

Process Water or Stormwater?

Is rainfall on a concrete plant Process Water or Stormwater? The answer may surprise you!

By Douglas Ruhlin, Principal Environmental Consultant, Resource Management Associates

Previously, the difference between stormwater and process water relative to aggregate stockpiles under the Clean Water Act and its implementing regulations (the National Pollution Discharge Elimination System or “NPDES” regulations) was discussed (*Concrete Infocus*, Fall 2007). That article attempted to dispel the misconception that rain falling onto aggregate stockpiles was automatically considered to be process water (or “non-stormwater” or “process wastewater”) and instead should be treated as stormwater under the NPDES regulations. While there may be specific state regulations that may change this interpretation, this is the commonly accepted view and one that most concrete producers would likely operate under.

This misconception is based on the idea that rainfall hitting a stockpile picks up pollutants prior to runoff and discharge and somehow is no longer suitable for treatment as stormwater. In fact, this is exactly what the NPDES stormwater regulations were created to address – rainfall that comes into contact with “source materials” at an industrial facility (such as a ready-mixed concrete plant), receives a pollutant load (such as fine aggregate material) and is then discharged to waters of the U.S. / waters of a state. The fact that the stormwater has picked up a pollutant load from the source material does not render it a non-stormwater/process water but,

instead, is what the stormwater provisions of the NPDES regulations were meant to address and deal with via stormwater treatment and/or the use of Best Management Practices (BMPs) to reduce pollutant loads prior to discharge.

But often, this argument is extended beyond stockpiles to other materials on a concrete plant. For example, consider a stockpile of brought-back concrete or concrete fine material removed from a settling basin that is present at a concrete plant in a predominantly dry state (more on wet material later in this article). Contact between rainfall and this material will undoubtedly result in an elevated pH and solids content of the resultant runoff, which might be considered significantly polluted. Is this stormwater or runoff? There is no distinction in the Clean Water Act as to the “level” of pollutants in runoff in making this distinction – in this case, it would simply be contaminated stormwater runoff (likely requiring some form of stormwater treatment or use of BMPs to reduce the pollutant load to acceptable levels before discharge). The fact that the pH is elevated or that there is an enhanced solids load is not relevant to the distinction between stormwater and process water.

The picture changes somewhat if the material in question is either in a wet or plastic state, such as excess concrete materials that have been discharged from a mixer

barrel through the addition of additional water. If there is a wet discharge associated with the material, obviously not stormwater, this is process water. If it rains onto this material, the resultant is a commingled discharge or process water. However, if the material is dry or relatively dry (i.e., no discharge off the material is evident), a good argument can be made that any resultant discharge that occurs when it rains is only stormwater. Some concrete producers try to avoid this issue altogether by placing plastic returned concrete or very wet fine material from a settling basin within a contained “commingled/process water” area, thereby ensuring that any discharge, regardless of classification, is treated as process water. Bear in mind however that this conservative approach can result in the generation of more commingled/process water than necessary, which all has to be treated as process water (such as not normally being allowed to be discharged).

This interpretation is not always rock-solid, however. Some states have specifically identified materials that, upon contact with rainfall, are no longer treated (by the state regulations) as stormwater, but are instead then treated as a non-stormwater/process water. If unsure, always check first with your applicable NPDES permit at the concrete plant (likely a stormwater discharge permit). If you cannot find any distinction made, the

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The Clean Water Restoration Act:

A Misguided Attempt at Keeping America's Waters Clean

By Kevin Walgenbach, Director, Government Affairs, NRMCA

Over the past decade the ready mixed concrete industry has made tremendous strides with its attention to the environment. Every day ready mixed concrete plants are greening themselves, making their operations more sustainable and reducing their carbon footprint. One piece of this process is the industry's water use, storage and disposal. Currently, the storage and disposal of water used on ready mixed concrete plants is closely monitored and in many different ways regulated by the federal government, states, counties, cities and/or municipalities. One example could be the need to obtain a state permit for releasing water used to wash out a mixer drum into a storm drain, which is generally illegal. But what if every time you washed out a truck, didn't cover a wash-out pond or settlement basin on the plant site or drove over a rain puddle in the road you were fined for polluting? What if scheduled deliveries were cancelled or rescheduled on a more regular basis because you had to obtain a permit to transport your load to a site where you could potentially come in contact with groundwater? Or, because a construction site contractor didn't obtain a permit before mapping out a building foundation which just happened to sit next to a seasonal creek that wasn't made known? Unfortunately, if a few members of Congress have their way this could become a reality for ready mixed concrete companies.

Introduced in the U.S. Senate in April 2009, approved by the Senate Committee on Environment and Public Works in June 2009 and currently stalled in Congress is a bill titled the Clean Water Restoration Act (S. 787) – the intent of which is to clarify the scope of jurisdiction the United States government has over water located in the United States and to restore the so-called original intent of the Clean Water Act. The measure attempts to do this by changing the government's current jurisdiction of "navigable" waters to "waters of the United States." As defined in S. 787, "waters of the United States" means "all waters subject to the ebb and flow of the tide, the territorial seas and all interstate and intrastate waters, including lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes and natural ponds, all tributaries of any of the above waters and all impoundments of the foregoing." As well, the bill provides that if there are any questions as to the meaning or reach of any terms contained in the definition, the Environmental Protection Agency and the Army Corps of Engineers will have sole discretion over those determinations.

Here-in lay the problem: the ambiguity of some of these terms raise questions about their effect on ready mixed concrete plants, trucks and operations. Potentially these terms could include all wet areas such as groundwater, wash-out ponds, settlement basins and

water reclaiming facilities located on ready mixed concrete plants. Regulation of such implies a whole slew of new burdensome permits that would have to be obtained in order to maintain status-quo operations just in case an employee or truck comes in contact with "waters of the United States."

In addition to self policing, the ready mixed concrete industry is already subject to numerous regulations which include water storage and disposal. Additional, overlapping controls will only result in regulatory overkill, an increase in the cost of doing business, no certainty of reducing pollution, and certainly many legal challenges.

Although the Clean Water Restoration Act might mean well; instead of reducing pollutants in our waterways, its passage will only result in overreaching regulatory implications pre-empting state and local governments and private property owners and adversely affecting ready mixed concrete plants, trucks and operations. A better way to address the problems ailing America's water ways should be through surgically pointed amendments to the Clean Water Act, not through regulatory heavy-handedness. ■

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presumption of an interpretation as given above is a reasonable one, although you may have to argue the point with state regulators. As in all cases, check first with your applicable state regulations, which must be followed without exception!

This interpretation does not provide a "free pass" to concrete producers when evaluating stormwater discharges at a concrete plant and choice of BMPs. While contact between source materials such as returned concrete, concrete fines from settling basins, etc. may be treated as stormwater runoff from a regulatory basis, it is clear that the resultant discharge may require a substantial amount of effort to return it to a state capable of being discharged. However, the distinction between process water and stormwater and the resulting discharge requirements, from a regulatory and permitting standpoint, can be significant. Make sure you know where you stand under your applicable regulations! ■

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