Ohio Department of Health
And Sewage Treatment System Technical Advisory Committee

Standards, Guidelines, and Protocols for Ohio Revised Code Section 3718.04 Review of Sewage Treatment System Products or Components

Use of these Standards, Guidelines, and Protocols

The Ohio Revised Code (ORC) section 3718.04 authorizes the Ohio Department of Health (ODH) to approve Sewage Treatment Systems (STS) and components that are not defined in the Ohio Administrative Code (OAC) 3701-29. ORC Section 3718.03 (A) creates the Sewage Treatment System Technical Advisory Committee (TAC) to advise the director of health on the approval or disapproval of these STS or components. ORC 3718.04 requires the director of health to consider TAC recommendations when approving or disapproving a STS or component.

Section 3701.03 (F) of the Revised Code requires TAC and ODH to cooperatively develop standards, guidelines, and protocols for the approval or disapproval of STS or components. This document is created to satisfy the requirement and must be considered by TAC when making recommendations for approval or disapproval and by the director of health when approving or disapproving an application.

Standards, Guidelines, and Protocols for Review of Sewage Treatment Systems (STS) and Components

In conducting the review of an application in accordance with ORC Section 3718.04, the TAC and the ODH shall:

1. Process the application and approval request documentation to assure review of the specified component or system performance claims.
2. Evaluate the application to assure the applicant has demonstrated at least equivalent performance to protect public health and the environment and meet the regulatory intent of ORC 3718.02 and OAC 3701-29 and standards and / or criteria including any applicable standards listed in Appendices A and B of this document.
3. Consider recommendations for approval or disapproval subject to the regulatory intent of ORC 3718 and OAC 3701-29 and / or any related regulatory changes to law or rule. TAC may also consider any implications for future requests for review.
4. Review application information in the context of the following criteria, as applicable:
    (a) Identify applicable performance standards, treatment processes, scientific and/or engineering principles and other relevant criteria pertinent to the review.
    (b) Assess if there is sufficient theory, applied research, and technical information to explain the function and performance of the component or system and to substantiate specific claims.
    (c) Consider any requirements, limitations on, or conditions of use, operation, or reliability in view of the information provided and the knowledge and experience of the reviewer.
    (d) Determine if the submitted performance information adequately supports the requested approval (see item 5 following) and meets the standards and criteria established by the TAC or in law or administrative rule.
    (e) Review the siting, installation, service, operation and maintenance (O&M) information for the purpose of determining its clarity, accuracy, and completeness.
5. Evaluate the sufficiency, credibility and applicability of submitted data or research findings. The TAC and/or the director may reject data or findings that are determined to be insufficient, unreliable, or not

applicable for the purposes of the requested approval. The evaluation of data and findings shall include, but is not limited to, the following considerations, as applicable:

(a) Credibility and Quality of supporting research, testing, sampling and data analysis –

i. Replicated studies, peer-reviewed research, high quality field testing, and test center data collected in environmental conditions comparable to Ohio shall be valued more heavily than other types of research reports or publications, regulatory reviews or evaluations, or vendor-developed reports.

ii. The data shall demonstrate consistent performance within the range of temperature and conditions to which the system would be exposed to while operating in Ohio, and expected flow volumes and waste strengths.

iii. Optimum data include, as applicable, information regarding strength of influent and effluent wastewater, average influent flow rate, peak influent flow rate, replication of events, controls in place during data collection, effluent quality, range of environmental conditions during data collection, and operation and maintenance performed during data collection. Strength of influent and effluent wastewater shall be demonstrated using at least the standards for which the applicant is requesting approval.

iv. TAC and the director shall consider the system or component's ability to consistently meet the standards for which the applicant seeks approval through review of provided raw data and statistical analysis of that data. Review of statistical analysis shall include but is in no way limited to the mean and standard deviation of normally distributed data, the geometric mean and geometric standard deviation (first moment of the transformation) for data that is not normally distributed, and the confidence intervals of all data. Appendix C is provided to explain the derivation and interpretation of confidence intervals.

(b) Methods used in gathering data or conducting research - Commonly accepted standards or protocols shall be valued more heavily than that from a protocol or testing process that is not widely accepted. Optimum data and analysis employ *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association or other methods using accepted scientific and statistical methods as appropriate. While reviewing submitted data, TAC and the director shall consider what individual, company, or agency was involved in designation of site(s), equipment, and event(s) evaluated among the total population, who participated in the chain of custody, collection, transportation, and evaluation of the sample, and who produced any report(s).

(c) Qualifications of party or parties conducting the testing or research - Research, sampling, evaluation or other data collection and analysis conducted by an independent third party shall be valued more than that conducted by a first party with a stake in the outcome. Third party testing or research is conducted by persons who have no conflict of interest in the outcome of the subject of the evaluation.

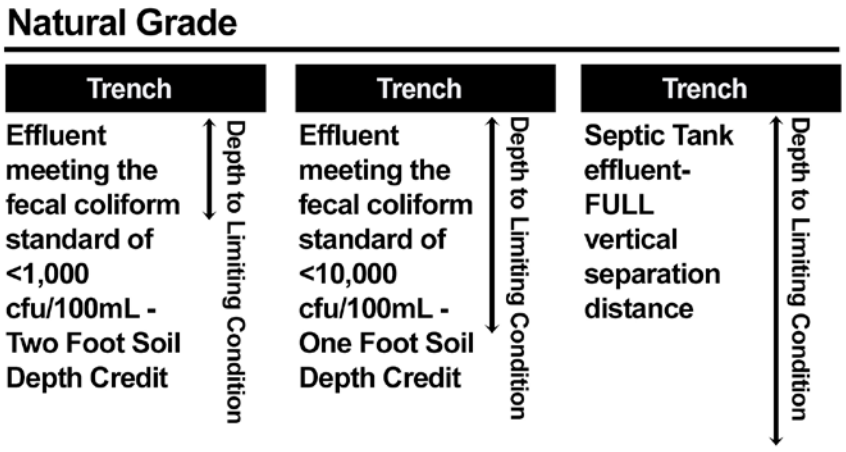
6. Evaluate the need for conditions to be placed on the approval. Any such conditions may relate to requirements for similar systems or components authorized and/or approved in accordance with procedures established under OAC Chapter 3701-29, special circumstances specific to the system or component under review, or other considerations as applicable.

Appendix A to Standards, Guidelines, and Protocols for ORC 3718.04 Review

A. Standards for effluent applied to a soil absorption component:

1. **$CBOD_5$/TSS Standard** – Compliance with this standard, for the purpose of permitting a soil absorption area sizing reduction in accordance with the Ohio Table, shall be demonstrated through:
   (a) submission of sufficient performance information to demonstrate that effluent consistently meets a mean plus one standard deviation of less than twenty five milligrams per liter (mg/L) for five-day carbonaceous biochemical oxygen demand ($CBOD_5$) and less than thirty mg/L total suspended solids (TSS) along with confidence intervals acceptable to TAC, or
   (b) submission of an application demonstrating current third party certification and ODH application requirements. Submissions demonstrating current third party certification may be administratively reviewed for approval as authorized by the Director of Health's October 26, 2007 Journal Entry. Demonstration of certification with one of the following third party testing protocols shall constitute sufficient proof of compliance with the $CBOD_5$/TSS standard:
      (1) ANSI/NSF Standard 40 certification or compliance with current ANSI/NSF Standard 40 by an ANSI/CSA accredited third party certifier
      (2) BNQ Standard NQ 3680-910CE
      (3) CEN Standard EN 12566-3

2. **Fecal Coliform Standards** – Compliance with the pathogen reduction standards listed below requires that effluent consistently meet a geometric mean plus two standard deviations of the standard. STS that are compliant with the fecal coliform standards listed in a) and b) below and the $CBOD_5$/TSS standard listed in 1 above, may utilize soil depth credits, as provided, in accordance with soil absorption provisions in rule or as conditions of approval by the director of health. STS that are compliant with the fecal coliform standards listed in c) and d) below and demonstrate the ability (mean plus two standard deviations) to produce an effluent with less than 15 mg/L $CBOD_5$ and less than 18 mg/L TSS, may be used for restricted or unrestricted spray application in accordance with the Spray Irrigation Special Device Approval. Alternate E.coli standards may also be used to determine compliance if approved by the director of health.
   a) less than or equal to ten thousand colonies/one hundred mL allows for a one foot soil depth credit;
   b) less than or equal to one thousand colonies/one hundred mL allows for a two foot soil depth credit;



   c) less than or equal to two hundred colonies/one hundred mL for restricted spray dispersal;
   d) less than or equal to twenty colonies/one hundred mL for unrestricted spray dispersal.

3. **Nitrogen Reduction -** Nutrient reduction standards for pretreatment components may be established by the Director or board of health when there is a significant risk of nutrient contamination to surface or ground water due to risk factors identified in the site evaluation or other types of water quality assessments, or risk due to proximity to local, state, or federally recognized nutrient sensitive environments.
   a) When total nitrogen reduction is required, pretreatment components that meet a fifty percent reduction in the total nitrogen concentration (average influent and effluent total nitrogen concentrations and the actual percentage of removal are provided) as demonstrated by ANSI/NSF Standard 245, BNQ Standard NQ 3680-910, CEN Standard EN 12566-3 data or equivalent shall be used.
   b Other nutrients standards may be established by the Director or board of health as needed for an area including higher nitrogen reduction or other nutrients.

B. Standards for effluent discharged to the waters of the state of Ohio

NPDES Effluent Limitations are established by the Director of the Ohio Environmental Protection Agency (OEPA) and included in the general permits.

a) Compliance with the discharge standards requires that effluent consistently meet a mean plus two standard deviation of less than:
   - $CBOD_5$ 15 mg/L
   - TSS 18 mg/L
   - NH_3 summer 2.0 mg/L
   - NH_3 winter 4.5 mg/L

b) Compliance with the discharge standards requires that effluent consistently meet a geometric mean plus two standard deviations of less than:
   - 523 cfu/100ml E. coli for systems discharging to waters of the state other than Lake Erie
   - 235 cfu/100ml E. coli for systems discharging directly to Lake Erie

c) Compliance with the discharge standards requires that the effluent shall not be less than 6.0 mg/L D.O. at any time.

d) Compliance with the discharge standards requires that the effluent shall not exceed 0.038 mg/L Chlorine residual at any time

General NPDES Permits can be found on the OEPA HSTS web page at:
http://www.epa.ohio.gov/dsw/permits/GP_HouseholdSewageTreatmentPlants.aspx

Appendix B to Standards, Guidelines, and Protocols for ORC 3718.04 Review

Treatment Standard	Law and/or Rules granting authority	Credit
$CBOD_5$/TSS less than 25/30 mg/L* **	Ohio Revised Code (ORC) 3718.04	Up to 1/3 sizing reduction of required soil absorption field area.
Fecal coliform less than 10,000 cfu/100ml** *and the $CBOD_5$/TSS 25/30 mg/L Standard as described above*	Ohio Revised Code (ORC) 3718.04	One foot depth credit* for soil based system**
Fecal coliform less than 1,000 cfu/100ml** *and the $CBOD_5$/TSS 25/30 mg/L Standard as described above*	Ohio Revised Code (ORC) 3718.04	Two foot depth credit* for soil based system**
Fecal coliform less than 200 cfu/100ml, *$CBOD_5$ less than 15 mg/L, and TSS less than 18 mg/L* **	Special Device Approval for Spray Irrigation	Restricted surface application
Fecal coliform less than 20 cfu/100ml, *$CBOD_5$ less than 15 mg/L, and TSS less than 18 mg/L* **	Special Device Approval for Spray Irrigation	Unrestricted surface application
Timed micro-dosing: Distribution to the soil absorption area providing timed micro-dosing controlled at each point of application not to exceed one quarter gallon per dose and one gallon per four square feet of infiltrative area for each point of application per day.	Ohio Revised Code (ORC) 3718.04 Special Device Approvals for Drip Distribution and Continuous Flush Drip Distribution (timed micro-dosed)	One foot depth credit* for soil based system**
$CBOD_5$/TSS for continuous flush drip distribution*:** Effluent meeting an average plus one standard deviation of less than 15 mg/L for five-day $CBOD_5$ and 18 mg/L TSS.	Ohio Revised Code (ORC) 3718.04 Special Device Approval for Continuous Flush Drip Distribution	Approved for use within an assured continuous flush drip distribution system.
Household Sewage Treatment System (HSTS) National Pollution Discharge Elimination System (NPDES) Permit effluent limitations:** ▪ $CBOD_5$ <15 mg/L ▪ TSS <18 mg/L ▪ NH_3 summer <2.0 mg/L ▪ NH_3 winter < 4.5 mg/L ▪ E. coli < 523 cfu/100ml for discharge to waters of the state other than Lake Erie ▪ E. Coli < 235 cfu/100ml for discharge directly to Lake Erie ▪ D.O. not less than 6.0 mg/L at any time ▪ Chlorine residual not to exceed 0.038 mg/L at any time	Federal Water Pollution Control Act 33 U.S.C. 1251 et. seq. ORC Chapter 6111 OAC 3745-1-05 NPDES Permit No. OHK000002 or NPDES Permit No. OHL000002	When a soil based HSTS is not feasible: Permits treated effluent meeting NPDES effluent standards to discharge to waters of the state or Lake Erie.
Nitrogen Reduction	Ohio Revised Code (ORC) 3718.04	may be required by local health districts when there is a significant risk of surface or ground water contamination

* Soil depth credit - the use of the design mechanisms of elevation, pretreatment, and/or distribution as substitutes for in situ soil treatment to compensate for inadequate vertical separation distance between the infiltrative surface and the limiting condition.
** Soil based system – final treatment of effluent occurring by distribution within in situ soil.
***Compliance with this standard requires that effluent consistently meet a mean or geometric mean plus one standard deviation
**** Compliance with this standard requires that effluent consistently meet a mean or geometric mean plus two standard deviations

Appendix C to Standards, Guidelines, and Protocols for ORC 3718.04 Review
Use of Confidence Interval in Analyzing Data

Confidence Intervals

In analyzing data, it is first essential to recognize that the data collected represent only a "sample" of the actual range of effluent quality produced by a system over time. Therefore, the information obtained, (for example the sample mean $CBOD_5$, TSS or Fecal Coliform value) is not the "true mean." Instead, it represents an ***estimate*** of the "true mean" that one would find if the system were monitored continuously. Of course, the more samples you take, the closer you are to finding the "true mean" that the system produces over the range of actual operating conditions experienced in the field. The *confidence interval* indicates how sure one can be that the **estimated mean** (calculated from the sample data collected) is near the "**true mean.**"

A confidence interval is a basic statistical concept that provides information about the **range in which the "true mean" actually lies**. These are expressed in terms of percentages. In general, the more confident you want to be that the "true mean" lies within the range you select, the wider the range becomes. This concept may best be explained by a simple example.

> ***Example***: Consider attempting to predict the average score on an exam being taken by 100 people. We can say with 100% certainty (a confidence level of 100%) that the mean will fall between 0 and 100. *However, if we want to narrow that range, we give up confidence*. For example, one can be relatively sure that not all students will score 100 or 0. We also know that some will do well, and some will not. Hence, we can postulate that the average is probably somewhere between 20% and 90%, but we are less than 100% confident in this answer (because in some cases everyone may have scored either very high or very low). This is a qualitative explanation of why increased confidence levels result in larger ranges.

In examining a system's operation, we collect samples to provide us guidance on where the "true mean" is. In the example above, this would imply collecting some number of tests and recording the score, then calculating the mean. The result will be a mean test score that provides some guidance on where the "true mean" lies, ***but there will always be some margin of uncertainty unless the entire population is measured.***

The above concept is translated into statistics by calculating a confidence interval at a desired level of certainty by assuming the population being sampled is normally distributed around the mean. In the case of a mean $CBOD_5$ or TSS value, and many of the other parameters analyzed for on-site sewage treatment systems, this is a good assumption. For some however, most notably bacterial information (e.g. total and fecal Coliform), the data tend NOT to be normally distributed. To allow us to use the statistics we are used to (mean, standard deviation, etc) we must TRANSFORM the data into a form that is normally distributed. For bacterial data, the transformation that has proven most effective is the LOG transformation. Once transformed, we can use the transformed data to calculate the confidence interval, and then transform the confidence interval BACK to its original form.

Calculating Confidence Intervals

The formula for confidence intervals is:

$$CI = Ave \pm (t_{\square/2})\left(\frac{s}{\sqrt{n}}\right) \qquad \text{(Eq. 1)}$$

Where: CI = Confidence Interval (range in which "true mean" lies with specified certainty);

Ave = Sample Mean;

($t_{\square/2}$) = t-value at desired confidence interval. A value based on number of samples and degree of certainty desired and obtained from any statistical reference text;

n = number of samples;

s = standard deviation of sample calculated as $\sqrt{S\left(\frac{(y-y_{ave})^2}{n-1}\right)}$. (Eq. F-2)

Using Confidence Intervals to Determine the Number of Data Points Needed

The most common question asked is how many data points (samples) are required to achieve a desired degree of certainty. Unfortunately, it is IMPOSSIBLE to answer that before we start collecting data. As can be seen from equation 1 above, the confidence interval is a function of the standard deviation of the data. To provide an example of the application of this concept, consider the data set below

Date	$CBOD_5$	TSS
21-Jun	20.6	16
22-Jun	20.6	30
23-Jun	46.3	27.4
24-Jun	27.2	26.7
25-Jun	76.1	35
26-Jun	63.3	33
27-Jun	70.1	32
5-Jul	17.5	2.4

Date	$CBOD_5$	TSS
11-Jul	12.7	9
18-Jul	7.81	6.8
27-Jul	7.82	NS
28-Jul	13.6	NS
29-Jul	11.5	NS
30-Jul	14.4	NS
1-Aug	12.1	NS
21-Dec	13.5	4.52

Date	$CBOD_5$	TSS
11-Jan	13.8	12.6
12-Jan	11.4	11.1
13-Jan	15.2	14
14-Jan	12.2	9.39
15-Jan	13.3	13
16-Jan	8.54	7.8
17-Jan	17.7	6.72
24-Jan	10.3	5.82

For the two variables of concern, $CBOD_5$ and TSS, the AVERAGE is under the desired 25/30 level ($CBOD_5$ = 22.4 mg/L and TSS = 16.0 mg/L). But that does not tell us how sure we are that this sample average is giving us the TRUE average values over the range of the systems operation.

To accomplish this, we need to calculate the confidence interval. For this example, we will use the 90% confidence interval (namely, we are sure that the system will produce a value within the specified range 90% of the time). To calculate this we need to calculate the standard deviation of the sample data, as well as know the number of sample points. Because we are only interested in the case when the value is above the range (value above the top confidence interval) we will use a ONE-SIDED T-test statistic. The tail area probability chart can be found in any standard statistical text. An example is found at the end of this document (Table B1).

Calculating Confidence Intervals

A 90% confidence for one-tail means we are looking for the 10% (0.1) tail area probability (i.e. the probability that the value of the normal distribution is in the 10% tail area). For the $CBOD_5$ data above we have 24 samples and a standard deviation of 20.02, and for TSS, we have 19 samples and a standard deviation of 10.92. Because we use one "degree of freedom" in calculating the standard deviation, we have 23 degrees of freedom for $CBOD_5$ and 18 for TSS. From Table B1 (attached) we find the tail area probability for 0.1 and 23 degrees of freedom and 18 degrees of freedom to be 1.319 and 1.328 respectively.

Therefore, from equation 1

$$\text{Top confidence interval for } CBOD_5 = \text{Ave} + (t_{\square/2})\left(\frac{s}{\sqrt{n}}\right) = 22.4 + (1.319)\left(\frac{20.02}{\sqrt{24}}\right) = \mathbf{27.8\ mg/L}$$

$$\text{Top confidence interval for TSS} = 16.0 + (1.328)\left(\frac{10.92}{\sqrt{19}}\right) = 19.3\ \text{mg/L}$$

From this calculation, we cannot be sure (at the 90% level) that the system tested is meeting the $CBOD_5$ standard of 25 mg/L on average. In fact, we can determine HOW confident we are by using the data and equation 1 to calculate the resulting "t-value" when the top of the confidence interval is 30 mg/L (the standard). Rearranging Equation 1 yields

$$(t_{\square/2}) = (\{\text{Top confidence interval for CBOD5}\} - \text{Ave}) * \left(\frac{\sqrt{n}}{s}\right) = (25\text{-}22.40) * \left(\frac{\sqrt{24}}{20.02}\right) = 0.636$$

Given a t-value of 0.636 and using Table B1, with 23 degrees of freedom, corresponds to just below the 75% confidence level. **So from the data, we can only be about 70% or so confident that the system will meet the required performance standard** *(exact percentage would require a more detailed table than the one provided)***.**

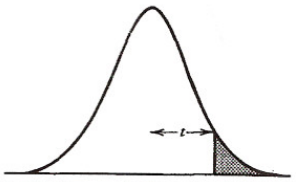


TABLE B1. Probability points of the *t* distribution with *v* degrees of freedom

	tail area probability									
v	**0.4**	**0.25**	**0.1**	**0.05**	**0.025**	**0.01**	**0.005**	**0.0025**	**0.001**	**0.0005**
1	0.325	1.000	3.078	6.314	12.706	31.821	63.657	127.32	318.31	636.62
2	0.289	0.816	1.886	2.920	4.303	6.965	9.925	14.089	22.326	31.598
3	0.277	0.765	1.638	2.353	3.182	4.541	5.841	7.453	10.213	12.924
4	0.271	0.741	1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5	0.267	0.727	1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6	0.265	0.718	1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7	0.263	0.711	1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8	0.262	0.706	1.397	1.860	2.306	2.896	3.355	3.833	4.501	5.041
9	0.261	0.703	1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10	0.260	0.700	1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11	0.260	0.697	1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12	0.259	0.695	1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13	0.259	0.694	1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14	0.258	0.692	1.345	1.761	2.145	2.624	2.977	3.326	3.787	4.140
15	0.258	0.691	1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16	0.258	0.690	1.337	1.746	2.120	2.583	2.921	3.252	3.686	4.015
17	0.257	0.689	1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18	0.257	0.688	1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19	0.257	0.688	1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20	0.257	0.687	1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21	0.257	0.686	1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22	0.256	0.686	1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23	0.256	0.685	1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.767
24	0.256	0.685	1.318	1.711	2.064	2.492	2.797	3.091	3.467	3.745
25	0.256	0.684	1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26	0.256	0.684	1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27	0.256	0.684	1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28	0.256	0.683	1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29	0.256	0.683	1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30	0.256	0.683	1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646
40	0.255	0.681	1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
60	0.254	0.679	1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
120	0.254	0.677	1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
∞	0.253	0.674	1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291

Source: Taken with permission from E. S. Pearson and H. O. Hartley (Eds.) (1958), *Biometrika Tables for Statisticians*, Vol. 1, Cambridge University Press.

Parts of the table are also taken from Table III of Fisher and Yates: *Statistical Tables for Biological, Agricultural and Medical Research*, published by Longman Group Ltd., London (previously published by Oliver and Boyd, Edinburgh), by permission of the authors and publishers.

Appendix D to Standards, Guidelines, and Protocols for ORC 3718.04 Review

Explanation of the Review Process

Step I. ODH Residential Sewage Program Review for Completeness

A request for ORC 3718.04 Review shall be submitted as a hard copy document to ODH at the address on the application form. ODH will conduct a preliminary review of the application to determine whether the application is complete. Each item specified in the application and application checklist instructions must be addressed for an application to be considered complete. When a manufacturer submits an application to modify an existing approval, the manufacturer may submit only the information from the application checklist instructions that are applicable to the requested modification. Although all documentation from the original approval is not required for the modification to be considered complete, TAC members may, at any time, request this information to complete the review of the request.

- In the event that an application is determined to be incomplete, the applicant shall be notified by ODH not later than sixty days following the submission the application. The applicant shall be provided with a written description of the information that is missing.
- In the event that an application is determined to be complete, the applicant will be notified not later than sixty days following the submission of the application. The applicant will be asked to submit 15 hard copies of the complete application for distribution to TAC members. The applications shall be sent to the address on the application form.

Step II. TAC Review and Recommendations

- The Ohio Department of Health shall send each TAC member a copy of the application by direct mail or hand delivery within 30 days of receipt of the 15 hard copies. Distribution of the 15 hard copies to committee members shall mark the beginning of the statutory 90 day TAC review period. Please be advised that when an application has been forwarded to the TAC for review, committee members may request additional information from the applicant. In such case, ODH will contact the applicant regarding the requested information.
- In order to provide sufficient time for TAC members to complete comprehensive reviews of submittals, the committee has requested that requests for new approvals not be added to future agendas until 30 days after copies have been made. Similarly, the committee has requested that requests for modification to existing approvals not be added to future agendas until 14 days after the request has been forwarded to the committee.
- TAC meetings are scheduled at a frequency to accommodate review of complete applications within the statutory 90 day TAC review period. Requests will be added to future committee meeting agendas, providing sufficient time for each member to review the completed application. Posting of the TAC meeting agendas including the dates, times, and locations of the meetings on the ODH web site shall serve as public notification.
- Applicants may request that additional time be added to the agenda for a short presentation before TAC. Regardless of whether the applicant requests a presentation before the committee, it is recommended that the applicant be present to address questions during discussion of the STS or component. TAC shall review the request for approval considering these standards, guidelines, and protocols. TAC shall vote to recommend approval or disapproval to the director in accordance with TAC bylaws.
    - In the event that TAC votes to recommend approval of the STS or component, the recommendation shall be forwarded to the director for final approval or disapproval. In making recommendations for approval, the TAC may include recommendations for any conditions on the approval. The TAC recommendations for approval may include a minority recommendation for disapproval as applicable.

- In the event TAC votes to recommend disapproval of the application, the reason for disapproval shall be included in the recommendation. The recommendation for disapproval of the system shall be forwarded to the director for final approval or disapproval.

Step III. ODH Final Approval or Disapproval

The director of health shall review the request for approval with consideration of the TAC recommendation and make the final determination of system approval or disapproval within sixty days of receiving the TAC recommendation. However, if the TAC fails to provide recommendation, or fails to provide recommendation within the statutory 90 day TAC review period, the director may approve or disapprove the application without considering the TAC recommendation. The director shall notify the applicant in writing indicating whether the application has been approved or disapproved.

- In the event of an application's disapproval, the notification shall provide a brief explanation of the reason(s) for the disapproval.
- In the event of an application's approval, the approval will be listed on the ODH web site after receipt of the STS or components Homeowner's Manual, installation checklist, and a detailed drawings of the STS and/ or component and complete treatment train (where applicable) suitable for web posting. Such posting shall serve as the notification of director's approval to boards of health and other interested parties. An approval may specify conditions for use of the STS or component.

ODH Compliance Review of an Approved System or Component

An approved and listed system or component is subject to ODH review for compliance with the conditions of approval and compliance with law and rules. Whenever there has been a change in design of the system or component, an applicant shall notify ODH and shall resubmit an application for review. An ODH review may be conducted when specified as a condition of an approval, when there is evidence of noncompliance with approval conditions, or for other reasons deemed necessary to assure compliance. Upon review, if there is a determination of noncompliance, a system or component may be disapproved and removed from the approved list in accordance with Chapter 119 of the Revised Code.