Annual performance report for: Integra South East Energy Recovery Facility

Permit Number: EPR/ BJ7107IJ

Year: 2018

This document represents the Annual Performance Report for Integra South East Energy Recovery Facility (Portsmouth ERF) and has been submitted in compliance with Chapter IV Article 55(2) of the Industrial Emissions Directive (IED):

''For waste incineration plants or waste co-incineration plants with a normal capacity of 2 tonnes or more per hour, the report referred to in Article 72 shall include information on the function and monitoring of the plant and give account of the running of the incineration or co-incineration process and the level of emissions into air and water in comparison with the emission limit values. That information shall be made available to the public.'

1. Introduction

Name and address of plant	Veolia ES Hampshire Ltd Integra South East Energy Recovery Facility Quartremaine Road Portsmouth Hampshire PO3 5QH
Description of waste input	Non-hazardous municipal waste and similar commercial wastes
Operator contact details if members of the public have any questions	020 7812 5000

2. Plant description

Portsmouth ERF was the third of its kind to be built in Hampshire and is leading example of best environmental practice for waste treatment. Waste produced by Portsmouth City and South East Hampshire Districts is processed at this ERF, providing a long term, sustainable solution for waste recovery. It recovers heat energy from the waste to produce steam, which is used to generate electricity supplied to the National Grid. Strict environmental controls and proven operating experience ensure the Portsmouth ERF is a centre of excellence and a benchmark for the industry.

3. Summary of Plant Operation

Municipal waste received	177,099 tonnes
Commercial and industrial waste received	30,369 tonnes
Total waste received	207,468 tonnes
Total plant operational hours	17356 hours combined
Total hours of “abnormal operation” (see permit for definition)	0 hours
Total quantity of incinerator bottom ash (IBA) produced	37,667 tonnes
Disposal or recovery route for IBA	R5: recycling of inorganic materials.
Did any batches of IBA test as hazardous? If yes, state quantity	None
Total quantity of air pollution control (APC) residues produced	5119 tonnes
Disposal or recovery route for APC residues	D9: physio-chemical treatment resulting in final compounds which are then discarded
Total electricity generated for export to the National Grid	104,163 MWh
Electrical energy used on installation	16,774 MWh

4. Summary of periodic monitoring results for emissions to air

The table below shows the results of periodically monitored substances.

Substance	**Emission limit value**	**Results**			
		Line 1		**Line 2**	
		24 -25/01/2018	10 -12/07/2018	26 -30/01/2018	10 -12/07/2018
Mercury and its compounds	0.05 mg/m^3	0.0010 mg/m^3	0.0019 mg/m^3	0.0016 mg/m^3	0.0013 mg/m^3
Cadmium & thallium and their compounds (total)	0.05 mg/m^3	0.0011 mg/m^3	<0.00098 mg/m^3	<0.0010mg/m^3	0.00092 mg/m^3
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5 mg/m^3	0.066 mg/m^3	0.044 mg/m^3	0.055 mg/m^3	0.020 mg/m^3
Dioxins and furans (I-TEQ)	0.1 ng/m^3	0.0015 ng/m^3	0.0012 - 0.0013 ng/m^3	0.0020-0.0021 ng/m^3	0.0058 ng/m^3
Hydrogen Fluoride	2 mg/m^3	<0.056 mg/m^3	0.089 mg/m^3	<0.045 mg/m^3	<0.039 mg/m^3

4.2 Summary of monitoring results for emissions to water

There are no emissions to water from the process [other than clean surface water].

5. Summary of Permit Compliance

5.1 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 % of 95% of 10-min averages	100 % of 95% of 10-min averages
Total organic carbon	100 %	100 %
Hydrogen chloride	100 %	100 %
Hydrogen fluoride	100 %	100 %

5.2 Summary of any notifications or non-compliances under the permit

Date	Summary of notification or non-compliance	Reason	Measures taken to prevent reoccurrence
	None		

5.3 Summary of any complaints received and actions to taken to resolve them.

Date of complaint	Summary of complaint	Reason for complaint including whether substantiated by the operator or the EA	If substantiated, measures to prevent reoccurrence
	None		

6. Summary of plant improvements

Summary of any permit improvement conditions that have been completed within the year and the resulting environmental benefits.
IC11 completed: The operator shall submit the written protocol referenced in condition 3.2.4 for the monitoring of soil and groundwater for approval by the Environment Agency. The protocol shall demonstrate how the operator will meet the requirements of Article 14 (1)(b), 14 (1)(e) and 16(2) of the IED. The procedures shall be implemented in accordance with the written approval from the Environment Agency. The Integra South East Energy Recovery Facility, pre commissioning and throughout the lifetime of the operations of the plant, has established a robust set of soil and groundwater baseline data for the facility. This data is used to monitor the effectiveness and the continued integrity of the pollution prevention infrastructure and provides an early warning sign of any release of polluting substances. The continued collection of data, every 2 years for groundwater and 5 years for soil, will assist in the surrender process and monitor the movement of pollutants in the ground and groundwater beneath the site of the installation. The data will also provide continued evidence that Portsmouth ERF is not impacting upon the quality of the groundwater soil.
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.
A variation to amend the carbon monoxide emission limit value from 30 minute averages to 10 minute averages and modernise and consolidate the permit was determined February 2018. There is no resulting environmental impact, 10 minute average assessment periods are a more suitable averaging period for waste incineration activities. No changes have been made to the plant processes.

Summary of any other improvements made to the plant or planned to be made and a summary of the resulting environmental benefits.
Every practicable opportunity to use the heat rejected at the steam condensers for beneficial local use is investigated. To date no cost effective or practicable options have become available. The site will continue to identify all possible opportunities, and investigate the practicalities of its installation. All viable developments will be implemented at the earliest opportunity.