

## Performance Monitoring/Sampling Related Issues

1. If a bad sample or concern with a sample that may impact the annual average:
  - a. Re-sampling within 48 hours of receipt of laboratory results shall be allowed on all samples that exceed design parameters in order to evaluate the validity of the original sample results. If the re-sample is in compliance with the appropriate performance-based standard, the original result shall be disregarded.
  - b. If any two consecutive samples exceed the applicable performance standards by more than 100%, the system design and operation shall be inspected by the design engineer for conformance with permitting requirements, and shall be adjusted to bring the effluent quality into compliance with permitting requirements.
    - i. The monitoring frequency shall be increased (Florida suggests to once per week, or more if the design engineer specifies such) until such time the violation is corrected.
    - ii. When two consecutive samples are within 100% of the design parameters, monitoring shall be reduced (in Florida - to once every two weeks, then quarterly after four good sample results, then twice a year after eight good quarterly samples).
2. A design engineer chooses to use a sand lined trench/bed as the treatment and dispersal system to meet Effluent Standard 2 or in conjunction with another pretreatment process to meet Effluent Standard 3. Such a system will not allow the final effluent to be sampled before final discharge to the subsoil to verify whether it meets the required levels of treatment. The point of compliance then becomes the boundaries of the property and ground water monitoring will be required. This is also true if a standard for that LOSS has been established for TN and/or TP.
3. For a LOSS located within 500 feet of a surface water body with a TMDL for phosphorus, the LOSS applicant shall have a hydrogeologist develop and submit a phosphorus impact study to DOH. This study determines whether surface water may be impacted with phosphorus via a ground water plume created by the LOSS. The study must estimate/determine the phosphorus absorption capacity of the soil and the expected phosphorus breakthrough to the receiving water. Findings developed in consultation with DOH staff will generate the appropriate performance standard the LOSS must meet for TP.
4. Other monitoring requirements: (*what should be the frequency of recording, if any?*)
  - a. Actual flow -
  - b. Sludge/scum levels in tanks -
  - c. Ponding depths in drainfield's observation ports - (Florida suggests quarterly)
  - d. Depth of ground water mounding in piezometers installed in and downgradient of drainfield -
  - e. For specific treatment/distribution/dispersal technologies -
  - f. Other:

5. The submission of fraudulent data produced with an intention to deceive shall be considered a violation. This includes the following:
  - a. Apparent measurement results for which no measurement or test results were actually made as determined by the absence of the supporting records which are usually made.
  - b. Measurements or test results obtained by deliberately and knowingly making measurements or collecting samples at places and times other than as specified in this chapter.
  - c. Test results obtained through use of unapproved and erroneous sampling, preservation, storage, or analysis procedures.
  - d. Computational errors, misunderstandings of required procedures and other common errors are excluded.
6. Possibly for guidance – Maximum single sample and quarterly average (for LOSS with monthly or more frequent sampling – e.g. ≥14,500 gpd) values for samples (based on Florida work)

Effluent Standard	Parameter	Maximum Annual Average	Maximum Single Value	For LOSS ≥14,500 Maximum Quarterly Average
2	BOD <sub>5</sub> & TSS	30 mg/L	90 mg/L	45 mg/L
	Fecal Coliform	1,000/100 ml	4,000/100 ml	1,500/100/ml
3	BOD <sub>5</sub> & TSS	10 mg/L	20 mg/L	12.5 mg/L
	Fecal Coliform	200/100 ml	800/100 ml	250/100/ml
N1	TN	20 mg/L	40 mg/L	25 mg/L
N2	TN	10 mg/L	20 mg/L	12.5 mg/L

7. **REPORTING AND RECORDKEEPING REQUIREMENTS (primarily from the Department of Ecology permits)** - The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.
  - a. **Reporting**
    - i. The first monitoring period begins on **XXXX XX , 20XX**. Monitoring results shall be submitted annually in the annual report on a form provided, or otherwise approved, by the Department. The report shall be sent to: **XXXXXXXXXX**
    - ii. The Permittee shall notify the Department when problems meeting the effluent or ground water standards are being experienced and inform them of the steps being taken to correct the problem. This action shall also be noted in the annual report.
    - iii. In the event ground water monitoring cannot be conducted due to adverse conditions, such as frozen ground conditions or dry wells, the Permittee shall indicate the specific reason on the annual report.

**b. Records Retention**

- i. The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.
- ii. The Permittee shall retain all records pertaining to the monitoring of sludge for a minimum of five (5) years.

**c. Recording of Results** - For each measurement or sample taken, the Permittee shall record the following information:

- i. the date, the exact place and time of sampling;
- ii. the individual who performed the sampling or measurement;
- iii. the dates the analyses were performed;
- iv. who performed the analyses;
- v. the analytical techniques or methods used; and
- vi. the results of all analyses.

**d. Additional Monitoring by the Permittee** - If the Permittee monitors any pollutant more frequently than required by this permit using applicable test procedures, the results of this monitoring shall be included in calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

**e. Noncompliance Notification** - In the event the Permittee is unable to comply with any of the permit terms and conditions due to any cause, the Permittee shall:

- i. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;
- ii. Repeat sampling, if part of the violation, and analysis of any violation and submit the results to the Department within thirty (30) days after becoming aware of the violation;
- iii. Immediately notify the Department of the failure to comply; and
- iv. Submit a detailed written report to the Department within thirty (30) days, unless requested earlier by the Department, describing the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

## Updates of Other Topics

### Topic #1: Flow Splitting

- Currently, if the flow from any development with wastewater flows at **any common point** is greater than 3500 gpd, it is a LOSS.
- There are times from a public health/environment protection perspective or when it just makes good engineering sense to have multiple smaller systems instead of one large system. Some states recognize this by specifying a maximum size system (from 2,000 to 10,000 gpd among states we've evaluated).
- The intent is to minimize "flow splitting" that is done to avoid 1) submitting plans to one agency or 2) more stringent rules.
- While it hasn't been fully discussed, the ideas have been developed. For the committee's consideration, an on-site sewage system is a LOSS if:
  - The maximum flow for a non-single family home development (both residential and commercial) is between 3,500 and 100,000 gpd.
  - The maximum flow for any development under the ownership of a single entity is between 3,500 and 100,000 gpd.
  - The maximum flow for a single family home development at **any common point** is between 3,500 and 100,000 gpd.

### Topic 24 – Short-term operator requirements

- Current Recommendations:
  - A qualified operator must be provided to do testing, record-keeping, recognize a problem, trouble-shoot, and consult others as needed
  - Qualified operator is:
    - Certified as wastewater operator by Ecology
    - Certified as O&M Professional by LHJs
  - Manufacturers of proprietary products (advanced systems) must OK level of certified operator for their product – and verify in writing for DOH.
  - Designer and PE – can't be operator
  - DOH must be notified within 30 days if change in operator
  - Before approval to construct, must have O&M contract signed
  - LOSS transferred from Ecology retain Ecology certified operator requirement – in RCW
  - LOSS with existing permit from DOH or LHJ that identifies operator – retain operator, if no operator identified, two years to find operator and inform DOH
  - Other existing LOSS – two years from date of issue for initial operating permit to notify DOH of operator
- Issues/Questions
  - Chapter 70.118B RCW
    - Work group convened under 2006 Puget Sound OSS management plan/MRA legislation is to make recommendations to appropriate legislative committees for the development of certification or licensing of maintenance specialists – shall include recommendations for development of certification and licensing of LOSS operators.

- Systems required to meet operator certification requirements under Chapter 70.95 RCW must continue to meet those requirements as a condition of the department operating permit.
- Chapter 70.95B RCW requires Ecology certified operator for “wastewater treatment Plants”
  - "Wastewater treatment plant" means a facility used to treat any liquid or waterborne waste of domestic origin or a combination of domestic, commercial or industrial origin, and which by its design requires the presence of an operator for its operation. It shall not include any facility used exclusively by a single family residence, septic tanks with subsoil absorption, industrial wastewater treatment plants, or wastewater collection systems.
  - "Operator in responsible charge" means an individual who is designated by the owner as the person on-site in responsible charge of the routine operation of a wastewater treatment plant.
  - The individual on-site at a wastewater treatment plant who is designated by the owner as the operator in responsible charge of the operation and maintenance of the plant on a routine basis shall be certified at a level equal to or higher than the classification rating of the plant being operated.
  - The director (*of Ecology*) shall adopt and enforce such rules and regulations as may be necessary for the administration of this chapter. The rules and regulations shall include, but not be limited to, provisions for the qualification and certification of operators for different classifications of wastewater treatment plants.
  - The director (*of Ecology*), in cooperation with the secretary of health, may establish an ad hoc advisory committees, as necessary, to obtain advice and technical assistance regarding the examination and certification of operators of wastewater treatment plants.
- **Questions:**
  - Does this mean that non-Ecology certified operators can only “operate” LOSS consisting of septic tanks with subsoil absorption? If so, Ecology certified operators are needed for all other known and unknown LOSS.
  - Does this requirement take effect immediately when we know about a LOSS or do we have some flexibility?
  - Will Ecology be able to add requirements to their certification examination that include appropriate LOSS operation, monitoring, and maintenance activities?
  - Will there be sufficient numbers of operators available?
  - Even if it’s found to be acceptable/legal, will the short-term recommendations from the subcommittee result in sufficient numbers of operators to meet the anticipated demand?