

State of Oregon
Department of Environmental Quality

**Industrial Stormwater Advisory Committee
Meeting 3- September 15, 2009**

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Subject: Monitoring Overview-Consequences for Benchmark Exceedances

This memorandum will provide the advisory committee with an overview of the issues related to developing permit requirements for consequences for benchmark exceedances. Also, at the November 17, 2009 meeting, the department will discuss this issue in great deal with the committee and seek feedback on recommendations for new permit approaches.

Background:

Oregon's current permits require facilities during the 4th year of permit coverage to evaluate the last four samples collected at each outfall. If the geometric mean of these 4 samples exceeds benchmark(s), the department will require an individual permit with site specific numeric effluent limits. The department used the geometric mean to analyze the stormwater data because it is less sensitive to very high or low values and is a suitable statistic given the highly variable nature of stormwater discharges.

The goal of these requirements is to target facilities that fail to implement effective best management practices (BMPs) over the first 4 years of the permit term or need an individual permit with site specific permit conditions to better control their stormwater discharge. The Department has not implemented these requirements because the facilities will not operate under their 4th year of permit coverage until 2010 at the earliest. However, every time facilities exceed a benchmark they are required to submit an Action Plan to DEQ within 30 days that explains the steps they took to investigate the cause of the elevated pollutant levels and corrective actions they will take to improve the quality of its stormwater discharge.

Under EPA's 2008 Multi Sector General Permit (MSGP), facilities are required to take corrective actions if the "arithmetic" average of four quarterly samples exceeds a benchmark(s). EPA does not require facilities to take corrective actions each time benchmarks are not met. However, if one sample is very high, such as four times the benchmark concentration, then the facility is required to take corrective actions at that time. Facilities are required to document deficiencies within 24 hours, make any necessary changes before the next storm event if possible and take corrective actions within 14 days. The MSGP does not include any additional requirements for facilities that have a history of exceeding the benchmarks.

DEQ has agreed to seek feedback from the advisory committee on developing permit requirements for facilities that repeatedly fail to meet benchmarks (see 7.b of settlement agreement). DEQ has considered the following options:

- Developing escalating consequences based on regularity and intensity of the exceedances.
- Requiring facilities to conduct more intensive monitoring such as increasing frequency of monitoring or collecting composite samples to better evaluate the reason for the elevated pollutant loads in their discharge.

- Gathering more samples to conduct the geometric mean evaluation (e.g. basing the evaluation on 12 samples rather than 4 samples).
- Developing criteria for when industries will not be eligible for permit coverage.

DEQ Industrial Stormwater Database

DEQ has developed an Industrial Stormwater database that will record stormwater data submitted by the facilities operating under 1200-COLS permit (effective September 2006) and the 1200-Z permit (effective July 2007). The database is a compilation of data submitted by the facilities to DEQ regional offices and local municipalities that are acting as an agent for DEQ and implementing the permits on DEQ's behalf. DEQ will evaluate approximately 2 to 3 years of monitoring data depending when the facilities obtained coverage under the new permits.

This data will assist DEQ with evaluating the options discussed above for developing permit requirements for consequences for benchmark exceedances. Specifically, the department will evaluate this data for the following purposes:

- Identify the number and type(s) of facilities that may need an individual permit based on the 4th year geometric mean evaluation in DEQ's current permits. This information can assist DEQ in evaluating whether to retain or modify the current approach for benchmark exceedances. Because EPA MSGP benchmark values are more stringent than DEQ's benchmark values, there will likely be an increase in the number of facilities that will be required to obtain an individual permit if DEQ retains this requirement.
- Determine if there are groups of industries or sectors that have a history of exceeding the benchmarks. This information can assist DEQ in developing criteria for when a facility is not eligible for a general permit.
- Estimate the number and types of facilities that may have to meet additional requirements for consequences for benchmark exceedances under the permits that DEQ will be proposing (e.g., requiring more intensive monitoring for facilities that fail to meet benchmarks).

Approaches by Other States

Some states in the nation have permit requirements that address consequences for benchmark exceedances that go beyond the traditional approach of requiring the facility to evaluate their BMPs and revise their stormwater plan. Below are examples of states that have more robust consequences for benchmark exceedances:

North Carolina

North Carolina developed a tiered approach for escalating consequences based on the frequency of the benchmark exceedance in its permit issued in 2007.

- Tier One (sampling result exceeds a benchmark value, or is outside the benchmark range, for any specific parameter at any specific outfall)
 1. Conduct a stormwater management inspection of the facility within two weeks of receiving sampling results.
 2. Identify and evaluate possible causes of the benchmark exceedance.
 3. Identify source controls, operational controls, or physical improvements to reduce the concentrations of the parameters of concern, or to bring concentrations within the benchmark range.

- Tier Two (during the permit term, sampling results are above the benchmark values or are outside the benchmark range, for any specific parameter at any specific outfall two times in a row)
 1. Repeat all the required actions outlined above in Tier One.
 2. Immediately institute monthly monitoring for all parameters at every outfall where a sampling result exceeded the benchmark value for two consecutive samples. Monthly (analytical and qualitative) monitoring shall continue until three consecutive sample results are below the benchmark values, or within the benchmark range.
 3. If no discharge occurs during the sampling period, the permittee is required to submit a monthly monitoring report indicating “No Flow” to comply with reporting requirements.

- Tier Three (during the permit term, sample results are above the benchmark values or outside the benchmark range for any specific parameter at any specific outfall parameter on more than four occasions)
 1. Require the permittee increase or decrease the monitoring frequency for the remainder of the permit;
 2. Rescind coverage under the general permit, and require that the permittee apply for an individual permit;
 3. Require the permittee to install structural stormwater controls or other stormwater control measures, or
 4. Require that the permittee implement site modifications to qualify for the No Exposure Certification.

Washington

The Department of Ecology is currently revising its industrial stormwater permit. The agency issued a draft permit for public notice and comment in June 2009 and is in the process of developing the final permit.

Washington’s current permit requires facilities to conduct escalating levels of plan review and implementation of additional BMPs in response to the frequency of exceeding action levels that are based on the benchmarks. In the draft permit, the Department of Ecology modified this approach and removed the action levels because it was confusing for permittees. Under the draft permit, the corrective actions are triggered solely by the number of benchmark exceedances.

- Level One (exceed benchmark one time)
 1. Review the stormwater plan and ensure that it is in full compliance with permit, and contains the correct BMPs from the applicable Stormwater Management Manual.
 2. Make appropriate revisions to the plan to include additional Operational Source Control BMPs with the goal of achieving all benchmark values in future discharges.
 3. Complete a Level 1 Plan Certification Form and attach it to the plan.

- Level Two (exceed benchmark on four occasions*)
 1. Review the stormwater plan and ensure that it is in full compliance with permit, and contains the correct BMPs from the applicable Stormwater Management Manual.
 2. Make appropriate revisions to the plan to include additional Structural Source Control BMPs (e.g., installing a roof over storage and working areas or using temporary tarps, preventing clean stormwater from getting contaminated) with the goal of achieving all benchmark values in future discharges

3. Complete a Level 2 Plan Certification Form and attach it to the plan.
- Level Three (exceed benchmark on eight occasions*)
 1. Review the plan and ensure that it is in full compliance with the permit and contains the correct BMPs from the applicable Stormwater Management Manual.
 2. Make appropriate revisions to the plan to include additional Treatment BMPs (e.g., detention ponds, oil/water separators, biofiltration, sand filtration, constructed wetlands) with the goal of achieving all benchmark values in future discharges.
 3. Complete a Level 3 Plan Certification Form and attach it to the plan. The portion of the plan that addresses stormwater treatment structures or processes shall be designed and stamped by a professional Engineer
 - Level 4 (exceed benchmarks on twelve occasions*)

The Department of Ecology may require the permittee to do one or more of the following:

 1. Submit a receiving water study;
 2. Submit an engineering report;
 3. Perform additional water quality monitoring;
 4. Perform additional pollution prevention and/or treatment measures at the facility, including but not limited to the installation of an Active Stormwater Treatment System; or
 5. Obtain an individual permit.

* The Department of Ecology took into consideration the benchmark history of the facilities under the current permit. Facilities that have already triggered Level 2 or 3 responses under the current permit will start under the new permit at Level 2. They will also have to take corrective actions under Level 3 and 4 based on fewer benchmark exceedances than other facilities. For example, if they exceed the benchmarks on four occasions rather than eight, they will have to meet the Level 3 corrective actions.