Micro-nova System Specifications

System Description

The system is a one tank system with engineering drawings provided in Appendix A. The system is constructed within a standard 3000L polymer tank that is manufactured by Everhard Industries. This tank is manufactured to 1546.1 (see Appendix B).

A clarifier and pumpwell are housed in the tank. Submerged media and aeration legs are affixed to these internal tanks. Air is provided by a blower that is mounted on the tank and the media provides surface area for the growth of bacteria to allow for the biodegradation of organic material in the wastewater.

Water is pumped through a sand filter for final polishing prior to irrigation.

The system is designed to treat up to 600L/day of Greywater to secondary standard (BOD_5 <20mg/L, Suspended Solids<30mg/L, E.coli<1CFU/100mL)

Operation

Connection to Domestic Source

The Installation Procedure is provided in Appendix C with the Home Owners Manual.

The system is to be connected to a greywater source, (bathwater, showerwater and laundry) from a domestic household. This connection is to be made via a diverter that is closed during periods of when the application area is saturated. This will isolate the system and ensure that no treated wastewater escapes from the application area.

Aerobic Treatment

Air is supplied at 100L/min. using a LA-80A Blower that is manufactured by Nitto. This air is distributed via a manifold to two airlift devices and three aeration legs and ensures that the entire system remains aerobic. The pressure in the distribution is monitored via an electronic pressure switch. In the event of a blower failure an alarm will be signaled.

Wastewater that flows into the aerobic treatment zone where aerobic bacteria grow on support media that is housed in this zone. Bacteria biodegrade and biosorb the impurities in the wastewater allowing for the improvement of water quality.

An airlift is located in the aerobic zone that lifts aerobically treated wastewater from the aerobic treatment zone to the clarifier allowing for a balancing volume to be maintained in the aerobic treatment zone and minimise the impacts of high flows through the system.

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Clarification

Water is transferred into a 430L clarifier allowing for the removal of heavy solids. These solids settle to the bottom of the chamber are pumped to the inlet to the Aerobic treatment Zone.

Disinfection

Clarified wastewater flows over chlorine tablets into a pumpwell providing for disinfection. A pump is located in this chamber which is activated by its own integrated float switch. A float switch activates a high level alarm to indicate a pump failure.

Filtration

Treated wastewater is filter through a sand filter before being delivered to the application area.

Required Servicing

The system must be serviced every three months by a qualified service professional. This will be specified in purchase documentation provided to the owner.

General servicing will include but not be limited to –

- general operation of the system.
- the testing of treated water quality.
- addition of chlorine tablets.
- inspection and, where necessary, maintenance of irrigation area.

Sludge is expected to accumulate in the aeration tank and will require pumping out every 2-5 years. This will be dependant on the volume and quality of wastewater collected.

Servicing Procedure is provided in Appendix XXX

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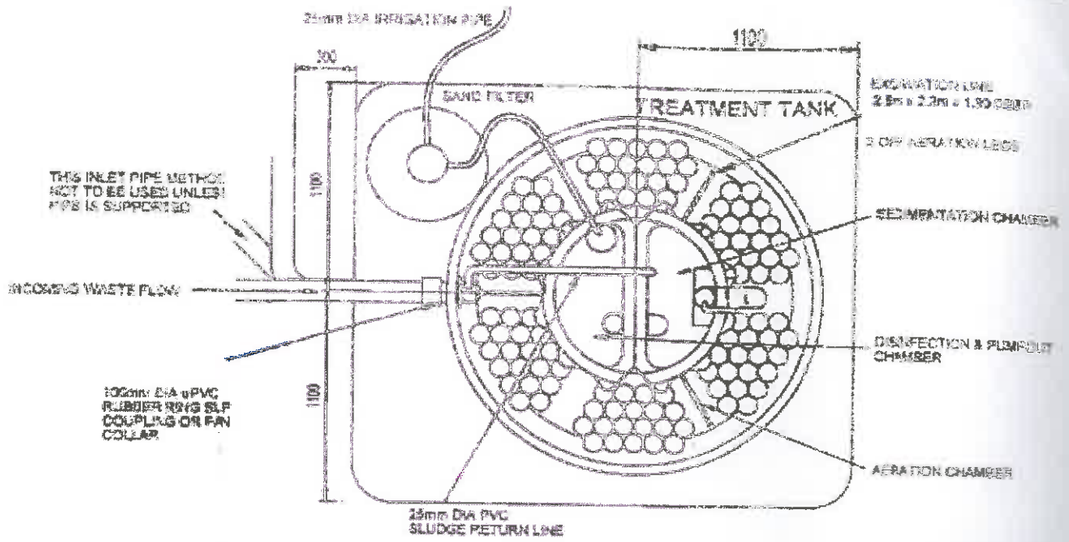

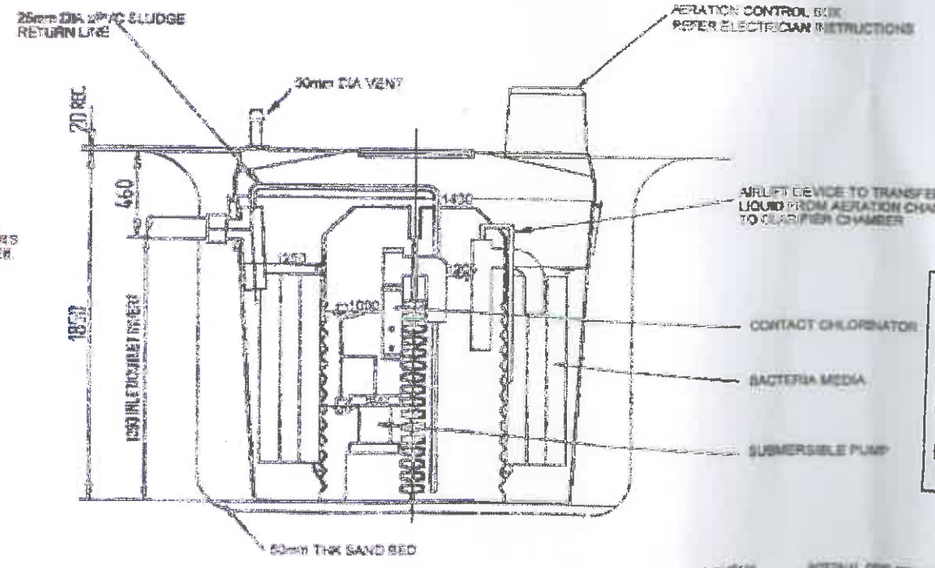

TANK INSTALLATION AND PLUMBING TO BE IN ACCORDANCE WITH PLUMBING INSTRUCTIONS PROVIDED WITH SYSTEM.

EFFLUENT APPLICATION/IRRIGATION SYSTEM TO BE AS PER INSTRUCTIONS OR DESIGN PROVIDED WITH EACH INDIVIDUAL SYSTEM.

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AMENDMENT A 6/12/2006 INTERNAL FIBREWORK MODIFICATION AS PER J LANGFORD REQUEST

DRAWN B.D	DATE 6-12-2006	APPROVED FOR MANUFACTURE	MATERIAL	SIZE	SCALE 1:25	REF. No.

TITLE: ARUANOVA GREYWATER TREATMENT SYSTEM 3000 lt POLYMER TANK SYSTEM

EVERHARD INDUSTRIES PTY LTD
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DRAWING NUMBER MP - 3561

REVISION A

DATE 6/12/06