

WAC 246-272B-06700 Sand-lined trenches and beds. (1) Sand-lined trenches or beds may be used to meet Treatment Level B.

(2) The minimum dosing frequency is:

(a) Twelve equally spaced timed doses per day for coarse sand; or

(b) Six equally spaced timed doses per day for ASTM C-33 sand.

(3) The maximum allowable hydraulic loading rate is one gallon per square foot per day.

(4) The design engineer shall:

(a) Use coarse sand that meets the following specifications:

(i) Particle size distribution per Table 8 of this section;

(ii) Effective particle size from 0.3 to 0.5 mm; and

(iii) Uniformity coefficient less than four; or

(b) Use sand that meets the ASTM-33 specification, Table 9 of this section and:

(i) Has no more than forty-five percent passing any one sieve and retained on the next consecutive sieve, of those listed in Table 9 of this section; and

(ii) Has a fineness modulus of not less than 2.3 or more than 3.1. The fineness modulus is calculated by adding the cumulative percents of samples retained on the sieves listed in Table 9 and dividing the sum by 100; or

(c) Verify that the sand material meets the desired specification and provide to the department a particle size analysis of the sand material.

(5) The minimum depth of sand media is twenty-four inches.

(6) The design engineer shall:

(a) Design the LOSS to meet the drainfield requirements in Table 3 in WAC 246-272B-06050 for the minimum horizontal setback from the edge of the sand-lined trench or bed;

(b) Specify that for installations in type 1 soil, trench and bed widths be increased by one foot from the calculated minimum absorption area based on design flow; the additional volume must be filled with sand media in order to prevent effluent from bypassing filter media by flowing out the sidewalls; and

(c) Specify monitoring ports as required in WAC 246-272B-06400.

Table 8: Coarse Sand—Required Particle Size Distribution

Sieve	Particle Diameter, mm	Percent Passing by Weight
3/8 inch	9.50	100
No. 4	4.75	95 to 100
No. 8	2.36	80 to 100
No. 16	1.18	45 to 85
No. 30	0.6	15 to 60
No. 50	0.3	3 to 15
No. 100	0.15	0 to 4

Table 9: Fine Aggregate—ASTM C-33 Sand—Particle Size Distribution

Sieve	Particle Diameter, mm	Percent Passing by Weight
3/8 inch	9.50	100
No. 4	4.75	95 to 100
No. 8	2.36	80 to 100
No. 16	1.18	50 to 85

Sieve	Particle Diameter, mm	Percent Passing by Weight
No. 30	0.6	25 to 60
No. 50	0.3	5 to 30
No. 100	0.15	0 to 10; prefer < 4
No. 200	0.075	0 - 3; prefer 0

[Statutory Authority: RCW 70.118B.020. WSR 11-12-035, § 246-272B-06700, filed 5/25/11, effective 7/1/11.]