

March 22, 2022

LEACHATE COLOR TREATMENT

Fluctuating color is not harmful to creek, environment, or public health

Modern Landfill is investing more than \$20 million to upgrade its leachate treatment plant. That work includes installation of a Reverse Osmosis system that will expand the plant's capabilities to reduce the color of the treated effluent, which at times can shade a varying degree of brown or reddish-brown. **The fluctuating color poses no harm to Kreutz Creek or to the environment or public health.**

Modern Landfill legally discharges treated effluent from its on-site leachate treatment plant into Kreutz Creek under a National Pollution Discharge Elimination System (NPDES) permit that was renewed in 2017. With respect to color, the landfill is operating in full compliance. The NPDES permit does not impose a specific color limit on discharge to Kreutz Creek, but it does carry a color monitoring provision.

When the Pennsylvania Department of Environmental Protection (DEP) issued the NPDES permit renewal in 2017, the agency determined that "the development of appropriate site-specific permit requirements such as numerical color effluent limits is not justified at this time."

as well as mixing/dilution characteristics of the discharge, **the development of appropriate site-specific permit requirements such as numerical color effluent limits is not justified at this time.** In addition, because visual determination of color is subjective, it

Source: November 1, 2016 NPDES Permit Fact Sheet Addendum, p. 4

In making its determination, and based on its own experiences with other waste disposal facilities, DEP acknowledged that the observed color in the effluent "is most likely caused by the decomposition (or degradation) of naturally occurring matter contained in the leachate," like food waste and yard waste, which is typical in municipal waste landfills. The coloring is similar to leaves left on a driveway; the longer the leaves weather on the driveway, the varying shade of the organic stain left behind.

the conversation with the permittee and its consultant, **colored effluent is most likely caused by the decomposition (or degradation) of naturally occurring organic matter contained in the leachate.**

Source: November 1, 2016 NPDES Permit Fact Sheet Addendum, p. 4

Although Modern Landfill's NPDES permit does not impose a specific color effluent limit on its discharge, the landfill is required to monitor the color of its effluent monthly at its point of discharge into Kreutz Creek and submit those results to DEP. The new plant is scheduled to be operational in mid-2023.

For more information: <https://modernlandfillpa.com/>.