

# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – February 12, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Health, 246 North High Street

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.

ODNR Soil Scientist -- Matt Deaton

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District

Registered Engineer – Walt Sandefur, Sandefur Consulting

Public Representative – Linda Aller

Installer/ Service Provider – Mark Fehring, Fehring Services

### **Absent:**

Designer – Joe Keiser, Streamkey, Inc.

OEPA DSW Engineer – Mark Stump (excused)

Manufacturer Representative - Scott Hetrick, Norweco Inc. (excused)

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District (excused)

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Dr. Karen Mancl with The Ohio State University, Trent Lydic with Jet Inc.

By phone:

Carl Thompson with Infiltrator, Inc.

**Other ODH participants:** Andrew Thomas, Dusten Gurney and Nathan Johnson

### **Welcome and Agenda review**

Introductions were made by all in attendance. The meeting agenda was reviewed. There were no requests to modify the agenda.

### **Approval of November 13, 2012 meeting minutes**

Meeting minutes were reviewed by committee members. A typo in the meeting date was noted. Mark Fehring made a motion to approve the February 13, 2012 TAC meeting minutes as mended. Dan Lark seconded the motion. Motion approved.

### **Review of TAC 2012 Annual Report**

Andy Thomas, Ohio Department of Health

Copies of the TAC 2012 Annual Report was circulated for review. Committee members noted several issues in the report that were noted for correction. Linda Aller made a motion to approve the TAC 2012 Annual Report as amended. The motion was seconded by Matt Deaton. Motion passed.

### **Update on OSU spray irrigation project**

Dr. Karen Mancl, The Ohio State University

**Sewage Treatment Systems Technical Advisory Committee**  
**MEETING MINUTES**

Dr. Mancl provided an update on the spray irrigation project funded in part by the Ohio Department of Health STS Innovation Fund as recommended by TAC. The presentation included an explanation of the site, construction of the spray distribution system, and the results of the study thus far as outlined in three monthly reports to ODH. Additionally, Dr. Mancl provided a short video of the spray irrigation field during a spray event. Dr. Mancl informed the committee that she may be interested in extending the study and will work with ODH to see if funding is available.

**2012 Failure Rate Report**

Committee members discussed the 2012 Failure Rate Report. The report outlined the data collected from local health districts concerning the number of failed STS within their districts as part of the Clean Watersheds Needs Survey circulated by the Ohio Environmental Protection Agency.

**Continued discussion on Infiltrator, Inc.'s request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval.**

Carl Thompson, Infiltrator, Inc.

Zak Sherman distributed draft design concepts for the proposed standard. Carl Thompson provided an explanation of the proposal. Carl Thompson informed the committee that an industry coalition had formed regarding this issue in other states and that he was requesting a special device approval for a sand-lined treatment system instead of modification to the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval.

Discussion of previous TAC approvals and the impact of an SDA on those approved systems followed. Linda Aller stated that additional data is needed to pursue revocation of previous approvals. Concern was raised concerning the operation of these types of systems in Ohio. Rebecca Fugitt stated that ODH would survey local health districts to find out how many Advanced Enviro-Septic systems had been installed and how they are operating. Carl Thompson stated that Infiltrator will collect data concerning the operation of these types of systems in other states for the April 2013 TAC meeting.

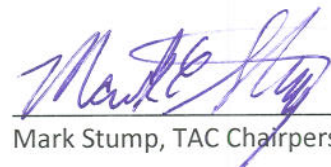
**Sewage Program Updates**

STS Rules Advisory Committee (RAC) – Rebecca Fugitt updated the committee concerning rule development process. ODH program staff conducted eleven small regional meetings during the comment period for the current draft rules. Comments will be collected through March 1, 2013. The RAC will be reconvened for final review of the draft rule, including changes based on public comment. This will be followed by a 30 day review and navigating through Common Sense Initiative (CSI) review. With the abolishment of Public Health Council, rules will be adopted as Director's Rules. Appeals Board – No formal appeals have been filed.

**Next Meeting: March 12, 2013**

The meeting was adjourned.

Approved on March 12, 2013 as signified by:

  
Mark Stump, TAC Chairperson

  
Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – March 12, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Health, 246 North High Street

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

ODNR Soil Scientist -- Matt Deaton

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District

Public Representative – Linda Aller

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District

Manufacturer Representative - Scott Hetrick, Norweco Inc.

Registered Engineer – Walt Sandefur, Sandefur Consulting

### **Absent:**

Designer – Joe Keiser, Streamkey, Inc.

OEPA DSW Engineer – Mark Stump (excused)

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc. (excused)

By phone:

Installer/ Service Provider – Mark Fehring, Fehring Services

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Allison Blodig with Bio-Microbics, Inc., Mike Felton with Streamkey, and Brian Parker and Jason Berry with Eljen Corporation

**Other ODH participants:** Andrew Thomas, and Nathan Johnson

### **Welcome and Agenda review**

Introductions were made by all in attendance. The meeting agenda was reviewed. There were no requests to modify the agenda.

### **Approval of February 12, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. A correction in the meeting minutes was noted. Ray Saporito made a motion to approve the February 12, 2013 TAC meeting minutes as amended. Linda Aller seconded the motion. Committee members present voted to approve the motion.

### **Modified Eljen Corporation application discussion**

Jason Berry and Brian Parker, Eljen Corporation

Brian Parker reviewed the revised request and submittal. The manufacturer had modified the request to include two modules (A42 and B43), include approval for meeting the BOD<sub>5</sub> and TSS standard for all three distribution methods (gravity, demand dosed, and time dosed) and approval for the 10,000 cfu/100mL fecal coliform standard for the demand dosed and time dosed systems. Mr. Parker also

## **Sewage Treatment Systems Technical Advisory Committee**

### **MEETING MINUTES**

explained that the request only includes below grade designs. Mr. Parker noted that the manufacturer plans to modify the installation and design manual to include shallow installations (minimum two inches into existing grade) if approved.

Discussion concerning the request included the sand loading rate utilized by the design and several suggested changes to the design. Mr. Parker agreed to make the requested changes to the installation and design manual. Eljen Corporation will make the requested changes and add shallow installation guidance to the manual. The changes will be reviewed by TAC.

Matt Deaton made a motion to recommend approval of the Eljen Corp A42 and B43 modules for meeting the BOD/TSS standard when designed using the modified installation and design manual and for meeting the 10,000 cfu/100mL fecal coliform standard when designed using the modified installation and design manual in demand dosed and time dosed configurations contingent of final review of the modified manual. Linda Aller seconded the motion. Committee members voted in favor of the motion.

#### **Bio-Microbics request for modification of previous approvals**

Allison Blodig, Bio-Microbics

Allison Blodig reviewed the manufacturer's submittal which included two modification requests.

Ms. Blodig reviewed the manufacturer request for approval of the MicroFAST 0.625 model for use in the state as an option for all previous MicroFAST approvals. Ms. Blodig stated that the 625 gpd model is a scaled version of the tested system and provided documentation supporting the request.

Dan Lark made a motion to recommend approval of the MicroFAST 0.625 model for use in the state as an option for all previous MicroFAST approvals. Charles Patterson seconded the motion. Committee members voted in favor of the motion.

Ms. Blodig reviewed the manufacturer request for approval of MicroFAST models for meeting the 10,000 cfu/100mL fecal coliform standard without the use of UV disinfection. The request included ten data points. Discussion ensued concerning the quantity and quality of the data and the confidence interval demonstrated through the manufacturer's statistical analysis. The temperature and quality of the testing influent was also discussed.

Ray Saporito made a motion to recommend that the manufacturer collect additional data to support the request and table discussion on the request until the committee's April meeting. Dan Lark seconded the motion. Committee members voted in favor of the motion.

Ms. Blodig asked how many data points other manufacturers that were recommended approval by the committee had submitted in the past. Rebecca Fugitt stated that program staff would review a sample of previous submittals and provide her with that information.

#### **Continued discussion on Infiltrator, Inc.'s request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval.**

Rebecca Fugitt and Andrew Thomas reviewed the results of the program's survey of local health departments concerning the number of Advanced Enviro-Septic systems in the state. Mrs. Fugitt stated that ODH is requesting all data collected as part of the eight experimental concurrences for reduced sized Advanced Enviro-Septic systems and will also have that information available for review by the

## **Sewage Treatment Systems Technical Advisory Committee**

### **MEETING MINUTES**

committee at a future meeting. Mark Fehring stated that he works with an installer in southeast Indiana who has experience with installation of these systems in Indiana. He will follow up with the installer.

#### **Sewage Program Updates**

STS Rules Advisory Committee and draft rules – Rebecca Fugitt updated the committee concerning rule development process. The review period for the draft rules has ended and ODH is compiling the comments on the new regulations. Once the comments are compiled and organized, ODH will modify the draft rules and reconvene the Rules Advisory Committee to review a second draft.  
Appeals Board – No formal appeals have been filed.

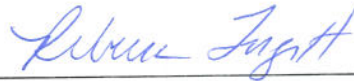
#### **Next Meeting: April 9, 2013**

The meeting was adjourned.

Approved on 4-9-2013 as signified by:



Mark Stump, TAC Chairperson



Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – April 9, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Health, 246 North High Street

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt  
AOHC Health Commissioner – Raymond Saporito, Ashtabula County Health Department  
OEHA Registered Sanitarian – Dan Lark, Lake County General Health District  
AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District  
Registered Engineer – Walt Sandefur, Sandefur Consulting  
OEPA DSW Engineer – Mark Stump  
Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.  
Installer/ Service Provider – Mark Fehring, Fehring Services

### **Absent:**

Designer – Joe Keiser, Streamkey, Inc.  
Public Representative – Linda Aller (excused)  
ODNR Soil Scientist -- Matt Deaton (excused)  
Manufacturer Representative - Scott Hetrick, Norweco Inc. (excused)

### **Vacant:**

Ohio Townships Association  
Academic

### **Guests:**

Allison Blodig with Bio-Microbics, Inc.; Steve Davis with Hydro-Action Inc.; Chris Mandich with Jet, Inc.;  
Dr. Karen Mancl with the Ohio State University and Carl Thompson with Infiltrator Systems, Inc.

**Other ODH participants:** Andrew Thomas, and Nathan Johnson

### **Welcome and Agenda review**

Introductions were made by all in attendance. The meeting agenda was reviewed. There were no requests to modify the agenda.

### **Approval of March 12, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Zak Sherman made a motion to approve the March 12, 2013 TAC meeting minutes. Mark Fehring seconded the motion. Committee members present voted to approve the motion.

### **STS Innovation Fund – Proposal for Phase 2: Water irrigation of reclaimed wastewater offsite – will pollutants runoff?**

Dr. Karen Mancl, the Ohio State University

Dr. Mancl reviewed the request for funding from the STS Innovation Fund to continue the water irrigation project for another season. Committee members discussed the request. Discussion ensued concerning the indirect costs included in the proposal. Rebecca Fugitt stated that the indirect cost percentage added by the university may be negotiable. She believed the department had negotiated lower indirect costs in other contracts with the university.

## Sewage Treatment Systems Technical Advisory Committee

### MEETING MINUTES

Dan Lark made a motion to recommend approval of the funding request provided the indirect costs could be negotiated to 30% of the project cost. The motion was seconded by Walt Sandefur. Mark Stump called for a roll call vote. Committee members voted in favor of the motion 6-1 with Zak Sherman voting nay.

#### **Bio-Microbics request for modification of previous approvals**

Allison Blodig, Bio-Microbics

Allison Blodig reviewed the manufactures submittal which included two modification requests.

Ms. Blodig reviewed additional data that the manufacturer had submitted as a result of discussion during the March TAC meeting concerning the request for approval of MicroFAST models for meeting the 10,000 cfu/100mL fecal coliform standard without the use of UV disinfection.

Charles Patterson made a motion to recommend approval of the MicroFAST models for meeting the 10,000 cfu/100mL fecal coliform standard without the use of UV disinfection. The motion was seconded by Zak Sherman. Committee members voted in favor of the motion.

Chris Mandich raised concerns with the submission by Bio-Microbics and the committee's recommendation including the flow in the tested systems, that other systems were installed in the provided study that were not included in the manufacturers submittal and that the log reduction in fecal coliform appeared to be less than that provided by most Ohio systems. Discussion ensued and the comments were addressed by Ms. Blodig. No further action was taken by the committee.

#### **Continued discussion on Infiltrator, Inc.'s request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval.**

The committee continued the discussion concerning the request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval. Discussion included recent action taken by Indiana concerning the creation of policy governing these systems and by NSF concerning the creation of a treatment standard for these systems. Rebecca Fugitt committed to following up with Indiana and NSF for future discussions.

#### **Sewage Program Updates**

Rebecca Fugitt updated the committee concerning rule development process, STS Rules Advisory Committee and Draft Rules.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

#### **Next Meeting: May 13, 2013**

The meeting was adjourned.

Approved on 5-11-2013 as signified by:

  
\_\_\_\_\_  
Mark Stump, TAC Chairperson

  
\_\_\_\_\_  
Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – June 11, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Natural Resources, Conference Room H-2  
2045 Morse Rd., Columbus, OH

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt  
Manufacturer Representative - Scott Hetrick, Norweco Inc.  
Installer/ Service Provider – Mark Fehring, Fehring Services  
Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.  
ODNR Soil Scientist -- Matt Deaton  
Registered Engineer – Walt Sandefur, Sandefur Consulting  
Public Representative – Linda Aller  
AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

### **Absent:**

OEPA DSW Engineer – Mark Stump  
OEHA Registered Sanitarian – Dan Lark, Lake County General Health District (excused)  
AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District (excused)  
Designer – Joe Keiser

### **Vacant:**

Ohio Townships Association  
Academic

### **Guests:**

Calvin Locker, Ecological Tanks  
Chris Mandich, Jet, Inc.

**Other ODH participants:** Mahjabeen Qadir, Dusten Gurney, Nathan Johnson, and Andrew Thomas

### **Welcome and Agenda review**

Meeting called to order by Scott Hetrick. Introductions were made by all in attendance. The meeting agenda was reviewed.

### **Approval of April 9, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Mark Fehring made a motion to approve the April 9, 2013 TAC meeting minutes. Ray Saporito seconded the motion. Committee members present voted to approve the motion.

### **Ecological Tanks – renewal/ modification request**

Calvin Locker presented to the TAC regarding the renewal/modification request of the Aqua Safe Advanced Treatment System with Disinfectant UV and Re-Aeration Device. Mr. Locker discussed the history of the approval for the Aqua Safe treatment train. The Aqua Safe Advanced Treatment System with Disinfectant UV and Re-Aeration has been previously approved, but the approval included a condition that it expire five years from date of approval due to lack of third party testing. Mr. Locker is requesting that the approval be renewed with no expiration.



## **Sewage Treatment Systems Technical Advisory Committee**

### **MEETING MINUTES**

Mr. Saporito commented that he appreciated the acquisition of recent third party testing. Ms. Aller asked if Ecological Tanks had been submitting a list of all installations in Ohio bi-annually, as required in the previous approval. Ms. Fugitt indicated they had.

Zak Sherman made a motion to recommend approval of the renewal/modification request of the Aqua Safe Advances Treatment System with Disinfector UV. Mark Fehring seconded the motion. Committee members present voted to approve the motion.

#### **Continued discussion on the request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval**

The committee continued the discussion concerning the request to modify the Leaching Trench Products Using a Non-Gravel Fines Free Distribution System Special Device Approval. Rebecca Fugitt and Nathan Johnson discussed the compiled information regarding Presby systems installed in accordance with experimental concurrences. ODH has contacted Indiana's Department of Health but has not yet received any formal information. ODH will continue to gather information from local health departments and consult with Indiana's Department of Health regarding their experiences. Zak Sherman suggested TAC wait for Indiana to finish the revision of their standards for sand-lined systems to "use as a model" for any action Ohio may take.

Ms. Fugitt indicated Lee Rashkin of Presby Environmental Inc. approached her about Presby Environmental, Inc.'s intention to apply for reduced sizing approval in Ohio. Ms. Fugitt informed him he will have to make application and seek approval through TAC.

#### **Sewage Program Updates**

Rebecca Fugitt updated the committee concerning the rule development process. Over 2000 comments were received and reviewed by program staff. Responses were provided for all comments. Program staff has met with legal counsel regarding some of the comments. Mahjabeen Qadir, ODH Sr. Legal Counsel, briefly summarized some the issues she is investigating. Program staff will be meeting with the Ohio Soil Inventory Control Board and an Association of Ohio Pedologists representative later in the day to discuss some of the received comments. The Rules Advisory Committee will meet on Wednesday, June 26 to discuss specific topics that will be forwarded to RAC members prior to the meeting. Ms. Fugitt briefly reviewed the agenda for the RAC meeting.

A second draft is expected to be released for comment in mid-to-late July, which will start the second review period. The proposed effective date of the rules will be no sooner than January 1, 2014.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

#### **Next Meeting: July 9 13, 2013**

Scott Hetrick announced that he had brought copies of a submittal outlining the manufacturer's request for recommendation for approval of the Hydro-Kinetic Wastewater Treatment System. It was noted by ODH staff that they had not had the opportunity to examine the application and all accompanying information to determine if the application was complete. Mr. Hetrick requested that committee members accept the submittals as compiled and for the request to be placed on the July 9, 2013 agenda. Committee members agreed to accept the submittal as compiled and to add the request to the July 9, 2013 agenda, although the application may not be considered complete a full thirty days prior to the meeting (in accordance with TAC standard practices). Committee members requested that the

**Sewage Treatment Systems Technical Advisory Committee**  
**MEETING MINUTES**

manufacturer quickly comply with any requests from ODH staff concerning the review for completeness to ensure that any additional material to be added to the submittal is forwarded to them in a timely manner. Mr. Hetrick agreed.

Mark Fehring indicated he will not be able to attend the July meeting.

**Addition to Agenda**

Concern has been expressed regarding the attendance of an appointed member of TAC. Ohio Revised Code 3718.03 (B) states: *The applicable appointing authority may remove a member from the committee for failure to attend two consecutive meetings without showing good cause for the absences*. Committee members requested that, as secretary, Rebecca Fugitt draft correspondence to the member expressing the committee's concern and requesting confirmation of his intention to continue participation on the TAC.

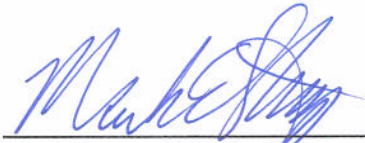
**Adjourn**

Matt Deaton made a motion to adjourn the meeting.

Zak Sherman seconded the motion.

Committee members present voted to adjourn the meeting.

Approved on July 9, 2013 as signified by:



Mark Stump, TAC Chairperson



Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – July 9, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Natural Resources, Conference Room H-2  
2045 Morse Rd., Columbus, OH

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

OEPA DSW Engineer – Mark Stump

Manufacturer Representative - Scott Hetrick, Norweco Inc.

ODNR Soil Scientist -- Matt Deaton

Registered Engineer – Walt Sandefur, Sandefur Consulting

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District

Designer – Joe Keiser

### **Absent:**

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District (excused)

Installer/ Service Provider – Mark Fehring, Fehring Services (excused)

Public Representative – Linda Aller

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Chris Mandich, Jet, Inc.

**Other ODH participants:**, Nathan Johnson, and Andrew Thomas

### **Welcome and Agenda review**

Meeting called to order by Scott Hetrick. Introductions were made by all in attendance. The meeting agenda was reviewed.

### **Approval of June 11, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Ray

Saporito made a motion to approve the June 11, 2013 TAC meeting minutes. Scott Hetrick seconded the motion. Committee members present voted to approve the motion with Charles Patterson abstaining from the vote.

### **Norweco Inc., Hydro-Kinetic Wastewater Treatment System Model 600 FEU**

Scott Hetrick made a brief presentation to the committee concerning the manufacturers request for approval of the Hydro-Kinetic Wastewater Treatment System Model 600 FEU for meeting the following effluent quality standards:

- <30mg/L BOD<sub>5</sub> /TSS, <10,000 cfu/100mL fecal coliform, and Nutrient Reduction
- <1,000, <200, <20 cfu/100mL fecal coliform when used with the Norweco UV Disinfection Unit
- Meeting the effluent quality limits outlined in the OEPA HSTS General NPDES Permit when used with the Norweco UV Disinfection Unit, post aeration, and failsafe

## Sewage Treatment Systems Technical Advisory Committee

### MEETING MINUTES

Mr. Hetrick informed the committee that the manufacturer was requesting approval for meeting the specified effluent limits with a required maintenance interval of 12 months.

Discussion ensued concerning the submitted material and the performance data collected and presented in the manufacturers third party report. Committee members pointed out that some of the manufacturer's performance data seemed to be affected by an installation or manufacturing error that was noted in the report. Although the error was noted in the report the data was not omitted.

Committee members requested several changes to the manufacturer's submittal:

- Provide proof of structural soundness and water tightness for the four tank design,
- Provide a maximum depth of installation consistently in the installation checklist and manual,
- Remove the reference to compaction in the installation checklist,
- Provide a drawing of each treatment train adjusted for use in Ohio,
- Provide separate Installation and Operation and Maintenance Checklists,
- Provide performance data for the last six months of the third party testing to support performance claims, and
- Provide performance data for the entire twelve months of third party testing with the July data omitted to support performance claims with notes from the third party stating why the data was not used,

Charlie Patterson made a motion to recommend approval with the requested changes and demonstration that the system will meet the ammonia standard after recalculation of the ammonia data for a twelve month maintenance cycle to meet the BOD<sub>5</sub> /TSS standard, all specified fecal coliform standards, NPADESA discharge, and nutrient reduction. The motion was seconded by Ray Saporito. Committee members voted in favor of the motion with Scott Hetrick abstaining from the vote.

#### TAC Appointments:

Rebecca Fugitt pointed out that several committee members were nearing the end of their term.

#### Sewage Program Updates

Rebecca Fugitt updated the committee concerning the rule development process.

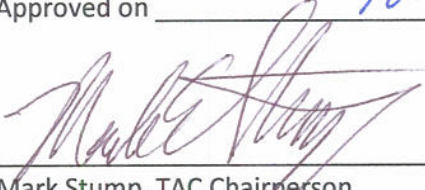
A second draft is expected to be released for comment in August.

The proposed effective date of the rules will be no sooner than January 1, 2014.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

#### Next Meeting: August 13, 2013

Approved on 10-8-2013 as signified by:

  
\_\_\_\_\_  
Mark Stump, TAC Chairperson

  
\_\_\_\_\_  
Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – October 8, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Natural Resources, Conference Room H-2, 2045 Morse Rd., Columbus, OH

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

OEPA DSW Engineer – Mark Stump

Manufacturer Representative - Scott Hetrick, Norweco Inc.

ODNR Soil Scientist -- Matt Deaton

Registered Engineer – Walt Sandefur, Sandefur Consulting

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District

Installer/ Service Provider – Mark Fehring, Fehring Services

Public Representative – Linda Aller

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.

Designer – Joe Keiser

### **Absent:**

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Trent Lydic and Chris Mandich with Jet, Inc.

**Other ODH participants:** Nathan Johnson

### **Welcome and Agenda review**

The meeting called to order by Mark Stump. Introductions were made by all in attendance. The meeting agenda was reviewed. No changes to the agenda were requested.

### **Approval of July 9, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Charles Patterson made a motion to approve the July 9, 2013 TAC meeting minutes. Zac Sherman seconded the motion. Committee members present voted to approve the meeting minutes.

### **Review and discussion of TAC Standards and Criteria**

The Ohio Department of Health and Sewage Treatment Systems Technical Advisory Committee *Standards, Guidelines, and Protocols for Ohio Revised Code Section 3718.04 Review of Sewage Treatment Systems Products and Components* (September 2010) document was reviewed by the committee. Committee members suggested several revisions to the document. Changes were to update the document to accurately reflect current review processes and to clarify those processes for manufacturers. The suggested revisions were documented and Rebecca Fugitt said that program staff would make the changes to the document and the subject will again be on the agenda of the November 12 meeting.

## Sewage Treatment Systems Technical Advisory Committee MEETING MINUTES

### Review of the Spray Irrigation of Wastewater Special Device Approval

The draft Special Device Approval for Spray Irrigation Assurances was reviewed by the committee. Committee members discussed several technical aspects of the document and suggested several changes. Comments submitted by interested parties were also reviewed. Several committee members requested to review the referenced Ohio State University Bulletin 912 *On-Site Sprinkler Irrigation of Treated Wastewater In Ohio*. Rebecca Fugitt said that program staff would locate copies for the committees review. The agenda item will be on the agenda of the November 12 meeting.

### TAC Appointments:

Rebecca Fugitt pointed out that several committee members were nearing the end of their term.

### Sewage Program Updates

Rebecca Fugitt updated the committee concerning the rule development process. A second draft is expected to be released for comment. The proposed effective date of the rules will be no sooner than January 1, 2014.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

Submittals from Enfiro-Flo, Inc. for the NuWater Advanced Treatment System were circulated. The manufacturer is seeking approval for use of the product in Ohio and will be on the November 12, 2013 meeting agenda.

### Next Meeting: November 12, 2013

Approved on 11-12-2013 as signified by:

  
\_\_\_\_\_  
Mark Stump, TAC Chairperson

  
\_\_\_\_\_  
Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – November 12, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Natural Resources, Conference Room H-2, 2045 Morse Rd., Columbus, OH

### **TAC Members in Attendance:**

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

Manufacturer Representative - Scott Hetrick, Norweco Inc.

ODNR Soil Scientist -- Matt Deaton

Registered Engineer – Walt Sandefur, Sandefur Consulting

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District

Public Representative – Linda Aller

Designer – Joe Keiser

### **Absent:**

Installer/ Service Provider – Mark Fehring, Fehring Services (excused)

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc. (excused)

OEPA DSW Engineer – Mark Stump (excused)

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department (excused)

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Chris Mandich with Jet, Inc. and Mike Rowan with Ohio State University

**Other ODH participants:** Nathan Johnson and Andy Thomas

### **Welcome and Agenda review**

The meeting called to order by Scott Hetrick. Introductions were made by all in attendance. The meeting agenda was reviewed. No changes to the agenda were requested.

### **Approval of October 8, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Linda Aller made a motion to approve the October 8, 2013 TAC meeting minutes. Dan Lark seconded the motion. Committee members present voted to approve the meeting minutes.

### **Review of the Spray Irrigation of Wastewater Special Device Approval**

The draft Special Device Approval for Spray Irrigation Assurances was reviewed by the committee. Dr. Mike Rowan was available to provide comments on the special device approval and answer questions from the committee members. Committee members discussed several technical aspects of the document.

### **Enviro-Flo, Inc.'s request for approval for use of the NuWater Aerobic Treatment System**

Enviro-Flo, Inc. did not request time for a presentation and did not have a representative available to answer questions from the committee. Rebecca Fugitt explained that Enviro-Flo, Inc. was requesting approval of the NuWater Aerobic Treatment System Models B-500 to B1500 for meeting the CBOD<sub>5</sub> and

## Sewage Treatment Systems Technical Advisory Committee

### MEETING MINUTES

TSS standard of <30mg/L and approval of the NuWater Aerobic Treatment System Models B-500 to B1500 for the fecal coliform standards of <10,000 cfu/100mL, <1,000 cfu/100mL and <200 cfu/100mL when used with the Salcor 3G UV disinfection unit.

Discussion ensued concerning the provided performance information. Committee members discussed the statistical analysis of the fecal coliform data. Provided that the sum of the mean and two times the standard deviation of the fecal data exceeded the fecal coliform standard of 200 cfu /100mL, several committee members expressed concern that the system would not meet the standard consistently enough to justify recommendation for approval.

Dan Lark made a motion to recommend approval of the NuWater Aerobic Treatment System Models B-500 to B-1500 for meeting the CBOD5 and TSS standard of <30mg/L and approval of the NuWater Aerobic Treatment System Models B-500 to B1500 for the fecal coliform standards of <10,000 cfu/100mL and <1,000 cfu/100mL when used with the Salcor 3G UV disinfection unit. The motion was seconded by Charlie Patterson. Committee members voted in favor of the motion.

#### Review and discussion of TAC Standards and Criteria

The Ohio Department of Health and Sewage Treatment Systems Technical Advisory Committee *Standards, Guidelines, and Protocols for Ohio Revised Code Section 3718.04 Review of Sewage Treatment Systems Products and Components* (September 2010) document was reviewed by the committee. Committee members suggested several revisions to the document

#### TAC Appointments:

Rebecca Fugitt pointed out that several committee members were nearing the end of their term.

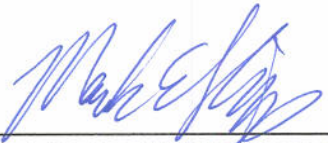
#### Sewage Program Updates

Rebecca Fugitt updated the committee concerning the rule development process. A second draft is expected to be released for comment.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

#### Next Meeting: December 10, 2013

Approved on 12-10-2013 as signified by:

  
\_\_\_\_\_  
Mark Stump, TAC Chairperson

  
\_\_\_\_\_  
Rebecca Fugitt, Secretary



# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

**Date:** Tuesday – December 10, 2013

**Time:** 10:00 AM to 2:00PM

**Location:** Ohio Department of Natural Resources, Conference Room H-2, 2045 Morse Rd., Columbus, OH

### **TAC Members in Attendance:**

OEPA DSW Engineer & Chair – Mark Stump

ODH Director of Health Representative & TAC Secretary – Rebecca Fugitt

Manufacturer Representative - Scott Hetrick, Norweco Inc.

ODNR Soil Scientist -- Matt Deaton

Registered Engineer – Walt Sandefur, Sandefur Consulting

AOHC Health Commissioner – Charles Patterson, Clark County Combined Health District

OEHA Registered Sanitarian – Dan Lark, Lake County General Health District

Public Representative – Linda Aller

AOHC Health Commissioner –Raymond Saporito, Ashtabula County Health Department

Manufacturer Representative – Zak Sherman, Infiltrator Systems, Inc.

### **By teleconference:**

Installer/ Service Provider – Mark Fehring, Fehring Services

### **Absent:**

Designer – Joe Keiser

### **Vacant:**

Ohio Townships Association

Academic

### **Guests:**

Chris Mandich with Jet, Inc. and Jim Meyer and Jason Davis with Norweco, Inc.

**Other ODH participants:** Nathan Johnson and Andy Thomas

### **Welcome and Agenda review**

The meeting called to order by Mark Stump. Introductions were made by all in attendance. The meeting agenda was reviewed. No changes to the agenda were requested.

### **Approval of November 12, 2013 meeting minutes**

Meeting minutes were reviewed by committee members. Charles Patterson made a motion to approve the October 8, 2013 TAC meeting minutes. Linda Aller seconded the motion. Committee members present voted to approve the meeting minutes.

### **Norweco, Inc.'s request for modification to the previous approval fo the Hydro-Kinetic 600 FEU system to include the approval for meeting the effluent standards outlined in the Ohio Environmental Protection Agency's General NPDES Permit for HSTS for discharge to the waters of the state including Lake Erie.**

Jim Meyer and Jason Davis with Norweco, Inc.

Jim Meyer and Jason Davis provided a brief presentation outlining the manufacturer's request. Mr. Meyer explained that during the previous TAC review of the Hydro-Kinetic 600 FEU system, committee

# **Sewage Treatment Systems Technical Advisory Committee**

## **MEETING MINUTES**

members had expressed concern with the ammonia data from the system. Mr. Meyer explained that additional ammonia data was collected. A report from North American Tensing, LLC outlining the testing and system performance titled "Ammonia Nitrogen Removal Evaluation Report" was circulated to committee members.

Ray Saporito made a motion to recommend approval of the Hydro-Kinetic 600 FEU system for meeting the effluent standards outlined in the Ohio Environmental Protection Agency's General NPDES Permit for HSTS for discharge to the waters of the state including Lake Erie. The motion was seconded by Dan Lark. Committee members voted in favor of the motion.

### **Review and discussion of TAC Standards and Criteria**

A second draft of "The Ohio Department of Health and Sewage Treatment Systems Technical Advisory Committee Standards, Guidelines, and Protocols for Ohio Revised Code Section 3718.04 Review of Sewage Treatment Systems Products and Components" document was reviewed by the committee. Committee members suggested several revisions to the document

### **Review of the Spray Irrigation of Wastewater Special Device Approval**

The draft Special Device Approval for Spray Irrigation Assurances was reviewed by the committee for further clarification on several details including: the requirement for assurance and development of two sets of standards (restricted and nonrestricted spray application). A second draft will be developed by program staff for review at a future TAC meeting.

### **TAC Appointments:**

Rebecca Fugitt announced the reappointment of Walt Sandefur, Dan Larek and Ray Saporito. Mrs. Fugitt also announced that the governor's office had been in contact with the department concerning the appointment of the OTA committee member. Additionally, Mrs. Fugitt spoke with several committee members who are nearing the end of their term and must contact the appointing authority if they wish to remain on the committee.

### **Sewage Program Updates**

Rebecca Fugitt updated the committee concerning the rule development process. A second draft has been forwarded to OPHAB and the comment period for the OPHAB review runs through December 12, 2013.

Rebecca Fugitt informed the committee that no formal appeals have been filed to the County Appeals Boards.

### **Next Meeting: January 14, 2014**

Approved on 1-14-2014 as signified by:

  
\_\_\_\_\_  
Mark Stump, TAC Chairperson

  
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Rebecca Fugitt, Secretary