

STS Technical Advisory Committee

MEETING MINUTES

Date: Tuesday – March 13, 2007

Time: 10:00 AM to 2:00 PM

Location: Ohio Department of Natural Resources, 2040 Morse Road, Columbus

TAC Members in Attendance (8 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County

& Martin Tremmel, Union County

ODNR Soil Scientist – Tim Gerber

General Public – Stephen Hovancsek, retired PE/PS

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

Installer/Service Provider – Todd Supeck, Supeck Septic Services

Academic – Dr. Mark Tumeo, Cleveland State University

OEPA DSW Engineer – Mark Stump

EXCUSED: Manufacturer representatives - Dick Bachelder, PSA, Inc. and Mike Price, Norweco, Inc., OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

Guests: Chris Schraff, Porter, Wright, Morris and Arthur, LLP, Mehmet A. Gencer, Paul Zakriski, and Jack Morabito, IMET Corporation.

Other ODH participants: Dusten Gurney and Amy Wood

Agenda Review: Introductions were made of all participants and the meeting agenda was approved by the TAC members.

IMET Corporation Presentation: Representatives from IMET Corporation provided a powerpoint presentation with handouts on the IMET Fixed Media Bioreactor products. Discussion occurred on the product specifications, product costs, national and international installations and product performance. The TAC continued with questions and discussions regarding the product, and provided suggestions to the IMET representatives on the types of testing and data that should be collected to ensure product performance and reliability. The TAC recommended that IMET identify a specific set of testing configurations and environments and proceed with testing and data analysis, and then come back to the TAC with research and design information for review. Recommendations for statistical sampling and analysis procedures were also discussed. The next steps for IMET were specified as 1. identification of system configuration(s); 2. preparation of a study/field testing plan; 3. identifying and securing funding sources (suggestions were provided); 4. conduct study/field testing; 5. prepare results and report to TAC.

Meeting Minutes: The TAC members reviewed the August 8, 2006 meeting minutes. A motion was made by Mark Tumeo for approval of the August 8, 2006 TAC meeting minutes. The motion was seconded by Ray Saporito. All TAC members voted in favor of approving the

minutes. Rebecca signed the minutes and the approved minutes were provided to Mark Stump, TAC secretary, for his signature.

STS Program Updates: Rebecca Fugitt led a discussion providing an update on the STS program activities and stepped through the STS website and information. The department will be modifying the STS website to include a specific homeowner page with first listing on the initial STS web page. The TAC members commented that the homeowner web information should include the range of costs of systems and sample system configuration and information, the processes involved, information on securing the services of a soil scientist and the costs, explanation on the design process and range of costs. Information should be provided on the factors that affect the cost of a system. The TAC also recommended that the department conduct a survey of system costs. The TAC also recommended that a direct link to the listing of local health districts and the OTCO contractors that have taken the STS exam be provided on the homeowner web page. An update was provided on the products that have been reviewed and approved by ODH (pretreatment components and drip distribution assurances) and posted on the website.

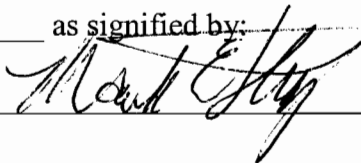
Todd Supeck expressed concerns that some manufacturers were limiting training for service providers and limiting the number of qualified service providers for their products in the state. He commented that some product training was also very expensive and that we need to ask manufacturers to identify their annual product training update requirements and costs.

Next Meetings: The TAC reconfirmed that future meetings would be held on the second Tuesday of each month with the remaining meetings for 2007 scheduled for April 10, May 8, June 12, July 10, August 14, September 11, October 9, November 6 and December 11. The meeting location will continue to be at the Ohio Department of Natural Resources complex, with the specific meeting room to be announced with the meeting agenda.

Approved on 5-8-07

as signified by:


Rebecca Fugitt, TAC Chairperson


Mark Stump

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – May 8, 2007

Time: 10:00 AM to 2:45 PM

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (10 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County

& Martin Tremmel, Union County

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Academic – Dr. Mark Tumeo, Cleveland State University

General Public – Stephen Hovancsek, retired PE/PS

Installer/Service Provider – Todd Supeck, Supeck Septic Services

Manufacturer Representative - Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

EXCUSED: Manufacturer Representative - Dick Bachelder, PSA, Inc.

TAC Applicants/Presenters:

Eco-Pure - Len Moore

SeptiTech – Dan Ostrye and Don Rousseau

Guests: Jim Whitcraft and Mark Davis of Preferred Pump, Trent Lydic of Jet, Inc., and Steve Branz of Bord na Mona.

Other ODH participants: Jean Caudill and Amy Wood

Agenda Review: Introductions were made by all in attendance and the meeting agenda was approved by the TAC members with no modifications.

Meeting Minutes: The TAC members reviewed the March 13, 2007 meeting minutes. The TAC requested that the chair send a follow-up letter to the IMET Corporation regarding outcomes of the March 13th meeting. A motion was made by Todd Supeck for approval of the March 13, 2007 TAC meeting minutes. The motion was seconded by Tim Gerber. All TAC members present voted in favor of approving the minutes. Rebecca Fugitt signed the minutes and the approved minutes were provided to Mark Stump, TAC secretary, for his signature.

Presentations by TAC Applicants:

1. Len More of Eco-Pure provided a detailed PowerPoint presentation on the 300 Series Peat Moss Filter followed by questions from TAC members. The applicant has requested approval for the BOD₅/TSS and 10K fecal standards. The TAC requested that ODH provide comparison information on the loading rates and fecal reduction data for Bord na Mona's PuraFlo peat biofilter that was already approved through the ODH review process in

accordance with Ohio Administrative Code (OAC) 3701-29-12(B). The representative of Eco-Pure was asked to provide a list of states where the Eco-Pure systems are installed and the approximate number of systems installed per state. A motion was made by Mike Price and seconded by Ray Saporito, that pending the receipt of the requested information, the TAC would take action on the Eco-Pure application at the next TAC meeting in June. All TAC members present voted in favor of the motion.

2. Dan Ostrye and Don Rousseau of SeptiTech introduced their Ohio distributors from Preferred Pump and provided a PowerPoint presentation. It was noted that the SeptiTech unit has an approval in accordance with OAC 3701-29-12(B) for BOD₅/TSS and nutrient reduction. The applicant has requested approval for the four fecal reduction standards and provided additional application information for approval for NPDES effluent limitations. The TAC requested that ODH provide the ETV data from the review process in accordance with OAC 3701-29-12(B). The representatives of SeptiTech were asked to provide a list of states where the SeptiTech systems are installed and the approximate number of systems installed per state. A motion was made by Mark Tumeo and seconded by Ray Saporito, that pending the receipt of the requested information, the TAC would take action on the SeptiTech application at the next TAC meeting in June. All TAC members present voted in favor of the motion.

TAC Technology Support:

Martin Tremmel and Rebecca Fugitt provided TAC members with perspectives on an April 4, 2007 letter from Senator Tom Niehaus to the TAC concerning the need for increased approvals of STS technologies. TAC members were also updated regarding legislation on the STS law and rules, including recent activities related to the biennial budget bill. Following discussion among the TAC members, motions were made to adopt three resolutions:

Motion 1 – Resolution 2007-05-08-01: *The Sewage Treatment System Technical Advisory Committee has reviewed and recommends approval of the pretreatment components, and related operation and maintenance as identified in the attached appendix. Such action shall be put in the form of a resolution to be approved by the committee by fax or email.* The noted appendix is the table of pretreatment components listed on the ODH web site. Motion made by Mark Tumeo, seconded by Stephen Hovancsek, and all TAC members present voted in favor.

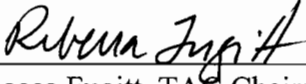
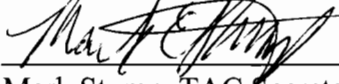
Motion 2 – Resolution 2007-05-08-02: *The Sewage Treatment System Technical Advisory Committee has reviewed and recommends approval of alternative aggregate, chamber and gravelless products for sewage treatment systems as identified in the attached appendix. Such action shall be put in the form of a resolution to be approved by the committee by fax or email.* The noted appendix would be a listing prepared by ODH of previously approved products and those recognized as acceptable in OAC Chapter 3701-29. Motion made by Mark Tumeo, seconded by Stephen Hovancsek, and all TAC members present voted in favor.

Motion 3 – Resolution 2007-05-08-03: *The Sewage Treatment System Technical Advisory Committee recommends that the Department of Health review and consider implementation of stepwise or other creative approaches to allow incremental repair and/or alteration of existing systems that are experiencing initial signs of failure or have experienced failure, with the goal of*

abating the nuisance in a cost effective manner. Motion made by Mark Tumeo, seconded by Ray Saporito, and all TAC members present voted in favor.

STS Program Updates: Given the added time spent on the resolutions, Rebecca Fugitt provided a very brief update on STS program activities prior to adjourning the meeting.

Next Meetings: The TAC reconfirmed that future meetings would be held on the second Tuesday of each month with the remaining meetings for 2007 scheduled for June 12, July 10, August 14, September 11, October 9, November 6 and December 11. The meeting location will continue to be at the Ohio Department of Natural Resources complex, with the specific meeting room to be announced with the meeting agenda.

Approved on 6-12-07 as signified by:

Rebecca Fugitt, TAC Chairperson

Mark Stump, TAC Secretary

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – June 12, 2007

Time: 10:00 AM to 2:50 PM

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (9 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County

& Martin Tremmel, Union County

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Academic – Dr. Mark Tumeo, Cleveland State University

Manufacturer Representative - Mike Price, Norweco, Inc. & Dick Bachelder, PSA, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

EXCUSED: General Public – Stephen Hovancsek, retired PE/PS

Installer/Service Provider – Todd Supeck, Supeck Septic Services

Guests: Dan Ostrye of SeptiTech, Jim Whitcraft of Preferred Pump, Trent Lydic of Jet, Inc., Mary Clark of Premier Tech, and Steve Branz of Bord na Mona.

Other ODH participants: Jean Caudill

Agenda Review: Introductions were made by all in attendance and the meeting agenda was approved by the TAC members with a change in the order of discussion of applications to accommodate the flight schedule for Dan Ostrye of SeptiTech.

Meeting Minutes: The TAC members reviewed the May 8, 2007 meeting minutes. A motion was made by Ray Saporito for approval of the May 8, 2007 TAC meeting minutes. The motion was seconded by Tim Gerber. All TAC members present voted in favor of approving the minutes. Rebecca Fugitt signed the minutes and the approved minutes were provided to Mark Stump, TAC secretary, for his signature.

Application Reviews:

Prior to addressing the two applications presented at the May meeting, TAC members discussed a law interpretation issue raised by Mike Price in a 6-7-07 E-mail to TAC members and the 6-8-07 E-mail response by Mark Tumeo on which all TAC members were copied. The issue concerned the role of the TAC and language in ORC 3718.04(A) regarding “approval for the use of a sewage treatment system or component of a system in this state that differs in design or function from systems or components the use of which is authorized in rules ...”. The concern was whether the TAC could make recommendations for approval on applications that address noncompliance with OAC 3701-29-12(B)(6) requiring that effluent quality data be provided

through an ANSI-accredited third party or ETV water quality protection center. It was established that both ODH legal counsel and the standards and guidelines adopted by the Director of Health previously addressed this issue in the affirmative and that the TAC members should proceed on the applications before them for review.

SeptiTech Application - Dan Ostrye of SeptiTech was present to address any questions from the TAC. The applicant requested approval for the four fecal coliform standards in OAC 3701-29-12(A)(2)(a) through (d) and for the effluent limitations in the HSTS General NPDES Permit. The application was reviewed in three parts based on the targeted effluent quality standards and the amount of data provided for the SeptiTech system with and without UV disinfection. Three approval/disapproval recommendations were made by the TAC:

1. The first motion was made by Mark Tumeo and seconded by Martin Tremmel: *The TAC recommends approval of the Non-UV SeptiTech Advanced Wastewater Treatment System for soil depth credits related to the <10,000 and <1000 fecal col/mL standards in OAC 3701-29-12(A)(2)(a) and (b) as presented in the application.* A roll call vote was called by the chairperson, with seven members voting in favor and one member voting against the motion.
2. The second motion was made by Martin Tremmel and seconded by Ray Saporito: *The TAC recommends denial of the SeptiTech with UV disinfection unit for OAC 3701-29-12(A)(2)(c) and (d) standards as presented in the application.* TAC concerns included the limited amount of data, lack of influent and flow characterization, etc. A roll call vote was called by the chairperson and all TAC members present voted in favor of the motion.
3. The third motion was made by Mark Tumeo and seconded by Mark Stump: *The TAC recommends denial of the SeptiTech with UV disinfection unit for discharge under the HSTS General NPDES Permit effluent limitations as presented in the application.* TAC concerns included those noted for the second motion for denial and the absence of full data sets for all NPDES effluent limitations from individual units. A roll call vote was called by the chairperson and all TAC members present voted in favor of the motion.

Eco-Pure Application – There was no Eco-Pure representative in attendance. The applicant had requested approval for the BOD₅/TSS standard in OAC 3701-29-12(A)(1) and the <10,000 fecal coliform standard in OAC 3701-29-12(A)(2)(a). The application was reviewed in two parts based on the separate effluent quality standards. Two approval/disapproval recommendations were made by the TAC:

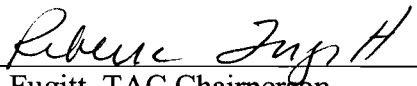
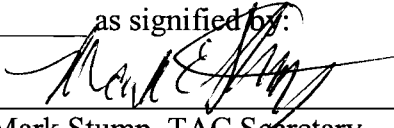
1. The first motion was made by Mark Tumeo and seconded by Tim Gerber: *The TAC recommends approval of the Eco-Pure 300 Series Peat Moss Filter for the OAC 3701-29-12(A)(1)BOD₅/TSS standard as submitted in the application.* A roll call vote was called by the chairperson, with seven members voting in favor and one member voting against the motion.
2. The second motion was made by Mark Tumeo and seconded by Ray Saporito: *The TAC recommends denial of the Eco-Pure 300 Series Peat Moss Filter for the OAC 3701-29-12(A)(2)(a) fecal coliform reduction standard as submitted in the application.* TAC members noted that the data provided did not meet the standard. A roll call vote was called by the chairperson and all TAC members present voted in favor of the motion.

Review of Renovation and Disinfection Products:

Rebecca Fugitt noted that the IMET Study Plan was just forward to the TAC by E-mail on the Friday before the meeting. TAC members tabled a discussion of the plan due to inadequate review time. A broader discussion was held on the listed agenda items of (7) renovation products and whether these were considered as STS components, (8) TAC review of stand alone disinfection products versus their review only within the framework of a treatment train, and (9) the information provided on a Sewage Nuisance Abatement Remediation Plan (SNARP) program being implemented by the Clermont County General Health District. It was noted that there may need to be changes to the ORC 3718.04 Review application format to accommodate component versus system reviews by the TAC, and that ODH should review the application documents and suggest changes for TAC consideration.

STS Program Updates: The TAC members discussed the biennial Budget Bill and the House and Senate amendments that affect the STS law and rules. The Senate amendments include a proposal that would change the ORC 3718.03 language governing the TAC. Martin Tremmel requested assistance from TAC members on drafting language setting STS treatment criteria that could be considered during the Conference Committee final consideration of the Budget Bill.

Next Meetings: Continuing with the second Tuesday of each month, the next TAC meeting was confirmed for July 10, 2007. The meeting location will again be the Ohio Department of Natural Resources complex, with the specific meeting room to be announced with the meeting agenda.

Approved on 7-10-07 as signified by:

Rebecca Fugitt, TAC Chairperson

Mark Stump, TAC Secretary

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – July 10, 2007

Time: 10:00 AM to 3:00 PM

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (7 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County
& Martin Tremmel, Union County

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representative - Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

EXCUSED: Academic – Dr. Mark Tumeo, Cleveland State University

Installer/Service Provider – Todd Supeck, Supeck Septic Services

Manufacturer Representative - Dick Bachelder, PSA, Inc.

ABSENT: General Public – Stephen Hovancsek, retired PE/PS

Guests: Craig Martin, Terry Fischer, and Trent Lydic of Jet, Inc.; Steve Branz of Bord na Mona.

Other ODH participants: Lance Himes, Jean Caudill, Amy Wood, and Dusty Gurney

Agenda Review: Introductions were made by all in attendance and the meeting agenda was approved by the TAC members.

Meeting Minutes: The TAC members reviewed the June 12, 2007 meeting minutes. A motion was made by Mike Price for approval of the June 12, 2007 TAC meeting minutes. The motion was seconded by Ray Saporito. All TAC members present voted in favor of approving the minutes. Rebecca Fugitt signed the minutes and the approved minutes were provided to Mark Stump, TAC secretary, for his signature.

Eco-Pure and SeptiTech approval updates: TAC members were informed of the final approvals granted by the Director of Health following the recommendations of the TAC for the Eco-Pure and SeptiTech systems. The approved products are listed to the ODH web site as follows:

- **Eco-Pure 300 Series Peat Moss Biofilter**
 < 30 mg/L BOD₅/TSS standard for soil absorption system sizing reduction
- **SeptiTech Advanced Wastewater Treatment System**
 ≤ 10,000 fecal coliform colonies/100 mL for one foot soil depth credit
 ≤ 1000 fecal coliform colonies/100 mL for two foot soil depth credit

The Eco-Pure representative subsequently made an e-mail request for further consideration on approval for the fecal coliform standards with use of a UV disinfection device. Since there was no data available for effluent from an Eco-Pure/UV treatment train, this was not considered by the TAC. It was noted that if a UV disinfection unit were to be submitted with influent specifications for a stand alone TAC review, other manufacturers of approved pretreatment components could use an approved UV unit to meet applicable fecal coliform standards.

Reappointment of TAC members with terms expiring July 21, 2007: The following three members were reappointed for three year terms and received letters from the Director of Health.

- o Manufacturer Representative - Dick Bachelder, PSA, Inc.
- o OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District
- o AOHC Health Commissioner – Ray Saporito, Ashtabula County

These terms will expire on July 21, 2010.

Am. Sub. HB 119 (Budget Bill) impact on TAC members and functions: Lance Himes, ODH Assistant Counsel, and Rebecca Fugitt reviewed the budget bill provisions that take effect 9-28-07 related to expanded TAC responsibilities and changes to the TAC member appointment process. It was noted that systems and components approved since January 1, 2007 would remain in place and that future request for approvals of systems and components that differ in design or function from systems or components the use of which is authorized in Ohio Administrative Code Chapter 3701-29 would be submitted to the TAC for consideration in accordance with legislative intent. The TAC members were also updated on the sewage treatment system rule changes effective 7-2-07, action to be taken by the Public Health Council on 7-25-07, and other budget bill provisions related to the formation of a study commission to address changes to law and rules for sewage treatment systems. TAC members discussed the implications and impacts resulting from the budget bill provisions.


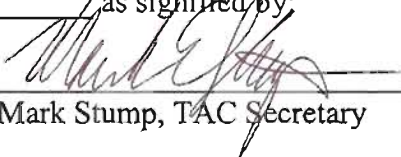
Modifications to TAC application materials and standards & guidelines: TAC application materials were generally not impacted by the rule changes due to references to Ohio Revised Code 3701.04 versus specific Ohio Administrative Code (OAC) rule language. Addition of references or a listing of applicable effluent standards is needed, since many standards were previously listed in rescinded OAC 3701-29-12(A). It was noted that the pretreatment component approval listing on the ODH web site also needed to be updated accordingly. TAC members agreed that, once updated, the introductory language for the web list should be sent to the TAC to consider the use of similar language in updating application materials.

Mound with pressure distribution and shallow leaching trenches – request for TAC approval: TAC members had received in advance of the meeting a draft document for special device approval for the statewide use of sand mounds with pressure distribution. The special device approval process is in accordance with the provisions in recently adopted interim OAC Rule 3701-29-20 (C). There was discussion of the need for such approval to allow for the continued use of mound systems. TAC members provided comment on the draft and took action to expedite the approval process. A motion was made by Martin Tremmel and seconded by Ralph Benson to recommend that the Director of Health approve the use of the special device approval for sand mounds with pressure distribution pending TAC review of the revised document. All

TAC members present voted in favor of the motion. In recognition of a similar need for a special device approval to allow for the statewide use of shallow leaching trenches, the TAC took action to support the development of a special device proposal for that purpose. A second motion was made by Mike Price and seconded by Ray Saporito to recommend that the Director of Health approve the use of a special device approval for shallow leaching trenches pending TAC review of a draft document. All TAC members present voted in favor of the second motion. Finally, there was discussion on whether a special device approval was needed for use of a subsurface sand filter in advance of reduced sized leaching trenches. Ray Saporito agreed to provide more information on the specification and siting conditions for the use of such a system.

Review of Renovation and Disinfection Products: Due to time constraints, there was no discussion of the IMET Study Plan and the Sewage Nuisance Abatement Remediation Plan (SNARP) program being implemented by the Clermont County General Health District.

Next Meeting: Continuing with the second Tuesday of each month, the next TAC meeting was confirmed for August 14, 2007 at 10 AM. The meeting location is changed from the Ohio Department of Natural Resources complex to the nearby Karl Road Branch of the Columbus Metropolitan Library at 5590 Karl Road, Columbus, OH 43229.

Approved on 8-14-07 as signified by:

Rebecca Fugitt, TAC Chairperson

Mark Stump, TAC Secretary

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – August 14, 2007

Time: 10:00 AM to 2:00 PM

Location: Columbus Metropolitan Library – 5590 Karl Road, Columbus

TAC Members in Attendance (10 of 11 were present):

Academic – Dr. Mark Tumeo, Cleveland State University

AOHC Health Commissioners – Ray Saporito, Ashtabula County
& Martin Tremmel, Union County

General Public – Stephen Hovancsek, retired PE/PS

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representative - Dick Bachelder, PSA, Inc. & Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

EXCUSED: Installer/Service Provider – Todd Supeck, Supeck Septic Services

Guests: George E. Johnson, Calvin Locker, Barry Meadows, James and Rene Dye of Ecological Tanks, Inc.; Trent Lydic of Jet, Inc.; Steve Branz of Bord na Mona; Ron Suchccki of Hoot Aerobic.

Other ODH participants: Jean Caudill, Amy Wood, and Dusten Gurney

Agenda Review: Introductions were made by all in attendance and the meeting agenda was approved by the TAC members.

Meeting Minutes: The TAC members reviewed the July 10, 2007 meeting minutes. A minor correction was noted by Ralph Benson. A motion was made and seconded for approval of the corrected July 10, 2007 TAC meeting minutes. TAC members present voted in favor of approving the minutes.

Update on two special device approvals for mounds and alternative leaching trenches: TAC members were informed that the special device approval for “Sand Mounds with Pressure Distribution” was signed by the Director of Health on July 31, 2007. The second special device approval for “Alternative Leaching Trenches” was forwarded for Director approval following revisions based on the comments submitted from TAC members.

ODH review of pretreatment components meeting BOD₅/TSS standard: Rebecca Fugitt presented an ODH request based on the recently re-adopted Ohio Administrative Code (OAC) Rule 3701-29-08 for aerobic type treatment systems to expedite the review process for manufacturers solely seeking approval for the BOD₅/TSS sizing reduction with components currently certified in compliance with ANSI/NSF Standard 40. Mark Tumeo made a motion that

the TAC recommend ODH administratively approve pretreatment components meeting current ANSI/NSF Standard 40 certification and ODH application requirements for BOD₅/TSS sizing reduction without TAC review. Stephen Hovancsek seconded the motion and all TAC members present voted in favor of the motion. The TAC requested that they be updated on those components approved in this manner.

Discussion of drip distribution assurance – special device approval: Rebecca Fugitt requested that the TAC consider a recommendation for special device approval to address ODH review of submitted drip distribution assurances. Given past controversy over the distribution soil depth credit and drip assurance requirements, the TAC tabled this discussion until the next meeting and asked for more information on the justification for the soil depth credit.

Septic Tank (9" versus 12" air gap) - special device approval: Rebecca Fugitt requested that the TAC consider a recommendation for special device approval to address the re-adopted OAC Rule 3701-29-07(G) requirement that "the distance from the flow line to the cover shall be at least twelve inches". It was noted that many tank manufacturers have adjusted their molds to the 9" air gap that had been allowed under the early 2007 STS rules that were rescinded in July 2007. A motion was made by Mike Price and seconded by Mark Tumeo recommending ODH develop a special device approval allowing a 9 to 12 inch air gap for septic tanks, including in the document applicable industry standards to support the approval. The TAC requested review of a draft septic tank special device document prior to Director approval. All TAC members present voted in favor of the motion.

Presentations by Applicants for ORC 3718.04 Review:

1. Calvin Locker of Ecological Tanks provided a PowerPoint presentation on the Aqua Safe and Aqua Aire units interspersed with questions from TAC members. The applicant requested approval for the 200 and 1000 fecal standards and NPDES for both units. The representatives from Ecological Tanks were asked to provide (1) the NSF report for the UV unit and additional information on influent flow rate and turbidity, and (2) data from other states (and more data if available from Ohio) where the Aqua Safe and Aqua Aire units are installed with the UV disinfection unit. A motion was made by Mark Tumeo and seconded by Ray Saporito, that pending the receipt of the requested information, the TAC would take action on Ecological Tanks' applications at the next TAC meeting. All TAC members present voted in favor of the motion.
2. Trent Lydic of Jet, Inc. provided a brief PowerPoint presentation followed by questions from TAC members. The applicant requested approval for the 200, 1000, and 10,000 fecal standards for the Jet BAT unit with Salcor 3G UV disinfection. A summary of eight weeks of data was provided with an indication that more data would be forthcoming as testing and analysis continued at the NSF test site. A motion was made by Martin Tremmel and seconded by Stephen Hovancsek, that pending the review of additional data and presentation of the fecal coliform data in monthly geometric mean format, the TAC would take action on the Jet application at the next TAC meeting. All TAC members present voted in favor of the motion.

Modifications to TAC standards & guidelines: The TAC discussed proposed revisions to the standards and guidelines including an appendix listing applicable effluent standards. The TAC requested that a footnote be added to the appendix for clarification on a graphic depicting pathogen reduction soil depth credits. The footnote would clarify that the “vertical separation to limiting conditions is established by local boards of health in compliance with state law and rules”. A motion was made by Stephen Hovancsek and seconded by Dick Bachelder to adopt the appendix to the Standards and Guidelines for ORC 3718.04 Review with the added footnote clarification. There was discussion of whether the guidelines should be revised to require applicants to demonstrate certification in compliance with ANSI/NSF Standard 40 if submitting a pretreatment component and that only ANSI-accredited third party data be accepted for review by the TAC. TAC members made note that this issue had been discussed in the past, and that the TAC was created as a way for products that differ in design and function to be approved for use in Ohio. It was also noted that these products will not always have ANSI accredited third party data and that the TAC had determined in their standards and criteria that differing data sources would carry more weight, credibility, and/or reliability than others. The motion was not amended. A vote was called by the chairperson, with nine members voting in favor and one member voting against the motion.

Future items expected to come before the TAC: Rebecca Fugitt reported on inquiries to ODH on items that may come before the TAC either as applications for review or special device recommendation. These include constructed wetlands, spray irrigation, and the previously discussed subsurface sand filter (SSSF) to leaching. The latter was briefly discussed with an indication that SSSF data is needed and that the issue of watertightness needs to be addressed. It was also noted that an application received for a “Super Septic Tank” would be reviewed for completeness and may come before the TAC at their next meeting.

IMET study plan and the Sewage Nuisance Abatement and Remediation Plan (SNARP): TAC members were asked to submit to the chair by e-mail any comments on the IMET study plan. Ralph Benson was asked to explore the possibility of developing a PowerPoint presentation on the SNARP program to serve as a resource for sharing information with other local health districts in Ohio.

TAC changes and report requirements related to Am. Sub. H.B. 119: Due to the provisions in Section 101.01 of Am. Sub. H.B. 119, the TAC is required to annually “select from among its members a chairperson and a vice-chairperson and a secretary to keep a record of its proceedings” and by “January 1, 2008, provide the household sewage and small flow on-site sewage treatment system study commission created by Am. Sub. H.B. 119 of the 127th general assembly with a list of available alternative systems and the estimated cost of each system”. The TAC discussed whether a list of resources that Ralph Benson had provided Rebecca Fugitt by e-mail could be included in a report to the study commission. Rebecca offered to prepare an outline of a proposed report format and references or links to the noted resources for TAC consideration at the next meeting.

Next Meeting: Continuing with the second Tuesday of each month, the next TAC meeting was confirmed for September 11, 2007 at 10 AM. The meeting location will return to the Ohio Department of Natural Resources complex at 2045 Morse Road, Columbus, OH 43229.

Approved on 9-11-07

as signified by:

Rebecca Fugitt
Rebecca Fugitt, TAC Chairperson

Mark Stump
Mark Stump, TAC Secretary

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – September 11, 2007

Time: 10:00 AM to 2:20 PM

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (9 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County
& Martin Tremmel, Union County

General Public – Stephen Hovancsek, retired PE/PS

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representative - Dick Bachelder, PSA, Inc. & Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

EXCUSED: Academic – Dr. Mark Tumeo, Cleveland State University

Installer/Service Provider – Todd Supeck, Supeck Septic Services

Guests: Bob Mayer of American Manufacturing; George E. Johnson, Calvin Locker, Barry Meadows, James and Rene Dye of Ecological Tanks; Trent Lydic of Jet; Steve Branz of Bord na Mona; Ron Suchecki of Hoot Aerobic; Michael Wall and Gary Annick of Hydro-Action; Eric Shields of Quantics; Tony Wallace of Wallace Septic; Ryan and Rod Yoho of Yoho Excavating.

Other ODH participants: Gene Phillips, Jean Caudill, Amy Wood, and Dusten Gurney

Agenda review: Introductions were made by all in attendance. The meeting agenda was approved by the TAC members with the exception of item #6 related to the Super Septic Tank application presentation being delayed until the next meeting.

Follow-up presentation by Ecological Tanks: Calvin Locker provided further sampling data on the Aqua Safe and Aqua Aire units in support of the requested approval for the 200 and 1000 fecal standards and NPDES for both units. The NSF report requested by the TAC for the UV disinfection data was not able to be provided. Jean Caudill of ODH reported that her call to NSF International confirmed that testing had occurred but that data could not be released without permission from the manufacturer of the ATU tested with the UV unit. Mr. Locker discussed the additional information requested by the TAC on influent flow rate and turbidity and provided more detail on the recent additional sampling in Ohio on Aqua Safe and Aqua Aire units installed with the UV disinfection unit. The TAC discussed first party data issues such as the need for sampling protocols and other data quality and quantity issues. The lab reports and service contract information for the tested units were provided to all TAC members. The TAC chair noted that decisions should be made in the context of past recommendations for approval and disapproval, along with consideration of the other criteria established in the *Standards and Guidelines for ORC 3718.04 Review*. After significant further discussion by TAC members and

company representatives, the key issues of continuing concern were noted as (1) the absence of a field testing protocol, (2) the unresolved NSF report data and the absence of third party testing of the actual treatment trains for both units, and (3) the quality and quantity of field sampling conducted by a manufacturer or manufacturer representatives. A motion was made by Stephen Hovancsek and seconded by Ralph Benson to terminate discussion and allow the applicants to return at the next meeting if they chose to do so. A roll call vote was called by the TAC chair, with seven members voting in favor and one member voting against the motion. The chair noted that the deadline for Director of Health action on approval or disapproval was October 30, 2007.

Meeting minutes: The TAC members reviewed the August 14, 2007 meeting minutes. A motion was made by Mike Price for approval of the minutes; seconded by Ray Saporito. All TAC members present voted in favor of approving the minutes. Rebecca Fugitt, TAC Chair, and Mark Stump, TAC secretary, signed the approved minutes. Mark Stump also signed the previously approved minutes from the July 10, 2007 meeting.

Follow-up presentation by Jet and new application for NPDES: Trent Lydic of Jet, Inc. provided additional data from the NSF test site to support the requested approval for the 200, 1000, and 10,000 fecal standards for the Jet BAT unit with Salcor 3G UV disinfection. There was discussion regarding the quantity of data and the need for the data to be provided as an NSF third party report document. A motion was made by Stephen Hovancsek and seconded by Dick Bachelder to terminate the discussion and postpone action pending the provision of the continuing test site data in an NSF report format. A roll call vote was called by the TAC chair, and all TAC members present voted in favor of the motion. Again, the chair noted that the deadline for Director of Health action on approval or disapproval was October 30, 2007.

A second Jet application for ORC 3718.04 review was presented for NPDES approval with the addition of a re-aeration chamber at the end of the Jet BAT unit / Salcor 3G UV treatment train currently being tested by NSF. The new Jet application was introduced in a brief PowerPoint presentation followed by questions from TAC members. It was noted that collection of nutrient and ammonia data was still in progress. A motion was made by Stephen Hovancsek and seconded by Ray Saporito to suspend discussion pending the provision of the continuing test site data in an NSF report format. All TAC members present voted in favor of the motion.

Discussion of drip distribution assurance – special device approval: Jean Caudill provided an overview of the draft special device document that had been sent to TAC members in advance of the meeting. The TAC chair noted that the special device approval could allow ODH to review submitted drip distribution assurances as in the past under the rescinded OAC rule 3701-29-13.3. There was discussion of the stringency of the drip distribution specifications as related to cost and whether the drip assurances review by ODH could be separated from a TAC product review process. TAC member Mike Price and Bob Mayer of American Manufacturing agreed to review the specifications in view of national standards and to report back to the TAC at the next meeting.

Update on special device approvals: The TAC chair noted that in addition to the Sand Mounds with Pressure Distribution approval, the Alternative Leaching Trenches special device approval has been posted to the ODH web site. The Nine to Twelve Inch Air Gap for Septic Tanks special


device approval is in process of getting Director of Health sign-off. ODH legal is reviewing OAC Rule 3701-29-08 for aerobic type treatment systems to determine if ODH can implement a review process for ATU manufacturers solely seeking approval for the BOD₅/TSS sizing reduction with components currently certified in compliance with ANSI/NSF Standard 40. Data and information on subsurface sand filter (SSSF) to leaching and subsurface constructed wetlands to leaching was still being gathered including review of a draft OEPA guidance document on constructed wetlands.

TAC report requirements related to Am. Sub. H.B. 119: Provisions in Am. Sub. H.B. 119, states that the TAC shall by "January 1, 2008, provide the household sewage and small flow on-site sewage treatment system study commission created by Am. Sub. H.B. 119 of the 127th general assembly with a list of available alternative systems and the estimated cost of each system" and that the TAC chair shall prepare and submit an annual report to the General Assembly not later than ninety days after the end of the calendar year in accordance with ORC 3718.03(G). The TAC reports, and two ODH reports also required by Am. Sub. H.B. 119, were discussed. The TAC members asked for an update at the next meeting.

Annual selection of TAC chairperson, vice-chairperson, and secretary: Nominations and votes for the TAC officers were held. There was a motion for selection of Rebecca Fugitt to continue as chair by Stephen Hovancsek and seconded by Mike Price, with all TAC members present voting in favor of the motion. A motion for selection of Tim Gerber as vice-chairperson was made by Stephen Hovancsek and seconded by Mike Price, with all TAC members present voting in favor of the motion. Finally, there was a motion for selection of Mark Stump to continue as secretary by Ray Saporito and seconded by Stephen Hovancsek, with all TAC members present voting in favor of the motion.

Next Meeting: Continuing with the second Tuesday of each month, the next TAC meeting was confirmed for October 9, 2007 at 10 AM. The meeting will be held in Building I at the Ohio Department of Natural Resources complex at 2045 Morse Road, Columbus, OH 43229.

Approved on 10-9-07



Rebecca Fugitt, TAC Chairperson

as signified by:



Mark Stump, TAC Secretary

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday – October 9, 2007

Time: 10:00 AM to 2:55M

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (7 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representative: Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

Academic: Dr. Mark Tumeo, Cleveland State University

EXCUSED:

AOHC Health Commissioners- Martin Tremmel, Union County

General Public – Stephen Hovancsek, retired PE/PS

Manufacturer Representative - Dick Bachelder, PSA, Inc

Resigned: Installer/Service Provider – Todd Supeck, Supeck Septic Services

Guests: Tom Ashton of American Manufacturing; Mike Felton of StreamKey Inc.;

George E. Johnson, Calvin Locker, Barry Meadows, James and Rene Dye of Ecological Tanks;

Trent Lydic and Chris Mandich of Jet; Steve Branz of Bord na Mona; Suzanne Dill of Geoflow;

Other ODH participants: Gene Phillips, Amy Wood, and Dusten Gurney

Agenda review: Introductions were made by all in attendance.

Meeting Minutes: The TAC members reviewed the September 11, 2007 meeting minutes. A motion was made by Dr. Tumeo and seconded by Ray Saporito for approval of the September 11, 2007 meeting minutes. TAC members present voted in favor of approving the minutes as submitted.

Resignation Noted: Rebecca Fugitt announced that Todd Supeck of Supeck Septic Services resigned his position on the board. Rebecca informed the committee that Todd represented the installer/service providers and that position is now appointed by the president of the Senate. The department will send a letter to the Senate President Harris regarding this resignation. ODH has requested that the Ohio On-Site Wastewater Association (OOWA) provide recommendations for replacement of this appointment.

Super Septic Tank Presentation: Pat Hanlon and Kevin Chaffee of Advanced Wastewater Solutions from Indiana were present to introduce their septic tank and its functions. Pat Hanlon described the various chambers/units within this one tank and how the effluent would move through the tank. Mr. Hanlon stated that with the reticulated form material as part of the package, the effluent produced is of pretreatment quality. (1st unit—conventional tank, 2nd-upflow filter, 3rd-reticulated foam filter to effluent filter at the outlet)

Kevin Chaffee informed the committee on the history of the unit and how it came about with trying to reduce hydrologic/organic loading into the soils. Mr. Chaffee showed slides of average hydrological/organic loading of a normal septic tank. The tank is being tested with effluent from the Sunman, Indiana waste stream and weekly grab samples of effluent exiting the tank were collected at various times.

The Up-flow Anaerobic Sludge Blanket (UASB) process was explained as part of the integral functioning of the tank and the decomposition of solids with additional effluent treatment. Mr. Hanlon and Mr. Chaffee stated that the Super Septic Tank produces higher quality effluent, anaerobic treatment, flow equalization and easy to maintain. The product was presented as a non-mechanical option for repairing a "failing" septic system.

Discussion from the TAC members: Due to lack of third party data, committee members asked about sampling results such as which labs did the results, the sampling protocol, how long was the sampling test, was it grab or composite samples?

Advanced Wastewater Solutions stated that they were only going to request approval for use as a septic tank in Ohio. The company was advised that the requirements for use of a tank in Ohio are a demonstration that the tank is watertight structurally sound to obtain approval.

Any company seeking a sizing reduction or fecal depth credit, must comply with the application requirements, and demonstrate through data collection how the standard has been achieved in accordance with the criteria established by the TAC, and the current rules or special device approvals.

Follow up presentation by Ecological Tanks: Cal Locker from Ecological Tanks informed the TAC members that he was formally withdrawing his submission of the Aqua Aire Unit, but continuing with the request for approval of the Aqua Safe Unit and treatment train.

Cal discussed his previous data submitted for the Aqua Safe Unit. Ecological Tanks is requesting approval of the 1,000 and 200 fecal depth credit and approval for use as a NPDES discharging system.

Cal provided additional data, using 9 systems in Ohio and showed that Cardinal Labs analyzed the results in the last month (since the last TAC meeting) and that 134 data samples had been collected and analyzed by a third party.

Further discussion was held by TAC members on the data presented, the quality and quantity of the data presented, and the timeline for approval or disapproval. Rebecca informed the TAC members that this application must be approved or disapproved by October 30, 2007 or it would be approved as submitted.

Dr. Turneo made a motion stating "with much regret and disappointment with the process of review by the TAC committee to deny the application of the Aqua Aire Unit for the 200 fecal and 1,000 fecal due to data received prior to the October 9, 2007 meeting does not support the necessary parameters needed. The motion was seconded by Ray Saporito. Upon a roll call vote, all TAC members supported the motion to deny. Motion carried.

Mark Stump made a motion for approval of the Aqua Aire treatment train as submitted with the Disinfectant ultraviolet disinfection unit with re-aeration for use as an NPDES discharging system for discharge to all waters in Ohio except Lake Erie. The motion was seconded by Ray

Saporito. Roll call voted held, six voted for approval and one abstained. Motion for approval carried.

Follow up with the Jet Inc: Trent Lydic of Jet Inc. presented to the TAC committee members additional data from the 1500 BAT series media plant with the Salcor 3GUV and Re-aeration Device. Discussion was held on where the sampling ports were located in the treatment train. Discussion was held on how much data is needed for approval process including the quantity of data needed over a range of variable testing conditions.

Dr. Tumeo Motion made the motion to approve this Jet 1500 BAT series media unit with the Salcor 3GUV for the 10,000, 1,000 and 200 fecal reduction depth credit. The motion was seconded by Tim Gerber. Discussion then followed. Mike Price suggested that the TAC should wait until the end of the Jet's testing with NSF, and then come back for approval to the TAC due to these concerns. Dr. Tumeo expressed that the TAC should have a separate discussion to refine and clarify what is sufficient quantity and quality of data over what range of variables for products to obtain approval. Roll call vote held with 6 yes votes and 1 no vote. Motion carried.

A second motion was made by Mark Stump to approve the Jet 1500 BAT with Salcor 3GUV disinfection and a Re-aeration Device as meeting the requirements for the General NPDES permit discharge standards. The motion was seconded by Mark Tumeo. Discussion was held. Mike Price expressed concern over the lack of 26 weeks of data. Mark Tumeo stated that the TAC cannot set arbitrary limits and the legislature has charged the TAC to review and approve/disapprove products. Concern was also expressed about approving products without national standards. Ray Saporito expressed concern over stifling innovation but that standards and safeguards should also be applied as appropriate. He stated that the TAC should focus on who is doing the testing and do the test results cover the variability needed to assure performance. The motion was then modified to recognize that the system as approved would not be authorized to discharge to Lake Erie. A roll call vote was then held with 6 yes votes and 1 no vote. The motion carried.

Special Device for Drip Distribution: TAC members were updated by Mike Price on his meetings with Bob Mayer of American Manufacture. Suzanne Dill from Geoflow was present and had sent an email with written comments on the proposal. Those comments were handed out and read by the TAC committee. Suzanne provided additional comments and discussion followed on the uses of turbulent flow emitters and other state experiences.

Rebecca Fugitt talked further about the history of the Drip Distribution System and Experimental Guidelines that were done in 2002. Based on the experiences from that process, and many discussions with industry and drip designers in Ohio, these standards were used to form the basis for the 2007 rules regarding drip distribution and the allowance for a soil depth credit for timed micro-dosing of effluent that can be achieved using this technology. Rebecca also informed the TAC members that there are presently four drip companies awaiting approval once this policy/procedure/special device is approved by the TAC and the Director.

Mike Felton from StreamKey and Tom Ashton from American Manufacture discussed the history of drip as developed under the old experimental concurrence process, and the importance of using the drip assurance process. Ray Saporito indicated that many local health districts are not very familiar with drip technology and the assurance process was a critical component to ensure that proper designs and subsequent installations were made to prevent problems at site. There is an issue of capacity of knowledge by sanitarians on this technology.

October 9, 2007
STS TAC meeting minutes

The TAC decided to go through the document paragraph by paragraph as submitted to get comments. There was a general comment that the special device approval should include definitions.

The first three paragraphs had no comments from TAC members or guests.

Condition section it was noted if ODH should audit or somehow follow up and spot check the companies that seek assurances to make sure the companies are following their own – procedures required under the assurance process.

VSD paragraph: It was commented that if a higher application rate was used, a soil depth credit would not be permitted and this should be clarified in the document.

Site Specifications—under the site and soil information paragraph, add "and color" to the end of the last sentence.

Design Criteria: Discussion was held on where the 25' came from as a separation distance. It was discussed that this number came from the prior Sewage Advisory Committee that worked on the original drip standards..

Design Plans: This section should be re-worded to state that the depth placement of the drop lines may not exceed 1 foot unless extreme site conditions justify a greater depth, and the designer can demonstrate appropriate operation of the system.

Drip Distribution: Suzanne Dill from Geoflow inquired why only pressure compensating emitters were the only emitters allowed. Suzanne acknowledged that turbulent flow emitters would have to have criteria set and not to be used on every lot. Dr. Tumeo suggested that the manufacturers suggest some design limitations (based on soils, lot conditions such as slope, and subsequent loading rates) for the turbulent flow emitters that would be included in the criteria.

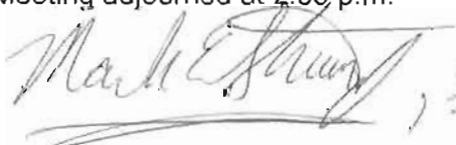
Due to time constraints, discussion on the drip distribution special device criteria was suspended until the next TAC meeting.

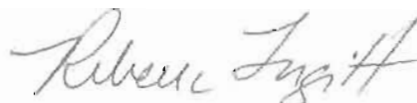
Rebecca then briefly discussed:

- The upcoming legislature report the TAC is required to produce, and the proposed content.
- Pending applications for TAC review
- Sewage Program updates—staffing, installer survey, educational meetings

The next TAC meeting is scheduled for November 13, and will be held at ODNR, Building I-1.

Meeting adjourned at 2:55 p.m.

 Mark E. Shumway, Secretary

 Rebecca Foyt

STS Technical Advisory Committee
MEETING MINUTES

Date: Tuesday November 13, 2007

Time: 10:00 AM

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance: (10 out of 10 were present)

Academic – Mark Tumeo, Cleveland State University

AOHC Health Commissioners – Ray Saporito, Ashtabula County & Marty Tremmel, Union County

General Public - Stephen Hovancsek, retired PE/PS

Installer/Service Provider – position currently vacant

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representatives – Dick Bachelder, PSA, Inc. & Mike Price, Norweco, Inc.

ODH Director of Health Representative & TAC Chair - Rebecca Fugitt

Guests: David Morgan and Mike Catanzaro of Delta Environmental Products, Wes Combs of Zoeller Pump Company, Dan Lark of Lake County Health Dept., Mike Felton of Streamkey Inc., Bob Mayer and of American Manufacturing, Dave Diehl of Diehl Technical, Charles Ray of Bord Na Mona, Trent Lydic of Jet Inc., Bennette Burks of 3-Engineering, LLC, Ryan Fickes of Pentair Water Pump, Zak Sherman of Infiltrator Systems Inc., Steven Miller of Soil and Environmental Consulting, and Rodney Ruskin of Geoflow.

Other ODH participants: Gene Phillips, Amy Wood, and Dusten Gurney

Agenda review:

- Introductions were made by all in attendance. The meeting agenda was approved by the TAC members.

Meeting minutes

- The October meeting minutes were proposed for approval. Ray Saporito made motion to approve the minutes, seconded by Mark Tumeo. All TAC members present voted in favor of approving minutes.

Presentations

1. Zoeller Pumps, Fusion Treatment Systems (ZF series 450, 600, 800). Presentation by Wes Combs, onsite sales manager. Qualification under NSF Standard 40 was completed this year for the ZF series. Test data was presented and questions fielded. Mark Tumeo requested temperatures and protocols from the Zoeller fecal data collection. Ray Saporito suggested better representation of

data. Mark Tumeo noted that the data represented does not match operating conditions in the field; only 10 pts of data and no temperature ranges. TAC discussed lack of range in variability the unit would face in the field. The influent into the system is from a Zoeller business office, not a household. Further discussion was conducted. The attainment of third party test data was stressed. Mike Price initiated motion for approval of BOD/TSS reduction and to **deny** the request of a fecal depth credit due to no third party data and issue with **source** of influent (that being non-residential and no data for the ZF 800). Dick Bachelder seconded the motion. A roll call vote was called by the TAC chair, and all TAC members present voted in favor of the motion.

2. **Delta Environmental** – DF Series ATU. Asking for NPDES approval with use of re-aeration device. Mike Catanzara and David Morgan of Delta presented the Dissolved Oxygen data. The data came from the Gulf Coast testing facility. The TAC **requested** information for the Delta NPDES system failsafe **mechanism**; Mike Catanzara said he could provide that information. Mike Price made a motion for NPDES approval; Mark Tumeo seconded the motion for waters other than Lake Erie, as requested by Delta. A roll call vote was called by the TAC chair, and all TAC members present voted in favor of the motion. Mark Tumeo wanted temperature data, Mike Catanzara said he would provide data. Note made on record that temperatures should accompany Dissolved Oxygen data.

Discussion of drip distribution assurance special device approval

- Rebecca Fugitt gave a summary of events/issues and an update since last meeting.
- The TAC began discussion on the Design Plan portion of proposed special device **approval**. This is where the TAC discussion left off at the October meeting.
- Mark Tumeo indicated 2-3 issues: pressure compensating emitters vs. turbulent flow, separate zones, and time dosing.
- After some extensive discussion, Mark Tumeo **suggested** that the drip experts in the audience each give a 5 minute exhortation on drip; what they are to lose/gain and support and why. Mike Price noted to not forget the cost argument.
- Rebecca Fugitt explained the ODH experimental concurrence versus the special device approval.
- The TAC discussed topic further and then opened up the floor for **guest** comments/exhortations.
- Dan Lark with Lake Co. was first, supporting the current **assurance** program. Lake County has a 2-3% problem rate with drip distribution **systems** and 95% are septic tank effluent systems. He discussed Lake County's success **with** prior drip assurance process.
- Mike Felton of Streamkey Inc. initiated a discussion on Local Health Departments having the option to not permit drip distribution systems in their jurisdiction under experimental concurrence vs. a special device approval. The question was raised regarding how local health departments would be kept accountable in administering the special device approval. Mike Felton re-iterated his letter to the TAC **regarding** drip distribution and explained how the assurances **were** modeled **after** **national** standards.

- Rebecca Fugitt announced the companies that have been granted drip assurance approval under the rescinded 2007 rules and companies that have applications turned in, but are awaiting approval under the special device approval. Rebecca stated that the proposed Drip Special Device Approval is modeled after former experimental and 2007 rules.
- There was discussion about the policy shift of the drip assurances and providing a stop gap in this interim rule period.
- Rod Ruskins of Geoflow spoke next. Discussed cost and risks of septic tank effluent to a drip distributions system. He suggested that two standards are needed; one for septic tank effluent and one for secondary treatment.
- Bob Mayer of American Manufacturing discussed flow meters, and pressure compensating emitters vs. non-pressure compensating (turbulent flow).
- Mark Tumeo questioned whether the savings in turbulent flow emitters is lost with added design factors/engineering cost. Bob Mayer continued to give explanation of drip factors such as flow meters. He presented the papers that have been recently written to support the proposed drip assurances - ASABE papers.
- Mark Tumeo urged again to consider what is being held up with extending the approval process of the drip special device approval and to communicate with the Sewage Study Commission what issues the TAC had in discussing the drip special device approval. Discussion continued on what to decide and what to communicate to the Sewage Study Commission. Recommendation was made to have two standards or special device approvals; one for septic tank effluent and one for pretreated effluent.
- Stephen Hovansek made motion to approve the proposed drip **special** device approval. Mark Tumeo seconded the approval as amended by the **TAC** to grant local health departments the option to not administer this approval in their jurisdiction. Mark Tumeo made motion to work on an additional approval for secondary treated effluent. The TAC committed to work on a second special device approval for pretreated effluent by the **immediate appointment of** a task force. Mark Stump suggested this go into the TAC report to the **Sewage Study Commission**. Mike Price moved to amend the motion to **immediately add** the task force with Mark Tumeo as the lead. A roll call vote was called by **the TAC** chair; all but one TAC member voted in favor of the motion.
- Discussion resumed about the drip distribution standard task force. The following signed up to participate in the task force: TAC members Mark Tumeo, Stephen Hovansek, Mike Price, and Rebecca Fugitt; industry or interested party members David Morgan of Delta Environmental Products, Dan Lark, R.S., Lake County Health Department, Trent Lydic of Jet Inc., Mike Felton of Streamkey, Tom Ashton and Bob Mayer of American Manufacturing, Zach Sherman of Infiltrator, Jeff Coomer of Consolidated Treatment, Rodney Ruskin of Geoflow, Bennette Burks of 3-Engineering LLC, and Charles Ray of Bord Na Mona. A teleconference will be scheduled for the first meeting.

Study Commission Report

- Rebecca Fugitt announced that the first report, as outlined in Amended Substitute House bill 119 Section 3718.03 (F) (5), is due January 1, 2008. The second report is due 90 days after the end of the 2007 calendar year.
- Mark Stump suggested adding a section that discusses treatment vs. disposal and why a treatment level is necessary.
- Rebecca Fugitt said that the TAC report focuses on products and costs and the ODH report covers whole gamut.

Ralph Benson and OOWA Installation Standards of Practice

- Ralph Benson distributed copies of the Ohio Onsite Wastewater Association document titled "Standards of Practice for Installations" to TAC member for their review and consideration. He asked that the TAC consider recommending the document to the Director of Health for inclusion in the ODH report to the Sewage Study Commission. Ralph also distributed copies of the Consortium of Institutes for Decentralized Wastewater Treatment document titled "Residential Onsite Treatment Systems: An Operation and Maintenance Service Provider Program" for review and consideration. He asked that the TAC give the same consideration to this document as he had requested for the Standards of Practice for Installations document, that is, recommendation to the Director of Health for inclusion in the ODH report to the Sewage Study Commission.
- Rebecca Fugitt suggested using the document in the TAC recommendations report. Mark Stump suggested to review for conflicts with the rules

Pending Applications for TAC review


- Rebecca Fugitt announced that Hoot Systems received BOD/TSS approval.
- Van Wert County Health Department has applied for experimental concurrence to use Presby Enviro-Septic® system. Discussion followed whether or not to allow them to come before the TAC with a presentation to introduce their product. Marty Tremmel asked if TAC could review literature from Presby. Mark Tumeo suggested Presby come after an application is made for TAC review.

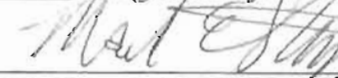
ODH Sewage Program update

- ODH is reviewing applications to Tom Grigsby's position, and Jean Caudill's position will be posted soon.
- There was discussion regarding TAC positions and terms. All members' terms expire in 2008 except those appointed in 2007. ODH staff is recommending to the Director to re-appoint the same people that he has authority to appoint.
- Next TAC meeting is scheduled for December 11, 2007 in the ODNr assembly center.

Approved on 1-8-08

as signified by:


Rebecca Fugitt, TAC Chairperson


Mark Stump, TAC Secretary

STS Technical Advisory Committee

MEETING MINUTES

Date: Tuesday – December 11, 2007

Time: 10:00 AM to 2:00M

Location: Ohio Department of Natural Resources, 2045 Morse Road, Columbus

TAC Members in Attendance (10 of 11 were present):

AOHC Health Commissioners – Ray Saporito, Ashtabula County, and Martin Tremmel, Union County

General Public – Stephen Hovancsek, retired PE/PS

ODNR Soil Scientist – Tim Gerber

OEHA Registered Sanitarian – Ralph Benson, Clermont County General Health District

OEPA DSW Engineer – Mark Stump

Manufacturer Representative: Mike Price, Norweco, Inc. and Dick Bachelder, PSA, Inc

Academic: Dr. Mark Turneo, Cleveland State University via phone

ODH Director of Health Representative & TAC Chair – Rebecca Fugitt

Installer/Service Provider –Position vacant due to resignation

Guests: Tom Ashton of American Manufacturing; Steve Branz of Bord na Mona; Leslie Page of Jet Inc., David Diehl of Diehl Tek, Ron Suchecki of Hoot Systems, Steve Miller, soil scientist and David Presby of Presby Environmental Inc. Sean McGuigan and Mike Market from Presby

Other ODH participants: Gene Phillips, Amy Wood, and Dusten Gurney

Agenda review: Introductions were made by all in attendance.

Meeting Minutes: The TAC members reviewed the November 13, 2007 meeting minutes.

Ralph Benson had corrections to the minutes dealing with his presentation of the Ohio Onsite Wastewater Association document titled "Standards of Practice for Installations" to the TAC members for review and consideration. Ralph wanted to correct that the TAC members consider recommending this document to the Director of Health for inclusion into the ODH report to the Sewage Study Commission. Ralph also distributed copies of the Consortium of Institutes for Decentralized Wastewater Treatment document titled "Residential Onsite Treatment Systems: An Operation and Maintenance Service Provider Program" for review and consideration. He asked that the TAC give the same consideration to this document as he had requested for the Standards of Practice for Installations document, that is, recommendation to the Director of Health for inclusion in the OHD report to the Sewage Study Commission.

A motion was made by Stephen Hovancsek and seconded by Ray Saporito for approval of the November 13, 2007 meeting minutes as amended. TAC members present voted in favor of approving the minutes as submitted and amended.

Presby Environmental Inc. : Applied for BOD/TSS and 10,000 fecal /one soil depth credit.

David Presby of Presby Environmental Inc. from New Hampshire was present to introduce his product and its functions. Mr. Presby started out with his history in the on-site world and then

presented on the **Enviro-Septic Wastewater Treatment System** product. This product is a 12 inch tile which is corrugated and perforated and surrounded with different materials to help reduce particles from reaching the infiltrated surfaces. There are weir's located inside this tile to help trap Fats, Oils and Greases. This product is embedded into sand either by bed or trench configuration. This product is also vented having a high vent (usually the plumbing vent in the house) and a low vent located at the end of the system.

Mr. Presby went on to state that this product had been tested and all his data came from the following test sites .The University of New Hampshire in 2002 and was tested in Stokes Canada in 2003 with that study lasting two years. Testing was also done at Bureau de Normalisation du Quebec (BNQ) for a year. Testing done at BNQ conforms to NSF standards and BNQ has a reciprocal agreement with NSF. Mr. Presby stated this testing also shows testing in a cold climate situation.

Mr. Presby stressed that his product must have a vertical separation distance of one foot to seasonal water to be able to produce the results that were found in his studies.

Discussion from the TAC members:

Discussion was held on the Indiana soils table and loading chart and how that compares to the Tyler Table being used in Ohio. Mr. Presby was asked to look at the difference, and justify the loading rates proposed that differs from the loading rates used in the Tyler Table. Mr. Presby responded that he had over 400 systems installed in Indiana and has seen no problems with those rates.

Mark Tumeo questioned Mr. Presby on this fecal data points for he could only find 8 points and that was not enough data to make a decision on the fecal.

TAC members also discussed that this product was asking for two things: A sizing reduction based on the BOD/TSS data and asking for a reduced area foot print. The committee questioned the regulatory structure of granting approval of a product that did not use the Tyler table for its system configuration since this was a criteria for approval that the TAC has established.

Due to the all the information presented to the TAC committee, they ask Mr. Presby to provide them with more data on the fecal and then produce a summary sheet of all the data that would supplement what was presented. TAC members also requested that Presby Environmental provided scientific justification and calculations supporting the loading rates for their product that differs from the Tyler Table.

- A motion was made by Stephen Hovancsek to request that Rebecca Fugitt provide correspondence to Presby Environmental Inc., on what they will need to submit prior to the next meeting to allow the TAC members to review the additional information so they could act on any motion to approve or deny this product. Mike Price seconded the motion. TAC members present voted in favor of approving the motion as submitted.

Hoot Aerobic System: Applied for 10,000 fecal/one foot credit requirements

Ron Suchecki from Hoot Aerobic System gave his presentation to the TAC committee. He started out stating his Unit Hoot H Series was the first unit to get the Administrative approval for BOD/TSS meeting the NSF 40 standards.

Building on that approval Mr. Suchecki presented his data from Baylor University showing that his unit can achieve the standards of less than 10,000 fecal to gain the one foot credit. His data came from Baylor University which is one of the NSF testing sites.

Discussion was held by TAC members on the data presented. The committee asked that Mr. Suchecki provide them with a signed cover sheet verifying the data was from this testing site and also need the geometric mean of the fecal data.

- Ray Saporito made a motion for approval of the Hoot H Series as submitted with the additional documentation of the Baylor signature and geometric means for the one foot credit that it was seeking. The motion was seconded by Stephan Hovancsek. Roll call voted held and motion for approval carried.

Special Device for Drip Distribution: TAC members were updated by Rebecca Fugitt on the conference call for that was held on December 7, 2007 for TAC workgroup members to discuss modifications to the drip distribution special device approval. During conference call, several key issues were discussed. Mark Tumeo agreed to make proposed modifications to the special device approval and provide this draft to the workgroup members and possible further discussion at the January, 2008 TAC meeting.

TAC/ODH Reports:

Rebecca briefly discussed

- The upcoming legislature report from ODH and the contents of the report. Rebecca mentioned socioeconomic factors that were being evaluated and benchmarks of affordability set by U.S. EPA that were being used for comparison. TAC members will be forwarded a copy of the report upon its completion.
- The upcoming report the TAC is required to provide to the study commission, and the proposed content. TAC members should expect a draft for review in the near future.
- ODH recommendations on the TAC committee that is appointed by the governor's office. ODH has recommended the current appointments of Mark Tumeo, Mark Stump, Tim Gerber and Stephen Hovancsek be continued.
- Letter sent to Senator Harris about the appointment of a person to the vacancy on the TAC committee that would fill the service provider/installer position. OOWA was to provide their recommendations to Senator Harris.
- Pending applications for TAC review
- Sewage Program updates—staffing

The next TAC meeting is scheduled for January 8, and will be held at ODNR, Assembly Center West, Building E.

Meeting adjourned at 2:00 p.m.

Approved on 1-8-08 as signified by:

Rebecca Fugitt, TAC Chairperson

Mark Stump, TAC Secretary