OWMS – Field Reference Guide
SPECIFICATIONS FOR SEPTIC FIELD SAND

The sand used for the sand layer in septic fields must be clean and have a specific sand particle size.

In a sand treatment mound, the sand layer is the primary area for the treatment of the organic load (BOD & TSS), pathogenic organisms and other constituents in wastewater. Dirty or improperly sized sand containing a lot of fines will not treat the wastewater properly.

Sand used in modified total area septic fields, above ground septic fields and sand mounds must meet CSA Standard A23.1 concrete sand specifications (ASTM C-33). The diameter of the particles of sand affects the rate of water movement. If particles are too small the water moves too slowly.

This standard meets medium sand filter specification. The sand shall be clean, graded, washed sand, ranging from No. 4 sieve to No. 200 sieve size. Sand grains shall meet the following particle size:

Grain Size Specifications (concrete sand specifications ASTM C33)

Sieve Size	Particle Size	% Passing
3/8 “	9.5 mm	100 %
No. 4	4.75 mm	95 % – 100 %
No. 8	2.36 mm	80% -100%
No. 16	1.18 mm	50% - 85%
No. 30	0.6 mm	25 % - 60 %
No. 50	0.3 mm	5% - 30%
No. 100	0.15	0% - 10%
No. 200	0.075 mm	0% - 5 %

Notes*
** Only 5 % or less of the sand should be particles 0.075 mm or smaller*

**Aggregate must be tested in compliance with CSA A23.1-04*.

* An aggregate analysis (sieve size report) may be requested to verify the sand meets the specification.

References:

page 16. Alberta Onsite Wastewater Management Association, “*Onsite Wastewater Treatment Systems Training Program Module 113, Revised 2005*”.

page 63. “*Alberta Private Sewage Systems Standard of Practice 1999 Handbook*”, First Edition July 2000

page 2, “*Installation Instructions for Pressurized Sand Fill Septic Systems*” Brochure printed by *Infiltrator Systems Inc*.®, Table 1 Grain size specifications (ASTM 33).