

Stockpiles and Stormwater

Is Rainfall on Aggregate Stockpiles Stormwater or Process Water? The Answer May Surprise You

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One area of regular debate and uncertainty in the U.S. has to do with water discharged off of aggregate (sand and stone) stockpiles at concrete plants. Under the regulations, is that water considered to be stormwater, or is it process wastewater? Given the significant differences between how these discharges are regulated, the answer is pretty important to a ready mixed concrete producer.

Both stormwater and process wastewater (“process water”) discharges are regulated under the Federal Water Pollution Control Act, otherwise known as the Clean Water Act. Process water discharges are those associated with plant activities and operations, such as mixer drum washout, truck and chute wash-off, plant and grounds cleaning, central mixer washout, overflow from a settling basin system, etc. One of the easiest ways to “find” process water generating activities and potential discharges is to evaluate your plant during dry weather conditions—if there’s water present, chances are pretty good that it’s process water. Discharges of process water to surface waters of the U.S. (or waters of a particular state) are typically covered under strict NPDES discharge permits and often have tough monitoring requirements and limits on the levels of pollutants that can be discharged, such as alterations of pH and the concentration of fine sediment material in the discharge.

Stormwater discharges, on the other hand, are regulated as “discharges associated with industrial activity,” that have “come into contact with source materials” and are then discharged to waters of the U.S. or a particular state. Source materials are anything present on a concrete plant site that would be capable of imparting pollutants to the discharged water, including raw and finished materials or products, equipment, plant areas, etc. A cloudy runoff or oil sheen is



evidence of stormwater which came into contact with source materials and is being discharged to a surface water. This is exactly what the stormwater components of the Clean Water Act were meant to control. Like process water discharges, stormwater discharges also need permits. However, they are usually much less stringent and often don’t require any monitoring of stormwater runoff.

Often, it is heard that process water includes rainfall that falls onto aggregate stockpiles at a concrete plant. How can this be? This clearly meets the regulatory definition of a stormwater discharge that has come into contact with source materials—rainfall that comes into contact with sands (or a fine coating on stone) that is then imparted to the stormwater and discharged. This is where the cloudy runoff comes from, and this is what is expected to be addressed via an NPDES stormwater discharge permit. In other words, rainfall falling onto stockpiles exactly meets the definition of a regulated stormwater discharge.

How about sprinklers on aggregate stockpiles? Think back to the dry weather test—is water being generated, or did it come from the sky? Clearly this is not stormwater runoff, and the discharge of this water due to stockpile overwatering or poor stockpile placement would not be covered by a stormwater discharge permit. It would likely be considered to be process water. Luckily, potential discharges are relatively easy to control through careful watering practices

and stockpile location. Prevention of overwatering can eliminate or minimize the discharge potential, which is key.

Some states, in their version of the Clean Water Act, have changed these general rules somewhat and may take a different view of how it classifies water from stockpiles. Some states say, arguably, that rainfall onto a stockpile is process

water, and others say that process water used for stockpile water (such as clarified water from a settling basin) is not considered to be process water any longer. You need to be aware of what the particular spin is in your state, but if you disagree with the interpretation, try your best to “educate” the regulators about waters being discharged from your stockpiles.

Rainfall onto an aggregate stockpile that is then discharged meets the definition of a stormwater discharge to a tee. Evaluating site activities during dry weather periods can help you determine what is, and is not, process water and stormwater. Depending upon what you find, you can always look to change site operations to make your regulatory life a bit easier. Stormwater is stormwater and process water is not—make sure you and your regulators know the difference! ■

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