

## OWMS – Field Reference Guide JAR TEST

Under some circumstances, it may be beneficial to perform a jar test for fines (silt or clay) on the sand when it is received or before it is purchased to determine if the sand supplied meets the specification of the sand ordered.

An 8 hour jar test must be conducted for best results.

The jar test is a 'quick' method to determine if the sand contains too many fines. The jar test is not to be used as a replacement for sieve analysis; however the test can be used as a field method to determine that the sand meets CSA A23.1-04 (ASTM C33) specifications.

After settling for several hours, if the layer of fines that settle on top of the sand is thicker than 3.2 mm (1/8 inch), the sand contains too many fines and is not suitable for use in a treatment mound. When in doubt the aggregate supplier should provide an aggregate analysis report to confirm that the product meets the sieve specification.

When a 'check' on the sand is required, it is recommended that a sample of the sand be obtained prior to construction and the 8 hour jar test be conducted.

Jar test procedure is as follows:

- Place approximately 2 inches of sand in a glass quart jar.
- Fill the jar with water.
- Shake the jar vigorously to mix the sand and water.
- Set the jar on a level platform and allow to settle for several hours (4 - 8 hours).
- Upon settling, after several hours (4 - 8 hours), the layer of fines that settle on top of the sand layer should not be thicker than 3.2 mm (1/8 inch).

### TIPS:\*

Take a sample from the middle of the pile.

It may be necessary to jar test a composite sample.

It may be necessary to conduct two jar tests.

When in doubt, obtain the sieve analysis report from the aggregate supplier or send a sample to the laboratory. Be sure to ask the laboratory to include the No. 200 sieve size.

### Reference:

Page 157, Alberta Private Sewage Systems Standard of Practice – 1999 Handbook, First Edition July, 2000.