Ohio Environmental Protection Agency

Division of Surface Water
Response to Comments

Rule(s): **Sewage Sludge/Biosolids Rules**
Ohio Administrative Code Chapter 3745-40

Agency Contact for this Package
Elizabeth Bailik, PE
Division of Surface Water
(614) 644-2039
elizabeth.bailik@epa.state.oh.us

This document summarizes the comments and questions received during the interested party review comment period, which ended June 7, 2010.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the comments are grouped by rule. The names of the commenter(s) follow the comment in parentheses.

(A) Comments without responses:

Comment 1:
- As you are aware, the Ohio State University College of Public Health and the Franklin County Board of Health along with the Ohio EPA and other consultants, are currently testing an investigation tool developed by the Water Environment Research Foundation (WERF) to respond to alleged concerns about health effects from neighbors of the land application of biosolids. Given Ohio's key role in testing the WERF complaint investigation tool, which could be used nationally by a wide variety of stakeholders, these proposed amendments will provide regulators information on heretofore unknown concerns that, in my opinion will help, not hurt the biosolids industry.

Even after the conclusion of the WERF project at the end of 2010, prompt response to ALL concerns received by farmers, appliers, and generators, not just the ones that are currently reported by citizens to regulators or local health departments, is the only way to get a handle on understanding the risk associated with the land application of biosolids.

A trusting partnership between, industry, regulators, farmers, and scientists, with the objective of further understanding the concerns of citizens, will make the biosolids industry stronger in Ohio in the long run. Citizen understanding of biosolids can and will be increased if regulators and industry listen and proactively track and report these concerns. The more concerns that come to our attention, the more we can educate citizens on the truth of current science, wherever that science may take us.

Trust between the biosolids industry, regulators, scientists, farmers, and our citizens can only result in a "win-win". I would like to know if there are any additional opportunities to present these comments to your agency. Ohio is in a prime position to take more of a leadership role in understanding the risk from the land application of biosolids. To be effective, leaders listen. I believe these proposed amendments will put Ohio's regulators, industry, and scientists, in a collaborative position of listening to citizen concerns.
(Paul Rosile, Franklin County Board of Health)

Comment 2:
Synagro Central, LLC (Synagro) is pleased to provide the enclosed comments on the above referenced rules. Our goal is to see Ohio EPA adopt rules that preserve and enhance the only green and cost effective method of biosolids management in Ohio.

Synagro is the nation's leading provider of services for the management of solids (biosolids) produced by wastewater treatment processes. Synagro offers a variety of treatment processing options for biosolids (e.g. composting, heat drying, alkaline treatment, dewatering) as well as complete management services for the various biosolids products, including direct application to agricultural land.

Synagro has worked with the OEPA on development of these rules over many years. Since the original rule was promulgated in January 2002 Ohio EPA has published draft or proposed rules for interested party review many times and we have provided input at each opportunity. The proposed rule includes new requirements for agronomic rate, indicator organism testing, soil phosphorus requirements and odor abatement that have not been included in any previous draft rules. These are highly technical requirements requiring a thorough review to assess the impacts on Ohio communities. Many of the requirements of this rule are derived from the enabling federal 40 C.F.R. part 503 rule while others are included as much more stringent Ohio EPA requirements.
(Bruce MacLeod, Synagro Central, LLC)

Comment 3:
This letter is being submitted to the Ohio Environmental Protection Agency (the "Ohio EPA") on behalf of the City of Akron, Ohio (the "City") in response to the Ohio EPA's proposed amendments to Ohio's Wastewater, Sewage Sludge and Biosolids rules (the "Draft Rules"). The City appreciates Ohio EPA's consideration of the City's comments to the proposed revisions to the Draft Rules.

As discussed in greater detail below, the City is concerned with the impact that the Draft Rules will have on the City, as well as similarly situated parties, as the permittee of a wastewater treatment plant and producer of associated wastewater treatment sludges and biosolids. Therefore, the City urges the Ohio EPA to refrain from sending the Draft Rules to the Joint Committee on Agency Rule Review ("JCARR") for processing until such time as the issues discussed herein can be resolved to all parties' satisfaction.
(Terrence Finn, Roetzel and Andress on behalf of City of Akron)

Comment 4:
The City of Columbus appreciates the fact that the Ohio EPA incorporated the majority of its comments set forth in its May 22, 2009 comment letter. The City is also encouraged by the Agency's Response to Comments No. 21 recognizing that proper land application of biosolids is an important alternative to disposal. The City submits the following additional comments for the Agency's consideration. Each comment is discussed separately below.
(Dominic Hanket, City of Columbus)

Comment 5:
We applaud OEPA for carefully considering the comments of the regulated community. We understand that the requirements in the revised regulations are slightly more technically oriented than previous version of the regulations. The regulated community may need training, support, and guidance to assist them as they develop their biosolids management plans and programs.
(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

B) Comments with responses:

General Comments

Comment 6:
Ohio Department of Agriculture just filed the fertilizer rules for a 5 year review with no changes. According to the Ohio Lake Erie Phosphorus Task force, fertilizer represents over 66 percent of the nutrients applied and there is an economic mechanism that incentivizes application of fertilizer nutrients during the winter and early spring when the potential for water quality impacts is greatest. Addressing this unregulated source of nutrient impairment to Ohio's waters would seem to be a higher priority than targeting an already highly regulated fertilizer such as biosolids.
(Bruce MacLeod, Synagro Central, LLC)

Response 6:
Ohio Department of Agriculture, Division of Plant Industry filed no change rules on May 19, 2010 that include regulations for fertilizers. Ohio Department of Agriculture had a representative on the Ohio Lake Erie Phosphorus Task Force and is therefore well aware

of the Task Force recommendations. Ohio EPA would expect Ohio Department of Agriculture to include updates to the rules if necessary in future rule reviews. It should also be mentioned that Ohio EPA does not regulate commercial fertilizer and is therefore only in an advisory role in regards to this material. Ohio EPA does however regulate other sources of nutrients to waters of the state such as treated wastewater, biosolids and manure from Concentrated Animal Feeding Operations (CAFOs). It is, therefore, the Agency's responsibility to ensure these materials are managed in accordance with the most up-to-date best management practices for minimizing runoff into Ohio's surface waters, especially in light of the serious impacts excessive nutrient levels are exhibiting in waters such as the western basin of Lake Erie and Grand Lake St. Marys. Best management practices for reducing phosphorus inputs to waters of the State have evolved since the biosolids regulations were first adopted; therefore, the regulations are being amended to include the steps towards implementing the best available science for land application.

Comment 7:
Many of the concerns that Ohio EPA is attempting to address by promulgation of this new rule are a result of the lack of implementation of the current rule by the regulated community. To encourage broad implementation of this rule we are recommending that a certification program be promulgated to increase the likelihood of implementation.

Many municipalities currently have problems submitting a single annual report. This rule language is just too technical in nature to expect implementation by anyone other than the most sophisticated beneficial users in Ohio. Adoption of these 12 new highly technical rules, while many current Ohio municipalities are unaware that new rules were adopted in 2002, will further heighten confusion in the regulated community. Ohio rules require that wastewater plants be operated by a Certified Wastewater Operator. The highly technical nature of this rule combined with the high number of potential beneficial users in Ohio lead to the inescapable conclusion that the only possibly way to adequately regulate this nutrient resource is through a certification similar to a wastewater works operator. Synagro endorses these highly technical rules that protect the waters of Ohio. However we are concerned about the potential for low implementation by uncertified beneficial users.
(Bruce MacLeod, Synagro Central, LLC)

Response 7:
Ohio EPA will take this into consideration when Chapter 3745-7, Operator Certification for Public Water Systems and Wastewater Treatment Works is open for review.

Rule 3745-40-01: Definitions

Comment 8:
3745-40-01: The City recommends that "phytoavailable phosphorous" be defined. This additional term would impact the calculation of all phosphorous-related agronomic rate

terms. This change ensures that the land applier knows how much phosphorous is available in the biosolids while the supplier of the fertilizer is providing accurate information regarding the availability of phosphorous in the biosolids to be applied.
(Dominic Hanket, City of Columbus)

Response 8:
At this time, Ohio EPA will not be including a definition of "phytoavailable phosphorus" in the proposed rules. We acknowledge that not all phosphate is readily available for plant uptake the first year of application; however it will become available through transformation for subsequent crops and can contribute to nutrient impairment in the aquatic environment. Basing application rates on phosphate is consistent with recommendation in Ohio's Natural Resources Conservation Service (NRCS) Conservation Practice standards, which are the State's best management practices for working lands.

Comment 9:
3745-40-01 and 01(D): The definition of *Agronomic rate*, 40-01(D)(1), should be modified to acknowledge the phosphorus (P) content in biosolids that is actually available for uptake by crops. Phytoavailability of organic amendment nitrogen is routinely considered in the calculation of the *Nitrogen agronomic rate*, 40-01(OOO). This same concept should be expanded to include the determination of the phosphorus agronomic rate.

Application rates are limited to crop removal of P when the site rating calls for P-based nutrient management. For manures, P removal rates are matched to total manure P content, since manure P is routinely assumed equal to fertilizer P for supplying crop needs and building soil P levels. Because biosolids are P-rich relative to manures, assuming 100% plant availability of P for *single-year phosphorus agronomic rate* will typically restrict biosolids application rates to <1 ton/acre. Such low application rates will severely reduce a farmer's interest in utilizing biosolids because supplemental fertilizer N will be necessary and low rates are uneconomical and impractical. Low application rates will also mean municipalities will need much greater acreage to recycle their biosolids. *Multi-year phosphorus agronomic rate* application greatly improves the situation.

The P-supplying ability of most biosolids is however generally less than commercial P fertilizer. Greenhouse studies were conducted with a common pasture grass grown in two P-deficient soils amended with 12 biosolids and a commercial fertilizer (triple superphosphate, TSP) to quantify P uptake and to assess the relative phytoavailabilities of the P-sources. Biosolids were grouped into three general phytoavailability categories relative to TSP: high (>75% of TSP), moderate (25-75% of TSP), and low (<25% of TSP). Two biosolids, produced via biological P removal (BPR) processes and conventionally stabilized (i.e., aerobic or anaerobic digestion), were in the high category and mimicked fertilizer-P with regard to P phytoavailability. Most biosolids produced by

conventional wastewater treatment and solids digestion and additional treatments (e.g., composting) were in the moderate category. Also included in this category were a BPR that had been pelletized and another BPR supplemented with Al. The low category included biosolids treated by advanced alkaline stabilization (e.g., N-Viro process) and biosolids containing greater than normal (>50 g/kg) total Fe and Al concentrations and processed to high (>60%) solids content.

Notably the USEPA Process Design Manual for Land Application suggests a single 50% phytoavailability factor biosolids P. Canadian regulators (Ontario Ministry of Environment and Energy, and Ontario Ministry of Agriculture, Food and Rural Affairs, as cited by O'Connor et al., 2004) recommend a value of 40%. If a P index assessment for a site dictates P-based application, the fraction of total P available to crops must be known. Until further research provides more specific guidance, the 50% phytoavailable P value appears to be a reasonable estimate for the majority of biosolids (e.g., medium category).

It is suggested that the term *Phytoavailable phosphorus* be added to 40-01, and the *Agronomic rate* definition, 40-01(D)(1), be modified as follows:

"Phytoavailable phosphorus" means the amount of phosphorus that is available for crop uptake, used for determination of the *Single-year phosphorus agronomic rate,* 40-01(MMMM), or *Multi-year phosphorus agronomic rate,* 40-01(NNN). [Comment: Unless a different biosolids phosphorus phytoavailability factor can be demonstrated, 50 percent of total biosolids P shall be considered available for crop uptake. Phosphorus phytoavailability in subsequent years is accounted for by agronomic soil phosphorus testing conducted on a frequency of no greater than 3 years.]

"Agronomic Rate" means a rate of application of nutrients from any source to the land or an amount of nutrients removed by the crop based on:

(1) Plant-available nitrogen and phytoavailable phosphorus content of biosolids to be land applied;
(2) Nutrient needs of the current or planned crops; and
(3) Nutrient holding capacity of the soil.

(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

Response 9:
As mentioned in the response to Comment 8 above, we will not be including a change to phosphate application rate determinations based on "phytoavailable phosphorus". The study referenced in the comment, *Characterizing Forms, Solubilities, Bioavailabilities, and Mineralization Rates of Phosphorus in Biosolids, Commercial Fertilizers, and Manures Phase I* by O'Conner et. al., 2002, was conducted on sandy soils with low phosphorus levels, not typical of soils throughout Ohio. As stated in the executive summary, "this serves to underscore an important principle: P bioavailability is a

complex function of many properties of the soil, climate, and vegetation, as well as the P source. This research used sandy P-deficient soils where the biosolids properties are primary determinants of the P chemistry and behavior. Application of biosolids and other organic-P sources to soils already containing adequate P for crop growth may appear to have little impact on P uptake and crop yields, thereby masking inherent differences in the P bioavailability of various materials." The study goes on to state that "A goal of Phase II of this research is to provide a rationale for incorporating biosolids into phosphorus indices under development by many states to address P-based nutrient management. To do this, the project team will focus on field-verifying the greenhouse studies of P bioavailability and leaching and the potential of using Fe or Al additions to reduce P solubility in biosolids or manures with high soluble P levels. Additionally, runoff studies of P from various sources applied to various soils will be conducted." To date, the results of Phase II of this project has not been published. It should be noted that a team has been assigned to review and update the Ohio Phosphorus Index Risk Assessment Procedure. The National Phosphorus Index is also under review. Updates made to the Phosphorus Index may be included in future rule makings.

It is true that supplemental commercial nitrogen fertilizer may be needed when biosolids applications are limited by phosphorus criteria as is the case with most other organic materials that are land applied, however the amount will still be less than required without the biosolids application. The other benefits of biosolids application, such as improving soil tilth and micronutrients should be emphasized along with implementing more sustainable practices (i.e., reducing the amount of phosphorus applied before soil test Bray P1 levels reach 150 ppm will allow the field to be utilized longer for application).

Comment 10:
3745-40-01(L): It may be a good idea to include class B sludge in the first sentence of the definition.
(Maureen Ware, Ohio EPA SWDO)

Response 10:
Ohio EPA has made this change as requested.

Comment 11:
3745-40-01(P): As BPR is an acronym, it may be a good idea to define the acronym. I presume it to mean Biological Phosphorus Removal (BPR) Biosolids.
(Maureen Ware, Ohio EPA SWDO)

Response 11:
This definition has been removed.

Comment 12:
3745-40-01(W): Assuming that inorganic pollutants are things such as metals, I doubt that they are "beneficially used" at a beneficial use site. Rather perhaps you should say "…the maximum amount of an inorganic pollutant that may be applied at a beneficial use site". It also may help to call out the time period we are referring to. Is this per month, year, a decade, or forever? In section 3745-40-04, it appears that July 20, 1993 may be the "trigger" date for cumulative pollutant loading rates. Where does that date come from? Perhaps 7/20/93 should be used in the definition of Cumulative Pollutant Loading Rate.
(Maureen Ware, Ohio EPA SWDO)

Response 12:
Ohio EPA has made the changes as suggested.

Comment 13:
3745-40-01(W): The proposed definition of "cumulative pollutant loading rate," or CPLR, in draft OAC 3745-40-01(W) should be changed to reflect the definition in accordance with 40 CFR 503. CPLR is not a maximum amount of pollutant that can be "beneficially used" at a site; rather, it pertains to the lifetime maximum amount of which "can be applied" to an area of land.

The City of Columbus recommends that the term "Cumulative pollutant loading rate" means the maximum amount of an inorganic pollutant that can be applied to an area of land.
(Dominic Hanket, City of Columbus)

Response 13:
Ohio EPA has made this change as requested.

Comment 14:
3745-40-01(QQ): Should a site that floods more than once every 2 years even be considered as acceptable for sludge disposal?
(Maureen Ware, Ohio EPA SWDO)

Response 14:
Ohio EPA feels that requiring same day incorporation or injection in areas of beneficial use sites that are classified as frequently flooded will still provide sufficient protection of surface waters of the state.

Comment 15:
3745-40-01(WW): You define Immediate Incorporation as follows:
"(WW) "Immediate incorporation" means "incorporation", as defined in paragraph (YY) of this rule, of biosolids within six hours after surface application." However, there is no definition as to what constitutes "surface application".

(Maureen Ware, Ohio EPA SWDO)

Response 15:
Ohio EPA has removed the term surface application from the definition of immediate incorporation. The definition has been revised as follows:

"Immediate incorporation" means "incorporation", as defined in paragraph (YY) of this rule, of biosolids within six hours after delivery to the authorized beneficial use site.

Comment 16:
3745-40-01(CCC): It may be a good idea to include not only the depth, but the rate at which the liquid biosolid can be injected (e.g. X# gallons/square foot).
(Maureen Ware, Ohio EPA SWDO)

Response 16:
Beneficial use rates will vary from site to site; therefore it is not possible to define a beneficial use rate in the definition.

Comment 17:
3745-40-01(NNN): The current definition limits the *Multi-year phosphorus agronomic rate* to three calendar years. The definition should be modified to acknowledge the use of phytoavailable phosphorus for calculations and allow crop rotation periods up to five years. This modification will promote greater biosolids beneficial use in an environmentally sound manner as biosolids application will typically provide all primary nutrient requirements during the year of application, and build the *soil phosphorus reservoir* for subsequent phosphorus uptake for several years.

It is suggested that the definition of *Multi-year phosphorus agronomic rate* be modified as follows:

“Multi-year phosphorus agronomic rate” means the beneficial use rate of biosolids that will provide the phytoavailable phosphorus needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed five calendar years of planned crops. [Comment: Unless a different biosolids phosphorus phytoavailability factor can be demonstrated, 50 percent of total biosolids P shall be considered phytoavailable for crop uptake. Phosphorus phytoavailability in subsequent years is accounted for by agronomic soil phosphorus testing conducted on a frequency of no greater than 3 years.]
(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

Response 17:
The definition of “multi-year phosphorus agronomic rate” has been revised to remove the three calendar years of planned crops restriction. The definition has been revised as follows:

"Multi-year phosphate agronomic rate" means the beneficial use rate of biosolids that will provide the phosphate needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed five calendar years of planned crops. In multi-year phosphate applications, no additional source of phosphorus is applied to the same beneficial use site in subsequent years until the applied phosphate has been removed from the beneficial use site via harvest and crop removal."

Comment 18:
3745-40-01(QQQ): The phrase "unreasonable interference with the comfortable enjoyment of life or property" is rather subjective. Some folks might consider it an unreasonable interference if they get the slightest whiff of a sludge odor.
(Maureen Ware, Ohio EPA SWDO)

Response 18:
This definition remains unchanged from previous drafts of these rules. Ohio EPA will continue to investigate and evaluate nuisance odor complaints on a case by case basis. Odor, itself, is subjective to each individual person and this definition provides Ohio EPA staff latitude in evaluating a nuisance odor.

Comment 19:
3745-40-01(RRR): Why are medical care facilities not considered as an occupied building?
(Maureen Ware, Ohio EPA SWDO)

Response 19:
Medical care facilities are occupied with people who may be more sensitive to beneficial use of Class B biosolids, therefore the isolation distance for these facilities is increased over the distances used for other occupied buildings and a separate definition is necessary.

Comment 20:
3745-40-01(TTT): The definition for organic phosphorus source coefficient references the "phosphate" application rate. We believe it was the intent of OEPA to reference the "phosphorus" application rate. The City recommends that the word "phosphate" be replaced with the word "phosphorus."
(Dominic Hanket, City of Columbus)

Response 20:
Ohio EPA will be removing the definition of "organic phosphorus source coefficient" from this draft of the rules. Since the Ohio Phosphorus Index Risk Assessment Procedure is currently in the process of revision, Ohio EPA has decided not to include changes to this risk assessment procedure at this time. The current version of the Phosphorus Index Risk Assessment Procedure already accounts for the differences in

organic sources of phosphorus versus commercial sources of phosphorus through the weighting of factors. If available, an updated Phosphorus Index Risk Assessment Procedure will be included in the next rule review.

Comment 21:
The current definition of *Organic phosphorus source coefficient* references Table 2, which contains organic phosphorus application rate multipliers used as default values in the Pennsylvania phosphorus index. We applaud OEPA's inclusion of this table. However, note that these default *table values* are considered to be very conservative, HIGH levels. Allowing land appliers to establish appropriate phosphorus source coefficient values for each specific biosolids product is strongly suggested. A simple and inexpensive water extraction test can be performed to accomplish this goal. Analyzing water extractable P in biosolids typically results in much lower source coefficient values than shown in Table 2. Lower phosphorus source coefficient levels have a significant effect on phosphorus index results and therefore can make or break an otherwise successful beneficial use program.

The current definition of *Organic phosphorus source coefficient* should be expanded to allow laboratory testing to establish appropriate *product-specific* phosphorus source coefficient values for biosolids products. Table 2 values should remain as default levels for land appliers who choose not to test their biosolids.

Recommended revision: "Organic phosphorus source coefficient" means the multiplier used to adjust the organic phosphate application rate found in the phosphorus index. The multiplier is:

1) Found in Table 2 of this rule; or
2) Determined through water extractable phosphorus testing in a laboratory, and calculated as follow:

P Source Coefficient = 1.17 x % water extractable P

(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

Response 21:
This definition has been removed from the proposed rule. Please see the response to Comment 20, above.

Comment 22:
3745-40-01(UUU): Is there any animal density associated with being a pasture (e.g. 15 cows per acre, 10 horses per acre, etc.). Otherwise, someone could put one animal on a large tract of land and call it pasture land.
(Maureen Ware, Ohio EPA SWDO)

Response 22:

Pasture land can vary in size; therefore it is possible that a pasture could exist where only one animal is feeding.

Comment 23:
3745-40-01(FFFF): The definition of Representative sample is subjective. It may be useful to instead provide numbers and/or a method that a WWTP operator can relate to. Giving a concrete definition of representative would most likely provide a truly representative sample.
(Maureen Ware, Ohio EPA SWDO)

Response 23:
It is not possible to provide a concrete number for representative samples due to the variability between various treatment works. Each treatment works will need to evaluate their processes to determine the best method for collecting representative samples.

Comment 24:
3745-40-01(LLLL): I did not think it necessary to treat sludge when it is to be transferred to another NPDES permitted treatment works.
(Maureen Ware, Ohio EPA SWDO)

Response 24:
For the purposes of this definition, "treat" includes thickening and de-watering which many plants will do prior to transferring the sewage sludge to another POTW.

Comment 25:
3745-40-01(MMMM): The current definition of *Single-year phosphorus agronomic rate* does not acknowledge the use of phytoavailable phosphorus for application rate calculation.

It is suggested that the definition of *Single-year phosphorus agronomic rate* be modified as follows:

"Single-year phosphorus agronomic rate" means the beneficial use rate of biosolids that will provide the phytoavailable phosphorus needs for a realistic yield goal of the succeeding crop to be planted at the beneficial use site.
(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

Response 25:
Please see the response to Comments 8 and 9, above. Phosphorus application rates should be determined based on the phosphate concentration in the biosolids without modification based on current Ohio best management practices.

Comment 26:
3745-40-01(TTTT): It might be a good idea to call out exactly what units you want (e.g. grams of oxygen/day/kg dry sludge.) Otherwise you may get ounces/minute/gram, pounds/hour/ton, etc. True, all can be converted, but since you are defining it, you might as well call out the units in which you want it to be.
(Maureen Ware, Ohio EPA SWDO)

Response 26:
The unit requirements are found in rule 3745-40-04 within the vector attraction reduction requirements.

Comment 27:
3745-40-01(VVVV): The fact that the land that can be used includes *but is not limited to* the various types listed indicates that someone could propose using surface disposal on a farm field. As the definition stands, it appears that sludge can be put on some land for a period of 2 years or more. What's the difference between surface disposal and beneficial use of biosolids?
(Maureen Ware, Ohio EPA SWDO)

Response 27:
Some biosolids may be stored at a regional storage facility or at a beneficial use site for up to a period of two years. After two years of storage, this practice would be considered surface disposal and would be prohibited no matter where the stockpile is located.

Comment 28:
3745-40-01(YYYY): You define "total solids" as follows: "(YYYY) "Total solids" means the materials in sewage sludge or sewage sludge material that remain as residue when the sewage sludge or sewage sludge material (dry weight basis) is dried at one hundred three to one hundred five degrees Celsius (two hundred seventeen to two hundred twenty-one degrees Fahrenheit)." Yet you define "dry weight basis" as follows: "(EE) "Dry weight basis" means calculated on the basis of having been dried at one hundred five degrees Celsius (two hundred twenty-one degrees Fahrenheit) until reaching a constant mass (i.e., essentially one hundred per cent solids content)." Dry weight basis requires the sludge to be dried at 105 degrees Celsius until it reaches a constant mass, yet "Total Solids" says the sludge can be dried at 103-105 Celsius. The temps for both should be consistent, and "Total Solids" should call out the constant mass language.
(Maureen Ware, Ohio EPA SWDO)

Response 28:
The definition has been revised as follows:

"Total solids" means the materials in sewage sludge or sewage sludge material that remain as residue when the sewage sludge or sewage sludge material is dried in

accordance with Part 2540G of the Standard Methods for the Examination of Water and Wastewater.

Comment 29:
3745-40-01(AAAAA): That is not consistent with the definition as shown in DDAGW's webpage, which states "Class V wells are used to inject non-hazardous fluids underground. Fluids are injected either into or above an underground source of drinking water. There are 17 different types of Class V wells. Examples of Class V wells include, among others, surface water runoff drainage wells, septic systems, dry wells, motor vehicle waste disposal wells, and industrial, commercial, and utility disposal wells."
(Maureen Ware, Ohio EPA SWDO)

Response 29:
UIC Class V Injection Well as be redefined as follows:

"Underground injection control (UIC) class V drainage well" means underground injection control (UIC) class V injection well as defined in paragraph (E) of rule 3745-34-04 of the Administrative Code.

Comment 30:
3745-40-01(CCCCC): It might be a good idea to call out the period of time for which it is to be combusted.
(Maureen Ware, Ohio EPA SWDO)

Response 30:
The definition of volatile solids has been revised as follows:

"Volatile solids" means the amount of the total solids in sewage sludge lost when the sewage sludge is combusted in accordance with Part 2540G of the Standard Methods for the Examination of Water and Wastewater.

Rule 3745-40-02: Purpose, applicability, general requirements, exclusions, and prohibitions

Comment 31:
3745-40-02(B)(2): There is no "or" or "and" after item a, so it is not clear if items a,b, and c must all be met, or just a or b&c.
(Maureen Ware, Ohio EPA SWDO)

Response 31:
The "and" after item (b) indicates that (a), (b), and (c) must all be satisfied.

Comment 32:
3745-40-02(C)(2)(d): Item C(2)(d) and C(3)(e) calls out the fact that sludge removed from a treatment lagoon must be dealt with in accordance to the Sludge rule. Shouldn't we include sludge removed from any kind of sludge producing facility and not just a treatment lagoon?
(Maureen Ware, Ohio EPA SWDO)

Response 32:
These items have been removed from the draft rules.

Comment 33:
3745-40-02(C)(3)(a): In response to Ohio EPA Response #46 in the January 2010 Response to Comments for this rule package:

The City of Sidney has a full time staff that is very aggressive at reducing/eliminating inflow and infiltrations in the City's collection system. City council has allocated $75,000 per year for a dedicated I&I reduction program. Additionally, each year the City all of its Issue II funds for sewer rehabilitation. In addition to the aggressive I&I reduction program, the City constructed a 2.2 MG capacity equalization basin in 1993. The equalization basins were built to handle excessive flows from wet weather events. As previously stated, the City of Sidney is designed for an average daily flow of 7.0 MGD with a peak design flow of 13.5 MGD. The current screen is designed for 10.0 MGD, which can handle approximately 140% more flow than the average daily design flow of 7.0 MGD. During periods of wet weather, when flows exceed 13.5 MGD, a portion of the flow is directed to the equalization basins. The City exceeds the design rating for the screen less than 10% annually. If the OEPA requires 100% screening of all flows, the City of Sidney will be required to install approximately $500,000 worth of additional equipment. The City feels these funds would be of greater use for equipment replacement and infrastructure repairs. Additionally, the City feels current screening will meet OEPA's definition of removal "…method to significantly remove manufacture inerts." Current rule OAC 3745-40-01(A)(56) prohibits the land application of biosolids that contain manufactured inerts. The City of Sidney pays an annual sewage sludge fee to the OEPA for the purpose of administrative and regulatory oversight of biosolids programs. This fee should include enforcement of the existing rules, which would negate the need to require additional screening. It is the City's opinion that enforcement of the existing rule and not expanding it to require full screening of all flows, is the proper course of action. Therefore, the City of Sidney requests the OEPA to consider requiring screening for average or design average daily flows instead of all flows.
(Brian Schultz, City of Sidney)

Response 33:
Ohio EPA will revise this requirement as follows:

"(a) By July 1, 2015, prior to the beneficial use of biosolids, influent wastewater and septage, or sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may be accomplished by either of the following:

(i) Screening influent wastewater and influent septage through a bar screen with a maximum aperture of five-eighths inch (1.59 cm) designed to screen the average daily design flow;

(ii) Screening all biosolids through a bar screen with a maximum aperture of five-eighths inch (1.59 cm) prior to beneficial use; or

(iii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standards in paragraph (C)(3)(a)(i) or (ii) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]

Ohio EPA recommends that the City of Sidney investigate the possibility of redirecting the equalization basin flows through the screen when flows recede to ensure that a maximum removal of manufactured inerts occurs.

Comment 34:
3745-40-02(C)(3)(a)(ii): Refers to paragraph C(3)(c)(i). There is no paragraph C(3)(c)(i).
(Maureen Ware, Ohio EPA SWDO)

Response 34:
Paragraph 3745-40-02(C)(3) will be revised as follows:

(a) By July 1, 2015, prior to the beneficial use of biosolids, influent wastewater and septage, or sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may be accomplished by either of the following:

(i) Screening influent wastewater and influent septage through a bar screen with a maximum aperture of five-eighths inch (1.59 cm) designed to screen the average daily design flow;

(ii) Screening all biosolids through a bar screen with a maximum aperture of five-eighths inch (1.59 cm) prior to beneficial use; or

(iii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standards in paragraph (C)(3)(a)(i) or (ii) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]

Comment 35:
3745-40-02(C)(3)(b): Could you add "and/or Guidance Document #11" to the end of that paragraph?
(Maureen Ware, Ohio EPA SWDO)

Response 35:
Guidance Document #11 is guidance for drafting NPDES permits. The treatment, storage, transfer, disposal, or beneficial use of biosolids is done in accordance with the NPDES permit, not Guidance Document #11.

Comment 36:
3745-40-02(C)(3)(d): Draft Rule OAC 3745-40-02(C)(3)(d) authorizes the transfer of sewage sludge and biosolids, respectively, to another treatment works provided that the other treatment works "…has an NPDES permit for the treatment, storage, transfer, or disposal of sewage sludge or biosolids or the beneficial use of biosolids." *See also,* Draft Rule OAC 3745-40-02(C)(2)(c). For consistency purposes, the City recommends that Ohio EPA insert the phrase "or a management plan" after "NPDES permit" in each of the foregoing provisions.
(Terrence Finn, Roetzel and Andress on behalf of the City of Akron)

Response 36:
Ohio EPA has made the change as requested.

Comment 37:
3745-40-02(D): Based upon Ohio EPA's responses to previous comments submitted, it is the City's understanding that Ohio EPA does not intend to regulate the beneficial use of exceptional quality biosolids ("EQB") in quantities that do not meet the regulatory definition of "bulk exceptional quality biosolids" (i.e., less than 300 dry tons) set forth in Draft Rule OAC 3745-40-01(Q). Further, from Ohio EPA's responses it is the City's

understanding that such smaller scale "non-bulk" EQB users (e.g., small scale residential or nursery operations) would be subject to only limited requirements under the rules, such as those contained in Draft Rules OAC 3745-40-08(A) (requiring that only EQB be used on lawns or home gardens) and OAC 3745-40-02(C)(3)(f) (minimizing odors). The City appreciates Ohio EPA's efforts to minimize the regulation of smaller users of "non-bulk" amounts of EQB in applications such as residences, nurseries, etc.

However, the City is concerned that as currently proposed, the Draft Rules contain multiple provisions which would result in the unintended consequence of subjecting these smaller EQB users to broader regulation under OAC Chapter 3745-40. For example, Draft Rule OAC 3745-40-02(B)(1)(b) expressly provides that the requirements of OAC Chapter 3745-40 apply to "…[t]he beneficial use of biosolids." The definition of "beneficial use" includes the "…distribution of exceptional quality biosolids that do not satisfy the definition of bulk exceptional quality biosolids." Draft Rule OAC 3745-40-01(K).

Moreover, Draft Rule OAC 3745-40-02(C)(3)(b) requires that:

"…The treatment, storage, transfer, disposal, or beneficial use of biosolids shall be in compliance with this chapter and the conditions of an NPDES permit or an approved management plan."

Thus, under the Draft Rules, one could argue that smaller users of "non-bulk" amounts of EQB are subject to an NPDES permit or a management plan. A similar argument could be made under Draft Rules OAC 3745-40-03(A)(2) and OAC 3745-40-03(C)(3).

The City recommends that the simplest and most straightforward way to clarify that smaller "non-bulk" users of EQB are not subject to the NPDES permit and other requirements of OAC 3745-40 is to add a provision which specifically exempts smaller "non-bulk" users of EQB from the requirements of the Chapter, except for certain limited provisions.

Therefore, the City recommends the addition of the following provision to paragraph (D) to Draft Rule OAC 3745-40-02:

"(D)…(8) Except as provided in paragraph (A) of rule 3745-40-10 of the Administrative Code and in paragraph (C)(3)(f) of rule 3745-40-02 of the Administrative Code, the use of exceptional quality biosolids that do not satisfy the definition of bulk exceptional quality biosolids."
(Terrence Finn, Roetzel and Andress on behalf of City of Akron)

Response 37:
Rule 3745-40-03(A)(2) states the following:

"(2) Except as provided in paragraph (C) of this rule, the beneficial use of biosolids shall be in compliance with this chapter and, as applicable, the conditions of an NPDES permit. Unless otherwise determined by the director, any person who receives exceptional quality biosolids for beneficial use is not required to obtain an NPDES permit." (emphasis added)

The exclusion, as proposed, would appear to exclude exceptional quality biosolids from the requirements of rule 3745-40-04, which would not be possible as exceptional quality biosolids are not exceptional quality until they meet the requirements of rule 04. Also, Ohio EPA does not intend to apply facility storage requirements to "non-bulk" EQB users as they would not be permittees. The exclusion, as proposed, would require facility storage by "non-bulk" EQB users.

With Class B and bulk exceptional quality biosolids defined in rule, and referred to throughout the Chapter, Ohio EPA feels it is clear which provisions of this Chapter it intends to apply to exceptional quality biosolids that do not meet the definition of bulk exceptional quality biosolids. Also, Ohio EPA wishes to maintain the ability to require that users of "non-bulk" EQB meet any or all requirements of this Chapter should the necessity arise to protect human health or the environment.

Rule 3745-40-03: NPDES permit requirements and management plan requirements

Comment 38:
3745-40-03(A)(1): It appears that a management plan (paragraph C) could take precedence over the NPDES permit should there be a difference between the two. If that is to remain, I think it would be good to put under paragraph C something to the effect of "No management plan can include provisions that are less stringent than required by the sludge generator's NPDES permit."
(Maureen Ware, Ohio EPA SWDO)

Response 38:
An NPDES permit is required by this Chapter. The director may allow a management plan permit instead of an NPDES permit, should the situation arise. Therefore, any management plan could not be in conflict with an NPDES permit because they would not be regulating the same activity at the treatment works.

Comment 39:
3745-40-03(A)(3)(a): How could an NPDES permit require a net volume or net weight of sludge produced by a WWTP? A rough range of expected sludge weight may be known, but certainly not a specific number.
(Maureen Ware, Ohio EPA SWDO)

Response 39:
Ohio EPA may want to restrict the amount of biosolids beneficially used. Also, requirements to report the net weight and net volume are included in all NPDES permits.

Comment 40:
3745-40-03(A)(3)(e): Add the highlighted language:
"(e) Permit conditions:
(i) To minimize the creation of nuisance odors;
(ii) To implement treatment, storage, transfer, or disposal of the sewage sludge or biosolids;
(iii) To implement the beneficial use of biosolids;
(iv) To require 48 hours notice to the director of the location of the land application of biosolids;
(v) Requiring the filing of periodic reports on the amounts, composition and quality of the sewage sludge or biosolids; and
(vi) That are more stringent than the requirements in this chapter."
(Paul Rosile, Franklin County Board of Health)

Response 40:
Ohio EPA does wish to be able to collect this information; however we are not properly equipped or staffed to log this information and do not feel it is appropriate to require in rule at this time. Ohio EPA will continue to investigate new technologies that will allow us to collect this information in a time efficient manner and we do hope to include this requirement in future rulemakings.

Comment 41:
3745-40-03(C): Shouldn't paragraph C state something to the effect that a management plans shall not be less stringent than any rules in 3745-40 and/or 503?
(Maureen Ware, Ohio EPA SWDO)

Response 41:
It is possible that a management plan could be less restrictive than this Chapter dependent on site specific characteristics, such as a management plan written for mine reclamation sites in which the agronomic rate restrictions would be less stringent than required by rule.

Comment 42:
3745-40-03(C)(3): The latest draft may still impose the requirements of OAC 3745-40-07 and 08 on residential users of exceptional quality biosolids (EQB).

To address the City of Columbus' concerns about subjecting residential users of EQB to the requirements of OAC 3745-40-07 and 08, the Agency states in Response to Comments No. 29 that it created the definition of "bulk exceptional quality biosolids" which applies to applications of more than 300 dry tons. However, in the redraft of OAC

3745-40-03(A)(1) (see response to comment No. 50) pertaining to NPDES permit requirements and management plan requirements, the Agency appears to achieve the opposite result.

The redrafted rule suggests that while generally the person who received exceptional quality biosolids for beneficial use is not required to obtain an NPDES permit, he or she may be required to do so at the discretion of the director. The subsection also states in effect at (C)(3) that if a permit is not required, the director may still require that the beneficial user of EQB obtain an approved management plan.

While the Agency has created a useful definition of bulk EQB, it has not carried the term through to other parts of the rules to achieve the true intent of excluding beneficial users of non-bulk EQB from the management requirements of the rules. The City requests that the language of OAC 3745-40-03 be clear that NPDES permit or management plan requirements do not apply to non-bulk EQB beneficial users.

The City recommends the following clarifying language for OAC 3745-40-03(C)(3): "the director may require that any person who is not a permittee operating or managing a beneficial use site obtain a management plan prior to the beneficial use of biosolids."
(Dominic Hanket, City of Columbus)

Response 42:
Ohio EPA will not add this language. Ohio EPA believes that there may be other situations where enforcement of regulations would be necessary to ensure protection of human health and the environment other than at beneficial use sites.

Comment 43:
3745-40-03(C)(5) and (6): Addresses expiration of approved management plans. Language should be added which states that the person with the approved plan may continue to operate under such plan beyond the rule expiration date provided that such person timely submits a request for renewal of the plan to the Agency.
(Dominic Hanket, City of Columbus)

Response 43:
3745-40-03(C)(5) and (6) has been revised as follows:

"(5) Any management plan that was approved less than five years prior to the effective date of this rule, shall expire five years after the effective date of the approved management plan. An application for renewal of a management plan must be submitted 180 days prior to the expiration date of the plan. As long as a renewal application is submitted 180 days prior to the expiration date of the plan, the permittee may continue to operate under the current plan until a new management plan is issued.

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(6) Any management plan that was approved five years or more prior to the effective date of this rule shall expire one year after the effective date of this rule. An application for renewal of a management plan must be submitted 180 days prior to the expiration date of the plan. As long as a renewal application is submitted 180 days prior to the expiration date of the plan, the permittee may continue to operate under the current plan until a new management plan is issued."

Rule 3745-40-04: Biosolids classifications

Comment 44:
3745-40-04(B) and (B)(1)(a)(iii): The last sentence of 3745-40-04 (B) removes some of the additional flexibility provided by the above referenced March 26, 2007 modification to the 40 CFR part 503 rule. The USEPA added two new lab methods for analysis of fecal coliform in sewage sludge and one new method for analysis of salmonella. The fecal coliform methods include EPA Methods 1680 (LT-EC) and 1681 (A-1) and the Salmonella Method 1682 (Modified MSRV). These methods are alternatives to the methods originally approved in the 40 CFR part 503 rule in 1992. The rule also extends the holding time for fecal coliform using EPA Methods 1680 (LTB-EC) or 1681 (A-1) in sewage sludge for Class A composted, and Class B aerobically or anaerobically digested sewage sludge. The proposed language in the rule that restricts all fecal coliform analysis to submittal within six hours of collection is also placing in Ohio Administrative Code language that is correctly referenced in OAC 3745-40-09 (A)(1)) and is adopted by reference into that rule. The Standard Methods for Examination of Water and Wastewater that are being adopted by reference in rule 3745-40-09 include method language that specified the preservation and holding times for each analytical method used. Adopting the methods and the guidance for that method by reference allows the use of the most current method and guidance rather than restricting the regulated community to the requirement in the Ohio Administrative Code. We suggest that the last sentence in 3745-40-04(B) and 3745-40-04(B)(1)(a)(iii) be removed from the rule.

OAC 3745-40-04(B) Pathogen Reduction alternatives

Class B biosolids:….

~~*All samples taken for the purpose of showing compliance with this rule, in regards to the limit for fecal coliform numbers must be submitted for analysis within six hours of collection.*~~

OAC 3745-40-04(B)(1)(a)(iii)

~~*All samples taken for the purpose of showing compliance with this rule, in regards to the limit for fecal coliform numbers must be submitted for analysis within six hours of collection.*~~

(Bruce MacLeod, Synagro Central, LLC)

Response 44:
Ohio EPA will make this change as requested.

Comment 45:
3745-40-04(B) and (B)(1)(a)(iii): The approved sampling methods referenced in 40-09(A)(1) state that samples of biosolids shall be collected and analyzed "in accordance with table A-1 of this rule, or any other method as approved under 40 CFR 503." Parts 136 and 503 were modified to approve new methods for monitoring of microbial pollutants in biosolids, as outlined in the Federal Register on March 26, 2007, pages 14220-14233. As stated in the aforementioned Federal Register Rules and Regulations, "This rule amends the regulations at 40 CFR Part 503 by adding a cross reference to the 40 CFR Part 136 methods in section 503.8(b)." Therefore, changes detailed in Part 136 are intrinsically referenced in Part 503, which is approved by OEPA.

As specified in the aforementioned Federal Register notice, maximum holding time for fecal coliform is six hours with the exception of a maximum holding time of 24 hours for the following biosolids sample types using either EPA Method 1680 (LTB-EC) or 1681 (A-1): Class A composted, Class B aerobically digested, and Class B anaerobically digested.

Suggested language replacement:

40-04(B) All samples taken for the purpose of showing compliance with this rule, in regards to the limit for fecal coliform numbers, must be submitted for analysis within six hours of collection, with the exception of exceptional quality biosolids which must be submitted for analysis within 24 hours of collection.

40-04(B)(1)(a)(iii) All samples taken for the purpose of showing compliance with this rule, in regards to the limit for fecal coliform numbers, must be submitted for analysis within six hours of collection, with the exception of Class B aerobically digested and Class B anaerobically digested biosolids which must be submitted within 24 hours of collection.
(Dominic Hanket, City of Columbus)

Response 45:
Ohio EPA will remove the holding time requirement from rule.

Comment 46:
3745-40-04(B)(1)(a)(i): It would be helpful to define what a "larger sewage sludge pile" is in terms of rough volume (cubic feet, cubic meters, etc.).
(Maureen Ware, Ohio EPA SWDO)

Response 46:
Ohio EPA has removed the term "larger sewage sludge pile."

Comment 47:
3745-40-04(B)(1)(b): What if they haul more than once a month? In the case of multiple hauls per month, how would they choose which event to monitor?
(Maureen Ware, Ohio EPA SWDO)

Response 47:
Ohio EPA has removed the requirement to monitor prior to each hauling event.

Comment 48:
3745-40-04(B)(1)(b): The frequency of monitoring requirements for Alternative P-1 references 'each hauling event'. This is not defined. The federal regulation (Part 503) requires a frequency based on dry metric tons land applied in a 365 day period. Using hauling events may not give you a sufficient monitoring frequency to be consistent with Part 503.
(John Colletti, USEPA Region 5)

Response 48:
Please see Response 47.

Comment 49:
3745-40-04(B)(1)(b): The monitoring frequency requirement in 3745-40-04(B)(1)(b) is cost prohibitive and unnecessary. Additionally this rule is much more stringent than the federal rule by requiring fecal coliform testing for each hauling event rather than at the frequency specified by the 40 CFR 503 rule. This rule will result in greatly increased costs for each test and greatly increased testing requirements for the small municipalities in Ohio that can least afford it. The intent of fecal coliform testing is to verify through the analytical concentration of this microbial indicator organism that the treatment being conducted by the treatment plant will achieve the desired pathogen reduction. The rule already includes language requiring documentation of the stabilization process used. The intent is not to test to clear each batch or "hauling event". This is not the intent of the rule and adds unnecessary expense. We recommend that fecal coliform testing be consistent with that required in 3745-40-09 Table B-1.
(Bruce MacLeod, Synagro Central, LLC)

Response 49:
Please see Response 47.

Comment 50:
3745-40-04(B)(3)(a)(i): What if they add multiple loads of sludge to the drying bed over multiple days? Should they start the 90 day count after the last load is added?
(Maureen Ware, Ohio EPA SWDO)

Response 50:
Yes, all sewage sludge must have satisfied the minimum ninety day air drying requirement.

Comment 51:
3745-40-04(B)(4): The comment references "temperatures between twenty and *thirty degrees* Celsius", yet the equation notes "temperature between twenty and *thirty-five degrees Celsius*".
(Maureen Ware, Ohio EPA SWDO)

Response 51:
Ohio EPA has corrected the error in the comment.

Comment 52:
3745-40-04(B)(4)(a)(i): This section can be read that any of the listed feedstocks individually or mixed can be anaerobically digested. Section (b)(i) of this part states that sewage sludge or biosolids exclusively with bulking agents or additives is to be anaerobically digested. This should be clarified.
(John Colletti, USEPA Region 5)

Response 52:
Ohio EPA has clarified the rule as follows:

"(i) Sewage sludge and biosolids shall be treated in the absence of air for a specific mean cell residence time at a specific temperature. The sewage sludge or biosolids may be comingled with bulking agents or additives, as defined in rules 3745-27-01 and 3745-27-40 of the Administrative Code, and the following feedstocks:

(a) Yard waste;
(b) Animal waste;
(c) Food scraps; or
(d) An alternative feedstock authorized by the director or an authorized representative."

Comment 53:
3745-40-04(B)(5)(a)(ii)(*a*)(*iii*): Because the phrase "measured at multiple points and at a range of depths" is subjective, perhaps specifying where temperatures should be taken in terms of a 3 dimensional grid in percentages would provide more accurate reporting (e.g. temp. taken at every 25% point in an x, y, z axis grid.) This comment would apply to all the pile temperature taking sections of this rule.
(Maureen Ware, Ohio EPA SWDO)

Response 53:
Due to the variability in composting methods and treatment works, Ohio EPA feels that it is not possible to define a concrete method for establishing specific monitoring points.

Each treatment works will need to evaluate their processes to determine the best method for collecting representative samples.

Comment 54:
3745-40-04(B)(6)(a)(ii): You should call out an increase to a pH of 12 throughout the pile. Otherwise, and increase could be for example from 7 to 7.2. Also, you note "The pH shall be measured at several locations to ensure that the pH is raised throughout the sewage sludge". You may consider requiring the pH to be taking in a specific 3D grid (see temp comment in 28) as "several locations" is a rather subjective term.
(Maureen Ware, Ohio EPA SWDO)

Response 54:
Ohio EPA added language to specify that the entire mass of sewage sludge is required to achieve a pH of twelve. Ohio EPA will not specify grid sampling due to the variability in treatment works.

Comment 55:
3745-40-04(B)(6)(b)(iii): Is that dry tons of lime added to all the sludge for the whole year, or for each load that is land applied at a given time?
(Maureen Ware, Ohio EPA SWDO)

Response 55:
Ohio EPA has added language to this rule to require records for the quantities of and when lime addition occurred.

Comment 56:
3745-40-04(B)(9)(a)(i-iii): You may want to refer to "the entire sewage sludge pile/load/etc." instead of sewage sludge. Otherwise, they could check the temp, pH, and dryness of a small section of the sludge, and decide since it meets the criteria, the whole pile meets the criteria. Having them check the temp. etc in a 3D grid would be a good idea too.
(Maureen Ware, Ohio EPA SWDO)

Response 56:
Ohio EPA has added the following language to rule (B)(9)(a):

"Sufficient mixing to ensure that the entire mass of sewage sludge comes into contact with the lime and achieves the minimum pH of twelve. The pH shall be measured at several locations to ensure that the pH is raised throughout the sewage sludge;"

Comment 57:
3745-40-04(B)(10)(a)(i): The City seeks clarification pertaining to EQ biosolids composting bulking agents. Compost facilities are exempt from certain requirements (the requirements of rules 3745-27-40 through 3745-27-47 of the Administrative Code and

Chapter 3745-37 of the Administrative Code) if bulking agents or additives, as defined in rules 3745-27-01 and 3745-27-40 of the Administrative Code, or alternative bulking agents or additives that have been approved by the director or an authorized representative are used. If alternative bulking agents are used, they must be approved by the director or an authorized representative of the OEPA. It is assumed that if an approval for use of an alternative bulking agent exists, that approval will remain in effect and no new approvals will be required with the revised regulations. Although it appears that any existing approval for use of alternative bulking agents will not need to be reissued, a comment should be added to paragraphs 40-04(B)(10)(a)(i)(*b*) and 40-04(B)(10)(a)(i)(*c*) to indicate that existing approvals remain valid after the new regulations become effective.
(Dominic Hanket, City of Columbus)

Response 57:
Ohio EPA does not feel that it is necessary to add the requested language as the rules do not specify between existing or future approvals. All existing approvals will remain valid under the draft rules, once adopted.

Comment 58:
3745-40-04(B)(10)(a)(ii)(*a*)(*ii*): Perhaps instead of multiple points and a range of depths, a 3D grid by percentage could be required (e.g. every 20% of a 3D x,y,z axis grid).
(Maureen Ware, Ohio EPA SWDO)

Response 58:
Please refer to Response 53.

Comment 59:
3745-40-04(B)(10)(a)(ii)(*b*)(*ii*): How does placing a foot of insulating material ensure that the temperature for the entire composting medium achieves fifty-five degrees Celsius? Insulation generally holds heat in but does not create heat.
(Maureen Ware, Ohio EPA SWDO)

Response 59:
Ohio EPA has clarified that the insulating material requirements are to assist in meeting the temperature requirements and do not ensure that the temperature requirements have been satisfied.

Comment 60:
3745-40-04(B)(10)(a)(ii)(*b*)(*iii*): Again, for temperature, use a 3D x,y,z axis grid and percentages to ensure that sufficient temperatures in diverse places have been taken.
(Maureen Ware, Ohio EPA SWDO)

Response 60:
Please refer to Response 53.

Comment 61:
3745-40-04(B)(10)(b)(iii): Draft Rule OAC 3745-40-04(B)(10)(b)(iii) requires that, as part of its recordkeeping requirements, a permittee identify, maintain and annually report to Ohio EPA the county of origin of its composting feedstocks, bulking agents and additives.

There does not appear to be any beneficial purpose served by requiring a permittee to report the county of origin of its composting feedstocks, bulking agents and additives. Notably, a similar comment was raised by the City of Columbus to the prior version of the Draft Rules. In response to the City of Columbus' comment, Ohio EPA responded that its goal is to keep an "even playing field" between treatment works and composting facility operators. However, the City could not find a similar requirement for composting operators. The closest requirement that the City could find was a requirement for the identification of the "origin of the wastes received" in the annual reporting requirements for composting facilities. See, OAC 3745-27-45(P)(2)(b).

In addition, it is unclear from Draft Rule OAC 3745-40-04(B)(10)(b)(iii) the specific information Ohio EPA is requiring to be reported to Ohio EPA. Specifically it is not clear if the Draft Rule requires identification of the county of origin of the supplier of the material, or the county of origin of the material itself. Notably, a permittee should be able to obtain and report the county of origin of the supplier of the material without difficulty. However, it would be nearly impossible for a permittee to obtain the county of origin of the material. There would need to be a separate requirement for this information imposed upon suppliers of feedstocks, bulking agents and additives to identify the county of origin of all of their materials. The identification of a supplier's associated supply chains for these materials would be extremely difficult, if not impossible, to track.

Based upon the foregoing, the City requests the requirement to identify the county of origin of its composting feedstocks, bulking agents and additives be stricken from Draft Rule OAC 3745-40-04(B)(10)(b)(iii).
(Terrence Finn, Roetzel and Andress on behalf of the City of Akron)

Response 61:
The comment correctly noted that the requirement in OAC 3745-27-45(P)(2)(b) "origin of the wastes received" does not specify that only the county of origin is expected. This clarification is provided in the daily log forms for composting facilities as OAC 3745-27-45(K)(3)(a) states, in part, that the owner or operator of a composting facility is required to record the facility operations on the daily log forms prescribed by the Director. The form can be found at the following link:

http://www.epa.state.oh.us/portals/34/document/guidance/gd_010.pdf

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The goal of the requirement is to track the movement of the material from its origin to the disposal facility, hence the requirement is to record the county of origin of the waste and not the supplier. However, if the information is not available, the county of origin of the supplier should be supplied as a best approximation.

Ohio EPA appreciates the City's willingness to help the Agency meet its statutory requirements. Equally, it is the Agency's goal to establish flexible rule language that can accommodate the operational realities of a diversity of facilities. The experience with the solid waste composting regulations has been that there are several appropriate ways to track the wastes received. It is the agency's intent to afford the same flexibility to treatment works.

Comment 62:
3745-40-04(B)(10)(b)(iii): In response to comments No. 60 the Agency declined to remove the requirement contained in draft OAC 3745-40-04(B)(10)(b)(iii) which states that records of the weight or volume, and county of origin of all feedstocks, bulking agents and additives utilized in the composting requirement must be kept. The City requests that the Agency review this decision. As previous discussed, there are a host a difficulties in providing the requested information to the agency.

The following are just two examples. Frequently tree trimmers working in multiple counties will deliver their cuttings in large utility trucks to the City's Compost facility. The delivery person, while perhaps knowing the counties he or she had visited that day, will have no way of deciphering the amount of material derived from each of the counties. Another example is one involving an individual who delivers in a truck a bag of leaves or cuttings from yard work. There may be up to 40 of these types of deliveries in a single day. It would be burdensome to require each small delivery to be weighed and county source identified. While the City understands the agency's desire to coordinate solid waste and biosolids regulation oversight, the requirement to keep these records in its current fashion is simply too burdensome and unworkable.

As a final comment, the City questions the legal justification for imposing a recordkeeping requirement on its compost facility arising out of a joint commitment to two sister departments within the agency. While the City is willing to gather available data that can assist the Agency in meeting its internal goals where able, it questions the appropriateness of requiring by rule to make such effort.
(Dominic Hanket, City of Columbus)

Response 62:
Ohio EPA agrees with the comment that it is challenging to keep records of specific amounts originated in specific counties. The proposed requirements mirror an existing record keeping requirement in the composting regulations in the solid waste program. As in the composting program, the proposed rule language provides flexibility by only requiring reporting of the total amount of feedstocks, bulking agents and additives, and of

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the general counties of origin. In general, composting facilities under the solid waste program list the total waste and all the counties of which they have knowledge the waste could have come from. Similarly, composting facilities are allowed to record consolidated loads in a weekly basis instead of recording individual loads. A common practice is to designate a drop-off area at the facility and once a week the operator will do the best possible estimation of the volume of waste received. The intention is that the requirements proposed for treatment works will be applied in the same manner.

Ohio EPA is required by the Ohio Revised Code to implement a statewide solid waste management plan for the purpose of diverting solid wastes from landfills and ensuring that wastes are disposed appropriately. The same law requires that counties form single or joint solid waste management districts and that these develop a local plan for the management of solid wastes. In order to effectively implement the state's and the solid waste management district's plans, it is necessary to track the amount of wastes generated and where they are being disposed. Ohio EPA already tracks the solid waste (feedstocks, bulking agents and additives) taken to composting facilities regulated under the solid waste program. However there has not been formal tracking of the solid wastes taken to treatment works that utilize composting as a treatment method. These treatment works can have a significant positive impact by providing an alternative option for management of these wastes, hence tracking how much waste is taken to treatment works is important for the state.

Comment 63:
3745-40-04(B)(15)(a): You might want to define what exactly you mean by “tracked constantly”.
(Maureen Ware, Ohio EPA SWDO)

Response 63:
Ohio EPA has added the following language to rule (B)(15)(a):

“A device shall be used to monitor the temperatures to ensure that the temperature of the sewage sludge does not fall below seventy degrees Celsius (one hundred fifty-eight degrees Fahrenheit) during the thirty minute treatment period.”

Comment 64:
3745-40-04(C)(1)(a): The comment to this section presents an equation to be used for determining volatile solids reduction. It should be made clear that this is not the only formula that should be used. The document cited has other formulas that can be used. The proper formula to be used should be based on site-specific circumstances at the facility.
(John Colletti, USEPA Region 5)

Response 64:
Ohio EPA has eliminated the reference to the specific equation and references **"**Environmental Regulations and Technology, Control of Pathogens and Vector Attraction in Sewage Sludge" guidance document instead.

Comment 65:
3745-40-04(D)(1): There is no definition for "pollutant ceiling concentration" in section 3745-40-01.
(Maureen Ware, Ohio EPA SWDO)

Response 65:
"Pollutant ceiling concentration limits" is defined within the requirements of rule 3745-40-04(D).

Comment 66:
3745-40-04(D)(6)(a): If the lat and long are used, you should specify where they are shot from (center of site, center of road access point, SW corner, etc.).
(Maureen Ware, Ohio EPA SWDO)

Response 66:
Ohio EPA has specified that the lat and long shall be from the center of the site.

Rule 3745-40-05: Notice and necessary information requirements for biosolids and other notification requirements

Comment 67:
3745-40-05: Add the following language:
"(D) In order to protect public health and the environment, the director may require any person who distributes biosolids and any person receiving the biosolids to provide notification to the director within 48 hours of any complaint regarding the land application of the biosolids regarding odor, alleged health effects, or alleged effects on quality of life."
(**Paul Rosile, Franklin County Board of Health**)

Response 67:
Ohio EPA currently requires that a summary of complaints be compiled and attached to the annual report each treatment works is required to submit. At this time, Ohio EPA does not feel that a 48 hour complaint notification requirement is necessary as complaints are already forwarded to Ohio EPA for immediate investigation, if needed.

Comment 68:
3745-40-05(A): This requirement should provide for the notification of the pollutant content, pathogen reduction level and vector attraction reduction level of the biosolids to

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the beneficial user. This is consistent with the 40 C.F.R. part 503 rule. Without the requirement for this notification it would be impossible for the beneficial user to know if the material being used meets the requirements of the Ohio rules.
(Bruce MacLeod, Synagro Central, LLC)

Response 68:
Ohio EPA has added the language as requested.

Comment 69:
3745-40-05(B): Why don't you require the metal contents of the sludge be provided to the land owner/farmer?
(Maureen Ware, Ohio EPA SWDO)

Response 69:
Ohio EPA has added this requirement to rule (A).

Comment 70:
3745-40-05(B): The City has several concerns with this section:

a. The current language does not specify the timing or frequency of the reporting to the farm operator. We recommend reporting on a crop-year basis.
b. Required reporting should be limited to the farm operator/manager. Moreover, the language should be updated to allow for non-farm beneficial uses.
c. Analytical results reporting units and method are not specified. Results should be specified on a dry-weight basis, and can be reported either in metric or imperial units.
d. Phosphorus availability isn't defined for all management cases, and cannot be reported in those cases. Potassium availability is usually assumed to be 100%. "Available Phosphorus" and "Available Potassium" should be changed to "Phytoavailable Phosphorus" and "Total Potassium."
e. Allow for tabular reporting for beneficial use sites with many fields.
f. Instead of daily details, require summary application data to be reported if beneficial use occurred on more than one day within a crop year.
g. Potassium application should be reported as an application rate.

Suggested language replacement:

(B) Other notification requirements. Any person who beneficially uses class B or bulk exceptional quality biosolids shall provide the operator of the beneficial use site where the class B or bulk exceptional quality biosolids were beneficially used a crop-year report. Where multiple fields received class B or bulk exceptional quality biosolids on the same beneficial use site, application data shall be integrated for all events on an individual field, and report a by-field summary of analytical and application data in a tabular format. At a minimum, the crop-year report shall include the following information:

"On [fill in the date(s) biosolids were applied to the field], biosolids from [fill in treatment works location], Ohio EPA Permit [fill in NPDES permit number], were applied to the field located on [fill in location of the field]. Biosolids are a by-product of wastewater treatment. An analysis of the biosolids showed the following concentrations:

(1) Kjeldahl nitrogen: [provide concentration in % or mg/kg, dry-weight basis]
(2) Ammonia nitrogen: [provide concentration in % or mg/kg, dry-weight basis]
(3) Total phosphorus: [provide concentration in % or mg/kg, dry-weight basis]
(4) Total potassium: [provide concentration in % or mg/kg, dry-weight basis]

The application rate applied to the field yielded:

(1) Available nitrogen applied: [provide application rate in lbs/ac or kg/ha, dry-weight basis]
(2) Phytoavailable phosphorus applied: [provide application rate in lbs/ac or kg/ha, dry-weight basis]
(3) Total potassium applied: [provide application rate in lbs/ac or kg/ha, dry-weight basis]

The above information is supplied as a requirement of the Ohio Environmental Protection Agency, division of surface water, which can be reached at 1-877-644-2001. If you have any questions, please contact [provide contact name] at [provide contact mailing address], or by phone at [provide phone number].
(Dominic Hanket, City of Columbus)

Response 70:
Ohio EPA has revised the rule as follows:

"Other notification requirements. Any person who beneficially uses class B or bulk exceptional quality biosolids shall provide the beneficial use site operator a crop-year report for each beneficial use site. In the event that more than one type of feed crop, fiber crop, food crop, or pasture is grown on a single beneficial use site where multiple beneficial use rates are used, a crop year report shall be submitted for each separate crop area. At a minimum, the crop-year report shall include the following information:

"On [fill in the date(s) biosolids were beneficially used on the beneficial use site], biosolids from [fill in name of treatment works], Ohio EPA Permit [fill in NPDES permit number], were beneficially used on [fill in Ohio EPA number for the beneficial use site for Class B biosolids, or street address or latitude and longitude of the beneficial use site for bulk exceptional quality biosolids] located in [fill in township and county where beneficial use occurred]. Biosolids are a by-product of wastewater treatment.

An analysis of the biosolids showed the following concentrations:

(1) Kjeldahl nitrogen: [provide concentration in % or mg/kg, dry-weight basis]

(2) Ammonia nitrogen: [provide concentration in % or mg/kg, dry-weight basis]

(3) Total phosphorous: [provide concentration in % or mg/kg, dry-weight basis]

(4) Total potassium: [provide concentration in % or mg/kg, dry-weight basis]

The beneficial use rates were:

(1) Available nitrogen: [provide application rate in lbs/ac or kg/ha, dry-weight basis]

(2) Phosphate: [provide application rate in lbs/ac or kg/ha, dry-weight basis]

(3) Potash: [provide application rate in lbs/ac or kg/ha, dry-weight basis]."

Please refer to Response 8 regarding phytoavailable phosphorus.

Rule 3745-40-07: Requirements for the storage of biosolids: isolation distance requirements and requirements for field and regional facility storage

Comment 71:
3745-40-07(Table C-1): Isolation distance between biosolids and surface waters of the state is 100 ft. How or will this effect sludge that is being processed that will be sent to a landfill?
(Michael Perriguey, Ohio American Water Company)

Response 71:
Table C-1 is applicable to field storage, which is defined as "the storage of biosolids in a field at a beneficial use site for no more than ninety days." Therefore, Table C-1 is not applicable.

Comment 72:
3745-40-07(C)(2)(b): You might want to include a definition for "low lying wet area" in the definitions section.
(Maureen Ware, Ohio EPA SWDO)

Response 72:
Ohio EPA has defined "low lying wet area" as an area of a beneficial use site where the soils are saturated and where water tends to pond.

Comment 73:

3745-40-07(F)(2): Why do you require an NPDES permit for treatment of sludge at a regional storage facility? Are such facilities expected to discharge pollutants to waters of the state or simply store sludge? You even say in paragraph F(3)(d) "no person shall locate a regional storage facility where there is a potential for a discharge to waters of the state." NPDES permits are for discharges of pollutants to waters of the state. So F(2) and F(3)(d) seem to contradict each other.
(Maureen Ware, Ohio EPA SWDO)

Response 73:
A treatment works is defined by Ohio Revised Code Chapter 6111.01 as "any plant, disposal field, lagoon, dam, pumping station, building sewer connected directly to treatment works, incinerator, or other works used for the purpose of treating, stabilizing, blending, composting, or holding sewage, sludge, sludge materials, industrial waste, or other wastes, except as otherwise defined." In 2005, Ohio EPA received delegation from US EPA to regulate the sewage sludge program via the NPDES permit program; therefore, any facility that falls into the definition of treatment works must be regulated in accordance with these rules.

Comment 74:
3745-40-07(G): The proposed rule at 3745-40-07 (G) adds requirements for a regional storage facility. Development of storage is key to encouraging beneficial use of biosolids in Ohio. This requirement and other requirements throughout the rule specifically list the language from the enabling legislation HB 197 relating to "protect public health and the environment or to minimize the creation of nuisance odors" however nowhere in the rule is the language "to encourage beneficial use " used. With regard to this requirement on regional storage facilities the OEPA has provided a moving target for a potential permittee. The development of a regional storage facility will require a considerable investment of capital in construction of the facility. The facility would be built according to the approved permit from Ohio EPA. The language in this rule then negates the value of the permit because more stringent requirements lowering the amount of storage time or requiring odor abatement technologies can be imposed at any time. Wastewater treatment and the beneficial use of the biosolids from wastewater treatment is an essential public utility infrastructure. In order to facilitate investment in construction of infrastructure facilities there must be some certainty in the permitting. OEPA should change this language to reflect the similar certainty in permitting that is afforded an NPDES holder.
(Bruce MacLeod, Synagro Central, LLC)

Response 74:
Ohio EPA has removed the reference to regional storage facility in 3745-40-07(G).

<u>Rule 3745-40-08: Requirements for the beneficial use of biosolids: general requirements, prohibitions, isolation distance requirements, site specific requirements, and additional site restrictions for the beneficial use of class B biosolids</u>

Comment 75:
3745-40-08(A)(2)(a): The language added to this rule restricts the application of biosolids to the lesser of the nitrogen agronomic rate or the multi-year phosphorus agronomic rate for soils less than 100 parts per million Bray-Kurtz P1. This is new language in this proposed rule and this is our first opportunity to provide input to OEPA.

First, phosphorus is a mineral nutrient that is essential to plant and animal life-including humans. Phosphorus makes up 1 percent of a person's total body weight and is present in every cell in the body. Phosphorus is essential for crop production in Ohio as well. Lowered crop yields are to be expected in soils with less than 40 ppm Bray-Kurtz P1. The proposed rule language makes no consideration for the application of biosolids to improve the soil phosphorus level in the soil. Phosphorus application should not be restricted in soils less than 100 ppm Bray-Kurtz P1 in order to be consistent with other nutrient sources in Ohio.

Second, it is important to keep in mind that not all phosphorus is available to plants or of environmental concern. For example, Ohio soils naturally contain between 250 to 750 parts per million of total phosphorus, but most of it is unavailable as a nutrient for plant growth. The Water Environment Research Foundation (WERF) conducted a study on the phosphorus in biosolids entitled "Characterizing Forms, Solubilities, Bioavailabilities, and Mineralization Rates of Phosphorus in Biosolids, Commercial Fertilizers and Manures Phase 1, 99-PUM-2T". This study determined the differences between phosphorus in biosolids and the phosphorus in commercial fertilizers and manures. For example the study shows typical biosolids with water extractible phosphorus (WEP) level of less than 5 percent compared to commercial fertilizer with a WEP level of 85%. It is the water soluble phosphorus that is of primary environmental concern.

Third, regulating P level in soils less than 100 parts per million Bray-Kurtz P1 for environmental concern is arbitrary and without scientific backing. The Bray-Kurtz P1 level in a soil was developed to determine the amount of P available for crop nutrition and the probability of a crop response to fertilizer P additions. OEPA is proposing to use this agronomic soil test for an environmental purpose for which there is no correlation. Research has shown that at low soil test P levels (less than 150 ppm Bray-Kurtz P1) that there is no relationship between soil test P and runoff dissolved P. This soil test phosphorus research is outlined in great detail in the Ohio EPA's Ohio Lake Erie Phosphorus Task Force Final Report, April 2010. Since 2002 the application of biosolids on soils greater than 150 ppm Bray-Kurtz P1 has been regulated by Ohio EPA under this rule. Expanding this rule to place severe restrictions on soils much lower than the 150 ppm Bray-Kurtz P1 level will be prohibitively expensive to the municipalities affected and provide no environmental benefit as shown by Ohio EPA's own report.

In conclusion, given the low water solubility of phosphorus in biosolids and the published research that shows that soil test P less than 150 ppm Bray-Kurtz P1 does not

predict an increased risk of dissolved phosphorus runoff we recommend that Ohio EPA revise the proposed rule language to remove the restrictions on low phosphorus soils. This would also make this rule consistent with other rules in Ohio addressing land application of crop nutrients.

We suggest that the OAC 3745-40-08 ((A)(2)(a) language be replaced with the following:

(a) For soils with soil phosphorus test results less than or equal to one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate.

(Bruce MacLeod, Synagro Central, LLC)

Response 75:
New requirements pertaining to the land application of phosphorus were included in response to comments and in an effort to bring the biosolids rules more in line with Ohio NRCS best management practices. However, to provide a little more flexibility and consistency with Ohio NRCS recommendations the following revisions are being made to 3745-40-08(A)(2) and (3):

"(a) For soils with soil phosphorus test results less than or equal to forty parts per million Bray-Kurtz P1 extraction or forty-five parts per million Mehlich III extraction:

(i) the nitrogen agronomic rate;
(ii) a phosphate beneficial use rate of two hundred fifty pounds per acre or less; or
(iii) a phosphate beneficial use rate between two hundred fifty six pounds per acre and five hundred pounds per acre if one of the following criteria are met, upon which no further phosphorus sources may be beneficially used at the beneficial use site for three calendar years:

(a) all biosolids are injected or are incorporated within twenty four hours of beneficial use; or
(b) there is greater than fifty per cent ground cover at the time of beneficial use.

(b) For soils with soil phosphorus test results greater than forty parts per million Bray-Kurtz P1 extraction or forty-five parts per million Mehlich III extraction and less than or equal to one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction:

(i) the nitrogen agronomic rate; or
(ii) a multi-year phosphate agronomic rate.

(c) For soils with soil phosphorus test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) the nitrogen agronomic rate; or
(ii) the single-year phosphate agronomic rate.

(d) For soils with soil phosphorus test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction, beneficial use shall be completed in accordance with the phosphorus index.

(3) For all beneficial use sites, beneficial of Class B or bulk exceptional quality biosolids may be completed in accordance with the phosphorus index."

These revisions should provide some relief on soils with low phosphorus levels and the cap on the maximum application should ensure protection of water quality in accordance with Ohio NRCS recommendations. There is also the option of using the phosphorus index, which may allow a higher application rate of biosolids on fields with less risk of phosphorus entering surface waters.

The belief that phosphorus stays bound to soil particles and is unavailable for plant uptake is outdated. Section 3.3 of the Ohio Lake Erie Phosphorus Task Force Final Report describes phosphorus dynamics in soil and the transformation of phosphorus between dissolved and precipitated forms to achieve equilibrium. As plant available forms of phosphorus are removed through plant uptake in the soil, a balance is reestablished and less available forms of phosphorus transform into available. Therefore, all forms of phosphorus are relevant to agronomic and environmental concerns.

It should be noted that there are no agronomic gains to adding additional phosphorus to crop fields with Bray P1 soil test phosphorus levels greater than 40 ppm. Guidelines were created to allow the application of additional phosphorus up to Bray P1 soil test levels of 150 ppm to allow for the use of organic materials such as manure and biosolids as a source of fertilizer. The Bray P1 soil test level of 150 ppm was selected as an environmental cutoff, where it was presumed likely phosphorus from fields with soil tests greater than this level was running off/leaching into the environment. The regulation of phosphorus levels in soil with Bray P1 soil test phosphorus levels less than 100 ppm is not arbitrary or without scientific backing. Both the Ohio Phosphorus Index Risk Assessment Procedure and the Ohio Phosphorus Soil Test Risk Assessment Procedure have included limits on phosphorus applications at levels below the critical cutoff level since at least 2001. The Ohio NRCS Conservation Practice Standard 590 has included the use of either of these risk assessment tools since at least 2003. By implementing best management practices at these lower soil test phosphorus levels, the application fields

can continue to be utilized for land application of organic materials for a longer period of time, resulting in a more sustainable practice.

The Ohio Lake Erie Phosphorus Task Force discussed the above at great length. The Task Force's final report states that "it is understood that the P soil test threshold number will be higher than agronomic P sufficiency for crop needs. However, considering the increase in DRP [dissolved reactive phosphorus] in Ohio streams, the current threshold value of 150 mg P/kg is being brought into question. Currently, 150 mg P/kg Bray P1 extractable P is considered the threshold STP level where risk of increased P transport is considered likely. Testing the validity of this claim and identifying a soil test method, whether it continues to be Bray P1 or another that is strongly related to P runoff (transport), have been identified as top priorities of the Ohio NRCS sponsored Ohio P-Index Revision Team. As illustrated in Figure 26 of the April 2010 Ohio Lake Erie Phosphorus Task Force Final Report, soil has an assimilative (binding) capacity for P. Phosphorus becomes more soluble and the risk of P transport increases as the soils assimilative capacity is exceeded." Until such time that an updated Phosphorus Index is finalized, Ohio EPA will continue to base phosphorus application requirements on the current standards with the realization that the critical level may change, in order to be more protective of water quality.

Comment 76:
3745-40-08(A)(2)(a): As a publicly owned treatment works ("POTW") serving the communities of Huber Heights, Tipp City, and Vandalia, OH, the Tri-Cities North Regional Wastewater Authority ("TCA"), a joint venture among the three cities, has been committed to a beneficial re-use biosolids program by way of land application for twenty-five years. Our program includes approximately 800 acres of TCA-owned and EPA-approved farmland, a seven mile force main used to pump biosolids to anyone of seven strategically-placed biosolids storage tanks (approximately 750,000 gallons each), a ground-water monitoring system, a significant investment in land application equipment and a co-op agreement with a local farmer who has built his planting and yield program based on historical nutrient levels provided by our municipal biosolids.

I have presented our site-specific program at WEFTEC and OWEA and, in 2005, TCA received a USEPA Clean Water Act Recognition Award for our Biosolids Program. I am confident that our Biosolids Management Plan and inclusive standard operating procedures have been developed and implemented with protection of the environment, wholly, in mind.

I appreciate the work that Ohio EPA is doing to prevent, restore and maintain water quality and I appreciate the attempt to further that work with the regulations currently before us. However, with that said, we need to be mindful that there is a significant financial and programmatic cost and reduction in protection of the environment associated with the more stringent regulations included in the third draft of Ohio sludge regulations. Most specifically, regulation OAG 3745-40-08 ((A)(2)(a) which restricts

land application to phosphorus agronomic rates when soil phosphorus levels are below 100 ppm has immediate and adverse affects on our Biosolids Management Plan and the new requirement appears to be arbitrary and without scientific backing. This regulation works to severely hinder (if not abolish) TGA's land application program by reducing application rates by as much as 75% which will require that we apply biosolids to every acre of our farm every year instead of applying biosolids to approximately one third of our acreage every year. Further, it will require us to landfill nearly half of our biosolids annually and require our contract farmer to begin using commercial nitrogen which TGA prohibited several years ago upon learning that it was a source of elevated nitrate levels in the groundwater in and around our farm.

As this requirement was not part of the first or second draft, but rather, was added to the third version with little opportunity for comment, I am compelled to submit our concern and state our discouragement for agency approval by way of this correspondence. A change this significant inserted at this point in the process without a comprehensive environmental and financial impact assessment is inconsistent with OEPA's normal mode of operation - which has always been with a spirit of cooperation and reason.
TCA has been preparing for the new regulations for quite some time, but cannot readily or reasonably incorporate the aforementioned regulation regarding phosphorus application rates into our Biosolids Management Plan without significant financial and operational impact. To that end, I respectfully request that OEPA consider OAG 3745-40-08 ((A)(2)(a) language be replaced with the following:

(a) *For soils with soil phosphorus test results less than or equal to one hundred parts per million Bray-Kurtz* P1 *extraction or one hundred fifteen parts per million Mehlich III extraction:*

(i) The nitrogen agronomic rate.

Also, I respectfully request that you strongly consider delaying the ruling on the proposed changes so we can all have time to evaluate their impact on POTW's and the agricultural community. Do farmers in Ohio who currently benefit from the use of biosolids realize the additional costs they will incur to replace the lost nutrients if these changes are approved? Does the agency realize the volume of beneficial biosolids that may be sent to landfills and no longer land applied?

If Ohio EPA still feels compelled to use the most recent draft language, I would recommend that OAC 3745-40-08 ((A)(2)(a) is withheld to a future update to allow us all more opportunity to assess the impact and adjust programs accordingly. I contend that the requirement in question is not limited to TCA's program, but would also have implications to other communities with land application programs.
(David Heckler, Tri-Cities North Regional Wastewater Association)

Response 76:

The additional restrictions on land application of biosolids were included in the second interested party review and additional requirements added to the proposed versions of the biosolids rules based on comments received by interested parties, which is typical of the rulemaking process. To give additional time to adjust land application practices to meet the new requirements, we will delay the effective date of these requirements for 2 years. It should be noted that most crop farmers land applying manure have been implementing requirements more stringent than those proposed in this rulemaking for some time, at least since Ohio NPDES updated its practice standards in 2003. We acknowledge that some farmers will need to purchase supplemental nitrogen fertilizer when application rates are restricted based on phosphorus, however biosolids will continue to provide the farmer with benefits that commercial fertilizer will not and will still decrease the amount farmers would need to purchase otherwise.

Comment 77:
3745-40-08(A)(2)(a), (b), and (c): Section 40-08(A)(2)(c) specifies that the agronomic rate be determined in accordance with the phosphorus index when the soil phosphorus test results are greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction. We agree that the values currently noted in this section serve as reasonable threshold levels, beyond which detailed phosphorus index evaluation and resultant agronomic rate determination is required. However, soil phosphorus test results less than those noted above should be exempt from detailed phosphorus index evaluation.

Sections 40-08(A)(2)(a) and (b) should be removed and section 40-08(A)(2)(c) should be modified to address agronomic rate determination for two scenarios: (1) When soil phosphorus testing shows LESS THAN one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction, and (2) when soil phosphorus testing shows GREATER THAN OR EQUAL TO one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction.

Recommended revision: For soils with soil phosphorus test results LESS THAN one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction, beneficial use shall be based on the nitrogen agronomic rate. For soils with soil phosphorus test results GREATER THAN OR EQUAL TO one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction, the nitrogen agronomic rate or phosphorus index prescribed agronomic rate approach shall be used, whichever is more limiting. [Comment: When phosphorus-based application is prescribed by phosphorus index evaluation (i.e. phosphorus index category = HIGH), biosolids phytoavailable phosphorus shall be used for determining single-year or multi-year phosphorus agronomic rates. Multi-year phosphorus agronomic application shall not exceed five calendar years of planned crop removal.]
(Trudy Johnston, Material Matters in conjunction with the City of Columbus)

Response 77:
The biosolids phosphorus application criteria have been revised to be more in line with Ohio NRCS, Ohio Department of Agriculture and Ohio EPA requirements for CAFOs. Additional flexibility was included for Bray P1 soil test Phosphorus levels less than 40 ppm. Also, a delay in the effective date of the rules was included to allow permittees additional time to adjust to the new requirements. See also Response 76, above.

Comment 78:
3745-40-08(B)(1) and (B)(2): The proposed rule language adds a significant monitoring and recordkeeping requirement to the regulated community. The practicality of implementing this rule needs to be considered before it is adopted. The proposed language requires that the weather forecast be consulted for the zip code where the beneficial use site is located. However, the National Weather Service website does not provide the forecast for a zip code. The forecasts are only provided for a point forecast. For example to obtain a forecast for Ohio EPA at zip code 43215 you can enter the zip code at the National Weather service website however the resulting forecast is for a location at 39.98N 82.97W. Ohio EPA has a GIS database of land application sites by location based on the latitude and longitude. Since latitude and longitude is an established standard for identifying the location of a land application site we request that the Ohio EPA allow the forecast to be consulted for the location of the beneficial use site, not the zip code.
(Bruce MacLeod, Synagro Central, LLC)

Response 78:
Ohio EPA has revised the rule as follows:

"The forecast consulted shall be for the nearest municipality where the beneficial use site is located and shall be printed out or otherwise recorded and kept on file for each beneficial use event.

[Comment: Information on hourly forecasts may be located at the National Oceanic and Atmospheric Administration's website: www.weather.gov by entering a zip code or City, State in the box where indicated and selecting the "hourly weather graph."]"

Comment 79:
3745-40-08(B)(1) and (B)(2): Responses to prior comments on forecast weather data indicate that OEPA wants to retain forecast monitoring in the rules rather than removing it. In consideration, the language should be updated to reflect available forecast data, as specified in Appendix M of EPA Managing Manure at Concentrated Animal Feeding Operations, August 2004, referenced by OAC 901:10-2-14. Appendix M refers the applier to the NOAA MOS MAV and MOS MEX forecast products (http://www.weather.gov/mdl/synop/products.php). The MOS MAV graphical product, following the Appendix M instructions, gives a map of the entire US; ZIP-code level

accuracy is not possible. The MOS MEX text product, following the Appendix M instructions, provides precipitation forecast data for weather stations; it does not provide probability levels for the precipitation amount, nor does it provide ZIP-code level accuracy.

Suggested language replacement:

Except as provided in paragraphs (B)(1)(b) to (B)(1)(b)(iii) of this rule, no person shall beneficially use class B or bulk exceptional quality biosolids during a precipitation event, or when the GFS MOS forecast indicates that 0.5-inch of rain will occur within twenty-four hours after beneficial use.
(Dominic Hanket, City of Columbus)

Response 79:
Ohio EPA has revised the rule as follows:

"The forecast consulted shall be for the nearest municipality where the beneficial use site is located and shall be printed out or otherwise recorded and kept on file for each beneficial use event.

[Comment: Information on hourly forecasts may be located at the National Oceanic and Atmospheric Administration's website: www.weather.gov by entering a zip code or City, State in the box where indicated and selecting the "hourly weather graph."]"

Comment 80:
3745-40-08(B)(2)(b): It looks like you plan to allow application to really bad soils. If that is the case, in addition to the language prohibiting application if a rain is expected within X# of hours, you should also have language for if a rain has already occurred within X# of hours (Class D soils take forever to dry out!).
(Maureen Ware, Ohio EPA SWDO)

Response 80:
Beneficial use of liquid biosolids is prohibited if the available water capacity for the soil has been reached. In addition, in most cases dewatered biosolids will not be beneficially used on saturated soils due to difficulties associated with transportation on the fields and farmer concerns about increased soil compaction.

Comment 81:
3745-40-08(B)(2)(b): So you are saying they can apply the sludge to Class D soils during a rain if they can provide records that less than 0.25" of rain occurred within the 24 hours following the application? What if they think that will happen, go ahead and apply the sludge, then the weather changes and they get more rain than they expected? You may wish to consider getting rid of the "*or*" in the first sentence, and then getting rid of paragraph B(2)(b)(iii).

(Maureen Ware, Ohio EPA SWDO)

Response 81:
Applicators who decide to proceed with the beneficial use of biosolids when the forecast indicates that a precipitation event will likely occur do run the risk of incurring violations.

Comment 82:
3745-40-08(D)(2)(b): In addition to the requirements listed in this section, it is recommended that the rule also requires the person that land applies on frozen or snow-covered ground be required to monitor the land application site and report to Ohio EPA consistent with the requirements in paragraphs that follow Part VI, B, 2, 5.f of Ohio's CAFO general permit.

Also, Ohio EPA should revise section (D)(2)(b) to provide that, (1) if the ammonia nitrogen in a water quality sample is 26 mg/L or greater in a discharge at the point it enters waters of the State, then any additional surface application of class B or bulk exceptional quality biosolids to frozen or snow-covered ground is prohibited on the field where the runoff event occurred and (2) if runoff from frozen or snow-covered ground discharges to waters of the State with an ammonia content of 26 mg/L or greater in three or more surface land application events, then surface application of biosolids on any frozen or snow-covered ground is prohibited for that person from that point on.. These provisions will make the rule for biosolids application on frozen or snow-covered ground consistent with the general permit for CAFOs.
(John Colletti, USEPA Region 5)

Response 82:
Ohio EPA has made the change as requested.

Comment 83:
3745-40-08(D)(2)(b): The language in this subpart reads "Between March first and December fifteenth of any two consecutive calendar years". We believe that the language was intended to read "Between March first and December fifteenth of any ~~two consecutive~~ calendar year~~s~~".
(Bruce MacLeod, Synagro Central, LLC) (Dominic Hanket, City of Columbus)

Response 83:
Ohio EPA has made the change as requested.

Comment 84:

3745-40-08(D)(3): It sounds like an NPDES permit could be issued for land application of sludge to a frequently flooded area. Do we currently (or plan to in the future) issue NPDES permits for such a purpose?
(Maureen Ware, Ohio EPA SWDO)

Response 84:
No, it is not Ohio EPA's intent to issue an NPDES permit for this activity.

Comment 85:
3745-40-08(E)(2): How can the food crops with harvested parts that touch the biosolids or soil mixture also be totally above the surface of the authorized beneficial use site?
(Maureen Ware, Ohio EPA SWDO)
Response 85:
Ohio EPA has revised the rule as follows:

3745-40-08(E)(2): "Food crops with harvested parts that touch the biosolids or soil mixture and are on the surface of the authorized beneficial use site shall not be harvested for fourteen months after the beneficial use of class B biosolids;"

Comment 86:
3745-40-08(E)(10): This section prohibits the mixing of class B biosolids from different treatment works at authorized beneficial use site. The land reclamation at the PPG Lime Lakes allowed this type of mixing. Would this be prohibited at other reclamation sites?
(John Colletti, USEPA Region 5)

Response 86:
No, Ohio EPA would allow mixing of Class B biosolids from different treatment works at a reclamation site provided the mixing is conducted in accordance with the requirements of an NPDES permit or management plan.

Rule 3745-40-09: Approved sampling methods, monitoring frequency requirements, record retention and annual reporting requirements

Comment 87:
3745-40-09(Table A-1): The proposed rule in section OAC 3745-40-09 (A) Table: A-1 lists the approved methods for sampling. The sampling methods for fecal coliform appear to be more stringent and inconsistent with the enabling federal rule 40 CFR Part 503. The 503 rule was modified in the Federal Register of March 26, 2007 pgs 14220 – 14233 to approve new methods for monitoring of microbial pollutants in sewage sludge. The addition of these new and updated methods to the sewage sludge regulations provides increased flexibility to the regulated community and laboratories in selection of analytical methods. These benefits should be available to the Ohio regulated community through the inclusion of these methods in the Ohio rule. The federal rule was modified

with a simple cross reference to the federal methods listed in 40 CFR Part 136. This cross reference should also be included in the updated Ohio rule.

We suggest the following change to OAC 3745-40-09(A):

The following methods, or methods listed in 40 CFR Part 136, shall be used to analyze samples of biosolids and are adopted by reference in this chapter.
(Bruce MacLeod, Synagro Central, LLC)

Response 87:
Ohio EPA will make the suggested change.
Comment 88:
3745-40-09(B)(1)(a): Why do you need total solids analyzed if it's going to a landfill or incinerator?
(Maureen Ware, Ohio EPA SWDO)

Response 88:
So the treatment works can track and report the sludge fee weight on the December Discharge Monitoring Report (DMR).

Comment 89:
3745-40-09(B)(1)(c): Why is paragraph B(1)(c) included in the total solids section when it only addresses total volume of sludge being transferred? Perhaps you should say if it's being transferred, you don't need the total solids analysis, but just total volume.
(Maureen Ware, Ohio EPA SWDO)

Response 89:
Ohio EPA has clarified the rule as follows:
"3745-40-09(B)(2): Transfer to another treatment works. Each day when sewage sludge or biosolids are transferred to another treatment works, the total volume of sewage sludge or biosolids removed for transfer shall be documented."

Comment 90:
3745-40-09(B)(4)(a): We believe that the proposed language should read as follows:

For any NPDES permit that was issued by the director prior to the effective date of this rule, the monitoring frequencies for metals and nutrients in the currently <u>effective</u> NPDES permit or the monitoring frequencies for metals in accordance with 40 C.F.R. 503 shall be followed until a modification or renewal NPDES permit is issued.

Additionally, most of the currently effective NPDES permits in Ohio do not included the requirement to sample for total potassium. This sampling requirement has been in effect since 2002. Sampling for total potassium is required in this rule because potassium is an

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important nutrient for crops. We recommend that the following language be added to the rule so that potassium will be analyzed as intended by the rule.

3745-40-09(4)(c)
For any NPDES permit issued by the director that does not include a sampling requirement for total potassium minimum frequency of monitoring for total potassium shall be in accordance with table B-1 of this rule.
(Bruce MacLeod, Synagro Central, LLC)

Response 90:
Ohio EPA will make the suggested change.

Comment 91:
3745-40-09(B)(4)(b): In response to Ohio EPA Response #126 in the January 2010 Response to Comments for this rule package:

The City of Sidney fails to see the benefit of this interpretation. If the City is required to do quarterly analysis (based on annual biosolids generation) regardless of land application activities, does that mean that biosolids generated in between analytical periods can be land applied without further analysis? The City of Sidney supports OEPA's current interpretation of this rule and suggests that USEPA provide supporting documentation for their interpretation. Biosolids are not beneficially reused until they are land applied. Prior to that event they could be disposed of through other options (i.e. landfill) that currently do not require the same level of analysis. Currently the OEPA receives representative data of Land Applied Biosolids. The City of Sidney fails to see how this will continue under the draft rules. As previously stated, requiring POTW's to increase sample monitoring only increases the financial burden of beneficial reuse programs. The City of Sidney requests the OEPA to continue current monitoring frequencies of beneficial reuse programs.
(Brian Schultz, City of Sidney)

Response 91:
Ohio EPA has revised the rule as follows:

3745-40-09(B)(4)(b): "For any NPDES permit or management plan issued by the director after the effective date of this rule, minimum frequency of monitoring for metals and nutrients shall be in accordance with table B-1 of this rule. This monitoring shall occur even if beneficial use does not occur during a reporting period or the number of samples collected and reported shall be increased prior to the next beneficial use event to account for the reporting period(s) in which beneficial use did not occur, unless all previously

accumulated sewage sludge has been removed and disposed of via a landfill, through incineration or by transfer to another treatment works."

Comment 92:
3745-40-09(Table B-1): The sludge amounts should be in a row above "sampling parameters", not in the row next to "sampling parameters".
(Maureen Ware, Ohio EPA SWDO)
Response 92:
Ohio EPA has clarified table B-1 to provide the monitoring frequencies based upon the quantity of sewage sludge generated by a treatment works per calendar year.

Rule 3745-40-11: Signage requirements for beneficial use sites receiving class B biosolids

Comment 93:
3745-40-11(A): Add the highlighted language:
"(A) Unless deemed otherwise by the director, any authorized beneficial use site, where class B biosolids are beneficially used, shall have a sign:

(1) That is erected at least one week prior to the delivery of biosolids to the site;
(2) That faces each road frontage, within twenty-five feet of the road;
(3) Within twenty-five feet of a public road where the site is accessed for beneficial use;
(4) That includes text that is in black capital letters on a white background, where the letters are one inch in height;
(5) That reads: "NOTICE: CLASS B BIOSOLIDS APPLICATION SITE.";
(6) That includes the name of the permittee and the permittee's telephone number;
(7) That includes the name of an OEPA contact in the biosolids program and the OEPA's contact number; and
(8) That is unobstructed from view."
(Paul Rosile, Franklin County Board of Health)

Response 93:
Ohio EPA will not include this provision as the contact information for the generator of the biosolids is already required to be on the signage. Questions related to the treatment and management of the biosolids can be immediately addressed by the generator.

Comment 94:
3745-40-11(A)(4): You might consider going with 2" letters (see standard Part II language for outfall markers in NPDES permits).
(Maureen Ware, Ohio EPA SWDO)

Response 94:

The one inch lettering requirement has been in rule since 2002 and Ohio EPA is not aware of any issues associated with the size of the letters. Ohio EPA will reevaluate this issue in the next rule review.

Comment 95:
3745-40-11(B) and (C): These sections require signage to be in place for specific periods after class B biosolids have been land applied. The rule should include language to be included on the signage, e.g., "No Trespassing" or "Keep Off".
(John Colletti, USEPA Region 5)

Response 95:
Ohio EPA is not aware of any issues associated with trespassing on authorized beneficial use sites after beneficial use has occurred. Ohio EPA will reevaluate this issue in the next rule review.

Comment 96:
3745-40-11(B) and (C): Replace “after termination of beneficial use activity” with “after field application to an area of land.”
(Dominic Hanket, City of Columbus)

Response 96:
Ohio EPA has used the term beneficial use throughout the rule for consistency purposes.

Rule 3745-40-12: Compliance and enforcement; and spill notification requirements

Comment 97:
3745-40-12(A): Draft Rule OAC 3745-40-12(A) provides that the “director or an authorized representative” may pursue a number of actions, including but not limited to, actions involving the denial, revocation or modifications of an NPDES permit or a management plan.

In order to avoid any confusion, the City recommends that the phrase “In accordance with OAC Chapter 3745-40,” be inserted at the beginning of Draft Rule OAC 3745-40-12(A). Similar language is set forth elsewhere in the environmental provisions of the Ohio Revised Code and Chapter 3745-40 of the administrative code.
(Terrence Finn, Roetzel and Andress on behalf of the City of Akron)

Response 97:
Ohio EPA has made the change as requested.

Comment 98:
3745-40-12(A)(6): Add the highlighted language:

"May require any person who beneficially uses biosolids that have resulted in a nuisance odor**,** *alleged health effect, and/or an alleged effect on quality of life to provide notification to the director within 48hours and* to cease beneficial use and may de-authorize any beneficial use site for repeated nuisance odors or violations of this chapter, as determined by the director or an authorized representative. If the director or an authorized representative determines that the beneficial use of biosolids results in nuisance odors:

(a) The permittee shall cease delivery of biosolids to the authorized beneficial use site; and

(b) No additional biosolids shall be delivered to the site until the creation of such nuisance odors has been minimized, as determined by the director or an authorized representative;"
(Paul Rosile, Franklin County Board of Health)

Response 98:
At this time, Ohio EPA feels that the term "alleged" is too subjective to include in rule. In addition, the National Academy of Sciences has reviewed current practices, public health concerns and regulator standards, and has concluded that "the use of these materials in the production of crops for human consumption when practiced in accordance with existing federal guidelines and regulations, presents negligible risk to the consumer, to crop production and to the environment."

Comment 99:
3745-40-12(B)(1) and (2): Draft Rule OAC 3745-40-12(B)(1) and (2) each impose a spill notification upon permittees. Notably, under each provision, a permittee is required to provide notification "…no later than twenty-four hours following the first discovery by the permittee *or the permittee's contractor or representative* …" (emphasis added). The City is not opposed to providing Ohio EPA with notification of a spill when it has knowledge of a spill. However, as currently drafted, a permittee would be required to provide notification of a spill based upon the discovery by a third party, even though the permittee has no knowledge of the spill.

In addition to the above, it is unclear from the Draft Rules what potential compliance requirements this scenario would impose upon the permittee. For example, while not expressly required within the rule, is the permittee obligated to monitor the use of the materials beyond the point that the materials have been transferred to an end user of the materials? If so, how is the permittee supposed to meet such an obligation? A significant cost and expense will be placed upon permittees if permittees are required to monitor and oversee the end users of biosolids.

Finally, "*permittee's contractor or representative*" is not defined within the Draft Rule. Thus, under the Draft Rule, one could argue that the twenty-four hour notification

timeframe has been triggered merely because an individual contracted by the permittee for routine maintenance activities observes sewage sludge or biosolids on a parking lot.

In order to avoid the foregoing results, the City recommends that the phrase "*permittee's contractor or representative*" be removed from Draft Rule OAC 3745-40-12(B)(1) and (2).
(Terrence Finn, Roetzel and Andress on behalf of City of Akron)

Response 99:
Ohio EPA has removed OAC 3745-40-12(B)(1) from rule.

Comment 100:
3745-40-12(B)(1): Suggest that small quantities of biosolids be exempt from notification. Otherwise, a few grams that my fall off a truck would need to be reported.
(Michael Perriguey, Ohio American Water Company)

Response 100:
Ohio EPA has removed OAC 3745-40-12(B)(1) from rule.

Comment 101:
3745-40-12(B)(2)(b): How can the affected distance downstream be determined? Possibly guidance is needed.
(Michael Perriguey, Ohio American Water Company)

Response 101:
Ohio EPA has removed the requirement to report the affected distance downstream from this rule.

Comment 102:
3745-40-12(B)(2)(c): Not sure how you would know if there is a downstream intake. Suggest that sentence be changed to something like "If known, list the location of a downstream surface water intake that could be impacted."
(Michael Perriguey, Ohio American Water Company)

Response 102:
Ohio EPA has removed the requirement to report the downstream drinking water intake(s) from this rule.

Comment 103:
3745-40-12(B)(2)(f): Use of the word "Any" at the start of B(2) makes that paragraph seem optional, thus spills could occur, they could do nothing to clean up or prevent future ones, and still be in compliance. Getting rid of the "Any" at the start of B(2) makes clean up and prevention necessary.
(Maureen Ware, Ohio EPA SWDO)

Response 103:
Ohio EPA has made the change as requested.

End of Response to Comments