



WATER PROTECTION AND LAND REUSE
REMEDIATION DIVISION

FEB 22 2013

Town of Fairfield

Thomas J. Steinke
Director

Fairfield, Connecticut 06824
Conservation Commission
The Wetlands Agency

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February 14, 2013

Mr. Donald Gonyea
Bureau of Materials Management &
Compliance Assurance
Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06108-5127

Re: CTDEEP NPDES Permit Application No. 201205444, Permit ID No. CT0030651 Exide Group,
Inc. Mill River water discharge

Dear Mr. Gonyea :

At its February 7, 2013 meeting, the Fairfield Conservation Commission voted to submit additional comments on the pending Exide NPDES permit application. These following comments and concerns are especially critical during the hot, low flow, summer spawning period.

1. Fecal coliform bacteria are water quality impairments in this specific Exide remediation section of the Mill River, and the CTDEEP has adopted a formal protocol called a Total Maximum Daily Load (TMDL) requirement for addressing it and reducing it in the future. This bacterium determines the viability of all shellfish water quality classifications and therefore affects all commercial and recreational shellfish activities in areas that may be affected by such bacteria at all seasons of the year.

The Exide dredge will mobilize these bacteria with the resuspended sediment and discharge them:

- A) outside of the protective dredge cell silt curtain into the unprotected open water of the river and harbor, and
- B) to the upland sediment treatment facility where the dredged sediment slurry (and bacteria) will be pumped into large black bags of synthetic textile material where the sediment will be retained and all dissolved matter and small particulate matter will be drained from bags into a water recovery system for treatment before being discharged back to the river. The black bags may contribute a significant heat load to the drainage water through both sunlight and the decomposition of organic matter in the sediment matrix in the bag, especially during the hot, biologically active summer season, with the bacteria multiplying with the heat and nutrients in

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the waste water stream to be discharged to the river. The temperature of the discharge water and its potential affect on shellfish spat is also of great concern because the amount of dissolved oxygen that a given amount of water can hold is reduced with increasing temperature, while at the same time the amount of dissolved oxygen required by an aquatic organism during respiration increases with increasing temperature – the result of these two factors can cause significant stress on an organism.

To protect the river from the adverse effects of such bacteria, the permittee should sample and monitor fecal coliform bacteria, and treat the waste water discharge stream when necessary, to ensure that the discharge stream has no bacteria in excess of the applicable TMDL standard for this reach of Mill River.

2. Exide's discharge "mixing zone" (the section of receiving water in the river located between the point of discharge and the downstream location of the monitoring instruments) is of concern because any contaminants in the discharge water could be masked by the intervening water column in the mixing zone; to prevent this occurrence the permittee should be required to maintain its monitoring instrument array at the instantaneous point of discharge with no in-water mixing zone in the Mill River.

This "no in-water mixing zone" requirement should apply to both the wastewater discharge at the raft as well as the silt curtain discharge around the dredge cell in the river.

3. The discharge of nutrients to the impounded Mill River mill pond water column could add to plant life (e.g., algae blooms) thriving on the nutrients and subsequently dying and posing a threat to water quality in the form of hypoxia/anoxia resulting from the decomposition of their organic matter derived from those nutrients.

To minimize such impacts, the permittee should be required to monitor nutrients, e.g., nitrogen and phosphorous, in its upland sediment treatment wastewater and extract any that are in excess of concentrations in the receiving waters.

Please do not hesitate to contact me if you have any questions.

Sincerely yours,



Thomas J. Steinke
Conservation Director

TJS/asj

cc: M. Tetreau, First Selectman; J. Fallon, Esq., K. Money, Exide; D. Esty, C. Fusaro, T. Selmeski, CTDEEP; J. McKinney, State Senator; R. Blumenthal, C. Murphy, United States Senators; B. Kupchik, K. Fawcett, T. Hwang, State Representatives; J. Himes United States Representative