

30 January 2015

Mrs E A Parr
PPC Compliance Assistant
Natural Resources Wales
Rivers House
St Mellons Business Park
St Mellons
CARDIFF
CF3 0EY

Our Ref: W:\Environmental\PPC\Environment Agency Reporting\Permit Reporting\New Melt Shop\Annual\2014\TP3639BH
4.2.2. Annual Returns 2014.doc

Dear Mrs Parr,

RE: Melt Shop EPR Permit TP3639BH 4.2.2 Annual Returns 2014

In accordance with CELSA Manufacturing (UK) Ltd Environmental Permitting Regulations (EPR) Melt Shop Permit TP3639BH, permit condition 4.2.2 requires the following:

4.2.2 For the following activities in schedule 1, table S1.1, A1 to A9. A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31st January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data.

1.1. Introduction

Despite an exceptionally difficult market, CELSA remains focused on the continual improvement of our environmental performance. This commitment is reinforced by the CELSA Group's mission statement which states that 'we believe in managing and operating our business in an ethical, safe and environmentally responsible manner'.

The Melt Shop's environmental performance in 2014 will be reviewed, including the environmental Objectives and Targets which are set by senior management. Most notably, CELSA achieved a 10% reduction in dust complaints. CELSA is confident that this is a result of the scrap screening which has been implemented at the Melt Shop to separate and remove tailings and non-magnetic metals contained in the scrap. CELSA has also continue to engage with local residents in Tremorfa to understand the pertinent issues with respect to dust in the local area.

Significant investment in innovation technology at CELSA in 2014 included two sets of trials using Polymer Injection Technology. Numerous benefits were observed, such as reduced electricity

consumption and reduced dioxin formation. Following the approval from NRW, CELSA are to permanently implement the use of polymer as an alternative slag foaming agent in 2015.

1.2. Environmental Performance Review

1.2.1 Energy Consumption

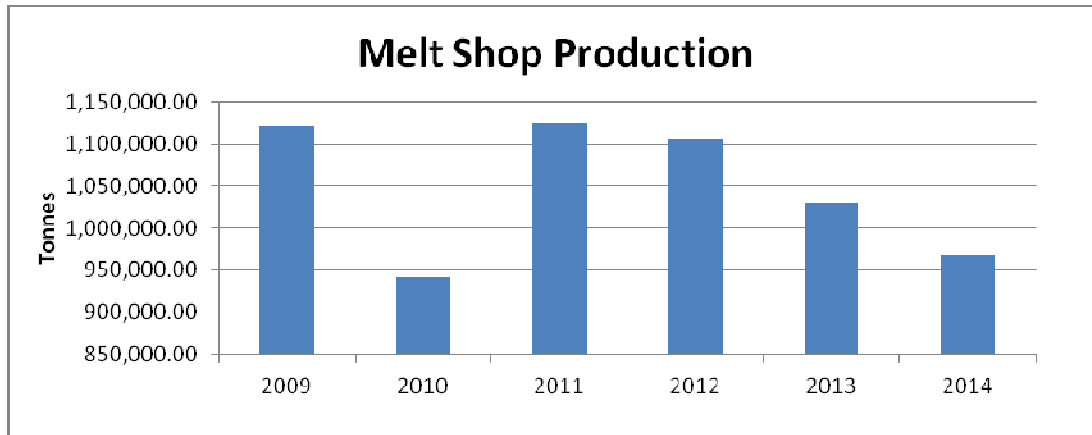


Figure 1: Melt Shop production (tonnes)

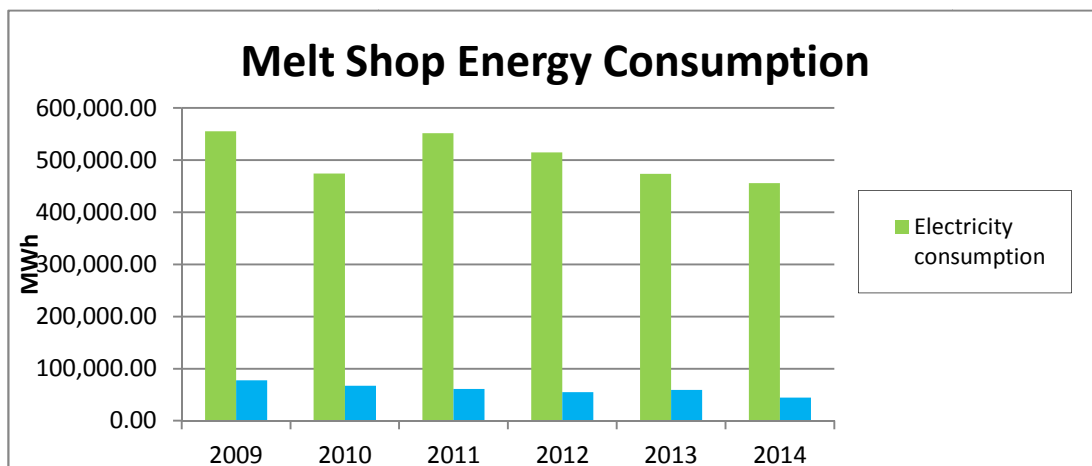


Figure 2: Melt Shop energy consumption (MWh)

A reduction in total energy consumption (MWh) was observed at the Melt Shop. However, annual production of liquid steel was 967,900 tonnes compared to 1,030, 541 tonnes. As a result, CELSA did not meet the objective to reduce energy consumption (KWh/tonne) by 3% compared to 2013. The Melt Shop are continuing to target energy reduction in 2015 as part of the company's strategic Big M project. CELSA is confident that the implementation of Polymer Injection Technology will result in a reduction in energy consumption in 2015 compared to 2014.

1.2.2 Air emissions – A1 & A2

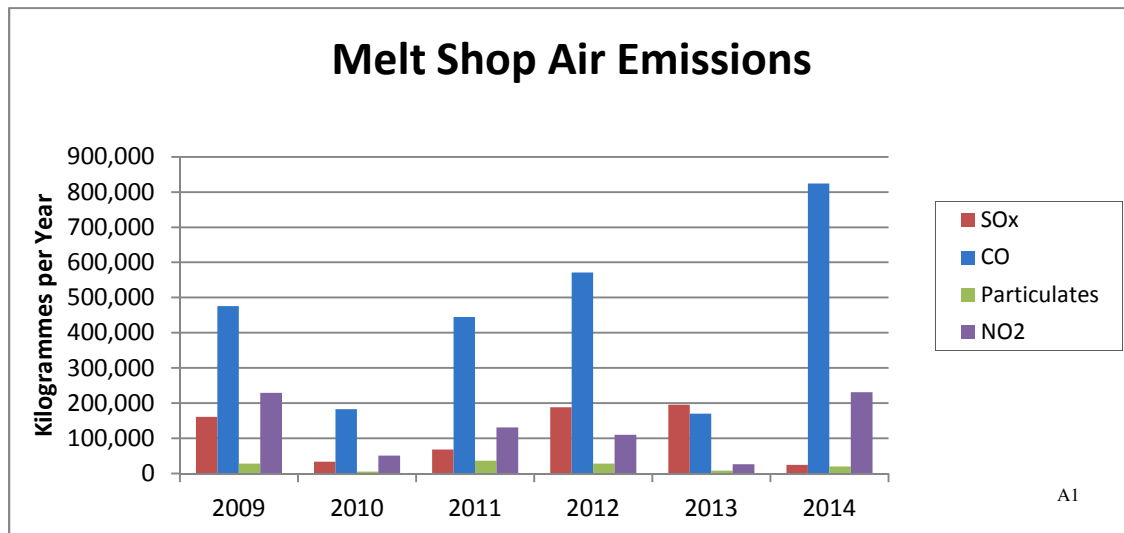


Figure 3: Melt Shop A1 annual stack monitoring results (kg/yr)

The air emission parameters for A1 and A2 were all below the set limits. An increase in CO has been observed. CELSA is aware of the importance in understanding and controlling CO emissions during the EAF process. An on-going internal investigation, led by the Melt Shop Production Manager, will aim to establish and implement process control measures in 2015.

1.2.3 Waste Water Quality – S1 & S2

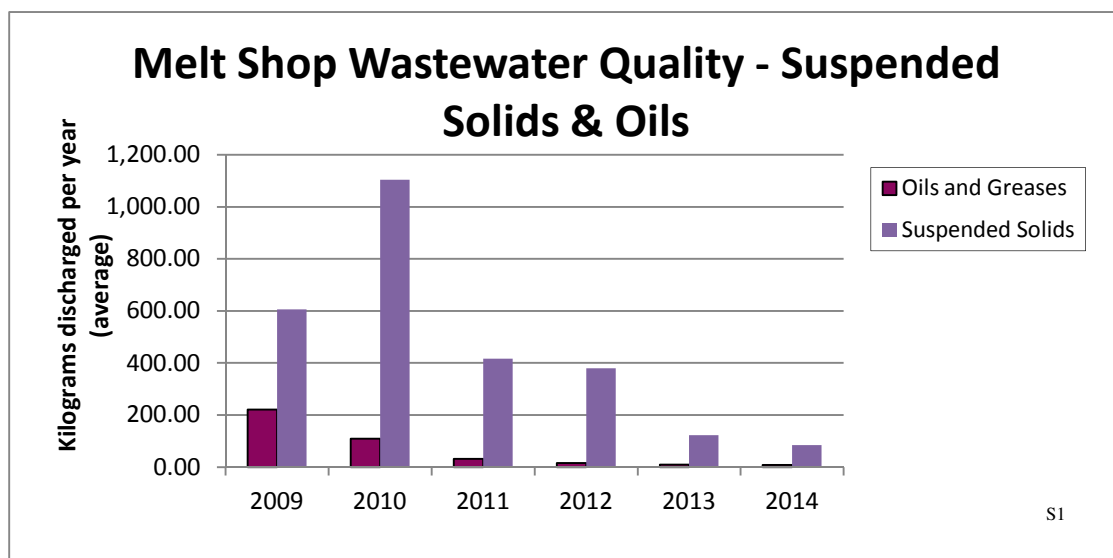


Figure 4: Melt Shop S1 waste water quality results – suspended solids and oil/grease (average kg/yr)

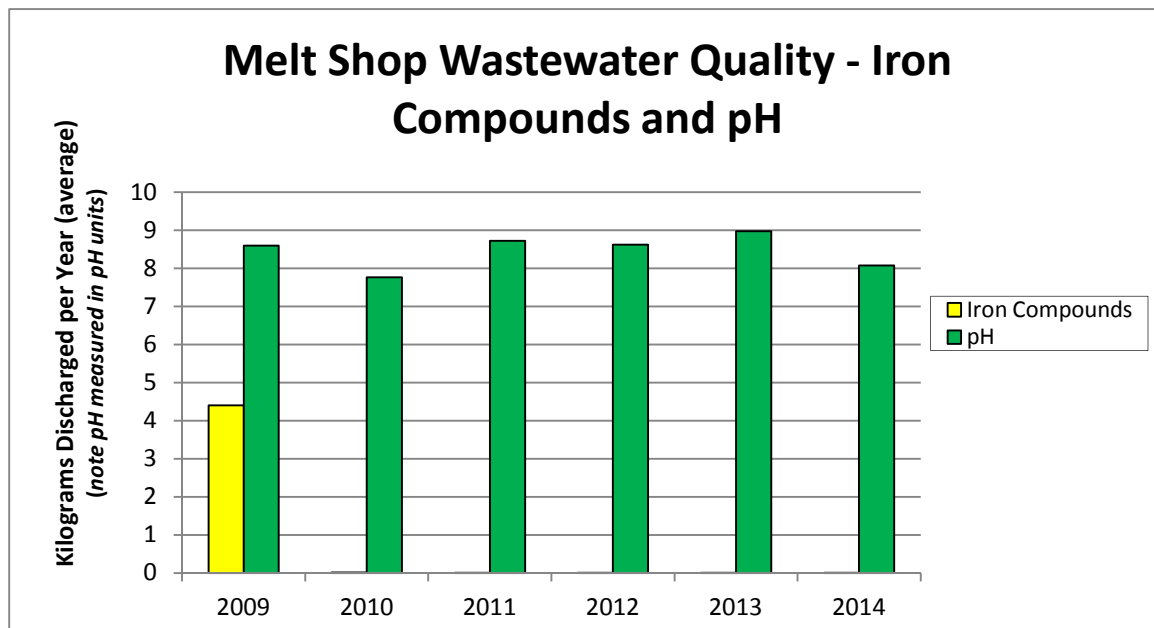


Figure 5: Melt Shop S1 waste water quality results – iron compounds and pH (average kg/yr)

All S1 emission limit values were met. There has not been sufficient flow from the scrap bay to enable collection of a sample for analysis for emission point S2.

1.2. 4 Water Consumption

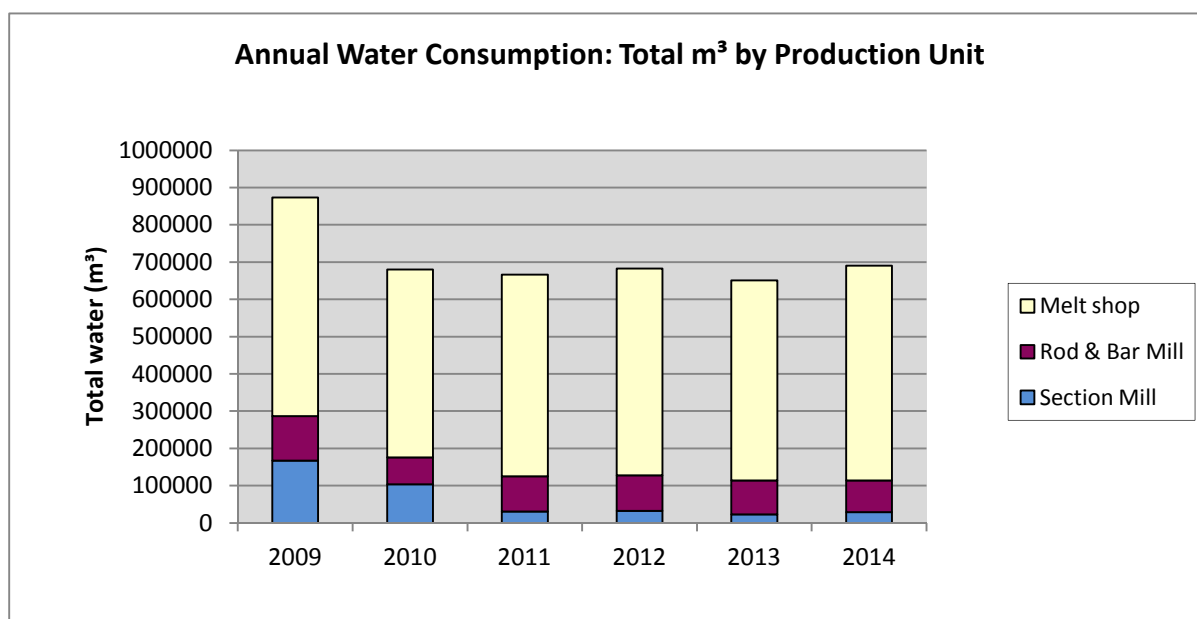


Figure 6: Melt Shop water consumption (m³)

CELSA did not achieve their target to reduce total water consumption (m³) by 3% compared to 2013. CELSA will continue to implement water conservation measures and a further water reduction target will be set in 2015.

1.2.5 Waste Production

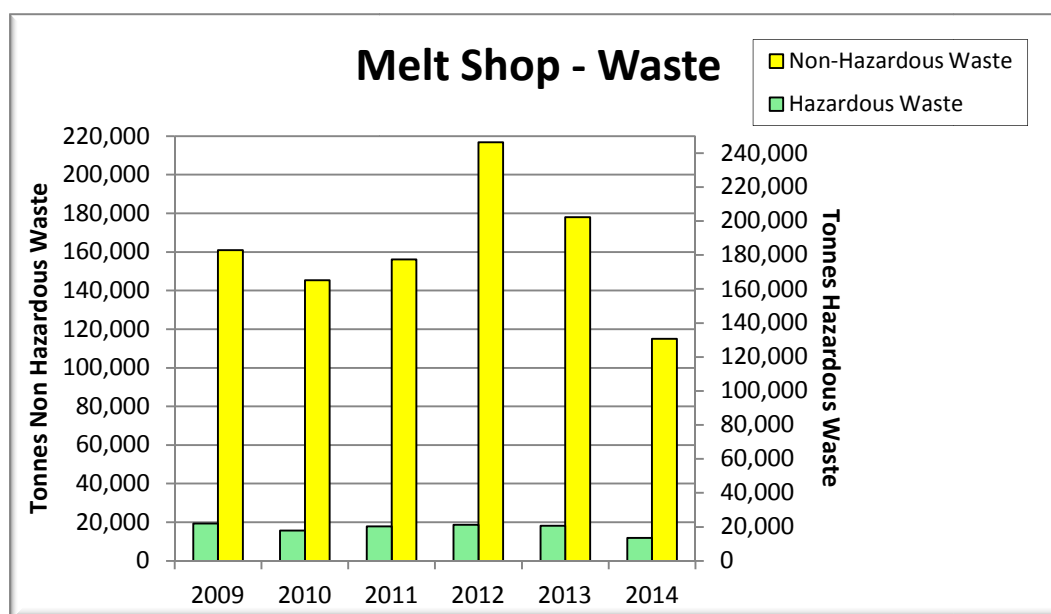


Figure 6: Melt Shop production of non-hazardous and hazardous waste (tonnes)

A reduction in the production of non-hazardous and hazardous waste sent for disposal has been observed. The majority of waste streams are now sent for off-site recovery or recycling.

1.2.6. Fugitive Emissions

Particulates are formed as a consequence of EAF steelmaking and are created from the volatilisation of the steel scrap during the electric arc melting process. Large volumes of fume are generated during the melting process, which are handled by up to 2 million cubic metres per hour of extraction. Fume is drawn off both the electric arc and ladle furnace using extraction fans. The main fume discharge and any fugitive releases in these areas are captured by the roof canopy total capture system and conveyed by ducting to the abatement plant (bag house).

CELSA received a dust complaint in May 2014 as a result of excessive temperature and high differential pressure experienced. The emergency dilution damper opened and the filter inlet dampers closed in order to protect the filter sleeves from damage. These conditions were only temporarily observed. The system was reset manually and restarted in sequence to bring the plant back online.

Slag is produced during the making of steel and is a normal by-product of the EAF process. Slag from the EAF is tipped to flow beneath the furnace onto the slag bed. As this is conducted within the main melt shop, any emissions arising from this are captured by the air collection and abatement system. The slag is then moved by a specially adapted bulldozer to an outside intermediate staging area, to blade the material out and allow cooling water to be sprayed on the slag. The slag is kept in the staging area until a cooled economic load has been assembled. It is then transported via dedicated wagons to the slag reprocessing plant on the other side of Rover Way.

As part of the secondary steel process an artificial slag is generated on the steel ladle. Subsequent to casting, this slag will be tipped to the ground. When cooled, it is also transported to the slag handling plant across Rover Way.

Dust suppression is in operation during slag tipping to ensure any fugitive emissions are minimised. The water spray system has been improved and other abatement techniques are being considered in 2015 to continue to control any potential fugitive emissions.

During 2014, CELSA achieved a 10% reduction in dust complaints. This is indicative of the significant investment in dust suppression and also increased communication with the local community. The Frisbee Dust Gauges and the Turnkey Optical Particle Analysis system also enable CELSA to gain a greater understanding of dust levels in Tremorfa. Given the importance of the fugitive dust complaints, CELSA will continue to work on the minimisation of complaints from operational activities.

If you require any further information or should you have any further questions arising from the above, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in cursive script, appearing to read 'S. Jones', is written over a horizontal line.

Sara Jones
Environmental Advisor