



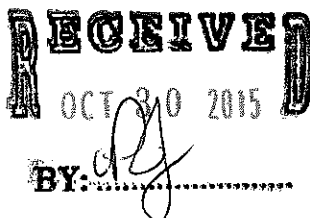
Oregon

Kate Brown, Governor

Department of Environmental Quality
Northwest Region Portland Office/Water Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503) 229-5263
FAX (503) 229-6957
TTY 711

October 26, 2015

Dan Huff
City of Molalla
P.O. Box 248
Molalla, OR 97038



**RE: Warning Letter with Opportunity to Correct
Molalla STP
2015-WLOTC-1133
Facility ID #57613/ Permit #101514
Clackamas County**

Dear Mr. Huff:

On September 28, 2015 Jennifer Cline submitted a report of the leak test results which your permit required (Schedule D, Condition 14). After reviewing this report DEQ determined the results were inconclusive and asked for additional data via email. DEQ also set up a meeting at the plant to go over the data while seeing the actual structures and tools that were part of this test. On October 14, 2015 Jason Clifford submitted additional data asked for during the meeting. After reviewing this additional data DEQ determined the results were still inconclusive. Based on this review DEQ has concluded that the City of Molalla is responsible for the following violation of Oregon environmental law:

VIOLATION:

ORS 468B.025(2) Prohibited Activities. No person shall violate the conditions of any waste discharge permit. Facility personnel failed to perform an acceptable leak test because the results do not tell us whether the leakage from the lagoons is acceptable or excessive. To comply with the permit condition, the test has to provide useful results. Violating the permit condition is a **Class II** violation (per OAR 340-012-0053(2)).

DEQ considers Class I violations to be the most serious violations; Class III violations are the least serious.

CORRECTIVE ACTION

By no later than January 25, 2016 have a qualified, experienced, third party conduct an audit of your leak test, and report to me their findings. An audit acceptable to DEQ must include the following:

- Verification of the flow measuring devices' accuracies.
- Verification of the water level measuring devices' accuracies.

- Verification of flow path assumptions used.
- An evaluation of leakage within the plant that could affect the results (the DAF, for example).
- Documentation of lagoon sizes (areas).
- An annual flow balance for the facility (all waters in vs. all waters out).

A Registered Engineer or Professional Hydrogeologist with experience in water storage and transport must certify and sign the audit report.

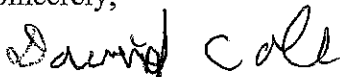
If the audit report finds and can demonstrate to DEQ's satisfaction that the leak test was valid and shows an acceptable leak rate of 1/8" per day or less, then DEQ will accept the leak test. If the audit report shows the leak test was valid and demonstrates an unacceptable leak rate, then DEQ will require you to install monitoring wells. If the audit report shows the leak test was invalid, then DEQ will require you to conduct another leak test, and/or install monitoring wells.

This notice is a Warning Letter with Opportunity to Correct. DEQ does not intend to take formal enforcement action at this time. However, if you repeat this violation; I may refer this matter to DEQ's Office of Compliance and Enforcement for formal enforcement action, including civil penalty assessment and/or a Department order. DEQ can assess civil penalties for each day of violation.

If you believe any of the facts in this Warning Letter with Opportunity to Correct are wrong, you may provide information to me at the address shown at the top of this letter. DEQ will consider new information you submit and take appropriate action.

DEQ wants to help you comply with your permit conditions and limits. If you have any questions about this letter's content, please contact me in writing, by phone at 503-229-5011, or by email at cole.david@deq.state.or.us.

Sincerely,



David Cole
Water Quality Specialist
Northwest Region, Water Quality Source Control Section

Ec: Office of Compliance and Enforcement, DEQ Headquarters

Memo

To: Molalla STP File

From: Randy Bailey

Date: 10/26/2015

Subject: Leakage test submitted 9/28/2015

Recommendation: Request audit of the test

Attach: **Molalla Wastewater Treatment System Lagoon Leak Test report.(with update submission).
Summary calculations for Molalla STP Lagoons Leakage test**

Molalla 2015 Lagoon Seepage (leak) test.

Molalla STP was required to perform a leakage test on their lagoons to demonstrate that there was not excessive leakage. This is a requirement of their current NPDES permit. According to DEQ guidance, less than 1/8 inch per day is considered acceptable and more than 1/4 inch per day is excessive. A leak test requires closely tracking lagoon surface levels, precipitation, evaporation, and all water flows to and from a lagoon. Guidance restricts these tests generally to July and August to avoid the influence of precipitation and surface runoff to lagoons. Molalla performed the leak test between 8/14/2015 and 8/29/2015.

DEQ guidance recommends that individual cells or lagoons be isolated if possible for 10 – 15 days to achieve adequate precision during the test. Molalla did not isolate their two lagoons as they are part of the active treatment process. However they note that they made an attempt to isolate lagoon 2 for part of the test. When a cell cannot be isolated the daily influent/effluent flows must be measured accurately to achieve meaningful results.

The guidance also indicates that each cell be equipped with a staff gauge for liquid level measurements that allow for readings from to 1/8 inch to 1/16 inch, and general specifications for equipment to measure precipitation and evaporation. Molalla did record lagoon levels, but the measurements reported were only made to the nearest 1/10 foot. This precision may be adequate for the purposes of the test if other measurements can be verified. The guidance recommends daily measurements on a schedule at the same time each day, but the results are averaged over the duration of the test. Evaporation and precipitation must be measured during the test. Molalla's measurements presented appear to be useable.

Flow measurements into and out of the lagoons were presented, but the methods or meters used to make the measurements are not described in the report. So it is not possible to evaluate the flow data.

Test Results

Molalla submitted test results in a report dated September 28, 2015. The results appear to be inconclusive as it appears that lagoon 1 "lost" over 20 inches of water and lagoon



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700 NE Multnomah St,
Stc 600
Portland, OR 97232
Phone: 800-452-4011

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Memo

2 “gained” over 30 inches of water over the course of the 15 day test. This is not likely, and indicates a problem with the calculations.

The original submission did not present adequate data to evaluate the validity of the test, so a flow balance for the test period was requested. The flow balance shows a large discrepancy between the pond levels that would be expected based on the inflow and outflows, and the levels recorded. Based on the flow balance reported for Lagoon 1, the pond level should have been 21 inches higher than was reported. Lagoon 2 should have been 30 inches lower than was reported (neglecting seepage in both cases). It would make sense that some of the reported effluent from lagoon 2 was actually from lagoon 1. This could account for a part of the discrepancy. However, this still leaves approximately 4.3million gallons unaccounted for (gained) during the test. This is a quantity approximately equal to about 30% of the plant flow. It is likely that this is an accounting or measurement error. Without an in depth review of all of the data collected, equipment used and the current design of the plant, we cannot determine what assumptions or measurements are in error, or whether there is enough verifiable information to demonstrate that the ponds have acceptable leakage. Simply repeating the test would not be recommended at this time as we have entered the precipitation season, and the accuracy of the equipment used and the assumptions made appears to be erroneous.

Recommendations:

I recommend that the City have an audit performed on the data and information used for the test. It is within reason that the errors can be found and corrected. An adequate audit must include:

- Verification of the accuracy of the flow measuring devices.
- Verification of the accuracy of the water level measuring devices.
- Verification of flow path assumptions used.
- An evaluation of leakage within the plant that could affect the results (the DAF for example).
- Documentation of the size (area) of the lagoons.
- An annual flow balance for the facility (all waters in vs all waters out).

A Registered Engineer or Professional Hydrogeologist with experience in water storage and transport should certify and sign the audit. (This is included in the leak test guidance).



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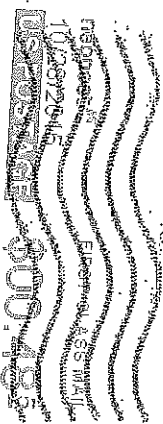


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700 NE MULTNOMAH ST.
STE 600
PORTLAND, OR 97232-4100

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Dan Huff
City of Molalla
PO Box 248
Molalla, OR 97038

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