliance	
	Primary	Secondary
Particulates	100%	100%
Oxides of nitrogen	100%	100%
Sulphur dioxide	100%	100%
Carbon monoxide	99.96%	100%
Total Organic Carbon	100%	100%
Hydrogen chloride	100%	100%
Mercury	100%	100%
Cadmium & thallium	100%	100%
Sb, As, Pb, Cr, Co, Cu, Mn, Ni, and V, including their compounds	100%	100%
Dioxins/furans	100%	100%

Hydrogen fluoride	100%	100%

Table showing non-compliance notified to the Environment Protection Unit

	Parameter	Date	Reason	Actions Taken
1.	Daily HCL & SO2	25.01.09	Lime milk was being diluted by water passing through a faulty valve into the lime milk holding tank.	Faulty water valve was replaced.
2.	Daily HCL	01.02.09	The HCL atomiser tripped due to moisture getting into the motor plug.	Atomiser was replaced and repaired, and insulation was increased on the motor plug.
3.	Daily HCL	12.02.09	There was deterioration in the quality of the lime milk which resulted in un-reacted quick lime being used as a scrubbing agent instead of hydrated lime.	Dispensing speed of the quick lime screw conveyor was increased.
4.	Daily HCL	23.03.09	Problems with the lime control valve resulted in poor lime flow performance.	Lime control valve was replaced.
5.	½ hourly CO	13.04.09	During start up the boiler feed water pump pressure control loop was not re-enabled. This caused a plant protection system to trip which resulted in a loss of combustion air.	Start up procedure was amended to include a step to re-enable the control loop.
6.	TOC	17.04.09	The primary chamber temperature in the Secondary incinerator had been reduced to try and improve the efficiency of the Secondary process. However the reduction in temperature had an effect on the total organic carbon levels.	Primary chamber temperature was increased to 700^{o}C.
7.	Daily S02	17.04.09	Explosive cleaning of the furnace was carried out to improve safe working conditions of boiler ash removal during an upcoming shutdown. The removal of the boiler ash from the furnace walls & water tubes during the explosive cleaning reduced the efficiency of the gas cleaning system to remove SO2 air emissions.	The time lapse between explosions during the explosive cleaning was increased.
8.	Daily HCL	26.09.09 & 28.09.09	There was a problem with the preparation of lime milk due to overfilling of lime in one of the tanks which restricted the lime milk flow through the system. During the 26th there were also high vibration problems with the atomiser.	The lime slaking system was inspected and cleaned. The atomiser was also inspected and sent for repair.
9.	Daily S02	18.10.09	A build up of ash was carried over into	The absorber high

			the bag filters causing the filter bags to block, which in turn reduced the coating of lime on the bags. The absorber high level probe was also not working.	level probe was repaired and the lime slaking temperature was monitored more closely.
10.	Daily S02	24.10.09 & 26.10.09	The October shutdown has caused a build up of old waste in the pit which resulted in very high raw S02 values. These raw values were above those specified in the design of the absorber, which resulted in the absorber being unable to scrub the flue gas into specification. Further reasons for the exceedance include the high level of old waste in the pit made mixing with new waste extremely difficult, and over the weekend of 24/25 October, no new waste was brought to site which prevented the mixing of old waste with new. The impeller in the lime slurry tank was also out of action, and this may have had an effect on the make up of lime milk that neutralises S02 in the spray absorber vessel.	The slurry tank impeller was repaired and emphasis was increased on ensuring mixing of waste in the pit.
11.	½ hourly CO	22.11.09	Due to a ground fault on the SNCR blower motor the plant protection system tripped the plant. This caused a loss in control of combustion air and grate hydraulics.	The SNCR blower motor was replaced.

6. SUMMARY OF PLANT IMPROVEMENTS – OBJECTIVES & TARGETS

Last year's objectives **Targets set for end of 2009**	**Achieved?**	**How we did**
Ensure continuous improvement in our environmental performance. Retain EMAS registration & ISO14001	√	Continuous improvement is part of EMAS, ISO14001 and SITA policy. Retained EMAS registration and ISO14001
Ensure all activities are undertaken in a compliant manner.	TBA	Internal audit carried out by EPU, 16 non-conformities, actions and timescales agreed with EPU.
Reduce emission limit exceedances by five per cent.	√	Emission limit exceedances reduced by 23.5%
Reduce water consumption by a further five per cent	√	Water consumption reduced by 23%
Reduce fuel consumption by five per cent	√	Fuel consumption reduced by 71%
Reduce electricity consumption by five per cent	√	Electricity consumption reduced by 85%
Achieve target levels for chemical consumption and APCR production Activated carbon <0.5 kg/tonne of waste Lime <14 kg/tonne of waste APCR <40 kg/tonne of waste	√	Consumption of activated carbon 0.31 kg/tonne of waste
	√	Consumption of lime 11.4 kg/tonne of waste
	√	Production of APCR 34 kg/tonne of waste

7. FURTHER INFORMATION

FUGITIVE EMISSIONS

One fugitive emission was recorded during 2009. This occurred on 09.04.09 when the Recycled water tank overflowed into the Underground water tank which at the time was discharging to river. Although the incident was reported to the EPU .

COMPLAINTS

One odour complaint was received during 2009. On investigation it was established that the Energy from Waste Plant was not the cause of the odour.

Further information available at www.sita.co.im

APPRENDIX

Releases to air graphs

Hydrogen chloride

Sulphur dioxide

Carbon monoxide

Oxides of nitrogen

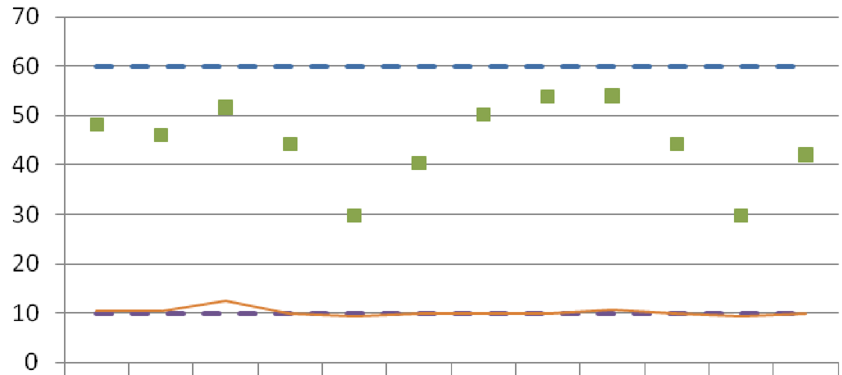
Total Organic Carbon (VOC)

Particulates

Ammonia

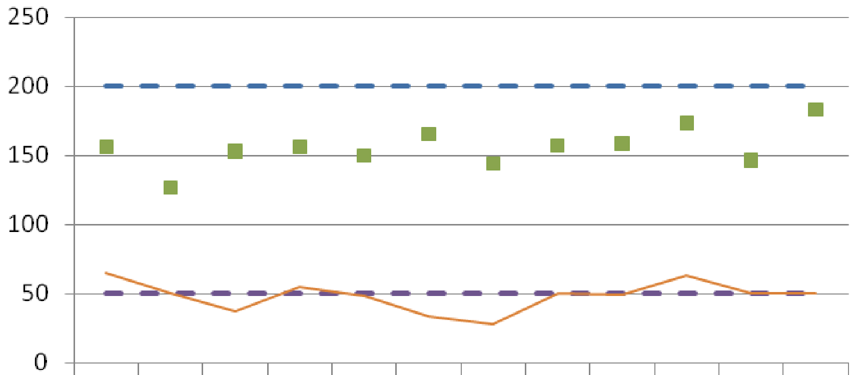
PRIMARY INCINERATOR

HYDROGEN CHLORIDE



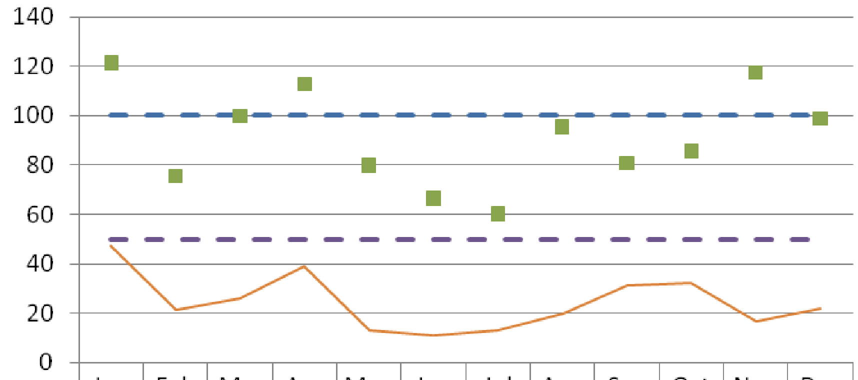
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	60	60	60	60	60	60	60	60	60	60	60	60
Monthly 1/2 hourly maximum	48.1	46.1	51.6	44.2	29.8	40.4	50.2	53.9	54	44.3	29.8	42
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	10.3	10.3	12.4	10	9.3	10	9.96	10	10.7	9.9	9.5	10

SULPHUR DIOXIDE



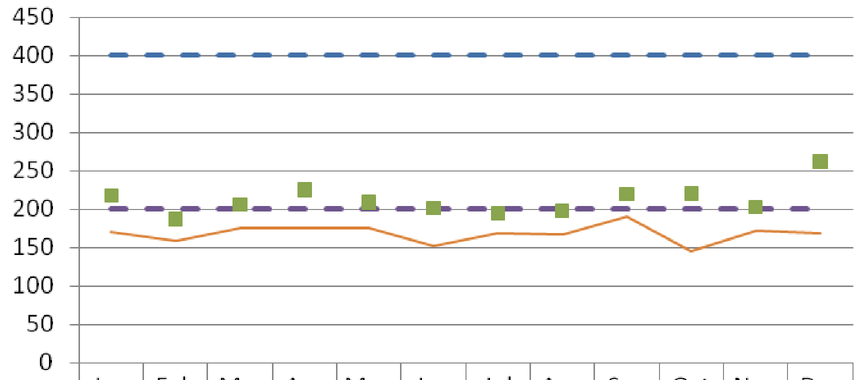
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly 1/2 hourly maximum	155.9	126.6	152.8	156.2	149.7	165.4	143.9	156.9	158.5	173.4	146.6	183
Daily ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily maximum	64.7	50	37.5	54.6	48.5	33.1	28.2	50	48.9	63.3	50	49.7

CARBON MONOXIDE



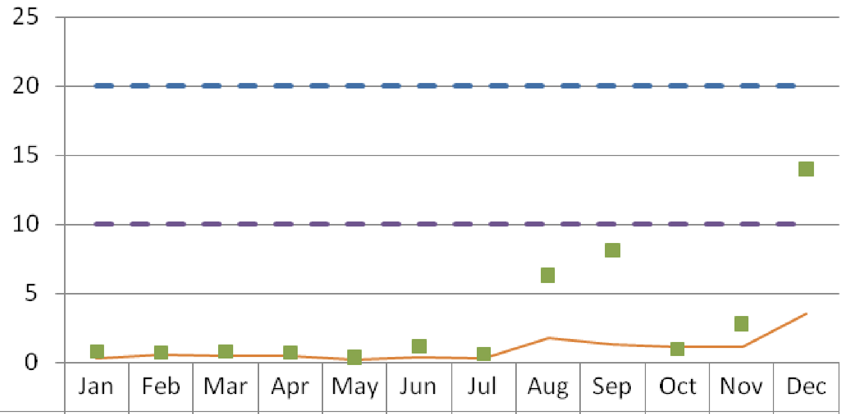
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	100	100	100	100	100	100	100	100	100	100	100	100
Monthly 1/2 hourly maximum	121.4	75.5	100	113	79.9	66.4	60.3	95.4	80.8	85.7	117.4	99
Daily ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily maximum	47.3	21.2	26.2	39.1	13.1	11	13.2	20	31.4	32.2	16.7	21.9

OXIDES OF NITROGEN



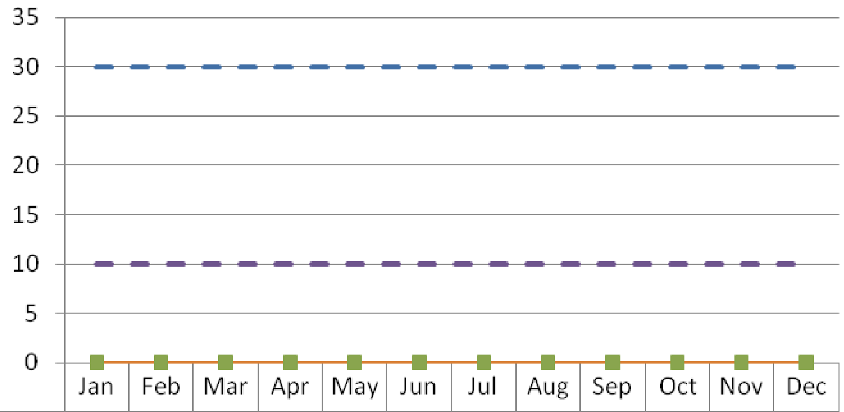
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	400	400	400	400	400	400	400	400	400	400	400	400
Monthly 1/2 hourly maximum	217.8	187.1	205.8	225	208.7	201.5	194.7	198	219.8	220.2	202.9	262
Daily ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly daily maximum	169.8	157.8	175.3	175.8	174.9	151.9	169.3	167.5	190.7	145.5	171.9	168

TOTAL ORGANIC CARBON (VOC)



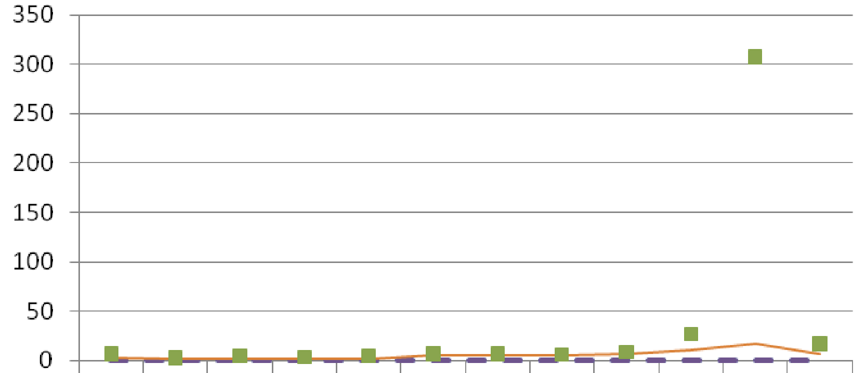
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	20	20	20	20	20	20	20	20	20	20	20	20
Monthly 1/2 hourly maximum	0.8	0.7	0.8	0.7	0.4	1.2	0.6	6.3	8.1	1	2.8	14
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	0.3	0.6	0.5	0.5	0.2	0.4	0.3	1.8	1.3	1.1	1.1	3.5

PARTICULATES



	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 maximum	0	0	0	0	0	0	0	0	0	0	0	0
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	0	0	0	0	0	0	0	0	0	0	0	0

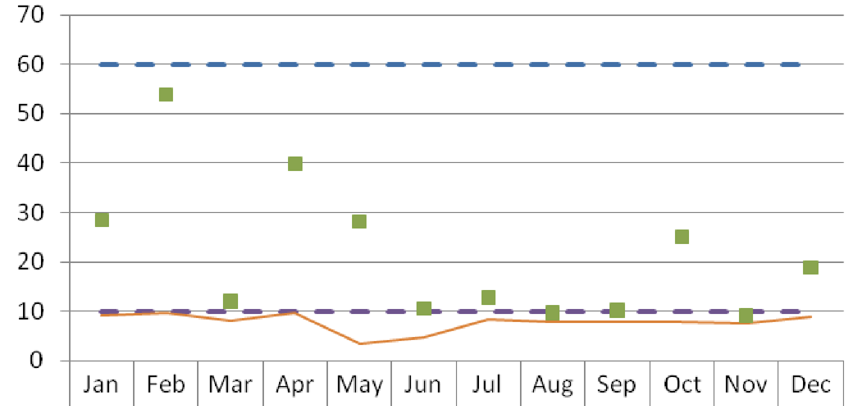
AMMONIA



	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 maximum	6.9	3	4.5	3.3	4.6	6.5	6.5	6.4	8.4	26.6	307.6	17
Daily ELV	0	0	0	0	0	0	0	0	0	0	0	0
Monthly daily maximum	2.6	1.4	1.5	1.5	1.6	5.3	5.4	5.5	7	10.1	17.4	6.7

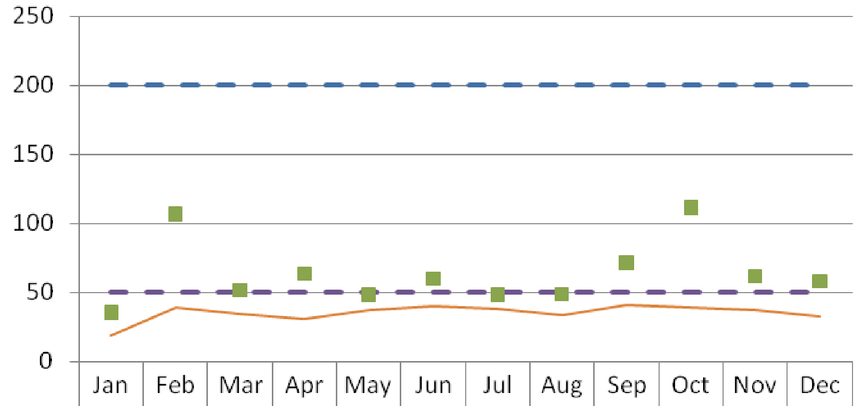
SECONDARY INCINERATOR

HYDROGEN CHLORIDE



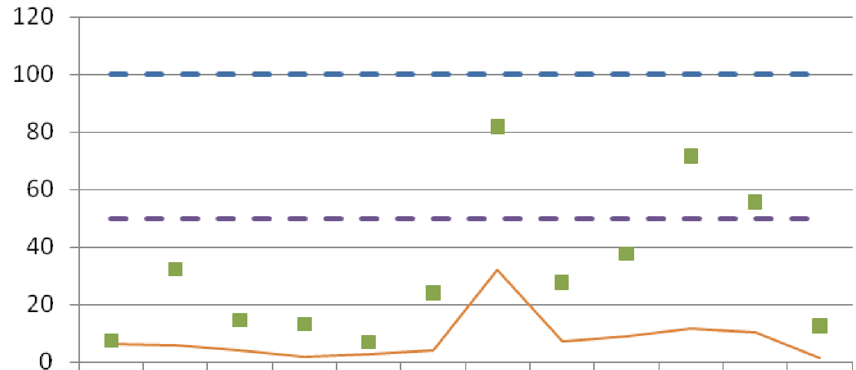
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	60	60	60	60	60	60	60	60	60	60	60	60
Monthly 1/2 hourly maximum	28.4	53.9	12	39.9	28.1	10.6	12.8	9.6	10.2	25	9.1	18.8
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	9.2	9.7	8	9.6	3.3	4.7	8.3	7.7	7.7	7.7	7.6	8.9

SULPHUR DIOXIDE



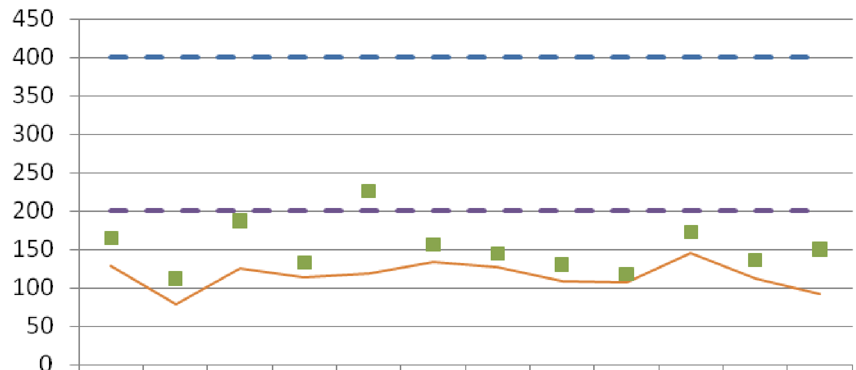
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly 1/2 hourly maximum	35.2	106.6	51.4	63.5	48.4	59.7	48.4	48.6	71.6	111.2	61.8	58
Daily ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily maximum	19.1	39.5	34.6	31	37	40	37.9	33.7	41	39	36.8	32.6

CARBON MONOXIDE



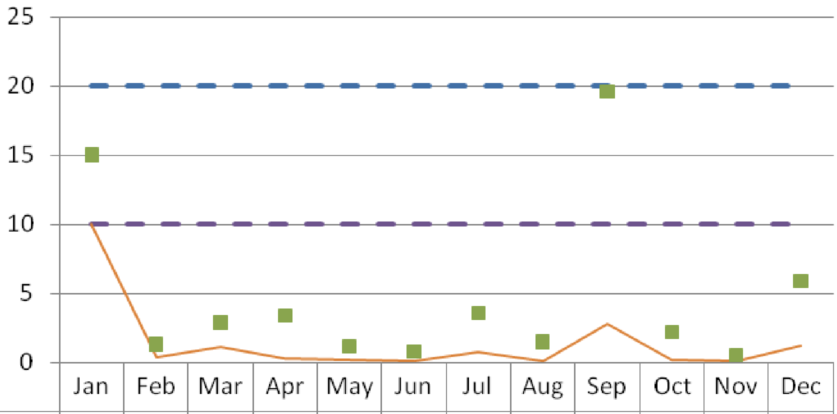
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	100	100	100	100	100	100	100	100	100	100	100	100
Monthly 1/2 hourly maximum	7.4	32.2	14.5	13.1	7	24.1	81.8	27.7	37.6	71.6	55.6	12.6
Daily ELV	50	50	50	50	50	50	50	50	50	50	50	50
Monthly daily maximum	6.1	6	4.1	1.8	2.6	4	32	7	8.8	11.7	10.4	1.6

OXIDES OF NITROGEN



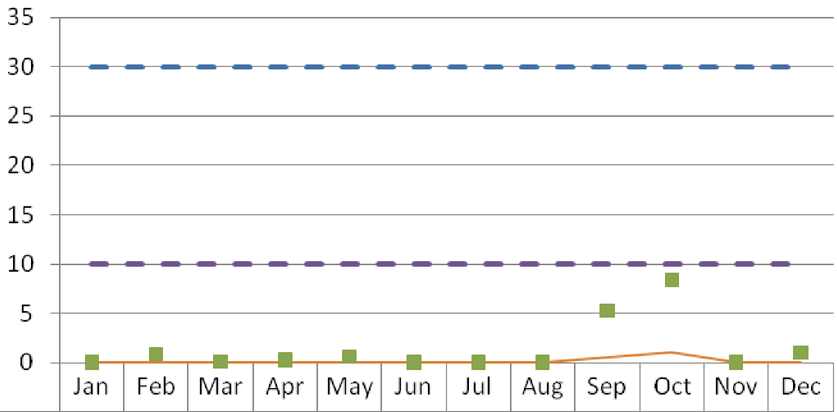
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	400	400	400	400	400	400	400	400	400	400	400	400
Monthly 1/2 hourly maximum	164.6	112	186.9	133.1	226.2	156.2	144.2	130.5	117.8	172.4	135.8	150
Daily ELV	200	200	200	200	200	200	200	200	200	200	200	200
Monthly daily maximum	128.2	79.2	125.7	112.9	118.3	133	126.9	108.7	107.4	145.5	111.7	92

TOTAL ORGANIC CARBON (VOC)



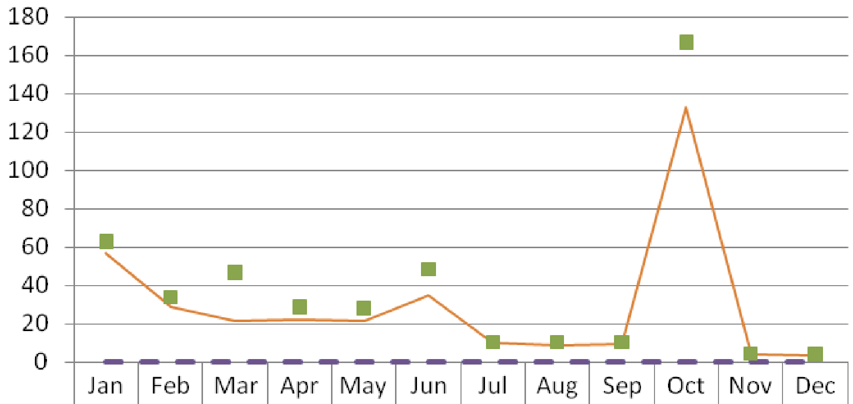
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1/2 hourly ELV	20	20	20	20	20	20	20	20	20	20	20	20
Monthly 1/2 hourly maximum	15	1.3	2.9	3.4	1.2	0.8	3.6	1.5	19.6	2.2	0.5	5.9
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	10	0.4	1.1	0.3	0.2	0.1	0.8	0.1	2.8	0.2	0.1	1.2

PARTICULATES



	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 maximum	0	0.9	0.1	0.3	0.6	0	0	0	5.3	8.4	0	1
Daily ELV	10	10	10	10	10	10	10	10	10	10	10	10
Monthly daily maximum	0	0	0	0	0	0	0	0	0.5	1	0	0

AMMONIA



	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 maximum	62.7	33.8	46.9	28.7	28	48.4	10.4	10.6	10.5	166.8	4.6	4
Daily ELV	0	0	0	0	0	0	0	0	0	0	0	0
Monthly daily maximum	56.7	28.5	21.4	21.8	21.6	34.9	10.1	9.1	9.2	132.8	3.8	3.5