

INNOVATIVE/ALTERNATIVE SEWAGE DISPOSAL TECHNOLOGIES
TECHNICAL REVIEW COMMITTEE (TRC)

December 16, 2005 Meeting Minutes

DRAFT

Attendees:

TRC members present: Noel Berg, Russ Chateauf, Susan Licardi, George Loomis, Tim Stasiunas and Dennis Vinheiro

TRC members absent: Ken Anderson, Dave Burnham and Joe Frisella

Others present: Deb Knauss RIDEM

Russ called the meeting to order about 8:30

Materials distributed:

- Draft Agenda for today's meeting - 12/16/05
- Draft Minutes of 10/21/05
- Draft Minutes of 11/18/05

Minutes

The following corrections and edits to the **minutes of the October 21, 2005** meeting were made:

Page 2: Fourth full paragraph down, underline "be applied consistently to all denite technologies."

Page 2: In the first sentence following "Motion" specify that 2,000 gpd is design flow.

Page 2: Last full paragraph, second sentence: insert "service" between O & M and provider.

Page 2: Last full paragraph, last sentence, change *from* "...this requirement should be a..." *to:* "...this monitoring requirement be a ..."

Page 2: After "Amended Motion", third sentence, add "*by the O & M service provider*" after "...additional measures to be taken."

Page 3: Top of page, sentence before "Discussion" add "*as many times*" before "...as necessary..."

Page 3: Near the top of the page, in the fourth sentence after "Amended Motion" add "*as many times*" before "...as necessary"

Page 3: Four paragraphs up from page bottom in the section addressing **Substitution of AX units for RXs**, add "*prior to initiation of the bidding process*" after "...must petition the Department for substitution of the AX for the RX".

The following corrections and edits to the **minutes of the November 18, 2005 meeting** were made:

Page 1: In the second sentence beneath White Knight, delete "of" after "...increase in the amount".

Page 3: In the first sentence of the first paragraph following the bullets, delete "there" before "be some restriction".

Motion: A motion was made by Dennis to approve the minutes with corrections.

Second: George seconded the motion.

Vote: All present voted in favor.

White Knight

There was some discussion of the application type under which applications for designs incorporating the White Knight should be made if an approval is issued for the technology. The group agreed that a copy of the site qualification form used by the company and a copy of the original design plan for the system (which may be a copy of the originally approved plan or drawn up based on the site investigation work which we would require to identify location and size of tank and d-box – if used and the type and size of leaching area in use) must be submitted with the ISDS repair application.

Motion: A **motion** was made by Noel to limit use of the technology to systems which have received state approval.

Second: The motion was **seconded** by Dennis.

Vote: All present voted in favor (Noel Berg, Russ Chateauf, Susan Licardi, George Loomis, Tim Stasiunas and Dennis Vinheiro).

Advantex AX Denite Approval

Russ reported that additional thought had been given to the issue of monitoring all systems over 2,000-gpd design flow. The Vendor will be required to test 3 representative SFH systems as well as 3 representative systems >2,000 gpd design flow. The Question DEM has been considering is the issue of responsibility for the monitoring of all other systems with design flows over 2,000 gpd. The solution at which DEM arrived is to require the permittee to have the O & M provider conduct the necessary monitoring of the system. We will require in the certification that the O & M provider report the data to the vendor and to DEM. The certification will also clarify that the vendor is required to report the data and installations and use of the technology in RI to DEM.

It was noted that large systems and systems treating high strength wastewater require careful oversight.

Incorporate in the certification that for any system treating high strength wastewater, the vendor must consider the issue of the strength of the wastewater, report this information to DEM and certify that the system will work for the proposed use.

George Loomis introduced the grant proposal being prepared by the URI CE WQ group, for use of web-based ISDS tracking software. The first priority, if the grant is obtained, is to begin working on tracking of high-risk systems, those treating large amounts of wastewater and high strength wastes. The lab data would be submitted electronically to URI with specified required fields. The system can be set to the users' specifications to respond to the submission of reports which are incomplete.

Regarding additions to the Advantex AX Denite Certification

Motion: A motion was made by Dennis to add the following to the certification:

- Add as a vendor requirement influent testing
- Supply water use data for large systems (over 2,000 gpd design flow)
- Systems which are selected for representative sampling must be approved by the Department
- Systems monitored must be re-sampled as often as necessary to demonstrate the system is operating in compliance with the certification.

Second: The motion was seconded by Noel

Vote: All present voted in favor (Noel Berg, Russ Chateauneuf, Susan Licardi, George Loomis, Tim Stasiunas and Dennis Vinhateiro).

Use of BSFs in Critical Resource Areas

Currently it is required that advanced treatment systems in critical resource areas (salt ponds and drinking water reservoirs) must discharge to a PSND or a BSF. This requirement is sound in areas where nitrogen is the nutrient of concern, but large BSFs used inland on drinking water supply reservoirs may not be providing adequate phosphorus reduction. Use of a PSND would be preferable but current requirement is one *or* the other. Russ stated that he is considering changing this to require us of the PSND or where the rules allow, a conventional leachfield, in inland drinking water reservoir areas but prohibit use of the BSF.

George reported that one of Mark Stolt's grad students has observed that a PSND can remove 30 – 50% of the residual nitrogen in the effluent following an advanced treatment unit and remove 80 – 100% of the phosphorous.

There was some discussion of raised BSFs and dimensional configurations of these leach system options. A longer, more linear BSF is a better option for addressing this phosphorous concern than a conventional system delivering effluent higher in the profile. Consider a PSND in native soil versus a PSND in a raised configuration delivering effluent to C-33 sand, versus a BSF – the PSND in native soil is generally accepted to provide the best treatment of these three options, but we do not have data substantiating this.

George presented the following example for consideration: a two-foot water table triggers the requirement for a BSF in a critical resource area with the removal of some of the thatch and sod and two-feet of sand beneath the BSF. In situations like this the infiltration rates do not maximize treatment.

New Building Construction: For a **single family home** in a critical resource area or a drinking water supply area with site conditions allowing use of a PSND, must use a PSND, otherwise a BSF will be required. For **commercial NBC** applications in critical resource areas and drinking water supply areas, if the only option which would fit is a BSF, and use of the BSF is prohibited in these areas – BSF may not be used for systems greater than 1,500 gpd design flow unless by variance and the variance application would have to submit phosphorous loading analysis if the argument is being made that the design will adequately reduce phosphorous loading from the system.

The group agreed that in critical resource areas and drinking water supply areas, for systems less than 2,000 gpd design flow, if a PSND may be designed for the site, it must be used.

Floating AX Pods

The recent heavy rains caused some AX pods to be displaced, in some cases breaking connections. Some RX blowers flooded and shorted-out. Regarding the floating pods, they are supposed to be fastened to the roof of the tank (this is specified in the installation guide) or they would have to be anchored or secured. Given consideration of these requirements and the recent issues reported, Russ asked the group to consider if there is something that was missed in the development of these provisions intended to prevent such issues.

Tim reported that he places a counter weight of 500 - 600 pounds of concrete (8 – 10 bags) on top of the anti-floatation flanges. He reported that about 1 – 1-1/2 years ago, the vendor started automatically sending the flanges with the units.

It was suggested that the installations for which there were issues reported be reviewed in an effort to identify if there is any indication of one or a few installers involved.

It was agreed that it be clearly communicated by DEM to the vendor that this anti-floatation provision is addressed in the installation guide. There must be a directive from the Department addressing the issues of floatation, soft soils and sand bedding stressing the flanges need to be used and counterweighted with four bags of sac-crete on each side. DEM will contact the vendor regarding this information for designers, which will be provided to and mailed by the vendor.

Other

Issues for next meeting:

- ADS pipe
 - Use of ADS pipe would require spreader pipes every four feet or it will wiggle into the soil.
 - Inspection ports should be required every twenty feet and at the distal end and that the ports be wrapped with filter fabric.
 - One member reported that it is stronger than PVC
 - It was requested that before a decision is made regarding use of ADS pipe that the material be shown to be equivalent to PVC.

Motion: A motion was made to adjourn the meeting.

Second: The motion was seconded.

Vote: All members present voted in favor of the motion (Noel Berg, Russ Chateaufneuf, Susan Licardi, George Loomis, Tim Stasiunas and Dennis Vinhateiro). The meeting adjourned about 12:15 PM.

Next Meeting

Next meeting was scheduled for January 27, 2006 from **8:00** to **Noon** at the South Kingstown Town Hall at 180 High Street in Wakefield.