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Australian Stock Exchange Company Announcements Office Exchange Centre Level 1 20 Bridge Street Sydney NSW 2000 AnaeCo Limited ABN 36 087 244 228 3 Turner Avenue, Technology Park Bentley, Western Australia 6102 PO Box 1287, Bentley DC WA 6983 Ph: +61 8 9361 4777 Fx: +61 8 9361 4888 info@anaeco.com www.anaeco.com

WMRC Project Update

Biological Ramp-up phase of Commissioning Completed

Highlights

- Biological Ramp-up phase of Commissioning successfully completed.
- DiCOM[™] bioconversion process has met expectations and is fully proven.
- Preparations are underway for commencement of Performance Trials.

AnaeCo Limited is very pleased to announce completion of the Biological Rampup phase of commissioning at the WMRC Project, now that the final item of equipment, the biogas scrubber, has been commissioned.

The 21st and final batch of MSW contributing to Biological Ramp-up was loaded into a bioconversion vessel in week commencing 29 June. The plant is now undergoing a short maintenance shutdown in preparation for the final phase of commissioning under the Design & Construct Contract, which is performance trials.

This concludes what has been a protracted Ramp-up phase lasting 12 months compared to the originally planned 18 week period. Key points of note for the Biological Ramp-up period include:

- 21 batches comprising more than 6,300 tonnes of MSW, over 12 months.
- Biological activity and biogas generation conducted continuously for 12 months despite numerous delays and interruptions to total plant processing caused by mechanical equipment failures requiring rectification work in other parts of the plant.
- All DiCOM[™] bioconversion phases (aerobic/transition/anaerobic) were completed as intended producing biogas and an organic product.
- DCS (Distributed Control System) and overarching SIS (Safety Instrumented System) managed all automated plant operations with high reliability.
- 484 tonnes of biogas were produced, which meets our commissioning expectations.
- Energy capable of being generated from biogas consistently supports the design objective that the plant will be a net energy producer.



• Biogas produced and flared has abated 3,625 tonnes of CO₂e, through the destruction of methane.

Net carbon abatement of 170 tonnes of CO_2e per week was achieved by the end of Ramp-up, accounting for site energy consumption. This is equivalent to taking 16 passenger vehicles off the road for one year¹. Annual processing at these levels would therefore be equivalent to taking 832 passenger vehicles off the road for one year.

- Organic product output from the bioconversion process has been delivered to the Principal's nominated off-taker for assessment. (Commercial arrangements for the off-take are being negotiated between the Principal and the off-taker and do not involve AnaeCo.)
- Minimal environmental (odour or noise) impacts.
- The protracted Biological Ramp-up period was adversely affected by manufacturer and equipment defects, notably, approximately 5 month delay as a result of process water storage tank leaks and approximately 2 months for faulty mechanical equipment integral to conveying systems servicing the bioconversion vessels.
- MRF processing, which produces the organic fraction of MSW as feedstock for bioconversion, is now running at 55-65% of capacity and has passed client's throughput tests which recorded performance at 115% of nominal design capacity. The trommel has performed consistently and reliably throughout this period, effectively separating fine and coarse fractions of waste.
- During the Biological Ramp-up phase a number of refinements were applied to the Wet Density Separation System (WDS) which was installed at this facility in a prototype form. Performance has significantly improved as a result of these refinements and the efficacy of removing glass, grit and heavy inerts from the fine fraction of waste produced by trommeling, has been proven.
- There have been a number of valuable engineering and operational lessons learned from this Biological Ramp-up period which will be applied in future plant designs.

ENDS

For further information, please contact:

David Lymburn – Managing Director

(08) 9361 4777

Media : James Murray – Head of Business Development

¹ CO₂e expressed as cars removed from the road annually has been calculated using the United States EPA Greenhouse Gas Equivalencies Calculator.



About AnaeCo

AnaeCo delivers waste resource recovery facilities based on the AnaeCo[™] System, incorporating the patented DiCOM[™] bioconversion process. The AnaeCo[™] System includes advanced sorting, recycling, anaerobic digestion and aerobic composting to recycle municipal solid waste (MSW) into renewable energy from biogas, organic fertiliser and recyclables such as steel, aluminium, glass and plastics, thus maximising diversion from landfill and ensuring social, economic and environmentally sustainable management of MSW.

The AnaeCo[™] System enables resource recovery intervention closer to source, with enhancement of existing waste transfer stations now a viable waste management option. AnaeCo's experienced team provides design, and commissioning services for AnaeCo[™] facilities.

For further information go to <u>www.anaeco.com</u>

About the WMRC Project

The WMRC Project involves the construction and commissioning of an AnaeCo[™] plant at the JFR McGeough Resource Recovery Facility in Shenton Park, Western Australia.

The JFR McGeough RRF is a solid waste transfer station owned and operated by the Western Metropolitan Regional Council.

The AnaeCo[™] plant is an asset owned by Funds managed by Palisade Investment Partners Ltd and is contracted to receive 55,000tpa of MSW.

The WMRC Project is the first full operational scale installation of the AnaeCo[™] System and is a transfer station retro-fit occupying less than 4,000m².



Figure 1 : AnaeCo[™] AWT Plant at WMRC JFR McGeough Resource Recovery Facility, Shenton Park, Western Australia