

Large On-Site Sewage System
Rule Committee Meeting Summary
December 2, 2008
9:30am – 3:30pm

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Action and Follow-Up Items

Future Meetings:

Full Rule Advisory Committee:

- **January 22, 2009:** Tumwater, Point Plaza East bldg. (**Tentative**)
- **1 or 2 more meetings, not yet scheduled**

Technical Review Subcommittee:

- **January 2009 (currently unscheduled):** Tumwater

Operating Permit Subcommittee:

- No more meetings

Local Government Consistency Subcommittee:

- To be scheduled.

Remaining Follow-Up Items:

Future tasks:

- What’s involved in the annual renewal of an operating permit?
- Define failure of a LOSS.
- Define minimum expected information from permittee (type of system, do they meet regs –if no, ECY says don’t issue permit).
- Define what requirements should be in the first permit (monitoring, data gathering, and schedule).
- DOH staff - refine strategies for remaining questions on operating permits and bring back to LRAC, or

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- Develop rule language – to see how it follows and where the gaps are. Would help the discussion, or
- Work up issue paper for remaining operating permit issues. Take to subcommittee??
- Ecology presentation on present potential funding options/financial assistance for LOSS upgrades (John Stormon to arrange)
- Consider later: Will we allow slope>30% for LOSS?
- Consider again: metering/flow measurement requirements.

For TRS:

- Ground water monitoring

Other:

- On page 5 of the issue paper #5: does “professional” include on-site designer? Consult DOL and AAG.
- Define surface water. See King County result.
- DOH must establish a better high strength waste standard

Welcome and Introductions

Dave Lenning welcomed LOSS Rule Advisory Committee (LRAC) members, reviewed the agenda with committee members, and asked committee members, DOH staff and audience members to introduce themselves. There were 11 committee members present constituting a quorum. There were no comments on or additions to the agenda.

Task 1 – Technical Review Subcommittee Recommendations on Topics 10, 11, 25, & 27

Richard Benson and David Lowe presented the discussion paper on Performance Standards and Monitoring Frequency/Methods reviewed by the Technical Review Subcommittee (TRS) and the recommendations from their November 5, 2008 subcommittee meeting. Richard’s PowerPoint presentation highlighted the specific issues and recommendations. Copies of the issues and TRS recommendations were sent to the committee members prior to the LRAC meeting. After explanations, the committee discussed the topics, and voted on whether to accept the TRS recommendations.

Subcommittee Recommendations and Rule Committee Discussion and Votes

Technical Review Subcommittee (TRS) Recommendations (Leads: Richard Benson & David Lowe)

Issue # 1: Basic Principles for performance standards

Comments:

- These are not expected to be included in rule language

LRAC Vote: 10-Green. 1–Abstention (Laurie needs to study issue more). Accept listed principles

Issue #2: Parameters to be monitored

Comments:

- Other parameters may be needed. For example, COD may be useful for a RV park. Write rule to include required parameters and note that DOH is given authority to add others as needed.
- CBOD or BOD? CBOD is a part of BOD. West Sound Utilities uses CBOD. The small system treatment levels use CBOD since the primary testing protocol switched from BOD to CBOD in 1996. Ecology performance standards typically use BOD.
- Specific UV and chlorination requirements should be noted in guidance
- Some parameters are more for process control and/or diagnostic purposes.

LRAC Vote: 10.5-Green. 0.5-Yellow (Laurie Morgan). Accept list of parameters

Issue #3: Performance standards and parameters for each standard to be included in rule

Comments:

- Renumber ES levels. Normally the lower the number, the higher the quality of effluent. This is backwards. This can be changed when the rule language is developed.
- Use FOG instead of O&G. It was explained that during the small rule development process, the small system rule committee was informed that FOG was no longer the standardized term – O&G was.
- Why isn't O&G included in all standards? A sand filter will fail due to O&G.
- It is unclear how TN will be applied to existing LOSS or repairs. Some kind of assessment will be needed.
- For new construction, the TN standard will be determined by the results of a baseline evaluation and/or a comprehensive study (required for LOSS with flows $\geq 14,500$ gpd). A baseline study will not always result in a comprehensive study.

LRAC Vote: 10-Green. 1–Abstention (Laurie Morgan). Accept three recommended effluent standards containing core values and four add-on standards. Rule should contain authority for DOH to require higher standards (e.g. use reclaimed water standards, especially on existing/failing LOSS where horizontal and/or vertical separations are less than desired/required.)

Issue #4: Values for parameters in effluent standards

Comments:

- O&G needs to be reduced prior to a sand filter. O&G levels are too high. Should be lower.
- With these standards being effluent standards (prior to discharge to the LOSS drainfield), it needs to be included with the septic tank effluent standard but

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not the other two containing core values. O&G will be a “process control” standard for a sand filter.

- Exceeding O&G doesn’t mean a failure is imminent or that quality is being compromised resulting in a public health or environmental quality concern. It signifies follow-up is needed to prevent a problem.
- Need to address need for immediate resampling – maybe averaging two samples. Should this be addressed in rule or guidance?
- Consider adding a single sample maximum value or quarterly averages (when samples are collected monthly or more frequently)

LRAC Vote:

- 11-Green. Use 20 mg/L for O&G values in both ES1 and add-on standard.
- Accept ES1 (with 20 mg/L O&G instead of 30), ES2, ES2, O&G (with 20 mg/L O&G instead of 30), N1, N2, and P.
- All values are annual averages

Issue #5: Baseline sampling frequency for all parameters in each effluent standard

Comments:

- There should be multiple oversights, besides greater sampling frequency, on LOSS \geq 14,500 gpd.
- Monthly sampling for large LOSS seems to be too infrequent
 - DOH can increase
 - Initial sampling frequency may be greater to verify performance
 - May need for flow to increase as use(s) increases
 - Address in O&M manual and/or DOH guidance
- Sampling frequency may need to be adjusted based on:
 - How flow grows/increases – construction timelines
 - System type (complexity, history, familiarity)
 - Soil type/site sensitivity (e.g. shellfish growing areas, MRAs, water recreation area, unconfined aquifers, aquifer recharge areas, wellhead protection areas)
 - Consistency of effluent quantity and/or quality
- Who regulates a “bad actor” customer – a wastewater source that produces more wastewater or higher strength wastewater than other sources connected to the same LOSS?
 - Should it be the LOSS owner?
 - Should the management plans contain agreements with LOSS customers?
 - Difficulties could be created if requirements for ownership change.

LRAC Vote: 11-Green

- Quarterly for LOSS with daily flows of 3,500 – 14,500 gpd
- Monthly or more frequent for all LOSS with daily flows $>$ 14,500 gpd
- Give DOH authority to adjust sampling frequency – see comments above. Address how, why, when in O&M manual and DOH guidance.
- All LOSS will be required to monitor effluent quality
- This implies on-going flow monitoring will also be done

Issues #6-9: Sampling Methodology, When Samples Collected, Sampling Person, & Lab Requirements for Running Samples

Comments:

- Who should sample – designated owner’s representative? A trained person?
- It makes sense the designated LOSS operator be responsible. The designated operator can train others, including subordinates.
- The rule should specify who’s responsible for using correct sampling technique (how), the timing of taking the sampling (when), and the location (where). The detail should be addressed in the O&M manual.
- Must determine what goes in rule and what goes in guidance and what level of detail goes into each. Look at ECY and ODW rule language.
- Certified labs require “chain of custody” verification.

LRAC Votes: 11-Green.

- Issue #6: Grab samples.
- Issue #7: Sample at times that are truly representative of wastewater generation and system use.
- Issue #8: The designated LOSS operator is the person responsible for sampling
- Issue #6: ECY certified laboratory is required to perform sample analyses.

Issue #10: Influent Sampling

LRAC Vote: 9-Green. Don’t require influent sampling

Issue #11: What to do if bad sample? Come back to this topic later.

Issue #12: Application of Performance Standards – baseline requirements:

- Soil types 2-5 with vertical separation ≥ 3 feet: **ES1 required**
LRAC Vote: 9-Green.
- Soil types 2-5 with vertical separation of 2-3 feet: **ES2 required**
LRAC Vote: 9-Green.
- Soil type 1 with vertical separation ≥ 3 feet: **ES2 required**
LRAC Vote: 9-Green.
- Soil type 1 with vertical separation 2-3 feet: **ES3 required**
LRAC Vote: 9-Green.
- Allowance for increasing loading rates by 100% for soil types 1-4 and by 50% for soil type 5
 - Need to be cautious when increasing loading rates due to higher quality effluent
 - With small OSS, 100% primary and 100% reserve are needed when using an increased loading rate
LRAC Vote: 9-Green.

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- Increased loading rates depending on soil type can be used if effluent quality is one level higher (next more restrictive performance standard) than the site would normally require
- Primary drainfield can be sized using increased loading rate
- Reserve area must be sized using loading rates for septic tank effluent (not based on higher quality effluent)
- Reserve area being saved may be reduced after some time period if LOSS is at anticipated flow capacity, LOSS is functioning satisfactorily, and DOH comfort level has increased.
- For repairs or existing LOSS that cannot meet soil depth and/or horizontal separation requirements for new construction:
 - It is not practical to develop a table for LOSS similar to Table IX in the small OSS rule.
 - This topic needs to be addressed in rule so DOH authority and flexibility is sufficiently identified.
 - Should this be addressed via waiver? No. A waiver will take additional time and resources. The allowance needs to be addressed in the rule.
 - While it is an option that will be mentioned in the rule (like it is in the small OSS rule), forcing residents to vacate their homes is not a realistic option.

LRAC Vote: 9-Green. Don't develop something like Table IX in the small OSS rule. Give authority in rule for DOH to require higher level of treatment (similar to current or new reclaimed water standards when that rule has been promulgated) after the site characteristics have been properly addressed.

- Should there be an allowance for high quality effluent to be discharged into the soil for disposal purposes only?
 - This will not be a reclamation system – no beneficial use, no aquifer storage and recharge

LRAC Votes: 9-Green, 1 abstain

- High quality of effluent is needed, similar to one of the current reclaimed water standards, even if this is not a reclaimed water system.
- Apply recommendations for increasing loading rate.
- Hydrogeologic study/ground water mounding analysis concludes liquid will stay below the surface of the soil.
- DOH and ECY should maintain their dialogs with LOSS and reclaimed water.

Task 2 – Public Health Notice and LOSS

Melissa McEachron provided a brief PowerPoint presentation and a handout and led a discussion of the public health notice requirements contained in Chapter 70.118B RCW. She provided her findings from her research of various RCWs and provided a conceptual approach for handling this requirement in the LOSS rule.

LRAC Votes: 9-Green to support public notice approach

Task 3 – Audience Comments

None

Task 4 – Discussion on Topics 1 and 24

Dave provided a handout containing information on issues #1 and 24 and on other issues related to performance standards. Dave asked the committee to review the information on the handout and get any comments to Melissa.

Task 5 – Operating Permits

Linda Pang reminded the committee of the operating permit process discussed and the conceptual support the committee gave at the last meeting. This operating permit process included:

- The “A” track is for new, expansion, or modified LOSS. This track leads to an operating permit that addresses both health and environmental protection.
- The “B” track is for LOSS that had been approved under the 1995 or 2003 LOSS rules by DOH or LHJs or LOSS approved by ECY and transferred to DOH after the LOSS rule is completed. A "B" track operating permit will protect either at least public health or the environment. “B” track LOSS deemed to protect both health and the environment will be moved to the “A” track.
- The “C” track is for all other LOSS (those approved by DOH or LHJs prior to the 1995 rule and LOSS which are currently unknown). The first operating permit issued a “C” track LOSS results in that LOSS being input into the DOH LOSS database.
- “B” and “C” track operating permits will eventually be required to meet the requirements for an “A” track operating permit. LOSS in sensitive or higher risk areas (shellfish growing areas, unconfined aquifers, etc.) will be required to upgrade prior to other LOSS.
- The “F” track is for LOSS that are failing, that need to be repaired. Once repaired, a repaired LOSS will be issued an “A” track operating permit that protects both health and the environment.

Using a PowerPoint presentation and a handout, Linda then led a discussion that included the following comments/questions:

- What level of detail is needed to have a complete file for “C” track LOSS?
- Who should be responsible for gathering data on “C” or “B” track LOSS for which DOH does not have complete system information?
- Should there be a maximum time frame that a previously unknown LOSS (“C” track LOSS) owner has to provide complete detail on their LOSS?
- “C” track LOSS in the same priority group as a “B” track LOSS will be required to be upgraded to an “A” track operating permit first.
- When establishing the priorities for upgrading “B” and “C” track LOSS (moving to “A” track operating permit), “C” track LOSS should be considered to have greater risk than “B” track LOSS and, thus, should be upgraded first. New, proposed modifications or expansions, and repairs have top priority.

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- Upgrading of “B” and “C” track LOSS (moving to “A” track operating permit) is very dependent on the availability of financial assistance for LOSS owners and resources for DOH.
- Operating permit fees charged by DOH must adequately pay for operating permit activities.
- Once a LOSS is identified as a priority LOSS that should be upgraded to an “A” track operating permit, should there be a maximum time frame before the upgrading is expected to be completed?
- What should the “B” and “C” track operating permits be called? Interim? Transitional?
- When the first operating permit given a “C” track LOSS (and “B” track LOSS that don’t have complete system information available) is up for renewal, DOH should give the LOSS owner a list of all expectations at once, even if they are not all due by the next renewal.
- When should effluent monitoring of “B” and “C” track LOSS start being required?
- Once a LOSS has an “A” track operating permit, how frequently can upgrades be required when special sensitivities are identified or TMDLs for receiving water are established?
- Need to develop a way to flag if a LOSS gets an “automatic” renewal of its operating permit. This will include the length of time since its last in-depth assessment was done.
- Inputting information/data into the DOH database by the internet would be useful and reduce resource needs - # customers, actual sewage flows, as-built drawing, O&M observations and measurements. DOH will identify location and parameters for monitoring.
- If a LOSS is in a low risk area and/or doesn’t have all the needed information available, consider requiring more frequent monitoring to ensure system performance is not degrading or the system is not failing.
- Could consider a color coding for operating permits
 - Yellow – unknown LOSS or LOSS minimally out of compliance (no remodels or expansions until converted to green)
 - Green – meets all requirements
 - Red – Out of Compliance
- The availability of engineers and their time need to be considered when determining how quickly complete information must be developed and submitted to DOH or how quickly upgrades will be required. Engineers present felt they would have sufficient time.
- Especially for “C” track LOSS, how accurate or detailed should as-built drawings be when they are required for existing LOSS? Can it be primarily a schematic of the LOSS rather than a to-scale detailed drawing, which would be faster and less costly to develop?
- Operating permit requirements must be cost and time reasonable for LOSS owners.
- Who should validate LOSS information submitted to DOH – LOSS owner (most RAC members thought “No”), PE, O&M specialist, LHJ, other)?

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Wrap-Up

Ahead of us:

- Public vs. Private Ownership
- Ground water monitoring
- Compliance and Enforcement
- Finish operating permits

To do: If advisory committee members have any comments, get them to Melissa

- Performance standard/monitoring related subjects and comments on tan handout provided
- Information on Issues #1 and 24
- Definitions in definition section at the end of the LOSS Foundation Document.

Rule Advisory Committee Meetings – Tumwater

January 22, 2009 – may be held if technical subcommittee can meet before then. If the technical subcommittee can't meet before then, it may meet on January 22nd and the RAC will be rescheduled to February.

Local Government Consistency Subcommittee Meeting

Not yet scheduled

[Adjourn 3:35](#)

Meeting Summary

List of Handouts

1. Tasks 1 & 3:
 - Technical Subcommittee Recommendations and Performance Monitoring Frequency and Methods
 - Performance Monitoring/Sampling and Related Issues
2. Task 4: Part of Performance Monitoring/Sampling and Related Issues
3. Task 5: Operating Permits Slide/Handout

Meeting Attendees

Department of Health

Dave Lenning, Manager, Wastewater Management Section
 Denise Lahmann P.E., Engineering Supervisor, WWMP
 Melissa McEachron, WWMP Rule Coordinator
 Richard Benson P.E., Technical Issues Lead

Committee Members and Alternates	Special Guest
David Jensen P.E., Design Engineer	David Lowe
Jenn Kunkel, BIAW	
Laurie Morgan, Ecology	Guests
Judy Hockett, WSDOT- Operations	Jim Gleason, Enviroquip
Jerry Deeter, Public Health, Kitsap Co. Health Dist.	Robert Nation, Fextex Systems, Inc
John Poppe, Public Utility, West Sound Utility Dist. & WASWD	Peter Michel, AIM Manufacturing
Bill Stuth Jr., Installers	Mike Hinthorne, Onamac
Bill Dewey, Environmental Interests, Taylor Shellfish	
Thesesa Janzen, Manufactured Housing Association of WA	
Scott Jones P.E., Design Engineer	
Mark Nelson, Private Utility, Evergreen Valley Utilities	
DOH Staff	
Linda Pang P.E., Wastewater Management Program	
Jeanne Andreason, P.E., Wastewater Management Program	
Mamdouh El-Aarag P.E., Wastewater Management Program	
Nancy Darling, Wastewater Management Program	

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Kelly Cooper, Environmental Health Div.	
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Parking Lot Items

2/28/08

Legislative Issues:

- UTC regulation of private, for-profit management companies, if allowed.
- Staffing to implement the rule. (inspection workload)

3/25/08

No adds

4/24/08

Attorney General consultation topics:

- Stretch “annual” permit to reduce costs.
- Interpret “initial permit in compliance”.

6/26/08

No adds

7/30/08

AAG Consultation Topics:

- Ask AAG: How does 2007 LOSS legislation impact existing LOSS?

9/30/08

AAG Consultation Topics:

- Ask AAG: Can we or must we issue an operating permit to a LOSS that doesn't have a complete application?

Legislative Issues:

- Stakeholders should develop a “repair/improvement” funding package for the legislature – as an incentive.

12/2/08

No adds