



Mr Charlie Harris  
 Environment Agency  
 Trentside Offices  
 Scarrington Road  
 West Bridgford  
 Nottingham  
 NG2 5FA

27<sup>th</sup> February 2015

Dear Mr Harris,

**RE: Scunthorpe Power Plants (Central Power Station & Turbo Blower House)  
 Emission Limit Value Proposal**

Dear Charlie,

Following our discussion on the 17<sup>th</sup> February regarding the Power Plant ELVs for the Industrial Emission Directive Permit, we have now amended our data and can now give a proposal for the Environment Agency to consider.

As discussed on the 17<sup>th</sup> February, data that covers start up and shutdown periods have been omitted, and as expected, this has not made a difference in the emission levels. As discussed, this is due to the infrequent shutdown and start-ups and the short duration when it does occur.

Despite this, table S1.5 has been completed. For the start up it has to be assumed that this will be 40%. A start up is typically 8 to 24 hours in duration and a shutdown is approximately 30 minutes.

<b>Table S1.5 Start-up and Shut-down thresholds</b>		
<b>Emission Point and Unit Reference</b>	<b>“Minimum start up load” Load in MW and as percent of rated power output (%) and/or discrete processes</b>	<b>“Minimum shut-down load” Load in MW and as percent of rated power output (%) and/or discrete processes</b>
CPS Boiler 1	43.2 MW; 40%	43.2 MW; 40%
CPS Boiler 2	43.2 MW; 40%	43.2 MW; 40%

**TATA STEEL**

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CPS Boiler 3	19.6 MW; 40%	19.6 MW; 40%
TBH Boiler 1 - 4	15.6 MW; 40%	15.6 MW; 40%
TBH Boiler 5 - 6	21.6 MW; 40%	21.6 MW; 40%

The ELV proposals are set out below with a summary of the key parameters as we have discussed previously. The table's also detail the 95<sup>th</sup> percentile annual exceedances that will occur based on the proposed limits.

**Proposed CPS ELVs**

	Monthly	Daily (1.4xMonthly)	Hourly (2x Monthly)	Annual Exceedances (all)		Annual Exceedances (minus abnormal)		Comments
				Daily	Hourly	Daily	Hourly	
Maximum				18	438	18	438	= 95 <sup>th</sup> percentile
Dust	40	56	80	13	259	9	225	As agreed from previous discussions
NOx	300	420	600	4	64	2	27	As agreed from previous discussions
SO2	500	700	1000	9	141	3	40	Confirmed ELV, higher daily

As discussed previously the main debate for the Central Power Station emissions has been regarding the SO<sub>2</sub> ELVs. Until a natural gas system is installed, we are concerned about issues meeting the daily ELV. It is proposed that the daily factor is increased from 1.21x to 1.4x of the monthly ELV, therefore giving a daily ELV for SO<sub>2</sub> of 700mg/m<sup>3</sup>. This will enable a bit of flexibility for Tata Steel, but also ensuring the ELVs for the hourly (1000 mg/m<sup>3</sup>) and monthly (500 mg/m<sup>3</sup>) to be in line with the Environment Agencies expectations.

Based on the proposed ELVs, the table above refers to the annual exceedances that would have been attributed based on the 2014 data.

**Proposed TBH ELVs**

	Monthly	Daily	Hourly (2x Monthly)	Annual Exceedances (all)		Annual Exceedances (minus abnormal)		Comments
				Daily	Hourly	Daily	Hourly	
Maximum				18	438	18	438	= 95 <sup>th</sup> percentile
Dust	40	56	80	13	204	5	75	New ELV, higher monthly & Daily = 1.4x Monthly
NOx	300	363	600	0	1	0	0	As agreed from previous discussions
SO2	500	605	1000	7	99	0	0	As agreed from previous discussions

As with CPS, we would like to propose the same monthly limit for Dust / Particulates (40 mg/m<sup>3</sup> rather than 20 mg/m<sup>3</sup>). This brings the Dust / Particulates ELVs in line with those of CPS. This is to take into account the increased HFO usage at the end of 2014. It is also proposed that the daily factor for dust only is increased from 1.21x to 1.4x of the monthly ELV.

Based on the proposed, the table above refers to the annual exceedances that would



have been attributed based on the 2014 data

In addition to the proposed ELVs, for both plants we would like to retain our exclusion for emissions during abnormal operations. We do agree that these will need to be only used for truly exceptional gas supply events of limited duration. We propose that the text remains the same as follows:

*1 - Loss of Coke Oven Gas pressure*

*If Coke Oven Gas pressure is lost then the ability to fire Gas in the Central Power Station / Turbo Blower House will be lost, and the boilers will have to be reverted to Heavy Fuel Oil firing to maintain operations. This is due to the loss of pilot burners.*

*2 – Loss of Blast Furnace Gas pressure or production problems*

*In order to preserve a level in the BFG Holder in the event of major BFG production problems it may be necessary to revert to oil firing at the Central Power Station / Turbo Blower house.*

*In the event of a total loss of BFG at the Central Power Station / Turbo Blower House, Heavy Fuel Oil firing may be initiated to maintain operations.*

*3 – Loss of Electrical Supply*

*When the electrical supply to the site suffers interruption many abnormal scenarios can occur. If gas firing cannot be achieved at the Central Power Station / Turbo Blower House then Heavy Fuel Oil must be fired to facilitate any safe shutdown of and subsequent restart of Internal Site Plant operations. It will also be necessary to retain some boiler plant on Heavy Fuel Oil throughout any electrical supply incident, as steam generation is required in order to be able to pump, heat and atomise the oil within the Power Station itself. (Unlike the Central Power Station, the Turbo Blower House does not have a Black Start capability.)*

*4 – Gas Main Maintenance*

*During essential gas main maintenance work it may be required to revert to Heavy Fuel Oil firing at the Central Power Station / Turbo Blower House to maintain operations.*

Another important point is we are concerned that if a longer duration gas supply problem or scenario arose whereby business situations results in the works arising gases not being able to sustain power generation, Heavy Fuel Oil will have to be utilised for an extended period of time. Therefore this may lead to breaches of the allowable annual exceedances. Due to this, until we are in a position whereby a natural gas back up system has been implemented, will the Environment Agency be able to take a regulatory enforcement position whereby any compliance classification scores as a result of any breaches could be suspended?



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• Yours Sincerely

Christopher A Jackson  
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