



Ohio Water Environment Association

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**83rd Annual
Meeting
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Ms. Elizabeth Balik, P.E.
Ohio Environmental Protection Agency
Division of Surface Water
PO Box 1049
Columbus, Ohio 43216-1049

Re: Comments on Draft Sewage Sludge Draft (OAC 3745-40)

Dear Beth,

The Ohio Water Environment Association, through its newly formed Technical Review Group has taken the opportunity afforded to us to review the proposed sludge Draft under OAC 3745-40, and have developed a list of comments for your consideration.

First of all, the Ohio Water Environment Association (OWEA) wishes to express its appreciation for the work done by the Ohio EPA in its efforts to protect and enhance the water environment. We have endeavored to write our comments in a positive tone with the intention of improving the value and effectiveness of the proposed Draft to the Ohio EPA and the regulated community. We would be appreciative if you would consider our comments in this spirit.

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Considerations Affecting Design of Facilities

- The Draft Rules appear to enter the sphere of proposing design recommendations similar to those in *Ten States Standards*. Therefore, we suggest that the Ohio EPA give consideration to incorporating other recommendations from *Ten States Standards* into these Draft. This will help minimize confusion to end users, by placing cogent and modern guidelines into one document.
- For aerobic digestion design, we suggest that the requirement to maintain 1 mg/l be dropped in lieu of “maintaining positive dissolved oxygen levels.” For example, jet aeration systems are a very effective mixing and oxygen delivery system and are fully capable of providing full mixing and suspension with very low DO levels. This produces two benefits. It helps create a sustainable solution to sludge handling by reducing energy consumption. In addition, by operating in an oxic/anoxic mode, it encourages the proliferation facultative bacteria, which has a lower yield coefficient than strict aerobic bacteria. The end result is less mass for dewatering and disposal, which is also a more sustainable approach to facilities operation and management.
- The Draft for aerobic digestion reference the *White House Document*. My understanding of this document recognizes the process benefit of operating digestion tanks in series. Equipment suppliers such as Enviroquip of Austin Texas have stated that the *White House Document* supports a position to operate digestion tanks “in series” at detention times of 42 days or less—as opposed to 60 days for tanks operated “in parallel.” Has the Ohio EPA considered this?
- The Draft Rules propose a solids detention time (SRT) of 60 days at a temperature of 15 degrees C. Experience has shown that this temperature may not be sustainable in winter conditions without being covered—an added expense. Commonly, digester temperatures can drop to below 15 degrees C during the coldest periods in winter to about 10 degrees C. The Draft may wish to acknowledge this.
- The Draft Rules discuss options for sludge storage. We suggest that they better clarify if open beds must be covered. My experience has revealed that Ohio EPA reviewers have different interpretations of what is considered as acceptable storage; some insist that beds be covered, while other reviewers do not. A bit more clarification may be necessary to minimize confusion.

- The Draft Rules should clarify the difference between sludge “process” tanks and sludge “storage” tanks, and under what conditions that “process” tanks be considered for “storage.”
- The Ohio EPA may wish to expand discussion to reflect the growing practice of adding septage and/or oil and grease to digesters. At this point in time, more and more treatment plants have added a septage receiving station. We believe that septage receiving at a POTW is environmentally superior to the traditional way of land application regulated by the Ohio Department of Health.
- As a general observation, it appears that the requirements to pursue either Class A or EQB sludge are very stringent, and so much so that there is little differentiation from requirements for Class B biosolids once it is produced. As an example, storage requirements remain the same. One could argue that there is little incentive to pursue higher quality treatment in the absence of environmental regulations. While we wish for the regulated community to be responsible stewards, we do not wish to discourage them from pursuit of sludge better than Class B quality.
- There appears to be an error in the formula for the calculation of the Fractional Volatile Solids Reduction (FVSR) in 3745-40-04 Paragraph (C)(1)(a) of the draft rule.

The term VS_f does not mean “final volatile solids”, and VS_b does not mean “volatile solids before treatment” as stated.

In the “Control of Pathogens and Vector Attraction in Sewage Sludge” (EPA, 1999) document, the “f” subscript refers to “feed” to the digester, and the “b” subscript is “bottom” of the digester, referring to the digested solids.

The correct definitions are:

VS_f = fractional volatile solids feed before treatment (Often referred to as VS_{in}).

VS_b = fractional volatile solids after treatment (Often referred to as VS_{out}).

To convert FVSR to percent volatile solids reduction, multiply FVSR x 100.

3745-40-01 Definitions

- (SSS) We suggest that the term “sewage sludge” be defined since it is central to the discussion.
- (C) We suggest that the term “agronomic” be defined in the draft rule.
- We did not locate a definition for “frozen and snow covered ground”. We suggest that these terms be included for the purpose of clarity.
- (OO) We are curious in better a better understanding on how the Agency interprets the minimum depth of four inches for incorporation. Please clarify.
- (QQ) We were not clear what level of control is being advocated for inert materials. Please clarify.

3745-40-02.1

- -02(E) (2) makes reference to 3745-40-08 (D) (1) when it should be (D) (2)
- -02(E) (2) prohibits “land application” but does not prohibit “beneficial use”. Is this -02(E) (3) prohibits inert material in biosolids beneficially used. Biosolids will contain some inert material, so where should the line be drawn on the type, dimensions, and quantities?
- -02(C) (3) (b) “sanitary landfill” is not defined in section -01.
- -02(E) (2) references 3745-40-08 (D)(1)(b)(ii) when it should be (D)(2)(b)(ii).

Section -04 Biosolids Classifications

- 04(D) 2 Table D-1 proposes to eliminate the benefit of an “averaged” sample since a single hit above the new ceiling limit will force a generator to landfill dispose of the biosolids. For example, composted biosolids tested once with a zinc result of 3000 mg/kg would mean it must be land filled despite the fact that this test may be an “outlier.” Please clarify.
- -05(B) requires that any person who is not a permittee and distributes biosolids will notify biosolids customer that the “material contains biosolids treated” Is it the intention of the Rule to regulate labeling of potted plants with some EQB compost blended in the potting soil mix?

3745-40-06

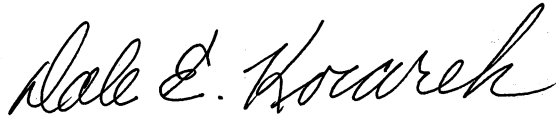
- -06(B) Rail car storage for bulk biosolids is prohibited without specific site authorization. The quantity of 50 cubic yards defining bulk biosolids seems to be very small. Also, is there a difference between shipping” and “storage” of bulk biosolids?
- -07(c) We wonder if increasing the isolation distance to such an extent would eliminate might potentially a lot of otherwise good sites from receiving the benefit of biosolids.
- -07(E) Table E-1: Suggests that the applicator remove biosolids that exceeds the time limit because the field is too wet for access. Please clarify.

3745-40-08

- 3745-40-09(B)4 dioxin 30 ppt TEQ limit is very low compared to existing standards in locations that have dealt with dioxins such as the 300 ppt limit in the State of Missouri. The USEPA investigated dioxins and concluded that levels were not an issue and did not justify regulation. The 30 ppt limit will eliminate some land application programs. This also does not indicate that an average concentration below would be acceptable. At what point in further testing would a biosolids material be acceptable to land apply?
- -09 Table B-4 Based on our review, it initially appears that the information presented may need to be clarified. For example, some pathogen and vector attraction reduction monitoring must be performed daily (each time process is conducted) even though the table suggests that it can be done quarterly or annually?

Thank you for the opportunity to provide comment on these important Draft Rules.

Very truly yours,

A handwritten signature in black ink that reads "Dale E. Kocarek". The signature is written in a cursive style with a large, sweeping initial 'D'.

Dale E. Kocarek, P.E., BCEE
OWEA Vice President and
Technical Review Group

Copy: Dianne M. Sumego, P.E., OWEA President
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