



Territory-Wide Services
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Our Ref: DF2010/1431
DD2015/1644

Suncoast Waste Water Management
59 Industrial Estate
KUNDA PARK QLD 4556

ATTENTION: MR. ADAM PRESCOTT

Dear Mr. Prescott,

**RE: PRODUCT APPROVAL FOR OZZIKLEEN RP10
AERATED WASTEWATER TREATMENT SYSTEM**

Reference is made to your application seeking product approval for the above system. This approval supersedes the product approval 02/10 issued to Suncoast Waste Water Management on 20 March 2010.

I advise that, pursuant to Public and Environmental Health Regulation 91, a product approval is granted to market and sell the **Ozzikleen RP10 Aerated Wastewater Treatment System** ("the system") in the Northern Territory.

The product approval number is 06/15.

1. Description of the System

1.1. The system is contained in a single, cylindrical vertical axis, polyethylene collection well with an operating design capacity of 4150 litres and an emergency storage volume of 1000 litres. The system has a design capacity of 10 EP, with a maximum hydraulic load of 2000 l/day and BOD₅ loading of 700g/day. The operational water level in the system is 1600 mm. The system comprises:

- A stilling well within the aeration/sedimentation chamber that prevents the incoming wastewater from disturbing the still water conditions required for settling and decanting.
- An aerated/sedimentation chamber with a capacity of 4150 litres where the treatment of the wastewater occurs through a programmable cycle of three intermittent phases.
 - An aeration phase when an aerobic environment is provided for microorganisms to feed and grow on the organic waste and establish an 'activated sludge'.
 - A settling phase when still conditions allow for settlement of the activated sludge to the bottom of the tank, leaving a layer of clear water at the top.

- A decanting phase when still conditions are maintained but clear, treated water is drawn from near the surface of the tank for delivery to the chlorinator, basket strainer and the chlorine contact tank.
- A combined 350 litre chlorine contact chamber/irrigation pump chamber with a capacity of 300 litres for chlorine contact of the effluent. Flow to the chamber is from the main tank through a chlorinator and basket strainer.
- A 350 litre waste sludge storage chamber that allows for settling and thickening of sludge for a period in excess of 6 months before the need to pump out and dispose of the sludge.
- Air is supplied to the aeration chamber by a Reitschle Thomas LP80HN air blower with an output of 77 litres/min. Air from the blower is also used to operate the decanter and to deliver waste to the sludge storage chamber.
- A Reeve RVS300 submersible pump with level control and output 220 litres/minute at 5 metres head, supplies treated effluent for irrigation.

2. Conditions of Approval

2.1. General

- 2.1.1. Product approval is granted for a period of five years from the date of this approval (**i.e. until 3 March 2020**) and will lapse unless renewed by the submission of an application and receipt of a product approval from the Director Environmental Health at least 1 month prior to the expiry date.
- 2.1.2. The system is approved to serve single dwelling units up to 10 EP or non-residential developments with a combined wastewater flow of 2000 litres per day.
- 2.1.3. The system is manufactured by Suncoast Waste Water Management ("the manufacturer") and shall be supplied, constructed and installed in accordance with the drawings and documents listed provided to the Department of Health (DoH) that include Drawing Nos. GD-RP10-H10.A and GD-RP10-H10.D.
- 2.1.4. The system shall be manufactured in accordance with the requirements of:
 - AS/NZS 1546.1:2008 as per StandardsMark Licence Certificate No. SMKB20032 granted by SAI Global.
 - AS/NZS 1546.3:2008 as per StandardsMark Licence Certificate No. SMK02608 granted by SAI Global.
- 2.1.5. Any modification or variations to the design of the system shall be submitted for separate consideration by DoH.
- 2.1.6. Lids and access openings are to be fitted so as to be childproof.
- 2.1.7. The system must be fitted with an audio-visual alarm system installed in an appropriate location.
- 2.1.8. Each system shall be permanently and legibly marked with the following information:
 - Brand name of the system;
 - Manufacturer's name or registered trademark; and
 - Month and year of manufacture.

- 2.1.9. The system must comply with the provisions of the *Building Act* and Regulations and the *Public and Environmental Health Act* and Regulations that refer to the Code of Practice for Small On-site Sewage and Sullage Treatment Systems and the Disposal or Reuse of Sewage Effluent ("the Code"), the Administrative Procedures linked to the Code and any amendments to these documents.
- 2.1.10. All pumps and controls supplied with the system are to be suitable and durable for their intended purposes and operating environment within the Northern Territory.
- 2.1.11. DoH reserves the right to request from the manufacturer, results of field-testing of the system that were carried out for other Regulatory Authorities.
- 2.1.12. Notwithstanding the performance evaluation testing requirements for AWTS as detailed in AS/NZS 1546.3.2008, where a system is installed and operated in accordance with the approval conditions, effluent from the system taken in **any random grab sample** shall comply with the following:
- 5-day Biochemical Oxygen Demand (BOD5) less than 30 mg/L
 - Total Suspended Solids (TSS) less than 45 mg/L
 - E.coli (where disinfection is provided) less than 100 cfu/100ml
 - Free Available Chlorine (FAC) between 0.5 and 2.0 mg/L, where chlorination is the disinfection process.

When part of a regional sampling program 90% of all samples comply with the following:

- 5-day Biochemical Oxygen Demand (BOD5) less than 20 mg/L
 - Total Suspended Solids (TSS) less than 30 mg/L
 - E.coli (where disinfection is provided) less than 20 cfu/100mL with no sample exceeding 100 cfu/100mL
 - Free Available Chlorine (FAC) between 0.5 and 2.0 mg/L, where chlorination is the disinfection process.
- 2.1.13. DoH, by written notice, may cancel this product approval and require the repair, replacement, rectification, alteration of the system or part thereof:
- Should the system or component thereof no longer be manufactured or available for purchase; or
 - If the system is defective and not able to perform the function for which the approval is issued; or
 - If the distributor fails to comply with one of more approval conditions; or
 - If the distributor within 30 days, fails to remedy a breach for which written notice has been given by DoH.
- 2.1.14. DoH, by written notice, may demand appropriate works be made by the owner if the system is operated outside the specifications stated in Section 1.1, or in a manner that is prejudicial to public and environmental health or causes environmental nuisance.

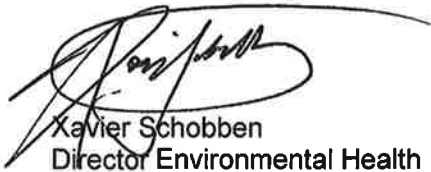
2.2. Installation, Operation and Maintenance

- 2.2.1. The system must be installed by a licensed plumber in accordance with the *Building Act* and Regulations (within Building Control Areas) and the *Public Health and Environmental Health Act* and Regulations (outside Building Control Areas). The Department of Lands, Planning and the Environment (DLPE) - Building Advisory Services can confirm the extent of Northern Territory Building Control Areas.
- 2.2.2. The installation of each system shall comply with the manufacturer's installation instructions and shall comply with the minimum setbacks as specified in the Code.
- 2.2.3. All electrical work must be carried out by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.
- 2.2.4. NT Local Government Authorities have no jurisdiction over the installation of onsite wastewater treatment systems.
- 2.2.5. No person should permit or cause any of the following substances to be discharged into the system, as it may harm, impair or decrease its effective operation:
 - any storm water, including roof and rainwater tank overflow, and surface drainage waters;
 - any backflush waters from a swimming pool or water softener;
 - any discharge or backflush from a spa bath/pool;
 - any sanitary napkin, clothing or plastic material or liner;
 - any petrol or other flammable or explosive substance whether solid, liquid or gas;
 - any disinfectant or deodorant, antiseptic or germicide powder or fluid, unless specifically stated by the manufacturer to be suitable for use with septic tanks and only in quantities necessary for normal household cleaning;
 - any trade waste likely to be detrimental to the natural flora and fauna within the system; and
 - any matter or substance which in the opinion of DoH or DLPE is likely to impair the effective working of the system.
- 2.2.6. Officers from DoH and DLPE reserve the right to inspect installations and also to assess installation and their performance.
- 2.2.7. The system is not to be installed in remote communities unless there is prior approval from DoH.
- 2.2.8. Vehicular traffic is to be excluded from the area around the system.
- 2.2.9. Cross connection of the system with the water supply for the premises must be prevented at all times. Backflow prevention devices are to be installed in accordance with DLPE requirements.
- 2.2.10. Commercial applications for the system will be dealt with on an individual basis and require Wastewater Works Design Approval by DoH.

- 2.2.11. Any dischargers involved with the manufacture, processing, wholesaling, preparation and retail of food products will be required to install pre-treatment equipment to the system. Any other types of dischargers will need written approval from the manufacturer. Only pre-treatment devices approved by the manufacturer will be permitted.
- 2.2.12. The system can only be installed in an unsewered area. Once sewer is available to the premises, this system must cease to operate and all wastewater must then be discharged to the sewer.
- 2.2.13. NT Distributors of the system shall:
- ensure that the purchaser of a system is provided with the relevant DoH notification/application forms which must be completed and lodged with DoH by the installer/agent. The distributor must remind the purchaser of the DoH administrative procedures concerning the installation of on-site wastewater systems and if necessary refer purchasers to DoH for further information;
 - ensure that the purchaser is provided with a home owner's manual;
 - maintain a list of installed systems that includes details of system type, date sold, owners name, owners address, owners contact details, installers name, installers contact details, service dates and service agent; and
 - maintain a list of service dates and service agent (if not the Distributor); and
 - advise DoH of the systems that do not have current maintenance agreements with the Distributor.
- 2.2.14. The system once installed, must be maintained in a fully operational and sanitary state at all times by the user / owner in accordance with the product approval conditions, manufacturer's requirements and any other specific requirements by DoH or DLPE.
- 2.2.15. DoH requires that the owner/occupier of a premise enters into and maintains an annual service contract with the manufacturer or the manufacturer's appointed agent. If this is not practicable then DoH will consider an alternative arrangement.
- 2.2.16. The system should be serviced at the intervals in accordance with the details set out in the RP10 Owner's Manual. Records are to be kept of all maintenance of the system and are to be maintained on-site. The local DoH Environmental Health Office may request copies of the service records.
- 2.2.17. Desludging is to be carried out in accordance with the manufacturer's instructions, though it is recommended that systems with a high loading are frequently desludged.
- 2.2.18. The irrigation system is required to be installed prior to the use and commissioning of the system. The irrigation shall comprise:
- surface drip irrigation covered by mulch; or
 - subsurface drip irrigation installed at approximately 100 mm depth; or
 - mound system; or
 - absorption trenches or evapotranspiration bed.

Note that spray irrigation is not permitted without prior permission from DoH.

Yours sincerely



Xavier Schobben
Director Environmental Health
Environmental Health

3 March 2015

Cc.

Environmental Health Officers
DLPE – Building Advisory Services
Dol – Construction Agency
NT Environment Protection Authority
Power and Water Corporation