

Agency Name: Department of Health and Environmental Control

Statutory Authority: 1-23-130 and 48-1-10 et seq.

Document Number: 4413

Final in State Register Volume and Issue: 37/10

Status: Emergency, effective for 90 days

Subject: Emergency Regulation for Management of Wastewater System Sludge, including Land Application of Sludge, Impacted by Illicit Discharges of Polychlorinated Biphenyls (PCB)

History: 4413

<u>By</u>	<u>Date</u>	<u>Action Description</u>	<u>Jt. Res. No.</u>	<u>Expiration Date</u>
-	10/25/2013	Emergency Reg Published in SR		
-	09/25/2013	Effective Date unless otherwise provided for in the Regulation		

Document No. 4413
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
CHAPTER 61

Statutory Authority: 1976 Code Sections 1-23-130 and 48-1-10 et seq.

Emergency Situation:

Emergency Regulation for Management of Wastewater System Sludge, including Land Application of Sludge, Impacted by Illicit Discharges of Polychlorinated Biphenyls (PCB)

Introduction.

The Department was notified in July 2013 of polychlorinated biphenyls (PCB) contaminated material in three publicly owned treatment works (POTWs) located in upstate South Carolina. Because PCBs were banned in the United States over thirty years ago, they are not expected to be found in wastewater systems. The Department's investigation indicates the materials found in the POTWs were illicitly discharged into the systems and originated from unknown sources.

It was believed these illicit discharges were limited to upstate POTWs until September 2013 when PCB contaminated material was detected in a restaurant grease trap in Richland County. Therefore, the Department finds there is a significant risk that illicit discharges of PCBs may be occurring statewide, and it is appropriate to take immediate action to prohibit land application of PCB contaminated material. Additionally, because permits for wastewater systems in South Carolina do not address the discharge of PCBs to waters of the State, immediate action is necessary to ensure PCB contaminated sludges are properly handled by systems affected by these illicit discharges.

PCBs are chemicals that were used as coolants and lubricants in transformers, capacitors, and other electrical equipment before being banned by Congress in 1979 because of evidence that they build up in the environment and can cause adverse health effects. Once in the environment, PCBs do not readily break down and therefore remain in the environment for long periods of time cycling through the air, water, and soil. PCBs are taken up in small organisms and fish. PCBs can accumulate in leaves and the above-ground parts of plants and food crops.

Land Application of Sludge.

Some South Carolina wastewater treatment systems are permitted for the land application of their sludge. The Department's current regulations for land application, R.61-9.503 and 504, mirror the current federal sewage sludge regulations related to pollutant loading adopted in 40 CFR 503. The federal Toxic Substances Control Act (TSCA) regulates PCB levels in sludge at levels equal to or greater than 50 parts per million (ppm). Because PCBs were banned in the United States over thirty years ago, they are not expected to be found in wastewater systems. Therefore, there are currently no federal or state regulations to limit the land application of sludge below 50 ppm.

With the issuance of this emergency regulation, the Department is prohibiting the land application of sludge with quantifiable levels of PCBs from wastewater systems, including but not limited to municipal wastewater treatment facilities, industrial wastewater treatment facilities, and septage from septic tank management and grease trap waste from interceptor tanks serving facilities such as restaurants that have quantifiable levels of PCBs.

Sludge Treatment at Wastewater Systems.

In wastewater systems impacted by illicit discharges of PCB contaminated waste, PCBs collect in the sludge of wastewater treatment systems. Sludge treatment by methods such as thickening, digestion and dewatering generates additional wastewater that must be managed by the wastewater treatment system. To protect public health and the environment related to the effluent discharge to surface waters and the land, the Department needs to establish restrictions for sludge treatment operations.

South Carolina has water quality standards that apply to dischargers (e.g., NPDES facilities). However, because they have been banned, PCBs are not typically identified in permit applications and unless PCBs are expected to be present. The NPDES permit process does not evaluate PCBs for discharge limitations in a permit. However, in the present circumstances, wastewater systems must manage PCBs that have accumulated in sludge. Since management of PCB contaminated sludge creates a new, but temporary wastestream, it is important to evaluate the return wastestream to determine if levels of PCBs are above detection (i.e., quantification levels).

The Department finds that this regulation is needed to immediately manage wastewater system sludge, including land application of sludge, impacted by illicit discharges. The Department further finds that this regulation is needed to protect the public health and the environment from the adverse effects of PCBs in the environment. The Department is a natural resources and health related agency, and finds that abnormal or unusual conditions exist that require immediate action to promulgate this emergency regulation.

Text:

Emergency Regulation for Management of Wastewater Treatment System Sludge, including Land Application of Sludge, Impacted by Illicit Discharges of Polychlorinated Biphenyls (PCB)

Section 1.

Polychlorinated Biphenyls (PCBs) Restriction Related to Land Application.

Land application pursuant to permits under Regulation 61-9 of sewage sludge (including domestic septage), industrial sludge, and/or grease trap waste (e.g., interceptor tanks for restaurants), of which for the purpose of this regulation is referred to as sludge, may not occur if levels of PCBs are quantifiable using EPA SW-846 Method 8082A, with sample preparation method #3550C ONLY.

Section 2.

Land Application of Sludge.

Land application permittees under Regulation 61-9 must collect representative sludge samples for PCB levels at least quarterly based on calendar year quarters to confirm compliance with Section 1. If a representative sample has not been taken within fifteen (15) days prior to the effective date of this regulation, the permittee shall cease land application until sampling has been completed to confirm compliance with Section 1. Data collected must be maintained by the permittee for five (5) years and submitted to the Department annually and should accompany other applicable annual reports. Any quantifiable level of PCBs in the sludge shall be reported to the Department in writing within five (5) calendar days of receipt of the results by the permittee.

Section 3.

Sludge Treatment at Wastewater Systems.

a) This section applies when a wastewater system is managing PCB contaminated sludge following illicit discharges of PCB waste to the system.

b) When operating sludge management systems (e.g., thickening, dewatering), where wastewater is generated that is feeding back in the wastewater treatment system (e.g., filtrate piped to the head of the treatment facility), if the returned wastewater is below levels of quantification as set by item “c” below, then such operation is deemed in compliance with state water quality regulations.

c) For the purposes of this regulation, the practical quantification level for the returned wastewater should be evaluated based on EPA Method 608 for PCBs in wastewater. The wastewater system owner must collect representative samples to confirm that the returned wastewater is below this level of quantification.

Section 4.

Implementation.

Definitions applicable to this regulation are specified in R.61-9 and the Pollution Control Act, South Carolina Code Section 48-1-10 et seq. This regulation is self-implementing, and is in addition to the requirements in permits issued pursuant to Regulation 61-9. This regulation is effective for ninety (90) days from the date of filing with the Legislative Council pursuant to South Carolina Code Section 1-23-130.