

Annual performance report for Integra South West ERF-Permit No. BJ7093-Year 2007

This report is required under the Waste Incineration Directive's Article 12(2):- requirements on access to information and public participation. This requires the operator of an incineration or co-incineration plant to produce an annual report to the regulator on the functioning and monitoring of the plant and to make this available to the public. To satisfy the requirements of the directive, the following information is provided in this report:

1. Introduction.

Name of Company	Veolia Environmental Services UK
Name of Plant	Integra South West ERF
Permit Number	BJ7093
Address	Marchwood Industrial Park, Oceanic Way, Marchwood, Hampshire, SO40 4BD
Phone number	02380 875500
Further information	All municipal waste that is not recycled arising in Southampton City and South West Hampshire Districts are incinerated at this ERF, providing a long term, sustainable solution for waste disposal in the area as part of the integrated approach to waste management within Hampshire, which achieves high levels of recycling and minimal disposal of waste to landfill.

Further copies of this report are available on the web at:

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

2. Plant description.

The main purpose of the activity carried out at this facility is to incinerate, primarily, Municipal Solid Waste (MSW) as defined by EWC 20 03 01, recovering energy in the form of steam and electricity generating 14MW for export to the National Grid. The permit covers the site and the entire incineration process which includes all incineration lines, waste reception and storage, waste-fuel and air supply systems, boilers, facilities for the treatment of exhaust gases, on-site facilities for handling and storage of residues and operations, recording and monitoring conditions.

3. Summary of plant operation.

This facility consists of two incineration lines, each capable of processing approximately 11 tonnes per hour, allowing for an average refuse throughput of 165,000 tonnes per year, but this is dependent on two factors: actual operating hours and calorific value of the waste being burnt.

Waste Type	EWC
Mixed municipal Waste	20 03 01
Market Waste	20 03 02
Street Cleaning Residues	20 03 03
Bulky Waste	20 03 07
Other Wastes from mechanical treatment of wastes	19 12 12

The average calorific value of general municipal waste is 9200 kJ/kg.

Plant Operational details are included in the table below.

Operating Hours (2 lines)	15,276	Hours
Total Waste Incinerated	183,897	Tonnes
Electricity Produced	122,927	MWh
Metals Recovered	2,675	Tonnes
Incinerator Bottom Ash	40,358	Tonnes
APC residues	5,484	Tonnes

Ash residues (known as Incinerator Bottom Ash or IBA) are currently disposed of into licensed landfill where it is used to build temporary road ways and as a 'cover' for other wastes to prevent wind blown litter. It also has the potential for being recycled as aggregate to be used in building new roads, car parks, etc. An appraisal of options for its reuse is being carried out.

Ferrous metal removed from the IBA is sent to a steel manufacturer for recycling.

Fine particulate matter, known as Air Pollution Control (APC) residues, removed from the flue gases by the fabric filter is collected and sent to specialised treatment works where it is used to treat spent acid wastes prior to disposal at a licensed land fill site.

#### 4. Summary of plant emissions.

All emissions to air from the two 65m high chimneys are controlled to meet the emission limits included in the PPC Permit. The flue gases released into the atmosphere are continuously monitored for Particulate Matter, TOC, Hydrogen Chloride, Oxides of Nitrogen, Carbon Monoxide, Ammonia and Sulphur Dioxide.

Bi-annual check monitoring of this equipment is carried out by approved contractors using independent extractive sampling methods, at which time emissions of Metals, Dioxins and other substances as listed below are also monitored.

Emission	Monitored
Particulate Matter	Continuously
TOC	Continuously
Hydrogen Chloride	Continuously
Oxides of Nitrogen	Continuously
Carbon Monoxide	Continuously
Sulphur Dioxide	Continuously
Ammonia	Continuously
Hydrogen Fluoride	Bi-annual
Mercury	Quarterly
Arsenic	Quarterly
Cadmium	Quarterly
Chromium	Quarterly
Copper	Quarterly
Nickel	Quarterly
Manganese	Quarterly
Antimony	Quarterly
Lead	Quarterly
Thallium	Quarterly
Dioxins and Furans	Bi-annually
PAH's	Bi-annually
PCB's	Bi-annually

The Continuous Emissions Monitoring equipment (CEMs) was in service during 2007 for 100% of the plant operating time. This equipment is stringently monitored with routine calibration checks and is standardised to BS EN14181:2004.

Half hourly and daily average emission data for continuously monitored emissions is supplied to the Environment Agency on a monthly basis. This information is available to the public. This information can be found at:

[www.hws.co.uk](http://www.hws.co.uk)

An example of this monthly CEMs sheet can be found at the end of this report, and the example is for HCL for the month of November 2007.

Table showing the Annual total for emissions of periodically monitored pollutants

Pollutant	Unit	Annual Total
Hydrogen Fluoride	Kg	21.72
Mercury	Kg	4.97
Arsenic	Kg	3.69
Cadmium	Kg	2.91
Chromium	Kg	3.02
Copper	Kg	17.16
Nickel	Kg	4.47
Manganese	Kg	20.17
Antimony	Kg	6.07
Lead	Kg	26.12
Thallium	Kg	1.39
Dioxins and Furans	Kg	0.00003017
PAH's	Kg	3.95
PCB's	Kg	0.000002269

#### 5. Summary of plant compliance.

Strict environmental controls and proven operating experience ensures that the facility is compliant with all conditions of its Pollution Prevention Control (PPC) Permit at all times. This is achieved through constant monitoring of the incineration process during all of the stages, with detailed procedures in place to enable trained staff to carry out their work in an environmentally compliant manner.

During 2007 Integra South West ERF operated within the Permitted Emission Limit Values (ELV) for 100% of operational time, thus no enforcement actions were required by the Environment Agency.

Table of plant compliances.

Breach of Permit Conditions	None
Abnormal Operations	1
Enforcement Actions	None
General Complaints	2

There was one abnormal operation reported from the facility during 2007. It was a CEM's failure. A false O2 signal resulted in an incorrect temporary NOx reading. Due to this higher reading an increased Urea injection occurred to counter act it. At no time was there a failure of the abatement system.

Any complaints received at the facility are thoroughly investigated with a full report being kept as to the outcome of the investigation.

Integra South west received two complaints during 2007, and they were found not to be attributable to the facility.

One related to small black sooty deposits land on a car and house. Subsequent investigation confirmed that they looked like hydrocarbons from a diesel engine and not from the facility. The other was that a resident was awoken at 03:00am by a loud roaring noise which was assumed to be from the ERF. This was also investigated and at the time there were no plant problems and it was agreed that the noise must have come from elsewhere.

#### 6. Summary of plant improvements.

Plant improvements made this year include installation of new dust probes along with an updated emission monitoring software package to achieve compliance with BS EN 14181:2004. This was carried out during the 3<sup>rd</sup> and 4<sup>th</sup> quarter of the year and the new equipment is now fully operational.

#### 7. Summary of information made available:

The operators Veolia Environmental Services UK along with HWS work closely with a local liaison group, which meets regularly at Marchwood at the energy recovery facility. Also there are routine meetings with New Forest District Council, Southampton City Council and Hampshire County Council.

As part of their regulatory responsibility the Environment Agency inspector visits the facility on a regular basis.

Useful web addresses:

[www.veolia.co.uk](http://www.veolia.co.uk)  
[www.hws.co.uk](http://www.hws.co.uk)  
[www.hants.gov.uk](http://www.hants.gov.uk)  
[www.environmental-agency.gov.uk](http://www.environmental-agency.gov.uk)

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