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Agenda Item:	
Meeting:	
Copy to:	

23 February 2016

Wayne Hart  
District Council of Mount Remarkable  
PO Box 94  
Melrose SA 5483

Dear Sir,

RE: WASTEWATER TREATMENT PLANT AT WIRRABARA

I refer to the application submitted by Mercator on behalf of the District Council of Mount Remarkable seeking approval to install a wastewater treatment plant at Wirrabara.

I advise that, pursuant to Public Health (Wastewater) Regulations, your application for the installation of a wastewater plant to treat a maximum hydraulic flow of 56.1 kL/day and BOD<sub>5</sub> load of 19.8 kg/day has been approved subject to the following conditions:

1. The approved system incorporates:
  - 1.1 12kL precast Ri Industries tank equipped with 2 grinder pumps and electronic flowmeter
  - 1.2 58kL intermittent anoxic/aeration reactor vessel constructed by SA concrete tanks with ITT Flygt WAS pump, 3.7kW Tsurumi self-aspirating submersible aerator and decant mechanism
  - 1.3 8kL sludge thickening tank
  - 1.4 12kL precast Ri Industries concrete decant balance tank
  - 1.5 Sodium hypochlorite disinfection system
  
2. The system is to be installed, commissioned, operated and maintained in accordance with:
  - 2.1 The plans and specifications as submitted and approved by the Minister for Health and Ageing (C/- Wastewater Management Section, Department for Health and Ageing).
  - 2.2 Manufacturers, installers and equipment suppliers' instructions and recommendations.
  - 2.3 The Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006 and any other relevant standards and codes
  - 2.4 Conditions of this approval.

3. In regards to the inspection and commissioning;
  - 3.1 The Minister for Health (C/- Wastewater Management Section, Department for Health and Ageing (DHA)) must be advised of the completion of installation, prior to commissioning the system.
  - 3.2 The Minister for Health (C/- Wastewater Management Section, DHA) is to be notified in writing of the commissioning date of the system.
  - 3.3 The Minister for Health (C/- Wastewater Management Section, DHA) reserves the right to inspect during construction, or upon completion, or not to inspect the installation.
4. **A Risk Management Plan for the system, in accordance with the Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1), must be submitted to the DHA within 6 months of the date of this approval.**
5. Operation and maintenance (O&M) manuals for the wastewater treatment plant and associated equipment are to be provided and maintained onsite for use by the system operator and maintenance personnel. The personnel are to be adequately trained to ensure the system is operated as required by the manufacturer and installation contractor as well as in compliance with this approval, including the reclaimed water quality monitoring and reporting requirements. Training shall also include Work Health and Safety aspects of system operation and maintenance. Appropriate signage advising of the use of chlorine is to be affixed to the building housing the chlorine containers and any ventilation requirements must also be adhered to.
6. The wastewater treatment plant is to produce recycled water complying with the following criteria:
  - 6.1 A mean value BOD<sub>5</sub> not greater than 20 mg/L
  - 6.2 A mean value of suspended solids not greater than 30 mg/L
  - 6.3 A median thermotolerant coliform (*E coli*) count not greater than 100/100 mL
  - 6.4 A mean total chlorine level of not less than 1 mg/L

Monitoring is to be carried out weekly for 4 weeks, fortnightly for 8 weeks and monthly for 9 months, then pending successful completion of this regime, on a **quarterly** basis thereafter. Sampling and analysis of samples are to be carried out by a NATA registered laboratory and the results are to be submitted to the DHA as soon as they become available.

After satisfactory completion of the initial 12 months, the results are to be submitted to the DHA in the form of an annual report due on the 30<sup>th</sup> September each year (for the period of 1<sup>st</sup> July to 30<sup>th</sup> June of each year).

However, the DHA reserves the right to request for the monitoring results at anytime. The owner and operator of the system are also responsible for reporting the results to the DHA immediately when there is a malfunction of the wastewater system or its components and/or the recycled water quality criteria above is not achieved, together with the measures taken to operate the system as per the requirements of this approval.

All such malfunctions and/or reclaimed water quality variations and the measures taken to rectify the problem(s) are also to be detailed in the annual report
7. Backflow prevention devices must be fitted to the system where required as per AS/NZS 3500 and SA Water requirements to ensure all water supplies are protected from cross

contamination. Certificates of compliance for backflow prevention work carried out are to be submitted to the DHA and SA Water.

8. Within **eight weeks** of the completion of the installation, engineering certification by an independent chartered professional engineer experienced in wastewater system design, construction and operation, considering all the conditions of this approval, is to be submitted to the Minister for Health (C/- Wastewater Management Section, DHA) including:
  - 8.1 Structural soundness of the installation for all aspects of the system including a statement that all the tanks are fit for purpose.
  - 8.2 Compliance of all components of the installation considering:
    - 8.2.1 Suitability of materials used, construction/installation methodology, trenching, bedding, jointing, required clearances etc of all drains with the required technical specifications, and
    - 8.2.2 All relevant standards and codes, the conditions of this approval and the manufacturer's requirements
  - 8.3 Water tightness testing of the system as per the required specification.

The applicant is responsible to ensure that auditing of the wastewater system during installation is undertaken as per the standards, guidelines and specifications referred to by this approval and that compliance is maintained with installation methods, correctness of materials used and the testing of the system.

The engineering certification is to clearly state the compliance or otherwise with the approval, of both system components and the system as a whole. The engineering certification is to be based on the assessment results including tests carried out during construction of the wastewater system.

9. Within **eight weeks** of the completion of the installation, "as constructed drawings" must be provided to the Minister for Health (C/- Wastewater Management Section, DHA) indicating the "as constructed" information. Drawings must be of an acceptable quality utilising standard notation, legends and legible detail and include cross sectional details, layout plans and details of the specific treatment plant components.
10. Pursuant to the Public Health (Wastewater) Regulations, the Minister for Health (C/- Wastewater Management Section, DHA) reserves the right to vary any or all of the approval conditions, and require the repair, replacement, rectification, or alteration of the system or any part thereof should at any time:
  - 10.1 The system or a component thereof not be manufactured, installed and/or operated in accordance with the approval conditions; or
  - 10.2 The system is defective and not able to perform the function for which the approval was issued; or
  - 10.3 The system is operated in a manner that is prejudicial to public and environmental health, or causes environmental nuisance; or

Approved by:

(Mr Anthony Farror) Date: 23 February 2016

Manager, Wastewater Management Section  
Delegate of the Minister for Health

**CC: Philip Mercer, Mercator**

**References:** - Wirrabara Mt Remarkable WWTP technical proposal

- Note 1:** The approval does not abrogate responsibilities under other Acts or Regulations to obtain the necessary approvals, permits or licences from other agencies including but not limited to:
- Environmental Protection Agency (EPA)
  - Department of Environment, Water and Natural Resources
  - Development Assessment Commission (DAC) and/or the Local Council
  - Office of the Technical Regulator
- Note 2:** Sludge from the system is to be taken away by an EPA licensed operator to an approved site and in accordance with the SA Biosolids Guidelines.
- Note 3:** This approval is issued on the basis of information provided by Mercator and that operation and maintenance of the scheme once constructed will be carried out by the owners or their agents.
- Note 4:** No commissioning of the system is to take place until "Engineering certification" and "As constructed drawings" have been provided to the Minister for Health (C/- Wastewater Management Section, DH) in accordance with this approval.
- Note 5:** All extensions/upgrades/modifications to this scheme will be subject to separate application(s) and approval from the Minister for Health (C/- Wastewater Management Section, DHA).