METRO

WASTEWATER MANAGEMENT

POLICY GUIDELINES FOR

THE SUBMISSION OF ALTERNATIVE

ON-SITE WATERBORNE SANITATION SYSTEMS

Approved December 1997
Guideline / Policy
Document No. 8
DURBAN METRO WASTEWATER MANAGEMENT

GUIDELINES FOR THE SUBMISSION OF ALTERNATIVE, ON-SITE WATERBORNE SANITATION SYSTEMS FOR APPROVAL

INTRODUCTION

These guidelines gives a broad outline of the procedures followed by Durban Metro Wastewater Management (DMWM) in order to assess the functioning of alternative on site sanitation systems. These guidelines cover general policy of the Department regarding testing of products and its approach to acceptance of products as well as details of specific data requirements and criteria for assessment of products for use in the Durban Metropolitan Area.

These guidelines will generally only apply to those systems which do not comply with the National Building Regulations and S.A.B.S. 0400.

General Policy with Respect to Testing Products and Acceptance

DMWM will not undertake product testing on behalf of a private organisation seeking acceptance of his product. All information and proof of performance required by DMWM in order to gauge acceptability of the product must be supplied by the applicant at his cost. DMWM may however wish to conduct further “in-house” testing on the product to either clarify or confirm certain data or information supplied by the applicant. Although the applicant may be informed of the broad outcome of such tests the detailed results will not be released.

In instances where a product shows wide potential but the applicant is unable at that stage to supply all relevant information or test results for DMWM to adequately assess the product then approval for use within the Metropolitan area will not be given. However DMWM will endeavour to facilitate such further development testing, or research that it considers necessary, by the applicant.

Once evaluated, should the product satisfy the requirements, DMWM will notify the Substructure Authorities that the product is acceptable for use in the Durban Metropolitan Area (DMA). This is in no way to be construed as an endorsement of the product for widespread use outside of the DMA.

Procedure and Criteria Applied by DMWM

In assessing products DMWM will use the National Building Regulations (NBR) and SABS 0400 as a datum. However MWM does not wish to limit efforts to resolve sanitation problems to existing technology only and by its very nature, future technology will not necessarily be covered by the NBR.
The following flow chart indicates the broad procedure and criteria under which applications will be scrutinised.
Information That Needs to Be Supplied to the Assessors

As a minimum, the supplier and / or promoter of a product and / or system must supply the following information to DMWM. This information requirement is in no way intended to be exhaustive and should further information be required to adequately assess a specific application then DMWM will call for it as and when required.

1. Description of Product and System
   i) A clear description and / or illustration of the product / system, as well as descriptions/ illustrations of the unit parts.
   ii) A clear and full specification of the product / systems intended use and how it is intended to function from the point of acceptance of waste, through its treatment, to ultimate disposal of all treated waste products.
   iii) The applicant shall state clearly the level of hygiene and public health impact achievable with specific reference to effective barriers against faecal related diseases, fly and vector infestation and odours.
   iv) A clear and detailed specification of the products intended purpose, its range of use, limiting factors, and operational criteria, which should include; geographic or geological conditions under which it may function; full application / design specifications in terms of hydraulic loading, biological loading, sizing of the units for applied loads and installation conditions.
   v) Whether the applicant considers the system to comply with the NBR or not.

2. Visual Inspection
   i) The vendor must make the system / product easily available for visual inspection by the assessor.
   ii) Details of actual installations, period of operation, failures which have occurred, feedback of users, etc.

3. Scientific and / or Statistical Details and Description of Operation
   i) A full scientific explanation of how the product should work and statistical evidence that the system works and under what limiting parameters it works.
   ii) Mass balance and loading diagrams, which indicate the functioning of the unit parts as well as the whole, for the following parameters
      a) Materials entering and leaving
      b) BOD / COD / OA / PV entering and leaving
      c) Water entering and leaving
   iii) If the parameters, in the influent to any unit part, exceed the ranges implied by NBR, then a description and scientific proof of how the subsequent units / system copes with the additional loads.
   iv) Scientific / statistical evidence confirming the operation and claims of the special features where appropriate.
   v) Applicants should make comment and indicate whether the system will cater for all waste water generated on the site. Water balance diagram should be provided for total water consumption on site where product / system is being used to dispose of only portions of the water.

NOTE: Where testing or sampling has been undertaken by reputable, independent 3rd parties on behalf of the applicant this data would obviously carry more weight.

Where scientific or statistical evidence is used a detailed description of the intention of the tests, the method, result, interpretation of the results and conclusion are required.
4. Servicing Requirements and User Operation
   i) Description of intended method of use by user.
   ii) Description of maintenance services required by the user including the frequency of services.
   iii) Description of services to be undertaken by the agent and the frequency of these services and costs where appropriate.
   iv) Description of services to be undertaken by the local authority including frequency and cost.
   v) List and or description of other services or additives (e.g. access, water, etc) required to maintain the product / system.
   vi) Diagram indicating access points and critical dimensions.
   vii) Description, number required, and cost of special tools and / or materials required for servicing.
   viii) For products / systems intended for the low income areas the following are required:
       a) Description of how and where hard paper is handled (all systems intended for the low income areas must be able to handle newspaper as a minimum)
       b) Description of how and where grit is handled.
       c) Description of closures to access points with particular reference to the provision of ingress of extraneous materials.
   ix) Description, cost and availability of all specials.
   x) Ease of repair / replacement of components and costs.

5. Practicality of Use
   i) Description and diagrams with critical dimensions illustrating the minimum space requirements and positions of components.
   ii) Description of light requirements and sources.
   iii) Description of ventilation requirements and sources.
   iv) Description of odour control methods.
   v) Description of user operation
   vi) Cleaning methods
   vii) Description of all prohibitions on the system / product
   viii) Cost of running the system - Operating costs
   ix) Description of suitability of system to “do it yourself” repairs.

6. Robustness and Materials
   i) Copies of all JASWIC, Agrément Board or SABS certificates indicating fitness for use should be supplied where appropriate.
   ii) List and description of all parts and components which do not have JASWIC, Agrément Board or SABS certificates.
iii) List of components and materials with a description of the appropriateness of the material for the application.

7. **Construction / Installation Specification and Requirements**

i) Instructions, description and diagrams for installation / construction

ii) Specifications and description of special parameters and or requirements for construction / installation

iii) Description of expertise required by personnel doing installation

iv) Description of any special techniques required for installation

v) Description of site conditions which make installation inappropriate.