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July 15, 2009

Mr. Jeff Killelea
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Re: Comments on the Draft Revised Industrial Stormwater General Permit – Released for
Public Comment June 3, 2009

Dear Mr. Killelea:

This letter provides Anchor QEA, LLC's comments on the Draft Revised Industrial Stormwater General Permit (Draft Permit) released for public comment on June 3, 2009 and the supporting Small Business Economic Impact Analysis (SBEIA) report. The remainder of this letter provides a summary of our comments. After you have had a chance to review our comments, we welcome the opportunity to discuss them with you.

Proposed Zinc Benchmark Level

The 200 µg/L zinc benchmark level was derived based upon a simple model that uses input parameters that account for the broad range of facility types and receiving waters that would be covered under the ISWGP. Therefore, the proposed benchmark level does not incorporate site-specific information from a permittee's receiving water body which could in turn increase the benchmark level. For example, the model inputs were based on total suspended solids, hardness, and background concentrations documented in freshwater rivers which are typically much different than those encountered in the higher turbidity brackish waters located along the coastline rivers and estuaries.

The 200 µg/L zinc benchmark level is also based on a number of assumptions that are not adequately supported and significantly affect the chosen benchmark level, including the use

of a 10 percent exceedance threshold and a receiving water dilution factor of 5. As shown in Figures 7, 8 and 9 of the Analysis Report - Water Quality Risk Evaluation for Proposed Benchmarks/Action Levels in the Industrial Stormwater General Permit (Herrera 2009), the zinc benchmark level increases by a factor of two if a dilution factor of 10 is used at the 10 percent exceedance threshold and the benchmark increases more marginally for increased exceedance thresholds. We request additional clarification on the technical rationale for the selected model input parameters.

The 200 µg/L zinc benchmark level is also below typically encountered ubiquitous sources of zinc concentrations at industrial facilities. Ecology identified that self-monitoring data by facilities in Western Washington has showed that a high percentage of permittees have experienced continued exceedances of the zinc benchmark level (117 micrograms per liter [µg/L]) and action level (372 µg/L) identified in Section S.4 of the IGSP. Due to these exceedances, Ecology conducted regional stormwater studies and literature research to determine the potential sources of the identified zinc concentrations and typical concentration ranges for each source. Ecology's findings were summarized in *A Survey of Zinc Concentrations in Industrial Stormwater Runoff* (January 2006). Further, Ecology developed a report entitled *Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater Discharges* (June 2008) to assist businesses reduce zinc concentrations.

The Ecology reports document the ranges of zinc concentrations typically encountered in industrial areas in Western Washington and other portions of the country due to a number of ubiquitous sources (e.g., runoff from parking areas, paved grounds, loading docks, buildings, and roofs) that are very difficult to control. The ranges of identified concentrations are above the proposed zinc benchmark level of 200 µg/L in the Draft Permit. More specifically, the reports summarize the following results:

- Every quarter, approximately 50 percent of reporting facilities have shown zinc concentrations exceeding the IGSP zinc benchmark level of 117 µg/L.
- Every quarter, about 20 percent of reporting facilities statewide have shown concentrations exceeding the ISGP zinc action level of 372 µg/L.
- The National Stormwater Quality Database (NSQD) includes data from 3,770 separate storm events from 66 agencies in seven states. NSQD findings show industrial total median zinc concentrations of 210 µg/L respectively (Pitt et al. 2004).

- Concentrations of total zinc in galvanized roof runoff have been reported in a range of 1,100-12,200 µg/L (Good 1993; Quek and Forster 1993; Thomas and Greene 1993).
- National data show typical zinc concentrations of 225 µg/L for stormwater runoff from industrial parking lots (Claytor and Schueler 1996).
- Zinc concentrations in runoff from roofing and building materials of types other than galvanized metal have been reported as typically 30 to 500 µg/L (Boller 1997; Good 1993; Heaney et al. 1999; Mason et al. 1999; Quek and Forster 1993; Thomas and Greene 1993; Zobrist et al. 2000).
- A number of Western Washington stormwater studies found runoff from roofs with galvanized ducts ranging from 217 to 500 µg/L zinc (Golding 2006); a level of 2,030 µg/L from the SR520 bridge galvanized metal downspouts; and levels of 1,590 µg/L and 298 µg/L in both unpainted and painted Galvalume (similar to galvanized steel but with aluminum as a constituent) roof surfaces, respectively.

The above findings indicate that typical industrial facilities in Western Washington that have continued to employ the Ecology-identified operational and housekeeping stormwater best management practices (BMPs; e.g., installation of filter fabric in catch basins, frequent sweeping/vacuuming of paved surfaces, painting of galvanized surfaces, etc.) still maintain a high probability of exceeding the proposed Draft Permit 200 µg/L zinc benchmark level due to the ubiquitous nature of potential zinc source loadings. In the Fact Sheet that accompanies the Draft Permit, Ecology recognizes this fact by stating “Based on Ecology’s best professional judgment and experience under the previous permitting cycle, Ecology has determined that in order to meet the proposed zinc benchmarks, permittees will be required to fully apply AKART, and many will be required to install active stormwater treatment systems.” Installation of active treatment systems will require extensive costs and an undue burden on small businesses, and may not lead to achievement of the benchmark level given expensive treatment systems may not achieve sufficient zinc removal due to high influent concentrations and/or high dissolved concentrations. Additionally, potentially much higher untreated source loadings of zinc above the benchmark level will continue to discharge to adjacent waterways from public right-of-ways roadway runoff and other non-treated sources. Expensive treatment of relatively low discharges by small businesses will have very little effect on water quality if much larger sources continue untreated.

The Draft Permit will also require permittees to employ treatment if isolated exceedences of the zinc benchmark level occur over long periods of time. The Draft Permit should incorporate a limited timeframe for requiring the Level Three Corrective Action so infrequent exceedences of this ubiquitous chemical do not require expensive treatment implementation.

Costs Presented in the SBEIA

Ecology's cost analysis supporting the Draft Permit severely underestimates the costs for small businesses to comply with the proposed revised regulations. Specifically, the cost estimate:

- Does not include direct costs for required additional employee training.
- Does not include costs for revising Stormwater Pollution Prevention Plans (SWPPP)s
- Severely underestimates annual monitoring analytical costs.
- Does not estimate the number of businesses that will be required to implement treatment BMPs (Level Three Corrective Action) or the costs for each business to employ the required treatment BMPs.
- Does not include the costs of defending and addressing third party lawsuits that are based on administrative and inconsistent interpretation of the stormwater compliance process.
- Does not include estimated costs for Level Four Corrective Action.

The additional cost elements above will significantly increase the cost impacts to our business to maintain compliance with the Draft Permit revisions. The Draft Permit needs to more accurately incorporate these costs and account for and address the high potential that significant money may be spent on stormwater treatment with no assurances that the identified benchmark levels will ultimately be achieved. Small businesses should not be required to conduct expensive treatment without assurances that the benchmark level will be achieved.

Level 3 Corrective Action Initiation and Schedule

Section S8.C requires that facilities listed in Appendix 6 that exceed any benchmark value during any four separate quarterly monitoring periods after January 1, 2010 implement a

Level 3 Corrective Action. This open-ended timeline for exceedances following January 1 means that if a facility has an isolated exceedance every 1 to 2 years, then after 4 to 8 years (assuming the Draft Permit maintains the same corrective action schedule beyond the proposed expiration on January 1, 2015) they will be required to install treatment BMPs. As discussed above, given the ubiquitous nature of parameters such as zinc and the proposed benchmark levels below the concentration documented for general roadway runoff, there is a high likelihood that no matter how many operational and/or structural BMPs a business implements, they will identify isolated exceedances over time. Small businesses should not be forced into expensive treatment actions due to ubiquitous sources that are very difficult to completely eliminate.

Section S8.C also states that, “If installation of Treatment BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to violation of a water quality standard, Ecology may waive the requirement for Treatment BMPs by approving a Modification of Permit Coverage.” We think this is an important waiver given our concerns about the benchmark level, and given that installation of treatment BMPs may not be feasible for all permittees or not necessary to protect water quality. We request clarification on what types of information and or actions Ecology will require the Permittee to collect and/or take, under the Modification of Permit Coverage approval process to make the demonstration that implementation of treatment BMPs is not feasible or not necessary to prevent water quality exceedences.

We appreciate the opportunity to review and provide comment on the Draft Permit and hope that Ecology will revise the proposed language to include a more appropriate zinc benchmark level that is attainable by businesses without requiring default treatment BMPs to be implemented. I can be reached at (206) 287-9130 to discuss this comment letter following your review.

Sincerely,

A handwritten signature in black ink that reads "Ryan Barth". The signature is written in a cursive, slightly slanted style.

Ryan Barth, P.E.
Anchor QEA, LLC

Cc: David Templeton and James Keithly, Anchor QEA, LLC