BCOSSA Technical Review Committee Technical Bulletin

Title: Flags for Consulting a Qualified Professional

Subject: Identifies areas within the SPM V2 which indicate that a Qualified Professional or a Professional with specific areas of expertise should be involved in Onsite System design and/or construction.

Relates to SPM Version: Version 2, September 2007

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Summary

At several points in the SPM there are mentions of situations where a professional should be involved.

This Technical Bulletin is intended to provide the AP with a single point reference to these situations.

This material is assembled based upon the SPM Version 2; however, APs are reminded that the SPM is to be referred to for a definitive answer on these points.

ASTTBC and APEG policy may differ from this Bulletin and from the instructions in the SPM.

1.1 Introduction

SPM Section 1.2.1.1 (Standards) clarifies that departures from the critical standards of Part 2 of the manual should only be made by a professional or under the supervision of a professional.

The section goes on to state that:

> "It is also recommended that wherever explicitly identified in Part 2 of the SPM, deviation from critical standards should only be made by an AP that meets specific qualifications (e.g., groundwater hydrologist)."

And, in Section 1.1.4 (Application of Standard Practice by Authorized Persons) the manual states that:

> "Some departures from the manual may be more consequential than others, and it may not be appropriate for all types of authorized persons to make all types of decisions concerning such departures. Rather, there will be certain aspects of standard practice that are sufficiently important, or which require certain expertise, such that they should only be undertaken by a professional, or under the supervision of a professional. These standards are explicitly referred to throughout the SPM."

Part 2, Section 2.1.2 (Part 2 Critical Standards), describes this same injunction that:

> "In addition, it is recommended that some critical standards within the SPM be achieved by professionals or other AP's with specialized training only or under the supervision of these persons, as opposed to a practitioner solely. Where this is the case, this is indicated in the manual."

Further, Section 1.2.1.1 and Part 3 Section 3.1 identify that for Part 3 significant standards there are also cases where a professional would be needed:

> "It is also recommended that wherever ***explicitly identified in Part 3*** of the SPM, deviation from the Part 3 significant standards or guidelines should only be made by an AP that meets specific qualifications (e.g., ***is a professional***, groundwater hydrologist, etc.)".

This Technical Bulletin summarizes situations identified in the manual that meet any or all of these criteria.

In addition to the discussion of Professionals in the SPM the *SSR* itself, in section 6, makes it a legal requirement that only professionals or persons supervised by professionals may construct or maintain a sewerage system that uses a treatment method classified as Type 3 or is designed from an estimated minimum daily domestic sewage flow of more than 9100 litres. Registered practitioners are limited by the SSR to construction and maintenance of Type 1 and 2 systems, unless supervised by a professional.

1.2 Checklist table of references to use of a Qualified Professional in the SPM

The following tables refer to sections of the SPM, please read those sections for further clarification. Note that in some cases sections of Part 3 refer to Professional involvement that has already been described in Part 2, in those cases the references are not inserted in these tables.

Since the Site Capability tables (2-12 and 2-13) are already a clear reference, they are not repeated here and the reader is directed to those tables.

SECTION	SITUATION	RECOMMENDATION IN THE SPM
1.2.9	Deviation from Part 2 Critical Horizontal Separation in a repair	Only be made by a professional
1.3.2	Role of the AP	Further clarification of Sections 1.2.1.1 and 1.1.4
2.2.1.3	DDF for facilities, high strength waste	Professional should design system where high strength waste is expected
	DDF for facilities, wax strippers, disinfectants, facilities where prescription drugs are used	Professional should be consulted
	DDF based on average flows and mass loadings	Professional should select DDF
2.3.3.3	Deviation from Horizontal Separation standards for critical setbacks (Table 2-6)	Any deviation from the table only be made by a Professional with competence in the field of hydrogeology or geotechnical engineering.
	Reduction in setback to well or source of drinking water	Should be approved by a professional with competence in the field of hydrogeology or geotechnical engineering, who should also design monitoring wells and protocol.
	Reduction in setback to water suction line	Professional should design the suction line and works for prevention of contamination.
	When considering suitable setbacks to high pumping rate wells	An area-based hydrogeological study is recommended.
2.3.4.2	Sand mound basal loadings	Except where designed by a Professional, it is recommended that maximum basal loading rates are those for Type 2 effluent.
2.3.4.3	Note on HLR for non standard sands in footnote to Table 2-10	Sand loading rate should be established by a Professional.
2.3.4.4	BC Zero Discharge Lagoon on a site with slope steeper than 12%.	The berms must be designed by a qualified Professional.
2.3.5.1	Establishment of LLR or groundwater mounding calculations	Method should be undertaken by or under the supervision of a Professional
2.3.5.3	Where LLR standards cannot be met	Water table mounding or other method, with calculation performed by a professional.
2.3.6.1	For all cases of sites with constrained capability	Custom design of system by Qualified Professional outside of the standards of Part 2 (but meeting performance standards).

SECTION	SITUATION	RECOMMENDATION IN THE SPM
Table 2-12	Options to address site capability constraints	See table for details, “Professional strongly recommended” in this context means design or design review by a professional.
Table 2-13	Options to address systems on specific sites	See table for details, “Professional strongly recommended” in this context means design or design review by a professional.
3.4.1.3	Soil coarse fragment content, inceptisols, upper saprolites (in addition to Table 2-12	If necessary, consult a qualified Professional for design or design review.
3.6.2.3	Design of Package Treatment Plants (one of several options)	Be designed by a B.C. Professional Engineer and meet the standards of the regulation
3.7.9.2	Sites not meeting criteria for seepage bed	Design or design supervision by a Professional
3.8.1.3	Sand mound installed over fill	Professional should make recommendations for basal area loading and required soil remediation.
3.9.1.3	Soils of higher permeability than the standards of the section for ETA beds	Professional design.
	ETA beds where no net positive Evapotranspiration	Professional design
	ET beds where net positive Evapotranspiration is less than 610mm per annum	Professional design
3.10.1.3	Sites not meeting criteria for a Lagoon system	Professional design and supervision of construction