Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2010 (as amended)

Decision document recording our decision-making process following review of a permit

The Permit number is: EPR/TP3731UE
The Operator is: Tube City IMS UK Limited
The Installation is: Hanson Dewatering Facility
This Variation Notice number is: EPR/TP3731UE/V003

What this document is about

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on BAT conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for the iron and steel production industry sector published on 8th March 2012 in the Official Journal of the European Union. This is our decision document, which explains the reasoning for the consolidated variation notice that we are issuing.

It explains how we have reviewed and considered the techniques used by the Operator in the operation and control of the plant and activities of the installation. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions ('BAT Conclusions') for Iron and Steel Production as detailed in document reference 2012/135/EU. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

As well as considering the review of the operating techniques used by the Operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. It also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the Permit consistent with our current general approach and philosophy and with other permits issued to installations in this sector. Although the wording of some conditions has changed, while others have disappeared because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the Permit in any way. In this document we therefore address only our determination of substantive issues relating to the new BAT Conclusions.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

How this document is structured

1. Our proposed decision
2. How we reached our decision
3. The legal framework
4. Annex 1- Review of operating techniques within the Installation against BAT Conclusions

1 Our decision

We have decided to issue the Variation Notice to the Operator. This will allow it to continue to operate the Installation, subject to the conditions in the Consolidated Variation Notice.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the varied permit will ensure that a high level of protection is provided for the environment and human health.

The Consolidated Variation Notice contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the Notice, we have considered the techniques identified by the operator for the operation of their installation, and have accepted that the details are sufficient and satisfactory to make those standard conditions appropriate. This document does, however, provide an explanation of our use of "tailor-made" or installation-specific conditions, or where our Permit template provides two or more options.

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 60(1) of the Environmental Permitting (England and Wales) Regulations 2010 (a Regulation 60 Notice) on 17/12/2013 requiring the Operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice also required that where the revised standards are not currently met, the operator should provide information that

- Describes the techniques that will be implemented before 08/03/2016 which will then ensure that operations meet the revised standard, or
- justifies why standards will not be met by 08/03/2016, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT AEL) described in the BAT Conclusions Document, the Regulation 60 Notice requested that the Operator make a formal request for derogation from compliance with that AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 60 Notice response from the Operator was received on 25/04/2014.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review

The Operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 60 Notice response that appears to be confidential in relation to any party.

2.2 Review of our own information in respect to the capability of the installation to meet revised standards included in the BAT Conclusions document

Based on our records and previous regulatory activities with the facility we have no reason to consider that the operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

2.3 Company name change

On the 1st September 2015 the company named changed to Tube City IMS UK Limited.

3 The legal framework

The Consolidated Variation Notice will be issued, under Regulations 18 and 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

Annex 1: decision checklist regarding relevant BAT Conclusions

BAT Conclusions for the Production of Iron Steel, were published by the European Commission on 8th March 2012. There are 95 BAT Conclusions.

Tube City operates a dewatering plant dealing with the waste water effluent from the hydrocyclone treatment plant at Scunthorpe Integrated Steelworks. The treated effluent is then passed back to Longs Steel for disposal via emission point W1. There are no emissions to air or water.

Therefore only the following BAT conclusions are relevant and have been addressed.

- All of Section 1.1 General BAT Conclusions that is BAT conclusions 1 to 18 inclusive.
- BAT conclusions 66 & 68 relating to water and waste water treatment
- BAT conclusion 69 preventing waste generation from blast furnace residues

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

The overall status of compliance with the BAT conclusion is indicated in the table as:

NA Not Applicable
CC Currently Compliant
FC Compliant in the future (within 4 years of publication of BAT conclusions)
NC Not Compliant

Annex 1: decision checklist regarding relevant BAT Conclusions

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
General BAT			
1	BAT is to implement and adhere to an environmental management system (EMS)	CC	Environmental Management System (EMS) is in place. BAT is achieved.
2	BAT is to reduce thermal energy consumption by using a combination of techniques.	NA	This is a dewatering activity. The plant does not produce or use thermal energy..
3	BAT is to reduce primary energy consumption by optimisation of energy flows & optimised utilisation of the extracted process gases such as coke oven gas.,	NA	This is a dewatering activity only. The site receives waste generated by the Longs Steel blast furnace gas treatment plant as part of the wet scrubbing of “top gas” from the furnace.
4	BAT is to use desulphurised and dedusted surplus coke oven gas and dedusted blast furnace gas and basic oxygen gas (mixed or separate) in boilers or in combined heat and power plants to generate steam, electricity and/or heat using surplus waste heat for internal or external heating networks, if there is a demand from a third party.	NA	This is a dewatering activity only

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
5	BAT is to minimise electrical energy consumption by using one or a combination of the following techniques: I. power management systems II. grinding, pumping, ventilation and conveying equipment and other electricity-based equipment with high energy efficiency.	CC	The operator has confirmed that they meet the full standards in the BREF Energy management is part of the EMS

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
6	BAT is to optimise the management and control of internal material flows in order to prevent pollution, prevent deterioration, provide adequate input quality, allow reuse and recycling and to improve the process efficiency and optimisation of the metal yield.	CC	The site receives waste generated by the Longs Steel blast furnace gas treatment plant as part of the wet scrubbing of “top gas” from the furnace. The influent arrives onto site via 4 sealed pipelines and enters a Laminar Clarifier where the influent is treated with flocculent to remove the remaining small amount of suspended solids. The thickened flocculated solids are then fed to a concentration thickening tank before being fed under pressure into a Dewatering Press where the solids are made into cake not exceeding 50% moisture; and the residual filtered water drains away back into the adjacent Serapim lagoon (operated by Longs Steel).The cake is dropped from the press onto a concrete pad which has a drain to remove any water to the Serapim lagoon. All material is recovered for use by Longs Steel
7	BAT is to select appropriate scrap qualities and other raw materials.	NA	Scrap is not used in the processes operated at the installation.
8	BAT for solid residues is to use integrated techniques and operational	CC	The supernatant water produced by the process is transferred back (via T1) to the main operator Longs

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	techniques for waste minimisation by internal use or by application of specialised recycling processes.		Steel into their lagoons for further treatment. The filter cake is also transferred back to Longs Steel for further storage and appropriate recovery and final disposal of cleaned waters to the Bottesford Beck.
9	BAT is to maximise external use or recycling for solid residues which cannot be used or recycled according to BAT 8, wherever this is possible and in line with waste regulations. BAT is to manage in a controlled manner residues which can neither be avoided nor recycled.	CC	As described above waste storage and the further treatment of waste waters on site is undertaken by the main operator Long Steel. The supernatant water produced by the process is transferred back (via T1) to Longs Steel lagoons for further treatment before being emitted to Bottesford Beck under environmental permit EPR/HP3736AW. The produced filter cake is also transferred back to Longs Steel for further storage and appropriate recovery.
10	BAT is to use the best operational and maintenance practices for the collection, handling, storage and transport of all solid residues and for the hooding of transfer points to avoid emissions to air & water.	CC	Solid residues (filter cake) and waste storage areas are managed by the main operator Longs Steel who have a preventative management programme in place.
11	BAT is to prevent or	NA	There are no dust

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	reduce diffuse dust emissions from materials storage, handling and transport		emissions, the filter cake is solid, and is returned to Longs Steel site for storage and appropriate recovery.
12	BAT for waste water management is to prevent, collect and separate waste water types, maximising internal recycling & using an adequate treatment for each final flow.	CC	See BAT 67. An enclosed system is used. Any residual filtered water during the pressing process is collected and drains away back into the adjacent lagoon for re-used, this is managed by the main operator Longs Steel.
13	BAT is to measure or assess all relevant parameters necessary to steer the processes from control rooms by means of modern computer-based systems.	NA	This is a dewatering activity only using a mechanical press. There is a control panel for the activity. The operator has confirmed that they meet the full standards in the BREF
14	BAT is to measure the stack emissions of pollutants from the main emission sources from all processes included in the Sections 1.2 – 1.7 whenever BAT-AELs are given and in process gas-fired power plants in iron and steel works.	NA	The permit only relates to dewatering. There are no emission sources. Cleaned waste waters are returned to Longs Steel for reuse.

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
15	For relevant emission sources not mentioned in BAT 14, BAT is to measure the emissions of pollutants from all processes included in the Sections 1.2 – 1.7 and from process gas-fired power plants within iron and steel works as well as all relevant process gas components/pollutants periodically and discontinuously	NA	As BAT14. There are no emissions to air or controlled waters.
16	BAT is to determine the order of magnitude of diffuse emissions	NA	There are no diffuse emissions sources, as this is a dewatering plant, cleaned waters are returned to Longs Steel as is the filter cake.
17	BAT is to prevent pollution upon decommissioning	CC	A decommissioning plan is in place as part of the site condition report and meets site condition reports and baseline reporting under IED– guidance and templates (H5) and BAT guidance.
18	BAT is to reduce noise emissions from relevant sources in the iron and steel manufacturing processes	CC	Noise management is part of the EMS. The plant is located away from sensitive receptors and shielded by other buildings on site.
BAT Conclusions for Sinter Plant			
BAT conclusions 19	The sinter plant is operated by Longs	NA	BATC 19 to 32 not relevant.

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
to 32 inclusive	Steel; therefore, BAT Conclusions 19 to 32 inclusive are not relevant for this installation.		
BAT Conclusions for Pelletisation Plants			
BAT Conclusions 33 to 41 inclusive	There are no Pelletisation plants in the U.K. Therefore, BAT Conclusions 33 to 41 inclusive are not relevant for this installation.	NA	BATC 33 to 41 not relevant
BAT Conclusion for Coke Oven Plants			
BAT Conclusions 42-58 inclusive	There are no coke oven plants at the installation. Therefore, BAT Conclusions 42-58 inclusive are not relevant for this installation	**NA**	**BATC 42 to 58 not relevant. The coke ovens are operated by Longs Steel.**
BAT Conclusions for Blast Furnaces			
BAT Conclusions 59-74 inclusive	The blast furnaces are operated by Longs Steel. Waste arising from blast furnace operation is handled by Hanson in the dewatering plant. .	NA	**Only Bat Conclusions 66-68 are relevant as these relate to waste water handling and treatment.**
66	BAT for water consumption and discharge from blast furnace gas treatment is to minimise and to reuse scrubbing water as much as possible,	CC	Waste waters (influent) received from Longs Steel are filtered (using a press) both the resultant filter cake and supernatant water are returned to Longs Steel for further use. See below BAT67
67	BAT for treating waste	CC	The influent arrives onto

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	water from blast furnace gas treatment is to use flocculation (coagulation) and sedimentation and the reduction of easily released cyanide, if necessary.		site via 4 sealed pipelines and enters a Laminar Clarifier where the influent is treated with flocculent to remove the remaining small amount of suspended solids. The thickened flocculated solids are then fed to a concentration thickening tank before being fed under pressure into a Dewatering Press where the solids are made into cake not exceeding 50% moisture; and the residual filtered water drains away back into the adjacent lagoon. The cake is dropped from the press onto a concrete pad which has a drain to remove any water to the lagoon. The cake is then removed from this point to a storage area operated by Longs Steel where it blended with other Blast residue for recycling through a CEMEX operated system. At no time does any liquid or material leave the process other than that recycled by Longs Steel. Twice a year the spent filter cloths are changed and disposed of at Longs Steel landfill.
68.	BAT is to prevent waste generation from blast furnaces by	CC	BAT III is applied - that is the hydrocyclonage of sludge with subsequent

BAT Conclusion No	Summary of BAT Conclusion requirement	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	using one or a combination of techniques and manage in a controlled manner blast furnace process residues which can neither be avoided nor recycled		on-site recycling of the coarse fraction. The treated water is discharged directly into Longs Steel adjacent lagoon which is sampled at point W1
BAT Conclusions for Basic Oxygen Steelmaking and Casting			
BAT Conclusions 75-86 inclusive	No BOS and Casting is undertaken.	NA	BATC 75 to 86 not relevant.
BAT Conclusions for Electric Arc Furnace Steelmaking and Casting			
BAT Conclusions 87-95	There are no EAF's at the installation.	NA	BATC 87 to 95 are not relevant.

Where relevant and appropriate, we have incorporated the techniques described by the Operator in their Regulation 60 Notice response as specific operating techniques required by the permit, through their inclusion in Table S1.2 of the Consolidated Variation Notice.