



TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT

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| KEY STRATEGIC AREA | 3 |
| THRUST | Sustainable Municipal Wastewater and Sanitation |
| PROGRAMME | 5 |
| TITLE | Guidelines for the Utilisation and Disposal of Faecal Sludge: Requirements for the Collection and Subsequent Disposal or Valorisation of Faecal Sludges |

Objectives: To develop Guidelines for Faecal Sludge Collection and subsequent Disposal or Valorisation that regulatory authorities, managers and practitioners responsible for faecal sludge management can easily understand and incorporate as part of their service provision operations.

General:

While guidelines pertaining to wastewater sludge disposal have been replaced or updated in the two decades, very little attention has been afforded to Faecal Sludges from on-site sanitation systems. Current unsustainable management practices currently employed include stockpiles and landfill disposal.

There are several reasons for developing a Faecal Sludge Guideline. First, there is a general lack of knowledge of how to safely collect and dispose of faecal sludges from on-site sanitation systems. Options for Faecal Sludge Disposal are inferred from the Wastewater Sludge Disposal Guidelines yet scientific evidence produced from the WRC and globally have shown faecal sludges to differ significantly in physical-chemical properties from wastewater sludges. Management options for wastewater sludges are therefore not always applicable for faecal sludges. Second, the current Wastewater Sludge Guidelines do not provide guidance on detritus removal from on-site sanitation systems which have been shown to contribute significantly to the volume and mass of faecal sludges. Technical know-how on ways in which to limit (including examples of behavior change best practice), screen or remove detritus from faecal sludge should be included as part of sludge collection and handling. Third, there has over the last two decades, been significant scientific advances in faecal sludge collection and valorisation technologies. The Guideline for Faecal Sludge Collection and subsequent Disposal or Valorisation should include these advances and aligned with international best practice for faecal sludges. And lastly, there has significant change in the regulatory environment with the publication of the National Sanitation Policy 2016 which includes valorisation of sludges as one of the objectives and the establishment of an ISO / PC 318 for non-sewered community-based beneficiation systems. The Guideline for Faecal Sludge collection and subsequent disposal or valorisation would provide guidance for other management options that focus on sludge valorisation and also provide opportunity for innovation.

Specific Aims:

The main objectives of the proposed project are as follows:

1. To establish a Reference Group whose function is to provide expert advice during the guideline development process.
2. To carry out a systematic review of relevant literature to identify and critically appraise best available evidence.

3. To develop Guidelines for Faecal Sludge Collection and Subsequent Disposal or Valorisation that complements current Wastewater Sludge Disposal guidelines.
4. To engage with stakeholders to elicit comments and recommendations.

Rationale:

These Guidelines were developed to provide technical know-how and best practices for the management of faecal sludges and encourage the implementation of beneficial use of sludge.

Deliverables:

Deliverables should include at least the following:

1. Comprehensive literature review including current regulatory, legislative and best practices for Faecal Sludge Collection and subsequent Disposal or Valorisation.
2. Development of Guideline for Faecal Sludge Collection and subsequent Disposal or Valorisation.
3. Final Report
4. Dissemination of guideline and co-ordinated with national stakeholders.

Lighthouse:

- Not specific to WRC Lighthouse

Knowledge Tree

- Inform Policy and Decision-Making

Time Frame: 2-years

Total Funds Requested: R 600,000 inclusive of VAT (R300,000 available in year 1).