VEOLIA
ENVIRONMENTAL SERVICES

Mr Neil Iles
Environment Agency
Sentinel House
Wellington Crescent
Fradley Park
Lichfield
Staffs WS13 8RR

18th January 2013

Dear Mr Iles

Tyseley Energy Recovery Facility
Environmental Permit WP3239SJ

In accordance with the Environmental Permit WP3239SJ, Veolia ES Birmingham Ltd. encloses the following reports:

- Report on the annual performance of the permitted installation to comply with condition 4.1.4
- Review of fugitive emissions to comply with condition 4.1.5
- Summary report of the progress towards improvement targets from the management system to comply with condition 4.1.6

I hope you find this in order. Please can you confirm receipt of these documents.

Yours sincerely,

Mr. Steve Haywood
Facility Manager
For and on behalf of Veolia ES Birmingham Ltd

Veolia ES Birmingham Limited
James Road, Tyseley, Birmingham B11 2BA
tel: 0121 680 2000 • fax: 0121 680 2051 • www.veolia.co.uk

Annual performance report for VESB Tyseley ERF
Permit No. WP3239SJ Year 2012

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 Birmingham Ltd
Name of Plant	Tyseley ERF
Permit Number	WP3239SJ
Address	James Road Tyseley Birmingham B11 2BA
Phone number	0121 680 2000
Further information	All municipal waste arising in Birmingham that is not recycled is 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 Birmingham, which achieves minimal disposal of waste to landfill.

Further copies of this report are available through:
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 27 MW 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 23.5 tonnes per hour, which takes approximately 350,000 tonnes of Birmingham's waste each year but this, is dependent on two factors: actual operating hours and calorific value of the waste being burnt.

The third incineration line processes clinical waste and other designated hazardous wastes (CWI) at a nominal rate of 600kg/hour.

Waste Type	***EWC***			
Mixed municipal Waste	20 03 01			
Separately collected fractions including packaging, food wastes, market wastes, street cleaning residues and bulky wastes.	02 01 03;	02 01 07;	02 02 03;	02 03 04;
	02 05 01;	02 06 01;	02 07 04;	03 01 01;
	03 01 05;	04 02 09;	04 02 15;	04 02 21;
	04 02 22;	15 01 01;	15 01 02;	15 01 03;
	15 01 04;	15 01 05;	15 01 06;	15 01 09;
	15 02 03;	16 02 14;	16 03 04;	16 03 06;
	16 05 05;	18 01 09;	18 02 03;	18 02 06;
	18 02 08;	20 01 01;	20 01 02;	20 01 08;
	20 01 10;	20 01 11;	20 01 28;	20 01 30;
	20 01 32;	20 01 38;	20 01 39;	20 02 01;
	20 03 01;	20 03 02;	20 03 04;	20 03 07
Low grade clinical wastes categories	18 01 04			
Separately collected fractions including veterinary wastes, special packaging, absorbents, organic and inorganic wastes, cytotoxic and cytostatic medicines, wood wastes and special municipal wastes.	02 01 02;	02 01 06;	02 02 02;	03 01 04;
	04 02 14;	04 02 16;	15 01 10;	15 02 02;
	16 03 03;	16 03 05;	18 01 06;	18 01 08;
	18 02 01;	18 02 02;	18 02 05;	18 02 07;
	20 01 26;	20 01 27;	20 01 29;	20 01 31;
	20 01 37;	20 01 99 (drug abuse litter only)		
All categories of healthcare and clinical wastes	18 01 01;	18 01 02;	18 01 03;	
Wastes from organic chemical processes	07 01 03;	07 01 04;	07 01 09;	07 01 10;
	07 02 03;	07 02 04;	07 02 09;	07 02 10;
	07 02 13;	07 03 03;	07 03 04;	07 03 09;
	07 03 10;	07 04 03;	07 04 04;	07 04 09;
	07 04 10;	07 04 13;	07 05 03;	07 05 04;
	07 05 09;	07 05 10;	07 05 13;	07 05 14;
	07 06 03;	07 06 04;	07 06 09;	07 06 10;
	07 07 03;	07 07 04;	07 07 09;	07 07 10;
	09 01 10;	09 01 11;	09 01 12;	16 05 04;
	20 01 35;			

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

Plant Operational details are included in the table below.

Operating Hours	8760	Hours
Total Waste Incinerated	367363	Tonnes
Electricity Produced	216946	MWh
Metals Recovered	3640	Tonnes
Incinerator Bottom Ash	78103	Tonnes
APC residues	8772	Tonnes

Ash residues (known as Incinerator Bottom Ash or IBA) are currently sent to Castle Bromwich for reprocessing. This material is reprocessed by extracting further ferrous and non-ferrous metals and by crushing, trommelling and screening to produce a graded, quality material that is useable as substitute aggregate in such applications as road building.

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 the Minosus Hazardous Waste underground storage facility in Cheshire.

4. Summary of plant emissions.

All emissions to air from the two 80m high chimneys 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, TOC, Hydrogen Chloride, Oxides of Nitrogen, Carbon Monoxide, Ammonia and Sulphur Dioxide.

Bi-annual and quarterly 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 2012 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: http://www.veoliaenvironmentalservices.co.uk/Birmingham/Facilities/Energy-recovery/Emissions-to-Air-data/

Table showing the Annual total for emissions of periodically monitored pollutants

Pollutant	*Unit*	*Annual Total*
Hydrogen Fluoride	Kg	1548
Mercury	Kg	13,11
Arsenic	Kg	2,36
Cadmium	Kg	3,16
Chromium	Kg	6,13
Copper	Kg	7,83
Nickel	Kg	17,81
Manganese	Kg	8,39
Antimony	Kg	3,92
Lead	Kg	13,04
Thallium	Kg	1,69
Dioxins and Furans	Kg	0.0000352
PAH's	Kg	0,99
PCB's	Kg	0.001201

5. Summary of plant compliance.

Strict environmental controls and proven operating experience ensures that the facility is compliant with all conditions of its Environmental 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 2012 VESB Tyseley 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	0
Abnormal Operations	0
Enforcement Actions	0
General Complaints	0

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

6. Summary of plant improvements.

During 2012 outage major grate repairs to the undercarriage was carried out.
A sludge press was also installed in interceptor 1 as an experiment that has proven to be successful.
A new carbon panel was manufactured and installed into the lime slurry pump house.

7. Summary of information made available:

Average daily emissions for each month are available to the public at the following website:

http://www.veoliaenvironmentalservices.co.uk/Birmingham/Facilities/Energy-recovery/Emissions-to-Air-data/

As part of their regulatory responsibility the Environment Agency inspector visits the facility on a regular basis. There are further copies of this report available from the Environment Agency.

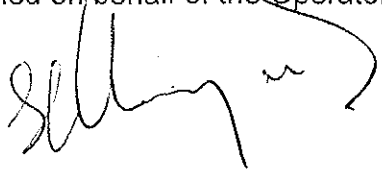
Local Environment Agency Office:

Upper Trent Area Office
Sentinel House
Wellington Crescent
Fradley Park
WS13 8RR

A local liaison group called the Ackers Trust gather every two months:

Ackers Trust
Golden Hillock Road
Small Heath
Birmingham
B11 2PY
Tel: 0121 772 5111

Compiled on behalf of the Operator by:



Steve Haywood
Tyseley ERF Facility Manager.
Veolia ES Birmingham Ltd.

Fugitive Emissions report for VESB Tyseley ERF
Permit No. WP3239SJ Year 2012

For the purposes of this report, fugitive emission are taken as: "an emission to air or water from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.4 and 2.2.5 of this Permit."

The following possible fugitive emissions are considered as having potentially significant environmental impacts:

1. Odour

Incoming municipal waste is delivered in covered vehicles or containers. There is no large scale storage of fuels or stockpiles of raw materials, other than municipal waste. Odour may arise from waste tipped and stored but the roller shutter doors are closed outside delivery times and the tipping hall is under negative pressure where combustion air is drawn from above the waste storage bunker so that the odours and airborne dust from the area are drawn into the incinerator line. Odorous substances are thus destroyed by incineration and any dust retained in the bottom ash or in the APC residue.

2. Dust

General

All the site roads and surroundings are litter-picked as required and the roads swept weekly by a vacuum sweeper lorry. All work areas are hand-swept in proportion to the potential environmental impact of any emissions. As part of the management system, all staff will attempt to rectify any significant shortfall in housekeeping standards they may encounter within the site boundary.

Dust - Calcium Hydroxide

Lime is discharged from sealed bulk powder tankers into a sealed storage silo before use in the slaking process. Any small spillages during unloading are contained and cleaned up immediately.

Dust - APC Residues

APC residue is collected from the process by sealed conveyors within the Flue Gas treatment building and taken to a storage silo that is fitted with a bag filter unit, with sequential cleaning. This unit is operated and maintained in accordance with the manufacturer's instructions. The APC residue is collected following the Method Statement from our contractor. The APC residue is discharged to sealed bulk powder tankers. Any small spillages during unloading are contained and cleaned up immediately.

Dust - Bottom Ash and Ferrous scrap

These materials are handled in a wet condition to avoid dust after discharge from the boiler water-filled quench bath and stored within the Residue Hall. They are loaded by mechanical grab into sheeted tipper Lorries for transport and disposal. Any small spillages during unloading are swept up and residues washed into the plant drains.

Dust - Tipping Hall

Dust may arise from incoming wastes being tipped or stored. The Tipping Hall is under negative pressure, since the combustion air for the incineration process is drawn form the headspace above the refuse bunker. Hence most fugitive dusts will be drawn into the bunker. The roller shutter doors are closed outside delivery times and during shut-down periods and the floor is washed down regularly.

3. Noise

Fugitive noise emissions produced by deliveries of waste and normal plant operations are limited by the design of the buildings, doors are kept closed except when required for operational purposes.

General

Staff are aware of the environmental impacts of their work and exercise an appropriate standard of house-keeping, proportionate to the impacts of any potential emissions. Staff check and report daily on fugitive noise, odour and dust emissions. They are instructed to be watchful for deficiencies in house-

keeping and to report any shortfall in skill or resources, which would hinder the prevention of pollution. Mitigation may typically include additional manual sweeping or cleaning, damping down of fugitive dusts or supply of additional de-odorising equipment.

Objectives Register 2012

Location/Department (Tyseley Energy Recovery Local Objectives

	Description:	Target Completion Date:	Achieved Completion Date:	Managers Signature on Completion
1	• QHSE Auditors & ERF Safety reps to monitor works in process on the annual outage	11/05/2012	11/05/2012	Andy Bullock
2	• Sludge Press Installation – Required to remove the ash from the interceptor pit – this will reduced the amount of visits from Industrial Site Services to empty the interceptor pit of ash.	14/04/2012	10/04/2012	Dave Field
3	• Under-grate Hopper Linkage – This will involve the replacement of the damaged / distorted grate bar carriage system in grates 2 & 3 L/R; including the spherical bearings, roller boxes, moving the fixed arms and grate bar carrier boxes – This will reduced the amount of grate bar failures in 2012.	11/05/2012	11/05/2012	Andy Bullock Dave Field
4	• New Maintenance Administration Building Required Modular building built to localize maintenance and operations functions in one place for site management; also office space for clinical operations, environment technician, secure destruction services, meeting space and drawing office.	20/06/2012	28/08/2012	Andy Bullock Dave Field

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	16/01/2012
Objective Number:	ONE

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
• QHSE Auditors & ERF Safety reps to monitor works in process on the annual outage	Dave Field	11/05/2012	11/05/2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Plan Outage schedule .	Steve Haywood Andy Bullock Dave Field	16/01/2012	16/01/2012
(2) Liaise schedule work plan with Kevin Capper	Dave Field	13/02/2012	10/02/2012
(3) QHSE to confirm names & heads for process control .	Kevin Capper	12/03/2012	16/03/2012
(4) Complete outage task .	Kevin Capper	11/05/2012	11/05/2012

Location/Dept Manager Signature:.....Andy Bullock .....Date:...11/05/2012.....

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	03/02/2012
Objective Number:	TWO

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
• Sludge Press Installation – Required to remove the ash from the interceptor pit – this will reduced the amount of visits from Industrial Site Services to empty the interceptor pit of ash.	Dave Field	16/04/2012	10/04/2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Liaise with supplier for correct specification Of sludge press required and cost.	Dave Field	10/02/2012	09/02/2012
(2) Raise purchase order for sludge press with Supplier (Future Industrial Services)	Simon Parsons	17/02/2012	21/02/2012
(3) Arrange delivery of new press with (Future Industrial Services.	Simon Parsons	23/03/2012	23/03/2012
(4) Schedule Installation date.	Dave Field	10/04/2012	10/04/2012

Location/Dept Manager Signature:.....Andy Bullock..... ...Date:..... 16/04/2012.....

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	08/02/2012
Objective Number:	THREE

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
Under-grate Hopper Linkage – This will involve the replacement of the damaged / distorted grate bar carriage system in grates 2 & 3 L/R; including the spherical bearings, roller boxes, moving the fixed arms and grate bar carrier boxes – This will reduced the amount of grate bar failures in 2012	Andy Bullock Dave Field	11/05/2012	11/05/2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Arrange materials supplier.	Simon Parsons	13/02/2012	16/02/2012
(2) Ensure Installation is entered into outage work schedule.	Dave Field	03/02/2012	03/02/2012
(3) By Off Job completion.	Dave Field	11/05/2012	11/05/2012
(4) Outage task completed	Andy Bullock	11/05/2012	11/05/2012

Location/Dept Manager Signature:.....Andy Bullock .....Date: 11/05/2012.....

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	15/01/2012
Objective Number:	FOUR

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
• New Maintenance Administration Building Required Modular building built to localize maintenance and operations functions in one place for site management; also office space for clinical operations, environment technician, secure destruction services, meeting space and drawing office.	Andy Bullock Dave Field	June 2012	August 2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Liaise with contractor on requirements & Build Schedule. (Elliot Building Contractors)	Andy Bullock Dave Field	January 2012	January 2012
(2) Monitor work progression against schedule.	Dave Field	March 2012	March 2012
(3) Review on move in date.	Andy Bullock	August 2012	August 2012

Location/Dept Manager Signature:...Andy Bullock..... Date: August 2012.....

5	• No1 Grizzly Conveyor – Due to repair issues A new grizzly conveyor Required for 2012 to be fitted in the major outage.	11/05/2012	11/05/2012	Andy Bullock Simon Parsons
6	• Carbon system – New carbon panel requires manufacturing and installing. The new panel needs installing into the lime slurry pump house; this will keep the slurry and carbon away from the new panel.	11/05/2012	11/05/2012	Dave field Simon Parsons
7	•			
8				
9				
10				
11				
12				
13				
14				

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	15/01/2012
Objective Number:	FIVE

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
• No1 Grizzly Conveyor – Due to repair issues A new grizzly conveyor Required for 2012 to be fitted in the major outage.	Andy Bullock Dave Field Simon Parsons	11/05/2015	11/05/2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Liaise with supplier on requirements of new grizzly conveyor and costs. (General Kinematics)	Dave Field	08/02/2012	10/02/2012
(2) Raise purchase order for contractors supply	Simon Parsons	14/02/2012	13/02/2012
(3) Arrange delivery date with supplier.	Simon Parsons	22/03/2012	22/03/2012
(4) Arrange Installation & buy Off	Simon Parsons	11/05/2012	11/05/2012

Location/Dept Manager Signature:.....Andy Bullock .....Date.....11/05/2012

Objectives & Targets Programme

Location:	Tyseley Energy Recovery Facility
Date:	08/02/2012
Objective Number:	SIX

Overall Objective: (Description)	Responsibility:	Target Completion Date:	Actual Completion Date:
• Carbon system – New carbon panel requires manufacturing and installing. The new panel needs installing into the lime slurry pump house; this will keep the slurry and carbon away from the new panel.	Dave Field Simon Parsons	11/05/2012	11/05/2012
Individual Targets (where applicable): (Description)	**Responsibility:**	**Target Completion Date:**	**Actual Completion Date:**
(1) Liaise with supplier on requirements and costs.	Simon Parsons	13/02/2012	10/02/2012
(2) Raise Purchase order for contractor supply.	Simon Parsons	14/02/2012	14/02/2012
(3) Arrange Delivery and buy off .	Simon Parsons	15/04/2012	17/04/2012
(4) Arrange installation . and verify ok condition .	Dave Field	11/05/2012	11/05/2012

Location/Dept Manager Signature:.....Andy Bullock.....Date:...11/05/2012.....