

# RENEWABLE WATER RESOURCES

## MEMORANDUM

---

**TO:** Board of Commissioners

**FROM:** Ray Orvin

**DATE:** September 12, 2013

**SUBJECT:** FAQ on PCBs

**I. What are PCBs?**

- i. PCBs (polychlorinated biphenyls) are chemicals that were used as coolants and lubricants in transformers, capacitors, and other electrical equipment. They were banned from production by Congress in 1979 because of evidence that they can build up in the environment and potentially cause adverse health and environmental effects.

**II. How did they get in our system?**

- i. PCBs were illegally introduced into the wastewater collection system from an unknown source and made their way to certain ReWa Water Resource Recovery Facilities (WRRFs). Also, residual amounts of PCBs have been identified in materials deposited by septage haulers at certain ReWa WRRFs. PCBs adhere to organic materials, therefore are contained in our biosolids.

**III. What are ReWa's permit requirements?**

- i. Our biosolids permit prohibits the processing, land application and disposal of biosolids with greater than 50 ppm. ReWa has two sets of annual sampling surveys that include PCB's and other constituents, one being the Biosolids testing, the other the Head Works Analysis. Prior to 2013, ReWa had not detected PCBs greater than 50 ppm at any WRRF.

**IV. Which ReWa plants were impacted and to what extent?**

- i. All plants have been tested for the presence of PCBs. Only the Mauldin Road, Lower Reedy and Pelham WRRFs have tested positive for this constituent.
- ii. **Mauldin Road WRRF** – The biosolids tests in February 2013 indicated low levels (below 50 ppm) of PCBs at Mauldin Road WRRF. The biosolids operational process at this facility is to thicken and then land apply. Land application was suspended. Currently staff is thickening solids and placing in holding tanks. Effluent water testing is non-detect for PCBs.
- iii. **Lower Reedy WRRF** – The biosolids tests in February 2013 indicated no PCBs at this WRRF. On July 25, residual levels of PCBs were indicated by testing at this WRRF. Land application of biosolids was suspended. Solids were thickened and placed into holding tanks. All solids after August 15<sup>th</sup> have been pressed and sent to the Twin Chimneys Landfill. Effluent water testing is non-detect for PCBs.
- iv. **Pelham WRRF** – The January 28<sup>th</sup> Head Works Analysis Report identified elevated levels of PCBs in the biosolids at the Pelham WRRF. Resampling at Pelham on February

11 verified elevated levels of PCBs in two tanks. ReWa continued sampling in March and April noting the continued presence of PCBs. A third tank was isolated in May when an oily sheen was observed at Pelham and PCBs were verified to be present in the oil. No biosolids have been processed from these 3 tanks. Currently, Pelham is pressing the solids that are below 50 ppm and sending the filter cake to the Twin Chimneys and Palmetto Landfills. Effluent water testing is non-detect for PCBs.

**V. What action is ReWa taking?**

- i. In alignment with ReWa's Mission Statement to protect the public health and water quality of the Upstate, we have contained the PCB-contaminated byproducts that entered our WRRFs and are working closely with DHEC and EPA to determine the appropriate disposal method and remediation plan. ReWa has contracted with AECOM to develop a plan of action and a turnkey solution, with performance based standards, for complying with EPA and DHEC requirements. In the meantime, the byproducts containing these PCBs have been segregated into onsite holding basins until a decision is made regarding the disposal of the material. We have increased monitoring at potential dumping sites, are sampling effluent discharges at all of our ReWa facilities as well as the biosolids at our facilities that produce this byproduct. As a precaution, ReWa has ceased all land application of biosolids originating from the affected facilities. ReWa has requested soil samples from farmers who have received biosolids from Pelham WRRF in the last year. DHEC has indicated that it also wants to test some of the land applied fields, so ReWa is partnering with DHEC to complete this sampling.

**VI. Are there any impacts on the environment or public?**

- i. Testing indicates that there is no adverse impact on our customers or downstream users. This testing continues on our biosolids, effluent discharges at ReWa facilities, as well as at potential dumping sites.

**VII. What can the public do to help?**

- i. If you have any knowledge or suspect anyone of illegally disposing of hazardous materials, such as PCBs, near a manhole, septage receiving facility or other location that has the potential of delivering wastewater to a treatment facility, please contact Crime Stoppers at 1-864-23-CRIME.