CHIEF EXECUTIVE APPROVAL 13/2014
AMENDMENT NO. 1

Plumbing and Drainage Act 2002, part 5.

Approval

1. The Envirotech ASF – Generation II ("the system") manufactured by Envirotech Treatment Systems (ABN 071 419 150 455) ("the manufacturer") was approved in Queensland and subsequently issued with a Chief Executive Approval No. 13/2014, under the Plumbing and Drainage Act 2002 (PDA) on 17 December 2014. This approval continues in force until 16 December 2019.

2. The Chief Executive received notification on 29 June 2015, that Envirotech Treatment Systems has transferred the rights of the Envirotech ASF – Generation II Chief Executive Approval No. 13/2014 in Queensland to Environitech IP Pty Ltd ATF Environitech IP Trust (ABN 76 262 979 491).

3. Approval is granted for the amendment described in clause 2 above and the conditions applying to the authorisation dated 17 December 2014 apply to this amended approval.

Lindsay Walker
Director
Plumbing Drainage and Special Projects

Date approved
2/7/15
Approval

1. The Envirotech ASF – Generation II ("the system") described in the Specifications and Drawings in the attached Schedule and manufactured by Envirotech IP Pty Ltd ATF Envirotech IP Trust (ABN 76 262 979 491) ("the manufacturer") has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code) dated 15 January 2013.

2. Approval is granted for the advanced secondary quality wastewater treatment system, subject to compliance by the manufacturer with the requirements of the Plumbing and Drainage Act 2002, part 5 and the conditions of approval detailed below.

3. This approval, the conditions of approval and the Schedule comprise the entire Chief Executive Approval document.

4. Any modification by the manufacturer to the design, drawings or specifications scheduled to this approval must be approved by the Chief Executive.

Conditions of approval

5. The manufacture, installation, operation, service and maintenance of the systems must be in conformity with the conditions of this Chief Executive Approval.

6. The advanced secondary quality wastewater treatment system, which is an example of the approved systems, may only be used on premises that generate per day

   (a) a maximum hydraulic loading of 1,500 litres; and
   (b) a maximum organic loading of 700 grams BODs.

7. The system must continue to meet the requirements of advanced secondary quality wastewater treatment system, producing the following effluent quality -

   (a) 90% of the samples taken must have a BODs less than or equal to 10 g/m³ with no sample greater than 20 g/m³.

   (b) 90% of the samples taken must have total suspended solids less than or equal to 10g/m³ with no sample greater than 20g/m³.

   (c) 90% of the samples taken must have a thermotolerant coliform count not exceeding 10 organisms per 100 mL with no sample exceeding 200 organisms per 100 mL.

   (d) The total chlorine concentration must be greater than or equal to 0.5g/m³ and less than 2.0 g/m³ in four out of five samples taken.
8. Each system must be serviced in accordance with the details supplied in the owner's service and maintenance manuals.

9. Each system must be supplied with —
   
   (a) a copy of this Chief Executive Approval document;
   (b) details of the system;
   (c) instructions for authorised persons for its installation;
   (d) a copy of the owner's manual to be given to the owner at the time of installation; and
   (e) detailed instructions for authorised service personal for its operation and maintenance.

10. This approval does not extend, apply to, or include the land application system used in conjunction with an approved system installed on premises.

11. The Chief Executive may, by written notice, cancel this approval if the manufacturer fails — to comply with one or more of the conditions of approval; or within 30 days, to remedy a breach, for which a written notice been given by the Chief Executive.

12. This approval may only be assigned with the prior written consent of the Chief Executive.

13. This approval expires on 16 December 2019 unless cancelled earlier in accordance with paragraph 11 above.

Lindsay Walker

Director
Plumbing, Reform and Legislative Services

Date approved: 02 July 2015
SPECIFICATION SHEETS

Pumps – 1. Filter Dosing Pump – automatic (in-built ON-OFF float switch
Type – centrifugal – vortex
Model: AV130 “Global”
Make: Leader
Country of Manufacture: Italy
Supplier: ATS Pumps BRISBANE
Performance: max head 5m
  max flow 130L/min
Power requirement: single phase 240V, 330 Watt

2. Waste Sludge Pump – automatic
   - as per 1

3. Effluent Pump – automatic
   As for 1 and 2 except large pump
   Performance: max head 9m
   max flow 330L/min
   Power requirement: single phase 240V, 750 Watt

Float Switches

1. High-level Alarm Filter Dosing Pump Well
   Type – plastic floating ball with internal micro-switch
   Function – 3-wire unit
   Make – Q.E.
   Country of manufacture: Italy
   Supplier: ATS Pumps BRISBANE
   Current Rating: max 16 amps

2. High-Level Alarm Effluent Pump Well
   - as per 1

U.V. Disinfection Unit

Location: top of tank connected into effluent irrigation pipeline
Type of lamp: high output low pressure mercury vapour lamp
Max throughput: 42 Lpm
Power requirement: 48 Watt
Material of Manufacture: stainless steel
Name of Manufacturer: Sterilight
Model no. of unit: UV S12Q-PA
Supplier: IBC water

Liner
   - for A.S.F. Gen II size 6m x 1.2m
   - required liner size
     (6+1.5) x (1.2 +1.5) – to allow for walls and roll-up at top to finish
     = 7.5m x 2.7m
   - material – polypropylene
- construction – woven strands with finish coating to both sides
- equivalent to Rheem CANVACON 5000 (used in truck tarps)
- supplier P.S.A. – Protective Structures Australia, YATALA

Geotextile
- manufacturer and supplier: Geofabrics Australia
- factory Melbourne:
- company’s Qld office: Sumner Park
- grade of product: A12
- layer at top of A.S.F. to prevent silt entering the media

Pipework
- P.V.C.
  - 100mm dia sewer
  - 25mm dia Class 12
  - fittings to suit
- supplier: REECE PLUMBING

Raw Materials for A.S.F.
- supplier: BORAL RESOURCES
Layer across floor of pit to cover the slotted underdrain pipe
- general thickness 150mm
- with extra mounding over the crown of underdrain
- size of material 20mm
- to be supplied clean/washed with no finer material

Body of A.S.F.
- thickness of layer: 600mm
- size of material: all between 5 and 7 mm
- to be supplied clean/washed with no finer material
- product used by BORAL in the manufacture of bitumen
  aggregate for road pavement construction
Top layer into which the pressure distribution pipework/manifold is
  embedded
- depth laid before placing pipework manifold 100-150mm
- final covering layer 50mm deep
- size of material 20mm
- to be supplied clean/washed with no finer material

Sand for furnishing – to be applied after
- placing the geotextile layer across the 20mm layer
- grading of sand – “medium sand” not a fine sand (ideally)
- sometimes supplied a “manufactured sand” with a similar
  size distribution/grading to “medium sand” (naturally
  formed)

Approximate Quantities* for ordering

<table>
<thead>
<tr>
<th>Aggregate Type</th>
<th>Cubic Capacity</th>
<th>Weight (dry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7mm aggregate</td>
<td>5.3m³</td>
<td>7.4 tonne</td>
</tr>
<tr>
<td>20mm aggregate</td>
<td>3.5m³</td>
<td>5.3 tonne</td>
</tr>
<tr>
<td>Medium sand</td>
<td>2.0m³</td>
<td>3.0 tonne</td>
</tr>
</tbody>
</table>

*extra material for bedding purposes not incl
CONCRETE SEPARATE TANKS

WASTE SLUDGE PIPE 25mm ID PYC

FLOATING BALL VALVE TO PREVENT CROSS CONNECTION REFER INSET A

PRESSURE PIPE TO ASP. DIAL

FLOW BAL CHAMBER TANK

3000L SEPTIC TANK

SLIP PUMP

WASTE SLUDGE TO DEBIT OF PRIMARY TREATMENT TANK

SUMP PUMP

WASTE SLUDGE

INLET B

CLARIFIER 1m DIAL

PRESS PIPE TO A.S.F.

WASTE SLUDGE FROM ASP.

MASSEN BIAL.

OUTLINE OF HANFORD

OUTLET REVERSE

FLOW BAL CHAMBER TANK

FLOW BAL CHAMBER TANK

3000L SEPTIC TANK

SUMP PUMP

WASTE SLUDGE

SUMP PUMP

WASTE SLUDGE

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AJ

CHRISS PALMER

SEP 2007

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