

**WASHINGTON DEPARTMENT OF HEALTH**  
**Sewage Tank - Rule Advisory Panel**  
June 12, 2008, 9:30 – 3:30  
Washington Department of Health, Kent Office

**SUMMARY**

**Action Items**

**Next Meeting: July 8, 2008. Kent**

- Main focus: Water-tightness standards and testing.
- Follow-up Items.

**Follow-Up Items**

- DOH to review dead weight loading in the International Building Code 2003 and Chapter 50, 51 of WA Building Code. Clarify if our standard is based on dry weight. If so, say so.
- Panel and DOH: investigate costs of water tightness testing in the field and at the point of manufacture.
- DOH to research water tightness standards of other states, similar to Mamdouh's presentation of labeling.
- From previous meeting: DOH to provide definitions for "adversely" and "trash tank".

**Introduction and Opening Remarks**

Mamdouh El-Aarag welcomed panel and audience members, reviewed the agenda, introduced DOH staff members, and asked panel members and audience members to introduce themselves. There were 11 panel members present and four DOH WWMS staff present.

There were no comments or additions to the agenda.

**Task 1: Specific Issues Prioritized List for Sewage System Tanks.**

Mamdouh continued with Issues #5, 11, 7, and 8. He handed out copies of his PowerPoint presentation.

The group reviewed and discussed each item and voted on proposals for each.

**Comments and Votes**

1. **Issue #5: Labeling:** Recommended Standards and Guidance (RS&G) Section 3.9, ASTM C 1227-08, IAPMO/ANSI Z1000-2007

A. Should every tank be labeled?

**Committee Vote: (Yes) 8-Green, 3-Yellow.**

Comments:

- There is a common need at installation: verification by contractor, installer, designer, inspector.
- Label is not seen after installation.
- Need for label can occur later: if failure, expansion, or documentation for bootleg system after-the-fact approval.
- If a problem later, can check homeowner records, or county/state records.

- Needed when illegal installations found.
- Cost of label
- Durability of label
- Manufacturer can choose to put additional information on label (over regulatory minimum).

B. What should the label include?

- Serial number.  
Committee Vote: 11-Red.
- Manufacturer name or code.  
Committee Vote: 6-Green, 2-Yellow, 3-Red.
- Liquid Capacity of tank.  
Committee Vote: 11-Green.
- Date of manufacture.  
Committee Vote: 7-Green, 3-Yellow, 1-Red.
- Maximum burial depth.  
Committee Vote: 2-Green, 3-Yellow, 6-Red.
- Label the inlet and outlet.  
Committee Vote: 7-Green, 2-Yellow, 2-Red.
- What kind of label?
  - Temporary – lasts through the installation process.  
Committee Vote: 6-Green, 1-Yellow, 4-Red.
  - Permanent/long-term: Durable  
Committee Vote: 6-Green, 3-Yellow, 1-Red.

Comments:

- Imbed or emboss?
- Sticker.
- Laminated.
- Depends on how long it must last.
- Don't be prescriptive; state objective (short-term, long-term).

C. Location of label on tank?

- Top – except inlet-outlet label.  
Committee Vote: 9-Green, 1-Yellow, 1-Red.

Comments:

- Top label is useful at installation and inspection.
- Side label is convenient for delivery driver.
- Side label is OK if tank is not back-filled before inspection.
- Manufacturer can choose to label in both places.
- Should have consistency in location – especially if dug up in the future.

D. Location language in RS&G section 3.9 (top, near inlet end of tank or inside the riser, if riser is cast in tank), and 3.9.2 (label for inlet/outlet) is OK.

Committee Vote: 10-Green, 1-Red.

## 2. Issue #11: Existing Approval List Phase-out/Transition to New Requirements

A. One year from the effective date of the tank rule WAC 246-272C.

Committee Vote: 10-Green, 1-Yellow.

Comments:

- Want to use up current inventory

- What about specialty tanks (low demand)?
- Keep County and DOH approved tank lists during transition.
- Will need to submit engineered designs that meet new rule requirements.
- In the future, counties could require additional conditions beyond state requirements.
- Manufacturers still want level playing field, not multiple and different requirements in the state.

### 3. **Issues # 7 and #8: Design Calculations and Structural Requirements:** RS&G Section 13.1

Mamdouh presented guidance from RS&G, ASTM, IAPMO/ANSI, Oregon standards.

A. RS&G Section 3.1 (general design and construction requirements) is accepted by the TAP. Follow-up with dead-load research to see if modification is necessary.

**Committee Vote: 11-Green.**

Comments:

- Is our current dead load of 110 lb/cubic foot too low?
- Should specify that this number is DRY weight per unit volume.
- International Building Code Table 1804.2 says 110 lb/cubic foot.
- **Action Item: DOH to review International Building Code 2003 and Chapter 50, 51 of WA Building Code. Clarify if our standard is based on dry weight. If so, say so.**

### **Task 2: Review LOSS Rule Technical Review Committee Recommendations**

After a break, Mamdouh continued his PowerPoint presentation, which was included in the hand-out. He presented a summary of the recommendations that will be given to the LOSS Rule Advisory Committee on June 26, 2008.

Comments:

- The recommendations, particularly on access openings, may be a problem for some manufacturers. Is there a way to get a variance from DOH, if it is shown that maintenance and testing can be accomplished?
- LOSS committee and Tank committee recommendations both go to DOH. DOH will ensure there is consistency in the requirements in both rules.
- LOSS recommendations didn't specify the tank size their comments are meant for (as did the Tank Rule panel).
- What about STEP systems which may have many individual tanks feeding the LOSS? We don't believe the LOSS recommendations were meant to apply to the individual tanks. WAC 246-272A should apply there.

### **Task 3: Action Items from May Meeting and Updates**

During lunch, Mamdouh discussed what he had learned on the three issues noted in the agenda.

#### **Comments and Votes**

#### **1. Issue #6: P.E. Stamp Question**

In new rule, use "licensed professional engineer with structural background" – do not specify structural P.E. or state of license.

**Committee Vote: 10-Green, 1-Yellow.**

Comments:

- Mamdouh was able to talk to Department of Licensing (DOL) about whether we must or should specify that tanks must be designed by a P.E. licensed in Washington State.
- Similar to a case DOL dealt with regarding design of microwave towers. DOL allowed out-of-state engineers.
- Current RS&G calls for a licensed structural engineer (3.1.4). Definitions common to all RS&Gs specify the P.E. must be licensed in the state of Washington.
- Should DOH have the option to approve designs by out-of-state P.E.? Concern for ability to appeal to another state's licensing board.
- Liability for poor design should rest with manufacturer (and with P.E.).
- Appeals to DOL have been infrequent; perceived as low risk.
- Want to use a P.E. familiar with the product and materials involved in tank construction, regardless of where licensed.

## 2. Grease Interceptor

RS&G sections 3.7.5, 3.7.6, 3.7.7 on grease interceptor requirements are acceptable to the panel.

**Committee Vote: 11-Green.**

Comments:

- Mamdouh couldn't find any information or issues in the literature regarding ports in grease interceptors.
- Inlet/outlet location information was checked for Maryland, Florida, and Maine. Similar to our RS&G (3.7.5)
- Discussed 6-12" range for outlet above bottom of tank. Some think it should be 8-12", but are willing to leave it at 6-12" – as long as there is a range.
- Grease chemical treatment (emulsifier) – issue for sewage strength.

Tank size for grease interceptor: 3 times the flow or 1000 gallons, whichever is greater. Agree with this LOSS TRC recommendation.

**Committee Vote: 11-Green.**

## 3. Inlet and Outlet Fittings Meeting ASTM Standards

Current language in the RS&G (3.7.1.4) is acceptable to the panel.

**Committee Vote: 11-Green.**

Comments:

- RS&G language allows equal or better than ASTM standard.
- OK with the "or equal" concept.

## Task 4: Homework Questions/Issues

Mamdouh said he only had one response on homework questions.

### Comments and Votes

#### 1. Issue #16: Minimum Distance Between Access Points

Minimum distance between access points on a tank shall be 10 feet, center to center, unless otherwise approved.

**Committee Vote: 11-Green.**

Comments:

- LOSS TRC recommends 8 feet, edge to edge.
- Concerns for certain size tanks and configurations.
- Want a variance possibility.

## 2. **Issue #9: When Does a Modification Require a New Approval?**

Any change that could materially affect structural integrity triggers re-review: either a notification of change to DOH or a complete submittal.

**Committee Vote: 8-Green, 3-Red.**

Comments:

- Change in functionality
- Structural changes: wall thickness, tank size, rebar placement, interties between 2 tanks, etc. (suggest examples go into guidance)
- Concern for cost of consulting an engineer. Assume that engineer will say he/she needs to do more work (more money).
- Any change that voids the original design (in P.E.'s eyes): notify or resubmit as appropriate. Committee consensus is that this is assumed.
- Manufacturer has to guarantee the tank – not the engineer, so the manufacturer should decide what needs to be resubmitted.
- Suggestion: when submitting all tank designs for review after the new rule is adopted – ask the engineer to consider potential changes (access points, pipe size, Interties between tanks) and note what's acceptable without redesign.

## **Task 5: Specific Issues Prioritized List**

Mamdouh returned to the final two items on our list, before discussing water tightness.

### 1. **Issue #4: Tanks for Proprietary Treatment Systems**

Tanks used in proprietary treatment systems must go through the DOH tank approval process.

**Committee Vote: 10-Green, 1-Absent.**

Comments:

- Current RS&G excludes tanks from the DOH process if the proprietary system is approved by NSF or other national testing agency.
  - Mamdouh learned that there is limited review of any tank by NSF (not the focus of their concern).
  - Other states are requiring local approval of tanks.
  - Level playing field issue.
2. **Issue #10: Specific Standards for Specific Tanks** There should be no special requirements for a particular type of tank.

**Committee Vote: 11-Green.**

Comments:

- If the tank can be used without modification, OK as already approved.
- If the tank is different than already approved tanks, or significantly modified, it must go through the approval process to get on the list.

## **Wrap-up**

All agenda items have been addressed. Mamdouh asked if we should spend the remaining time (~1 hour) discussing a part of the water tightness issue – testing at the manufacturing location. The panel believes that all of the water tightness discussion (manufacturing and installation) should occur together: do it all at the next meeting.

Comments on preparation for the July 8, 2008 meeting:

- Test each tank individually or all at once (if more than 1 tank in the treatment process)? Cost of water tightness testing at each location (panel members to bring information back).
- Check what other states are requiring: Wisconsin, California, North Carolina, Florida.
- Cost of water tightness testing at each location (panel members to bring information back).

We asked if there are other issues related to “large” sewage tanks that might be different to what has been discussed.

Comments:

- Does it make sense for there to be a vertical volume limit for large tanks?
- In a large LOSS: should we allow many small tanks to be connected together or restrict it?
- Issues with pumping large tanks – amount of time or size of pumper.
- Large LOSS becomes a “treatment” system” vs. on-site sewage system. Different standards or needs will apply (think nitrate removal).

Mamdouh explained that, assuming we get through that issue, it will be our last meeting for a while. DOH will draft language based on the panel’s recommendations, then circulate that to the panel. We should not need to meet during the rest of the summer.

**Next Meeting: July 8, 2008. Kent**

- Main focus: Water-tightness.

**Action Items and Homework**

- DOH to review International Building Code 2003 and Chapter 50, 51 of WA Building Code. Clarify if our standard is based on dry weight. If so, say so.
- Panel and DOH: investigate costs of water tightness testing in the field and at the point of manufacture.
- DOH to research water tightness standards of other states, similar to Mamdouh’s presentation of labeling.
- From previous meeting: DOH to provide definitions for “adversely” and “trash tank”.

**Adjourn: 2:40 pm.**

## **In attendance**

### **Technical Advisory Panel**

#### **Members**

Tony Gillingham	Premier Plastics
Curt Davis	Davis Sales, Norwesco
Scott Erickson	Wilbert PreCast
Craig Goodwin	Northwest Cascade, Inc.
Jim Wolfe	Evergreen Pre-Cast
Bob Sweeney	Environmental Management Systems Inc,
Mark Allen	Seattle-King County Health Dept.
Rocky Billings	Peninsula Tanks
Sam Carter	Orenco Systems, Inc.
Bob Nation	Fextex Systems Inc.
Dan Morgan	M-1 tanks, Inc.

#### **DOH Staff**

Denise Lahmann	Wastewater Management Section
Mamdouh El-Aarag	
Linda Pang	
Jeanne Andreasson	

#### **Guests**

None