



## BENTONITE SLURRY SPECIFICATIONS FOR SLURRY TRENCH WORK

### General

The slurry used for trenching shall be a viscous suspension of colloidal sodium bentonite, slightly heavier than water with low filtration of water through trench sides.

The slurry shall be maintained within the trench to a depth ranging from 0.5 to 1.0 feet below mean grade level. At no time shall the slurry reach or exceed a depth of 1.5 feet below mean grade level.

Slurry shall be controlled within the trench for viscosity, gelation and density. The slurry properties can be controlled, as needed, by changes in the slurry stocked in the reservoir.

### Bentonite Specifications

Bentonite for trenching slurry shall be of the high-swelling Wyoming type bentonite—Volclay bentonite as manufactured by CETCO, Arlington Heights, Illinois.

Bentonite at contractor's option, may be powdered or granular type, meeting either of these general specifications:

- Premium Gel<sup>®</sup> - 90 barrels\* per ton, minimum
- C/S Granular<sup>™</sup> - 90 barrels\* per ton, minimum
- Moisture content on both products: 12% maximum
- \*API Method

### Slurry in Trench-Specifications

- Viscosity (Marsh funnel 1500/1 quart) - 40 seconds minimum
- Gelation (Marsh funnel) - 35 seconds minimum
- Density - 67 lbs per cubic foot minimum

**Note:** Density shall be controlled by desanding at intervals to densities as defined by the project engineer.

### Slurry in Storage Reservoir-Specifications

- Viscosity (Marsh funnel 1500/1 quart) - 40-50 seconds
- Gelation (Marsh funnel) - 35-50 seconds
- Density - 65 lbs per cubic foot minimum

### Note:

1. Viscosity shall be determined by filling Marsh funnel with 1500 ccs. of fluid, timing the flow rate for 1 quart (946 ccs.) to flow out.
2. Gelation shall be determined in seconds from the time it takes for the balance of the fluid to drain from the Marsh funnel following Step 1.
3. High density is normally achieved by native silts and fines remaining suspended in the slurry. Should excessively high densities occur, the excess solids can be removed by desanding or screening.