

## Response to Maple Lodge Clarification RFI 27th February 2023

<b>Date:</b>	10 <sup>th</sup> March 2023	<b>Jacobs U.K. Limited</b>
<b>Project name:</b>	Thames Water STC IED	1180 Eskdale Road
<b>Project no:</b>	B22849AZ	Winnersh, Wokingham
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Dear Sarah,

Please see below the answers to your questions raised on the "Application Variation - Maple Lodge STC - Further clarification" document emailed on 27<sup>th</sup> February 2023.

### 1) Payment of outstanding fees

We identified in our RFI an outstanding balance of £2,034. We cannot locate this payment.

#### Answer 1.

Payment for the extra over of £2,034 has been processed against PO number 4700382228, with reference number EPR/FP3435LA/V006. Payment was confirmed with TW payment agent on the 7<sup>th</sup> March 2023.

### 2) Bioaerosol Risk assessment (BRA)

You have provided your monitoring locations for Bioaerosols in your response to the RFI, however you have not updated your BRA as requested in question 1 of the RFI.

Update and provide your Bioaerosol risk assessment to confirm the sampling locations (National Grid references) and methodology to be used in line with guidance Bioaerosol monitoring at regulated facilities - use of M9: RPS 209 - GOV.UK ([www.gov.uk](http://www.gov.uk)).

#### Answer 2

Please see the Appended updated Bioaerosol Risk Assessment 'TW\_STC\_EPR\_03a\_HGR\_APPF 2.0 (Feb 23)'

### 3) Floating Roof digesters

In response to question 2e of the RFI, you have advised that the floating roof digesters use a wet seal to minimise the release of biogas from the floating roof structure. Advising that you employ techniques to minimise the risk of diffuse emissions by:

- Adjusting the throttle valve on each digester outlet to balance the relative amount of biogas stored within each floating roof
- Managing consumption of biogas via operation of the CHP, and
- The use of the flare stack to manage storage of excess biogas in emergency circumstances.

It is our current viewpoint that these techniques do not meet the requirements of BAT 14d which require that in order to prevent or, where that is not practicable, to reduce diffuse emissions to air, BAT is to use an appropriate combination of techniques which include the containment, collection and treatment of diffuse emissions, including:

- Storing, treating and handling waste and material that may generate diffuse emissions in enclosed buildings and/or enclosed equipment,
- maintaining the enclosed equipment or buildings under an adequate pressure and,
- where appropriate/relevant collecting and directing the emissions to an appropriate abatement system via an air extraction system and/or air suction systems close to the emission sources.

We would also note that the use of the flare to manage storage of excess biogas would not meet BAT. BAT 15 requires that flaring is only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques below:

- Correct plant design, including the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves, and
- Plant management which includes balancing the gas system and using advanced process control.

It is our understanding that your response identifies diffuse emissions from the storage of unstable digestate in tanks that are not fully enclosed, and in any issued permit we would implement an improvement condition to address this. This improvement condition will require a plan containing the final designs, and an implementation schedule for the enclosure of the floating roof digesters. The plan will also need to contain a detailed description of the proposed gas utilisation plant, gas storage infrastructure for the biogas produced during anaerobic digestion, pressure relief valves and gas pipework.

- a) Provide confirmation that you will meet BAT and fully enclose the floating roof digesters.**
- b) Provide confirmation that you agree to implement a plan containing final designs, and an implementation schedule for the enclosure of floating roof digesters, and that this plan will contain a detailed description of the proposed gas utilisation plant, gas storage infrastructure for the biogas produced during anaerobic digestion, pressure relief valves and gas pipework.**
- c) Confirm that you understand the requirements of this IC. Should you wish to deviate from this requirement, your application must be supported with detailed and evidence based alternative measures.**

**Answer to 3a, 3b and 3c.**

Thames Water commits to ensuring primary digestors meet the requirements of IED by replacement of each asset, containment of diffuse emissions or providing an equivalent solution in accordance with BAT 14 and 14d.

Thames Water commits to implementing an engineering design, which may result in replacement of tanks or reduction in number of applicable tanks. The plan will include any proposed amendments to gas utilisation plant, gas storage infrastructure for the biogas produced during anaerobic digestion, pressure relief valves and gas pipework that may be required.

Our programme of delivery will need to be phased so that for each location a minimum number of existing AD tanks are always in continued operation to ensure process requirements are met.

Further to our email of 28<sup>th</sup> February, Thames Water would need to see the draft text of the proposed Improvement Condition before we can confirm our understanding of the requirements. Thames Water understands that any alternative BAT must be evidence based.

**4) NGR emission locations**

You have provided in response to question 3g monitoring point locations. This does not include the NGR for point S6.

Provide the NGR for emission point S6.

**Answer 4**

Monitoring point	NGR	Monitoring frequency	Methodology (standard)	Assessment procedures
S6 – Biogas Condensate	a) TQ04094 92114 b) 0409092073	n/a	MCERTS or ISO/IEC 17025	

Although a composite sampling location has been identified for Biogas Condensate: Monitoring point S6 (locations a & b), due to low volumes of this wastewater return routine monitoring is not proposed – please see 'Response to RFI\_Q5\_Maple Liquor 20230208'.

### 5) Diesel Generators

You currently have permitted under EPR/MB3295YC emission points A11 and A12.

Provide a written confirmation that these will provide power to the installation activity.(i.e. be a directly associated activity of the installation)

#### **Answer 5**

**The 1 x 2, 5.022MWth standby diesel generators - already permitted as new MCPs in SRP EPR/MB3295YC - provide power to the whole STW; *including sludge treatment* and UWWTD/other activities. Therefore, they could meet the definition of a DAA. There are no other standby diesel generators on site at the current time.**

**In amalgamating into the IED AD permit, we anticipate no material changes to the current permit conditions relating *to these already permitted new MCPs* but please reply on this point if this assumption is incorrect.**