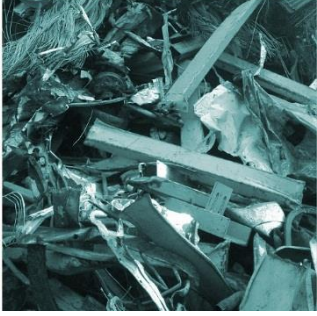
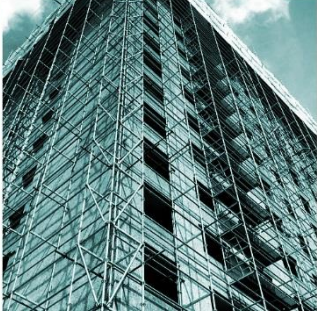
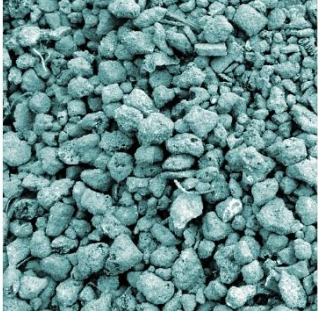
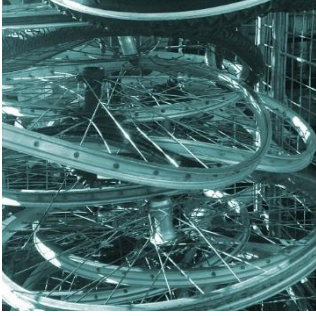
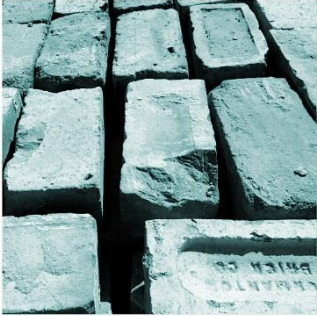
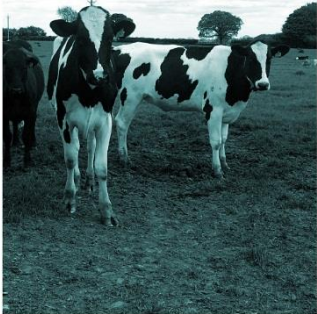
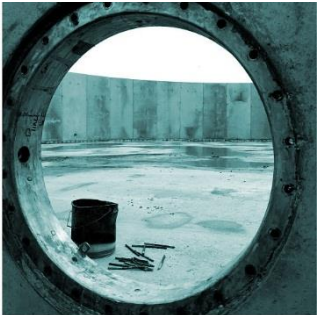


# BIO DYNAMIC UK LIMITED

## PERMIT VARIATION APPLICATION

Emissions Points Monitoring  
July 2022



## REPORT SCHEDULE

**Operator:** Bio Dynamic UK Limited

**Client:** Bio Dynamic UK Limited

**Project Title:** Bio Dynamic UK Limited Permit Variation Application

**Document Title:** Emissions Points Monitoring

**Document Reference:** HC1677-12

**Report Status:** Final 1.1

**Project Director:** Joanna Holland

**Project Manager:** Jo Chapman

AUTHOR	DATE
Jo Chapman	15 <sup>th</sup> July 2022
REVIEWER	DATE
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APPROVED	
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REVISION HISTORY	DATE	COMMENTS	APPROVED
Final Version 1.0	19 <sup>th</sup> August 2022	For submission to EA	Maxwell Bagnall
Final Version 1.1	24 <sup>th</sup> April 2023	Update site configuration	Maxwell Bagnall

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# CONTENTS

1. Emissions Points Monitoring.....1

## 1. EMISSIONS POINTS MONITORING

Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
<b>A1</b> -Engine Exhaust CHP Engine 1	Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual monitoring exercise.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.
<b>A2</b> -Engine Exhaust CHP Engine 2	Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual monitoring exercise.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.
<b>A3</b> - Emergency Flare Stack 01	Flare use time logged on SCADA system. Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual if required if flare operational more than 10% of year. Flare use time logged on SCADA system.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.
<b>A4</b> - Emergency Flare Stack 02	Flare use time logged on SCADA system. Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual if required if flare operational more than 10% of year. Flare use time logged on SCADA system.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.

Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
<b>A5</b> – Engine Exhaust CHP Engine 3	Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual monitoring exercise.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.
<b>A6</b> – Engine Exhaust CHP Engine 4	Monitoring to be carried annually for hourly average emissions rates for given variables.	Annual monitoring exercise.	To be carried out by third party contractor with MCERTS accreditation per appropriate BS EN methodology for given variables.
<b>A7</b> - Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.
<b>A8</b> - Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.
<b>A9</b> - Under/over pressure relief valve on digester.	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures,

Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
			annual performance review and audits.
<b>A10-</b> Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.
<b>A11-</b> Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.
<b>A12-</b> Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.
<b>A13-</b> Under/over pressure relief valve on digester	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.

Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
<p><b>A14</b> – Exhaust stack backup dual fuel (biogas/diesel) boiler</p>	<p>Daily sniff test monitoring for odours. May require annual exhaust emissions monitoring if required by permit.</p>	<p>Daily sniff test for odour. Annual emissions monitoring if required by permit.</p>	<p>Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits. Exhaust emissions monitoring methodology provided by third party contractor if required.</p>
<p><b>A15</b> – Odour abatement unit vent</p>	<p>Stack emissions monitoring according to parameters outlined in permit (third party assessment)</p> <p>Odour sniff tests</p> <p>Process monitoring visual and functional checks.</p> <p>Whole system efficiency test (third party assessment)</p>	<p>Every 6 months</p> <p>Daily</p> <p>Daily/weekly/continuous</p> <p>Annually</p>	<p>Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules.</p>
<p><b>A16</b> - Under/over pressure relief valve on digester</p>	<p>Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.</p>	<p>Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.</p>	<p>Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.</p>

Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
<p><b>A17 - Under/over pressure relief valve on digester</b></p>	<p>Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.</p>	<p>Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.</p>	<p>Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.</p>
<p><b>A18 – Odour abatement unit vent (tanker offtake point abatement unit)</b></p>	<p>Stack emissions monitoring according to parameters outlined in permit (third party assessment)</p> <p>Odour sniff tests</p> <p>Process monitoring visual and functional checks.</p> <p>Whole system efficiency test (third party assessment)</p>	<p>Every 6 months</p> <p>Daily</p> <p>Daily/weekly/continuous</p> <p>Annually</p>	<p>Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules.</p>
<p><b>A19 – Vent from waste reception tank farm displaced air odour abatement unit.</b></p>	<p>Stack emissions monitoring according to parameters outlined in permit (third party assessment)</p> <p>Odour sniff tests</p> <p>Process monitoring visual and functional checks.</p>	<p>Every 6 months</p> <p>Daily</p> <p>Daily/weekly/continuous</p>	<p>Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules.</p>



Emission Point Reference and Location	Monitoring Method	Monitoring Frequency	Relevant Procedures
	Whole system efficiency test (third party assessment)	Annually	
A20 – Digestate store pressure relief valve	Use of valves, including events leading to use, time in use, and corrective measures taken to be recorded.	Ongoing – every time in use. Times in use subject to audit and review. Daily visual inspection.	Incident reporting procedures, daily checks sheets, and standard operating procedures, annual performance review and audits.



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