



**Standard Operating Procedures:
Concrete, Masonry Materials,
and
Sawcutting Pollution Control**

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Scope

This procedure applies to all activities related to the storage, handling, use, sawcutting, washout, or disposal of concrete or other masonry materials on University of Virginia (UVA) property.

Responsibility

Anyone storing, handling, using, cutting, or disposing of concrete or other masonry materials on UVA property must comply with this procedure.

Procedures

1. Materials Storage and Use

- a. All employees and contractors are responsible for the proper temporary storage, waste containment, and disposal of all concrete and masonry related materials. All projects that have chemical handling or generate wastewater must have a spill kit on site.
 - i. All projects that are covered by a Construction General Permit and generate concrete washwater must include a concrete waste handling plan in the site Stormwater Pollution Prevention Plans (SWPPP). Concrete washout requirements are further described in Section 2.c of this SOP.
- b. Bags of concrete, lime, plaster, joint compounds, Portland cement, sand, and other soluble or erodible materials must be stored either indoors or be protected from contact with water if stored outside. If stored outside, materials must be covered by plastic sheet, tarp, or other impermeable liner when not in active use.
- c. In the event a bag containing a soluble or erodible material is punctured and/or becomes wet, any loose material must be immediately cleaned up and properly disposed of or covered with plastic sheeting to prevent exposure to rainwater.

2. Waste Generation and Disposal

- a. Concrete washout solids and wastewater, runoff from masonry mixing operations, wastewater generated by wet sawcutting, and any other semi solid or liquid waste generated from construction activities must not be allowed to enter storm drains or watercourses. Discharges to sanitary drains must be pre-approved as discussed in bullet 4.2.7. In addition, sediment from these activities must not be allowed to remain on pavement after the operation has ceased. These wastes may not be disposed onto the ground where they can drain or be flushed by rain to the storm system.
- b. Wet Sawcutting, Grinding, Drilling

- i. All slurry and sediment from sawcutting operations must be confined to the immediate work area by using sand bags, temporary berms, or other containment structures. Prior to beginning work for exterior operations, locate all nearby storm drain inlets, culverts, and catch basins. Any drains through which slurry discharges could enter a waterway must be protected. All controls must be in place before the start of cutting operations. Controls must be designed to contain the volume of wastewater that will be generated.
 - ii. Controls must be checked routinely during operations to ensure they are not being bypassed. In the event it appears the controls will be bypassed or that the controls will be unable to contain the volume of runoff generated, operations must cease until additional controls can be installed or existing controls can be adjusted to fully contain all discharge.
 - iii. When cutting through a roof system or an above-level floor, a bucket or other containment must be in place to catch sediment and wastewater on the floor level below.
 - iv. For exterior work, efforts must be made to minimize the potential for tracking of slurry off site by cars and pedestrians.
 - v. All slurry and sediment from sawcutting operations must be cleaned up as soon as possible. If the work is not being conducted in a high traffic area, material can be allowed to dry within its containment prior to being shoveled or swept up for disposal. Residual sediment trapped within the containment area can be swept up or shoveled and disposed of in general trash.
 - vi. If a shop vacuum is used because the material cannot dry in place, the liquid can be allowed to evaporate and residual solid material can be disposed of in general trash.
- c. Concrete Washout¹- any semi-solid mixed materials, such as concrete or mortar, that has hardened can be disposed of in the dumpster. If unused mixed materials are still wet, they must be contained and ideally should be allowed to harden in an indoor storage location or a covered outdoor area before being disposed of in general trash. Options for containing wet concrete or other semi-solid materials include, but are not limited to: trash cans, plastic kiddie pools, a pit in the ground lined with plastic, constructed wooden box lined with plastic, and plastic lined dumpsters. Any large construction project that is using concrete should have a concrete washout on site.
- i. For sites with a concrete washout, concrete wastewater must be allowed to evaporate in the washout containment. If there is not adequate time to allow the wastewater to evaporate, the wastewater can be removed quickly by spreading water gelling granules evenly across the water. In about five minutes, the water will turn into a gel that can be disposed with the concrete.
 - ii. Concrete washout containments should be inspected daily and after heavy rains to check for leaks, damage to the lining or sidewalls, and to ensure the container is less than 75% full to avoid overflows. Washout containments must be on level ground to increase storage capacity and minimize risk of

¹ <https://www3.epa.gov/npdes/pubs/concretewashout.pdf>

overflowing. Any damages to the container should be repaired promptly. Before heavy rains, the washout container's liquid level should be lowered by properly disposing of wastewater, or the container should be covered to avoid an overflow during the rain event.

- d. Water used for cleaning tools and other equipment that has been used for sawcutting or mixing operations must also be captured in a container to allow the mixture to harden and the liquid to evaporate.
- e. All outdoor dumpsters must be covered at the end of each day and during rain events.
- f. If large volumes of residual waste water remain, the Rivanna Water and Sewer Authority should be contacted about disposal of the residual water directly at the Moores Creek Treatment Plant, as the pH of the water is too high to be put directly into the sanitary sewer.
- g. No material covered under this SOP may be disposed of by being dumped down any sanitary sewer or storm sewer drain. Contact UVA Environmental Resources (ER) for questions regarding proper handling or disposal of these waste materials. All employees and contractors must receive approval by ER and Utilities Distribution before dumping any material covered under this SOP down any sanitary sewer drain. ER may be reached at storm-water@virginia.edu and will help coordinate with Utilities Distribution.