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**WATERLESS COMPOSTING TOILETS (WCT)
ACCREDITATION GUIDELINE**

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**PART 4, Clause 43(1)
LOCAL GOVERNMENT (APPROVALS) REGULATION, 1999**

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MAY, 2005.

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ABBREVIATIONS

| | |
|--------------------|---|
| AS/NZS 1546.2-2001 | Australian Standard/New Zealand Standard "Onsite Domestic Wastewater Treatment Units, Part 2: Waterless composting toilets" |
| cfu | colony forming units |
| EPA | Environment Protection Authority |
| NATA | National Association of Testing Authorities |
| NSW Health | NSW Department of Health |
| WCT | Waterless composting toilet |
| WMAC | Wastewater Management Advisory Committee |

DEFINITIONS

For the purpose of the guideline the definitions given in AS/NZS 1546.2 and those below apply:

| | |
|---------------------|--|
| blackwater | human excrement and matter contaminated by human excrement |
| chute | a vertical, unrestricted tube to convey human excrement to the composting chamber. |
| dry consistency | dry to touch, but having a moisture content of about 40 to 70%. |
| greywater (sullage) | domestic wastewater excluding toilet waste. |
| humus | dark organic materials produced by decomposition of vegetable and animal matter. |
| single dwellings | includes dual occupancy dwellings. |
| wastewater | means liquid and solid human organic material generated by a domestic premises and includes both blackwater and greywater. |

WATERLESS COMPOSTING TOILETS (WCT) ACCREDITATION GUIDELINE

1 OBJECTIVES

The objectives of this Guideline are to:

- provide a set of performance statements which define the requirements for WCT's;
- provide a performance evaluation test against which any WCT, conventional or innovative, may be assessed;
- provide details for manufacturers of WCT's to enable product accreditation by an independent third party;

2 SCOPE

This guideline sets out the minimum requirements for accreditation by the NSW Health Department (NSW Health) of waterless composting toilets (WCT) also known as humus closets and biological toilets, which treat human excreta and domestic organic matter from single dwellings. It is recommended that WCT's only be accredited where an on-site wastewater system can be provided for the disposal or utilisation of greywater (sullage).

A manufacturer or a person who distributes plans of WCT's is expected to produce a specification for the WCT and place the WCT under a testing regime before accreditation may be granted by NSW Health. Requirements for manufactured WCT's and where WCT's are to be built according to distributed plans and specification for their installation are contained in this guideline.

NSW Health accreditation of home built WCT's or those designed specifically for an individual premises is not required. (See Clause 43(2), Local Government (Approvals) Regulation 1999).

3 LEGISLATION

Section 68, Local Government Act, 1993, prescribes that *"a person may carry out the activity specified in the following table only with the prior approval of the council."* The table referred to contains Part C - Management of Waste, Item 5, which states, *"install, construct or alter a **waste treatment device** or a **human waste storage facility** or a drain connected to any such device or facility."*

Clause 25 of the Local Government (Approvals) Regulation 1999, defines **SMF** to mean:

- "(a) a **human waste storage facility**, or*
 - (b) a **waste treatment device** intended to process sewage,*
- and includes a drain connected to such facility or device."*

This definition provides the link between the term **waste treatment device** used in section 68 of the Act and a **SMF** where a waste treatment device for the purposes of the Regulation is a SMF.

Clause 43 of the Local Government (Approvals) Regulation 1999, also clarifies the accreditation role of NSW Health and the installation approval role of local councils and states *"A **council must not approve** the installation or construction of a **sewage management facility to which this Division applies** unless the council is satisfied that the facility is to be installed or constructed to a design or plan that is the subject of a **certificate of accreditation** from the **Director-General of the Department of Health**, being a certificate that is in force."*

A WCT is a sewage management facility, designed to treat human excreta and other added organic material, arising from the day to day activities of a single dwelling occupied by a maximum of ten (10) persons. WCTs of a larger capacity or non-domestic installations are subject to the local council but not to the NSW Health accreditation process.

NSW Health accreditation of a WCT includes it's associated equipment. A certificate of accreditation issued by the Director-General of NSW Health is to facilitate an approval to install, construct or alter a WCT issued by the Local Authority under the provisions of Section 68, Local Government Act, 1993.

A certificate of accreditation issued by the Director-General is issued for a specific WCT produced by a specific manufacturer.

It should be noted that NSW Health accreditation does not include approval to install nor approval of the final disposal / reuse / land application system. This is a matter for the local authority which should consider relevant Australian Standards, site assessments, recommendations from the Department of Local Government, and its own sewage management strategy.

4 ROLES OF INVOLVEMENT

4.1 Local Authorities

Local councils may grant approval to construct and install a WCT at a particular site in accordance with Section 68, Part C - Management of Waste, Local Government Act, 1993, and Part 4, Local Government (Approvals) Regulation 1999.

Similarly, local councils may grant approval to operate a WCT at a particular site in accordance with Section 68, Part C - Management of Waste, Item 6 Operate a system of sewage management (within the meaning of section 68A), and section 68A Local Government Act, 1993, and Part 4, Local Government (Approvals) Regulation 1999.

4.2 Department of Environment and Conservation (DEC)

The DEC is not involved in the accreditation process of SMF.

4.3 NSW Department of Health

4.3.1 It is a primary statutory function of NSW Health to administer accreditation of SMF to which clause 43 of the Local Government (Approvals) Regulation, 1999, applies.

4.3.2 NSW Health convenes the Wastewater Management Advisory Committee. All matters for consideration by the Committee should be forwarded to the Manager, General Environmental Health Unit, Department of Health, PO Box 798, Gladesville, NSW, 1675.

4.3.3 Public Health Units receive and disseminate information to, and conduct liaison with, local councils.

4.4 Independent Testing Agency

4.4.1 An independent testing agency is to be engaged by the SMF manufacturer to arrange, document, coordinate and supervise all testing activities conducted on the SMF and to prepare a final evaluation report for submission to the NSW Department of Health.

4.4.2 The independent testing agency must be a quality management certification body accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) or by another accreditation body with which JAS-ANZ has a memorandum of understanding.

4.4.3 Any laboratory engaged by the independent testing agency to perform bacteriological and chemical determinations shall be National Association of Testing Authorities (or recognised equivalent) registered for the tests performed.

4.4.4 The laboratory shall develop a sampling methods protocol in conjunction with the independent testing agency to define role and responsibilities, nominate equipment needed, establish sampling procedures (including quality assurance procedures) including an audit of the sampling program.

5 ACCREDITATION REQUIREMENTS

NSW Health has adopted relevant clauses of the Australian Standard / New Zealand Standard, AS/NZS 1546.2-2001 "Onsite domestic wastewater treatment units Part 2: waterless composting toilets" where indicated in this Guideline, for the statutory purposes of accreditation of WCT.

A NSW Health certificate of accreditation will only be issued to a manufacturer of a WCT which complies with sections 5, 6, 7, 8, 9, 10 and 11, of this document and may be issued subject to conditions. Some of the standard conditions which may be applied are contained in section 12.

6 APPLICATION CRITERIA

When testing of the WCT has been completed an application for accreditation of the WCT in the format of Appendix 1 shall be submitted to the Manager, Environmental Health, NSW Health Department. The application for accreditation shall contain:

- 6.1 the prescribed fee, if any;
- 6.2 an evaluation report completed by an independent testing agency detailing the testing methods used in accordance with section 9, inclusion of all logsheets, comparing performance against the test criteria, and detailing the security arrangements adopted to ensure testing integrity;
- 6.3 documentation showing accreditation of the testing agency as a third party quality management certification Body by the Joint Accreditation System of Australia and New Zealand (JAS - ANZ) or by another accreditation body with which JAS-ANZ has a memorandum of understanding;
- 6.4 documentation that the laboratories used for bacteriological determinations are National Association of Testing Authorities (NATA) registered;
- 6.5 details of the design criteria and design calculations in accordance with section 8;
- 6.6 a statement of the warranty and guaranteed service life of the WCT and all components in accordance with section 10;
- 6.7 product approval to the StandardsMark Quality Assurance Program or program deemed equivalent by NSW Health in accordance with section 11;
- 6.8 a copy of the manuals and service schedule specified in section 12;
- 6.9 three copies of plans to scale on A3 paper, dimensioned and accompanied by a listing of all components and component details, including name, model, size description, function, material of manufacture and location in the WCT. All components are to be shown.
- 6.10 a printed outline plan of the WCT on A4 size paper suitable for use with the submission of applications under Section 68, Local Government Act, 1993, and Local Government (Approvals) Regulation 1993; and
- 6.11 an undertaking to provide one set of engineering drawings specified in 6.9 and one copy of the printed plan specified in 6.10 to each local authority in whose area the WCT are to be installed.

NOTE: A preliminary application may be submitted for comment and clarification prior to commencement of any tests and submission of a formal application.

7 PERFORMANCE REQUIREMENTS AND PERFORMANCE CRITERIA

7.1 Scope

This section is intended to outline the performance requirements and performance criteria for WCT and their associated fittings.

7.2 Function and context of use

The function of a WCT is to collect and treat human excreta and any other added organic material and bulking agents from a single dwelling or non-domestic installation. The composting process used to treat the solids requires little or no added water. Excess liquid in the form of urine and condensation is removed from the solid waste and treated separately. The composting process converts the solid waste to a safer, more stable and less offensive composted end product. At the completion of the composting process, the composted end product shall be incorporated into the soil or removed for disposal in a manner approved by the local Council.

Depending on size and design, WCT are either installed with a toilet pan pedestal above floor level and the collection chamber(s) of the WCT below floor level; or completely free-standing on the floor in the case of the smaller units.

7.3 Performance Requirements

WCTs should perform in accordance with the requirements specified in Section 2.3 of AS/NZS 1546.2-2001.

7.4 Performance Criteria

WCTs should perform in accordance with the criteria specified in Sections 2.4 and 2.5 of AS/NZS 1546.2-2001.

8 DESIGN CONSIDERATIONS

8.1 Scope

This section is intended to outline the design considerations that need to be complied with in the manufacture, installation and use of WCT in dwellings and other facilities.

8.2 Function and Context of Use

WCT shall be designed and manufactured so that they:

- (a) Meet the performance requirements and performance criteria of section 2 of AS/NZS 1546.2-2001.
- (b) Perform the intended function when installed and operated to the manufacturer's instructions

8.3 Design Requirements

The **design requirements** specified in Sections 3.3 and 3.4 of AS/NZS 1546.2-2001 shall apply to WCT in the guideline.

9 TEST CRITERIA

Compliance testing for accreditation of a WCT shall be undertaken in accordance with the evaluation process specified in Appendix C of AS/NZS 1546.2-2001.

10 WARRANTY AND GUARANTEED SERVICE LIFE

- 10.1** All metal fittings, fasteners and components of the WCT shall be of non-corroding material and shall have a service life of at least 15 years. Service life means being designed to comply with the test criteria reliably for the period stated.
- 10.2** All mechanical and electrical parts shall have a minimum service life of 5 years and a minimum warranty period of 12 months.
- 10.3** The WCT shall have a minimum warranty period of 3 years during which all labour and materials shall be supplied free of cost by the manufacturer except for those referred to in 9.2.

11 PRODUCT ASSURANCE

- 11.1** The manufacturer shall obtain a license from a product certification body accredited by JAS-ANZ whose product certification program complies with the requirements of a product certification program defined in this guideline and whose scope includes this guideline and associated product standard.
- 11.2** Where the manufacturer enters into an agreement to market the WCT with one or more distributors or agents in NSW, the agreement shall stipulate that the distributor or agent will strictly adhere to the correct specification of the accredited WCT. The manufacturer shall submit a copy of the agreement to NSW Health.

12 MANUALS

The manufacturer of a WCT shall supply a manual containing the information specified in part 4 of AS/NZS 1546.2-2001.

13 ACCREDITATION CONDITIONS

The accreditation may be granted subject to conditions and any accreditation granted under this guideline shall be for a period of five years. The following accreditation conditions may be applied to all accreditations and will determine if a further accreditation will be granted:

- 13.1** A compliance monitoring program shall be commenced after two (2) years of the accreditation date. The manufacturer shall forward to NSW Health a list of WCT commissioned during this period. NSW Health shall make a random selection of WCT from the list as follows:
- A minimum of 5 and a maximum of 10% of the first 100 WCT systems installed and an additional 1% per 100 systems installed thereafter for each year of manufacture,
 - Sampling of the WCT shall be performed by an independent JAS/ANZ accredited agency in accordance with sample locations specified in Appendix B of AS/NZS 1546.2-2001.
 - The quality of the composted end product shall comply with the performance criteria set out in Appendix A of AS/NZS 1546.2-2001.
- 13.2** A copy of the following information shall be provided by the manufacturer to each local authority where it is intended to install WCT in their area once Departmental accreditation has been obtained:
- Statement of warranty
 - Statement of service life
 - Quality Assurance Certification
 - Installation Manual
 - Service Manual
 - Household Operators Manual
 - Service Report Form
 - Engineering Drawings on A3 format
 - Detailed Specifications

- A4 Plans
- Accreditation documentation from NSW Health.

13.3 Product Approval to the StandardsMark Quality Assurance Program or equivalent shall be obtained within twelve months of the date of the certificate of accreditation.

APPENDIX 1

The Manager
General Environmental Health Unit
NSW Department of Health
PO Box 798
Gladesville NSW 1675

**APPLICATION FOR ACCREDITATION OF AN
WATERLESS COMPOSTING TOILET SYSTEM**

I / We (person) _____ (Title) _____

of (Registered Business Name) _____

of (Registered Business Address) _____

hereby make application for accreditation by the Director-General of the Department of Health, NSW, under the provisions of clause 43 (1), Local Government (Approvals) Regulation, 1999, of a Waterless Composting Toilet System to be known as:

(Registered Trade Name) _____

which is designed to serve _____ (persons).

Attached in support of this application are the details required in Section 5 of the Accreditation Guideline.

Signature:

Date: