

SCDOT Concrete Slurry Disposal Procedure

Revised June 2020

1) Slurry spreading

- Disposal of Slurry is prohibited in areas of environmental sensitivity.
- Discharge from bridge decks or into an enclosed stormwater drainage system is prohibited.
- In areas that have vegetated shoulders and slopes, uniformly deposit the slurry on the shoulders and slopes as the grinding operation progresses down the road.
- Do not deposit slurry in areas adjacent to wetlands and other waterbodies, drainage structures, and bridges.
- If unable to deposit on vegetated shoulders and slopes, haul to a non-sensitive location within the project limits. Deposit the slurry in a similar rate and method as when depositing on vegetated shoulders and slopes. The slurry shall not be spread within 100 feet of any wetland or waterbody or within 3 feet of any water conveyance.
- The Resident Construction Engineer (RCE) and Contractor shall make a site inspection prior to the start of grinding or cutting operations to identify areas of environmental sensitivity. Also check project documentation for areas of environmental sensitivity.
- The slurry shall not be allowed to flow across the roadway into adjacent lanes.
- Utilize the flexible hose method. This method involves the attachment of a flexible hose to the end of the slurry discharge pipe and the discharge end of the hose must drag the ground to distribute the slurry. If another method of disposal is proposed, it must be approved by the RCE.
- The diamond grinding equipment shall be equipped with a well-maintained vacuum system that is capable of removing all standing slurry, leaving the roadway in a damp condition after the grinder passes.
- Spreading should begin a minimum of 1 foot from the paved shoulder, with each pass of the grinder moving the spreading operation farther down the vegetated shoulder and slope to ensure no build-up of grinding residue.

2. Slurry Collection and Disposal

**June 2020 Revision includes information on Temporary Off-Site Storage.*

- When it is not feasible to place the concrete slurry on vegetated shoulders and slopes, it must be collected in water-tight haul units and disposed of in designated areas within SCDOT Right of Way (ROW). Excavated ponds and storage areas within the SCDOT ROW can be used for permanent treatment.
- Any type settlement pond constructed within the SCDOT ROW shall be constructed to allow settlement of the solids and decanting of the water. The water may be reused in the grinding operation. Any remaining water will be allowed to evaporate and the remaining concrete waste can be buried on site (within the SCDOT ROW), and the pond area shall be reclaimed to its original condition and vegetated to protect against erosion.
- Concrete slurry may be disposed of on private property outside of the SCDOT ROW at no cost to SCDOT. These areas will be considered Structural Fill landfills and DHEC approval is required prior to the placement of any material. When the contractor submits the application to DHEC, it must be noted that the material to be deposited will be concrete slurry from a SCDOT project. All additional Structural Fill landfill requirements will be met. The RCE shall be notified of all Structural Fill landfill locations and provided a copy of all SCDHEC authorizations.
- For ALL excavated settlement ponds and Structural Fill landfills where concrete slurry will be deposited, the bottom of the excavation shall be constructed so that a minimum of three (3) feet of separation is maintained above the groundwater elevation at all times. The groundwater elevation shall be determined by excavating test holes and monitoring the holes for a minimum of twenty-four (24) hours. The number of test holes will be based on the size of the excavation and approved by the RCE.
- For temporary storage of concrete slurry on private property outside of the SCDOT ROW written permission must be obtained from property owner and provided to the RCE (200.04 Form). The concrete slurry shall be collected in water-tight haul units and transported to the designated areas. The material shall be deposited in an area that is bermed to allow the water to evaporate and for the settlement of the solids. **The designated area shall not be excavated.** The bermed area must be constructed above natural ground. The temporary storage on private property will be allowed for a period of one (1) year. The remaining solids must be removed and hauled to a permitted landfill or used in an area on SCDOT ROW as approved by the RCE. The contractor and private property owner shall follow the above guidance ensuring that the groundwater elevation is not within 3' of ground surface. Contractor shall note that borrow pits will require an additional DHEC authorization to temporarily store slurry within the pit since the area is already excavated and storage will not be bermed on natural ground elevation as required. *
- Disposal of concrete slurry at a commercial or municipal facility (e.g., landfill, etc.) is acceptable. The RCE shall be notified of the disposal locations.

- If the concrete slurry is to be land applied (i.e., agricultural purposes), all required permits must be obtained and the required procedures must be adhered to.

3. pH Control Plan

- With either a spreading or pickup operation, the contractor will monitor and control the pH of the slurry.
- The slurry will be managed to maintain a pH below 12.5 and greater than 2.
- At the beginning of operations, the contractor will test the pH at least once per hour to ensure it is within the acceptable limits.
- The test equipment will be calibrated daily by the contractor.
- Once the pH control plan is operational and producing consistent results, the testing frequency may be reduced to 4 tests per day.
- The contractor shall log all test results and deliver a signed copy to the RCE on a weekly basis.
- At no time shall slurry containing a pH outside the limits (2-12.5) be allowed to be deposited on the ground without an appropriate treatment to lower it to the acceptable range. The appropriate treatment will be approved by the RCE prior to implementation.