

April 20, 2007

Mr. Jim LaSpina
Department of Ecology
PO Box 47600
Olympia, Washington 98504-7600

Via Email

Re: Comments on Draft NPDES General Permit for Industrial Stormwater

Dear Mr. LaSpina:

Please accept the following comments on the Draft Industrial Stormwater General Permit issued February 2007.

General

Ecology is proposing to lower the copper benchmark to 11.9 µg/L and the zinc benchmark to 109 µg/L. Today's stormwater treatment technologies (and the majority of non-treatment BMPs) cannot achieve these concentrations with any consistency, if at all. Dissolved zinc presents a bigger challenge and Ecology has yet to publish source control BMPs for dissolved zinc. Until viable control options are available, the 2007 general permit should retain the existing benchmarks and action levels for copper and zinc.

The control of stormwater pollutants is very complex and the ability to meet water quality criteria using best management practices (including available treatment technologies) routinely is not possible without the use of a dilution factor or a mixing zone. This is the case not only for stormwater runoff from industrial facilities, but also for urban street runoff. While new treatment technologies will become available, they will require laboratory testing, field testing, full-scale implementation, and monitoring over time. We urge Ecology to retain the allowance for mixing zones and dilution factors in the general permit.

Condition S4 Sampling

We support the proposed change to the sampling frequency; i.e., four samples collected between October 1 and June 30. It is very difficult to meet the specified storm criteria during the summer months. Eliminating the quarterly requirement adds needed flexibility to monitoring programs.

Minor detail: S4B1e should read detention pond rather than retention pond (or a separate provision should be added for discharges from detention ponds).

Condition S5 Benchmarks, Action Levels, and Discharge Limitations

Methodology. We strongly disagree with the “Simple Percentile Method” used in the 6415 study to set new “technology-based” benchmarks and action levels. According to the study report, this approach assumes that facilities with pollutant concentrations below the median value “are likely better performers with regard to BMP selection and proper implementation” (EnviroVision and Herrera Environmental Consultants, 2006). Combining discharge data across industrial categories to derive median pollutant concentrations presumes, for example, that BMPs available and relevant to runoff from a light industrial facility are equivalent to BMPs available and relevant to runoff from a landfill and also from a metal recycling facility. Combining all data assumes that the nature of the parameter (e.g., dissolved or particulate-associated metals), size of facility, number of outfalls, complexity of operations, and amount of exposed material is comparable across all industry types and all facilities. This is not the case and the approach is quite misleading.

If technology- (performance) based concentrations are to be considered for use, and if Ecology determines that the available runoff data are representative, then as a start, the data should be compiled and evaluated only within industry groups.

Benchmark and Action Level for Zinc. The general permit requires facilities to specify BMPs necessary to comply with state water quality standards, provide AKART, and be consistent with BMPs identified in the Stormwater Management Manual. However, Ecology has yet to identify source control BMPs to reduce zinc in stormwater discharges (Ecology, 2007). Additionally, treatment BMPs for zinc are quite limited, are expensive, and have not demonstrated the ability to achieve water quality standards for zinc. Until source control BMPs are identified and AKART treatment technologies become available, Ecology should retain the current benchmark and action level for zinc.

Benchmark and Action Level for Copper. Numerous studies have shown that urban street runoff and residential runoff routinely exceed the proposed benchmark concentration of 11.9 µg/L, including the studies surveyed by Ecology (Ecology 2005). The combined surface area of these sources far exceeds that associated with the general permittees. To require the permittees to meet an 11.9 µg/L benchmark before these sources are controlled to a comparable level is unreasonable and illogical.

The general permit doesn’t account for stormwater run-on from adjacent streets and doesn’t account for air deposition; permittees have little or no options to control either of these pollutant sources. The natural background concentration for copper in soil (state-wide average) is 36,000 µg/kg (Ecology, 1994). A few particles of soil washing off the tires of an employee

vehicle and/or dust generated from an adjacent roadway could cause a facility to exceed the proposed copper benchmark of 11.9 µg/L.

Unless and until copper concentrations in street runoff can be controlled to 11.9 ug/L, the general permit provides provisions for stormwater run-on and air deposition, and the Stormwater Management Manual provides BMPs with demonstrated performance nearing these concentrations, the existing benchmark and action level for copper should be retained.

Laboratory Quantitation Levels. Permittees will not be able to ensure the lab complies with the specified quantitation levels, particularly for metals. If Ecology expects this level of precision from the laboratories, it should include this requirement in its laboratory accreditation program and work directly with the laboratories to develop the requisite procedures.

Condition S6 Discharges to 303(d)-listed or TMDL Waters

S6A2. A clarification on the “list which is in effect November 4, 2005” and how it relates to the Appendix 3 and Appendix 4 lists of the draft permit would be helpful. The text introduction to Appendix 3 references the 2004 impaired water body list. The text introduction to Appendix 4 does not specify a date.

S6B. This provision states that permittees are to conduct sampling in accordance with S4 and S6C. S6C1a directs permittees to “sample for parameters in Table 2” and S6C1b directs permittees to sample “for the parameters specified in the letter of permit coverage.” Clarification is needed. For example:

- S6C and Table 6 provide direction on when to sample for some of the Table 6 parameters. For others it is not clear. Is it Ecology’s intent that the permittee sample for all the Table 2 parameters (turbidity, pH, O&G, copper and zinc), *plus* the parameters as described in the S6C text? Which dischargers sample for BOD₅? Just those discharging into a water body impaired for dissolved oxygen? Which dischargers sample for ammonia, lead, mercury and pentachlorophenol?
- S6C4 specifies the industries required to sample for fecal coliform, including Food and Kindred Products (SIC Codes 20xx). Is it Ecology’s intent that this parameter applies only to dischargers to water bodies that are impaired for fecal coliform? If so, do these 20xx facilities also sample for Table 3 parameters?
- Same questions as related to benchmarks and action levels- Is it Ecology’s intent that the discharger use the Table 2 benchmark/action level for oil and grease (since it is not included in Table 6) and use the turbidity, pH, copper and zinc values in Table 6? Mix and match dependent on the specific parameter(s) for which the water body is listed as impaired?

Condition S8 Corrective Actions

S8A. Level One Corrective Actions If the proposed 11.9 µg/L copper benchmark is retained in the final permit, the requirement for a permittee to perform a Level One Corrective Action becomes meaningless. Even with today's benchmark, the identification of copper sources and operational and source control BMPs at the part-per-billion level is difficult, at best. Requiring 1100+ facilities to perform a Level One Corrective Action *each time* a sample exceeds 11.9 µg/L is a misuse of resources. It also gives the impression that copper in stormwater runoff can be controlled to this concentration through adaptive management.

Alternatively, the Level One Corrective Action should be dropped for copper (at the 11.9 µg/L benchmark). Facilities then would begin a Level Two analysis after any two samples exceed the action level. This approach would maintain the (misleading) assumption that copper can be controlled to this concentration, but will reduce unproductive reporting.

S8B. Level Two Corrective Actions The start date for a Level Two Corrective Action is confusing. For example, if a facility is in Level Two or Level Three for zinc under today's permit, do they start at Level Two again after September 30, 2007? If Ecology ultimately uses the proposed (lower) copper and zinc benchmarks, then permittees *should* be allowed to "re-set the clock" on their Level Two and Level Three responses.

As currently written, a Level Two Corrective Action would require installation of capital BMPs within 6 months. Capital BMPs are defined (in the box below B.7 in the draft permit) to include treatment. Six months is insufficient time to implement treatment BMPs. It appears this is not Ecology's intent for Level Two (i.e., to require treatment) and the definition just needs revision.

Six months can be insufficient time for some capital BMPs. The permittee must receive and interpret sampling results, investigate and select capital BMPs, and then install/construct within this time. Manufacturing modifications, stormwater collection/transfer systems, and roofing, for example, often take longer depending on order time for equipment, operational constraints, and/or weather constraints. Alternatively, Ecology could eliminate the 6-month limit for capital BMP implementation in Level Two. If Ecology retains the 4-sample trigger for Level Three, the permittee ultimately would have to meet a 12-month implementation schedule under Level Three if samples continued to exceed action levels.

S8C. Level Three Corrective Actions Consistency in wording for the Level Two and Level Three triggers may be needed. Level Two is based on September 30, 2007, but Level Three is based on the action level "in effect at the time of the sample." This gets more confusing when permittees are at different levels of response for different parameters.

As noted above, Level Three Corrective Actions for parameters with lowered action levels (i.e., copper and zinc) should be triggered by 4 samples collected after September 30, 2007.

The alternative of tying the Level Three trigger to the completion of Level Two BMPs is a good idea and reflects the progression of actions and responses to new sample results.

S8D. Level Four Corrective Actions We support the decision to add a Level Four. Under the current permit, dischargers are expected to implement treatment BMPs within 12 months of initiating a Level Three Response. This is a very aggressive schedule and is not possible to meet for most treatment BMPs, when you factor in design, order time for equipment, and weather constraints. Additionally, most treatment technologies for stormwater are still in their development stage and permittees need time for bench and field testing before selection and implementation of a treatment technology.

Ecology should provide additional explanation for the treatment waiver provision; i.e., its potential use by a permittee. Based on site-specific conditions, some facilities may request a waiver from the implementation of any treatment. It is our understanding that a treatment waiver will also (and more commonly) be needed where a permittee *has* implemented treatment BMPs, but still exceeds benchmark concentrations or water quality standards. Particularly for copper and zinc, few if any treatment BMPs will reduce metals to concentrations below their associated benchmarks. This includes full-scale, end-of-pipe stormwater treatment facilities.

Until new and improved treatment technologies become available (and are vetted by Ecology through the Stormwater Management Manual), many permittees will continue to exceed benchmarks and water quality standards even with the aggressive implementation of source, operational, structural and treatment BMPs. A waiver from “additional treatment” must be made available to these facilities and should be provided for in the general permit.

Additionally, as currently drafted, the treatment waiver is only available to facilities that are not discharging to 303(d)-listed water bodies. What is Ecology’s expectation for a facility discharging to a 303(d) waterway that has implemented AKART, but still cannot achieve benchmark concentrations due to the lack of available treatment technologies that can achieve part-per-billion discharge concentrations?

S10 Compliance with Standards

Point of Compliance. Under the draft permit, Ecology has added condition S10D which states that Ecology will “assess compliance with this permit” at the point of discharge *from the site*. Presumably this provision has been added to correspond with the elimination of the mixing zone provision. In effect, it means that compliance with water quality standards is required at the point of discharge from the site. For facilities that do not discharge directly into a receiving water body, assessing compliance at the point of discharge from the site is inappropriate. The brief Fact Sheet statement that Ecology will consider available dilution when determining a water quality violation is not adequate.

The existing permit defines the point of compliance with water quality standards (Condition S7 Compliance with Standards) as follows:

Compliance with surface water quality standards means that stormwater discharges by a facility with permit coverage will not cause or contribute to a violation of water quality standards in the receiving water.

The receiving water is the water body at the point of discharge. If the discharge is to a stormwater conveyance system, either surface or subsurface, the receiving water is the water body that the stormwater conveyance discharges to.

This definition has been dropped from the draft permit with no corresponding discussion or explanation in the Fact Sheet. This definition of the point of compliance should be retained in the new permit.

Mixing Zones. The draft permit does not allow permittees to apply for a mixing zone or use available dilution. According to the Fact Sheet, these options were omitted from the draft permit “since a general permit must apply to a number of sites” and “precise mixing zones and available dilution are not applicable to facilities that are covered under a general permit” (Ecology, 2007). Why are they applicable to facilities under today’s general permit, but proposed not to be applicable under the new permit?

The proposed Level Four requirements include a site-specific AKART analysis and a site-specific water quality analysis. If this level of site-specific analysis will be allowed in the general permit, then the application for a mixing zone or dilution factor should continue to be allowed in the general permit. This will be important particularly if Ecology lowers the benchmarks for copper and zinc, as proposed.

Thank you for the opportunity to comment.

Sincerely,

Dawson Consulting LLC

A handwritten signature in black ink that reads "Linda Dawson". The signature is written in a cursive, flowing style.

Linda Dawson
Principal

References

Ecology. 1994. Natural Background Soil Metals Concentrations in Washington State. Publication #94-115. October.

Ecology. 2005. Stormwater Management Manual for Western Washington. Prepared by WA Department of Ecology. Publication Numbers 05-10-029 through 05-10-033. February.

Ecology. 2007. Fact Sheet for Industrial Stormwater General Permit. Prepared by WA Department of Ecology. February 20.

EnviroVision and Herrera Environmental Consultants. 2006. Evaluation of Washington's Industrial Stormwater General Permit. Prepared for WA Department of Ecology. November.