

ENGINEERING REPORT REQUIREMENTS

BOATYARD GENERAL PERMIT

The purpose of this document is to answer some questions that have arisen regarding engineering reports for boatyards.

1. PERMIT REQUIREMENT

3. Level Three Response

During the effective term of the permit, when any six monitoring results (potentially including the seasonal average) have accumulated for any one parameter at any stormwater monitoring location and exceed the benchmark for that parameter (e.g., four zinc values from one monitoring location and two zinc values from another monitoring location); or when the monitoring results for any two samples exceed a parameter benchmark value during the coverage under this permit if a Level Two Response requirement had been triggered for that same parameter under the previous Boatyard General Permit (issued June 1, 2011), the Permittee must install treatment as described in Subsection (a) below, unless the Permittee can demonstrate that treatment is either not feasible or not necessary as described in Subsection (b) below.

(a) Treatment

- i. The Permittee must prepare an **Engineering Report** that includes the following items, at a minimum:
 - Brief summary of the treatment alternatives considered and the reasons the proposed option was selected. The report must include cost estimates of ongoing operation and maintenance, including disposal of any spent media.
 - The basic design and construction data for all treatment devices and structures that are to be installed, including a characterization of the stormwater runoff influent and the sizing calculations of the treatment units.
 - A description of the treatment process and operation, including a flow diagram.
 - The types and amounts of chemicals used in the treatment process, if any.
 - A proposed schedule for implementation of the preferred option. Implementation must be completed within 12 months of the time when Ecology accepts the Engineering Report.
 - Results expected from the treatment process, including the predicted characteristics of the stormwater runoff discharge.
 - A statement expressing sound engineering justification (through the use of pilot plant data, results from similar installations, and/or scientific evidence) that the proposed treatment is reasonably expected to meet the permit benchmarks and limits.

3. Level Three Response

- The Engineering Report must be prepared and certified by a licensed professional engineer unless the Permittee can demonstrate engineering competence and receives an exemption from Ecology.
- ii. The Permittee must submit the Engineering Report to Ecology within 3 months of reporting the six monitoring results above a benchmark. Ecology typically completes review of a well-done Engineering Report within 60 days. Failure to submit an acceptable Engineering Report may result in an order, penalty, or both. The Permittee must notify Ecology at the time the new or modified treatment BMP is in place and operational. Level One and Level Two Reports are not required for benchmark exceedances for the same parameter(s) that may occur during the period the preferred option is being put into place and started up.

2. GUIDANCE FOR ENGINEERING REPORTS

State Requirements for Submission of Engineering Reports and Plans for Industrial Wastewater Treatment Facilities (ECY 05-10-014). <http://www.ecy.wa.gov/biblio/0510014.html>.

3. CONTACTS

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4. OTHER CONSIDERATIONS

There is no checklist, fill-in form, or standard format available for engineering reports.

Ecology will review boatyard Level Three engineering reports in the order received. Ecology expects there will be some delay in approving reports if there are a large number of reports to be reviewed.

The guidance document cited in Item 2 above was developed for new industrial facilities discharging process wastewater. Those requirements therefore are generally more extensive than the report required for stormwater treatment. Ecology expects the following elements in an engineering report for boatyards:

Wastewater characterization – The pollutants in boatyard stormwater have been sufficiently characterized. The primary pollutants of concern are metals – copper, zinc and lead. Suspended

solids are a general concern because metals are usually attached to particulates. Oil may be a problem if not controlled.

Options for meeting the benchmarks – Ecology expects the previous Level Two report will have explored the options for meeting the benchmarks. The Level Three report should contain a brief summary of the options considered in the Level Two report.

Rationale for selecting treatment system – A brief summary is required of why the proposed treatment option was selected, including a statement expressing sound engineering justification through the use of pilot plant data, results from similar installations, and/or other evidence that the proposed treatment system will meet the benchmarks. The summary should include the results expected from the treatment process, including the predicted stormwater discharge characteristics.

Chemical treatment - The amount and kind of chemicals (e.g., flocculants, etc.) used in the treatment process, if any.

Submittals –A conceptual plan should include the costs for options considered in the Level Two report, the expected residual concentrations and variability after treatment, a schematic of the treatment process, and a determination that the discharge will meet water quality standards.

Vendor’s treatment equipment reports – These may be sufficient if they are combined with information on the discharge (e.g., submerged or surface discharge, schematic of the discharge routing, and characteristics of the receiving water at the point of discharge).

Operation and Maintenance Manual – A complete engineering report will contain an operation and maintenance manual.

Hydraulic sizing – Use the Western Washington Hydrology Model to determine runoff amounts.