**EQC Temporary Composting Rule Presentation**

**Introduction**

Thank you Audrey. Chair George and Commissioners. My name is Bob Barrows. I am a Waste Policy Analyst in the Eugene office and the DEQ Composting Program Lead. I will talk about the technical aspects of this proposed temporary rule. First I will define some concepts and terms I will use during my presentation.

Anaerobic Digestion

A process that occurs within tanks or enclosed vessels (digesters), in the absence of oxygen creating an anaerobic environment to process organic feedstocks like manure or food waste or human waste. Note: this rulemaking does not address waste water treatment plant digesters. Anaerobic microorganisms digest feedstocks creating methane which is used to create electricity or make other types of fuel. Anaerobic digesters may be designed and operated specifically for certain types of feedstocks.

Digestate

Digestate consists of liquid and solid material that is usually separated after the digestion process. Liquid digestate is applied as fertilizer to soil under Nutrient Management Plans approved by Oregon Dept. of Agriculture issued Confined Animal Feeding Operation permits. Solid digestate is generally used as livestock bedding or may be sent to composting facilities for further processing.

Agricultural Operation

Is defined in Oregon Dept. of Agriculture statutes and basically is a farm that makes a profit from growing and selling crops, fowl, livestock or other animals or farm services. Most Oregon anaerobic digesters are located on dairy farms and are considered agricultural operations; manure is the primary feedstock. The amount of off-farm feedstocks allowed to be received by farm digesters is limited by ODA and Exclusive Farm Use zoning, to that which would be considered a “farm use”. In other words, commercial digesters, receiving unlimited amounts of off-farm feedstocks are not allowed on farm digester sites.

Agronomic Application Rate

Amount of digestate that can be applied to soil for optimum crop production without causing groundwater or surface water problems; based on evaluation of factors such as nutrients available in the digestate, the type of soil, and the crop grown. The farms’ approved Nutrient Management Plan is intended to ensure soil application is done at an agronomic application rate.

Pathogens

Disease causing organisms that may be present in digestate or finished compost. Testing for the amount of fecal coliform bacteria are used in DEQ Composting Rules as indicator of the level of pathogen reduction provided by anaerobic digestion or composting.

**Inconsistency in Composting Rules**

While processing a permit modification for the POTB manure digester, last summer, DEQ staff identified an inconsistency in DEQ Composting rules. The POTB had asked DEQ for a modification to their digester permit, which had received only manure when it was operating, to accept other feedstocks, such as seafood processing wastes and food waste.

The inconsistency is in the Pathogen Reduction section of the Composting Rules and treats limits and testing for pathogen reduction differently based on the location of the digester. Digestate from digesters not considered agricultural operations (farms) must be tested and meet a pathogen reduction standard of 1000 MPN for fecal coliform, while farm digesters considered agricultural operations are exempted from testing and meeting that standard. All liquid digestate generated in Oregon is applied to farm fields for use as fertilizer. This is a significant point that I will explain shortly.

DEQ did not recognize this inconsistency in 2013 when anaerobic digester requirements where added to Composting Rules. We did not anticipate a situation such as the POTB manure digester which sends digestate to farms for soil application. The POTB digester is not on a farm and is not considered an agricultural operation and could be interpreted as being subject by current rules to the pathogen reduction standard. All other manure digesters are agricultural operations and do not test for pathogen reduction.

Manure has a very high fecal coliform load and while anaerobic digestion significantly reduces fecal coliforms, most manure digesters are not operated in a manner that can meet the 1000 MPN fecal coliform standard. Most Oregon manure digesters are operated in a manner that can reduce fecal coliform counts down from tens of millions population to several thousand, but aren’t operated to reduce to below 1000 MPN.

**Technical Justification**

Why aren’t farm digesters required to attain that standard? Because soil application of digestate at agronomic application rates, further reduces fecal coliforms and other pathogens to levels safe for the environment and human health.

DEQ researched EPA regulations for biosolids land application, looked at research conducted by universities operating anaerobic digesters, such as WSU and Michigan State; and reviewed other state regulations for digestate management, such as Washington, Wisconsin and California. EPA and the other states recognized research showing final pathogen reduction to safe levels by soil application of digestate.

**Proposed Language**

Since the POTB digester may be subject to testing and meeting the 1000 MPN standard, it could be treated differently than all other manure digesters. The proposed temporary rule language will treat all digesters (manure or other feedstocks) the same, regardless of the location of the digester as long as the digestate is land applied at agronomic application rates and under certain EPA site restrictions for safety. However, if digestate is to be used in some other manner than as soil application, then it must meet the pathogen reduction standard.

This ends my technical part. Jennifer.