

Plant name: Edmonton Refuse Incinerator

Authorisation No: AG5269 Variations: AL2900, AV6922, AX6486

Address: Advent Way
Edmonton
London
N18 3AG

Operator: London Waste Ltd. London Waste Ltd. is a joint venture company between the North London Waste Authority and the private sector firm SITA. The North London Waste Authority consists of the London Boroughs of Barnet, Enfield, Haringey, Waltham Forest, Camden, Hackney, and Islington.

Owned by: NLWA/SITA

Waste burnt: A wide variety of material including domestic, commercial, clinical and industrial waste.

Capacity: 540 000 tonnes per year

Process: The plant consists of five incinerator/boiler units, each capable of burning 15 tonnes per hour of refuse, including limited amounts of clinical waste. Refuse vehicles tip waste into bunkers each capable of holding 4000 tonnes. Material is transferred by one of 3 overhead grab cranes into feed chutes where it is pushed into the incinerator by a hydraulic ram. Roller grates move the waste through the incinerator which should burn at 925 - 1040°C. Exhaust gases from the incinerator units pass through electrostatic precipitators (to remove some of the dust), lime (to neutralise acid gases) and activated carbon (to adsorb organic materials such as dioxin). A fabric filter removes more particulates before the gases are vented through the 100m high chimney.

Bottom ash is quenched with water to cool it. Ferrous metal is extracted from it magnetically. Most of the bottom ash now goes to Ballast Phoenix who use it for making construction aggregates. Until August or November 1999 (information from the operators and the Environment Agency is inconsistent) fly ash from the electrostatic precipitators was mixed with this grate ash. Fly ash is very highly contaminated and is classified as hazardous waste. It should normally be sent to a licensed special waste landfill site. Greenpeace has written several letters to London Waste requesting information on the levels of

hazardous materials in the mixed ash and the locations in which it has been used as a construction aggregate. We have not received a reply.

Dust from the dry lime gas treatment process and fabric filters is landfilled as hazardous waste.

Contaminated water from ash quenching is passed through an effluent treatment plant before being discharged to Chingford sewer. Boiler "blowdown" liquor is discharged directly to sewer.

EA office responsible:

NE Thames
Broadmeads Pumping Station
Hertford Road
Ware
SG12 9LH

Public Register at:

Environment Agency regional office
Kings Meadow House
Kings Meadow Road
Reading
Berkshire, RG1 8DQ *and*
London Borough of Enfield
Civic Centre
Silver St.
Enfield
London
EN1 3XA

Most recent self-reported emissions to air:**For 2000:**

Cadmium & thallium	8.92kg
Carbon monoxide	191 t
Dioxin	0.08 g
Hydrogen chloride	36.7 t
Total metals	653 kg
Oxides of Nitrogen (as NO ₂)	1080 t
Particulate matter	25.6 t
Sulphur dioxide	20.6 t

Self reported releases to land for 2000:

Bottom ash and sludge from effluent treatment plant to landfill:	69 417 t
Bottom ash and sludge sent for use as construction aggregate:	70 280 t
Flue gas treatment residue (including precipitator ash):	12 687 t
Material rejected as non-combustible:	209 043 t

Self reported breaches in the last 3 years:

Date	Unauthorised release	Reason given
01.03.01	CO	Jammed grates on boiler 2
26.02.01	CO	Fault in air system of FGT plant
26.02.01	HCl	Fault in air system of FGT plant
19.02.01	?	no details on register
18.02.01	?	no details on register
08.02.01	?	no details on register
29.02.01	?	no details on register
18.01.01	CO	Sudden reduction in load, no 1 unit
21/22.11.00	CO	Defective riddling screw
09.10.00	?	no details on register
25.09.00	Fly ash (FGT residue)	Corroded steel plate no. 2 conveyor. 0.5 - 0.75 tonnes fine powder released
14.08.00	Fly ash (FGT residue)	Corroded steel plate no. 4 conveyor. 1-2 tonnes of fine powder released
9/10.08.00	CO	Feeder ram failure
28.07.00	CO	None given. Described as "an unavoidable breach"
20.06.00	CO	Grate drive failure causing loss of fuel to fire bed and drop in burn temp.
21.05.00	CO	Large material in feedstock blocked quench bath
21.11.99	HCl	Feedstock contaminated with an unknown quantity of chlorinated products
03.11.99	HCl	Feedstock contaminated with an unknown quantity of chlorinated products
03.11.99	HCl	Feedstock contaminated with an unknown quantity of chlorinated products
04.10.99	?	no details on register
27.07.99	HCl	incineration of a large quantity of vinyl wallpaper
21.07.99	HCl	Unknown quantity of chlorinated product present in feedstock
21.07.99	HCl	Unknown quantity of chlorinated product present in feedstock
04.04.99	CO	Quench bath flap unexpectedly came adrift
30.03.99	HCl	System unable to cope with large quantity of PVC (1.1 tonnes)
20.03.99	CO	Blocked feed chute
17.02.99	SOx	Possibility of high sulphur content in waste stream
17.02.99	CO	Control failure of the FD Damper Vane
21.12.98	?	no details on register
21.09.98	HCl	Unknown source of chlorinated products present in waste
21.09.98	SOx	High HCl levels mopped up lime dosing
16.04.98	HCl	Contaminated feedstock from 14.4.98
14.04.98	HCl	Unknown source of chlorinated products present in waste
29.11.97	HCl	Incineration of PVC credit cards

Environment Agency pollution registers are often kept in a state of extreme disorder and this can sometimes result in researchers under-estimating the actual number of breaches that have occurred. The breaches listed above are not necessarily all those known to the Environment Agency. In March 2001, a parliamentary answer by Environment Minister Michael Meacher gave some Environment Agency data on pollution breaches and where these figures are greater than those discovered by our field researchers, we have taken the higher figures as the true ones.

Comments

On the 13th April 1999 the Environment Agency wrote with regard to the persistent hydrogen chloride breaches and asked why the plant's authorisation should not be amended to exclude PVC (which London Waste had identified as the cause of many HCl breaches). The reply was not on the public register when Greenpeace viewed it.

In December 2000 London Waste Ltd. commissioned REC Ltd. to monitor some of the pollutants emitted from its stack. They found that emissions of oxides of nitrogen from the chimney were above the authorised limit for 25 of the 26 hours monitored.

EA notifications/warnings

On 23rd July London Waste was found guilty of 11 out of 12 charges of operating in breach of its authorisation. It was fined £38,500 with £14,705 costs, for burning clinical waste of types not permitted by its authorisation and failing to comply with an Enforcement Notice.

London Waste has never been prosecuted for exceeding authorisation limits to air.