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ENFORCEMENT ACTION

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The generation of regulated wastewater is a fact of life at ready-mix concrete facilities. For instance, it is a common practice to rinse the outside of mixer trucks after receiving a load of concrete at a ready-mix plant to remove the cement dust and particles that accumulate on the outside of the vehicle during loading. It is also common for ready-mix producers to wash out the inside of mixer drums at the end of the day. The washwater and any remaining concrete are then typically placed in a settling pit. Periodically, the solids in the pit are scraped out and hauled away. Both the truck rinsewater and the pit washwater are regulated wastewaters.

Concrete producers must understand the implications of improperly disposing of regulated wastewater. Riefler Concrete Products, a ready-mix producer in western New York State, recently discovered the hard way what can happen when regulated wastewater is not properly handled. In October 1998, a Riefler-owned ready-mix plant outside of Buffalo was raided by the U.S. Environmental Protection Agency (EPA) and various other federal governmental agencies. Armed officers executed a search warrant looking for evidence that Riefler's truck rinsewater was being discharged in violation of the Clean Water Act (CWA). Riefler had established the practice of rinsing down its trucks in a wash area equipped with a drain connected to piping that on days with extensive rainfall discharged the rinsewater into a drainage ditch which, in turn, flowed into a creek. Unknown to Riefler, such discharge is illegal without a proper permit. Ignorance of the law, however, provides no defense or relief from prosecution.

United States Attorneys working for the Justice Department handled the Riefler case. The company was accused of negligently discharging truck rinsewater containing cement particles and heightened pH levels (both pollutants) from a point source, i. e., the wash area drain pipe, to U.S. waters, i.e., the creek. In December 1999, Riefler pleaded guilty to a misdemeanor criminal violation of the CWA. Its previous owner, who had designed and installed the wash area drainage system, pleaded guilty to a felony. Both parties await sentencing and will pay a combined fine of \$185,000. Riefler will also have to conduct remediation, and design and install a new wastewater collection system that will prevent unpermitted discharges.

The Clean Water Act The legislation prohibits the discharge of any pollutant from a point source into U.S. waters, unless the discharge is permitted by the terms and conditions of a permit issued under CWA. Such a permit is commonly known as a National Pollutant Discharge Elimination System or NPDES Permit.

Pursuant to the Clean Water Act, a "discharge of a pollutant" is the addition of any pollutant to navigable waters from a point source. A "pollutant" is defined very broadly and includes any type of industrial, municipal or agricultural waste discharged into water. Some examples are dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and dirt.

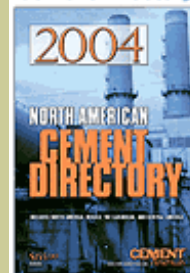
A "point source" is any discernable, confined and discrete conveyance such as a pipe, ditch, channel, tunnel, conduit, discrete fisher, container, rolling stock, concentrated animal feeding operation, landfill, leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. "Waters of the United States" are waters that are or have been used for interstate or foreign

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commerce including waters subject to the ebb and flow of the tide, interstate waters, lakes, rivers, streams, mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, natural ponds, as well as any tributaries to any of these waters. Also included are irrigation canals.

In general, the most common pollutants encountered in point source wastewater discharges from concrete operations are dust and cement particulates (suspended solids) and elevated pH levels. Of these, elevated pH levels - typically in the 10 to 12 range on a scale of 0 (very acidic) to 14 (very alkaline) - constitute the greater environmental concern.

Elevated pH levels may adversely affect an ecological community in numerous ways. High levels of pH in a water body can cause chemical reactions resulting in high concentrations of ammonia poisonous to fish. The size of the aquatic bacterial population can also be increased by high pH discharges. Furthermore, soil and vegetation may be impaired by high pH wastewater discharges. As most soils have a neutral to slightly acidic pH - between 4 and 8 - soils with a pH above 8.5 can cause plants to wilt. In addition, high pH soils tend to have a high concentration of salts that can be corrosive to vegetation. Soil pH can also affect the availability of nutrients such as nitrogen and phosphorous.

Unlike a persistent discharge of toxic chemicals, a discharge of high pH wastewater in the 10 to 12 range would not likely result in cumulative or permanent impairment to the environment. However, repeated discharges of high pH wastewater to the terrestrial environment could result in long-term stunting of plant growth. Though the impact of high pH wastewater discharge on a stream may vary depending on a number of factors, such as quantity of discharge, flow volume of the receiving water body, existing nutrient loading and pH of the receiving water body, aquatic plant and fish life may suffer. Thus, uncontrolled wastewater discharges from concrete producers can have an adverse impact on the environment, and concrete producers should be aware of the possible need for a discharge permit.


Ready-mix producers carry the burden of determining whether their operations require a NPDES permit. Generally, if a facility has any wastewater leaving its site, it very possibly requires a discharge permit. At the very least, the discovery of wastewater leaving a site should trigger a thorough evaluation of whether a discharge permit is required. This evaluation should focus on whether there is "discharge of a pollutant" from a "point source" to "waters of the United States." In addition, many states prohibit discharges to ground water. Thus, even if water is not leaving the site, but rather is pooling and being absorbed into the ground, there may be a need for a discharge permit.

In the event a NPDES permit is required, ready-mix producers can consider operational changes that would put an end to point source discharges, and thereby eliminate the need for the NPDES permit. To the extent that regulated wastewaters are rerouted and discharged to an authorized Publicly Owned Treatment Works (POTW), no permit is required. (Be aware, however, that a POTW permit or authorization will likely be required.) Also, depending upon the nature and type of the operation, it may be possible to recycle or reuse wastewaters, eliminating the need to discharge.

In the event that a NPDES permit is necessary, the ready-mix producer will generally be required to monitor and sample wastewater discharges, to establish and maintain records, to file regular discharge monitoring reports, and to install, use and maintain specified monitoring equipment. Failure to comply with a NPDES permit - or failure to obtain one - or any infringement of the Clean Water Act is a violation of the law subject to fines up to \$25,000 per day of violation. Violators may be subject to civil and/or criminal proceedings. Corporate officers and employees may also face individual fines and jail time. In some circumstances, fines calculations may start at \$250,000/day.

Conclusion The generation of regulated wastewater is a fact of life at ready-mix plants. Failure to understand and comply with CWA wastewater discharge requirements can subject concrete producers to significant civil and, in some cases, criminal penalties. Ignorance of the law provides no defense or relief from prosecution. Compliance with the CWA may require operational changes and some capital improvements. Ready-mix producers should learn the applicable regulations, understand how they apply to their specific facilities and operations, and determine what actions are necessary to attain compliance with the CWA. For more information

on CWA compliance, ready-mix producers may utilize the resources of the various state and federal concrete associations or contact the U.S. EPA or appropriate state environmental regulatory authority.

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