

R1 ENERGY EFFICIENCY FACTOR and BREF BAT **CERTIFICATE for 2015**

This is to certify that the existing Waste to Energy (WtE) Plant **ZABALGARBI BIZKAIA**, permitted by the Basque Authorities on 14th September 1993, equals the status of a recovery operations by the proof of the R1 energy efficiency factor reaching at least 0,60.

The
Waste to Energy (WtE) Plant
ZABALGARBI BIZKAIA
Camino de Artigas 10, 48002 Bilbao

reaches for the operation time of 2015 for the combined Combustion Train (CT) with Heat Recovery Boiler (HRB), based on regular operation, according to Annex II of the Directive 2008/98/EC¹ in combination with the EU R1 Guidelines² and Commission Directive (EU) 2015/1127³ taking the Climate Correction Factor (CCF) into account⁴:

R1 = 0,80

The incineration facility WtE Plant ZABALGARBI BIZKAIA, dedicated to the processing of municipal solid waste, is therefore to be classified as R1 recovery operations, because its energy efficiency is above 0,60 according to WtE plants in operation before 1st January 2009.

Furthermore the operational requirements in accordance to the EU R1-Guidelines and the Waste Incineration BREF document⁵ mentioned in BAT 62 a and b as well as BAT 63 of Chapter 5 are met as follows:

BAT 62 a generation of electricity: 0,428 MWh el/(tonne of MSW + exhaust gas)
(reference value related to the actual NCV $\geq 0,296$ MWh el/(tonne of MSW + exhaust gas))

BAT 62b overall total energy export level 307196 >> 22865 MWh el/a

BAT 63 installation electrical demand: 0,099 MWh el/(tonne of MSW + exhaust gas)
(reference average of electrical demand related to the actual NCV $\leq 0,111$ MWh el/(tonne of MSW + exhaust gas))

Bamberg, 11-March 2016

Dr.-Ing. Dieter O. Reimann

(Independent third person as in article 4, para. 4.6 of the R1 Guidelines²)

Enclosure 1: ANNEX 5



¹ DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 19 November 2008 on Waste and repealing certain Directives (EN-Official Journal of the European Union L312/3-22 of 22.11.2008)

² EU Commission: Guidelines on the interpretation of the R1 energy efficiency formula for incineration facilities dedicated to the processing of municipal solid waste according to ANNEX II of Directive 2008/98/EC on waste (June 2011)

³ COMMISSION DIRECTIVE (EU) 2015/1127 of 10 July 2015 and correction of amending Annex II to DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 19 November 2008 on Waste and repealing certain Directives (EN-Official Journal of the European Union L184/13 of 11.7.2015 and L 297/9 of 13.11.2015)

⁴ Detailed information about the use of the Climate Correction Factor see on reverse side of the certificate

⁵ BREF/BAT Waste Incineration (WI) for Integrated Pollution Prevention and Control (IPPC), "Reference Document on the Best Available Techniques for Waste Incineration", EUROPEAN COMMISSION, EIPPC Bureau Sevilla, August (2006) <http://eippcb.jrc.es/pages/FActivities.htm>