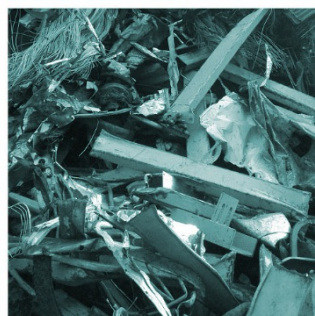
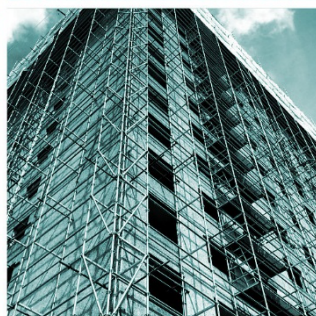
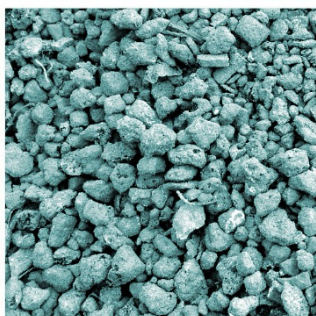
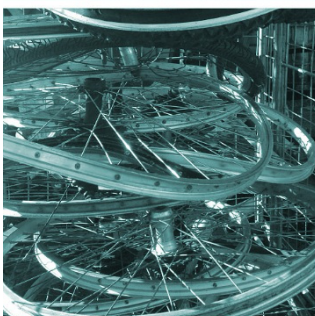
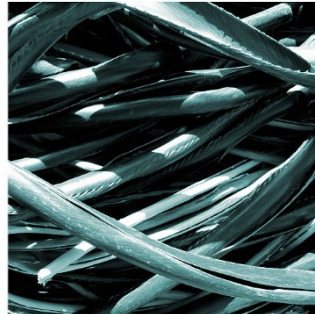


BIO DYNAMIC UK LIMITED

PERMIT VARIATION APPLICATION

Emissions Points Monitoring
July 2022



REPORT SCHEDULE

Operator: Bio Dynamic UK Limited

Client: Bio Dynamic UK Limited

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Project Manager: Jo Chapman

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|-------------------|------------------------------|----------------------|-----------------|
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| | | | |

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1. EMISSIONS POINTS MONITORING

| Emission Point Reference and Location | Monitoring Method | Monitoring Frequency | Relevant Procedures |
|--|--|---|--|
| A1-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. |
| A2-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. |
| A3- 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. |
| A4- 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 |
|---|--|---|--|
| A5 – 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. |
| A6 – 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. |
| A7 - 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. |
| A8 - 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. |
| A9 - 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. |
| A10- 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. |
| A11- 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. |
| A12- 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. |
| A13- 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 |
|--|--|---|---|
| A14 – Exhaust stack backup dual fuel (biogas/diesel) boiler | Daily sniff test monitoring for odours. May require annual exhaust emissions monitoring if required by permit. | Daily sniff test for odour. Annual emissions monitoring if required by permit. | 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. |
| A15 – Odour abatement unit vent | Stack emissions monitoring according to parameters outlined in permit (third party assessment) Odour sniff tests Process monitoring visual and functional checks. Whole system efficiency test (third party assessment) | Every 6 months Daily Daily/weekly/continuous Annually | Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules. |
| A16 - 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 |
|--|---|---|--|
| A17 - 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. |
| A18 – Odour abatement unit vent (tanker offtake point abatement unit) | <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> | Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules. |
| A19 – Vent from waste reception tank farm displaced air odour abatement unit. | <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> | Outlined in Odour Management Plan, Regular checks schedules, and Maintenance and monitoring Schedules. |

| Emission Point Reference and Location | Monitoring Method | Monitoring Frequency | Relevant Procedures |
|---|--|---|--|
| | Whole system efficiency test (third party assessment) | Annually | |
| A20 – Dewatering system tank (MBR) 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. |
| W1 – Discharge point to surface water (the river Trent) from dewatering (MRP). | <p>Visual inspection for odours and visible oils/suspended solids.</p> <p>Monitoring schedule for parameters outlined in BAT 8</p> | <p>Daily visual inspection of release point from site.</p> <p>Monthly</p> | <p>Daily environmental monitoring checks.</p> <p>Water quality discharge parameter benchmark levels.</p> |



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