



Oregon

Tina Kotek, Governor

Department of Environmental Quality

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October 24, 2024

Roxane Worley
City Administrator, City of Hines
PO Box 336
Hines, Oregon 97738

Re: Warning Letter with Opportunity to Correct
City of Hines
2024-WLOTC-9644
File 38817, WPCF 101045
Harney County

Dear Roxanne Worley,

The City of Hines (City) is permitted under a Water Pollution Control Facilities (WPCF) permit No. 101045. DEQ routinely provides review of records submitted by the City to assess compliance with the City's permit. Schedule B., Table B.1 of the permit requires the City to submit monitoring reports, annual reports, and one-time plans/surveys/studies by the dates specified in the table:

Table B1: Reporting Requirements and Due Dates				
Reporting Requirement	Frequency	Due Date (See note a.)	Report Form (See note b.)	Submit To: (See note c.)
Lagoon Leak Test Report (see Schedule D)	One Time	Submit by 05/31/2022	Electronic copy in the DEQ-approved format	As directed by DEQ
Hauled Waste Control Plan (see Schedule D)	One time	Submit by 12/15/2021	Electronic copy in a DEQ-approved format	As directed by DEQ
Industrial User Survey Report (see Schedule D)	One time	Submit by 12/15/2023	Electronic copy in the DEQ-approved format	As directed by DEQ

**This table has been consolidated to only include items related to this warning letter. The City should consult the permit for a full list of requirements in Table B.1*

Based on review of records, DEQ has found the City failed to submit the following plans/surveys by the required due dates and is in violation with the permit for three (3) occurrences of missed reporting.

Reporting Violations:

DEQ has determined that failing to provide these submittals are violations of the WPCF permit and Oregon Environmental Law:

Permit Due Date	Violation	Class
May 31, 2022	Failing to submit a lagoon leak test report by the date provided in Table B.1. Failing to timely submit a report or plan as required by rule, permit, or license, unless otherwise classified is a violation; OAR 340-012-0055(2)(b).	II
December 15, 2021	Failing to submit a Hauled Waste Control Plan by the date provided in Table B.1. Failing to timely submit a report or plan as required by rule, permit, or license, unless otherwise classified is a violation; OAR 340-012-0055(2)(b).	II
December 15, 2023	Failing to submit an Industrial User Survey by the date provided in Table B.1. Failing to timely submit a report or plan as required by rule, permit, or license, unless otherwise classified is a violation; OAR 340-012-0055(2)(b).	II

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

Environmental Impact of Violations

Without conducting necessary studies and surveys, the City, DEQ, and the public are unable to evaluate the effectiveness of the City’s wastewater treatment system and plan for future needs.

Corrective Actions:

The City of Hines is responsible for the following corrective actions:

1. **By September 30, 2025**, the City of Hines must conduct and submit to DEQ a lagoon leak test report. Guidance for lagoon leak tests and required reporting can be found in Schedule D of the City’s WPCF permit and in Attachment 1.
2. **By December 15, 2024**, the City of Hines must develop and submit a Hauled Waste Acceptance Plan to DEQ. Guidance for development of a plan can be found at: <https://www.oregon.gov/deq/FilterDocs/HauledWasteDEQACWA2015.pdf> The City may accept hauled wastes at discharge points designated by the POTW only after receiving written DEQ approval of a Hauled Waste Control Plan. Hauled wastes may include wastewater solids from another wastewater treatment facility, septage, grease trap wastes, portable and chemical toilet wastes, landfill leachate, groundwater remediation wastewaters and commercial/industrial wastewaters.

3. **By December 15, 2025**, the City of Hines must conduct and submit to DEQ an industrial user survey as described in 40CFR 403.8(f)(2)(i-iii) to determine the presence of any industrial users discharging wastewaters subject to pretreatment and submit a report on the findings to DEQ. The purpose of the survey is to identify whether there are any industrial users discharging to the POTW, and ensure regulatory oversight of these discharges to state waters.

Summary:

This notice is a Warning Letter with Opportunity to Correct. DEQ does not intend to take formal enforcement action at this time. However, should the City fail to meet permit compliance deadlines in the future or fail to complete the required corrective actions in this letter, the matter may be referred to DEQ's Office of Compliance and Enforcement for formal enforcement action, including assessment of civil penalties and/or a DEQ order. Civil penalties can be assessed for each day of violation.

If you believe any of the facts in this Warning Letter are in error, 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. Should you have any questions about the content of this letter or would like follow-up technical assistance, please contact me at 541-246-5462.

Sincerely,



Anna Morgan-Hayes

Water Quality Compliance Specialist

ec: Mike Hiatt, ER Water Quality Permitting and Compliance, DEQ
Blair Edwards, ER Water Quality Permitting and Compliance, DEQ
Nicole Morris, Pretreatment Coordinator, DEQ

Attachment 1: Lagoon Leak Test Guidance, DEQ, 2024

State of Oregon

Department of Environmental Quality Guidelines

Guidelines for Estimating Leakage from Existing Sewage Lagoons

PURPOSE AND SCOPE

EXCLUSIONS

GENERAL APPROACH

EQUIPMENT REQUIREMENTS

MEASUREMENTS AND CALCULATIONS

REPORT FORMAT

ANNUAL WATER BALANCE

NEW LAGOONS

PURPOSE AND SCOPE

These guidelines provide for relatively inexpensive test equipment and procedures to be used for prioritizing problem lagoons used for treating domestic sewage. Such tests are not definitive. They should be considered preliminary and approximate.

Tests based on these guidelines can only indicate whether the seal on an existing lagoon probably remains intact, or approximately how much it may be leaking. Preliminary tests of this type are not suitable for sewage lagoons where there is a strong likelihood of contamination, or an immediate urgency to protect a priority aquifer.

EXCLUSIONS

Such preliminary testing is not suitable for various types of lagoons which may contain stronger wastes than sewage. For example, leak tests for sludge, septage, strong industrial wastes, and landfill leachate lagoons may warrant a higher level of accuracy. To attain greater accuracy entails considerable time and expense, requires more equipment to develop wind and temperature records, and involves calculations outside the scope of these guidelines.

Such accuracy is seldom warranted for sewage lagoons. In critical groundwater pollution situations, where lagoon seepage is a known concern, immediate installation of monitoring wells and a formal program of groundwater monitoring are normally warranted. In such situations, no program of leak testing is probably accurate enough to substitute for direct groundwater monitoring. Leak testing would only delay the definitive determinations that must be made.

GENERAL APPROACH

The general objective of a leak test is to estimate the average rate of seepage through the bottom of the lagoon. Normally each lagoon cell is isolated and tested separately, which better pinpoints the location of any major leaks. The rate of seepage is expressed in inches per day or centimeters per second.

Leak testing should be restricted to July and August, when rainfall is minimal and the ground is dry enough to exclude significant runoff. Tests conducted at other times will have more variables and may underreport seepage due to runoff effects.

To obtain reasonable precision, each cell of a lagoon should be isolated and tested over a period of 10 - 15 days. Cell depth and pan evaporation measurements should be taken daily. If the lagoon cell cannot be isolated, then daily influent/effluent flows must also be measured. Daily measurements are preferred over weekly to improve precision and to minimize random measurement errors.

Lagoon liquid depth should suit the purpose of the test. To determine average seepage rates, lagoons should be at average operating depth.

In priority areas, any rate of seepage greater than zero may warrant direct sampling and monitoring of the groundwater. Seepage of 1/8" per day or less is normal. However, this low rate can cause groundwater contamination where lagoon contents are strong and background levels are high quality. Seepage exceeding 1/4" per day indicates a seal failure, or absence of adequate initial seal.

EQUIPMENT REQUIREMENTS

Each cell of a lagoon needs to be equipped with a staff gauge for level measurements. Stilling wells to dampen wave action are recommended, and will allow a staff gauge to be read to 1/8" - 1/16". Precipitation can be measured to about 1/100" with a good rain gauge. Evaporation can be measured to roughly 1/1000" with a hook gauge.

The following specifications for rainfall and evaporation equipment are based on Weathertronics equipment manufactured by Qualimetrics, Inc. of Sacramento, and available in Oregon through International Reforestation Supply, Eugene (345-0597). Equivalent equipment is acceptable.

1. Rain Gauge. Qualimetrics Model 6330. This is a plastic gauge with 11" capacity and 0.01" graduations, designed for post mounting.
2. Evaporation Pan. Qualimetrics Model 6821. This is a standard US Weather Bureau steel pan, 47.5" diameter by 10" deep.
3. Hook Gauge. Qualimetrics Model 6831. This is a brass gauge with 0.02" graduations.

To obtain accurate measurements, the equipment needs to be set up level and plumb in an unsheltered area near the lagoon. Equipment may have to be fenced to exclude animals.

The above list is a minimum. Various equipment needed to attain higher levels of accuracy is not listed. For example:

- Recording anemometer
- Max/min thermometers for air, for the evaporation pan, and for the lagoon surface

- Upwind and downwind evaporation pans

- Barometric pressure

If such equipment is available, its use will add precision and accuracy to the results. However, its use is not mandatory for preliminary leak tests used to screen and prioritize existing sewage treatment lagoons.

MEASUREMENTS AND CALCULATIONS

Measurements should be made on a schedule, at the same time each day, so that each set of data represents the duration of exactly one day. All measurements should be tabulated to aid calculation and reporting. We recommend using the attached form or a similar format.

Computations should be converted to compatible units of depth. Influent volume (gallons per day) is converted to inches per day through measurement of the actual water surface area. Rainfall will normally be near zero in July and August, but should be verified daily.

Evaporation will vary with wind and temperature. It should be measured daily, and the pan should be kept well filled.

Lagoon evaporation rates are invariably less than pan evaporation rates. Pan correction factors generally vary from 0.7 to 0.9. The larger the lagoon, the more its evaporation rate lags behind pan evaporation, so the smaller the numerical value of the pan correction factor.

In hot and windy summer weather, evaporation can be substantial. An erroneous pan correction factor can inject significant error. The result of computing seepage rates without any correction for pan evaporation is to overcalculate the evaporation rate. The effect of this error would be to underreport the seepage rate.

REPORT FORMAT

Leakage reports should be short and to the point. The main conclusion is to estimate the seepage rate from each lagoon cell, and from the lagoon as a whole. The methodology and equipment need to be described briefly but thoroughly. A copy of all field measurements and calculations should be tabulated and attached as supporting documentation.

Reports should be certified and signed by a registered engineer or professional hydrologist.

ANNUAL WATER BALANCE

The annual water balance prepared for each lagoon requires determinations of both seepage and evaporation. Leak tests performed according to these guidelines at average liquid depth can establish an average rate of seepage for the water balance. The rate of seepage will tend to vary with liquid level, and will remain constant if the level stays constant.

For the purpose of making water balance calculations, a monthly average evaporation rate should be obtained from local climatological records. Such records may then be applied with a suitable pan correction factor between 0.7 and 0.9, as previously described.

Rate of evaporation and pan correction factors both tend to vary throughout the year. To make accurate adjustments requires additional measurements be taken of all the pertinent factors. These include wind, water

temperature, air temperature, and atmospheric pressure. Pan evaporation corrections should conform to established calculation methods, as presented in standard hydrology texts.

NEW LAGOONS

New sewage and sludge lagoons are designed to be effectively watertight and nearly leak-free. Lagoons which may jeopardize groundwater because of their contents, uses, or location are routinely installed with groundwater monitoring wells. In such applications, leak testing is not a practical or reliable alternative to direct monitoring of the groundwater.

All of the measurements in leak tests are approximations, especially liquid level, and the pan correction factor is usually a rough estimate. Consequently, seepage computed from a leak test cannot be used to prove or substantiate the existence of any actual leak. Leak testing as a basis for acceptance of lagoon construction is not feasible, too often has led to fruitless litigation, and should be discouraged.

As a practical matter, the engineer must design each lagoon for watertightness. Then the engineer must conduct thorough, intensive, and continuous construction inspection to verify that watertight construction is being attained. Inspection may include compaction, infiltrometer, smoke, and spark tests, and constant observation of workmanship and materials.

If leakage and contamination occurred from a properly inspected and certified lagoon, it would indicate a damaged liner or a failure of design. Assuming good design and inspection, the engineer's written certification of proper construction carries a presumption of watertightness. No leak testing program should be approved as a substitute for diligent construction inspection.

INQUIRIES

Inquiries about these guidelines should be directed to DEQ regional water-quality plan review engineers.

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Orig. V.93

Rev1. VIII.94

