



2016 Annual Performance Report for Enviropower Ltd

Permit Number XP3030XX

This report is required under the Environmental Permit XP3030XX issued to Enviropower Ltd. The requirement is for the operator to produce an annual report to the regulator on the functioning and monitoring of the plant and to make this available to the public. The following information is provided in this report:

1. Plant description
2. Summary of plant operation
3. Plant Operational Data & Environmental Performance Indicators
4. Summary of Emissions to Air
5. Summary of Emissions to Sewer
6. Summary of Fugitive Emissions
7. Summary of Waste Disposal & Recovery
8. Summary of Plant Compliance
9. Summary of Plant Improvements
10. Summary of Performance of EMS

Please note that incorporated into this report is the following data:

- Reporting of Performance Indicators for the year 2016 (Form XP3030XX/PI)
- Reporting of emissions to the sewer for the year 2016 (Form XP3030XX/S1)
- Reporting of water usage for the year 2016 (Form XP3030XX/WU)
- Reporting of energy use for the year 2016 (Form XP3030XX/E1)
- Reporting of waste disposal and recovery for the year 2016 (Form XP3030XX/R1)

Name of Company	Enviropower Ltd
Permit Number	XP3030XX v006
Name of Plant	Enviropower Ltd, Lancing
Address of Plant	Units 1-2, 37 Chartwell Road Lancing Business Park BN15 8TU
Phone Number	01903 768239
Further Information	Non-recyclable industrial, commercial, construction & demolition waste that has been processed through Rabbit Waste Management's transfer station is processed through the Enviropower plant to recover the residual energy as electricity, providing a long term sustainable solution to waste disposal and power generation in the area.

1. Plant Description

The main purpose of the activity at this facility is to recover energy in the form of electricity from the non-recyclable fraction of industrial, commercial, construction & demolition waste. The facility can generate circa 5MW of electrical power, exporting enough to the National Grid to supply approximately 8,000 local homes. The permit covers the site and process including waste reception, storage and off site transfer of residues, emissions to water, air and land, recording and monitoring conditions.

2. Summary of Plant Operation

The facility consists of two lines of combustion equipment capable of processing a combined total of approximately 8 tonnes of waste per hour, allowing for a permitted throughput of 60,350 tonnes per year. Throughput is dependent on two main factors; the actual operating hours per annum and the calorific value of the fuel, the average being in the order of 15MJ/Kg. A Heat Recovery Steam Generator captures the heat from the combustion to produce steam which drives two steam turbines and a generator. The waste gases are cleaned before being released via a 16 metre stack.

Fine particulate matter and air pollution control (APC) residues are removed from the flue gas stream by fabric filter and consigned to specialist treatment works.

3. Plant Operational Data & Environmental Performance Indicators

Table S4.1 Annual Production/Treatment		
Total Waste Incinerated	59,005	Tonnes
Electrical Energy Produced	31,865,700	kWh
Electrical energy Exported to National Grid	22,077,530	kWh
Electrical energy generated and used on installation	9,058,770	kWh

Table S4.2 Performance Parameters			
Parameter	Total	Perf. Indicator	Units
Mass of Bottom Ash produced	6,370	107.96	Kg/tonne of waste incinerated
Mass of APC residues produced	3,580	60.67	Kg/tonne of waste incinerated
Sodium bicarbonate consumption	1,824	30.91	Kg/tonne of waste incinerated
Activated Carbon consumption	43	0.74	Kg/tonne of waste incinerated
Urea consumption	200	3.39	Kg/tonne of waste incinerated
Water consumption	22,790	0.38	M ³ /tonne of waste incinerated
Electrical energy imported to site	729,400	12.36	kWh/tonne of waste incinerated

4. Summary of Emissions to Air

All emissions from the 16m high stack are controlled to meet the emission limits included in the Environmental Permit. The flue gases released into the atmosphere are continuously monitored for particulate matter, total organic carbon (TOC), hydrogen chloride (HCl), carbon monoxide (CO), sulphur dioxide (SO₂), ammonia (NH₃) and oxides of nitrogen (NO_x). Daily and half hourly averages of these are reported to the regulator for each calendar month on a six monthly basis.

The continuous emission monitoring (CEM) equipment was in service during 2016 for 100% of the plant operational time. This equipment is MCERTS certified and is stringently monitored with biannual servicing being undertaken by the manufacturer and approved contractors.

Periodic monitoring was carried out in March 2016 and October 2016.

The following Schedule 1 notices in relation to emissions to air were made to the Environment Agency in 2016:

- 30th January 2016 – HCl daily limit exceeded on line A . This was due to the bag filter being taken out of service for routine maintenance then returned to service before a pre-coating of bicarb had built up on all the bags. The pulsing system was manually stopped to allow a substantial coating of bicarb to build up on the bags to alleviate the problem.
- 13th October 2016 – Mercury exceedance on line B during extractive monitoring. All other determinands within permitted levels and this was thought to be a rogue sample. Repeat testing was conducted in December which showed mercury to be well within permitted levels on both lines.

These two instances notwithstanding, all monitoring of emissions to air, both via the CEMs and extractive monitoring, showed all other determinants to be within permitted levels.

QAL2 for gaseous pollutants was completed in March 2016 and all calibration factors were implemented at that time.

5. Summary of emissions to Sewer

There was no discharge of incinerator bottom ash quench water in 2016.

6. Summary of Fugitive Emissions

Permit condition 4.1.5 requires an annual review of fugitive emissions, and this annual review is included here. Enviropower has a Noise Management Plan, Dust Management Plan and Fugitive Emissions Procedure. An audit of the Noise Management Plan was conducted by the Environment Agency in June 2015. The Monitoring Officer's recommendations were included and an updated Noise Management Plan was issued in

August 2015. The Dust Management Plan, which includes our sister company Rabbit Waste Management's operations, was approved by the Environment Agency in 2012, and was subsequently updated in April 2015. The Dust Management Plan, Noise Management Plan and Fugitive Emissions procedure are all subject to annual internal audits and were therefore all audited in 2016.

No complaints in relation to Enviropower were received in 2016. We received one query from the Environment Agency on 22nd July in relation to reports of a 'burning smell' on the estate, however this was not found to be coming from Enviropower.

7. Summary of Waste Disposal & Recovery

Waste description	Disposal (tonnes)	Recovery (tonnes)
APC Residue	3,580	
Incinerator Bottom Ash		6,370

Enviropower conducts periodic audits of the permitted contractors which receive the APC residue and IBA produced. These audits are made available to the Environment Agency upon request.

Enviropower also operates a strictly controlled Contractor Control process to ensure current copies of site permits and waste carriers licenses are held. This is audited annually as part of our ISO 14001 certified EMS.

8. Summary of Plant Compliance

Strict environmental controls, a comprehensive EMS and proven operating experience ensures that the facility is able to track compliance with all conditions of its environmental permit. On the rare occasion that a breach or exceedance is detected our management system enables us to respond to this quickly and effectively. An incident investigation is conducted into any breach or potential breach. Our high levels of compliance are achieved by trained, experienced personnel operating a fully automated, closed loop process control system that continuously monitors and adjusts the relevant aspects of the process to ensure emission levels are kept within the permit's requirements.

9. Summary of Plant Improvements

The company's Fire and Emergency plan was updated in 2015 to include the requirements of the Environment Agency's Fire Prevention Plans guidance.

Readiness for CHP continues to be reviewed through ongoing discussions with the Lancing Business Park but no opportunities have arisen to date.

An adaptation to the plant has been made to enable the thermal treatment of sawdust and trommel fines. Appropriate changes have been made to RWM's Working Plan and Enviropower's Environmental Permit to ensure this change is adequately covered in both. Risk assessments and operational procedures are in place for this new process.

10. Summary of Performance of EMS

Enviropower is certified to ISO 14001:2004 and is in the process of transitioning to the 2015 standard.

Enviropower and RWM made good progress against all EMS objectives and targets throughout 2016 and are in the process of developing objectives & targets for 2017-18.

The EMS continues to function well across the business.

Signed for and on behalf of Enviropower Ltd.

A handwritten signature in black ink, appearing to read "Mick Shephard".

Mick Shephard

Power Plant Operations Director

Date: